Map Id: D23
Direction: SW
Distance: 0.577 mi., 3046 ft.
Elevation: 22 ft.
Relative: Lower

Site Name : NH1527300
29 TYLER AVE
MEDFORD, MA 02155
Database(s) : [PWS, PWS ENF] ***(cont.)***

Envirosite ID: 2732018
EPA ID: N/R

PWS ***(cont.)***

Population Category 2 :	N/R
Population Category 3 :	N/R
Population Category 4 :	N/R
Population Category 5 :	<=500
Population Category 11 :	<=100
Submission Quarter :	N/R
Submission Status Code :	N/R
First Reported Date :	2010-07-16
Last Reported Date :	2024-05-09
Deactivation Date :	N/R
GW or SW :	N/R
Is Grant Eligible :	N/R
Is Outstanding Performer :	N/R
Is School or Daycare :	N/R
Is Source Water Protected :	N/R
Primacy Agency :	New Hampshire
Primacy Type :	State
Org Name :	BACK WELL CORPORATION
EPA Region :	Region 1
Admin Name :	JAMES HOLLAND
Owner Type :	Private
Phone Number :	N/R
Phone Ext Number :	N/R
Alt Phone Number :	N/R
Email Address :	N/R
Fax Number :	N/R
Is Wholesaler :	N
LT2 Schedule Category :	N/R
NPM Candidate :	N/R
CDS ID :	N/R
DBPR Schedule Category :	N/R
Outstanding Performer Date :	N/R
Season Begin Date :	01-01
Season End Date :	12-31
Source Water Protection Date :	N/R
Seasonal Startup System :	N/R
Reduced Monitoring Begin Date :	N/R
Reduced Monitoring End Date :	N/R
Reduced RTCR Monitoring :	N/R
Last Date in Agency List :	2025-06-27

PWS ENF

Facility Address :	29 TYLER AVE, MEDFORD, MA 02155

Site Details

PWS ID :	NH1527300
PWS Name :	BACK WELL
EPA Region :	Region 1
Primacy Agency :	New Hampshire
PWS Type :	Transient non-community system
Primacy Type :	State
Primary Source :	Ground water
Activity Status :	Active
Deactivation Date :	N/R

Map Id: D23
Direction: SW
Distance: 0.577 mi., 3046 ft.
Elevation: 22 ft.
Relative: Lower

Site Name : NH1527300
29 TYLER AVE
MEDFORD, MA 02155
Database(s) : [PWS, PWS ENF] ***(cont.)***

Envirosite ID: 2732018
EPA ID: N/R

PWS ENF ***(cont.)***

Owner Type :	Private
Phone Number :	N/R
Last Date in Agency List :	2025-07-08

Violation Details

RTC Enforcement ID :	N/R
Violation ID :	1200006
Submission Year :	2024
Violation First Reported Date :	2023-03-30
Contaminant Name :	Coliform (TCR)
Rule Family :	Total Coliform Rules
Rule Group :	Microbials
Rule Name :	Total Coliform Rule
Violation Type :	Monitoring, Routine Major (TCR)
Is Health Based :	N
Is Major Violation :	N/R
Severity Indicator Count :	N/R
Public Notification Tier :	3
Address Line 1 :	29 TYLER AVE, MEDFORD, 02155
Address Line 2 :	N/R
Compliance Status :	Known
RTC Date :	N/R
Enforcement Action Description :	N/R
Admin Name :	JAMES HOLLAND
Email Address :	N/R

RTC Enforcement ID :	1200015
Violation ID :	1200006
Submission Year :	2024
Violation First Reported Date :	2018-08-13
Contaminant Name :	Coliform (TCR)
Rule Family :	Total Coliform Rules
Rule Group :	Microbials
Rule Name :	Total Coliform Rule
Violation Type :	Monitoring, Routine Major (TCR)
Is Health Based :	N
Is Major Violation :	N/R
Severity Indicator Count :	N/R
Public Notification Tier :	3
Address Line 1 :	29 TYLER AVE, MEDFORD, 02155
Address Line 2 :	N/R
Compliance Status :	Returned to Compliance
RTC Date :	2012-02-22
Enforcement Action Description :	State Compliance achieved
Admin Name :	JAMES HOLLAND
Email Address :	N/R

Map Id: C24
Direction: SSE
Distance: 0.580 mi., 3061 ft.
Elevation: 15 ft.
Relative: Lower

Site Name : 105961 MA
42.420599, -71.12028
MA
Database(s) : [WELLS - MA]

Envirosite ID: 51782858
EPA ID: N/R

WELLS - MA

Well ID :	105961
Well Address :	252 High Street, MEDFORD
Date Completed :	2004-04-27
Well Type :	Irrigation
Work Performed :	New Well
Total Depth :	300.00
Depth to Bedrock :	0.00
Water Level :	20.00
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.420599
Longitude :	-71.120280
Last Date in Agency List :	2025-07-09

Map Id: E25
Direction: ESE
Distance: 0.584 mi., 3083 ft.
Elevation: 91 ft.
Relative: Higher

Site Name : 7683 MA
42.424157, -71.113999
MA
Database(s) : [WELLS - MA]

Envirosite ID: 51811567
EPA ID: N/R

WELLS - MA

Well ID :	7683
Well Address :	20 Powderhouse Road Extension, MEDFORD
Date Completed :	1999-12-16
Well Type :	Domestic
Work Performed :	N/R
Total Depth :	480.00
Depth to Bedrock :	7.00
Water Level :	13.00
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.424157
Longitude :	-71.113999
Last Date in Agency List :	2025-07-09

Map Id: B26
Direction: SW
Distance: 0.584 mi., 3083 ft.
Elevation: 22 ft.
Relative: Lower

Site Name : 252605 MA
42.42103, -71.133207
MA
Database(s) : [WELLS - MA]

Envirosite ID: 51764319
EPA ID: N/R

WELLS - MA

Well ID :	252605
Well Address :	12 Harvard Avenue, MEDFORD
Date Completed :	1998-02-25

Map Id: B26
Direction: SW
Distance: 0.584 mi., 3083 ft.
Elevation: 22 ft.
Relative: Lower

Site Name : 252605 MA
42.42103, -71.133207
MA
Database(s) : [WELLS - MA] ***(cont.)***

Envirosite ID: 51764319
EPA ID: N/R

WELLS - MA ***(cont.)***

Well Type :	Monitoring
Work Performed :	New Well
Total Depth :	14.50
Depth to Bedrock :	0
Water Level :	12.00
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.421030
Longitude :	-71.133207
Last Date in Agency List :	2025-07-09

Map Id: F27
Direction: NNE
Distance: 0.592 mi., 3128 ft.
Elevation: 156 ft.
Relative: Higher

Site Name : 422627071071401
42.440833, -71.120556
MA
Database(s) : [NWIS]

Envirosite ID: 15909521
EPA ID: N/R

NWIS

Site Identification Number :	422627071071401
Site Type :	Outfall
Station Name :	WINCHESTER WATER TREATMENT PLANT EFFLUENT
Agency :	U.S. Geological Survey
District :	Massachusetts
State :	MA
County :	Middlesex County
Country :	USA
Land Net Location :	N/R
Name of Location Map :	N/R
Scale of Location Map :	N/R
Altitude of Gage/Land Surface :	N/R
Method Altitude Determined :	N/R
Altitude Accuracy :	N/R
Altitude Datum :	N/R
Hydrologic Unit :	Charles
Drainage Basin :	N/R
Topographic Setting :	N/R
Flags for the Type of Data Collected:	NNNANNNNNNNNNNNNNNNNNNNNNNNN
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	N/R
Date Site Established or Inventoried:	2009-09-21
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	N/R
Data-Other GW Files :	N/R
National Aquifer :	N/R
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	N/R
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	244100325

Map Id: F27
Direction: NNE
Distance: 0.592 mi., 3128 ft.
Elevation: 156 ft.
Relative: Higher

Site Name : 422627071071401
42.440833, -71.120556
MA

Database(s) : [NWIS] *(cont.)*

Envirosite ID: 15909521
EPA ID: N/R

NWIS *(cont.)*

Real-Time Data Flag :	N/R
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	N/R
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	N/R
Field Water-Level Measurements Begin Date:	N/R
Field Water-level Measurements End Date:	N/R
Field Water-Level Measurements Count:	N/R
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	N/R
Latitude :	42.440833
Longitude :	-71.120556
Last Date in Agency List :	2025-09-14

Map Id: E28
Direction: ESE
Distance: 0.599 mi., 3161 ft.
Elevation: 68 ft.
Relative: Lower

Site Name : 280941 MA
42.424716, -71.113245
MA

Database(s) : [WELLS - MA]

Envirosite ID: 51806220
EPA ID: N/R

WELLS - MA

Well ID :	280941
Well Address :	184 Lawrence Road, MEDFORD
Date Completed :	1995-05-18
Well Type :	Irrigation
Work Performed :	New Well
Total Depth :	405.00
Depth to Bedrock :	5.00
Water Level :	5.00
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.424716
Longitude :	-71.113245
Last Date in Agency List :	2025-07-09

Map Id: F29
Direction: NNE
Distance: 0.599 mi., 3164 ft.
Elevation: 157 ft.
Relative: Higher

Site Name : 422626071071301
42.440651, -71.119776
MA

Database(s) : [NWIS]

Envirosite ID: 16388964
EPA ID: N/R

NWIS

Site Identification Number :	422626071071301
Site Type :	Lake, Reservoir, Impoundment
Station Name :	SOUTH RES
Agency :	U.S. Geological Survey
District :	Massachusetts
State :	MA
County :	Middlesex County
Country :	USA
Land Net Location :	N/R
Name of Location Map :	N/R
Scale of Location Map :	N/R
Altitude of Gage/Land Surface :	N/R
Method Altitude Determined :	N/R
Altitude Accuracy :	N/R
Altitude Datum :	N/R
Hydrologic Unit :	Charles
Drainage Basin :	N/R
Topographic Setting :	N/R
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	N/R
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	N/R
Data-Other GW Files :	NNNNNNNN
National Aquifer :	N/R
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	N/R
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	N/R
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	N/R
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	N/R
Field Water-Level Measurements Begin Date:	N/R
Field Water-level Measurements End Date:	N/R
Field Water-Level Measurements Count:	N/R
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	N/R
Latitude :	42.440651
Longitude :	-71.119776
Last Date in Agency List :	2025-09-14

Map Id: G30
Direction: S
Distance: 0.616 mi., 3254 ft.
Elevation: 6 ft.
Relative: Lower

Site Name : 280989 MA
42.418854, -71.125843
MA
Database(s) : [WELLS - MA]

Envirosite ID: 51739109
EPA ID: N/R

WELLS - MA

Well ID :	280989
Well Address :	Mystic Street and Mystic Valley Parkway (Route 16), MEDFORD
Date Completed :	1991-03-01
Well Type :	Monitoring
Work Performed :	New Well
Total Depth :	20.00
Depth to Bedrock :	0
Water Level :	6.00
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.418854
Longitude :	-71.125843
Last Date in Agency List :	2025-07-09

Map Id: E31
Direction: ESE
Distance: 0.624 mi., 3292 ft.
Elevation: 89 ft.
Relative: Higher

Site Name : NH0162220 | CHRISTMAS MOUNTAIN CONDOMINIUM-PUMPHOUSE
37 POWDER HOUSE RD EXT
MEDFORD, MA 02155
Database(s) : [PWS, PWS ENF]

Envirosite ID: 2731972
EPA ID: N/R

PWS

Facility Address :	37 POWDER HOUSE RD EXT, MEDFORD, MA 02155
PWS ID :	NH0162220
PWS Type :	Community water system
PWS Name :	CHRISTMAS MOUNTAIN CONDOMINIUM
Activity Status :	Inactive
Primary Source :	Ground water
Submission Year :	N/R
Submission Year Quarter :	N/R
Population Served Count :	203
Service Connections Count :	81
Population Category 2 :	N/R
Population Category 3 :	N/R
Population Category 4 :	N/R
Population Category 5 :	<=500
Population Category 11 :	101-500
Submission Quarter :	N/R
Submission Status Code :	N/R
First Reported Date :	1989-03-02
Last Reported Date :	2023-03-30
Deactivation Date :	2006-10-01
GW or SW :	N/R
Is Grant Eligible :	N/R
Is Outstanding Performer :	N/R
Is School or Daycare :	N/R
Is Source Water Protected :	N/R
Primacy Agency :	New Hampshire
Primacy Type :	State

Map Id: E31
Direction: ESE
Distance: 0.624 mi., 3292 ft.
Elevation: 89 ft.
Relative: Higher

Site Name : NH0162220 | CHRISTMAS MOUNTAIN CONDOMINIUM-PUMPHOUSE
37 POWDER HOUSE RD EXT
MEDFORD, MA 02155

Database(s) : [PWS, PWS ENF] ***(cont.)***

Envirosite ID: 2731972
EPA ID: N/R

PWS ***(cont.)***

Org Name :	CHRISTMAS MOUNTAIN CONDOMINIUM ASSOC
EPA Region :	Region 1
Admin Name :	ARTHUR MABBETT
Owner Type :	Private
Phone Number :	N/R
Phone Ext Number :	N/R
Alt Phone Number :	N/R
Email Address :	N/R
Fax Number :	N/R
Is Wholesaler :	N
LT2 Schedule Category :	N/R
NPM Candidate :	N/R
CDS ID :	N/R
DBPR Schedule Category :	N/R
Outstanding Performer Date :	N/R
Season Begin Date :	N/R
Season End Date :	N/R
Source Water Protection Date :	N/R
Seasonal Startup System :	N/R
Reduced Monitoring Begin Date :	N/R
Reduced Monitoring End Date :	N/R
Reduced RTCR Monitoring :	N/R
Last Date in Agency List :	2025-06-27

PWS ENF

Facility Address :	37 POWDER HOUSE RD EXT, MEDFORD, MA 02155

Site Details

PWS ID :	NH0162220
PWS Name :	CHRISTMAS MOUNTAIN CONDOMINIUM
EPA Region :	Region 1
Primacy Agency :	New Hampshire
PWS Type :	Community water system
Primacy Type :	State
Primary Source :	Ground water
Activity Status :	Inactive
Deactivation Date :	2006-10-01
Owner Type :	Private
Phone Number :	N/R
Last Date in Agency List :	2025-07-08

Violation Details

Details for this site have been truncated due to the large number of available details for this site within this dataset. For the complete details for this site, contact your Envirosite account representative for a complimentary site report containing all of the details available.

RTC Enforcement ID :	N/R
Violation ID :	9000133
Submission Year :	2024
Violation First Reported Date :	1990-02-16

Map Id: E31
Direction: ESE
Distance: 0.624 mi., 3292 ft.
Elevation: 89 ft.
Relative: Higher

Site Name : NH0162220 | CHRISTMAS MOUNTAIN CONDOMINIUM-PUMPHOUSE
37 POWDER HOUSE RD EXT
MEDFORD, MA 02155

Database(s) : [PWS, PWS ENF] *(cont.)*

Envirosite ID: 2731972
EPA ID: N/R

PWS ENF *(cont.)*

Contaminant Name :	Coliform (Pre-TCR)
Rule Family :	Not Federally Regulated
Rule Group :	Not Federally Regulated
Rule Name :	Not Federally Regulated
Violation Type :	Monitoring, Regular
Is Health Based :	N
Is Major Violation :	Y
Severity Indicator Count :	N/R
Public Notification Tier :	3
Address Line 1 :	37 POWDER HOUSE RD EXT, MEDFORD, 02155
Address Line 2 :	N/R
Compliance Status :	System Inactive
RTC Date :	2006-10-01
Enforcement Action Description :	State Formal Notice of Violation issued
Admin Name :	ARTHUR MABBETT
Email Address :	N/R

RTC Enforcement ID :	N/R
Violation ID :	9000370
Submission Year :	2024
Violation First Reported Date :	1990-05-14
Contaminant Name :	Coliform (Pre-TCR)
Rule Family :	Not Federally Regulated
Rule Group :	Not Federally Regulated
Rule Name :	Not Federally Regulated
Violation Type :	Monitoring, Regular
Is Health Based :	N
Is Major Violation :	Y
Severity Indicator Count :	N/R
Public Notification Tier :	3
Address Line 1 :	37 POWDER HOUSE RD EXT, MEDFORD, 02155
Address Line 2 :	N/R
Compliance Status :	System Inactive
RTC Date :	2006-10-01
Enforcement Action Description :	State Formal Notice of Violation issued
Admin Name :	ARTHUR MABBETT
Email Address :	N/R

RTC Enforcement ID :	N/R
Violation ID :	9000044
Submission Year :	2024
Violation First Reported Date :	1990-02-16
Contaminant Name :	Coliform (Pre-TCR)
Rule Family :	Not Federally Regulated
Rule Group :	Not Federally Regulated
Rule Name :	Not Federally Regulated
Violation Type :	Monitoring, Regular
Is Health Based :	N
Is Major Violation :	Y
Severity Indicator Count :	N/R
Public Notification Tier :	3
Address Line 1 :	37 POWDER HOUSE RD EXT, MEDFORD, 02155
Address Line 2 :	N/R
Compliance Status :	System Inactive

Map Id: E31
Direction: ESE
Distance: 0.624 mi., 3292 ft.
Elevation: 89 ft.
Relative: Higher

Site Name : NH0162220 | CHRISTMAS MOUNTAIN CONDOMINIUM-PUMPHOUSE
37 POWDER HOUSE RD EXT
MEDFORD, MA 02155

Database(s) : [PWS, PWS ENF] ***(cont.)***

Envirosite ID: 2731972
EPA ID: N/R

PWS ENF ***(cont.)***

RTC Date :	2006-10-01
Enforcement Action Description :	State Formal Notice of Violation issued
Admin Name :	ARTHUR MABBETT
Email Address :	N/R

RTC Enforcement ID :	N/R
Violation ID :	9200007
Submission Year :	2024
Violation First Reported Date :	1992-10-28
Contaminant Name :	Coliform (TCR)
Rule Family :	Total Coliform Rules
Rule Group :	Microbials
Rule Name :	Total Coliform Rule
Violation Type :	Monitoring, Routine Major (TCR)
Is Health Based :	N
Is Major Violation :	Y
Severity Indicator Count :	N/R
Public Notification Tier :	3
Address Line 1 :	37 POWDER HOUSE RD EXT, MEDFORD, 02155
Address Line 2 :	N/R
Compliance Status :	System Inactive
RTC Date :	2006-10-01
Enforcement Action Description :	State Violation/Reminder Notice
Admin Name :	ARTHUR MABBETT
Email Address :	N/R

RTC Enforcement ID :	N/R
Violation ID :	9000223
Submission Year :	2024
Violation First Reported Date :	1990-02-16
Contaminant Name :	Coliform (Pre-TCR)
Rule Family :	Not Federally Regulated
Rule Group :	Not Federally Regulated
Rule Name :	Not Federally Regulated
Violation Type :	Monitoring, Regular
Is Health Based :	N
Is Major Violation :	Y
Severity Indicator Count :	N/R
Public Notification Tier :	3
Address Line 1 :	37 POWDER HOUSE RD EXT, MEDFORD, 02155
Address Line 2 :	N/R
Compliance Status :	System Inactive
RTC Date :	2006-10-01
Enforcement Action Description :	State Formal Notice of Violation issued
Admin Name :	ARTHUR MABBETT
Email Address :	N/R

RTC Enforcement ID :	9600006
Violation ID :	9315009
Submission Year :	2024
Violation First Reported Date :	1996-12-11
Contaminant Name :	Tetrachloroethylene
Rule Family :	Volatile Organic Chemicals

Map Id: E31
Direction: ESE
Distance: 0.624 mi., 3292 ft.
Elevation: 89 ft.
Relative: Higher

Site Name : NH0162220 | CHRISTMAS MOUNTAIN CONDOMINIUM-PUMPHOUSE
37 POWDER HOUSE RD EXT
MEDFORD, MA 02155

Database(s) : [PWS, PWS ENF] ***(cont.)***

Envirosite ID: 2731972
EPA ID: N/R

PWS ENF ***(cont.)***

Rule Group :	Chemicals
Rule Name :	Volatile Organic Chemicals
Violation Type :	Monitoring, Regular
Is Health Based :	N
Is Major Violation :	Y
Severity Indicator Count :	N/R
Public Notification Tier :	3
Address Line 1 :	37 POWDER HOUSE RD EXT, MEDFORD, 02155
Address Line 2 :	N/R
Compliance Status :	Returned to Compliance
RTC Date :	1996-07-16
Enforcement Action Description :	State Compliance achieved
Admin Name :	ARTHUR MABBETT
Email Address :	N/R

RTC Enforcement ID :	9600006
Violation ID :	9304009
Submission Year :	2024
Violation First Reported Date :	1996-12-11
Contaminant Name :	o-Dichlorobenzene
Rule Family :	Volatile Organic Chemicals
Rule Group :	Chemicals
Rule Name :	Volatile Organic Chemicals
Violation Type :	Monitoring, Regular
Is Health Based :	N
Is Major Violation :	Y
Severity Indicator Count :	N/R
Public Notification Tier :	3
Address Line 1 :	37 POWDER HOUSE RD EXT, MEDFORD, 02155
Address Line 2 :	N/R
Compliance Status :	Returned to Compliance
RTC Date :	1996-07-16
Enforcement Action Description :	State Compliance achieved
Admin Name :	ARTHUR MABBETT
Email Address :	N/R

RTC Enforcement ID :	9600006
Violation ID :	9307009
Submission Year :	2024
Violation First Reported Date :	1996-12-11
Contaminant Name :	1,1-Dichloroethylene
Rule Family :	Volatile Organic Chemicals
Rule Group :	Chemicals
Rule Name :	Volatile Organic Chemicals
Violation Type :	Monitoring, Regular
Is Health Based :	N
Is Major Violation :	Y
Severity Indicator Count :	N/R
Public Notification Tier :	3
Address Line 1 :	37 POWDER HOUSE RD EXT, MEDFORD, 02155
Address Line 2 :	N/R
Compliance Status :	Returned to Compliance
RTC Date :	1996-07-16
Enforcement Action Description :	State Compliance achieved

Map Id: E31
Direction: ESE
Distance: 0.624 mi., 3292 ft.
Elevation: 89 ft.
Relative: Higher

Site Name : NH0162220 | CHRISTMAS MOUNTAIN CONDOMINIUM-PUMPHOUSE
37 POWDER HOUSE RD EXT
MEDFORD, MA 02155

Database(s) : [PWS, PWS ENF] *(cont.)*

Envirosite ID: 2731972
EPA ID: N/R

PWS ENF *(cont.)*

Admin Name :	ARTHUR MABBETT
Email Address :	N/R
RTC Enforcement ID :	9600006
Violation ID :	9318009
Submission Year :	2024
Violation First Reported Date :	1996-12-11
Contaminant Name :	Toluene
Rule Family :	Volatile Organic Chemicals
Rule Group :	Chemicals
Rule Name :	Volatile Organic Chemicals
Violation Type :	Monitoring, Regular
Is Health Based :	N
Is Major Violation :	Y
Severity Indicator Count :	N/R
Public Notification Tier :	3
Address Line 1 :	37 POWDER HOUSE RD EXT, MEDFORD, 02155
Address Line 2 :	N/R
Compliance Status :	Returned to Compliance
RTC Date :	1996-07-16
Enforcement Action Description :	State Compliance achieved
Admin Name :	ARTHUR MABBETT
Email Address :	N/R
RTC Enforcement ID :	9600006
Violation ID :	9305009
Submission Year :	2024
Violation First Reported Date :	1996-12-11
Contaminant Name :	p-Dichlorobenzene
Rule Family :	Volatile Organic Chemicals
Rule Group :	Chemicals
Rule Name :	Volatile Organic Chemicals
Violation Type :	Monitoring, Regular
Is Health Based :	N
Is Major Violation :	Y
Severity Indicator Count :	N/R
Public Notification Tier :	3
Address Line 1 :	37 POWDER HOUSE RD EXT, MEDFORD, 02155
Address Line 2 :	N/R
Compliance Status :	Returned to Compliance
RTC Date :	1996-07-16
Enforcement Action Description :	State Compliance achieved
Admin Name :	ARTHUR MABBETT
Email Address :	N/R

Map Id: C32
Direction: SSE
Distance: 0.633 mi., 3340 ft.
Elevation: 11 ft.
Relative: Lower

Site Name : 280958 MA
42.419606, -71.120672
MA
Database(s) : [WELLS - MA]

Envirosite ID: 51807856
EPA ID: N/R

WELLS - MA

Well ID :	280958
Well Address :	31 Daly Road, MEDFORD
Date Completed :	1993-06-26
Well Type :	Irrigation
Work Performed :	New Well
Total Depth :	255.00
Depth to Bedrock :	20.00
Water Level :	15.00
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.419606
Longitude :	-71.120672
Last Date in Agency List :	2025-07-09

Map Id: 33
Direction: NW
Distance: 0.640 mi., 3382 ft.
Elevation: 120 ft.
Relative: Higher

Site Name : 5622 MA
42.439785, -71.135642
MA
Database(s) : [WELLS - MA]

Envirosite ID: 51813714
EPA ID: N/R

WELLS - MA

Well ID :	5622
Well Address :	9 Chardon Road, WINCHESTER
Date Completed :	2001-07-20
Well Type :	Irrigation
Work Performed :	New Well
Total Depth :	700.00
Depth to Bedrock :	30.00
Water Level :	19.80
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.439785
Longitude :	-71.135642
Last Date in Agency List :	2025-07-09

Map Id: D34
Direction: SW
Distance: 0.646 mi., 3410 ft.
Elevation: 25 ft.
Relative: Lower

Site Name : 422519071081301
42.422041, -71.136442
MA
Database(s) : [NWIS]

Envirosite ID: 16388364
EPA ID: N/R

NWIS

Site Identification Number :	422519071081301
Site Type :	Well
Station Name :	MA-MMX 6

Map Id: D34
Direction: SW
Distance: 0.646 mi., 3410 ft.
Elevation: 25 ft.
Relative: Lower

Site Name : 422519071081301
42.422041, -71.136442
MA

Database(s) : [NWIS] *(cont.)*

Envirosite ID: 16388364
EPA ID: N/R

NWIS *(cont.)*

Agency :	U.S. Geological Survey
District :	Massachusetts
State :	MA
County :	Middlesex County
Country :	USA
Land Net Location :	N/R
Name of Location Map :	N/R
Scale of Location Map :	N/R
Altitude of Gage/Land Surface :	28.00
Method Altitude Determined :	Level or other surveyed method.
Altitude Accuracy :	.1
Altitude Datum :	National Geodetic Vertical Datum of 1929
Hydrologic Unit :	Charles
Drainage Basin :	N/R
Topographic Setting :	N/R
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNN
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	1923
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Data have been checked by the reporting agency.
Data-Other GW Files :	YYNNNNNN
National Aquifer :	N/R
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	15.0
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	N/R
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	N/R
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	N/R
Field Water-Level Measurements Begin Date:	N/R
Field Water-level Measurements End Date:	N/R
Field Water-Level Measurements Count:	N/R
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	N/R
Latitude :	42.422041
Longitude :	-71.136442
Last Date in Agency List :	2025-09-14

Map Id: 35
Direction: ESE
Distance: 0.653 mi., 3448 ft.
Elevation: 89 ft.
Relative: Higher

Site Name : 279593 MA
42.425904, -71.11147
MA
Database(s) : [WELLS - MA]

Envirosite ID: 51814472
EPA ID: N/R

WELLS - MA

Well ID :	279593
Well Address :	170 Governors Avenue, MEDFORD
Date Completed :	2010-04-06
Well Type :	Monitoring
Work Performed :	New Well
Total Depth :	18.00
Depth to Bedrock :	0
Water Level :	18.00
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.425904
Longitude :	-71.111470
Last Date in Agency List :	2025-07-09

Map Id: G36
Direction: S
Distance: 0.665 mi., 3509 ft.
Elevation: -2 ft.
Relative: Lower

Site Name : 422505071073801
42.418152, -71.12672
MA
Database(s) : [NWIS]

Envirosite ID: 15911380
EPA ID: N/R

NWIS

Site Identification Number :	422505071073801
Site Type :	Well
Station Name :	MA-MMB 6
Agency :	U.S. Geological Survey
District :	Massachusetts
State :	MA
County :	Middlesex County
Country :	USA
Land Net Location :	N/R
Name of Location Map :	N/R
Scale of Location Map :	N/R
Altitude of Gage/Land Surface :	8.00
Method Altitude Determined :	Level or other surveyed method.
Altitude Accuracy :	.1
Altitude Datum :	National Geodetic Vertical Datum of 1929
Hydrologic Unit :	Charles
Drainage Basin :	N/R
Topographic Setting :	Valley flat
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	1906
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Data have been checked by the reporting agency.
Data-Other GW Files :	YYNNNNNN
National Aquifer :	N/R
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	50.0

Map Id: G36
Direction: S
Distance: 0.665 mi., 3509 ft.
Elevation: -2 ft.
Relative: Lower

Site Name : 422505071073801
42.418152, -71.12672
MA
Database(s) : [NWIS] *(cont.)*

Envirosite ID: 15911380
EPA ID: N/R

NWIS *(cont.)*

Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	N/R
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	N/R
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	N/R
Field Water-Level Measurements Begin Date:	N/R
Field Water-level Measurements End Date:	N/R
Field Water-Level Measurements Count:	N/R
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	N/R
Latitude :	42.418152
Longitude :	-71.12672
Last Date in Agency List :	2025-09-14

Map Id: 37
Direction: WSW
Distance: 0.691 mi., 3647 ft.
Elevation: 36 ft.
Relative: Lower

Site Name : 627219 MA
42.42661, -71.14043
MA
Database(s) : [WELLS - MA]

Envirosite ID: 16025930
EPA ID: N/R

WELLS - MA

Well ID :	627219
Well Address :	971 WEST ST, BARRE
Date Completed :	2013-04-23
Well Type :	Domestic
Work Performed :	Decommission
Total Depth :	0
Depth to Bedrock :	0
Water Level :	32.00
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.426610
Longitude :	-71.140430
Last Date in Agency List :	2025-07-09

Map Id: 38
Direction: E
Distance: 0.700 mi., 3696 ft.
Elevation: 105 ft.
Relative: Higher

Site Name : 422540071063801
42.427874, -71.110053
MA

Database(s) : [NWIS]

Envirosite ID: 15908878
EPA ID: N/R

NWIS

Site Identification Number :	422540071063801
Site Type :	Well
Station Name :	MA-MMX 4
Agency :	U.S. Geological Survey
District :	Massachusetts
State :	MA
County :	Middlesex County
Country :	USA
Land Net Location :	N/R
Name of Location Map :	N/R
Scale of Location Map :	N/R
Altitude of Gage/Land Surface :	107.00
Method Altitude Determined :	Level or other surveyed method.
Altitude Accuracy :	.1
Altitude Datum :	National Geodetic Vertical Datum of 1929
Hydrologic Unit :	Charles
Drainage Basin :	N/R
Topographic Setting :	N/R
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNN
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	1931
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Data have been checked by the reporting agency.
Data-Other GW Files :	YYNNNNNN
National Aquifer :	N/R
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	20.0
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	N/R
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	N/R
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	N/R
Field Water-Level Measurements Begin Date:	N/R
Field Water-level Measurements End Date:	N/R
Field Water-Level Measurements Count:	N/R
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	N/R
Latitude :	42.427874
Longitude :	-71.110053
Last Date in Agency List :	2025-09-14

Map Id: H39
Direction: SE
Distance: 0.718 mi., 3789 ft.
Elevation: 6 ft.
Relative: Lower

Site Name : 422509071070501
42.419263, -71.117553
MA

Database(s) : [NWIS]

Envirosite ID: 15908604
EPA ID: N/R

NWIS

Site Identification Number :	422509071070501
Site Type :	Well
Station Name :	MA-MMX 18
Agency :	U.S. Geological Survey
District :	Massachusetts
State :	MA
County :	Middlesex County
Country :	USA
Land Net Location :	N/R
Name of Location Map :	N/R
Scale of Location Map :	N/R
Altitude of Gage/Land Surface :	6.00
Method Altitude Determined :	Interpolated from topographic map.
Altitude Accuracy :	10
Altitude Datum :	National Geodetic Vertical Datum of 1929
Hydrologic Unit :	Charles
Drainage Basin :	N/R
Topographic Setting :	N/R
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNO
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	1928
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Data have been checked by the reporting agency.
Data-Other GW Files :	YYNNNNNN
National Aquifer :	N/R
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	30.0
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	0
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	0
Field Water-Level Measurements Begin Date:	1928-01-01
Field Water-level Measurements End Date:	1928-01-01
Field Water-Level Measurements Count:	1
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	0
Latitude :	42.419263
Longitude :	-71.117553
Last Date in Agency List :	2025-09-14

Map Id: 40
Direction: SSW
Distance: 0.720 mi., 3801 ft.
Elevation: 23 ft.
Relative: Lower

Site Name : 280984 MA
42.418591, -71.132979
MA
Database(s) : [WELLS - MA]

Envirosite ID: 51825582
EPA ID: N/R

WELLS - MA

Well ID :	280984
Well Address :	89 Boston Avenue, MEDFORD
Date Completed :	1991-08-29
Well Type :	Irrigation
Work Performed :	New Well
Total Depth :	150.00
Depth to Bedrock :	64.00
Water Level :	18.00
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.418591
Longitude :	-71.132979
Last Date in Agency List :	2025-07-09

Map Id: 41
Direction: NW
Distance: 0.725 mi., 3830 ft.
Elevation: 73 ft.
Relative: Lower

Site Name : 664836 MA
42.44183, -71.13444
MA
Database(s) : [WELLS - MA]

Envirosite ID: 33466109
EPA ID: N/R

WELLS - MA

Well ID :	664836
Well Address :	9 Everell Road, WINCHESTER
Date Completed :	2019-12-23
Well Type :	Monitoring
Work Performed :	Decommission
Total Depth :	12.00
Depth to Bedrock :	0
Water Level :	6.00
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.441830
Longitude :	-71.134440
Last Date in Agency List :	2025-07-09

Map Id: I42
Direction: ESE
Distance: 0.733 mi., 3873 ft.
Elevation: 105 ft.
Relative: Higher

Site Name : 122398 MA
42.423039, -71.111487
MA
Database(s) : [WELLS - MA]

Envirosite ID: 51815648
EPA ID: N/R

WELLS - MA

Well ID :	122398
Well Address :	64 Terrace Road, MEDFORD
Date Completed :	2003-04-02

Map Id: I42
Direction: ESE
Distance: 0.733 mi., 3873 ft.
Elevation: 105 ft.
Relative: Higher

Site Name : 122398 MA
42.423039, -71.111487
MA
Database(s) : [WELLS - MA] ***(cont.)***

Envirosite ID: 51815648
EPA ID: N/R

WELLS - MA ***(cont.)***

Well Type :	Monitoring
Work Performed :	New Well
Total Depth :	16.00
Depth to Bedrock :	0.00
Water Level :	11.50
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.423039
Longitude :	-71.111487
Last Date in Agency List :	2025-07-09

Map Id: 43
Direction: W
Distance: 0.754 mi., 3982 ft.
Elevation: 53 ft.
Relative: Lower

Site Name : 106070 MA
42.43063, -71.142525
MA
Database(s) : [WELLS - MA]

Envirosite ID: 51826015
EPA ID: N/R

WELLS - MA

Well ID :	106070
Well Address :	254 Grove Street, MEDFORD
Date Completed :	2002-01-10
Well Type :	Irrigation
Work Performed :	New Well
Total Depth :	325.00
Depth to Bedrock :	38.00
Water Level :	40.00
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.430630
Longitude :	-71.142525
Last Date in Agency List :	2025-07-09

Map Id: 44
Direction: SSW
Distance: 0.755 mi., 3985 ft.
Elevation: -1 ft.
Relative: Lower

Site Name : 01103030
42.417318, -71.130609
MA
Database(s) : [NWIS]

Envirosite ID: 16362041
EPA ID: N/R

NWIS

Site Identification Number :	01103030
Site Type :	Stream
Station Name :	MYSTIC RIVER NEAR MEDFORD, MA
Agency :	U.S. Geological Survey
District :	Massachusetts
State :	MA

Map Id: 44
Direction: SSW
Distance: 0.755 mi., 3985 ft.
Elevation: -1 ft.
Relative: Lower

Site Name : 01103030
42.417318, -71.130609
MA

Database(s) : [NWIS] *(cont.)*

Envirosite ID: 16362041
EPA ID: N/R

NWIS *(cont.)*

County :	Middlesex County
Country :	USA
Land Net Location :	N/R
Name of Location Map :	N/R
Scale of Location Map :	N/R
Altitude of Gage/Land Surface :	N/R
Method Altitude Determined :	N/R
Altitude Accuracy :	N/R
Altitude Datum :	N/R
Hydrologic Unit :	Charles
Drainage Basin :	N/R
Topographic Setting :	N/R
Flags for the Type of Data Collected:	NANANNNNNNNNNNNNNNNNNNNNNNNI
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	N/R
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	N/R
Data-Other GW Files :	NNNNNNNN
National Aquifer :	N/R
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	N/R
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	0
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	0
Field Water-Level Measurements Begin Date:	N/R
Field Water-level Measurements End Date:	N/R
Field Water-Level Measurements Count:	0
Site-Visit Data Begin Date :	1974-03-28
Site-Visit Data End Date :	1974-03-28
Site-Visit Data Count :	1
Latitude :	42.417318
Longitude :	-71.130609
Last Date in Agency List :	2025-09-14

Map Id: H45
Direction: SE
Distance: 0.761 mi., 4018 ft.
Elevation: 6 ft.
Relative: Lower

Site Name : 252601 MA | 280934 MA
42.41903, -71.116333
MA
Database(s) : [WELLS - MA]

Envirosite ID: 51761791
EPA ID: N/R

WELLS - MA

Well ID :	280934
Well Address :	Mystic Valley Parkway, MEDFORD
Date Completed :	1997-05-28
Well Type :	Monitoring
Work Performed :	New Well
Total Depth :	7.00
Depth to Bedrock :	0
Water Level :	4.00
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.419030
Longitude :	-71.116333
Last Date in Agency List :	2025-07-09

Well ID :	252601
Well Address :	Mystic Valley Parkway, MEDFORD
Date Completed :	1999-06-11
Well Type :	Monitoring
Work Performed :	New Well
Total Depth :	10.00
Depth to Bedrock :	0
Water Level :	3.00
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.419030
Longitude :	-71.116333
Last Date in Agency List :	2025-07-09

Map Id: J46
Direction: SW
Distance: 0.771 mi., 4068 ft.
Elevation: 22 ft.
Relative: Lower

Site Name : 137412 MA
42.419945, -71.137144
MA
Database(s) : [WELLS - MA]

Envirosite ID: 51815995
EPA ID: N/R

WELLS - MA

Well ID :	137412
Well Address :	12-35 Monument Street, MEDFORD
Date Completed :	2005-03-30
Well Type :	Monitoring
Work Performed :	New Well
Total Depth :	25.00
Depth to Bedrock :	0.00
Water Level :	15.00
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.419945
Longitude :	-71.137144
Last Date in Agency List :	2025-07-09

Map Id: 47
Direction: SE
Distance: 0.771 mi., 4070 ft.
Elevation: 105 ft.
Relative: Higher

Site Name : 280955 MA
42.421021, -71.112641
MA
Database(s) : [WELLS - MA]

Envirosite ID: 51823098
EPA ID: N/R

WELLS - MA

Well ID :	280955
Well Address :	41 Pilgrim Road, MEDFORD
Date Completed :	1993-11-10
Well Type :	Irrigation
Work Performed :	New Well
Total Depth :	490.00
Depth to Bedrock :	7.00
Water Level :	19.00
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.421021
Longitude :	-71.112641
Last Date in Agency List :	2025-07-09

Map Id: 48
Direction: NNW
Distance: 0.783 mi., 4135 ft.
Elevation: 152 ft.
Relative: Higher

Site Name : 675075 MA
42.44392, -71.13039
MA
Database(s) : [WELLS - MA]

Envirosite ID: 56660622
EPA ID: N/R

WELLS - MA

Well ID :	675075
Well Address :	6 JEFFERSON ROAD, WINCHESTER
Date Completed :	2023-08-17
Well Type :	Monitoring
Work Performed :	New Well
Total Depth :	15.00
Depth to Bedrock :	0
Water Level :	8.00
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.443920
Longitude :	-71.130390
Last Date in Agency List :	2025-07-09

Map Id: K49
Direction: SW
Distance: 0.785 mi., 4147 ft.
Elevation: 20 ft.
Relative: Lower

Site Name : MA1283016 | MAH KEE NAC WATER COMPANY
C/O PETER UNGARO 1 MONUMENT STREET
MEDFORD, MA 02155
Database(s) : [PWS, PWS ENF]

Envirosite ID: 54288554
EPA ID: N/R

PWS

Facility Address :	C/O PETER UNGARO 1 MONUMENT STREET, MEDFORD, MA 02155

Map Id: K49
Direction: SW
Distance: 0.785 mi., 4147 ft.
Elevation: 20 ft.
Relative: Lower

Site Name : MA1283016 | MAH KEE NAC WATER COMPANY
C/O PETER UNGARO 1 MONUMENT STREET
MEDFORD, MA 02155

Database(s) : [PWS, PWS ENF] *(cont.)*

Envirosite ID: 54288554
EPA ID: N/R

PWS *(cont.)*

PWS ID :	MA1283016
PWS Type :	Transient non-community system
PWS Name :	MAH KEE NAC WATER COMPANY
Activity Status :	Active
Primary Source :	Ground water
Submission Year :	2020
Submission Year Quarter :	2020Q3
Population Served Count :	200
Service Connections Count :	74
Population Category 2 :	<10,000
Population Category 3 :	<=3300
Population Category 4 :	<10K
Population Category 5 :	<=500
Population Category 11 :	101-500
Submission Quarter :	3
Submission Status Code :	Y
First Reported Date :	1993-12-15
Last Reported Date :	2020-09-16
Deactivation Date :	N/R
GW or SW :	Groundwater
Is Grant Eligible :	Y
Is Outstanding Performer :	N/R
Is School or Daycare :	N
Is Source Water Protected :	N/R
Primacy Agency :	Massachusetts
Primacy Type :	State
Org Name :	MAH KEE NAC WATER COMPANY, INC
EPA Region :	Region 1
Admin Name :	PETER UNGARO
Owner Type :	Private
Phone Number :	4132982127
Phone Ext Number :	N/R
Alt Phone Number :	N/R
Email Address :	M.D.Burghardt@hofstra.edu
Fax Number :	N/R
Is Wholesaler :	N
LT2 Schedule Category :	N/R
NPM Candidate :	Y
CDS ID :	N/R
DBPR Schedule Category :	N/R
Outstanding Performer Date :	N/R
Season Begin Date :	04-26
Season End Date :	10-20
Source Water Protection Date :	N/R
Seasonal Startup System :	N/R
Reduced Monitoring Begin Date :	N/R
Reduced Monitoring End Date :	N/R
Reduced RTCR Monitoring :	N/R
Last Date in Agency List :	2020-10-26

PWS ENF

Facility Address :	C/O PETER UNGARO 1 MONUMENT STREET, MEDFORD, MA 02155

Map Id: K49
Direction: SW
Distance: 0.785 mi., 4147 ft.
Elevation: 20 ft.
Relative: Lower

Site Name : MA1283016 | MAH KEE NAC WATER COMPANY
C/O PETER UNGARO 1 MONUMENT STREET
MEDFORD, MA 02155

Database(s) : [PWS, PWS ENF] *(cont.)*

Envirosite ID: 54288554
EPA ID: N/R

PWS ENF *(cont.)*

Site Details

PWS ID :	MA1283016
PWS Name :	MAH KEE NAC WATER COMPANY
EPA Region :	Region 1
Primacy Agency :	Massachusetts
PWS Type :	Transient non-community system
Primacy Type :	State
Primary Source :	Ground water
Activity Status :	Active
Deactivation Date :	N/R
Owner Type :	Private
Phone Number :	4132982127
Last Date in Agency List :	2021-04-12

Violation Details

RTC Enforcement ID :	N/R
Violation ID :	4
Submission Year :	2020
Violation First Reported Date :	2015-12-15
Contaminant Name :	Coliform (TCR)
Rule Family :	Total Coliform Rules
Rule Group :	Microbials
Rule Name :	Total Coliform Rule
Violation Type :	Monitoring, Routine Major (TCR)
Is Health Based :	N
Is Major Violation :	N/R
Severity Indicator Count :	N/R
Public Notification Tier :	3
Address Line 1 :	C/O PETER UNGARO, MEDFORD, 02155
Address Line 2 :	1 MONUMENT STREET
Compliance Status :	Known
RTC Date :	N/R
Enforcement Action Description :	State Administrative/Compliance Order without penalty issued
Admin Name :	PETER UNGARO
Email Address :	M.D.Burghardt@hofstra.edu

RTC Enforcement ID :	N/R
Violation ID :	2
Submission Year :	2020
Violation First Reported Date :	2015-09-15
Contaminant Name :	Coliform (TCR)
Rule Family :	Total Coliform Rules
Rule Group :	Microbials
Rule Name :	Total Coliform Rule
Violation Type :	Maximum Contaminant Level Violation, Acute (TCR)
Is Health Based :	Y
Is Major Violation :	N/R
Severity Indicator Count :	N/R
Public Notification Tier :	1
Address Line 1 :	C/O PETER UNGARO, MEDFORD, 02155
Address Line 2 :	1 MONUMENT STREET
Compliance Status :	Known

Map Id: K49
Direction: SW
Distance: 0.785 mi., 4147 ft.
Elevation: 20 ft.
Relative: Lower

Site Name : MA1283016 | MAH KEE NAC WATER COMPANY
C/O PETER UNGARO 1 MONUMENT STREET
MEDFORD, MA 02155

Database(s) : [PWS, PWS ENF] ***(cont.)***

Envirosite ID: 54288554
EPA ID: N/R

PWS ENF ***(cont.)***

RTC Date :	N/R
Enforcement Action Description :	State Administrative/Compliance Order without penalty issued
Admin Name :	PETER UNGARO
Email Address :	M.D.Burghardt@hofstra.edu

RTC Enforcement ID :	N/R
Violation ID :	3
Submission Year :	2020
Violation First Reported Date :	2015-09-15
Contaminant Name :	Coliform (TCR)
Rule Family :	Total Coliform Rules
Rule Group :	Microbials
Rule Name :	Total Coliform Rule
Violation Type :	Monitoring, Repeat Major (TCR)
Is Health Based :	N
Is Major Violation :	N/R
Severity Indicator Count :	N/R
Public Notification Tier :	3
Address Line 1 :	C/O PETER UNGARO, MEDFORD, 02155
Address Line 2 :	1 MONUMENT STREET
Compliance Status :	Known
RTC Date :	N/R
Enforcement Action Description :	State Administrative/Compliance Order without penalty issued
Admin Name :	PETER UNGARO
Email Address :	M.D.Burghardt@hofstra.edu

RTC Enforcement ID :	5
Violation ID :	1
Submission Year :	2020
Violation First Reported Date :	2013-06-17
Contaminant Name :	Coliform (TCR)
Rule Family :	Total Coliform Rules
Rule Group :	Microbials
Rule Name :	Total Coliform Rule
Violation Type :	Maximum Contaminant Level Violation, Monthly (TCR)
Is Health Based :	Y
Is Major Violation :	N/R
Severity Indicator Count :	N/R
Public Notification Tier :	2
Address Line 1 :	C/O PETER UNGARO, MEDFORD, 02155
Address Line 2 :	1 MONUMENT STREET
Compliance Status :	Returned to Compliance
RTC Date :	2010-07-01
Enforcement Action Description :	State Compliance achieved
Admin Name :	PETER UNGARO
Email Address :	M.D.Burghardt@hofstra.edu

Map Id: K50
Direction: SW
Distance: 0.785 mi., 4147 ft.
Elevation: 20 ft.
Relative: Lower

Site Name : MA1283016
C/O ERIK BARTLETT 1 MONUMENT STREET
MEDFORD, MA 02155

Database(s) : [PWS, PWS ENF]

Envirosite ID: 54247315
EPA ID: N/R

PWS

Facility Address :	C/O ERIK BARTLETT 1 MONUMENT STREET, MEDFORD, MA 02155
PWS ID :	MA1283016
PWS Type :	Transient non-community system
PWS Name :	MAH KEE NAC WATER COMPANY
Activity Status :	Active
Primary Source :	Ground water
Submission Year :	2019
Submission Year Quarter :	2019Q1
Population Served Count :	200
Service Connections Count :	74
Population Category 2 :	<10,000
Population Category 3 :	<=3300
Population Category 4 :	<10K
Population Category 5 :	<=500
Population Category 11 :	101-500
Submission Quarter :	1
Submission Status Code :	Y
First Reported Date :	1993-12-15
Last Reported Date :	2019-03-28
Deactivation Date :	N/R
GW or SW :	Groundwater
Is Grant Eligible :	Y
Is Outstanding Performer :	N/R
Is School or Daycare :	N
Is Source Water Protected :	N/R
Primacy Agency :	Massachusetts
Primacy Type :	State
Org Name :	MAH KEE NAC WATER COMPANY, INC
EPA Region :	Region 1
Admin Name :	DAVID BURGHARDT
Owner Type :	Private
Phone Number :	2033146036
Phone Ext Number :	N/R
Alt Phone Number :	N/R
Email Address :	M.D.Burghardt@hofstra.edu
Fax Number :	N/R
Is Wholesaler :	N
LT2 Schedule Category :	N/R
NPM Candidate :	Y
CDS ID :	N/R
DBPR Schedule Category :	N/R
Outstanding Performer Date :	N/R
Season Begin Date :	04-26
Season End Date :	10-20
Source Water Protection Date :	N/R
Seasonal Startup System :	Not Pressurized all Year
Reduced Monitoring Begin Date :	N/R
Reduced Monitoring End Date :	N/R
Reduced RTCR Monitoring :	N/R
Last Date in Agency List :	2019-05-16

PWS ENF

Facility Address :	C/O ERIK BARTLETT 1 MONUMENT STREET, MEDFORD, MA 02155

Map Id: K50
Direction: SW
Distance: 0.785 mi., 4147 ft.
Elevation: 20 ft.
Relative: Lower

Site Name : MA1283016
C/O ERIK BARTLETT 1 MONUMENT STREET
MEDFORD, MA 02155
Database(s) : [PWS, PWS ENF] *(cont.)*

Envirosite ID: 54247315
EPA ID: N/R

PWS ENF *(cont.)*

Site Details

PWS ID :	MA1283016
PWS Name :	MAH KEE NAC WATER COMPANY
EPA Region :	Region 1
Primacy Agency :	Massachusetts
PWS Type :	Transient non-community system
Primacy Type :	State
Primary Source :	Ground water
Activity Status :	Active
Deactivation Date :	N/R
Owner Type :	Private
Phone Number :	2033146036
Last Date in Agency List :	2019-05-16

Violation Details

RTC Enforcement ID :	N/R
Violation ID :	3
Submission Year :	2019
Violation First Reported Date :	2015-09-15
Contaminant Name :	Coliform (TCR)
Rule Family :	Total Coliform Rules
Rule Group :	Microbials
Rule Name :	Total Coliform Rule
Violation Type :	Monitoring, Repeat Major (TCR)
Is Health Based :	N
Is Major Violation :	N/R
Severity Indicator Count :	N/R
Public Notification Tier :	3
Address Line 1 :	C/O ERIK BARTLETT, MEDFORD, 02155
Address Line 2 :	1 MONUMENT STREET
Compliance Status :	Known
RTC Date :	N/R
Enforcement Action Description :	State Administrative/Compliance Order without penalty issued
Admin Name :	DAVID BURGHARDT
Email Address :	M.D.Burghardt@hofstra.edu

RTC Enforcement ID :	N/R
Violation ID :	2
Submission Year :	2019
Violation First Reported Date :	2015-09-15
Contaminant Name :	Coliform (TCR)
Rule Family :	Total Coliform Rules
Rule Group :	Microbials
Rule Name :	Total Coliform Rule
Violation Type :	Maximum Contaminant Level Violation, Acute (TCR)
Is Health Based :	Y
Is Major Violation :	N/R
Severity Indicator Count :	N/R
Public Notification Tier :	1
Address Line 1 :	C/O ERIK BARTLETT, MEDFORD, 02155
Address Line 2 :	1 MONUMENT STREET
Compliance Status :	Known
RTC Date :	N/R
Enforcement Action Description :	State Administrative/Compliance Order without penalty issued

Map Id: K50
Direction: SW
Distance: 0.785 mi., 4147 ft.
Elevation: 20 ft.
Relative: Lower

Site Name : MA1283016
C/O ERIK BARTLETT 1 MONUMENT STREET
MEDFORD, MA 02155

Database(s) : [PWS, PWS ENF] *(cont.)*

Envirosite ID: 54247315
EPA ID: N/R

PWS ENF *(cont.)*

Admin Name :	DAVID BURGHARDT
Email Address :	M.D.Burghardt@hofstra.edu

RTC Enforcement ID :	N/R
Violation ID :	4
Submission Year :	2019
Violation First Reported Date :	2015-12-15
Contaminant Name :	Coliform (TCR)
Rule Family :	Total Coliform Rules
Rule Group :	Microbials
Rule Name :	Total Coliform Rule
Violation Type :	Monitoring, Routine Major (TCR)
Is Health Based :	N
Is Major Violation :	N/R
Severity Indicator Count :	N/R
Public Notification Tier :	3
Address Line 1 :	C/O ERIK BARTLETT, MEDFORD, 02155
Address Line 2 :	1 MONUMENT STREET
Compliance Status :	Known
RTC Date :	N/R
Enforcement Action Description :	State Administrative/Compliance Order without penalty issued
Admin Name :	DAVID BURGHARDT
Email Address :	M.D.Burghardt@hofstra.edu

RTC Enforcement ID :	5
Violation ID :	1
Submission Year :	2019
Violation First Reported Date :	2013-06-17
Contaminant Name :	Coliform (TCR)
Rule Family :	Total Coliform Rules
Rule Group :	Microbials
Rule Name :	Total Coliform Rule
Violation Type :	Maximum Contaminant Level Violation, Monthly (TCR)
Is Health Based :	Y
Is Major Violation :	N/R
Severity Indicator Count :	N/R
Public Notification Tier :	2
Address Line 1 :	C/O ERIK BARTLETT, MEDFORD, 02155
Address Line 2 :	1 MONUMENT STREET
Compliance Status :	Returned to Compliance
RTC Date :	2010-07-01
Enforcement Action Description :	State Compliance achieved
Admin Name :	DAVID BURGHARDT
Email Address :	M.D.Burghardt@hofstra.edu

Map Id: I51
Direction: ESE
Distance: 0.789 mi., 4164 ft.
Elevation: 69 ft.
Relative: Lower

Site Name : 280998 MA
42.422258, -71.110879
MA
Database(s) : [WELLS - MA]

Envirosite ID: 51814883
EPA ID: N/R

WELLS - MA

Well ID :	280998
Well Address :	86 Governers Avenue, MEDFORD
Date Completed :	1990-06-22
Well Type :	Irrigation
Work Performed :	New Well
Total Depth :	375.00
Depth to Bedrock :	20.00
Water Level :	26.00
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.422258
Longitude :	-71.110879
Last Date in Agency List :	2025-07-09

Map Id: J52
Direction: SW
Distance: 0.792 mi., 4181 ft.
Elevation: 22 ft.
Relative: Lower

Site Name : 601758 MA
42.419717, -71.137425
MA
Database(s) : [WELLS - MA]

Envirosite ID: 51753384
EPA ID: N/R

WELLS - MA

Well ID :	601758
Well Address :	12 Fairfield Street, MEDFORD
Date Completed :	2011-10-14
Well Type :	Monitoring
Work Performed :	Decommission
Total Depth :	25.00
Depth to Bedrock :	0
Water Level :	15.00
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.419717
Longitude :	-71.137425
Last Date in Agency List :	2025-07-09

Map Id: J53
Direction: SW
Distance: 0.792 mi., 4183 ft.
Elevation: 22 ft.
Relative: Lower

Site Name : 121368 MA
42.419709, -71.137424
MA
Database(s) : [WELLS - MA]

Envirosite ID: 51812460
EPA ID: N/R

WELLS - MA

Well ID :	121368
Well Address :	12 Fairfield Street, MEDFORD
Date Completed :	2003-05-13

Map Id: J53
Direction: SW
Distance: 0.792 mi., 4183 ft.
Elevation: 22 ft.
Relative: Lower

Site Name : 121368 MA
42.419709, -71.137424
MA
Database(s) : [WELLS - MA] ***(cont.)***

Envirosite ID: 51812460
EPA ID: N/R

WELLS - MA ***(cont.)***

Well Type :	Monitoring
Work Performed :	New Well
Total Depth :	22.00
Depth to Bedrock :	0.00
Water Level :	16.00
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.419709
Longitude :	-71.137424
Last Date in Agency List :	2025-07-09

Map Id: L54
Direction: ESE
Distance: 0.792 mi., 4184 ft.
Elevation: 36 ft.
Relative: Lower

Site Name : 7681 MA
42.424703, -71.109127
MA
Database(s) : [WELLS - MA]

Envirosite ID: 51761714
EPA ID: N/R

WELLS - MA

Well ID :	7681
Well Address :	74 Lawrence Road, MEDFORD
Date Completed :	2000-03-30
Well Type :	Irrigation
Work Performed :	N/R
Total Depth :	300.00
Depth to Bedrock :	36.00
Water Level :	23.00
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.424703
Longitude :	-71.109127
Last Date in Agency List :	2025-07-09

Map Id: J55
Direction: SW
Distance: 0.798 mi., 4211 ft.
Elevation: 21 ft.
Relative: Lower

Site Name : 158917 MA
42.419824, -71.137732
MA
Database(s) : [WELLS - MA]

Envirosite ID: 51804990
EPA ID: N/R

WELLS - MA

Well ID :	158917
Well Address :	12 Fairfield Street, MEDFORD
Date Completed :	2008-11-23
Well Type :	Monitoring
Work Performed :	New Well
Total Depth :	23.00

Map Id: J55
Direction: SW
Distance: 0.798 mi., 4211 ft.
Elevation: 21 ft.
Relative: Lower

Site Name : 158917 MA
42.419824, -71.137732
MA
Database(s) : [WELLS - MA) *(cont.)*

Envirosite ID: 51804990
EPA ID: N/R

WELLS - MA *(cont.)*

Depth to Bedrock :	0
Water Level :	17.00
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.419824
Longitude :	-71.137732
Last Date in Agency List :	2025-07-09

Map Id: J56
Direction: SW
Distance: 0.805 mi., 4252 ft.
Elevation: 22 ft.
Relative: Lower

Site Name : 124995 MA
42.419576, -71.137606
MA
Database(s) : [WELLS - MA]

Envirosite ID: 51821397
EPA ID: N/R

WELLS - MA

Well ID :	124995
Well Address :	14 Fairfield Street, MEDFORD
Date Completed :	2003-12-22
Well Type :	Monitoring
Work Performed :	New Well
Total Depth :	24.00
Depth to Bedrock :	0.00
Water Level :	0
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.419576
Longitude :	-71.137606
Last Date in Agency List :	2025-07-09

Map Id: M57
Direction: S
Distance: 0.807 mi., 4259 ft.
Elevation: 20 ft.
Relative: Lower

Site Name : STACK
42.416111, -71.127222
MEDFORD, MA
Database(s) : [DIGITAL OBSTACLE]

Envirosite ID: 2727613
EPA ID: N/R

DIGITAL OBSTACLE

Date of Action :	1994-02-22
Action :	Change
FAA Study Number :	N/R
OBS Number :	25-000309
Obstacle Type :	STACK
City Name :	MEDFORD
State Identifier :	MA
Country Identifier :	USA
Type of Lighting :	None

Map Id: M57
Direction: S
Distance: 0.807 mi., 4259 ft.
Elevation: 20 ft.
Relative: Lower

Site Name : STACK
42.416111, -71.127222
MEDFORD, MA
Database(s) : [DIGITAL OBSTACLE] *(cont.)*

Envirosite ID: 2727613
EPA ID: N/R

DIGITAL OBSTACLE *(cont.)*

Verification Status :	Unverified
Quantity :	1
Mark Indicator :	None
Above Ground Level Height (Feet) :	00150
Above Mean Sea Level Height (Feet) :	00170
Horizontal Accuracy :	N/R
Vertical Accuracy :	N/R
Latitude :	42 24 58.00N
Longitude :	071 07 38.00W

Map Id: M58
Direction: S
Distance: 0.819 mi., 4322 ft.
Elevation: 22 ft.
Relative: Lower

Site Name : 422457071073901
42.41593, -71.126998
MA
Database(s) : [NWIS]

Envirosite ID: 15908479
EPA ID: N/R

NWIS

Site Identification Number :	422457071073901
Site Type :	Well
Station Name :	MA-MMW 4
Agency :	U.S. Geological Survey
District :	Massachusetts
State :	MA
County :	Middlesex County
Country :	USA
Land Net Location :	N/R
Name of Location Map :	N/R
Scale of Location Map :	N/R
Altitude of Gage/Land Surface :	20.00
Method Altitude Determined :	Interpolated from topographic map.
Altitude Accuracy :	10
Altitude Datum :	National Geodetic Vertical Datum of 1929
Hydrologic Unit :	Charles
Drainage Basin :	N/R
Topographic Setting :	N/R
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNN
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	1903
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Data have been checked by the reporting agency.
Data-Other GW Files :	YYYNNNNN
National Aquifer :	N/R
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	355
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	N/R

Map Id: M58
Direction: S
Distance: 0.819 mi., 4322 ft.
Elevation: 22 ft.
Relative: Lower

Site Name : 422457071073901
42.41593, -71.126998
MA

Database(s) : [NWIS] ***(cont.)***

Envirosite ID: 15908479
EPA ID: N/R

NWIS ***(cont.)***

Real-Time Data Flag :	N/R
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	N/R
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	N/R
Field Water-Level Measurements Begin Date:	N/R
Field Water-level Measurements End Date:	N/R
Field Water-Level Measurements Count:	N/R
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	N/R
Latitude :	42.41593
Longitude :	-71.126998
Last Date in Agency List :	2025-09-14

Map Id: 59
Direction: N
Distance: 0.819 mi., 4324 ft.
Elevation: 151 ft.
Relative: Higher

Site Name : 604262 MA
42.444741, -71.128198
MA

Database(s) : [WELLS - MA]

Envirosite ID: 51762980
EPA ID: N/R

WELLS - MA

Well ID :	604262
Well Address :	6 Leslie Road, WINCHESTER
Date Completed :	1996-07-30
Well Type :	Irrigation
Work Performed :	New Well
Total Depth :	500.00
Depth to Bedrock :	17.00
Water Level :	24.00
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.444741
Longitude :	-71.128198
Last Date in Agency List :	2025-07-09

Map Id: 60
Direction: SSE
Distance: 0.823 mi., 4344 ft.
Elevation: 6 ft.
Relative: Lower

Site Name : 422503071070501
42.417596, -71.117553
MA

Database(s) : [NWIS]

Envirosite ID: 16390312
EPA ID: N/R

NWIS

Site Identification Number :	422503071070501
Site Type :	Well
Station Name :	MA-MMB 3
Agency :	U.S. Geological Survey
District :	Massachusetts
State :	MA
County :	Middlesex County
Country :	USA
Land Net Location :	N/R
Name of Location Map :	N/R
Scale of Location Map :	N/R
Altitude of Gage/Land Surface :	2.00
Method Altitude Determined :	Level or other surveyed method.
Altitude Accuracy :	.1
Altitude Datum :	National Geodetic Vertical Datum of 1929
Hydrologic Unit :	Charles
Drainage Basin :	N/R
Topographic Setting :	N/R
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNN
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	N/R
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Data have been checked by the reporting agency.
Data-Other GW Files :	YYNNNNNN
National Aquifer :	N/R
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	50.0
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	N/R
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	N/R
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	N/R
Field Water-Level Measurements Begin Date:	N/R
Field Water-level Measurements End Date:	N/R
Field Water-Level Measurements Count:	N/R
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	N/R
Latitude :	42.417596
Longitude :	-71.117553
Last Date in Agency List :	2025-09-14

Map Id: N61
Direction: N
Distance: 0.826 mi., 4362 ft.
Elevation: 201 ft.
Relative: Higher

Site Name : 126047 MA
42.445002, -71.126316
MA
Database(s) : [WELLS - MA]

Envirosite ID: 51792183
EPA ID: N/R

WELLS - MA

Well ID :	126047
Well Address :	43 Lorena Road, WINCHESTER
Date Completed :	2004-12-10
Well Type :	N/R
Work Performed :	New Well
Total Depth :	665.00
Depth to Bedrock :	8.00
Water Level :	40.00
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.445002
Longitude :	-71.126316
Last Date in Agency List :	2025-07-09

Map Id: O62
Direction: NW
Distance: 0.830 mi., 4383 ft.
Elevation: 76 ft.
Relative: Lower

Site Name : 603652 MA
42.4418, -71.138183
MA
Database(s) : [WELLS - MA]

Envirosite ID: 51807519
EPA ID: N/R

WELLS - MA

Well ID :	603652
Well Address :	7 Brooks Street, WINCHESTER
Date Completed :	1981-01-28
Well Type :	N/R
Work Performed :	New Well
Total Depth :	0
Depth to Bedrock :	0
Water Level :	16.00
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.441800
Longitude :	-71.138183
Last Date in Agency List :	2025-07-09

Map Id: K63
Direction: WSW
Distance: 0.832 mi., 4391 ft.
Elevation: 13 ft.
Relative: Lower

Site Name : 280943 MA
42.421078, -71.140018
MA
Database(s) : [WELLS - MA]

Envirosite ID: 51775517
EPA ID: N/R

WELLS - MA

Well ID :	280943
Well Address :	607 High Street, MEDFORD
Date Completed :	1995-05-08

Map Id: K63
Direction: WSW
Distance: 0.832 mi., 4391 ft.
Elevation: 13 ft.
Relative: Lower

Site Name : 280943 MA
42.421078, -71.140018
MA
Database(s) : [WELLS - MA] ***(cont.)***

Envirosite ID: 51775517
EPA ID: N/R

WELLS - MA ***(cont.)***

Well Type :	Irrigation
Work Performed :	New Well
Total Depth :	305.00
Depth to Bedrock :	90.00
Water Level :	20.00
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.421078
Longitude :	-71.140018
Last Date in Agency List :	2025-07-09

Map Id: O64
Direction: NW
Distance: 0.840 mi., 4434 ft.
Elevation: 70 ft.
Relative: Lower

Site Name : 10095 MA
42.44236, -71.137515
MA
Database(s) : [WELLS - MA]

Envirosite ID: 51788934
EPA ID: N/R

WELLS - MA

Well ID :	10095
Well Address :	8 Grove Street, WINCHESTER
Date Completed :	2000-09-05
Well Type :	Irrigation
Work Performed :	N/R
Total Depth :	700.00
Depth to Bedrock :	27.00
Water Level :	20.00
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.442360
Longitude :	-71.137515
Last Date in Agency List :	2025-07-09

Map Id: 65
Direction: WNW
Distance: 0.843 mi., 4452 ft.
Elevation: 49 ft.
Relative: Lower

Site Name : 604324 MA
42.438454, -71.14227
MA
Database(s) : [WELLS - MA]

Envirosite ID: 51748138
EPA ID: N/R

WELLS - MA

Well ID :	604324
Well Address :	62 Grove Street, WINCHESTER
Date Completed :	1997-09-09
Well Type :	Irrigation
Work Performed :	Hydrofracture
Total Depth :	605.00

Map Id: 65
Direction: WNW
Distance: 0.843 mi., 4452 ft.
Elevation: 49 ft.
Relative: Lower

Site Name : 604324 MA
42.438454, -71.14227
MA
Database(s) : [WELLS - MA) *(cont.)*

Envirosite ID: 51748138
EPA ID: N/R

WELLS - MA *(cont.)*

Depth to Bedrock :	50.00
Water Level :	20.00
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.438454
Longitude :	-71.142270
Last Date in Agency List :	2025-07-09

Map Id: 66
Direction: SE
Distance: 0.847 mi., 4473 ft.
Elevation: 23 ft.
Relative: Lower

Site Name : 600078 MA
42.41917, -71.113112
MA
Database(s) : [WELLS - MA]

Envirosite ID: 51779204
EPA ID: N/R

WELLS - MA

Well ID :	600078
Well Address :	14 High Street, MEDFORD
Date Completed :	2010-06-30
Well Type :	N/R
Work Performed :	N/R
Total Depth :	30.00
Depth to Bedrock :	0
Water Level :	10.00
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.419170
Longitude :	-71.113112
Last Date in Agency List :	2025-07-09

Map Id: M67
Direction: S
Distance: 0.848 mi., 4476 ft.
Elevation: 23 ft.
Relative: Lower

Site Name : 679086 MA
42.4155, -71.12606
MA
Database(s) : [WELLS - MA]

Envirosite ID: 60940576
EPA ID: N/R

WELLS - MA

Well ID :	679086
Well Address :	200 BOSTON AVE, MEDFORD
Date Completed :	2024-10-18
Well Type :	Monitoring
Work Performed :	New Well
Total Depth :	21.00
Depth to Bedrock :	0
Water Level :	14.00
Agency Link :	Click here for hyperlink provided by the agency.

Map Id: M67
Direction: S
Distance: 0.848 mi., 4476 ft.
Elevation: 23 ft.
Relative: Lower

Site Name : 679086 MA
42.4155, -71.12606
MA
Database(s) : [WELLS - MA] ***(cont.)***

Envirosite ID: 60940576
EPA ID: N/R

WELLS - MA ***(cont.)***

Latitude :	42.415500
Longitude :	-71.126060
Last Date in Agency List :	2025-07-09

Map Id: 68
Direction: NNW
Distance: 0.852 mi., 4499 ft.
Elevation: 115 ft.
Relative: Higher

Site Name : 603766 MA
42.444403, -71.132877
MA
Database(s) : [WELLS - MA]

Envirosite ID: 51768615
EPA ID: N/R

WELLS - MA

Well ID :	603766
Well Address :	11 Chestnut Street, WINCHESTER
Date Completed :	1989-11-15
Well Type :	Irrigation
Work Performed :	New Well
Total Depth :	200.00
Depth to Bedrock :	75.00
Water Level :	26.00
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.444403
Longitude :	-71.132877
Last Date in Agency List :	2025-07-09

Map Id: L69
Direction: ESE
Distance: 0.863 mi., 4558 ft.
Elevation: 41 ft.
Relative: Lower

Site Name : 252065 MA
42.423858, -71.108082
MA
Database(s) : [WELLS - MA]

Envirosite ID: 51743667
EPA ID: N/R

WELLS - MA

Well ID :	252065
Well Address :	21 Ashcroft Road, MEDFORD
Date Completed :	2008-05-02
Well Type :	Irrigation
Work Performed :	New Well
Total Depth :	255.00
Depth to Bedrock :	5.00
Water Level :	45.00
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.423858
Longitude :	-71.108082
Last Date in Agency List :	2025-07-09

Map Id: 70
Direction: WNW
Distance: 0.864 mi., 4562 ft.
Elevation: 61 ft.
Relative: Lower

Site Name : 7685 MA
42.435204, -71.144358
MA
Database(s) : [WELLS - MA]

Envirosite ID: 51755973
EPA ID: N/R

WELLS - MA

Well ID :	7685
Well Address :	93 Norwich Circle, MEDFORD
Date Completed :	1999-05-27
Well Type :	Irrigation
Work Performed :	N/R
Total Depth :	505.00
Depth to Bedrock :	26.00
Water Level :	15.00
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.435204
Longitude :	-71.144358
Last Date in Agency List :	2025-07-09

Map Id: 71
Direction: WNW
Distance: 0.880 mi., 4649 ft.
Elevation: 55 ft.
Relative: Lower

Site Name : 106064 MA
42.437599, -71.143651
MA
Database(s) : [WELLS - MA]

Envirosite ID: 51788636
EPA ID: N/R

WELLS - MA

Well ID :	106064
Well Address :	20 Canterbury Street, WINCHESTER
Date Completed :	2002-08-01
Well Type :	Irrigation
Work Performed :	New Well
Total Depth :	300.00
Depth to Bedrock :	25.00
Water Level :	16.00
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.437599
Longitude :	-71.143651
Last Date in Agency List :	2025-07-09

Map Id: P72
Direction: NE
Distance: 0.896 mi., 4731 ft.
Elevation: 156 ft.
Relative: Higher

Site Name : 422639071065901
42.444167, -71.116389
MA
Database(s) : [NWIS]

Envirosite ID: 15909702
EPA ID: N/R

NWIS

Site Identification Number :	422639071065901
Site Type :	Lake, Reservoir, Impoundment
Station Name :	S Res at Winchester, MA

Map Id: P72
Direction: NE
Distance: 0.896 mi., 4731 ft.
Elevation: 156 ft.
Relative: Higher

Site Name : 422639071065901
42.444167, -71.116389
MA

Database(s) : [NWIS] *(cont.)*

Envirosite ID: 15909702
EPA ID: N/R

NWIS *(cont.)*

Agency :	U.S. Geological Survey
District :	Massachusetts
State :	MA
County :	Middlesex County
Country :	USA
Land Net Location :	N/R
Name of Location Map :	Boston North, MA
Scale of Location Map :	24000
Altitude of Gage/Land Surface :	N/R
Method Altitude Determined :	N/R
Altitude Accuracy :	N/R
Altitude Datum :	N/R
Hydrologic Unit :	Charles
Drainage Basin :	N/R
Topographic Setting :	Lake or Swamp
Flags for the Type of Data Collected:	NNNNNNNNNNNANNNNNNNNNNNNNNNI
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	N/R
Date Site Established or Inventoried:	2000-09-01
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	N/R
Data-Other GW Files :	NNNNNNNN
National Aquifer :	N/R
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	N/R
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	4648-20100
Real-Time Data Flag :	0
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	2000-09-01
Water-Quality Data End Date :	2000-09-01
Water-Quality Data Count :	22
Field Water-Level Measurements Begin Date:	N/R
Field Water-level Measurements End Date:	N/R
Field Water-Level Measurements Count:	0
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	0
Latitude :	42.444167
Longitude :	-71.116389
Last Date in Agency List :	2025-09-14

Map Id: M73
Direction: S
Distance: 0.901 mi., 4756 ft.
Elevation: 36 ft.
Relative: Lower

Site Name : 280986 MA
42.414744, -71.125461
MA
Database(s) : [WELLS - MA]

Envirosite ID: 51767019
EPA ID: N/R

WELLS - MA

Well ID :	280986
Well Address :	55 North Street, MEDFORD
Date Completed :	1991-07-02
Well Type :	Monitoring
Work Performed :	New Well
Total Depth :	22.00
Depth to Bedrock :	0
Water Level :	13.00
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.414744
Longitude :	-71.125461
Last Date in Agency List :	2025-07-09

Map Id: O74
Direction: NW
Distance: 0.904 mi., 4771 ft.
Elevation: 66 ft.
Relative: Lower

Site Name : 151457 MA
42.442941, -71.138549
MA
Database(s) : [WELLS - MA]

Envirosite ID: 51789222
EPA ID: N/R

WELLS - MA

Well ID :	151457
Well Address :	11 Grove Street, WINCHESTER
Date Completed :	2007-08-27
Well Type :	Irrigation
Work Performed :	New Well
Total Depth :	700.00
Depth to Bedrock :	45.00
Water Level :	29.58
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.442941
Longitude :	-71.138549
Last Date in Agency List :	2025-07-09

Map Id: N75
Direction: N
Distance: 0.906 mi., 4786 ft.
Elevation: 223 ft.
Relative: Higher

Site Name : 123523 MA
42.446167, -71.126234
MA
Database(s) : [WELLS - MA]

Envirosite ID: 51763299
EPA ID: N/R

WELLS - MA

Well ID :	123523
Well Address :	10 Ledgewood Road, WINCHESTER
Date Completed :	2005-04-21

Map Id: N75
Direction: N
Distance: 0.906 mi., 4786 ft.
Elevation: 223 ft.
Relative: Higher

Site Name : 123523 MA
42.446167, -71.126234
MA
Database(s) : [WELLS - MA] ***(cont.)***

Envirosite ID: 51763299
EPA ID: N/R

WELLS - MA ***(cont.)***

Well Type :	Irrigation
Work Performed :	New Well
Total Depth :	650.00
Depth to Bedrock :	2.00
Water Level :	21.58
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.446167
Longitude :	-71.126234
Last Date in Agency List :	2025-07-09

Map Id: Q76
Direction: SSW
Distance: 0.917 mi., 4840 ft.
Elevation: 29 ft.
Relative: Lower

Site Name : 281791 MA
42.414703, -71.129426
MA
Database(s) : [WELLS - MA]

Envirosite ID: 51792708
EPA ID: N/R

WELLS - MA

Well ID :	281791
Well Address :	1 Capen Court, SOMERVILLE
Date Completed :	1993-03-03
Well Type :	Monitoring
Work Performed :	New Well
Total Depth :	15.00
Depth to Bedrock :	0
Water Level :	6.00
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.414703
Longitude :	-71.129426
Last Date in Agency List :	2025-07-09

Map Id: P77
Direction: NE
Distance: 0.919 mi., 4851 ft.
Elevation: 156 ft.
Relative: Higher

Site Name : 422639071065601
42.444167, -71.115556
MA
Database(s) : [NWIS]

Envirosite ID: 16391115
EPA ID: N/R

NWIS

Site Identification Number :	422639071065601
Site Type :	Lake, Reservoir, Impoundment
Station Name :	WINCHESTER SOUTH RESERVOIR DEEP HOLE
Agency :	U.S. Geological Survey
District :	Massachusetts
State :	MA

Map Id: P77
Direction: NE
Distance: 0.919 mi., 4851 ft.
Elevation: 156 ft.
Relative: Higher

Site Name : 422639071065601
42.444167, -71.115556
MA

Database(s) : [NWIS] *(cont.)*

Envirosite ID: 16391115
EPA ID: N/R

NWIS *(cont.)*

County :	Middlesex County
Country :	USA
Land Net Location :	N/R
Name of Location Map :	N/R
Scale of Location Map :	N/R
Altitude of Gage/Land Surface :	N/R
Method Altitude Determined :	N/R
Altitude Accuracy :	N/R
Altitude Datum :	N/R
Hydrologic Unit :	Charles
Drainage Basin :	N/R
Topographic Setting :	N/R
Flags for the Type of Data Collected:	NNNANNNNNNNNNNNNNNNNNNNNNNNN
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	N/R
Date Site Established or Inventoried:	2009-09-28
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	N/R
Data-Other GW Files :	N/R
National Aquifer :	N/R
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	N/R
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	244100325
Real-Time Data Flag :	N/R
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	N/R
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	N/R
Field Water-Level Measurements Begin Date:	N/R
Field Water-level Measurements End Date:	N/R
Field Water-Level Measurements Count:	N/R
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	N/R
Latitude :	42.444167
Longitude :	-71.115556
Last Date in Agency List :	2025-09-14

Map Id: Q78
Direction: SSW
Distance: 0.920 mi., 4856 ft.
Elevation: 29 ft.
Relative: Lower

Site Name : 132996 MA | 141350 MA
42.414684, -71.129627
MA
Database(s) : [WELLS - MA]

Envirosite ID: 51780649
EPA ID: N/R

WELLS - MA

Well ID :	141350
Well Address :	1 Capen Court, SOMERVILLE
Date Completed :	2005-08-23
Well Type :	Monitoring
Work Performed :	New Well
Total Depth :	20.00
Depth to Bedrock :	0.00
Water Level :	15.00
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.414684
Longitude :	-71.129627
Last Date in Agency List :	2025-07-09

Well ID :	132996
Well Address :	1 Capen Court, SOMERVILLE
Date Completed :	2004-10-05
Well Type :	Monitoring
Work Performed :	New Well
Total Depth :	18.00
Depth to Bedrock :	0.00
Water Level :	10.00
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.414684
Longitude :	-71.129627
Last Date in Agency List :	2025-07-09

Map Id: L79
Direction: ESE
Distance: 0.932 mi., 4921 ft.
Elevation: 19 ft.
Relative: Lower

Site Name : 281010 MA | 281011 MA
42.423381, -71.10689
MA
Database(s) : [WELLS - MA]

Envirosite ID: 51787806
EPA ID: N/R

WELLS - MA

Well ID :	281010
Well Address :	Forest Street, MEDFORD
Date Completed :	1984-06-12
Well Type :	N/R
Work Performed :	New Well
Total Depth :	48.00
Depth to Bedrock :	23.00
Water Level :	0
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.423381
Longitude :	-71.106890
Last Date in Agency List :	2025-07-09

Well ID :	281011
Well Address :	Forest Street, MEDFORD

Map Id: L79
Direction: ESE
Distance: 0.932 mi., 4921 ft.
Elevation: 19 ft.
Relative: Lower

Site Name : 281010 MA | 281011 MA
42.423381, -71.10689
MA
Database(s) : [WELLS - MA) *(cont.)*

Envirosite ID: 51787806
EPA ID: N/R

WELLS - MA *(cont.)*

Date Completed :	1984-05-24
Well Type :	N/R
Work Performed :	New Well
Total Depth :	48.00
Depth to Bedrock :	2.00
Water Level :	0
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.423381
Longitude :	-71.106890
Last Date in Agency List :	2025-07-09

Map Id: Q80
Direction: SSW
Distance: 0.937 mi., 4946 ft.
Elevation: 26 ft.
Relative: Lower

Site Name : 111165 MA | 111166 MA | 111167 MA
42.414546, -71.130366
MA
Database(s) : [WELLS - MA]

Envirosite ID: 51780126
EPA ID: N/R

WELLS - MA

Well ID :	111165
Well Address :	405 Alewife Brook Parkway, SOMERVILLE
Date Completed :	2002-03-13
Well Type :	N/R
Work Performed :	Decommission
Total Depth :	15.00
Depth to Bedrock :	0.00
Water Level :	0
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.414546
Longitude :	-71.130366
Last Date in Agency List :	2025-07-09

Well ID :	111167
Well Address :	405 Alewife Brook Parkway, SOMERVILLE
Date Completed :	2002-03-13
Well Type :	N/R
Work Performed :	Decommission
Total Depth :	15.00
Depth to Bedrock :	0.00
Water Level :	0
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.414546
Longitude :	-71.130366
Last Date in Agency List :	2025-07-09

Well ID :	111166
Well Address :	405 Alewife Brook Parkway, SOMERVILLE
Date Completed :	N/R
Well Type :	N/R

Map Id: Q80
Direction: SSW
Distance: 0.937 mi., 4946 ft.
Elevation: 26 ft.
Relative: Lower

Site Name : 111165 MA | 111166 MA | 111167 MA
42.414546, -71.130366
MA
Database(s) : [WELLS - MA) *(cont.)*

Envirosite ID: 51780126
EPA ID: N/R

WELLS - MA *(cont.)*

Work Performed :	Decommission
Total Depth :	0
Depth to Bedrock :	0.00
Water Level :	0
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.414546
Longitude :	-71.130366
Last Date in Agency List :	2025-07-09

Map Id: 81
Direction: W
Distance: 0.940 mi., 4963 ft.
Elevation: 16 ft.
Relative: Lower

Site Name : 133011 MA
42.434403, -71.146062
MA
Database(s) : [WELLS - MA]

Envirosite ID: 51748955
EPA ID: N/R

WELLS - MA

Well ID :	133011
Well Address :	3087 Mystic Valley Parkway, MEDFORD
Date Completed :	2004-07-14
Well Type :	Monitoring
Work Performed :	New Well
Total Depth :	15.00
Depth to Bedrock :	0.00
Water Level :	8.00
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.434403
Longitude :	-71.146062
Last Date in Agency List :	2025-07-09

Map Id: R82
Direction: SE
Distance: 0.942 mi., 4972 ft.
Elevation: 14 ft.
Relative: Lower

Site Name : 422506071064301
42.41843, -71.111442
MA
Database(s) : [NWIS]

Envirosite ID: 16390345
EPA ID: N/R

NWIS

Site Identification Number :	422506071064301
Site Type :	Well
Station Name :	MA-MMX 30
Agency :	U.S. Geological Survey
District :	Massachusetts
State :	MA
County :	Middlesex County

Map Id: R82
Direction: SE
Distance: 0.942 mi., 4972 ft.
Elevation: 14 ft.
Relative: Lower

Site Name : 422506071064301
42.41843, -71.111442
MA

Database(s) : [NWIS] *(cont.)*

Envirosite ID: 16390345
EPA ID: N/R

NWIS *(cont.)*

Country :	USA
Land Net Location :	N/R
Name of Location Map :	N/R
Scale of Location Map :	N/R
Altitude of Gage/Land Surface :	20.00
Method Altitude Determined :	Interpolated from topographic map.
Altitude Accuracy :	10
Altitude Datum :	National Geodetic Vertical Datum of 1929
Hydrologic Unit :	Charles
Drainage Basin :	N/R
Topographic Setting :	N/R
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNO
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	1930
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Data have been checked by the reporting agency.
Data-Other GW Files :	YYNNNNNN
National Aquifer :	N/R
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	20.0
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	0
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	0
Field Water-Level Measurements Begin Date:	1930-01-01
Field Water-level Measurements End Date:	1930-01-01
Field Water-Level Measurements Count:	1
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	0
Latitude :	42.41843
Longitude :	-71.111442
Last Date in Agency List :	2025-09-14

Map Id: 83
Direction: NW
Distance: 0.944 mi., 4984 ft.
Elevation: 36 ft.
Relative: Lower

Site Name : 652426 MA
42.441601, -71.141659
MA
Database(s) : [WELLS - MA]

Envirosite ID: 51766589
EPA ID: N/R

WELLS - MA

Well ID :	652426
Well Address :	20 Grove Place, WINCHESTER
Date Completed :	N/R
Well Type :	Irrigation
Work Performed :	New Well
Total Depth :	500.00
Depth to Bedrock :	33.00
Water Level :	20.00
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.441601
Longitude :	-71.141659
Last Date in Agency List :	2025-07-09

Map Id: S84
Direction: N
Distance: 0.944 mi., 4986 ft.
Elevation: 190 ft.
Relative: Higher

Site Name : 4100 MA
42.446573, -71.128254
MA
Database(s) : [WELLS - MA]

Envirosite ID: 51749737
EPA ID: N/R

WELLS - MA

Well ID :	4100
Well Address :	2 Ledgewood Road, WINCHESTER
Date Completed :	2000-09-01
Well Type :	Domestic
Work Performed :	New Well
Total Depth :	605.00
Depth to Bedrock :	4.00
Water Level :	47.00
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.446573
Longitude :	-71.128254
Last Date in Agency List :	2025-07-09

Map Id: T85
Direction: WSW
Distance: 0.962 mi., 5077 ft.
Elevation: 7 ft.
Relative: Lower

Site Name : 01103010
42.420667, -71.142694
MA
Database(s) : [NWIS]

Envirosite ID: 16361947
EPA ID: N/R

NWIS

Site Identification Number :	01103010
Site Type :	Stream
Station Name :	MYSTIC RIVER AT ARLINGTON, MA

Map Id: T85
Direction: WSW
Distance: 0.962 mi., 5077 ft.
Elevation: 7 ft.
Relative: Lower

Site Name : 01103010
42.420667, -71.142694
MA

Database(s) : [NWIS] *(cont.)*

Envirosite ID: 16361947
EPA ID: N/R

NWIS *(cont.)*

Agency :	U.S. Geological Survey
District :	Massachusetts
State :	MA
County :	Middlesex County
Country :	USA
Land Net Location :	N/R
Name of Location Map :	N/R
Scale of Location Map :	N/R
Altitude of Gage/Land Surface :	N/R
Method Altitude Determined :	N/R
Altitude Accuracy :	N/R
Altitude Datum :	N/R
Hydrologic Unit :	Charles
Drainage Basin :	N/R
Topographic Setting :	N/R
Flags for the Type of Data Collected:	ANNNNNNNNNNNNNNNNNNNNNNNNNNA
Flags for Instruments at Site :	YNNNYNNNNNNNNNYNNNNNNNNNNNNNN
Date of First Construction :	2015-09-16
Date Site Established or Inventoried:	2015-09-16
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Data have been checked by the reporting agency.
Data-Other GW Files :	N/R
National Aquifer :	N/R
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	N/R
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	1
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	0
Field Water-Level Measurements Begin Date:	N/R
Field Water-level Measurements End Date:	N/R
Field Water-Level Measurements Count:	0
Site-Visit Data Begin Date :	2016-02-10
Site-Visit Data End Date :	2019-10-17
Site-Visit Data Count :	32
Latitude :	42.420667
Longitude :	-71.142694
Last Date in Agency List :	2025-09-14

Map Id: 86
Direction: SSW
Distance: 0.968 mi., 5111 ft.
Elevation: -1 ft.
Relative: Lower

Site Name : 422452071075901
42.414541, -71.132553
MA

Database(s) : [NWIS]

Envirosite ID: 15908426
EPA ID: N/R

NWIS

Site Identification Number :	422452071075901
Site Type :	Well
Station Name :	MA-AKB 6
Agency :	U.S. Geological Survey
District :	Massachusetts
State :	MA
County :	Middlesex County
Country :	USA
Land Net Location :	N/R
Name of Location Map :	N/R
Scale of Location Map :	N/R
Altitude of Gage/Land Surface :	6.00
Method Altitude Determined :	Level or other surveyed method.
Altitude Accuracy :	.1
Altitude Datum :	National Geodetic Vertical Datum of 1929
Hydrologic Unit :	Charles
Drainage Basin :	N/R
Topographic Setting :	N/R
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNN
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	1937
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Data have been checked by the reporting agency.
Data-Other GW Files :	YYNNNNNN
National Aquifer :	N/R
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	28.0
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	N/R
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	N/R
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	N/R
Field Water-Level Measurements Begin Date:	N/R
Field Water-level Measurements End Date:	N/R
Field Water-Level Measurements Count:	N/R
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	N/R
Latitude :	42.414541
Longitude :	-71.132553
Last Date in Agency List :	2025-09-14

Map Id: Q87
Direction: SSW
Distance: 0.968 mi., 5111 ft.
Elevation: 14 ft.
Relative: Lower

Site Name : 281754 MA | 281755 MA
42.414162, -71.130824
MA
Database(s) : [WELLS - MA]

Envirosite ID: 51765055
EPA ID: N/R

WELLS - MA

Well ID :	281755
Well Address :	395 Alewife Brook Parkway, SOMERVILLE
Date Completed :	1996-12-18
Well Type :	N/R
Work Performed :	New Well
Total Depth :	0
Depth to Bedrock :	0
Water Level :	0
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.414162
Longitude :	-71.130824
Last Date in Agency List :	2025-07-09

Well ID :	281754
Well Address :	395 Alewife Brook Parkway, SOMERVILLE
Date Completed :	1996-12-18
Well Type :	N/R
Work Performed :	New Well
Total Depth :	0
Depth to Bedrock :	0
Water Level :	0
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.414162
Longitude :	-71.130824
Last Date in Agency List :	2025-07-09

Map Id: T88
Direction: WSW
Distance: 0.968 mi., 5111 ft.
Elevation: 0 ft.
Relative: Lower

Site Name : 01103017 | 422514071083601
42.420652, -71.142831
MA
Database(s) : [NWIS]

Envirosite ID: 31321421
EPA ID: N/R

NWIS

Site Identification Number :	422514071083601
Site Type :	Well
Station Name :	MA-AKB 5
Agency :	U.S. Geological Survey
District :	Massachusetts
State :	MA
County :	Middlesex County
Country :	USA
Land Net Location :	N/R
Name of Location Map :	N/R
Scale of Location Map :	N/R
Altitude of Gage/Land Surface :	N/R
Method Altitude Determined :	N/R
Altitude Accuracy :	N/R
Altitude Datum :	N/R
Hydrologic Unit :	Charles

Map Id: T88
Direction: WSW
Distance: 0.968 mi., 5111 ft.
Elevation: 0 ft.
Relative: Lower

Site Name : 01103017 | 422514071083601
42.420652, -71.142831
MA

Database(s) : [NWIS] ***(cont.)***

Envirosite ID: 31321421
EPA ID: N/R

NWIS ***(cont.)***

Drainage Basin :	N/R
Topographic Setting :	N/R
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNN
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	1937
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Data have been checked by the reporting agency.
Data-Other GW Files :	YYNNNNNN
National Aquifer :	N/R
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	74.0
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	N/R
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	N/R
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	N/R
Field Water-Level Measurements Begin Date:	N/R
Field Water-level Measurements End Date:	N/R
Field Water-Level Measurements Count:	N/R
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	N/R
Latitude :	42.420652
Longitude :	-71.142831
Last Date in Agency List :	2025-09-14

Site Identification Number :	01103017
Site Type :	Stream
Station Name :	MYSTIC RIVER AT MEDFORD, MA
Agency :	U.S. Geological Survey
District :	Massachusetts
State :	MA
County :	Middlesex County
Country :	USA
Land Net Location :	N/R
Name of Location Map :	LEXINGTON, MA
Scale of Location Map :	24000
Altitude of Gage/Land Surface :	N/R
Method Altitude Determined :	N/R
Altitude Accuracy :	N/R
Altitude Datum :	N/R
Hydrologic Unit :	Charles
Drainage Basin :	N/R
Topographic Setting :	N/R
Flags for the Type of Data Collected:	NANANNNNNNNNNNNNNNNNNNNNNNNI
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNN

Map Id: T88
Direction: WSW
Distance: 0.968 mi., 5111 ft.
Elevation: 0 ft.
Relative: Lower

Site Name : 01103017 | 422514071083601
42.420652, -71.142831
MA
Database(s) : [NWIS] *(cont.)*

Envirosite ID: 31321421
EPA ID: N/R

NWIS *(cont.)*

Date of First Construction :	N/R
Date Site Established or Inventoried:	1999-05-17
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	N/R
Data-Other GW Files :	NNNNNNNN
National Aquifer :	N/R
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	N/R
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	442515600
Real-Time Data Flag :	0
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	1999-05-19
Water-Quality Data End Date :	2000-06-07
Water-Quality Data Count :	14
Field Water-Level Measurements Begin Date:	N/R
Field Water-level Measurements End Date:	N/R
Field Water-Level Measurements Count:	0
Site-Visit Data Begin Date :	1999-05-19
Site-Visit Data End Date :	1999-05-19
Site-Visit Data Count :	1
Latitude :	42.420652
Longitude :	-71.142831
Last Date in Agency List :	2025-09-14

Map Id: R89
Direction: SE
Distance: 0.977 mi., 5161 ft.
Elevation: 11 ft.
Relative: Lower

Site Name : 280921 MA
42.4183, -71.110596
MA
Database(s) : [WELLS - MA]

Envirosite ID: 51775850
EPA ID: N/R

WELLS - MA

Well ID :	280921
Well Address :	30 High Street, MEDFORD
Date Completed :	1999-03-11
Well Type :	Monitoring
Work Performed :	New Well
Total Depth :	7.00
Depth to Bedrock :	0
Water Level :	3.00
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.418300
Longitude :	-71.110596

Map Id: R89
Direction: SE
Distance: 0.977 mi., 5161 ft.
Elevation: 11 ft.
Relative: Lower

Site Name : 280921 MA
42.4183, -71.110596
MA
Database(s) : [WELLS - MA) *(cont.)*

Envirosite ID: 51775850
EPA ID: N/R

WELLS - MA *(cont.)*

Last Date in Agency List : 2025-07-09

Map Id: Q90
Direction: SSW
Distance: 0.979 mi., 5169 ft.
Elevation: 10 ft.
Relative: Lower

Site Name : 606979 MA
42.414076, -71.131242
MA
Database(s) : [WELLS - MA]

Envirosite ID: 51774447
EPA ID: N/R

WELLS - MA

Well ID : 606979
Well Address : 392 Alewife Brook Parkway, SOMERVILLE
Date Completed : 2012-06-04
Well Type : Monitoring
Work Performed : New Well
Total Depth : 20.00
Depth to Bedrock : 0
Water Level : 5.00
Agency Link : Click here for hyperlink provided by the agency.
Latitude : 42.414076
Longitude : -71.131242
Last Date in Agency List : 2025-07-09

Map Id: 91
Direction: NW
Distance: 0.982 mi., 5184 ft.
Elevation: 20 ft.
Relative: Lower

Site Name : 125184 MA
42.443103, -71.140686
MA
Database(s) : [WELLS - MA]

Envirosite ID: 51752202
EPA ID: N/R

WELLS - MA

Well ID : 125184
Well Address : 63 Grove Place, WINCHESTER
Date Completed : 2004-06-28
Well Type : Monitoring
Work Performed : New Well
Total Depth : 25.00
Depth to Bedrock : 0.00
Water Level : 9.00
Agency Link : Click here for hyperlink provided by the agency.
Latitude : 42.443103
Longitude : -71.140686
Last Date in Agency List : 2025-07-09

Map Id: 92
Direction: ESE
Distance: 0.983 mi., 5192 ft.
Elevation: 25 ft.
Relative: Lower

Site Name : 122409 MA
42.420691, -71.107706
MA
Database(s) : [WELLS - MA]

Envirosite ID: 51759981
EPA ID: N/R

WELLS - MA

Well ID :	122409
Well Address :	67 Forest Street, MEDFORD
Date Completed :	2003-05-19
Well Type :	Monitoring
Work Performed :	New Well
Total Depth :	14.00
Depth to Bedrock :	0.00
Water Level :	8.00
Agency Link :	Click here for hyperlink provided by the agency.
Latitude :	42.420691
Longitude :	-71.107706
Last Date in Agency List :	2025-07-09

Map Id: S93
Direction: NNW
Distance: 0.989 mi., 5222 ft.
Elevation: 185 ft.
Relative: Higher

Site Name : 422649071074901
42.44704, -71.129776
MA
Database(s) : [NWIS]

Envirosite ID: 15909802
EPA ID: N/R

NWIS

Site Identification Number :	422649071074901
Site Type :	Well
Station Name :	MA-XOW 22
Agency :	U.S. Geological Survey
District :	Massachusetts
State :	MA
County :	Middlesex County
Country :	USA
Land Net Location :	N/R
Name of Location Map :	N/R
Scale of Location Map :	N/R
Altitude of Gage/Land Surface :	180.00
Method Altitude Determined :	Interpolated from topographic map.
Altitude Accuracy :	10
Altitude Datum :	National Geodetic Vertical Datum of 1929
Hydrologic Unit :	Charles
Drainage Basin :	N/R
Topographic Setting :	Hillside
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNO
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	1940
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Data have been checked by the reporting agency.
Data-Other GW Files :	YYYNNNNN
National Aquifer :	N/R
Local Aquifer :	Bedrock
Local Aquifer Type :	N/R
Well Depth :	92.0

Map Id: S93
Direction: NNW
Distance: 0.989 mi., 5222 ft.
Elevation: 185 ft.
Relative: Higher

Site Name : 422649071074901
42.44704, -71.129776
MA

Database(s) : [NWIS] ***(cont.)***

Envirosite ID: 15909802
EPA ID: N/R

NWIS ***(cont.)***

Hole Depth :	N/R
Source of Depth Data :	Z
Project Number :	N/R
Real-Time Data Flag :	0
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	1952-06-13
Water-Quality Data End Date :	1954-06-16
Water-Quality Data Count :	2
Field Water-Level Measurements Begin Date:	1940-06-01
Field Water-level Measurements End Date:	1940-06-01
Field Water-Level Measurements Count:	1
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	0
Latitude :	42.44704
Longitude :	-71.129776
Last Date in Agency List :	2025-09-14

RADON DATA:

STATE SOURCE: No Available Data

FEDERAL AREA RADON INFORMATION FOR: 02155

NUMBER OF SAMPLE SITES: 12

Area:	Average Activity:	% <4 pCi/L:	% 4-20 pCi/L:	% >20 pCi/L:
basement	1.98 pCi/L	100%	0%	0%
unknown	1.25 pCi/L	100%	0%	0%

FEDERAL EPA RADON ZONE FOR MIDDLESEX COUNTY: Zone = 1

Note: Zone 1 indoor average level > 4 pCI/L

: Zone 2 indoor average level > = 2 pCI/L and < = 4 pCI/L

: Zone 3 indoor average < 2 pCI/L

EPICENTERS
National Geographical Data Center
National Geographical Data Center
303-497-6826
List of recent and historic earthquakes and information.

DIGITAL OBSTACLE
Obstacles of interest to aviation users
Federal Aviation Administration
855-379-6518
The Digital Obstacle File describes all known obstacles of interest to aviation users in the U.S. with limited coverage of the Pacific the Caribbean Canada and Mexico. The obstacles are assigned unique numerical identifiers; accuracy codes and listed in order of ascending latitude within each state or area by FAA Region.

AIRPORT FACILITIES
Airport landing facilities
Federal Aviation Administration
(866) 835-5322
Airport landing facilities

NWIS
National Water Information Systems
United States Geological Society
(703) 648-5953
Information on all water resources for the United States. This database contains all current and historical data for the nation.

PWS
Public Water Supply
Environmental Protection Agency
(800) 426-4791
Safe drinking water information Systems

PWS ENF
Public Water Supply locations with Enforcement Violations
Environmental Protection Agency
(800) 426-4791
Safe drinking water information Systems with enforcememnt violations

HIST PWS ENF
Historical Public Water Supply locations with Enforcement Violations
Environmental Protection Agency
(800) 426-4791
List of Safe Drinking Water Information Systems (SDWIS) with enforcement violations that are no longer in current agency list.

WELLS - MA
Wells
Massachusetts Energy & Environmental Affairs (EEA)
Well locations

RADON
National Radon Database
U.S. Environmental Protection Agency
215-814-2469
A study of the EPA/State Residential Radon Survey and the National Residential Radon Survey.

RADON EPA
RADON EPA
U.S. Environmental Protection Agency
215-814-2469
EPA list of Radon zones

BASINS
Better Assessment Science Integrating point & Non-point Sources
U.S. Environmental Protection Agency
855-246-3642
Integrated geographical information system national watershed data and environmental assessment known as Better Assessment Science Integrating point & Non-point Sources

FLOOD Q3
Flood data
Environmental Protection Agency
(202) 566-1667
Q3 Flood Data

FLOOD DFIRM
National Flood Hazard Layer Database
Federal Emergency Management Agency
The National Flood Hazard Layer Database (NFHL) is a computer database that contains the flood hazard map information from FEMAs Flood Map Modernization program. These map data are from Digital Flood Insurance Rate Map (DFIRM) databases and Letters of Map Revision.

HYDROLOGIC UNIT
Hydrologic Unit Maps
USGS
The United States Geological Survey created a hierarchical system of hydrologic units originally called regions, sub-regions, accounting units, and cataloging units. Each unit was assigned a unique Hydrologic Unit Code (HUC). As first implemented the system had 21 regions, 221 subregions, 378 accounting units, and 2,264 cataloging units. Over time the system was changed and expanded. As of 2010 there are six levels in the hierarchy, represented by hydrologic unit codes from 2 to 12 digits long, called regions, subregions, basins, subbasins, watersheds, and subwatersheds. The table below describes the system's hydrologic unit levels and their characteristics, along with example names and codes.

WETLANDS NWI
National Wetland Inventory
U.S. Fish and Wildlife Service
(703) 358-2171
Wetland Inventory for the United States

WETLANDS - MA
Wetlands
U.S. Fish and Wildlife Service
Wetlands Inventory

SSURGO
Detailed Soil Data Map
Natural Resources Conservation Service: U.S. Department of Agriculture
(202) 690-4985
Detailed Soil Data Map

STATSGO & MUI
General Soil Data Map
Natural Resources Conservation Service: U.S. Department of Agriculture
(202) 690-4985
General Soil Data Map

USGS GEOLOGIC AGE
USGS Digital Data Series DDS
Natural Resources Conservation Service: U.S. Department of Agriculture
(202) 690-4985
USGS Digital Data Series DDS: Geologic Age and Rock Stratigraphic Unit

M. Environmental Noise

Acoustical consultant, Acentech, installed noise meters on the Medford High School property on February 11, 2026. Acentech is in the process of analyzing the data and preparing a report. This information will be included in the Preferred Schematic Report.

N. Assessment of Hazardous Materials

A hazardous materials report dated January 29, 2026, prepared by CDW is attached at the end of this seciton.

PRELIMINARY HAZARDOUS MATERIALS SUMMARY REPORT
Medford High School

489 Winthrop Street
Medford, Massachusetts 02115

Prepared by:
CDW Consultants, Inc.
4 California Drive, Suite 301
Framingham, Massachusetts

Prepared for:
SMMA
1000 Massachusetts Avenue
Cambridge, Massachusetts 02138

CDW Project #6004.0

January 20, 2026

REVISED January 29, 2026

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1.0 INTRODUCTION

CDW Consultants, Inc. (CDW) is pleased to present this preliminary hazardous building materials (HBM) summary report summarizing the findings of the presumed suspect asbestos-containing materials (ACM), lead based paint (LBP) and hazardous materials inspection of the Medford High School (MHS), located at 489 Winthrop Street, in Medford, Massachusetts (Site). In December 2025, CDW staff conducted a visual HBM survey along with limited sampling of building materials for ACM and LBP.

2.0 PROJECT UNDERSTANDING

The intent of the preliminary survey was conducted in support of a Feasibility Study for the Site. The HBM survey was conducted to identify suspect ACM, LBP, visible hazardous materials including mercury switches, transformers, light ballasts, fluorescent tubes, above ground storage tanks (ASTs), hydraulic fluids (elevators, lifts) and other visible hazardous materials connected to building systems. Limited samples were obtained of suspect ACM and LBP as part of the HBM survey. Additionally, plans and reports were reviewed to determine identified ACM, LBP and poly-chlorinated biphenyl (PCB) containing building materials to provide preliminary range of costs for abatement. According to the Massachusetts School Building Authority (MSBA) Statement of Interest, the priorities identified for the Site include:

- Replacement or renovation of a building which is structurally unsound or otherwise in a condition seriously jeopardizing the health and safety of school children, where no alternative exists.

- Replacement, renovation or modernization of school facility systems, such as roofs, windows, boilers, heating and ventilation systems, to increase energy conservation and decrease energy related costs in a school facility.

3.0 GENERAL SITE CONDITIONS

The Medford High School and Medford Vocational Technical High School complex was constructed during from 1967 to 1970. The MHS is approximately 570,000 square feet (SF) and contains 300+-classrooms, gyms, vocational shops, theatre, administrative space, kitchen and cafeterias. It is a three-story, reinforced concrete structure with multiple low-slope roofs. The foundation construction consists of conventional concrete spread footings to support structural columns and is slab on grade.

Exterior

The exterior of the MHS consists of primarily reinforced concrete panels, brick veneer, and mechanically fastened concrete fins. Expansion joint caulking is located in the brick faced areas of the exterior. The MHS building has not been significantly improved since 1970. The original

exterior concrete wall assembly has several punched openings for windows, doors, and vents. Door openings are enclosed by a mixture of metal door and doorframe assemblies and are sealed with exterior caulking of various types. Most of the openings in the building exterior date to original construction.

At the auditorium, pool and areas surrounding the vocational programs, the exterior assembly includes semi-opaque fiberglass panels. These panels date to the school's original construction.

The original roof, completed in 1970, was replaced with an EDPM roof in 1990 and is approximately 215,934 SF in area. The roof over the science wing is a 40,000 SF PVC roof.

Exterior windows consist of single pane steel casement windows and translucent fiberglass panels at the pool, auditorium, and areas of the vocational section of the building. Classroom windows are single pane casement style. All windows are original construction. There are approximately 900 windows. The sealants and glaze have been replaced in some areas with silicone over the original.

Interior

The main MHS mechanical room is in D Building and houses infrastructure for buildings A, B and D. The walls of the main mechanical room are painted concrete and CMU. The mechanical room contains heat exchangers for buildings A, B and D; two decommissioned air handler units, domestic hot water tanks and pumps, boilers, electric motor control panels and electric transformers, an acid neutralization tank and a sprinkler standpipe servicing the new science wing on the third floor.

The incinerator room contains painted CMU and concrete walls. Interior sealant joints are located between painted CMU with abutting concrete walls. The flooring is finished concrete. The incinerator has been decommissioned for over 40 years, however, MPS has no reports to assess the level of abatement completed.

The heating systems for MHS are composed of low-pressure steam boilers in the school's boiler room and servicing the entire building. The boilers were replaced in 2008 and two more in 2014. Low pressure steam from the boilers is provided to multiple hot water heat exchangers located throughout the building in areas where the air handing units (AHU) are located (e.g., tech etc.) The boilers utilize gas as a fuel source. Historically, there were two 20,000-gallon #6 fuel oil underground storage tanks (USTs) located outside the boiler room, which have been removed.

Domestic hot water for the school is provided by two separate systems; one located on the first-floor mechanical room and one on the second-floor mechanical room in the vicinity of the gymnasium and locker rooms. The copper distribution piping for domestic cold and hot water throughout MHS is from the original construction.

HVAC throughout the classrooms consist of univent heaters, located on the interior side of the outside walls. Heating is provided by hot water coils or steam heating coils. These were installed

during the original school construction. Large sheet metal HVAC air handling units contain suspect ACM flex connectors and duct pin glue, where insulated.

There are three large electrical transformers and switch banks located throughout the three mechanical rooms in the school. The main electrical room is located in D Building and houses the electrical power distribution equipment to service the school. The power distribution system includes panels and feeders that were installed during original construction. These units may contain transite arc panels and hydraulic fluids.

Interior Finishes

The main entry has walls consisting of painted CMU, polished brick, linoleum tiles, and wood paneling. The lobby's floors include original red quarry tile throughout. The theatre contains a wood stage, painted CMU walls with metal catwalks above, concrete flooring under the seating, brick walls with acoustical panels and a plaster ceiling with HVAC ducts.

Classroom walls are painted CMU and concrete. Flooring in the classrooms is composed of 9"x9" vinyl tile with some containing linoleum tile. Ceilings are exposed concrete deck in the tech shops and suspended acoustical ceiling tile. Each classroom contains slate boards, assumed to be glued, doors with windows and associated transoms above the doors. The classrooms facing the exterior walls contain sinks with black undercoating. Vinyl and rubber covebase line the bottoms of the walls.

Hallways contain painted CMU and concrete, some of which has ceramic tile and wood panel finishes. Interior sealant joints are located between painted CMU and abutting concrete walls. Flooring consists of 9" x 9" flooring tiles installed during the original building construction. A variety of acoustic suspended ceiling tile assemblies are also present through the multitude of hallways. Vinyl and rubber covebase line the bottoms of the walls. Some suspect ACM pipe insulation and fittings were noted above suspended ceiling tiles in all wings. Hall door assemblies are periodically located throughout. Stairwells contain painted CMU and concrete walls, and rubber treads are located on concrete stairs. The two covered walkways (breezeways) 9"x9" flooring was recently abated and is currently concrete.

All bathrooms consist of CMU walls with ceramic tile floors. Flooring tile was installed during the original school construction. Sinks and toilets are porcelain.

There are three cafeterias, two of which have seating capacity of 300 students and one with a seating capacity of 150 students. Wall assemblies within the cafeterias are painted CMU and concrete walls, some of which have ceramic tile and wood panel finishes. Flooring includes 9" x 9" flooring tiles installed during the original building construction. The cafeterias include a suspended acoustical ceiling tile with some sections of textured plaster ceilings.

There are four elevators The main elevator, located off the main entry lobby, is a hydraulic powered three-stop cab which was installed during the building's original construction. Other elevators service the building's loading dock and athletic facilities. A fourth elevator is located in the school's main kitchen.

The auto shop contains a concrete floor, painted CMU walls and a concrete ceiling. Electric auto lifts with ISO 32 hydraulic oil tanks are mounted to the lifts. The remnants of several older lifts are located on/in the concrete floor. Also, in the auto shop there is a drum of used oil filters and a drum of used antifreeze. There is minor staining in the garage from drips and grease. Small amounts of gasoline and oils are stored in flammable cabinets.

The large gym contains a rubber floor with wood parquet in the middle. Since the floor was installed in the late 1960s, the rubber floor should be presumed as mercury containing until testing proves otherwise.

In 2013 and 2014, the science wing was renovated and includes 17 labs and classrooms. All flooring and walls are newer construction. Lab tables and benches are composite, and fume hoods are metal.

Plans Review

CDW reviewed architectural plans by Rich Phinney Lang and Cote, Inc. dated July 31, 1969. Some Items of note in relation to HBM are listed below.

- There are notes on several plans stating that Form board was installed on the interior side of exterior concrete walls. Form board / fiberboard products used circa 1969 often contained asbestos, depending on the specific product and manufacturer. Form board was used as fire-resistant board for acoustical or thermal insulation purposes. For products manufactured before ~1980, asbestos content was commonly: 5–25% chrysotile. If installed before 1981 its treated as Presumed Asbestos-Containing Material (PACM) unless proven otherwise by testing.

- Plan A2 depicts a pipe trench in corridor A-14.

- Ducts are depicted under the stage and may contain ACM.

- Ductwork installed in transite is depicted on Plan A-13 in the locker room.

- Sheet A-22 depicts pits for hydraulic fluid.

4.0 ASBESTOS SURVEY

4.1 Report Review

CDW reviewed the prepared by Universal Environmental Consultants (UEC), dated December 2023. The results are provided in the below table.

Material and Location	Asbestos Y/N/A	Quantity
Beige Vinyl Sheet Flooring, 3rd Floor B wing Hallway	No	--
Mastic Under Beige Vinyl Sheet Flooring	Yes	7,830 SF
2'x2' Suspended Ceiling Tile, B Wing	No	--
Mastic Under Beige/Tan Vinyl Floor Tile – B Wing	Yes	41,600 SF
Beige 9"x9" Vinyl Floor Tile – C Wing Hall, Gym Hall, C Wing, C Wing Halls, B Wing Hall Under 12"x12", B Wing Halls, B Wing Classrooms, A Wing Hall, Media Center Under 12"x12"	Yes	128,805 SF
Mastic Under Above	Yes	128,505 SF
Brown 9"x9" Vinyl Floor Tile-Stairwells, Cafeteria 3, C Wing Offices, Admin Lunch Room, Building and Grounds, Conference Room, A Wing Classrooms and Halls, Cafeteria 1 and Kitchen Hallway, teacher Dining, "V" Wing Offices, 2nd Floor Main Offices	Yes	27,765 SF
Mastic Under Above	Yes	27,765 SF
Gray Sink Undercoating-A210, A208, A205, A203, A103	Yes	17 Each
Mastic Under Beige and Blue 12"x12" Vinyl Floor Tile-Library, Pool Stairwell, A-103	Yes	7,020 SF
Caulking Between Block and Cement, Cement Joints at Wals	Yes	Unknown

Material and Location	Asbestos Y/N/A	Quantity
Breeching Insulation	Incinerator Room	280 SF
HVAC Vibration Cloth-Gym, Receiving, Mech. Room, Generator Room, Auditorium Catwalk, Pool Loft, Pool Filter Room	Yes	30 Each
Black Sink Coating-Superintendent's, Acct. Payable, Personnel Office, Building and Grounds, Teachers Room	Yes	6 Each
Red Pebble Linoleum and Mastic-First Floor Covered Exits	Yes	400 SF
Black 2"x12" Vinyl Floor Tile-and Mastic – Public Information Offices	Yes	500 SF
Gray 12"x12" Vinyl Floor Tile-and Mastic – Room V-205	Yes	500 SF

Additionally, the following items were listed as NOT containing ACM in the UEC Report:

- Pipe fittings on fiberglass insulated pipe
- Textured Ceiling Skim Coat – Cafeterias, All rooms in C wing and V Wing
- Tectum Panels on Ceiling Decks-Unknown
- 2'x2' Suspended Acoustical Ceiling Tile-C Wing Hall, Gym Hall, A wing Halls, B Wing Halls, B Wing Classrooms
- Sheetrock and Joint Compound-Office Area
- Smooth hard plaster – Above Lockers-All Wings, Auditorium
- 1'x1' Acoustical Tile on Track-Library, Music, C Wing Offices
- Window Sills
- 1' x 1' Acoustical Tile and Glue Daubs – A104 Through A121

4.2 Methods

The United States Environmental Protection Agency (USEPA) and Massachusetts Department of Environmental Protection (MassDEP) are responsible for developing and enforcing regulations necessary to protect the general public from airborne contaminants that are known to be hazardous to human health. They regulate ACM associated with renovation, demolition, and asbestos abatement

projects via the National Emissions Standard for Hazardous Air Pollutants (NESHAP) Title 40 CFR Part 61. These regulations require that buildings be inspected for ACM prior to renovation/demolition projects. They stipulate that all friable ACM as well as non-friable ACM that are in poor condition or will be made friable by renovation or demolition activity be removed or otherwise appropriately abated before they are disturbed.

The investigative work for the asbestos survey included conducting a visual inspection of physically accessible areas of the structure. CDW also conducted minor non-destructive sampling. Once inspection was completed, the building components were categorized into homogeneous areas. These homogeneous areas included: surfacing materials, thermal system insulation, and miscellaneous materials. In December 2025 Ms. Susan Cahalan (Massachusetts Asbestos Inspector AI060784) collected bulk samples of different homogeneous suspect materials for asbestos analysis. The bulk samples were delivered under chain of custody to Asbestos Identification Laboratory, Inc. (AIL) of Woburn, Massachusetts, fully accredited asbestos analytical laboratories, analyzed the bulk samples utilizing Polarized Light Microscopy (PLM) in accordance with the requirements of 40 CFR Part 763, Subpart F. Samples analyzed to contain equal to or greater than greater than 1% asbestos are to be treated as ACM as defined by the USEPA and MassDEP. A positive stop method was used – if one sample in a homogeneous group is positive then additional samples of the same material are not analyzed. The asbestos analytical reports are provided in Appendix A.

4.2 Findings

Laboratory analytical findings are provided in the below table.

Field ID	Material	Location	Asbestos % / Result
1A	Gray Pipe Fitting	Mechanical Room	None Detected
1B	Gray Pipe Fitting	Mechanical Room	None Detected
2A	Gray Pipe Fitting / Valve	Mechanical Room	None Detected
2B	Gray Pipe Fitting / Valve	Mechanical Room	None Detected
3	Gray Pipe Fitting	Mechanical Room	None Detected
4A	Brown Cloth Flex Connector	Mechanical Room	None Detected
4B	Brown Cloth	Mechanical Room	None Detected

Field ID	Material	Location	Asbestos % / Result
	Flex Connector		
5A	Brown Glue On Duct Pins	Mechanical Room	None Detected
5B	Brown Glue On Duct Pins	Mechanical Room	None Detected
5C	Brown Glue On Duct Pins	Mechanical Room	None Detected
6A	Gray Insulation on FG End Cap	Mechanical Room	**Chrysotile 75**
6B	Gray Insulation on FG End Cap	Mechanical Room	Not analyzed
6C	Gray Insulation on FG End Cap	Mechanical Room	Not analyzed
7A	Interior Window Gray Glaze	Door Assembly – Mechanical Room Hallway	None Detected
7B	Interior Window Gray Glaze	Door Assembly – Mechanical Room Hallway	None Detected
7C	Interior Window Gray Glaze	Door Assembly – Mechanical Room Hallway	None Detected
8A	White Paint (Wall)	Mechanical Room Hallway	None Detected
8B	White Paint (Wall)	Mechanical Room Hallway	None Detected
8C	White Paint (Wall)	Mechanical Room Hallway	None Detected

Field ID	Material	Location	Asbestos % / Result
9A	Tan/Gray Window Glaze (Interior)	Mechanical Room Hallway	**Chrysotile 3**
9B	Tan/Gray Window Glaze (Interior)	Mechanical Room Hallway	Not analyzed
9C	Tan/Gray Window Glaze (Interior)	Mechanical Room Hallway	Not analyzed
10A	Yellowish Paint	Electrical Room Next to Boiler	None Detected
10B	Yellowish Paint	Electrical Room Next to Boiler	None Detected
10C	Yellowish Paint	Electrical Room Next to Boiler	None Detected
11A	Gray Flex Connector	Electrical Room Next to Boiler	**Chrysotile 80**
11B	Gray Flex Connector	Electrical Room Next to Boiler	Not analyzed
12A	Black Glue Under FG Pipe Wrap	Storage Room Next to Pool Filter Room	None Detected
12B	Black Glue Under FG Pipe Wrap	Storage Room Next to Pool Filter Room	None Detected
12C	Black Glue Under FG Pipe Wrap	Storage Room Next to Pool Filter Room	None Detected
13A	Tan Paint	Receiving Dock / Overhead Door	**Chrysotile 2**

Field ID	Material	Location	Asbestos % / Result
13B	Tan Paint	Receiving Dock / Overhead Door	Not analyzed
13C	Tan Paint	Receiving Dock / Overhead Door	Not analyzed
14A	Brown Glue Duct Pins	HVAC – Receiving Area	**Chrysotile 4**
14B	Brown Glue Duct Pins	HVAC – Receiving Area	Not analyzed
15A	Interior Black Window Glaze	Office – Receiving Area	**Chrysotile 2**
15B	Interior Black Window Glaze	Office – Receiving Area	Not analyzed
15C	Interior Black Window Glaze	Office – Receiving Area	Not analyzed
16A	Black Slate Sills	3rd Floor Classrooms	None Detected
16B	Black Slate Sills	3rd Floor Classrooms	None Detected
16C	Black Slate Sills	3rd Floor Classrooms	None Detected
16D	Black Slate Sills	3rd Floor Classrooms	None Detected
16E	Black Slate Sills	3rd Floor Classrooms	None Detected
17A	Gray Interior Window Glaze	Assembly Door – 3rd Floor C	**Chrysotile 2**
17B	Gray Interior Window Glaze	Assembly Door – 3rd Floor C	Not analyzed
17C	Gray Interior Window Glaze	Assembly Door – 3rd Floor C	Not analyzed

Field ID	Material	Location	Asbestos % / Result
18A	Gray/Tan Window Glaze	Exterior Windows – 3rd Floor C	**Chrysotile 2**
18B	Gray/Tan Window Glaze	Exterior Windows – 3rd Floor C	Not analyzed
18C	Gray/Tan Window Glaze	Exterior Windows – 3rd Floor C	Not analyzed
18D	Gray/Tan Window Glaze	Exterior Windows – 3rd Floor C	Not analyzed
18E	Gray/Tan Window Glaze	Exterior Windows – 3rd Floor C	Not analyzed
19A	Interior Gray Window Glaze	Hall Assembly – 3rd Floor C	**Chrysotile 2**
19B	Interior Gray Window Glaze	Hall Assembly – 3rd Floor C	Not analyzed
19C	Interior Gray Window Glaze	Hall Assembly – 3rd Floor C	Not analyzed
20A	Tan Paint	Breezeway – 3rd Floor C	None Detected
20B	Tan Paint	Breezeway – 3rd Floor C	None Detected
20C	Tan Paint	Breezeway – 3rd Floor C	None Detected
21A	Textured Ceiling (White)	3rd Floor Cafeteria	**Chrysotile 2**
21B	Textured Ceiling (White)	3rd Floor Cafeteria	Not analyzed
21C	Textured Ceiling (White)	3rd Floor Cafeteria	Not analyzed

Field ID	Material	Location	Asbestos % / Result
21D	Textured Ceiling (White)	3rd Floor Cafeteria	Not analyzed
21E	Textured Ceiling (White)	3rd Floor Cafeteria	Not analyzed
21F	Textured Ceiling (White)	3rd Floor Cafeteria	Not analyzed
21G	Textured Ceiling (White)	3rd Floor Cafeteria	Not analyzed
22A	Grayish Expansion Joint in CMU	Gym 2 w/ Rubber Floor	None Detected
22B	Grayish Expansion Joint in CMU	Gym 2 w/ Rubber Floor	None Detected
22C	Grayish Expansion Joint in CMU	Gym 2 w/ Rubber Floor	None Detected
22D	Grayish Expansion Joint in CMU	Gym 2 w/ Rubber Floor	None Detected
22E	Grayish Expansion Joint in CMU	Gym 2 w/ Rubber Floor	None Detected
23A	Gray Int. Window Glaze	Tech Hall Assembly	**Chrysotile 2**
23B	Gray Int. Window Glaze	Tech Hall Assembly	Not analyzed
23C	Gray Int.	Tech Hall Assembly	Not analyzed

Field ID	Material	Location	Asbestos % / Result
	Window Glaze		
24A	Black Sink Coating	B Wing Exterior Facing Classrooms	**Chrysotile 5**
24B	Black Sink Coating	B Wing Exterior Facing Classrooms	Not analyzed
24C	Black Sink Coating	B Wing Exterior Facing Classrooms	Not analyzed
25A	Int. Gray Window Glaze	B Wing Classroom Door + Transoms	**Chrysotile 2**
25B	Int. Gray Window Glaze	B Wing Classroom Door + Transoms	Not analyzed
25C	Int. Gray Window Glaze	B Wing Classroom Door + Transoms	Not analyzed
25D	Int. Gray Window Glaze	B Wing Classroom Door + Transoms	Not analyzed
25E	Int. Gray Window Glaze	B Wing Classroom Door + Transoms	Not analyzed

Abatement costs of ACM and Presumed ACM (PACM) are provided in the below table. Note these costs are not official costs but industry average.

Material	Location	Quantity	Unit Price	Total Price
Beige Vinyl Sheet Flooring Mastic	3rd Floor B Wing Hallway	7,830 SF	$4	$31,320
Mastic Under Beige /Tan Floor Tile	B Wing	41,600 SF	$4	$166,400

Material	Location	Quantity	Unit Price	Total Price
Beige 9”x9” Vinyl Floor Tile and Mastic	C Wing Hall, Gym Hall, C Wing, C Wing Halls, B Wing Hall Under 12”x12”, B Wing Halls, B Wing Classrooms, A Wing Hall, Media Center Under 12”x12”	128,805 SF	$4	$515,220
Brown 9”x9” Vinyl Floor Tile and Mastic	Stairwells, Cafeteria 3, C Wing Offices, Admin Lunch Room, Building and Grounds, Conference Room, A Wing Classrooms and Halls, Cafeteria 1 and Kitchen Hallway, teacher Dining, “V” Wing Offices, 2nd Floor Main Offices	27,765 SF	$4	$111,060
Gray and Black Sink Undercoating	A210, A208, A205, A203, A103 Superintendent’s, Acct. Payable, Personnel Office, Building and Grounds, Teachers Room, Classrooms Facing Exterior Walls	140 Each	$50	$7,000
Mastic Under Beige and Blue 12”x12” Vinyl Floor Tile	Library, Pool Stairwell, A-103	7,020 SF	$3	$21,060
Breeching Insulation	Incinerator Room	280 SF	$18	$5,040
HVAC Vibration Cloth	Gym, Receiving, Mech. Room, Generator Room, Auditorium Catwalk, Pool Loft, Pool Filter Room	30 Each	$75	$2,250
Red Pebble Linoleum and Mastic	First Floor Covered Exits	400 SF	$4	$1,600

Material	Location	Quantity	Unit Price	Total Price
Black 2”x12” Vinyl Floor Tile-and Mastic	Public Information Offices	500 SF	$4	$2,000
Gray 12”x12” Vinyl Floor Tile-and Mastic	Room V-205	500 SF	$4	$2,000
Slate Boards, White Boards and Tack Boards with Glue Daubs	Classrooms, Some Halls and Offices	1,000 Each	$100	$100,000
Gaskets	On Piping at Valves, Connections, Boiler Rooms, Mechanical Rooms, Some Above Ceilings in Corridors, Unseen behind Walls	750 Each	$100	$75,000
Pipe Insulation Including Fitting on ACM Pipe Insulation	Above Ceilings, Pipe Tunnel, Behind Walls	18,000 LF	$17	$306,000
Pipe Insulation Fittings on Fiberglass Insulated Pipe Including End Cap Sealant	Above Ceilings, Pipe Tunnel, Behind Walls	750 Each	$17	$12,750
Flex Connectors	HVAC Equipment	100 Each	$100	$10,000
Insulation on HVAC	Behind Walls, Theatre Ceiling	1,000 SF	$8	$8,000
Square Duct Pin Glue	On Insulated HVAC Equipment	1,000 Each	$5	$5,000
Acoustical Panels and Glue	Library, Music, Theatre, Chorus, Band	10,000 SF	$12	$120,000
Plaster Ceiling	Auditorium/Theatre Ceiling	7,200 SF	$12	$86,400

Material	Location	Quantity	Unit Price	Total Price
Stage-Paper/Mastic Under Wood	Stage	2,100 SF	$8	$16,800
Doors with Window Glaze	Classrooms Except Tech and Inner Classrooms/Offices	250 Each	$125	$31,250
Interior Window Glaze	Offices, Admin, Classrooms Ave. 4'x4'	1,200 Each	$75	$90,00
Door Assembly Glaze Including Sidelights	Hallways	68 Each	$200	$13,600
Transite Arc Panels	Original Switchgear/Transformers	3 Units	$1,000	$3,000
White Textured Ceiling	Cafeteria E	7,350 SF	$8	$58,800
Duct in Transite	Part E Near Locker Room	150 LF	$12	$1,800
Walk In Refrigerator and Freezers (Mastic)	Kitchen and Supply	6 Each	$3,000	$18,000
Form Board	Depicted on 1969 Drawings-Interior Side of Exterior Concrete Select Areas	14,200 SF	$12	$170,400
Rubber Flooring	Gym 2 Mercury and PACM Glue/Mastic	14,000 SF	$25	$350,000
Exterior Window Glaze and Caulk Under Silicone	Exterior	900 Each (Various Sizes, Average 6'x5')	$125	$112,500
Exterior Caulk	Unit Vents	75 LF	$12	$900
Exterior Caulk	Around Doors	55 Each	$75	$4,125

Material	Location	Quantity	Unit Price	Total Price
Exterior Expansion Joints	On Brick Face Areas	2,600 LF	$12	$31,200
Vapor Barrier Material	Behind Brick Faced Portions – Exterior	23,200 SF	$8	$185,600
Tan Paint	Receiving-Overhead Door	1 Each (Approx 10'x10')	$500	$500
			Subtotal	$2,586,575
			PCBs in Sealants/Soils Contingency	$400,000
			Unknown Presumed Subsurface Transite Pipe Contingency	$200,000
			Subtotal	$3,186,575
			20% Contingency	$637,315
TOTAL				$3,823,890

SF=Square Feet, LF=Linear Feet

4.4 Recommendations

CDW recommends conducting a destructive NESHAP survey once the building is vacant to determine the extent of PACM and inspect inaccessible areas. An inspection is required by the USEPA Title 40 CFR Part 61 NESHAP regulation and Massachusetts Department of Environmental Protection (MassDEP) Regulation 310 CMR 7.15. These regulations require that buildings be inspected for ACM prior to renovations and demolitions.

5.0 LEAD-BASED PAINT

5.1 Methods

CDW performed a visual inspection of painted areas for suspect LBP. CDW collected samples of paint chips for laboratory analysis. The samples were submitted to EMSL Laboratories in Carle Place, New York for analysis of lead via Atomic Absorption Spectrometry (AAS). The laboratory analytical report is provided in Appendix B.

5.2 Findings

Laboratory analytical results are provided in the below table.

Sample ID	Sample Description	Location / Substrate	Lead Result (% wt.)	Reporting Limit (% wt.)	Date Sampled
LBP-1	Blue over Red Paint	Metal stair rail – Mechanical Room	15.0	0.0064	12/31/25
LBP-2	White Paint	Concrete walls near Mechanical Room	0.019	0.0064	12/31/25
LBP-3	White/Gray Paint	CMU – Transformer Room	0.036	0.0064	12/31/25
LBP-4	White/Tan Paint	Concrete wall near overhead doors (Receiving)	0.021	0.0064	12/31/25
LBP-5	Tan Paint	Columns at Breezeway	0.026	0.0064	12/31/25

Sample ID	Sample Description	Location / Substrate	Lead Result (% wt.)	Reporting Limit (% wt.)	Date Sampled
LBP-6	White Textured Paint	Cafeteria ceiling	<0.0064	0.0064	12/31/25
LBP-7	Tan Paint	CMU hallway to roof	0.052	0.0064	12/31/25
LBP-8	White/Tan Paint	CMU – Pool area	0.010	0.0064	12/31/25
LBP-9	Black over Red Paint	Metal classroom doors – C Wing	0.17	0.0064	12/31/25
LBP-10	White/Gray over Black Paint	Metal doors – B Wing	<0.0064	0.0064	12/31/25

The only LBP is the metal stair rail paint. All other samples are considered lead containing paint (LCP). Renovation or demolition activities that disturb surfaces that contain lead must be conducted in accordance with the OSHA regulation 29 CFR 1926.62 "Lead Exposure in Construction: Interim Final Rule." This regulation requires that a site-specific health and safety plan be prepared before conducting activities that create airborne lead emissions. Such a plan should include the identification of lead components, an exposure assessment, and, if applicable, the required work procedures and personnel protection to be used. Handling or impacting components that are covered by LBP may require compliance with the OSHA lead standard. To minimize exposure to airborne dust or fumes, torch burning, cutting, grinding, or similar high impact work on components covered by LBP should be avoided. Such work would need to be conducted by properly trained workers using appropriate worker protection and engineering controls.

In addition to the worker protection requirements stipulated by OSHA, MassDEP and the USEPA regulate the disposal of wastes that are potentially hazardous. Such wastes may include paint chips and residue generated during abatement or repainting work, or whole components, such as wood windows, doors, and trim that are coated with LBP and that are disposed of as the result of

renovation or demolition work. To determine the required method for disposing of permeable items coated with LBP, the MassDEP and the USEPA require representative sampling of the debris to determine the quantity of lead that would be expected to leach into the environment if the debris were disposed of in a landfill. The representative sample(s) must be analyzed by the Toxicity Characteristic Leaching Process (TCLP) to determine the proper disposal method.

6.0 HAZARDOUS MATERIALS SURVEY

6.1 Methods

OHM Visual Inspection

CDW visually inspected the Site building for universal, special and hazardous wastes associated with building materials. These included but were not limited to the following:

- Mercury-containing devices (fluorescent light tubes, thermostats, gauges, etc.);
- Polychlorinated bi-phenyl (PCB)-containing articles, equipment and devices (light ballasts, electrical switches, etc.);
- Chlorofluorocarbon (CFC)-containing equipment (refrigerants, air conditioners/HVAC equipment, water bubblers, etc.)
- Tritium-containing devices (Exit signs);
- Lead-Acid batteries (emergency lights, etc.); and
- Pressurized cylinders (fire extinguishers, etc.).

6.2 Findings

OHM

The visual survey for hazardous materials identified mercury-containing light tubes, electronic ballasts, mercury containing thermostats and switches, lead and tritium batteries, hydraulic fluids, science chemicals, gas cylinders, oils, drums of waste oil, underground fuel tank, transformers, refrigerants, and other hazardous materials. No hazardous materials sampling or analysis was conducted as part of this preliminary survey. A list of OHMs identified, and costs are listed in the below table.

Material Description	Est. Quantity	Units	Unit Cost	Total

Material Description	Est. Quantity	Units	Unit Cost	Total
Fluorescent Bulbs (Inc. Used in Storage)	4,000	Each	$2	$8,000
Electronic Ballasts	2,000	Each	$35	$70,000
di-(2-ethylhexyl) phthalate (DHPE) and PCB Ballasts	900	Each	$50	$45,000
Exit Signs (Batteries)	60	Each	$35	$2,100
Thermostats (Mercury)	100	Each	$50	$5,000
Older Door Retractors (Oils)	32	Each	$50	$1,600
55-Gallon Drums of Used Oils, Filters, Etc. Automotive, Maintenance Shed	20	Each	$350	$7,000
Used Paint Cans	50	Each	$10	$500
Hydraulic Fluid (Automotive)	100	Gallons	$25	$2,500
Hydraulic Fluid Reservoir Under Pad in Automotive (Assume PCBs)	500	Gallons	$80	$40,000
Hydraulic Fluid (Elevators)	300	Gallons	$25	$7,500
Refrigerants from Freezers/Refrigerators in Kitchen and Culinary	250	Gallons	$35	$8,750
Refrigerants from HVAC System in Mechanical Room and Chiller in Electrical Room	500	Gallons	$35	$17,500

Material Description	Est. Quantity	Units	Unit Cost	Total
Oil Filled Gauges (Boiler Room)	112	Each	$25	$2,800
Lead Pack in Galvanized Steel Pipe Connections (Mechanical Room)	50	Each	$150	$7,500
Acid Neutralization Tank for Science Rooms	1	Each	$15,000	$15,000
TOTAL				$240,750

6.3 Recommendations

Prior to removal, light tubes, ballasts, compact fluorescent bulbs, lead and tritium batteries, thermostats and switches will require proper handling, removal, transportation and off-site recycling/reclamation. Hydraulic oil from the elevators, transformers and refrigerants will require handling and disposal in accordance with state and federal regulations. Laboratory chemicals, gas cylinders, and other reusable items should be properly stored, in their original containers, and are recommended for re-use.

7.0 RADON TESTING

7.1 Methods

CDW performed an inspection of subsurface vapor intrusion via the deployment of radon canister kits. CDW deployed four indoor radon testing kits. Each kit includes two samples cannisters with one serving as the primary sample and the second as a duplicate. The radon testing kits use a liquid scintillation radon detector for concentrations. The laboratory analytical report are provided in Appendix C.

7.2 Findings

Laboratory analytical results are provided in the tables below.

Kit 1: E Mech Room

Sample ID	Location	Temp F	Humidity %	Result
RA208814	E Mech Room	68	40	0.5 pCi/L
RA208884	E Mech Room	68	40	0.4 pCi/L
				0.5 pCi/L Avg

Kit 2: Voke Wing Storage

Sample ID	Location	Temp F	Humidity %	Result
RA208833	Voke Wing Storage	68	40	0.5 pCi/L
RA208873	Voke Wing Storage	68	40	0.4 pCi/L
				0.5 pCi/L Avg

Kit 3: Room C115

Sample ID	Location	Temp F	Humidity %	Result
RA208850	Room C115	68	40	0.5 pCi/L
RA215681	Room C115	68	40	0.5 pCi/L
				0.5 pCi/L Avg

Kit 4: Storage Under Pool

Sample ID	Location	Temp F	Humidity %	Result
RA215679	Storage Under Pool	68	40	0.5 pCi/L
RA208898	Storage Under Pool	68	40	0.6 pCi/L
				0.5 pCi/L Avg

The USEPA regulates an action level of 4.0 picocuries per liter of air (pCi/L). None of the samples exceeded the recommended EPA threshold of 4.0 picocuries per Liter.

7.3 Recommendations

To confirm the measured radon concentration and account for seasonal/annual variability, perform repeat radon testing in 12 months. Testing should be conducted in the lowest occupied level and in the same room(s)/locations as the prior measurement (or as close as practicable), using closed-building conditions and EPA-recommended protocols.

Limitations

The conclusions are limited to the information available at the time of the field survey and the scope of services, as defined. No subsurface soil or groundwater sampling and analysis was performed. Where access to portions of the Site or to structures on the site was unavailable or limited, CDW renders no opinion as to the presence of hazardous material or the presence of indirect evidence related to hazardous material in that portion of the site or structure. A through, destructive survey cannot occur until the building is vacant. This report cannot be relied upon solely for renovation or demolition. The testing performed forms the basis for conclusions expressed and areas inaccessible for testing limits those conclusions. No other conclusions, interpretations or recommendations are contained or implied in this report other than those expressed. While CDW followed industry standards during the inspection, we do not warrant that all suspect hazardous building materials were identified in or on the buildings and shall not be held liable related to future abatement costs related to hazardous materials that are either not discovered or not appropriately characterized. This is due in part to inherent problems with every building inspection, such as, but not limited to:

- Seemingly homogeneous materials that are not in fact homogeneous;
- Seemingly representative locations that are not in fact representative;
- Layered materials that are not uniformly present or are isolated;
- Materials that are present and accessible but were not considered to be hazardous,
- Materials that are present in an isolated and limited quantity; and
- Material that is present in locations that are unsafe or otherwise difficult to access.

Client acknowledges that CDW's inspection is limited, and all hazardous materials may only become apparent during future renovation or demolition. During future renovation/demolition work, it is likely that additional hazardous materials or materials suspected of being hazardous will be identified. Such materials should be assumed to be hazardous unless appropriate evaluation or sampling and analysis demonstrate otherwise. No other use of this report is warranted without the written consent of CDW Consultants, Inc.

CDW appreciates the opportunity to provide our services to you on this project.

APPENDIX A

Asbestos Identification Laboratory

165 New Boston St., Ste 227
Woburn, MA 01801
781-932-9600

Web: www.asbestosidentifcationlab.com
Email: mikemanning@asbestosidentificationlab.com

NVLAP Testing Lab Code: 200919-0

Batch: 260113018

Susan Cahalan
CDW Consultants, Inc.
6 Huron Drive
Natick, MA 1760

Project Information

Medford HS / 6004

489 Winthrop St.,
Medford, MA

Method: PLM Bulk, EPA 600/R-93/116

Dear Susan Cahalan,

Asbestos Identification Laboratory has completed the analysis of the samples from your office for the above referenced project. The Analysis Method is PLM Bulk. The information and analysis contained in this report have been generated using the EPA 600/R-93/116 Method for the Determination of Asbestos in Bulk Building Materials. Materials or prodcuts that contain more than 1% of any kind or combination of asbestos are considered as asbestos containing building material as determined by the EPA. This Polarized Light Microscope (PLM) technique may be performed either by visual estimation or point counting. Point counting provides a determination of the area percentage of asbestos in a sample. If the asbestos is estimated to be less than 10% by visual estimation of friable material, the determination may be repeated using the point counting technique. The report may not be used by the customer to claim product endorsement by NVLAP or any other U.S. Government Agency.

The EPA recommends you should assume vermiculite contains asbestos and not to disturb it. Airborne asbestos fibers present a health risk through inhalation, so the first step is to not disturb the material, which could release fibers into the air. If you disturb the insulation, you may inhale some asbestos fibers. The degree of health risk depends on how much and how often this occurred. If you choose to remove the vermiculite insulation, this work should be done by a trained and accredited asbestos abatement contractor that is separate and independent from the company that performed the assessment of the vermiculite insulation to avoid any conflict of interest. https://www.epa.gov/asbestos/my-attic-has-vermiculite-insulation-it-am-i-risk-should-i-take-it-out | US EPA.

Laboratory results represent the analysis of samples as submitted by the customer. Information regarding sample location, description, area, volcume, etc., was provided by the customer. Information provided by the customer can affect the validity of results. Asbestos Identification Laboratory is not responsible for sample collection activities or analytical method limitations. Unless notified in writing to return samples, Asbestos Identification Laboratory discards customer samples after 30 days. Samples containing subsamples or layers will be analyzed separately when applicable. Reports are kept at Asbestos Identification Laboratory for three years. All customer information will be maintained in confidentiality. This report shall not be reproduced, except in full, without the written consent of Asbestos Identification Laboratory.

- NVLAP Lab Code: 200919-0
- Massachusetts Certification License: AA000208
- State of Connecticut, Department of Public Health Approved Environmental Laboratory Registration Number: PH-0142
- State of Maine, Department of Environmental Protection Asbestos Analytical Laboratory License Number: LB-0078(Bulk) LA-0087(Air)
- State of Rhode Island and Providence Plantations. Department of Health Certification: AAL-121
- State of Vermont, Department of Health Environmental Health License AL934461

Thank you Susan Cahalan for your business.

Michael Manning
Owner/Director
781-932-9600

Sampled: January 29, 2026 **Received:** January 13, 2026 **Analyzed:** 01/14/2026 **Report Date:** January 15, 2026

Analyzed by:
Elaina Maxwell

Elaina Maxwell

Susan Cahalan
CDW Consultants, Inc.
6 Huron Drive
Natick, MA 1760

Project Information

Medford HS / 6004

489 Winthrop St.,
Medford, MA

Method: PLM Bulk, EPA 600/R-93/116

Field ID LabID	Material	Location	Color	Non-Asbestos %	Asbestos %
1A 260113018-001	Gray Pipe Fitting	Mechanical Room	Gray	Fiberglass 30 Mineral Wool 30 Cellulose 10 Non-Fibrous 30	None Detected
1B 260113018-002	Gray Pipe Fitting	Mechanical Room	Gray	Fiberglass 30 Mineral Wool 30 Cellulose 10 Non-Fibrous 30	None Detected
2A 260113018-003	Gray Pipe Fitting / Valve	Mechanical Room	Gray	Fiberglass 30 Mineral Wool 30 Cellulose 10 Non-Fibrous 30	None Detected
2B 260113018-004	Gray Pipe Fitting / Valve	Mechanical Room	Gray	Fiberglass 30 Mineral Wool 30 Cellulose 10 Non-Fibrous 30	None Detected
3 260113018-005	Gray Pipe Fitting	Mechanical Room	Gray	Fiberglass 30 Mineral Wool 30 Cellulose 10 Non-Fibrous 30	None Detected
4A 260113018-006	Brown Cloth Flex Connector	Mechanical Room	Brown	Cellulose 80 Non-Fibrous 20	None Detected
4B 260113018-007	Brown Cloth Flex Connector	Mechanical Room	Brown	Cellulose 80 Non-Fibrous 20	None Detected
5A 260113018-008	Brown Glue On Duct Pins At HVAC	Mechanical Room	Multi	Non-Fibrous 100	None Detected
5B 260113018-009	Brown Glue On Duct Pins On HVAC	Mechanical Room	Multi	Non-Fibrous 100	None Detected
5C 260113018-010	Brown Glue On Duct Pins On HVAC	Mechanical Room	Multi	Non-Fibrous 100	None Detected
6A 260113018-011	Gray Insulation On FG End Cap Fitting At Cooling Equip.	Mechanical Room	Gray	Non-Fibrous 25	Detected Chrysotile 75

Sampled: January 29, 2026 **Received:** January 13, 2026 **Analyzed:** 01/14/2026 **Report Date:** January 15, 2026

Analyzed by:
Elaina Maxwell Elaina Maxwell

Batch: 260113018

Susan Cahalan
CDW Consultants, Inc.
6 Huron Drive
Natick, MA 1760

Project Information

Medford HS / 6004

489 Winthrop St., Medford, MA

Method: PLM Bulk, EPA 600/R-93/116

Field ID LabID	Material	Location	Color	Non-Asbestos %	Asbestos %
6B 260113018-012	Gray Insulation On FG End Cap Fitting At Cooling Equip.	Mechanical Room			Not analyzed
6C 260113018-013	Gray Insulation On FG End Cap Fitting At Cooling Equip.	Mechanical Room			Not analyzed
7A 260113018-014	Interior Window Gray Glaze	Door Assembly Mechanical Room Hallway (1st Floor)	Multi	Non-Fibrous 100	None Detected
7B 260113018-015	Interior Window Gray Glaze	Door Assembly Mechanical Room Hallway (1st Floor)	Multi	Non-Fibrous 100	None Detected
7C 260113018-016	Interior Window Gray Glaze	Door Assembly Mechanical Room Hallway (1st Floor)	Multi	Non-Fibrous 100	None Detected
8A 260113018-017	White Paint (Wall)	Mechanical Room Hallway (1st Floor)	White	Non-Fibrous 100	None Detected
8B 260113018-018	White Paint (Wall)	Mechanical Room Hallway (1st Floor)	White	Non-Fibrous 100	None Detected
8C 260113018-019	White Paint (Wall)	Mechanical Room Hallway (1st Floor)	White	Non-Fibrous 100	None Detected
9A 260113018-020	Tan/Gray Window Glaze Interior	Mechanical Room Hallway (1st Floor)	Multi	Non-Fibrous 97	Detected Chrysotile 3
9B 260113018-021	Tan/Gray Window Glaze Interior	Mechanical Room Hallway (1st Floor)			Not analyzed
9C 260113018-022	Tan/Gray Window Glaze Interior	Mechanical Room Hallway (1st Floor)			Not analyzed

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Batch: 260113018

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6 Huron Drive
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Project Information

Medford HS / 6004

489 Winthrop St.,
Medford, MA

Method: PLM Bulk, EPA 600/R-93/116

Field ID LabID	Material	Location	Color	Non-Asbestos %	Asbestos %
10A 260113018-023	Yellowish Paint	Walls Electrical Room Next To Boiler Room	Tan	Non-Fibrous 100	None Detected
10B 260113018-024	Yellowish Paint	Walls Electrical Room Next To Boiler Room	Tan	Non-Fibrous 100	None Detected
10C 260113018-025	Yellowish Paint	Walls Electrical Room Next To Boiler Room	Tan	Non-Fibrous 100	None Detected
11A 260113018-026	Gray Flex Connector	Electrical Room Next To Boiler Room	Gray	Cellulose 10 Non-Fibrous 10	Detected Chrysotile 80
11B 260113018-027	Gray Flex Connector	Electrical Room Next To Boiler Room			Not analyzed
12A 260113018-028	Black Glue Under FG Pipe Wrap (Off Pipe Insulation)	Storage Room Next To Pool Filter Room	Black	Fiberglass 15 Non-Fibrous 85	None Detected
12B 260113018-029	Glue (Black) (Off Pipe Insulation)	Storage Room Next To Pool Filter Room	Black	Fiberglass 15 Non-Fibrous 85	None Detected
12C 260113018-030	Glue (Black) (Off Pipe Insulation)	Storage Room Next To Pool Filter Room	Black	Fiberglass 15 Non-Fibrous 85	None Detected
13A 260113018-031	Tan Paint	Wall In Receiving Dock Area / Overhead Door	Tan	Non-Fibrous 98	Detected Chrysotile 2
13B 260113018-032	Tan Paint	Wall In Receiving Dock Area / Overhead Door			Not analyzed
13C 260113018-033	Tan Paint	Wall In Receiving Dock Area / Overhead Door			Not analyzed

Sampled: January 29, 2026 **Received:** January 13, 2026 **Analyzed:** 01/14/2026 **Report Date:** January 15, 2026

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Batch: 260113018

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6 Huron Drive
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Project Information

Medford HS / 6004

489 Winthrop St., Medford, MA

Method: PLM Bulk, EPA 600/R-93/116

Field ID LabID	Material	Location	Color	Non-Asbestos %	Asbestos %
14A 260113018-034	Brown Glue	Duct Pins HVAC (Receiving Area)	Brown	Non-Fibrous 96	Detected Chrysotile 4
14B 260113018-035	Brown Glue	Duct Pins HVAC (Receiving Area)			Not analyzed
15A 260113018-036	Interior Black Window Glaze	Office (Receiving Area)	Multi	Non-Fibrous 98	Detected Chrysotile 2
15B 260113018-037	Interior Black Window Glaze	Office (Receiving Area)			Not analyzed
15C 260113018-038	Interior Black Window Glaze	Office (Receiving Area)			Not analyzed
16A 260113018-039	Black Slate Sills	Building - Window Sill, 3rd Floor Classrooms	Black	Non-Fibrous 100	None Detected
16B 260113018-040	Black Slate Sills	Building - Window Sill, 3rd Floor Classrooms	Black	Non-Fibrous 100	None Detected
16C 260113018-041	Black Slate Sills	Building - Window Sill, 3rd Floor Classrooms	Black	Non-Fibrous 100	None Detected
16D 260113018-042	Black Slate Sills	Building - Window Sill, 3rd Floor Classrooms	Black	Non-Fibrous 100	None Detected
16E 260113018-043	Black Slate Sills	Building - Window Sill, 3rd Floor Classrooms	Black	Non-Fibrous 100	None Detected
17A 260113018-044	Gray Interior Window Glaze	Assembly Door, 3rd Floor - C Building	Multi	Non-Fibrous 98	Detected Chrysotile 2

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Batch: 260113018

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CDW Consultants, Inc.
6 Huron Drive
Natick, MA 1760

Project Information

Medford HS / 6004

489 Winthrop St., Medford, MA

Method: PLM Bulk, EPA 600/R-93/116

Field ID LabID	Material	Location	Color	Non-Asbestos %	Asbestos %
17B 260113018-045	Gray Interior Window Glaze	Assembly Door, 3rd Floor - C Building			Not analyzed
17C 260113018-046	Gray Interior Window Glaze	Assembly Door, 3rd Floor - C Building			Not analyzed
18A 260113018-047	Gray/Tan Window Glaze	Exterior Windows, 3rd Floor - C Building	Gray	Non-Fibrous 98	Detected Chrysotile 2
18B 260113018-048	Gray/Tan Window Glaze	Exterior Windows, 3rd Floor - C Building			Not analyzed
18C 260113018-049	Gray/Tan Window Glaze	Exterior Windows, 3rd Floor - C Building			Not analyzed
18D 260113018-050	Gray/Tan Window Glaze	Exterior Windows, 3rd Floor - C Building			Not analyzed
18E 260113018-051	Gray/Tan Window Glaze	Exterior Windows, 3rd Floor - C Building			Not analyzed
19A 260113018-052	Interior Gray Window Glaze	Hall Assembly, 3rd Floor - C Building	Multi	Non-Fibrous 98	Detected Chrysotile 2
19B 260113018-053	Interior Gray Window Glaze	Hall Assembly, 3rd Floor - C Building			Not analyzed
19C 260113018-054	Interior Gray Window Glaze	Hall Assembly, 3rd Floor - C Building			Not analyzed
20A 260113018-055	Tan Paint	Breezeway, 3rd Floor - C Building	Multi	Non-Fibrous 100	None Detected

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Analyzed by:
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Batch: 260113018

Susan Cahalan
CDW Consultants, Inc.
6 Huron Drive
Natick, MA 1760

Project Information

Medford HS / 6004

489 Winthrop St.,
Medford, MA

Method: PLM Bulk, EPA 600/R-93/116

Field ID LabID	Material	Location	Color	Non-Asbestos %	Asbestos %
20B 260113018-056	Tan Paint	Breezeway, 3rd Floor - C Building	Multi	Non-Fibrous 100	None Detected
20C 260113018-057	Tan Paint	Breezeway, 3rd Floor - C Building	Multi	Non-Fibrous 100	None Detected
21A 260113018-058	Textured Ceiling (White)	3rd Floor Cafeteria	White	Non-Fibrous 98	Detected Chrysotile 2
21B 260113018-059	Textured Ceiling (White)	3rd Floor Cafeteria			Not analyzed
21C 260113018-060	Textured Ceiling (White)	3rd Floor Cafeteria			Not analyzed
21D 260113018-061	Textured Ceiling (White)	3rd Floor Cafeteria			Not analyzed
21E 260113018-062	Textured Ceiling (White)	3rd Floor Cafeteria			Not analyzed
21F 260113018-063	Textured Ceiling (White)	3rd Floor Cafeteria			Not analyzed
21G 260113018-064	Textured Ceiling (White)	3rd Floor Cafeteria			Not analyzed
22A 260113018-065	Grayish Expansion Joint In CMU Wall	Gym 2 With Rubber Floor	Multi	Non-Fibrous 100	None Detected
22B 260113018-066	Grayish Expansion Joint In CMU Wall	Gym 2 With Rubber Floor	Multi	Non-Fibrous 100	None Detected

Sampled: January 29, 2026 **Received:** January 13, 2026 **Analyzed:** 01/14/2026 **Report Date:** January 15, 2026

Analyzed by:
Elaina Maxwell Elaina Maxwell

Batch: 260113018

Susan Cahalan
CDW Consultants, Inc.
6 Huron Drive
Natick, MA 1760

Project Information

Medford HS / 6004

489 Winthrop St.,
Medford, MA

Method: PLM Bulk, EPA 600/R-93/116

Field ID LabID	Material	Location	Color	Non-Asbestos %	Asbestos %
22C 260113018-067	Grayish Expansion Joint In CMU Wall	Gym 2 With Rubber Floor	Multi	Non-Fibrous 100	None Detected
22D 260113018-068	Grayish Expansion Joint In CMU Wall	Gym 2 With Rubber Floor	Multi	Non-Fibrous 100	None Detected
22E 260113018-069	Grayish Expansion Joint In CMU Wall	Gym 2 With Rubber Floor	Multi	Non-Fibrous 100	None Detected
23A 260113018-070	Gray Int. Window Glaze	Tech Hall Assembly	Gray	Non-Fibrous 98	Detected Chrysotile 2
23B 260113018-071	Gray Int. Window Glaze	Tech Hall Assembly			Not analyzed
23C 260113018-072	Gray Int. Window Glaze	Tech Hall Assembly			Not analyzed
24A 260113018-073	Black Sink Coating	B Wing Exterior Facing Classrooms	Black	Non-Fibrous 95	Detected Chrysotile 5
24B 260113018-074	Black Sink Coating	B Wing Exterior Facing Classrooms			Not analyzed
24C 260113018-075	Black Sink Coating	B Wing Exterior Facing Classrooms			Not analyzed
25A 260113018-076	Int. Gray Window Glaze	B Wing Classroom Door + Transoms	Gray	Non-Fibrous 98	Detected Chrysotile 2
25B 260113018-077	Int. Gray Window Glaze	B Wing Classroom Door + Transoms			Not analyzed

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Analyzed by:
Elaina Maxwell Elaina Maxwell

Batch: 260113018

Susan Cahalan
CDW Consultants, Inc.
6 Huron Drive
Natick, MA 1760

Project Information

Medford HS / 6004

489 Winthrop St.,
Medford, MA

Method: PLM Bulk, EPA 600/R-93/116

Field ID LabID	Material	Location	Color	Non-Asbestos %	Asbestos %
25C 260113018-078	Int. Gray Window Glaze	B Wing Classroom Door + Transoms			Not analyzed
25D 260113018-079	Int. Gray Window Glaze	B Wing Classroom Door + Transoms			Not analyzed
25E 260113018-080	Int. Gray Window Glaze	B Wing Classroom Door + Transoms			Not analyzed

Sampled: January 29, 2026 **Received:** January 13, 2026 **Analyzed:** 01/14/2026 **Report Date:** January 15, 2026

Analyzed by:
Elaina Maxwell Elaina Maxwell

Batch: 260113018

Client: CDW Consultants
Address: 4 California Ave, Framingham
Project Site & #: Medford HS / 6004
Phone / email address: 486 Winthrop St, Medford MA
774-244-6859 / scahalan@cdwconsultants.com
Contact: Sue Cahalan
Relinquish by/date: 1/12/2026
Received by/date: RCF 1/13/26
# of Samples Received: 80

CHAIN OF CUSTODY

EPA/600/R-93/116

Asbestos Identification Lab
165 New Boston St.
Suite 227
Woburn, MA 01801
(781)932-9600
www.asbestosidentificationlab.com

Date Sampled: 12/30/25 & 12/29/25

BATCH# 260130I8 Rev 07/24

Turnaround Time		Sample Method	
	Less 3 Hrs	X	Bulk
	Same Day		Soil
	Next Day		Wipe
	Two Day		Point Count
X	Three Day		NOB

Stop on 1st Positive? (Yes) No
Analyzed By: Elaine Maxwell
Date: 1-14-26 QC: MM

Temp in Celsius = 23

Lab ID# (Lab Use Only)	Field ID/ (Client Reference)	Material / Location	Stereomicroscope: % of Asbestos	Color	Homogeneity	Texture	Friable	Asbestos Minerals	Optical Properties: Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	RI: II	RI: ⊥	Non-Asbestos Percentage (%): Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous
a1	1A	Material: Gray Pipefitting Location: Mechanical room	0	gy	~	F/fr	S	Chrysotile									S	S	R				
								Amosite									-	-	F				
								Crocidolite									-	-	F				
								Tremolite									-	-	F				
								Anthophyllite									30	30	C				30
								Actinolite															
a2	1B	Material: " Location: "	0	gy	~	F/fr	S	Chrysotile									S	S	R				
								Amosite									-	-	F				
								Crocidolite									-	-	F				
								Tremolite									-	-	F				
								Anthophyllite									30	30	C				30
								Actinolite															
a3	2A	Material: Gray Pipe Fitting/ Valve Location: Mechanical Room	0	gy	~	F/fr	S	Chrysotile									S	S	R				
								Amosite									-	-	F				
								Crocidolite									-	-	F				
								Tremolite									-	-	F				
								Anthophyllite									30	30	C				30
								Actinolite															

Medford

Temp in Celcius = ____

Lab ID# (Lab Use Only)	Field ID/ (Client Reference)	Material / Location	Stereomicroscope: % of Asbestos	Color	Homogeneity	Texture	Friable	Asbestos Minerals	Optical Properties: Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	RI: ∥	RI: ⊥	Non-Asbestos Percentage (%): Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous
004	2B	Material: Gray Pipe Fitting ? Valve Location: Mechanical Room	0	gy	2	gF	S	Chrysotile									S 1	1S 1	R 1F				
								Amosite															
								Crocidolite															
								Tremolite															
								Anthophyllite															
								Actinolite									30	30	10				30
005	3	Material: Gray Pipe Fitting Location: Mechanical Room	0	gy	2	gF	S	Chrysotile									S 1	1S 1	R 1F				
								Amosite															
								Crocidolite															
								Tremolite															
								Anthophyllite															
								Actinolite									30	30	10				30
006	4A	Material: Brown Cloth Flex Connector Location: Mechanical Room	0	Br	2	F	2	Chrysotile											R 1F				
								Amosite															
								Crocidolite															
								Tremolite															
								Anthophyllite															
								Actinolite											80				20
007	4B	Material: " Location: "	0	Br	2	F	2	Chrysotile											R 1F				
								Amosite															
								Crocidolite															
								Tremolite															
								Anthophyllite															
								Actinolite											80				20
008	5A	Material: Brown Glue on Duct Pins in HVAC Location: Mechanical Room	0	m	2	gr	2	Chrysotile															
								Amosite															
								Crocidolite															
								Tremolite															
								Anthophyllite															
								Actinolite															100

Medford

Lab ID# (Lab Use Only)	Field ID/ (Client Reference)	Temp in Celcius = ____ / Material / Location	Stereomicroscope: % of Asbestos	Color	Homogeneity	Texture	Friable	Asbestos Minerals	Optical Properties: Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	RI: ∥	RI: ⊥	Non-Asbestos Percentage (%): Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous
009	5B	Material: Brown Glue on Duct pins on Metal Location: Mechanical Room	0	M	N	G	N	Chrysotile															
								Amosite															
								Crocidolite															
								Tremolite															
								Anthophyllite															
								Actinolite															100
010	5C	Material: " Location: "	0	M	N	G	N	Chrysotile															
								Amosite															
								Crocidolite															
								Tremolite															
								Anthophyllite															
								Actinolite															100
011	6A	Material: Gray Insulation on Fe end cap Location: Mechanical Room	75	GG	N	F	S	Chrysotile	75	W	P	+	C	N	1.551	1.543							
								Amosite															
								Crocidolite															
								Tremolite															
								Anthophyllite															
								Actinolite															25
012	6B	Material: " Location: "						Chrysotile															
								Amosite															
								Crocidolite															
								Tremolite															DNA
								Anthophyllite															
								Actinolite															
013	6C	Material: " Location: "						Chrysotile															
								Amosite															
								Crocidolite															
								Tremolite															DNA
								Anthophyllite															
								Actinolite															

Medford

Lab ID# (Lab Use Only)	Field ID/ (Client Reference)	Temp in Celcius = ____ / Material / Location	Stereomicroscope: % of Asbestos	Color	Homogeneity	Texture	Friable	Asbestos Minerals	Optical Properties: Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	RI: ∥	RI: ⊥	Non-Asbestos Percentage (%): Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous
019	8C	Material: White Paint (wall) Location: Mechanical Room Hallway (1st floor)	0	W	N	G	N	Chrysotile															
								Amosite															
								Crocidolite															
								Tremolite															
								Anthophyllite															
								Actinolite															100
020	9A	Material: Tan/Gray Window Glaze Interior Location: Mechanical Room Hallway (1st Floor)	0	M	N	G	N	Chrysotile	3	W	P	+	C	N	1.551	1.543							
								Amosite															
								Crocidolite															
								Tremolite															
								Anthophyllite															
								Actinolite															97
021	9B	Material: " Location: "						Chrysotile															
								Amosite															
								Crocidolite															
								Tremolite															
								Anthophyllite															
								Actinolite															
022	9C	Material: " Location: "						Chrysotile															
								Amosite															
								Crocidolite															
								Tremolite															
								Anthophyllite															
								Actinolite															
023	10A	Material: Yellowish paint Location: Walls Electrical Room Next to Boiler Room	0	T	N	G	N	Chrysotile															
								Amosite															
								Crocidolite															
								Tremolite															
								Anthophyllite															
								Actinolite															100

N/A

N/A

Medford

Lab ID# (Lab Use Only)	Field ID/ (Client Reference)	Temp in Celcius = ____ / Material / Location	Stereomicroscope: % of Asbestos	Color	Homogeneity	Texture	Friable	Asbestos Minerals	Optical Properties: Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	RI: ∥	RI: ⊥	Non-Asbestos Percentage (%): Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous
04	10B	Material: Yellowish Paint Location: Electrical Wall in Room next to Boiler Room	0	T	~	gr	~	Chrysotile															
								Amosite															
								Crocidolite															
								Tremolite															
								Anthophyllite															
								Actinolite															100
05	10C	Material: " Location: "	0	T	~	gr	~	Chrysotile															
								Amosite															
								Crocidolite															
								Tremolite															
								Anthophyllite															
								Actinolite															100
06	11A	Material: Gray Flex Connector Location: Electrical Room next to Boiler Room	90	gy	~	F	y	Chrysotile	90	~	P	+	C	~	1.551	1.543			R/R				
								Amosite															
								Crocidolite															
								Tremolite															
								Anthophyllite															
								Actinolite											10				10
07	11B	Material: " Location: "						Chrysotile															PNA
								Amosite															
								Crocidolite															
								Tremolite															
								Anthophyllite															
								Actinolite															
08	12A	Material: Black Glue (off pipe insulation) under FG pipe wrap Location: Storage room next to Pool Filter Room	0	BK	~	gr	~	Chrysotile															
								Amosite									5						
								Crocidolite															
								Tremolite															
								Anthophyllite									15						
								Actinolite															85

Midfora

Lab ID# (Lab Use Only)	Field ID/ (Client Reference)	Temp in Celcius = ____ / Material / Location	Stereomicroscope: % of Asbestos	Color	Homogeneity	Texture	Friable	Asbestos Minerals	Optical Properties: Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	RI: ∥	RI: ⊥	Non-Asbestos Percentage (%): Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous
29	12B	Material: Glue (Black) (off Pipe insulation) / Location: Storage room next to Pool filter room	0	BK	~	g	~	Chrysotile															
								Amosite															
								Crocidolite									<1						
								Tremolite															
								Anthophyllite															
								Actinolite									15						85
30	12C	Material: " / Location: "	0	BK	~	g	~	Chrysotile															
								Amosite															
								Crocidolite									<1						
								Tremolite															
								Anthophyllite															
								Actinolite									15						85
31	13A	Material: Tan Paint / Location: Wall in Receiving dock area / overhead door	0	T	~	g	~	Chrysotile	2	w	p	+	c	~	1.551	1.543							
								Amosite															
								Crocidolite															
								Tremolite															
								Anthophyllite															
								Actinolite															98
32	13B	Material: " / Location: "						Chrysotile															
								Amosite															
								Crocidolite															
								Tremolite															
								Anthophyllite															NA
								Actinolite															
33	13C	Material: " / Location: "						Chrysotile															
								Amosite															
								Crocidolite															
								Tremolite															NA
								Anthophyllite															
								Actinolite															

Medford

Lab ID# (Lab Use Only)	Field ID/ (Client Reference)	Temp in Celcius = ___ / Material / Location	Stereomicroscope: % of Asbestos	Color	Homogeneity	Texture	Friable	Asbestos Minerals	Optical Properties: Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	RI: ∥	RI: ⊥	Non-Asbestos Percentage (%): Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous	
034	14A	Material: Brown Glue Location: Duct Pins HVAC (Receiving Area)	0	Br	2	g	2	Chrysotile	4	2	P	+	L	2	1.551	1.543								
								Amosite																
								Crocidolite																
								Tremolite																
								Anthophyllite																
								Actinolite															96	
035	14B	Material: " Location: "						Chrysotile																PNA
								Amosite																
								Crocidolite																
								Tremolite																
								Anthophyllite																
								Actinolite																
036	15A	Material: Interior Black Window glaze Location: office (Receiving Area)	0	Br	2	g	2	Chrysotile	2	2	P	+	L	2	1.551	1.543								
								Amosite																
								Crocidolite																
								Tremolite																
								Anthophyllite																
								Actinolite															98	
037	15B	Material: " Location: "						Chrysotile																PNA
								Amosite																
								Crocidolite																
								Tremolite																
								Anthophyllite																
								Actinolite																
038	15C	Material: " Location: "						Chrysotile																PNA
								Amosite																
								Crocidolite																
								Tremolite																
								Anthophyllite																
								Actinolite																

Mcaford

Lab ID# (Lab Use Only)	Field ID/ (Client Reference)	Temp in Celcius = ____ / Material / Location	Stereomicroscope: % of Asbestos	Color	Homogeneity	Texture	Friable	Asbestos Minerals	Optical Properties: Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	RI: ∥	RI: ⊥	Non-Asbestos Percentage (%): Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous
059	16A	Material: Black Slate Sill Location: Building – Window Sill, 3rd Floor Classroom 5	0	BK	2	gr	2	Chrysotile															
								Amosite															
								Crocidolite															
								Tremolite															
								Anthophyllite															
								Actinolite															100
060	16B	Material: " Location: "	0	BK	2	gr	2	Chrysotile															
								Amosite															
								Crocidolite															
								Tremolite															
								Anthophyllite															
								Actinolite															100
061	16C	Material: " Location: "	0	BK	2	gr	2	Chrysotile															
								Amosite															
								Crocidolite															
								Tremolite															
								Anthophyllite															
								Actinolite															100
062	16D	Material: " Location: "	0	BK	2	gr	2	Chrysotile															
								Amosite															
								Crocidolite															
								Tremolite															
								Anthophyllite															
								Actinolite															100
063	16E	Material: " Location: "	0	BK	2	gr	2	Chrysotile															
								Amosite															
								Crocidolite															
								Tremolite															
								Anthophyllite															
								Actinolite															100

Temp in Celcius = ____

Lab ID# (Lab Use Only)	Field ID/ (Client Reference)	Material / Location	Stereomicroscope: % of Asbestos	Color	Homogeneity	Texture	Friable	Asbestos Minerals	Optical Properties: Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	RI: ∥	RI: ⊥	Non-Asbestos Percentage (%): Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous	
CMH	17A	Material Interior Gray Window glaze Location Assembly Door 3rd Floor - C Building	0	m	~	gr	~	Chrysotile	2	w	P	+	L	N	1.551	1.543								
								Amosite																
								Crocidolite																
								Tremolite																
								Anthophyllite																
								Actinolite															98	
CMH	17B	Material " Location "						Chrysotile																DNA
								Amosite																
								Crocidolite																
								Tremolite																
								Anthophyllite																
								Actinolite																
CMH	17C	Material " Location "						Chrysotile																DNA
								Amosite																
								Crocidolite																
								Tremolite																
								Anthophyllite																
								Actinolite																
CMH	18A	Material Gray/Tan Window glaze Location exterior Windows 3rd floor - C Building	0	gy	~	gr	~	Chrysotile	2	w	P	+	L	N	1.551	1.543								
								Amosite																
								Crocidolite																
								Tremolite																
								Anthophyllite																
								Actinolite															98	
CMH	18B	Material " Location "						Chrysotile																DNA
								Amosite																
								Crocidolite																
								Tremolite																
								Anthophyllite																
								Actinolite																

Temp in Celcius = ____

Lab ID# (Lab Use Only)	Field ID/ (Client Reference)	Material / Location	Stereomicroscope: % of Asbestos	Color	Homogeneity	Texture	Friable	Asbestos Minerals	Optical Properties: Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	RI: ∥	RI: ⊥	Non-Asbestos Percentage (%): Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous	
049	18C	Material: Gray / Tan Window glaze Location: exterior windows 3rd floor - CBuilding						Chrysotile																PM1
								Amosite																
								Crocidolite																
								Tremolite																
								Anthophyllite																
								Actinolite																
050	18D	Material: " Location: "						Chrysotile																PM4
								Amosite																
								Crocidolite																
								Tremolite																
								Anthophyllite																
								Actinolite																
051	18E	Material: " Location: "						Chrysotile																PM4
								Amosite																
								Crocidolite																
								Tremolite																
								Anthophyllite																
								Actinolite																
052	19A	Material: Interior Gray Window glaze Location: Hall Assembly 3rd floor - CBuilding	0	N	N	N	N	Chrysotile	2	W	P	T	L	N	1.551	1.543							98	
								Amosite																
								Crocidolite																
								Tremolite																
								Anthophyllite																
								Actinolite																
053	19B	Material: " Location: "						Chrysotile																PM3
								Amosite																
								Crocidolite																
								Tremolite																
								Anthophyllite																
								Actinolite																

Medford

Lab ID# (Lab Use Only)	Field ID/ (Client Reference)	Temp in Celcius = ____ / Material / Location	Stereomicroscope: % of Asbestos	Color	Homogeneity	Texture	Friable	Asbestos Minerals	Optical Properties: Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	RI: ∥	RI: ⊥	Non-Asbestos Percentage (%): Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous
054	19C	Material: Interior Gray Window Glaze Location: Hall Assembly 3rd Floor - C Building						Chrysotile															DNA
								Amosite															
								Crocidolite															
								Tremolite															
								Anthophyllite															
								Actinolite															
055	20A	Material: Tan Paint Location: Breezeway 3rd floor - C Building	0	N	N	G	N	Chrysotile															
								Amosite															
								Crocidolite															
								Tremolite															
								Anthophyllite															
								Actinolite															100
056	20B	Material: " Location: "	0	N	N	G	N	Chrysotile															
								Amosite															
								Crocidolite															
								Tremolite															
								Anthophyllite															
								Actinolite															100
057	20C	Material: " Location: "	0	N	N	G	N	Chrysotile															
								Amosite															
								Crocidolite															
								Tremolite															
								Anthophyllite															
								Actinolite															100
053	21A	Material: Textured Ceiling (White) Location: 3rd floor Cafeteria	0	N	N	G	S	Chrysotile	2	W	P	+	C	N	1.551	1.543							
								Amosite															
								Crocidolite															
								Tremolite															
								Anthophyllite															
								Actinolite															98

Medford

Lab ID# (Lab Use Only)	Field ID/ (Client Reference)	Temp in Celcius = ____ / Material / Location	Stereomicroscope: % of Asbestos	Color	Homogeneity	Texture	Friable	Asbestos Minerals	Optical Properties: Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	RI: =	RI: ⊥	Non-Asbestos Percentage (%): Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous	
69	21B	Material: Textured Ceiling (White) Location: 3rd Floor Cafeteria						Chrysotile																PNA
								Amosite																
								Crocidolite																
								Tremolite																
								Anthophyllite																
								Actinolite																
70	21C	Material: " Location: "						Chrysotile																PNA
								Amosite																
								Crocidolite																
								Tremolite																
								Anthophyllite																
								Actinolite																
71	21D	Material: " Location: "						Chrysotile																
								Amosite																
								Crocidolite																
								Tremolite																
								Anthophyllite																
								Actinolite																
72	21A	Material: " Location: "						Chrysotile																DNA
								Amosite																
								Crocidolite																
								Tremolite																
								Anthophyllite																
								Actinolite																
73	21E	Material: " Location: "						Chrysotile																PNA
								Amosite																
								Crocidolite																
								Tremolite																
								Anthophyllite																
								Actinolite																

Medical

Lab ID# (Lab Use Only)	Field ID/ (Client Reference)	Temp in Celcius = ____ / Material / Location	Stereomicroscope: % of Asbestos	Color	Homogeneity	Texture	Friable	Asbestos Minerals	Optical Properties: Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	RI: II	RI: ⊥	Non-Asbestos Percentage (%): Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous	
03	21F	Material: Textured Ceiling (white) Location: 3rd Floor-Cafeteria						Chrysotile																PLM
								Amosite																
								Crocidolite																
								Tremolite																
								Anthophyllite																
								Actinolite																
04	21G	Material: " Location: " "						Chrysotile																PLM
								Amosite																
								Crocidolite																
								Tremolite																
								Anthophyllite																
								Actinolite																
05	22A	Material: Grayish Expansion Joint Location: In CMU Wall Gym 2 with Rubber Floor	0	3	2	9	2	Chrysotile																
								Amosite																
								Crocidolite																
								Tremolite																
								Anthophyllite																
								Actinolite															100	
06	22B	Material: " Location: "	0	3	2	9	2	Chrysotile																
								Amosite																
								Crocidolite																
								Tremolite																
								Anthophyllite																
								Actinolite															100	
07	22C	Material: " Location: "	0	3	2	9	2	Chrysotile																
								Amosite																
								Crocidolite																
								Tremolite																
								Anthophyllite																
								Actinolite															100	

Medford

Lab ID# (Lab Use Only)	Field ID/ (Client Reference)	Temp in Celcius = ____ / Material / Location	Stereomicroscope: % of Asbestos	Color	Homogeneity	Texture	Friable	Asbestos Minerals	Optical Properties: Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	RI: ∥	RI: ⊥	Non-Asbestos Percentage (%): Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous
069	22D	Material Grayish Expansion Joint Location in CMU wall Gym 2 with Rubber floor	0	n	n	gr	n	Chrysotile															
								Amosite															
								Crocidolite															
								Tremolite															
								Anthophyllite															
								Actinolite															100
070	22E	Material " Location "	0	n	n	gr	n	Chrysotile															
								Amosite															
								Crocidolite															
								Tremolite															
								Anthophyllite															
								Actinolite															100
070	23A	Material Gray Int. Window Glaze Location Team Hall Assembly	0	gg	n	gr	n	Chrysotile	2	w	p	+	c	n	1.551	1.543							
								Amosite															
								Crocidolite															
								Tremolite															
								Anthophyllite															
								Actinolite															98
071	23B	Material " " Location " "						Chrysotile															
								Amosite															
								Crocidolite															
								Tremolite															
								Anthophyllite															
								Actinolite															DNA
072	23C	Material " " Location " "						Chrysotile															
								Amosite															
								Crocidolite															
								Tremolite															
								Anthophyllite															
								Actinolite															DNA

Medford

Temp in Celcius = ____

Lab ID# (Lab Use Only)	Field ID/ (Client Reference)	Material / Location	Stereomicroscope: % of Asbestos	Color	Homogeneity	Texture	Friable	Asbestos Minerals	Optical Properties: Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	RI: ∥	RI: ⊥	Non-Asbestos Percentage (%): Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous	
01g	24A	Material: Black Stone Coating Location: B wing exterior facing classrooms	0	Bk	~	sr	~	Chrysotile	5	w	p	+	l	w	1.551	1.543								
								Amosite																
								Crocidolite																
								Tremolite																
								Anthophyllite																
								Actinolite															95	
01H	24B	Material: 〃 Location: 〃						Chrysotile																
								Amosite																
								Crocidolite																
								Tremolite																NA
								Anthophyllite																
								Actinolite																
01J	24C	Material: 〃 Location: 〃						Chrysotile																
								Amosite																
								Crocidolite																
								Tremolite																NA
								Anthophyllite																
								Actinolite																
01K	25A	Material: Tan Gray Mud/glaze Location: B wing classroom Doors + Transom	0	gy	~	sr	~	Chrysotile	2	w	p	+	l	w	1.551	1.543								
								Amosite																
								Crocidolite																
								Tremolite																
								Anthophyllite																
								Actinolite															98	
01L	25B	Material: 〃 Location: 〃						Chrysotile																
								Amosite																
								Crocidolite																
								Tremolite																NA
								Anthophyllite																
								Actinolite																

Medford

Lab ID# (Lab Use Only)	Field ID/ (Client Reference)	Temp in Celcius = ____ / Material / Location	Stereomicroscope: % of Asbestos	Color	Homogeneity	Texture	Friable	Asbestos Minerals	Optical Properties: Asbestos %	Morphology	Extinction	Sign of Elongation	Birefringence	Pleochroism	RI: ∥	RI: ⊥	Non-Asbestos Percentage (%): Fiberglass	Mineral Wool	Cellulose	Hair	Synthetic	Other	Non-Fibrous	
01A	25C	Material / Location						Chrysotile																
								Amosite																
								Crocidolite																
								Tremolite																
								Anthophyllite																
								Actinolite																
01A	25D	Material / Location						Chrysotile																
								Amosite																
								Crocidolite																
								Tremolite																
								Anthophyllite																
								Actinolite																
01A	25E	Material / Location						Chrysotile																
								Amosite																
								Crocidolite																
								Tremolite																
								Anthophyllite																
								Actinolite																
		Material / Location						Chrysotile																
								Amosite																
								Crocidolite																
								Tremolite																
								Anthophyllite																
								Actinolite																
		Material / Location						Chrysotile																
								Amosite																
								Crocidolite																
								Tremolite																
								Anthophyllite																
								Actinolite																

PNA

PNA

PNA

APPENDIX B

EMSL Analytical, Inc.

528 Mineola Avenue, Carle Place, NY, 11514
Telephone: 516.997.7251 Fax:856-786-5974
emsl.com

EMSL Order ID: 062650220
LIMS Reference ID: EE50220
EMSL Customer ID: CDWC26

Attention: Susan Cahalan
CDW Consultants [CDWC26]
4 California Avenue, Suite 301
Framingham, MA 01701
(508) 875-2657
scahalan@cdwconsultants.com

Project Name: Medford High School

Customer PO:
EMSL Sales Rep: David Prince
Received: 01/15/2026 10:44
Reported: 01/15/2026 15:09

Analytical Results

Analyte	Results	RL	Weight(g)	Prep Date & Tech	Prep Method	Analysis Date & Analyst	Analytical Method	Q	DF
Client Sample ID: LBP-1/Blue over Red on Metal Mech Room Stair Rail									**Date Sampled: 12/31/25**
Matrix: Chips									**LIMS Reference ID: EE50220-01**
Lead	15 % wt	0.59 % wt	0.2709	01/15/26 BP	SW-846 3050B	01/15/26 BP	SW 846-7000B	D	100
Sample Comments:									
Client Sample ID: LBP-2/White Paint on Concrete Walls near Mech Room									**Date Sampled: 12/31/25**
Matrix: Chips									**LIMS Reference ID: EE50220-02**
Lead	0.019 % wt	0.0064 % wt	0.2737	01/15/26 BP	SW-846 3050B	01/15/26 BP	SW 846-7000B		1
Sample Comments:									
Client Sample ID: LBP-3/White Gray Paint on CMU Transformer Room									**Date Sampled: 12/31/25**
Matrix: Chips									**LIMS Reference ID: EE50220-03**
Lead	0.036 % wt	0.0064 % wt	0.2825	01/15/26 BP	SW-846 3050B	01/15/26 BP	SW 846-7000B		1
Sample Comments:									
Client Sample ID: LBP-4/White-Tan Paint on Concrete Wall near OH Doors Receiving									**Date Sampled: 12/31/25**
Matrix: Chips									**LIMS Reference ID: EE50220-04**
Lead	0.021 % wt	0.0064 % wt	0.2804	01/15/26 BP	SW-846 3050B	01/15/26 BP	SW 846-7000B		1
Sample Comments:									
Client Sample ID: LBP-5/Tan Paint on Columns @ Breezeway									**Date Sampled: 12/31/25**
Matrix: Chips									**LIMS Reference ID: EE50220-05**
Lead	0.026 % wt	0.0064 % wt	0.2566	01/15/26 BP	SW-846 3050B	01/15/26 BP	SW 846-7000B		1
Sample Comments:									
Client Sample ID: LBP-6/White Textured Ceiling Cafeteria									**Date Sampled: 12/31/25**
Matrix: Chips									**LIMS Reference ID: EE50220-06**
Lead	<0.0064 % wt	0.0064 % wt	0.2568	01/15/26 BP	SW-846 3050B	01/15/26 BP	SW 846-7000B		1
Sample Comments:									
Client Sample ID: LBP-7/Tan Paint on CMU Hall to Roof									**Date Sampled: 12/31/25**
Matrix: Chips									**LIMS Reference ID: EE50220-07**
Lead	0.052 % wt	0.0064 % wt	0.2669	01/15/26 BP	SW-846 3050B	01/15/26 BP	SW 846-7000B		1
Sample Comments:									
Client Sample ID: LBP-8/White-Tan on CMU - Pool Area									**Date Sampled: 12/31/25**
Matrix: Chips									**LIMS Reference ID: EE50220-08**
Lead	0.010 % wt	0.0064 % wt	0.2729	01/15/26 BP	SW-846 3050B	01/15/26 BP	SW 846-7000B		1
Sample Comments:									
Client Sample ID: LBP-9/Black over Red Paint (CWing) Metal Classroom Doors									**Date Sampled: 12/31/25**
Matrix: Chips									**LIMS Reference ID: EE50220-09**
Lead	0.17 % wt	0.0064 % wt	0.2665	01/15/26 BP	SW-846 3050B	01/15/26 BP	SW 846-7000B		1
Sample Comments:									

EMSL Analytical, Inc.

528 Mineola Avenue, Carle Place, NY, 11514
Telephone: 516.997.7251 Fax:856-786-5974
emsl.com

EMSL Order ID: 062650220
LIMS Reference ID: EE50220
EMSL Customer ID: CDWC26

Attention: Susan Cahalan
CDW Consultants [CDWC26]
4 California Avenue, Suite 301
Framingham, MA 01701
(508) 875-2657
scahalan@cdwconsultants.com

Project Name: Medford High School
Customer PO:
EMSL Sales Rep: David Prince
Received: 01/15/2026 10:44
Reported: 01/15/2026 15:09

Analytical Results (Continued)

Analyte	Results	RL	Weight(g)	Prep Date & Tech	Prep Method	Analysis Date & Analyst	Analytical Method	Q	DF
Client Sample ID: LBP-10/White-Gray over Black on Metal Doors B Wing									**Date Sampled: 12/31/25**
Matrix: Chips									**LIMS Reference ID: EE50220-10**
Lead	<0.0064 % wt	0.0064 % wt	0.2632	01/15/26 BP	SW-846 3050B	01/15/26 BP	SW 846-7000B		1
Sample Comments:									

EMSL Analytical, Inc.

528 Mineola Avenue, Carle Place, NY, 11514
Telephone: 516.997.7251 Fax:856-786-5974
emsl.com

EMSL Order ID: 062650220
LIMS Reference ID: EE50220
EMSL Customer ID: CDWC26

Attention: Susan Cahalan
CDW Consultants [CDWC26]
4 California Avenue, Suite 301
Framingham, MA 01701
(508) 875-2657
scahalan@cdwconsultants.com

Project Name: Medford High School
Customer PO:
EMSL Sales Rep: David Prince
Received: 01/15/2026 10:44
Reported: 01/15/2026 15:09

Certified Analyses included in this Report

Analyte	Certifications
SW 846-7000B in Chips	
Lead	06-AIHA LAP,06-NYSELAP,06-California ELAP

List of Certifications

Code	Description	Number	Expires
06-AIHA LAP	American Industrial Hygiene Association (AIHA LAP, LLC) - ELLAP	102344	08/01/2026
06-NYSDOH	New York State Department of Health	11469	04/01/2026
06-NYSELAP	NY NYS ELAP	11469	04/01/2026
06-California ELAP	California Water Boards	2339	04/01/2026
06-CTDPH	Connecticut Department of Public Health	PH-0249	03/31/2027

Please see the specific Field of Testing (FOT) on www.emsl.com <http://www.emsl.com> for a complete listing of parameters for which EMSL is certified.

Notes and Definitions

Item	Definition
D	Analyte was reported from a dilution run.
(Dig)	For metals analysis, sample was digested.
[2C]	Reported from the second channel in dual column analysis.
DA	Direct Analysis
DF	Dilution Factor
MDL	Method Detection Limit.
ND	Analyte was NOT DETECTED at or above the detection limit.
NR	Spike/Surrogate showed no recovery.
Q	Qualifier
RCS	Respirable Crystalline Silica
RL	Reporting Limit
Wet	Sample is not dry weight corrected.

Measurement of uncertainty and any applicable definitions of method modifications are available upon request. Per EPA NLLAP policy, sample results are not blank corrected.

EMSL Analytical, Inc.

528 Mineola Avenue, Carle Place, NY, 11514
Telephone: 516.997.7251 Fax:856-786-5974
emsl.com

EMSL Order ID: 062650220
LIMS Reference ID: EE50220
EMSL Customer ID: CDWC26

Attention: Susan Cahalan
CDW Consultants [CDWC26]
4 California Avenue, Suite 301
Framingham, MA 01701
(508) 875-2657
scahalan@cdwconsultants.com

Project Name: Medford High School

Customer PO:
EMSL Sales Rep: David Prince
Received: 01/15/2026 10:44
Reported: 01/15/2026 15:09



James Han Laboratory Manager or other approved signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. QC sample results are within quality control criteria and met method specifications unless otherwise noted. All results for soil samples are reported on a dry weight basis, unless otherwise noted.

Analysis following EMSL SOP for the Determination of Environmental Lead by FLAA. The laboratory has a reporting limit of 0.0064% by wt., based upon a minimum sample weight of 0.25g submitted to the lab, and is not responsible for any result or reporting limit provided in mg/cm2 since it is dependent upon an area value provided by non-lab personnel. A "<" (less than) result signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty and definitions of modifications are available upon request. Results in this report are not blank corrected unless specified.

EMSL Analytical, Inc.
Carle Place, NY 11514
PHONE: (516) 997-7251
EMAIL: carleplacelab@emsl.com

Lead Chain of Custody

EMSL Order Number / Lab Use Only: EE50220

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

If Bill-To is the same as Report-To leave this section blank. Third-party billing requires written authorization.

Customer Information		Billing Information	
Customer ID:		Billing ID:	
Company Name:	CDW Consultants	Company Name:	CDW Consultants
Contact Name:	Susan Cahalan	Billing Contact:	Susan Cahalan
Street Address:	4 California Drive	Street Address:	4 California Drive
City, State, Zip:	Framingham MA 01071	City, State, Zip:	Framingham MA 01071
Country:	US	Country:	US
Phone:	5088752657	Phone:	5088752657
Email(s) for Report:	scahalan@cdwconsultants.com	Email(s) for Invoice:	

Project Information

Project Name/No.: Medford High School
Purchase Order:
EMSL LIMS Project ID: (if applicable, EMSL will provide)
US State where samples collected: MA
State of Connecticut (CT) must select project location: ☐ Commercial (Taxable) ☐ Residential (Non-Taxable)
Sampled By: Name: Susan Cahalan
Sampled By: Signature:
No. of Samples in Shipment:

Turn-Around-Time (TAT)

☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☐ 32 Hour ☐ 48 Hour ☐ 72 Hour ☑ 96 Hour ☐ 1 Week ☐ 2 Week

Please call ahead for large projects and/or turnaround times 6 hours or less. *32 Hour TAT available for select tests only; samples must be submitted by 11:30am

MATRIX	METHOD	INSTRUMENT	REPORTING LIMIT	SELECTION
CHIPS ☒ % by wt. ☐ ppm (mg/kg) ☐ mg/cm² *Chips reporting Limit based on a minimum 0.25g sample weight. Not appropriate for Ceramic Tiles - XRF is recommended. *Sample Area Required below for mg/cm²	SW 846-7000B	Flame Atomic Absorption	*Please select reporting limit: - 0.0064% - 64 ppm - mg/cm2 - RL is Variable	☒
	SW 846-6010D	ICP-OES	*Please select reporting limit: - 0.0064% - 64 ppm - mg/cm2 - RL is Variable	☐
AIR	NIOSH 7082	Flame Atomic Absorption	3.2 µg/filter	☐
	NIOSH 7303M	ICP-OES	1.0µ g/filter	☐
	NIOSH 7303M	ICP-MS	0.05 µg/filter	☐
WIPE ☐ ASTM ☐ NON-ASTM *If no box is checked, non-ASTM Wipe is assumed	SW 846-7000B*	Flame Atomic Absorption	6 µg/wipe	☐
	SW 846-6010D*	ICP-OES	1.0 µg/wipe	☐
TCLP	SW 846-1311 / 7000B / SM 3111B	Flame Atomic Absorption	0.32 mg/L (ppm)	☐
	SW 846-1311 / SW 846-6010D*	ICP-OES	0.1 mg/L (ppm)	☐
SPLP	SW 846-1312 / 7000B / SM 3111B	Flame Atomic Absorption	0.32 mg/L (ppm)	☐
	SW 846-1312 / SW 846-6010D*	ICP-OES	0.1 mg/L (ppm)	☐
TTLC	22 CCR App. II, 7000B	Flame Atomic Absorption	32 mg/kg (ppm)	☐
	22 CCR App. II, SW 846-6010D*	ICP-OES	2 mg/kg (ppm)	☐
STLC	22 CCR App. II, 7000B	Flame Atomic Absorption	0.32 mg/L (ppm)	☐
	22 CCR App. II, SW 846-6010D*	ICP-OES	0.1 mg/L (ppm)	☐
Soil	SW 846-7000B	Flame Atomic Absorption	32 mg/kg (ppm)	☐
	SW 846-6010D*	ICP-OES	2 mg/kg (ppm)	☐
Wastewater Unpreserved ☐ Preserved with HNO3 ☐ PH<2	SM 3111B / SW 846-7000B	Flame Atomic Absorption	0.32 mg/L (ppm)	☐
	EPA 200.7 / 6010D	ICP-OES	0.020 mg/L (ppm)	☐
Drinking Water Unpreserved ☐ Preserved with HNO3 ☐ PH<2	EPA 200.5	ICP-OES	0.003 mg/L (ppm)	☐
	EPA 200.8	ICP-MS	0.001 mg/L (ppm)	☐
TSP/SPM Filter	40 CFR Part 50	ICP-OES	12 µg/filter	☐
		ICP-MS	0.6 µg/filter	☐
Other:				

Received: Carle Place, NY JAN 15 26 AM10:44

Sample Number	Sample Location	Volume / Area	Date / Time Sampled
LBP-1	Blue on Red on Metal Main Room Stair Rail	—	12/31/2025
LBP-2	White Paint on Concrete Wall Northwest Room	—	
LBP-3	White-gray Paint on Cmu Room Doorframe	—	
LBP-4	White-tan paint on Concrete Wall near det closet Recovery	—	
LBP-5	Tan paint on Cmu Basement	—	

Method of Shipment:
Sample Condition Upon Receipt:

Relinquished by:	Date/Time:	Received by:	Date/Time
	1/12/2026	James Hm	1/15/26
Relinquished by:	Date/Time:	Received by:	Date/Time
			10:14AM

Controlled Document COC-25 Lead R22 03/28/2025 *5010C Available Upon Request

1115/26 ☐ AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.

Medford NJ Pg 2 of 2

EMSL Analytical, Inc.

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Carle Place, NY 11514
PHONE: (516) 997-7251
EMAIL: carleplacelab@emsl.com

Lead Chain of Custody

EMSL Order Number / Lab Use Only

EE50220

Additional P: ...ecessary if needed for additional sample information

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Sample Number	Sample Location	Volume / Area	Date / Time Sampled
LBP-6	White Textured Ceiling Coating	—	12/31/2025
LBP-7	Tan paint on CMU Wall in Boiler Room	—	
LBP-8	White-tan on CMU pool Area	—	
LBP-9	Black over red paint (Coating) Metal Classroom Doors	—	
LBP-10	White-gray over Black on Metal Doors Railing	—	

RECEIVED
EMSL ANALYTICAL, INC.
Carle Place, NY
JAN 15 26 AM 10:44

Method of Shipment:		Sample Condition Upon Receipt:	
Relinquished by:	Date/Time: 1/6/2026	Received by: James Hay	Date/Time: 1/15/26
Relinquished by:	Date/Time:	Received by:	Date/Time: 10:44 AM

Controlled Document COC-25 Lead R22 03/26/2025

☐ I AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.

Page 2 of 2

Page 6 of 6

APPENDIX C

LABTECH RADONOK
c/o Alpha Energy Laboratories
2501 Mayes Road, Ste 100
Carrollton. TX 75006
aelabs.com
(972) 242-2479

RADON TEST REPORT

Report & Sample Dates

DATE RECEIVED:	1/14/2026
REPORT DATE:	1/16/2026

Laboratory Certification Info

NRPP: 101132 AL
NRSB: 25ARL003
STATE: N/A

Susan Cahalan
Cdw Consultants
489 Winthrop St
Medford, MA 02155

KIT SERIAL	RADON LEVEL	PROPERTY TESTED	TEST DURATION	STRUCTURE
RA208814	0.5 +/- 0.1 pCi/L	489 Winthrop St	Start: 04:10 PM 01/09/2026	Type: Slab
RA208884	0.4 +/- 0.1 pCi/L	Medford, MA 02155	End: 09:08 AM 01/12/2026	Floor: 1st Floor
ID1: 3277777	Average: 0.5 pCi/L	E Mech Room	Duration: 64.97 Hours	Closed: Yes
ID2: 3277777	RPD[1]: 20.0%			

1: The RPD for these tests passed the quality standard. RPD stands for Relative Percent Difference. RPD is used to assess the degree of precision between duplicate tests. It is normal and expected for test results to differ slightly. Note: Customer provided data indicates these two tests were exposed as Duplicates. Duplicates are placed side-by-side (within 6 inches) in the same location at the same time and are typically used as a Quality Assurance measure to asses device performance. If these tests were not exposed as Duplicates, the average and RPD values should be disregarded.

Short Term Radon Tests have an estimated margin of error of ±5% when used according to directions.

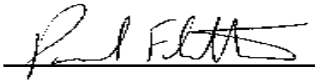
Quality Assurance (QA): Sample Type: Short Term. Technology: Activated Charcoal. Device Manufacturer: Eurofins Environment Testing Radon, LLC. Model: RD-1. NRPP Approved Device: AC-8202. NRSB Approved Device: 10325. Device Performance Standard: ANSI-AARST MS-PC 2022. Quality Assurance Standard: ANSI-AARST MS-QA 2023. Lab Methodology: EPA-402-R-92-004. Test instructions designed in accordance with ANSI-AARST MAH-2023. Radon level uncertainty is calculated using a 95% confidence level. One sampler can test up to 2,000 ft^2. Sampler Deployed by: Susan Cahalan. Sampler Retrieved by: Susan Cahalan.

Disclaimer: Results are only indicative of the sample as received in the lab. Incorrect information or improper sampling procedures will affect results. Eurofins Environment Testing Radon, LLC (EETR) did not provide sampling services unless otherwise indicated. Device deployment/retrieval is assumed to be performed by the person submitting the sample, unless otherwise specified by the client. The person (s) performing sampling are responsible for sampling QA, which may include duplicate, blank, and/or spiked detectors. Analysis, laboratory QA, and production QA performed by EETR. Measurements are not necessarily predictive or supportive of measurements conducted at different times or locations. EETR is not responsible for the consequences of any action you do or do not take based on the results. This report may only be reproduced in full, unless authorized in writing by EETR.

Radon Information: Radon is a naturally occuring radioactive gas. It is odorless, colorless, and tasteless. Radon in air is ubiquitous (existing or being everywhere at the same time) and is found in outdoor and indoor air. Radon concentration is measured in picocuries per liter of air (pCi/L). The average indoor concentration is 1.3 pCi/L. The average outdoor concentration is 0.4 pCi/L. Radon is the second leading cause of lung cancer, after smoking. Smokers and former smokers are at especially high risk. Radon exposure is a health risk over long periods of time. The more time you spend in a high radon environment, the greater the risk.

The US Environmental Protection Agency (EPA) and the Surgeon General recommend fixing the building when the radon level is 4 pCi/L or more. Because there is no known safe level of exposure to radon, EPA also recommends considering fixing radon levels between 2 pCi/L and 4 pCi/L. The World Health Organization (WHO) recommends fixing the building when the radon level is 2.7 pCi/L or more.

The process of fixing a radon problem is called mitigation. Even buildings with very high levels can be successfully mitigated. EPA recommends that you use a contractor certified by NRPP, NRSB, or your State (where applicable) to correct radon problems.

Measurement Specialist / Laboratory Director  Paul Fletcher **Date** 1/16/2026

IF YOU HAVE QUESTIONS ABOUT WHAT YOUR RESULTS MEAN:
EPA National Hotline: (800) 557-2366, epa.gov/radon, or, call your State Radon Official: (413) 586-7525

IF YOU HAVE QUESTIONS ABOUT HOW TO FIX A RADON PROBLEM:
Radon Fix-it Hotline: (800) 644-6999, epa.gov/radon, or, call your State Radon Official: (413) 586-7525

WHAT DO MY TEST RESULTS MEAN?

Radon concentration is measured in picocuries per liter of air (pCi/L). The average indoor concentration is 1.3 pCi/L. The average outdoor concentration is 0.4 pCi/L. The US Environmental Protection Agency (EPA) action level is 4 pCi/L, meaning that EPA recommends you take further action if your radon level is 4 pCi/L or more. Because there is no known safe level of exposure to radon, EPA also recommends considering further action for radon levels between 2 pCi/L and 4 pCi/L. The World Health Organization action level is 2.7 pCi/L. If this is your first test, retesting is usually advisable. If you have tested multiple times, average the results and use the average to determine the appropriate next steps.

For results **below 2 pCi/L** you do not need to take further action at this time.

For results **between 2 pCi/L and 4 pCi/L**, consider taking further action. If this is your first test, consider testing again to confirm the initial result. If you have tested multiple times, EPA recommends that you consider fixing the building.

For results **4 pCi/L or greater,** you should take further action. If this is your first test, EPA recommends you conduct another test to confirm the initial reading. If you have tested multiple times, you should fix the building.

If the building has an active radon mitigation system, test annually to confirm the system is working properly. Because radon levels can change, all buildings should be tested at least once every 2 years and whenever the building is renovated.

HOW DANGEROUS IS MY RADON LEVEL?

RADON RISK IF YOU SMOKE

Radon Level	If 1,000 people were exposed to this level over a lifetime	The risk of radon induced lung cancer compares to	What To Do Next?
100 pCi/L	About 770 people could get lung cancer	110 times the risk of dying in a car crash	Fix your home
40 pCi/L	About 380 people could get lung cancer	95 times the risk of dying from poison	Fix your home
20 pCi/L	About 260 people could get lung cancer	250 times the risk of drowning	Fix your home
10 pCi/L	About 150 people could get lung cancer	200 times the risk of dying in a fire	Fix your home
4 pCi/L	About 62 people could get lung cancer	5 times the risk of dying in a car crash	Fix your home
2 pCi/L	About 32 people could get lung cancer	6 times the risk of dying from poison	Consider fixing between 2 & 4 pCi/L
1.3 pCi/L	About 20 people could get lung cancer	(Average indoor radon level)	(Reducing below 1 pCi/L is difficult)
0.4 pCi/L	About 3 people could get lung cancer	(Average outdoor radon level)	(Reducing below 1 pCi/L is difficult)

Note: If you are a former smoker your risk may be lower
Estimates are lifetime risk of lung cancer deaths from EPA Assessment of Risks from Radon in Homes (EPA 402-R-03-003)

RADON RISK IF YOU HAVE NEVER SMOKED

Radon Level	If 1,000 people were exposed to this level over a lifetime	The risk of radon induced lung cancer compares to	What To Do Next?
100 pCi/L	About 440 people could get lung cancer	63 times the risk of dying in a car crash	Fix your home
40 pCi/L	About 120 people could get lung cancer	30 times the risk of dying from poison	Fix your home
20 pCi/L	About 36 people could get lung cancer	35 times the risk of drowning	Fix your home
10 pCi/L	About 18 people could get lung cancer	20 times the risk of dying in a fire	Fix your home
4 pCi/L	About 7 people could get lung cancer	The risk of dying in a car crash	Fix your home
2 pCi/L	About 4 people could get lung cancer	The risk of dying from poison	Consider fixing between 2 & 4 pCi/L
1.3 pCi/L	About 2 people could get lung cancer	(Average indoor radon level)	(Reducing below 1 pCi/L is difficult)
0.4 pCi/L		(Average outdoor radon level)	(Reducing below 1 pCi/L is difficult)

Note: If you are a former smoker your risk may be higher
Estimates are lifetime risk of lung cancer deaths from EPA Assessment of Risks from Radon in Homes (EPA 402-R-03-003)

HOW CAN I FIX A RADON PROBLEM?

The process of fixing a radon problem is called mitigation. Mitigation is highly effective at lowering radon levels. If your radon level is 4 pCi/L or more, you should fix the building. If your radon level is between 2 pCi/L and 4 pCi/L, you should consider fixing the building. There is no known safe level of radon, and levels below 4 pCi/L still pose a signficant health risk. In most cases, radon levels can be lowered below 2 pCi/L.

We recommend only hiring contractors who are certified and trained in radon mitigation. To find a certified contractor:

Call your State Radon Official at **(413) 586-7525** or go to ***aelabs.com/states***

Go to ***aelabs.com/mitigation*** for a list of NRPP certified contractors.

WHAT SHOULD I DO NEXT?

The guide below is for buildings without a radon mitigation system. Buildings with an active mitigation system should have radon levels below 4 pCi/L. Contact the contractor who installed your system if your radon test results indicate a radon level at or above 4 pCi/L. Most mitigation systems include a warranty; refer to your contract for details.

Number of Times Tested	Type of Test	Test Result (pCi/L)	What do I do next?	What test do I use? (If retesting)
One	Short Term	Less than 2	Retest every 2 years	Short Term
One	(2-7 days)	Between 2 and 4	Consider retesting now	Long Term or Short Term
One		Between 4 and 8	Retest now	Long Term or Short Term
One		8 or more	Retest now	Short Term
Two or more	Short Term	Less than 2	Retest every 2 years	Short Term
	(2-7 days)	Between 2 and 4	Consider fixing the building	
		4 or More	Fix the building	
One or more	Long Term	Less than 2	Retest every 2 years	Short Term
	(91-365 days)	Between 2 and 4	Consider fixing the building	
		4 or more	Fix the building	

LABTECH RADONOK
c/o Alpha Energy Laboratories
2501 Mayes Road, Ste 100
Carrollton. TX 75006
aelabs.com
(972) 242-2479

RADON TEST REPORT

Report & Sample Dates

DATE RECEIVED:	1/14/2026
REPORT DATE:	1/16/2026

Laboratory Certification Info

NRPP: 101132 AL
NRSB: 25ARL003
STATE: N/A

Susan Cahalan
Cdw Consultants
489 Winthrop St
Medford, MA 02155

KIT SERIAL	RADON LEVEL	PROPERTY TESTED	TEST DURATION	STRUCTURE
RA208833	0.5 +/- 0.1 pCi/L	489 Winthrop St	Start: 04:00 PM 01/09/2026	Type: Slab
RA208873	0.6 +/- 0.1 pCi/L	Medford, MA 02155	End: 09:05 AM 01/12/2026	Floor: 1st Floor
ID1: 3277775	Average: 0.5 pCi/L	Facility Storage Room	Duration: 65.08 Hours	Closed: Yes
ID2: 3277775	RPD[1]: 20.0%	Voke Wing		

1: The RPD for these tests passed the quality standard. RPD stands for Relative Percent Difference. RPD is used to assess the degree of precision between duplicate tests. It is normal and expected for test results to differ slightly. Note: Customer provided data indicates these two tests were exposed as Duplicates. Duplicates are placed side-by-side (within 6 inches) in the same location at the same time and are typically used as a Quality Assurance measure to asses device performance. If these tests were not exposed as Duplicates, the average and RPD values should be disregarded.

Short Term Radon Tests have an estimated margin of error of ±5% when used according to directions.

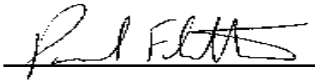
Quality Assurance (QA): Sample Type: Short Term. Technology: Activated Charcoal. Device Manufacturer: Eurofins Environment Testing Radon, LLC. Model: RD-1. NRPP Approved Device: AC-8202. NRSB Approved Device: 10325. Device Performance Standard: ANSI-AARST MS-PC 2022. Quality Assurance Standard: ANSI-AARST MS-QA 2023. Lab Methodology: EPA-402-R-92-004. Test instructions designed in accordance with ANSI-AARST MAH-2023. Radon level uncertainty is calculated using a 95% confidence level. One sampler can test up to 2,000 ft^2. Sampler Deployed by: Susan Cahalan. Sampler Retrieved by: Susan Cahalan.

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The US Environmental Protection Agency (EPA) and the Surgeon General recommend fixing the building when the radon level is 4 pCi/L or more. Because there is no known safe level of exposure to radon, EPA also recommends considering fixing radon levels between 2 pCi/L and 4 pCi/L. The World Health Organization (WHO) recommends fixing the building when the radon level is 2.7 pCi/L or more.

The process of fixing a radon problem is called mitigation. Even buildings with very high levels can be successfully mitigated. EPA recommends that you use a contractor certified by NRPP, NRSB, or your State (where applicable) to correct radon problems.

Measurement Specialist / Laboratory Director  Paul Fletcher **Date** 1/16/2026

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Radon Fix-it Hotline: (800) 644-6999, *epa.gov/radon*, or, call your State Radon Official: (413) 586-7525

WHAT DO MY TEST RESULTS MEAN?

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For results **below 2 pCi/L** you do not need to take further action at this time.

For results **between 2 pCi/L and 4 pCi/L**, consider taking further action. If this is your first test, consider testing again to confirm the initial result. If you have tested multiple times, EPA recommends that you consider fixing the building.

For results **4 pCi/L or greater,** you should take further action. If this is your first test, EPA recommends you conduct another test to confirm the initial reading. If you have tested multiple times, you should fix the building.

If the building has an active radon mitigation system, test annually to confirm the system is working properly. Because radon levels can change, all buildings should be tested at least once every 2 years and whenever the building is renovated.

HOW DANGEROUS IS MY RADON LEVEL?

RADON RISK IF YOU SMOKE

Radon Level	If 1,000 people were exposed to this level over a lifetime	The risk of radon induced lung cancer compares to	What To Do Next?
100 pCi/L	About 770 people could get lung cancer	110 times the risk of dying in a car crash	Fix your home
40 pCi/L	About 380 people could get lung cancer	95 times the risk of dying from poison	Fix your home
20 pCi/L	About 260 people could get lung cancer	250 times the risk of drowning	Fix your home
10 pCi/L	About 150 people could get lung cancer	200 times the risk of dying in a fire	Fix your home
4 pCi/L	About 62 people could get lung cancer	5 times the risk of dying in a car crash	Fix your home
2 pCi/L	About 32 people could get lung cancer	6 times the risk of dying from poison	Consider fixing between 2 & 4 pCi/L
1.3 pCi/L	About 20 people could get lung cancer	(Average indoor radon level)	(Reducing below 1 pCi/L is difficult)
0.4 pCi/L	About 3 people could get lung cancer	(Average outdoor radon level)	(Reducing below 1 pCi/L is difficult)

Note: If you are a former smoker your risk may be lower
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Radon Level	If 1,000 people were exposed to this level over a lifetime	The risk of radon induced lung cancer compares to	What To Do Next?
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20 pCi/L	About 36 people could get lung cancer	35 times the risk of drowning	Fix your home
10 pCi/L	About 18 people could get lung cancer	20 times the risk of dying in a fire	Fix your home
4 pCi/L	About 7 people could get lung cancer	The risk of dying in a car crash	Fix your home
2 pCi/L	About 4 people could get lung cancer	The risk of dying from poison	Consider fixing between 2 & 4 pCi/L
1.3 pCi/L	About 2 people could get lung cancer	(Average indoor radon level)	(Reducing below 1 pCi/L is difficult)
0.4 pCi/L		(Average outdoor radon level)	(Reducing below 1 pCi/L is difficult)

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One	(2-7 days)	Between 2 and 4	Consider retesting now	Long Term or Short Term
One		Between 4 and 8	Retest now	Long Term or Short Term
One		8 or more	Retest now	Short Term
Two or more	Short Term	Less than 2	Retest every 2 years	Short Term
	(2-7 days)	Between 2 and 4	Consider fixing the building	
		4 or More	Fix the building	
One or more	Long Term	Less than 2	Retest every 2 years	Short Term
	(91-365 days)	Between 2 and 4	Consider fixing the building	
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RADON TEST REPORT

Report & Sample Dates

DATE RECEIVED:	1/14/2026
REPORT DATE:	1/16/2026

Laboratory Certification Info

NRPP: 101132 AL
NRSB: 25ARL003
STATE: N/A

Susan Cahalan
Cdw Consultants
489 Winthrop St
Medford, MA 02155

KIT SERIAL	RADON LEVEL	PROPERTY TESTED	TEST DURATION	STRUCTURE
RA208850	0.5 +/- 0.1 pCi/L	489 Winthrop St	Start: 04:45 PM 01/09/2026	Type: Slab
RA215681	0.5 +/- 0.1 pCi/L	Medford, MA 02155	End: 09:30 AM 01/12/2026	Floor: 1st Floor
ID1: 3277778	Average: 0.5 pCi/L	Room C115	Duration: 64.75 Hours	Closed: Yes
ID2: 3277778	RPD[1]: 0.0%			

1: The RPD for these tests passed the quality standard. RPD stands for Relative Percent Difference. RPD is used to assess the degree of precision between duplicate tests. It is normal and expected for test results to differ slightly. Note: Customer provided data indicates these two tests were exposed as Duplicates. Duplicates are placed side-by-side (within 6 inches) in the same location at the same time and are typically used as a Quality Assurance measure to asses device performance. If these tests were not exposed as Duplicates, the average and RPD values should be disregarded.

Short Term Radon Tests have an estimated margin of error of ±5% when used according to directions.

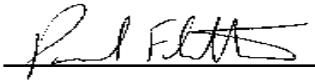
Quality Assurance (QA): Sample Type: Short Term. Technology: Activated Charcoal. Device Manufacturer: Eurofins Environment Testing Radon, LLC. Model: RD-1. NRPP Approved Device: AC-8202. NRSB Approved Device: 10325. Device Performance Standard: ANSI-AARST MS-PC 2022. Quality Assurance Standard: ANSI-AARST MS-QA 2023. Lab Methodology: EPA-402-R-92-004. Test instructions designed in accordance with ANSI-AARST MAH-2023. Radon level uncertainty is calculated using a 95% confidence level. One sampler can test up to 2,000 ft^2. Sampler Deployed by: Susan Cahalan. Sampler Retrieved by: Susan Cahalan.

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The US Environmental Protection Agency (EPA) and the Surgeon General recommend fixing the building when the radon level is 4 pCi/L or more. Because there is no known safe level of exposure to radon, EPA also recommends considering fixing radon levels between 2 pCi/L and 4 pCi/L. The World Health Organization (WHO) recommends fixing the building when the radon level is 2.7 pCi/L or more.

The process of fixing a radon problem is called mitigation. Even buildings with very high levels can be successfully mitigated. EPA recommends that you use a contractor certified by NRPP, NRSB, or your State (where applicable) to correct radon problems.

Measurement Specialist / Laboratory Director  Paul Fletcher **Date** 1/16/2026

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For results **below 2 pCi/L** you do not need to take further action at this time.

For results **between 2 pCi/L and 4 pCi/L**, consider taking further action. If this is your first test, consider testing again to confirm the initial result. If you have tested multiple times, EPA recommends that you consider fixing the building.

For results **4 pCi/L or greater,** you should take further action. If this is your first test, EPA recommends you conduct another test to confirm the initial reading. If you have tested multiple times, you should fix the building.

If the building has an active radon mitigation system, test annually to confirm the system is working properly. Because radon levels can change, all buildings should be tested at least once every 2 years and whenever the building is renovated.

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KIT SERIAL	RADON LEVEL	PROPERTY TESTED	TEST DURATION	STRUCTURE
RA215679	0.5 +/- 0.1 pCi/L	489 Winthrop St	Start: 04:40 PM 01/09/2026	Type: Slab
RA208898	0.6 +/- 0.1 pCi/L	Medford, MA 02155	End: 08:45 AM 01/12/2026	Floor: 1st Floor
ID1: 3277780	Average: 0.5 pCi/L	Storage Under Pool	Duration: 64.08 Hours	Closed: Yes
ID2: 3277780	RPD[1]: 20.0%			

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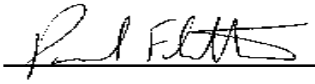
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One		8 or more	Retest now	Short Term
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One or more	Long Term	Less than 2	Retest every 2 years	Short Term
	(91-365 days)	Between 2 and 4	Consider fixing the building	
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0. Previous Existing Building and/or Site Reports, Studies, Drawings

The following reference documents were made available by the District:

- Original Building Construction Document Drawings - including only partial site, architectural, structural, electrical and mechanical information / Rich, Phinney, Lang & Cote Inc. / July 1967
- Roof Replacement Construction Document Drawings / Andrew N. Barr PE / June 2001
- Edgerly Field Athletic Complex Bid Documents / Gale Associates / May 2009
- Swimming Pool Filtration Equipment O&M Manual / Fillion Associates, Inc. / September 2013
- Science Lab Initiative Construction Documents including only architectural information / DiNisco Design Partnership / February 2015
- Medford Cable Access TV Construction Documents / Scott Payette Architects / July 2016
- City of Medford Comprehensive Plan / Agency / 2022

These documents are not included as part of this submission but are available upon request.

The City has identified improving stormwater management and slope stabilization as priorities for the site!



Takeaways from the Open Space and Recreation Plan

- Medford Highschool is within the Top 5% Urban Heat Areas in the Region.
- There is a desire to increase permeability of the site.
- Need to stablize banks with plantings.

Takeaways from the Comprehensive Plan

- Strong desire to diversify the character and use of open spaces and facilities.
- Provide activities and spaces to gather for all ages and abilities.

3.1.5 Site Development Requirements

3.1.5 Site Development Requirements

The existing Medford High School property is identified as Lot 1 on Assessor's Map 3-02 . The official Medford High School address is 489 Winthrop Street, which also includes the Edgerly Sports Complex. The property is bordered by Temple Shalom properties to the southeast, Winthrop Street to the south, residential properties to the west, and the Middlesex Fells Reservation on the north and east,

This 29.4 acre parcel of land includes the existing building for Medford High and Vocational Technical High School, vehicular circulation systems, parking lots, open space, athletic and recreational facilities. The existing building footprint occupies about one fifth of the parcel and is oriented at a roughly 45 degree angle from Winthrop Street.



A. Structures + Fences

Fencing:

Chain link fences separate the southern edge of Edgerly Field from the steep grade change. These fences wrap around the southwest corner of the field and continue to wrap around the small parking lot along the southwestern edge of the field. This fencing continues to wrap around a small CTE / sports equipment storage area and a 9-space parking lot, just west of the field. There is a small length of fencing hugging the northeast corner of the field. This fencing could remain on site if Edgerly Field remains lightly rehabilitated or left as is.

There is additional chainlink fencing bordering the four individual pre-school play areas immediately adjcent to the school. This fencing would need to be removed unless there was light or no rehabilitation.

Structures:

Near the CTE / sports equipment storage area and parking lot, there is one large storage facility, one smaller one, and a dumpster, among other various extra sports equipment. The physical nature of these structures could benefit from rehabilitation or replacement, but the location of them should remain in place.

In the northwestern corner of the field just west of Edgerly Field, there is a CTE practice space for pouring concrete foundations. It is assumed this program could be moved to a more convenient location and rehabilitated.

There is a storage container adjacent to the northwest corner of Edgerly Field. This structure can remain in place if in good condition.

There is a large parked trailer on the northwest edge of the field located at a higher grade, to the west of the western-most parking lot adjacent to the school. It is assumed the materials stored in this facility need to remain close to the field, but could benefit from upgraded storage facilities.

There are two large parked trailers in the southwest corner of the large parking lot south of the school. It is assumed the materials stored in this facility need to remain close to the parking lot, but could benefit from upgraded storage facilities.

There are numerous CTE storage facilities and trash receptacles around the CTE yards along the northeast facade of the school. It is assumed the materials stored here need to remain close to CTE Yard programming, but could benefit from upgraded storage facilities.

There is a storage facility southeast of the DCR parking lot. It is assumed the materials stored in this facility need to remain close to the parking lot, but could benefit from upgraded storage facilities.

B. Site Access + Circulation

Medford High School is located at a unique junction between urban city conditions and the Middlesex Fells, positioning the site along a variety of mobility options such as car, school bus, MBTA bus, bike, or on foot via trail. The school is well connected to most Medford neighborhoods through public transit, with additional support provided to the North Medford neighborhood which has a dedicated school bus route.

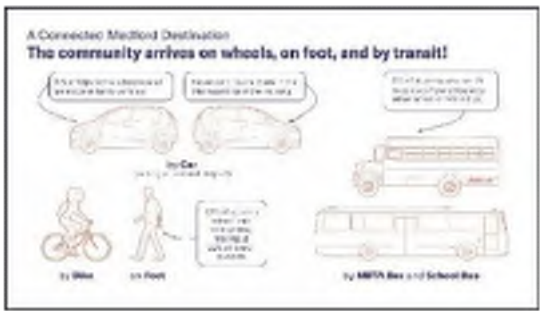
On average, most students commute 2.1 miles to school. Family vehicle and carpool trips make up the majority of commutes to school at 37%, with fewer car trips made in the afternoon in comparison to the morning. 62% of students living within 1 mile of Medford High School walk or bike, making up 22% of the overall commutes. 51% of students who live 2+ miles away from school either ride the school bus or the MBTA buses.

The school has a single entrance from Winthrop Street, identified by modest signage. Parking is pervasive and vehicles are prioritized in site circulation, providing approximately 400-428 parking spaces. Fencing along the north edge of the property blocks pedestrian access from the adjacent neighborhood, while trails along the east and south edges provide additional neighborhood connections. Community members accessing recreation amenities —such as the Medford High School Pool or sports fields— can enter only from a single access point on the northeastern side of the school building. There is no continuous pedestrian path around the school to Edgerly field, forcing pedestrians and vehicles to navigate the same narrow corridor.

The site ADA report found that most site pavements, pathways and amenities do not comply with contemporary code, and specifically that the level of renovation will trigger replacement of site features to ensure accessibility. This includes work across Winthrop Street to add compliant curb ramps at crosswalks that meet the site.

The driveways along the west and north sides of the building do not connect to the parking lot and driveway on the east side, creating difficult site navigation for emergency vehicles. Improving circulation around the school has been identified as a priority for first responders.

Currently, the site has only one entrance—a two- to three-lane driveway. The design team has met with first responders who have requested that a secondary means for emergency access be explored.



Methods of Campus Arrival



Routes to Campus



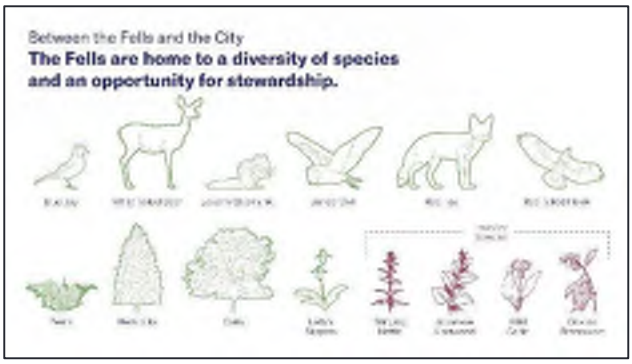
Parking on Campus

C. Physical Features + Environment

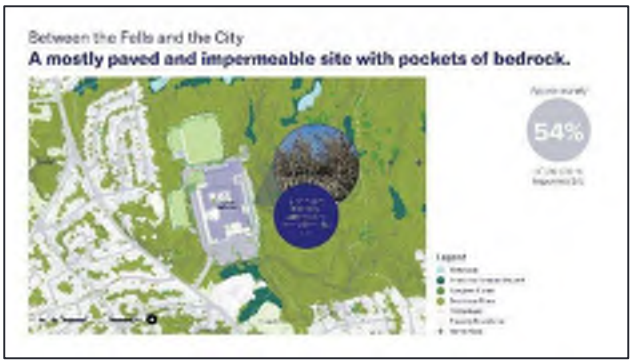
With 2,200 acres of forests, meadows, and reservoirs in its backyard, Medford High School has incredible access to one of the most beloved state parks in the greater Boston area, the Middlesex Fells. Over 500 native plant species, nearly 200 bird species, and over 20 species of mammals have been identified in the reservation. Such close access results in an exceptional educational setting, allowing students to engage directly with the natural diversity of this landscape. This diversity includes over 25 invasive species, such as Stinging Nettle, Japanese Knotweed, Wild Garlic, and Oriental Bittersweet, to name a few. Some of these invasive plants, like Oriental Bittersweet, can be spotted right along the campus edge.

Part of what makes this landscape so special is the large pockets of bedrock that can be seen throughout the Fells and even on campus. A significant bedrock outcropping is located directly on site. Additionally, about 54% of the site is impermeable, making for a lot of hardscape found throughout campus.

This bedrock creates a varied foundation for the campus, with roughly 80' of grade change between Winthrop Street and the Fells. Steep slopes hug the edges of nearly all sides of campus, except for areas immediately adjacent to the neighborhood on the west side. A wetland is located just southeast of the primary parking lot, with numerous other patches of wetland and waterbodies found throughout the woods adjacent to campus.



A Diversity of Species on and Around Campus



A Site Comprised of Many Impervious Surfaces

D. Parking and Paving

Parking:

Parking numbers are hard to define because of the informal use of non-parking spaces and pavement striped for other uses along with faded striping. For this reason, the parking lots will have a range of parking spots that reflect the unclear nature of some of the pavement markings. Along the southern edge of the existing building, there is a large lot (Lot A) that is divided down the middle by a drive aisle. The western side of Lot A hosts approxiamtely 110 parking spaces and the eastern side of Lot A hosts approximately 125 parking spaces. There are 16 space near the main building entrance, 7 of which are ADA accessible.

Along the eastern edge of the exising building (Lot B), there are 88-91 scattered parking spaces (60 of which are in a parking row adjacent to the Fells), 4 of which are ADA accessible. There are an additional 4 parking spaces for trucks and tandem parking by the automotive shop. The linear parking lot (Lot C) along the western edge of the building has 38-48 spaces, 2 of which are ADA accessible. Restriping has also made parking lines and the drop off lane hard to distinguish. There are 9 spaces in the small parking area just north of the field to the west of Lot C. Just west of Edgerly Field, there are 9 parking spaces, 2 of which are ADA accessible. Just south of Edgerly Field and just north of the existing school building, there are 29 scattered parking spaces, 3 of which are ADA accessible. Ultimately, this totals 400-430 parking spaces, 18 of which are ADA accessible, with 4 addditional truck parking spaces.

Paving:

The site ADA report found that most site pavements, pathways, and amenities do not comply with contemporary code, and specifically that the level of renovation will trigger replacement of site features to ensure accessibility. This includes work across Winthrop Street to add compliant curb ramps at crosswalks that meet the site. Most of the bituminous pavement on site is in poor condition and needs to be resurfaced.



	Total	Accessible	Reserved For Programs	Visitor	Staff	Student
Lot A (and entrance parking)	245 - 260	7	4 for MFN	9	22 numbered 113-128 unsigned	90±
Lot B	88-91	4	1 driver ed, 2 electric, 4 car drop-off, 1 Bistro 489	5 4 to CTE prog	67-70 unsigned	-
Lot C	38-48	2	4 Pre-school drop off	-	32-46 unsigned	-
Misc. parking at the back of the school	29	5	_	-	24 unsigned	-
Existing Total	400 - 428	1 8	16	18	258-288 unsigned	90±

E. Code Requirements

The project site will require compliance with the American Disabilities Act (ADA) and Massacusetts Architectural Access Board (MAAB).

Due to several wetland resources off the property but within 200' of the site, the site will be subject to the Wetlands Protection Act.

The project is a municipal building and exempt from the Town of Medford Zoning Bylaws as described in the following section.

F. Zoning Setbacks and Limitations

As described in a previous section, the lot is zoned as Single Family 1, SF-1. According to the Medford Zoning Bylaw Chapter 94, Table A, dated March 15, 2022, use of land or structures for educational purposes on land owned by the City of Medford is permitted in the SF-1 zoning district.

Table B provides the dimensional requirements as defined in the Bylaw Chapter 94, Table B: Table of Dimensional Requirements, 5(a), dated March 15, 2022. Additional information on the dimensional requirements can be found in the Bylaw Section 94-4.2 Dimensional requirements; special cases.

Massachusetts Department of Environmental Protection, DEP, wetlands have been identified adjacent to the property and in the nearby Fells. Any impact to or work within wetland buffers will require approval by the Medford Conservation Commision. Additional information is provided in the following Wetlands Resources section.

Table B

	SF-1
Minimum lot area in square feet	80,000*
Minimum lot frontage in feet	50
Minimum lot width in feet	100
Minimum lot depth in feet	100
Minimum landscaped open space as a percentage	10
Minimum usable open space as a percentage	25
Minimum front yard in feet	H+L/6, And ≥ 15
Minimum side yard in feet	H+L/6, And ≥ 15
Minimum rear yard in feet	H+L/6, And ≥ 15
Maximum lot coverage as a percentage	30
Maximum building height in feet	35
Maximum building height in stories	2 ½

*According to Zoning Bylaw Section 94-4.2.8 (4), the minimum total lot area for an institutional use in a residential district shall be 80,000 square feet.

H = the height of the building, L = the horizontal dimension of the side of the building substantially parallel to the lot line or street line that bounds the yard in question.

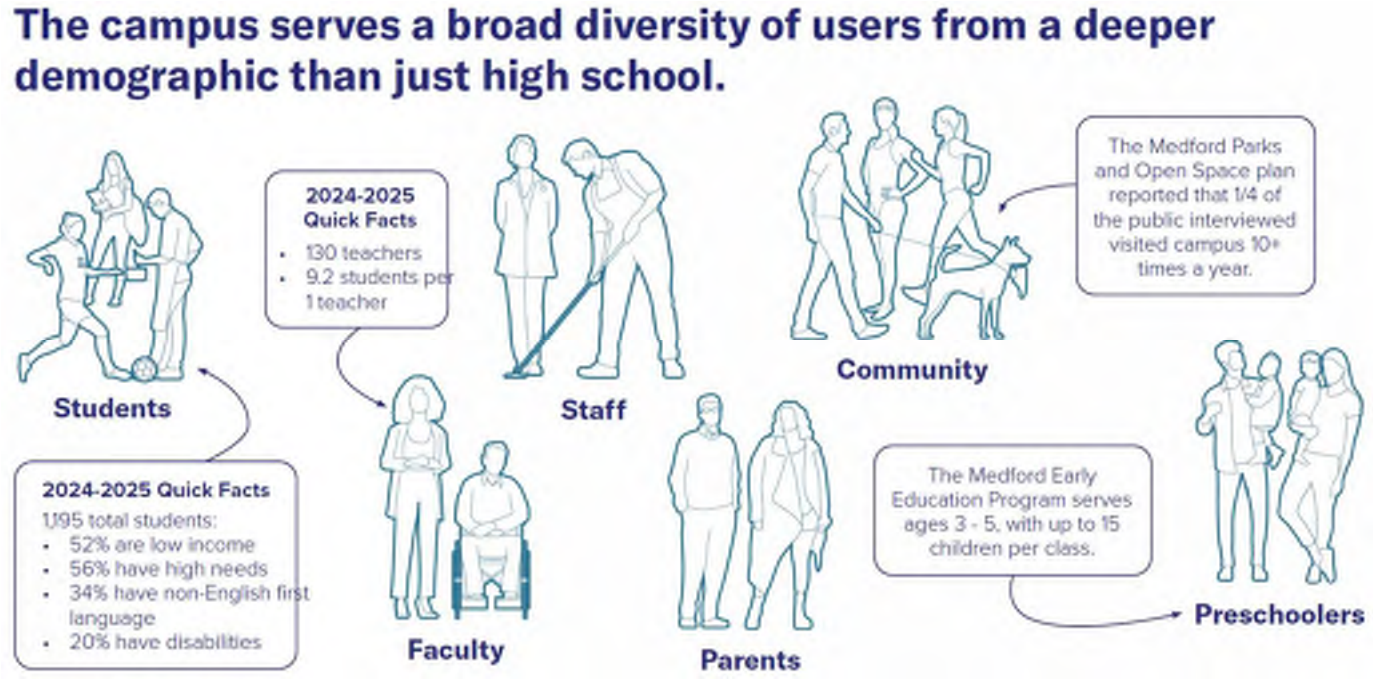
Additional dimensional requirements, as defined in the Bylaw Section 94-4.1.2:

- No part of the building shall be located more than 300 feet from a street.
- Buildings accessory to other permitted principal structures shall not be less than the same distance from that principal structure and from any other accessory building as if they were on separate lots.

Because a school is a municiapl building, is is exempt from the zoning bylaws, but will still submit plans for engineering review by the City.

G. Accessibility Requirements

All alternatives will comply with the above requirements from the ADA and MAAB. For accessible routes, curb cuts, walks, ramps, and parking.



H. Easements

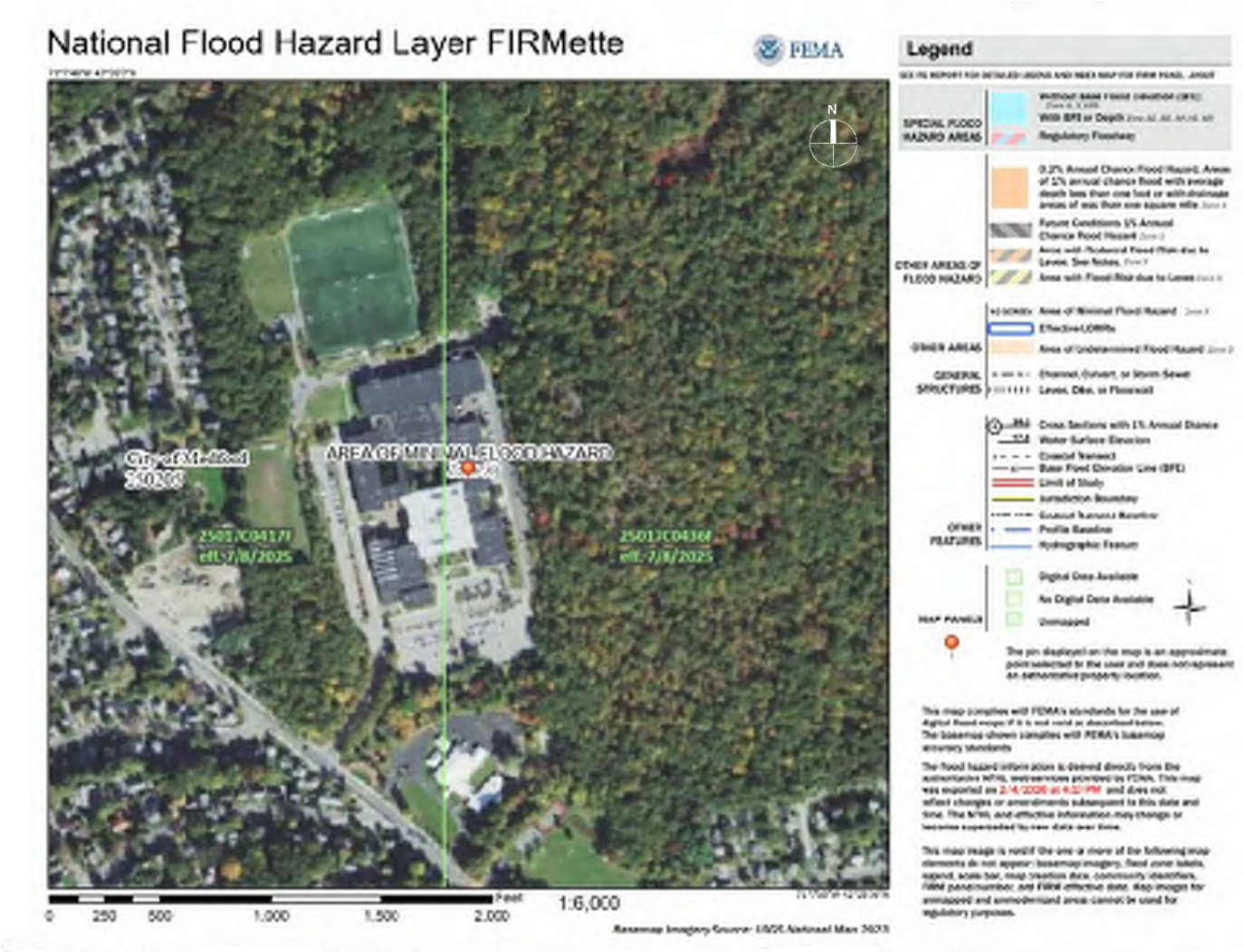
There are no recorded easements for the high school parcel.

I. Wetlands and/or Flood Restrictions

Existing wetland resources djacent to the site are described in Section 3.1.4.J.

The Massachsetts Wetllands Protection Act regulates work in proximity to existing wetlands. Work within the 100' buffer zone around wetland resources requires a Stormwater Management Plan per state standards. In addition, the City of Medford Wetlands Ordinance (Chapter 87) requires a permit from the Conservation Commission for work within 100' of a wetland resourse area.

As noted in Section 3.1.4.J the site is not in any floodplain and therefore is not subject to flood restrictions.



J. Emergency Vehicle Access

The general approach to vehicular access and circulation will be to create access to all sides of the building and ambulance access around the building and to athletic fields.

Details of circulation, including driveway widths and materials, and their location relative to the building will be developed in conjunction with police, fire, first responders, and the district to ensure that the site plan reflects the requirements of the city and district. And initial meeting with Medford Police and Fire was held on February 10, 2026.

The city's fire truck turning information will be utilized when completing and confirming truck turning and manuvering.

K. Safety and Security Requirements

The project is designed to balance community access to outdoor spaces and shared-use resources—such as Career and Technical Education (CTE) programs, pool facilities, and the Medford Family Network—while significantly enhancing school safety. A multilayered security strategy will combine both active and passive measures, including perimeter security, interior and exterior surveillance cameras, controlled entry points, access control at selected interior doors, intrusion detection zones, and the ability to implement schoolwide or localized lockdown capabilities. Security planning will be coordinated with local emergency personnel and will incorporate Crime Prevention Through Environmental Design (CPTED) principles.

Sitewide safety measures will be incorporated in a way that supports the school's goal of creating a welcoming, nature-connected environment. Controlled access, monitored entries, keypad-armable intrusion systems, motion detection, and the ability to secure classroom-wings during community use help to manage after-hours activity. Video surveillance will provide coverage of hallways and major gathering areas, while administrative locations and key offices will be equipped with video intercoms, duress buttons, and lockdown controls. Classrooms will feature shades that allow for shelter-in-place while maintaining a healthy, daylit environment.

In alignment with CPTED principles, the design will emphasize natural surveillance, natural access control, natural territorial reinforcement, maintenance, and activity support. Landscaping, lighting, pathways, and building orientation will be designed to improve visibility, guide movement, and clarify boundaries and transitions between public and private zones. Well-maintained grounds, clear signage, and numbering of all entry points will strengthen wayfinding and support first responder operations during emergencies. Together, these strategies create a secure, well-monitored, and community-friendly school environment.

An initial meeting with Medford Police and Fire was held on February 10, 2026. Additionally, police and fire chiefs are part of the Site, Safety and Security Adisory Team.

L. Utilities

Utlity connections for the new or renovated building will be generally from available services within the surrounding streets. Connections will be cooridnated with the Town and utility providers to ensure capacity is available for the project.

Any adjustments or upgrades to or new stormwater management features incorporated into the site will be coordinated with the Town's Engineering Division to ensure that the design meets requirements of the town and that new features can be maintained after construction.



M. Athletic Fields and Outdoor Educational Spaces

The existing fields and outdoor educational spaces, such as the CTE Yards, serve the school year-round. Edgerly Field, the large existing complex of sports facilities north of the existing school building, was renovated in 2010. The fields are heavily used, with turf and drainage systems beginning to show signs of wear and tear. The existing narrow practice field west of the school building is composed of significantly compacted natural turf and would benefit from renovation. Informal CTE yard space, currently located mostly along the eastern edge of the existing school building, would benefit from increase in square footage and dedicated amenities that meet specific program requirements. Design of renovated or new athletic fields and outdoor space will be influenced by accessibility, program adjacencies, and solar orientation. Assume any new fields and outdoor space to match or exceed existing quality and square footages.

Preschool playground spaces are small, exposed, and separated into 3 different areas adjacent to the existing school building. New preschool playgrounds will need to adhere to code requirements governing outdoor play spaces by MA Early Childhood Education.

In schemes with parking below decked activity space, assume fields are synthetic turf atop deck structure. Fields should be multi-striped to accommodate soccer, football, lacrosse, field hockey, ultimate frisbee, and potentially a running track.

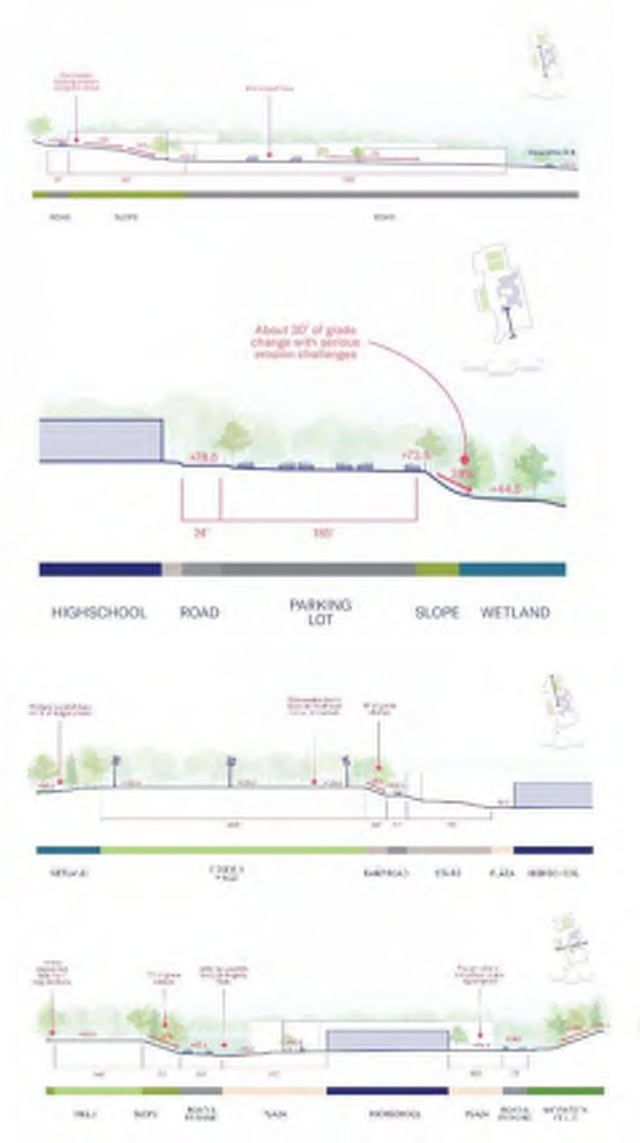


N. Site Orientation and Other Location Considerations and Issues

Nestled just southwest of the Middlesex Fells, the site is defined by its visible steep, rocky character and an unknown massing of bedrock below. The geological and topographical makeup creates visual intrigue and uniqueness for the site, as well as challenges for construction and permitting across areas that have not been previously graded.

Given the undulations in topography, it is imperative that future developments emphasize accessibility and create an inviting experience for school users and the public. The school should have one clear front door, public programs should be located close to Winthrop Street, and there should be visible and clear public access to adjacent trailheads.

The public should also have a clear view of the preschool area, CTE programming, and of athletic fields. Orientation of athletic fields should consider standards for alignment in relation to the sun; general sports fields should be oriented along a North-South axis to minimize glare in players' and spectactors' eyes. The proximity to the Fells offers opportunities for outdoor education and recreation for the school communitiy. The Mustang Loop is a beloved trail that would benefit from greater accessibility through informative and waynding signage, with maps.





3.1.6 Preliminary Evaluation of Alternatives

3.1.6 Preliminary Evaluation of Alternatives

A. Analysis of School District Student School Assignment Practices and Available Space in other Schools in the District

The Medford Public School district consists of the following schools (enrollment is from the 2025-26 school year):

Elementary Schools

- Brooks Elementary School
  - 388 High Street
  - Grades: PK-5
  - Enrollment: 559
- John J. McGlynn Elementary School
  - 3002 Mystic Valley Parkway
  - Grades: K-5
  - Enrollment: 498
- Milton Fuller Roberts Elementary School
  - 35 Court Street
  - Grades: K-5
  - Enrollment: 534
- Missituk Elementary School
  - 37 Hicks Avenue
  - Grades: PK-5
  - Enrollment: 424

Middle Schools

- John J. McGlynn Middle School
  - 3002 Mystic Valley Parkway
  - Grades: 6-8
  - Enrollment: 439
- Madeleine Dugger Andrews Middle School
  - 3000 Mystic Valley Parkway
  - Grades: 6-8
  - Enrollment: 438

High Schools

- Curtis-Tufts High School, Therapeutic Day School
  - 437 Main Street
  - Grades 9-12
  - Enrollment: 18
- Medford High School
  - 489 Winthrop Street
  - Grades: 9-12
  - Enrollment: 1,210

All of the other schools are currently at or beyond capacity, or are not well-suited to accommodate Grades 9-12.

B. Tuition Agreement with Adjacent School Districts

Currently the Medford Public Schools accepts several students from other Towns and Cities into their CTE programs. There are no other existing tuition agreements that currently exist for the Medford Public School system. Below is a list of the individuals that are currently enrolled in the CTE programs at Medford High School.

City	YOG	CTE Program
Belmont	2026	CCL
Belmont	2026	Auto Technology
Stoneham	2026	Graphic Arts
Winchester	2026	CCL
Belmont	2027	CCL

C. Rental or Acquisition of Existing Buildings

As part of the site analysis process, the City analyzed other available sites and buildings for the Medford High School student population. Currently, there are no schools or commercial buildings for rent or sale within the district that could accommodate the needs of the school. There are no existing parcels in the City of Medford that could accommodate the Medford High School facility and so the project is proposed to be completed on the existing high school site

Construction Alternatives Including Cost Estimate and Schedules

Multiple construction alternatives for a grade 9-12 comprehensive high school with enrollment of 1,395 students were developed, including a base code upgrade option, twenty-five renovation and addition options, and three entirely new construction alternatives. The alternatives explore opportunities and constraints of building on the existing Medford High School site.

The following sections provide a description and evaluation of each construction alternative. A cost estimate, provided by AM Fogarty, is included as an Appendix to this report.

Summary of Cost Alternatives

	A. Code Upgrade	B. Renovation & Addition											
Alternative	A.1	B.1.1	B.1.2	B.2.1	B.2.2	B.3.1	B.3.2	B.4.1	B.4.2	B.5.1		B.6.1	B.6.2
Description	Code Upgrade to Building and Site	Renovate the existing school with some spatial reconfigurations to meet MSBA and Ed. Vision goals		Selective demolition of Wing A with addition		Selective demolition of Wing A & C with addition		Selective demolition of Wing A , B & C with Addition		Selective Demo of Wing A, B, C, G & H with Addition		Selective Demolition of Wing A, B, G & H with New Addition	
		B.7.1	B.7.2	B.8.1	B.8.2								
		Selective demolition of A, B & G with Addition		Selective demolition of A, G & H with new addition									

	C. Renovation & Addition										D. New Construction – Multi-Phase		
Alternative	C.1.1	C.1.2	C.1.3	C.1.4	C.2.1	C.2.2	C.3.1	C.3.2	C.3.3	C.3.4	D.1.1	D.1.2	D.2.1
Description	Retain and renovate Gym, Pool and Wing E with new addition on Site 1				Retain and renovate Gym, Pool, and Wing E with new addition on Site 2		Retain and renovate Gym, Pool and Wing E with new addition on Site 3				Demolish existing facility; Construct a new building on Site 1		Demolish existing facility; Construct a new building on Site 2

Summary of Construction Alternatives and Project Cost

All Project Costs identified below are for the School Building Educational Program and site. All Addition / Renovation and New Construction Alternatives include gross floor area and costs associated with program elements in the “Other” space category from the Summary of Spaces.

Alt. A Code Upgrade	A.1
Total Project Cost	$437M
	

Alt. B Reno & Addition	B.1.1	B.1.2	B.2.1	B.2.2	B.3.1	B.3.2
Total Project Cost	$807M	$825M	$832M	$840M	$839M	$853M
						

Alt. B Reno & Addition	B.4.1	B.4.2	B.5.1	B.6.1	B.6.2	B.7.1
Total Project Cost	$861M	$875M	$872M	$880M	$869M	$858M
						

Alt. B Reno & Addition	B.7.2	B.8.1	B.8.2
Total Project Cost	$862M	$862M	$851M
			

Alt. C Reno & Addition	C.1.1	C.1.2	C.1.3	C.1.4
Total Project Cost	$838M	$841M	$850M	$855M
				

Alt. C Reno & Addition	C.2.1	C.2.2	C.3.1	C.3.2	C.3.3	C.3.4
Total Project Cost	$865M	$850M	$855M	$853M	$815M	$833M
						

Alt. D New Const. Multi-Phase	D.1.1	D.1.2	D.2.1
Total Project Cost	$894M	$874M	$859M
			

D. Code Upgrade (No-New Build)

Construction Alternative A.1: Code Upgrade and Repair

The base repair and code upgrade alternative with no modification of existing spaces or their function meets neither the educational program nor the projected growth in student population. The existing four-story high school is approximately 522,200 square feet.

Description

The code upgrade and repair alternative requires an assessment of the impact and cost of addressing the following deficiencies, without a major building project:

- Life safety code compliance
- Accessibility code limitations
- Energy code compliance
- Physical plant deterioration
- Hazardous materials
- Capacity constraints

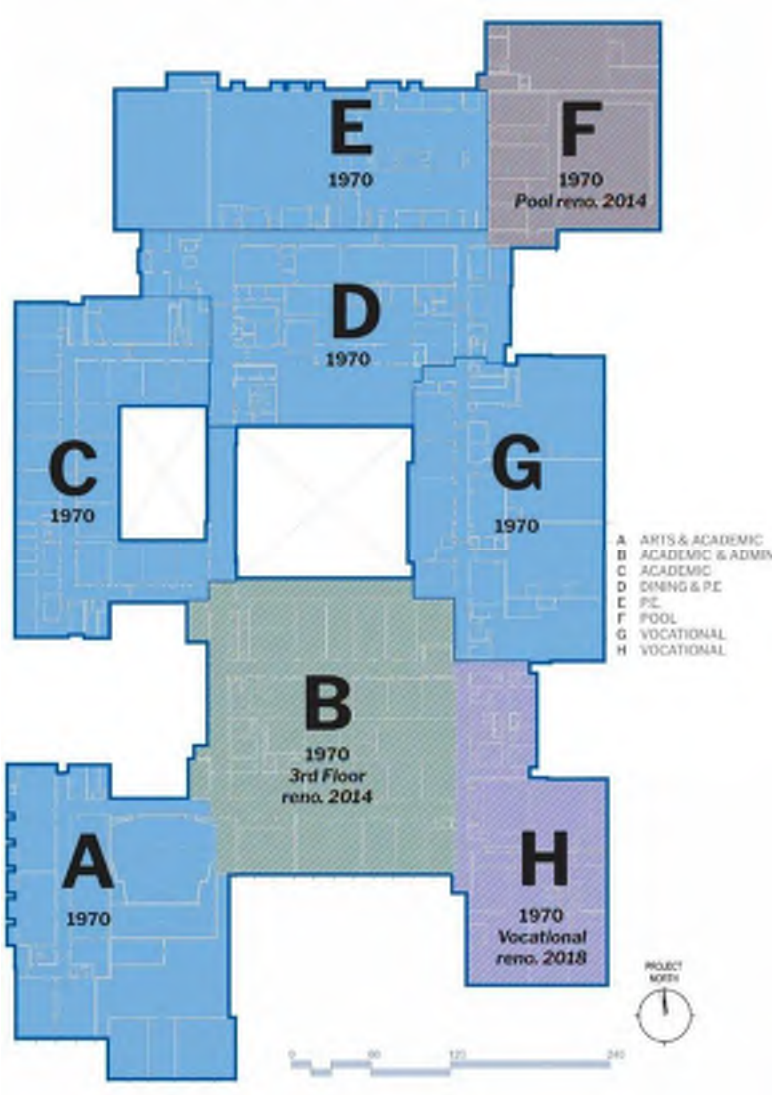
Life Safety Code Compliance

Stair guardrails do not meet minimum opening size requirements, nor require heights, nor provide adequate edge protection in many locations. Infill panels and vertical extensions will be provided at all stair guardrails to make them code compliant, and handrails will be added as required to meet code.

Accessibility Code Limitations

In general, the following items will be addressed in this alternative:

- Lower than required guardrails and handrails for ramps and stairs, without proper extensions
- Insufficient push/pull floor clearances at some doors
- Lack of ADA Door operators at most exterior entry doors
- Inaccessible seating locations in the theater and lecture halls
- Most drinking fountains are non-compliant (aside from those located in the 3rd floor B Wing science renovated area)
- Most toilet fixtures, lavatories and sinks are non-compliant (aside from those located in the 3rd floor B Wing science renovated area)
- Insufficient grab bars at most toilet rooms and all showers
- Exposed piping below sinks has neither compliant aprons nor pipe protections
- Lack of 5'-0" clear turning circle at some toilet rooms
- Non-accessible lavatory and sink faucets
- Non-compliant height at some urinals



Key Plan. High School Wings and Dates of Renovations

Energy Code Compliance

The City of Medford has adopted the Massachusetts Stretch Energy Code's Specialized Opt-In Code. The Code Upgrade option would require compliance with the Stretch Energy Code (Standard), as the Specialized Code does not apply to existing buildings. Enclosure Upgrades, MEP Systems upgrades will be required to comply with the Stretch Energy Code, with an Energy Use Intensity (EUI) target of 35 KBtu/SF/Yr. Building Enclosure upgrades will include mitigation of thermal bridges.

Site

Site work in this option focuses on meeting current accessibility codes. This includes providing an accessible walkway or ramp with a code compliant landing at the main entry doors. Existing walkways, ramps, guardrails, and handrails that do not meet current ADA standards would be replaced. Accessible routes from the designated accessible parking spaces to the main entrance would also be provided.

Architectural

On the exterior of the building, localized repointing and general cleaning of exterior masonry brick and exposed cast in place concrete will occur. Replacement of all exterior windows will be required with triple-glazed energy efficient units. Replacement of all exterior hollow metal doors and frames. Complete replacement of all membrane roofing (including different vintages), providing a high-albedo membrane roof with an energy code-compliant thickness of insulation. Given the lack of thermal insulation in the exterior walls, insulation will be added to the interior face of the exterior walls, mounted between the interior face of the exterior walls and added interior metal stud furring with a painted gypsum board finish and a "smart" one way vapor barrier behind it.

Any non-code compliant door hardware will be replaced with compliant hardware. Any non-code compliant door clearances will be addressed through the use of powered operators and actuator buttons.

All interior glazing that is potentially subject to impact will be replaced with laminated or tempered glass. Interior finishes such as flooring, wall tiles, and acoustic ceiling tiles will be replaced where damaged or deteriorated.

Interior masonry partitions that are located along structural grid lines (assume 30% throughout the building) will need to be demolished to allow for the installation of lateral system braces that need to be added to the existing structural frames. The partitions will be rebuilt as double stud interior partitions, each with two layers of gypsum board on each side of the partition, and with acoustic batt insulation within the stud cavities.

As noted in the Accessibility Code Limitations portion of this section, several spaces located throughout the school have inaccessible seating areas, due to tiers in the original lecture halls and inaccessible slopes and a balcony without dedicated elevator access in the auditorium. Cut-outs will be added in the front row of tiers to create inclusive seating positions down low, and ramps, a limited use limited access lift (LULA) and elevated seating positions will be added in the auditoirum. Added accessibility elements in these spaces will reduce the seating capacity slightly. All finishes in these spaces will be renovated to accommodate this alteration. In general, repairs to or replacement of finishes will occur wherever system upgrades are required.

Structural

Existing foundations and floor and roof framing will typically remain. At areas of steel framing at the roof, the tectum roof panels will be replaced with steel roof deck. Any areas of local slab on grade settlement will be reviewed further after geotechnical investigations and repaired. All exterior precast façade cracks and exposed rebar will be repaired. All cracks in interior non-load bearing CMU walls will be repaired. Any unreniforced masonry chimney or parpet extending 4 feet above the roof structure will be removed, have bracing installed, or anchored as needed to resist out-of-plane seismic forces. The weight of any new rooftop equipment (including PV panels) will be compared to the removal of old equipment to determine if structural reinforcement of the roof framing is required. Without existing drawings for the majority of the building, field testing and signficant structural measurements of existing members is required. All infill non-load bearing masonry walls will be seismically braced at the top of walls. New steel framing for floor and roof openings will be required at any new MEP shafts.

The pool deck concrete slab with exposed rebar requires repair, as well as other concrete beam and masonry wall cracks in the building.

The majority of the structural upgrades includes providing a new lateral system, as there is currently not a defined lateral system indicated in the existing drawings. Each Wing of the building requires multiple lateral frames in both directions. The expansion joints between the Wings will be increased to allow for proper movementment between isolated Wings. The lateral system will be either steel braced frames and/or infill concrete/CMU shear walls. New foundations below the new shear walls or modifications of existing foundations below the new lateral members is expected.

HVAC

The existing HVAC systems will be replaced with new, all-electric systems to comply with the current Massachusetts Stretch Energy Specialized Opt-In Code, as adopted by the City of Medford. A specific system approach is represented below, but alternative space heating and cooling approaches will be assessed to determine the preferred system.

Phased construction will require ongoing operation of portions of the existing HVAC systems to support the continued occupancy of existing building areas. Temporary measures will be included to ensure proper indoor air quality of existing spaces while construction occurs in nearby areas of the site (e.g., added filtration at outdoor air intakes or extending existing outdoor air intakes to be clear of construction zones).

The new heating and cooling systems will be based on a ground source geothermal system utilizing vertical boreholes. The geothermal loop will be 40% propylene glycol with distribution from a system of variable volume pumps in a mechanical room. Plate and frame heat exchangers will separate the ground source loop from the interior water loop and associated pumping system, which will support mechanical heating and cooling systems. Space heating and cooling will utilize above-ceiling heat pumps for classrooms and support spaces. Larger spaces will be supported by AHUs with water-source heat pumps.

Ventilation will be provided with rooftop DOAS units, configured with water-source heat pumps for conditioning of outdoor air to the classrooms and support spaces. VAV terminal units will manage ventilation to individual rooms based on CO2 control. Specialty systems will be included for ventilation of Science Labs, Kitchens, Kilns, Vocational spaces and other such installations. A new DDC building management system will provide control and monitoring of the HVAC systems and monitoring of selected Plumbing and Electrical equipment and metering.

Plumbing

The plumbing systems in general appear to be in adequate working conditions; however most of the plumbing systems are either at or beyond the end of their useful life expectancy. The major piping systems from visual inspection appear in fair to poor condition. In general, plumbing fixtures were replaced during renovations, but some conditions do not fully meet current ADA/MAAB requirements.

Water piping in general appears to be fair to poor condition. Due to the pipe age, there is a strong probability that the water service includes lead-containing solder. Lead free options for valves and fittings were limited at the time of construction. The domestic water system would require replacement throughout to meet current lead-free requirements.

Fixtures in general do not conform to current water saving standards (LEED). Fixtures to be replaced with low flow fixtures to meet the sustainability requirements. Kitchen equipment will also need to be replaced with low flow equipment in accordance with LEED requirements.

In order to meet the current Massachusetts Energy Code, including the Specialized Stretch Energy Code adopted by the City of Medford, the existing gas fired equipment will need to be removed and replaced with electric equipment.

The natural gas systems will be removed from the heating plant and domestic water heating system. The gas service for kitchen equipment, and science/lab classrooms will remain.

The gas fired water heaters will be replaced with electric water heaters. Final configuration/coordination would be required during design. The installation would not be as simple as a one for one replacement. The systems would need to be redesigned.

All the water closets, lavatories, etc. be modified to water conservation type fixture. Replace all faucets with new low flow fixtures, including handicap accessible fixtures.

All non-ADA fixtures that are required to be ADA compliant shall be replaced with ADA compliant fixtures and pre-formed pipe insulations. Replace all drinking fountains that are not operational with drinking water cooler and bottle filling station.

Overflow (secondary) drains or scuppers will be installed in parapets on the roof and where required by 780 CMR.

Any existing emergency eyewashes station that does have tepid water supply will be modified with tepid water system in accordance with 248 CMR and ANSI.

Observations of underground sanitary, vent, and storm piping are not possible. Testing, flushing, and possibly video inspection is required to determine the life expectancy left in the underground piping. Underground piping will be replaced unless proven to be fully functional.

Fire Protection

The existing 8" fire water service with 8" backflow preventer and 8" wet alarm check valve will remain. The entire building shall be protected throughout with a wet automatic fire suppression system and fed from the existing 8" Wet Riser Check Valve in the mechanical room Area G. The system will be a wet sprinkler system with control valve assemblies in multiple standpipe risers to limit the sprinkler area controlled to less than 52,000 s.f. as required by NFPA 13-2019. Each floor control station consists of a monitored shut-off valve, flow switch and an Inspector's test valve and sight glass.

A Manual Class I standpipe system shall be installed in accordance with NFPA Standard 14, 2019, and local Fire Department requirements. Standpipes will be located in each required egress stairway, and adjacent to the Stage. Additionally, standpipes will be located so that no part of the building is more than 200 feet from a standpipe valve. Each standpipe will be equipped with a 2 1/2" fire department hose valve with 1 1/2" reducer at the stair floor landing.
A new hydrant flow test shall be conducted, and the results of the test shall be analyzed to confirm the requirement of a Fire pump. if required, the Fire pump shall be an automatic electric driven horizontal split case fire pump with an automatic transfer switch. Preliminary calculations estimate that the fire pump shall be rated for 60 psi at 750 gpm and 50 HP motor. The jockey pump shall be rated for 2 HP. The fire pump room shall meet CMR 780 requirements.

Elevator Machine rooms and hoist ways will not be protected with automatic sprinklers in accordance with 780 CMR.

Sprinkler heads in areas with finished ceilings will be concealed pendant type and in areas with no suspended ceilings will be upright sprinkler heads. All sprinklers will be quick response heads. Sprinkler heads in mechanical rooms and Gym will be provided with Wire guards. Dry pipe system will be provided in areas subject to freezing.

A roof manifold will be provided at each roof level with a two-story or greater height.

Electrical

Utility Interconnection

The existing utility service will be replaced and upgraded to accommodate the new program, which includes an all-electric HVAC system, electric vehicle (EV) charging stations in a minimum of 2% of the total new off-street parking spaces (per zoning bylaws), provisions for future installation of EV charging stations for a minimum of 20% of the total new off-street parking spaces (per zoning bylaws), code required provisions for photovoltaic arrays, and battery energy storage systems (BESS). The electrical infrastructure to interconnect these systems will require additional coordination with utility, however early assumptions can include:

- Utility reclosure cabinet.
- CT / Metering cabinet (upstream of entire campus electrical interconnections)
- 15,000 Volt switchgear (owned by the school, operated by utility)
- Provisions for four (4) transformers (owned and operated by the school)
- Provisions for solar system interconnect switchboard for the photovoltaic panels and battery storage units.

All this equipment will be located on site, pad-mounted with underground conduit pathways. A screen wall to visually separate the electrical gear from street views will be required per zoning bylaws.

Renewable Energy System

Based on a target EUI of 35, early estimates suggest the size of the total solar system shall be 6.5 Megawatts, along with 4.8-Megawatt-hour battery energy storage systems (BESS). The total system will be made up of both roof-mounted photovoltaic (PV) panels, and ground-mounted PV canopies.

One transformer is dedicated to the photovoltaic (PV) system, feeding a 8000 Amp 277/480 V solar switchboard. The PV system and battery storage are anticipated to be designed as AC-coupled and will interconnect at the solar switchboard. This setup will allow for independent operation of the solar panel and battery storage for efficiency and reliability.

Power Distribution System

The existing electrical service will be replaced. The existing(3) services substations, 2400-Amp, 1200-Amp, and 600-Amp , 277/480 volt 3-phase 4 wire electrical services provides a power density of approximately 5.5 watts/sf, which is estimated to be significantly undersized for an all-electric code required program.

The new distribution system will consist of two (2) 4000 Amp, 277/480V 3-phase 4 wire switchboards with new underground secondary service conductors extended to pad-mounted transformers on site. Coordination with utility will be required, however at this time it is expected that two (2) transformers will be required for the demand of the high school.

Phased construction will require on-going operation of portions of the existing electrical systems to support the continued occupancy of existing building areas. Temporary measures will be included to ensure existing areas remain fully operational while construction occurs.

Lighting loads, the elevator, large mechanical equipment, and large kitchen electrical loads will be connected to 277/480V panelboards, and all other loads will be connected to 120/208V panelboards.

In the new construction areas, a system of new panelboards separated by use will be provided, located in dedicated electrical rooms throughout the building. Generally, the separate uses are lighting, mechanical and branch circuit loads.

Energy sub-metering system will be provided for monitoring all individual energy end uses that represent 10% or more of the total annual consumption of the building. Sub-meters will be connected to the new building DDC system.

Life Safety/Emergency System

The existing (2) 277/480 volt 3-phase, 4 wire diesel fueled emergency generator and generator distribution system is past it's usable life expectancy. The two generators have been noted to be non-functional and will be replaced with a new 1500kW 277/480 volt 3-phase, 4 wire diesel fueled emergency generator and distribution system will be provided. A docking station for a temporary roll-up generator shall be installed to allow the life safety distribution system to remain active during routine maintenance or generator failure, as well as new control wiring and pathways to comply with latest signal and wiring integrity codes. This will require excavating, replacing, and re-working the existing underground conduit between the generator and the service entrance equipment.

It is estimated that the following items will be connected to the generator system:

- Egress emergency lighting.
- Fire alarm system.
- IT Rooms (power and A/C) including network, door access, intrusion detection, CCTV, PA, telephones.
- Heating system as required to freeze protect the building.
- Elevators.
- Resiliency Level:
- Level 3 for the majority of building.
- Level 2, not including food prep requirement, applied to select areas of the building, such as the Gym (plan for attaching portable generator for cooking.

Lighting & Lighting Control

All new interior light fixtures with new, high efficient LED light fixtures fitted with dimmable drivers. Replace all exterior light fixtues with new, high efficient LED light fixtures fitted with dimmable drivers and full cut-off optics. A new lighting control system for a new, fully networked lighting control system compliant with the latest energy code. The lighting control system shall include the capability of communicating and controlling ON/OFF 120V power to receptacles in classrooms, offices, corridors, and other spaces required by energy code.

Fire Alarm

A fire alarm system is a fully addressable voice evacuation system consisting of four node panels throughout the campus. All new initiation and notification devices such as smoke detectors and speaker strobes will be provided. The system to communicate to the Fire Department via an antenna mounted on the roof, and an auto dialer, which is compliant with latest building codes. A bi-directional antenna (BDA) system shall be installed to comply with latest building code. The BDA system will have capabilities to boost fire department and police department radio communications within the building.

Lightning Protection System

The existing school does not have a lightning protection system. A lightning protection system is not required by code, although is recommended by NFPA Standards. A system should be assumed to be provided as part of code upgrade and any renovation options.

Telecommunications

The existing telecommunications copper and fiber optic cable infrastructure will be replaced to support data and voice transmission. CAT6A cable will be installed to the end points, with (12) strand OM4 multi-mode and (12) strand OS2 single-mode fiber optic cabling between the MDF and the IDFs. Existing network infrastructure electronics spaces in classrooms and storage spaces will be replaced with secure and climate-controlled rooms to better protect and maintain network electronic equipment. The MDF and IDFs will be replaced with new equipment cabinets, patch panels, and overhead cable management components.

The MDF and IDFs will be replaced with new rooms fitted with new cooling systems, lighting, and generator-backed power.

The existing Public Address and Master Clock Systems will be replaced. Classrooms and other learning spaces will be equipped with two-way talkback IP speakers. Corridors and larger spaces will be equipped with analog one-way speakers. Clocks will be synchronized and powered via low-voltage wiring. The Public Address and Master Clock systems will be interfaced at the head end.

Classroom technology infrastructure will be upgraded to provide new data and voice communications with a potential wireless access point location in the ceiling. Audiovisual cabling will be installed to allow projection of content from the instructor's computer to the wall-mounted interactive flat panel monitor.

Speech reinforcement systems will be installed in instructional spaces to provide even distribution of instructor and student speech throughout the space, as well as being interfaced to the interactive flat panel monitor to perform the audio functions for audiovisual presentations in the space. Current wireless access points will be purchased at the time of occupancy.

Security

The district recently completed a security enhancements project that included the installation of new cameras, card readers, and associated access control infrastructure at Medford High School. As part of the preliminary evaluation of alternatives for a new high school facility, an existing conditions walkthrough was performed to document current device locations and distinguish recently installed equipment from older legacy systems. This walkthrough has provided a clear understanding of where new cameras and card readers are deployed and allows the project team to quantify the number of devices that could potentially be salvaged and reused in the new building.

Based on this inventory, selective reuse of newer cameras, card readers, and related control hardware represents an opportunity for capital cost savings and reduced procurement time.

An early assessment of device age, condition, remaining useful life, and compatibility with the proposed security platform for the new facility will be essential to confirm which components are suitable for relocation. This information can be incorporated into the cost model to more accurately reflect potential reuse credits.

Any reuse strategy should be balanced against considerations such as warranty transferability, manufacturer support for redeployed equipment, cybersecurity standards, and the long-term maintenance implications of mixing reused and new devices. Coordination with district IT and security staff will be critical to develop a phased migration plan that maximizes reuse while maintaining system reliability, scalability, and overall campus security objectives.

Acoustics

New building utility equipment will incorporate sound attenuating measures, as necessary, for compliance with the community noise emissions requirements established in the Massachusetts Division of Air Quality Control (DAQC) Policy 90-001.

Additionally, new HVAC equipment and system components will be designed for compliance with the LEED Minimum Acoustics Performance prerequisite for HVAC background noise levels in core learning spaces.

Hazardous Materials

As expected for a building of this age, there are significant hazardous materials present, despite prior abatement activities that have occurred over the years. For a detailed report on the materials to be abated, see Section 3.1.4.N.

Capacity Constraints

The design capacity of 1,395 students noted in the MSBA Enrollment Projection, and the corresponding educational space needs cannot be adequately provided by a no-build option. No work related to increasing the capacity of the facility is included in the scope of this option.

Educational Program Requirements Fulfillment

A code-upgrade only renovation would not fulfill the Medford High School Educational Program and plan requirements, nor would it meet the projected enrollment capacity. While this option remedies life safety and accessibility concerns, the building would remain deficient in meeting the needs of the high school's educational delivery.

The current main entrance is neither near nor adjacent to the Main Administrative offices, which are located an entire level above the main entrance. Visitors check in at a Security desk in the main lobby, which is not secure.

The majority of the General Education classrooms and all of the Science Labs would remain undersized, compared to MSBA Guidelines. The spaces are too small for the type of collaborative and hands-on differentiated instruction that the District has outlined in their educational vision. The school would also continue to lack proper staff rooms and Teacher Planning Rooms for collaborative planning of curriculum.

As the classrooms are undersized, the code-upgrade renovation would not meet the Educational Program requirements for Special Education. Medford High School strives to deliver Special Education services in the least restrictive environments possible, primarily through a co-teaching model where a Special Education teacher pushes into the classroom alongside the General Education teacher. Co-teaching and differentiated instruction requires additional physical space for adults and instructional flexibility, and currently classrooms constrain the school's ability to consistently deliver inclusive support across all of the General Education classrooms.

MHS's goals include the right sizing of existing CTE Chapter 74 programs (in some cases, expansion of program enrollment) and the addition of four new programs. A code-upgrade only renovation would not satisfy this educational goal.

The school would not gain any informal break out or collaboration spaces that is part of the educational vision. Students would continue to gather by sitting on the floors in corridors as there are no existing spaces that facilitate peer-to-peer connections (social or educational).

The quality of the existing Physical Education spaces (from the standpoint of finishes, athletic equipment, and MEP systems perspective) is inadequate to support the school's educational goals to offer more variety in personal and lifetime fitness courses.

With only 333 seats (some of which are in need of repair and are currently unusable), the existing Auditorium would remain significantly undersized in its ability to adequately serve the current student population and the District's educational goal of 1,000 setas. The current Auditorium is well below the area outlined for this space in the MSBA Guidelines. This Alternative would also not allow for the inclusion of a Black Box, which is necessary to meet the District's educational goal of offering Performing and Technical Drama courses.

This Alternative would not change the lack of differentiated spaces within the footprint of the Media Center and would not support the school's goals for varied learning and seating opportunities within the space.

A code-upgrade only renovation would not meet the school's desire to offer more hands-on and varied course offerings, such as an Engineering and Robotics lab, a FACS lab, or a Digital Art and Production lab, as these spaces are often larger and have specialized technology for different kinds of curriculum.

This Alternative would also retain an undersized Medical Suite, inadequate in serving the student population size.

This option would also not remedy the school's goal to consolidate the multiple Dining Commons into one centralized Dining Commons.

The Alternative would not meet the projected enrollment capacity agreed upon by MSBA and the City of Medford, as it would not be able to house programs targeted to move to the high school. As part of the Statement of Interest, and in agreement with the MSBA, the District has an educational goal of bringing the Curtis Tufts Therapuetic Day Program and the Medford Early Education Program (MEEP, an integrated Pre-K program) to the Medford High School site. A code-upgrade only option would not provide enough space to allow these programs to move into the building.

Additional space constraints are outlined in the Deficiency Plans found in Section 3.1.3.B of this report.

Schedule Overview

Alternative A.1 would be implemented through multiple phases and intense summer phases over fifty-four (54) months.

Cost Overview

The estimated construction cost is:

$349,744,405

The estimated project cost is:

$437,180,506

Conclusion

The Pros and Cons are summarized as follows:

Pros

- Lower first costs when compared to other options which enhance the educational value of the building.

Cons

- The completed construction would not accommodate the future curriculum, nor the additional program elements that were identified in the Statement of Interest or envisioned in the Educational Program

E. Renovation(s) and Addition(s) to Existing Building(s)

Construction Alternative B.1.1: Addition/Renovation of existing building (existing footprint) with spatial reconfigurations

Construction of 117,674 Gross Square Feet (GSF) of new addition space, including the addition of 18,493 GSF of double-height CTE space outside of the existing building footprint and the remaining 99,181 GSF added as a new floor above the existing C and E Wings.

Light Renovation of the Pool Wing F at 36,902 GSF and Heavy Renovation of the remaining 485,303 GSF of Wings A, B, C, D, E and G and H. 116,802 Square Feet (SF) of tectum roof deck to be replaced

Alternative B.1.1 would be implemented through multiple phases over fifty-four (54) months.



B.1.1

Construction Alternative B.1.2: Addition/Renovation of existing building (existing footprint) with spatial reconfigurations, high-rise building designation

Partial Demolition of 23,836 GSF of floor area on the top two floors of Wing B to create a light well. Construction of 141,510 GSF of new area added as two new stories above the B and E Wings .

Light Renovation of the Pool Wing F at 36,902 GSF and Heavy Renovation of the remaining 461,467 Gross Square Feet (GSF) of Wings A, B, C, D, E, G and H. 107,754 SF of tectum roof deck to be replaced with metal roof deck.

Alternative B.1.2 would be implemented through multiple phases over fifty-four (54) months.



B.1.2

Construction Alternative B.2.1: Selective Demolition of Wing A with Addition

Full Demolition of Wing A. Partial Demolition of 13,274 GSF of Floor area across top two floors of Wing B to create a light well. Construction of 186,280 GSF of new area added as three new floors on 77,758 Square Feet of new footprint.

Light Renovation of the Pool Wing F at 36,902 GSF and Heavy Renovation of the remaining 416,697 GSF of Wings B, C, D, E, G and H. 107,754 Square Feet of Tectum roof deck to be replaced.

Alternative B.2.1 would be implemented through multiple phases over sixty-six (66) months.



B.2.1

Construction Alternative B.2.2: Selective Demolition of Wing A with Addition, high-rise building designation

Full Demolition of Wing A. Partial Demolition of 13,274 GSF of Floor area across the top two floors of Wing B to create a light well. Construction of 186,280 GSF of new area added as five new floors on 41,000 Square Feet of new footprint, with part of two top floors each wth 21,030 Square Feet of footprint extending over Wing B.

Light Renovation of the Pool Wing F at 36,902 GSF and Heavy Renovation of the remaining 416,697 GSF of Wings B, C, D, E, G and H. 107,754 Square Feet of Tectum roof deck to be replaced.

Alternative B.2.2 would be implemented through multiple phases over sixty-six (66) months.



B.2.2

Construction Alternative B.3.1: Selective Demolition of Wing A & C with Addition

Full Demolition of Wing A & C. Partial Demolition of 18,216 GSF of Floor area across the top two floors of Wing B to create a light well. Construction of 281,693 GSF of new area, added as four new floors, on a 65,668-square-foot new footprint.

Light Renovation of the Pool Wing F at 36,902 GSF and Heavy Renovation of the remaining 321,284 GSF of Wings B, D, E, G, and H. 107,754 Square Feet of Tectum roof deck to be replaced.

Alternative B.3.1 would be implemented through multiple phases over sixty-six (66) months.



B.3.1

Construction Alternative B.3.2: Selective Demolition of Wing A & C with Addition, high-rise building designation

Full Demolition of Wing A & C. Partial Demolition of 13,274 GSF of Floor area across top two floors of Wing B to create a light well. Construction of 276,751 GSF of new area added as five new floors on 56,191 SF of new footprint. With part of two top floors, each with 21,030 SF of footprint extending over Wing B.

Light Renovation of the Pool Wing F at 36,902 GSF and Heavy Renovation of the remaining 321,284 GSF of Wings B, D, E, G, and H. 107,754 Square Feet of Tectum roof deck to be replaced.

Alternative B.3.2 would be implemented through multiple phases over sixty-nine (69) months.



B.3.2

Construction Alternative B.4.1: Selective Demolition of Wing A, B & C with Addition

Full Demolition of Wing A, B & C. Construction of 385,677 GSF of new area, added as four new floors, on a 114,213-square-foot new footprint.

Light Renovation of the Pool Wing F at 36,902 GSF and Heavy Renovation of the remaining 217,300 GSF of Wings D, E, G and H. 107,754 Square Feet of Tectum roof deck to be replaced.

Alternative B.4.1 would be implemented through multiple phases over sixty-nine (69) months.



B.4.1

Construction Alternative B.4.2: Selective Demolition of Wing A, B &C with Addition, high-rise building designation

Full Demolition of Wing A, B & C. Construction of 385,677 GSF of new area, added as five new floors, on a 101,438-square-foot new footprint.

Light Renovation of the Pool Wing F at 36,902 GSF and Heavy Renovation of the remaining 217,300 GSF of Wings D, E, G and H. 107,754 SF of Tectum roof deck to be replaced.

Alternative B.4.2 would be implemented through multiple phases over sixty-nine (69) months.



B.4.2

Construction Alternative B.5.1: Selective Demolition of Wing A, C, G & H with Addition, high-rise building designation

Full Demolition of Wing A, C, G & H. Partial Demolition of 18,216 GSF of Floor area across top two floors of Wing B to create a light well. Construction of 349,080 GSF of new area added as five new floors on 117,629 SF of new footprint.

Light Renovation of the Pool Wing F at 36,902 GSF and Heavy Renovation of the remaining 235,681 GSF of Wings B, D & E. 86,822 SF of Tectum roof deck to be replaced.

Alternative B.5.1 would be implemented through multiple phases over sixty-nine (69) months.



B.5.1

Construction Alternative B.6.1: Selective Demolition of Wing A, B, G & H with Addition

Full Demolition of Wing A, B, G & H. Construction of 380,809 GSF of new area added as three new floors on 152,446 SF of new footprint.

Light Renovation of the Pool Wing F at 36,902 GSF and Heavy Renovation of the remaining 222,168 GSF of Wings C, D & E. 86,822 SF of Tectum roof deck to be replaced.

Alternative B.6.1 would be implemented through multiple phases over sixty (60) months.



B.6.1

Construction Alternative B.6.2: Selective Demolition of Wing A, B, G & H with Addition, high-rise building designation

Full Demolition of Wing A, B, G & H. Construction of 380,809 GSF of new area added as four new floors on 113,626 SF of new footprint.

Light Renovation of the Pool Wing F at 36,902 GSF and Heavy Renovation of the remaining 222,168 GSF of Wings C, D & E. 86,822 SF of Tectum roof to be replaced.

Alternative B.6.2 would be implemented through multiple phases over sixty (60) months.



B.6.2

Construction Alternative B.7.1: Selective Demolition of Wing A, B & G with Addition

Full Demolition of Wing A, B & G . Construction of 337,492 GSF of new area added as three new floors on 122,760 SF of new footprint.

Light Renovation of the Pool Wing F at 36,902 GSF and Heavy Renovation of the remaining 265,485 GSF of Wings C, D, E & H. 86,822 SF of Tectum roof deck to be replaced.

Alternative B.7.1 would be implemented through multiple phases over sixty (60) months.



B.7.1

Construction Alternative B.7.2: Selective Demolition of Wing A, B &G with Addition

Full Demolition of Wing A, B, & G Construction of 337,492 GSF of new area added as three new floors on 144,694 SF of new footprint.

Light Renovation of the Pool Wing F at 36,902 GSF and Heavy Renovation of the remaining 265,485 GSF of Wings C, D, E & H. 107,754 SF of Tectum roof deck above Wings D, E, F & H to be replaced.

Alternative B.7.2 would be implemented through multiple phases over sixty (60) months.



B.7.2

Construction Alternative B.8.1: Selective Demolition of Wing A, G & H with Addition

Full Demolition of Wing A, G & H . Partial Demolition of 18,216 GSF of Floor area across the top two floors of Wing B to create a light well. Construction of 276,825 GSF of new area added as three new floors on 133,369 SF of new footprint.

Light Renovation of the Pool Wing F at 36,902 GSF and Heavy Renovation of the remaining 265,485 GSF of Wings B, C, D, & E. 86,822 SF of Tectum roof deck to be replaced.

Alternative B.8.1 would be implemented through multiple phases over sixty (60) months.



B.8.1

Construction Alternative B.8.2: Selective Demolition of Wing A, G & H with Addition

Full Demolition of Wing A, G & H . Partial Demolition of 18,216 GSF of Floor area across the top two floors of Wing B to create a light well. Construction of 276,825 GSF of new area added as four new floors on 82,499 SF of new footprint.

Light Renovation of the Pool Wing F at 36,902 GSF and Heavy Renovation of the remaining 265,485 GSF of Wings B, C, D, & E. 86,822 SF of Tectum roof deck to be replaced.

Alternative B.8.2 would be implemented through multiple phases over sixty (60) months.



B.8.2

Construction Alternative C.1: Gym, Pool and Wing E Renovation. New Addition on Site 1 (Parking Lot)

Full Demolition of Wing A, B, C, G & H . Construction of 471,280 GSF of new area in the following configuration:

Alt C.1.1 - 4 Stories, 135,648 SF of New Footprint

Alt C.1.2 - 5 Stories, 116,961 SF of New Footprint (high-rise building designation)

Alt C.1.3 - 4 Stories, 179,085 SF of New Footprint

Alt C.1.4 - 4 Stories, 162,552 SF of New Footprint

Light Renovation of the Pool Wing F at 36,902 GSF and Heavy Renovation of the remaining 131,697 GSF of Wings D & E. 86,822 SF of Tectum roof deck to be replaced.

C.1 alternatives would be implemented through multiple phases over sixty (60) months.



C.1.1



C.1.2



C.1.3



C.1.4

Construction Alternative C.2: Gym, Pool and Wing E Renovation. New Addition on Site 2 (Hybrid of Parking Lot & Edgerly Field Sites)

Full Demolition of Wing A, B, C, G & H . Construction of 471,280 GSF of new area in the following configuration:

Alt C.2.1 - 7 Stories, 149,173 SF of New Footprint (high-rise building designation)

Alt C.2.2 – 5 Stories, 142,292 SF of New Footprint (high-rise building designation)

Light Renovation of the Pool Wing F at 36,902 GSF and Heavy Renovation of the remaining 131,697 GSF of Wings D & E. 86,822 SF of Tectum roof deck above Wings D, E & F to be replaced.

C.2 alternatives would be implemented through multiple phases over fifty-one (51) months.



C.2.1



C.2.2

Construction Alternative C.3: Gym, Pool and Wing E Renovation. New Addition on Site 1 (Edgerly Field)

Full Demolition of Wing A, B, C, G & H . Construction of 586,247 GSF of new area in the following configuration:

Alt C.3.1 - 6 Stories, 161,401 SF of New Footprint (high-rise building designation)

Alt C.3.2 – 6 Stories, 155,913 SF of New Footprint (high-rise building designation)

Alt C.3.3 _ 4 Stories, 184,027 SF of New Footprint

Alt C.3.4 - 4 Stories, 160,829 SF of New Footprint

Light Renovation of the Pool Wing F at 36,902 GSF and Heavy Renovation of the remaining 131,697 GSF of Wings D & E. 86,822 SF of Tectum roof deck above Wings D, E & F to be replaced.

C.3 alternatives would be implemented through multiple phases over fifty-one (51) months.

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C.3.1



C.3.2



C.3.3



C.3.4

Addition/Renovation Description

The Renovations and Additions to Existing Buildings Alternatives will include compliance with the Massachusetts Specialized Stretch Energy Code with an energy target EUI of 35 kBtu/SF/yr. or 30% better than ASHRAE 90.1-2019 whichever is lower, LEEDv5 for Schools Silver Certification minimum with a goal for Gold, and embodied carbon reduction strategies such as low carbon concrete and building materials.

Life Safety Code Compliance

All existing spaces and systems to remain will be reorganized, upgraded and/or constructed new to meet current life safety codes and standards. New addition portions of the building would be constructed in full compliance with current life safety codes and standards.

Accessibility Code Compliance

All existing spaces, systems, fixtures and equipment to remain will be renovated, reorganized and/or constructed new to meet current accessibility codes and standards. New additional portions of the building would be constructed in full compliance with current accessibility codes and standards.

Energy Code Compliance

The City of Medford has adopted the Massachusetts Specialized [Opt-in] Stretch Energy Code. The Renovations or Additions to Existing Buildings Alternative would require compliance with the Specialized [Opt-in] Stretch Energy Code, under the all-electric pathway and based on the major renovation/addition scope of work, with an Energy Use Intensity (EUI) target of 35 KBtu/SF/Yr. The Project will also be required to pursue LEEDv5 Certification under the MSBA Green School Policy, achieving a minimum of LEEDv5 Silver Certification and aspiration for Gold Certification.

Site

Site work within these addition/renovation alternatives will include the redevelopment of all vehicular and pedestrian circulation systems. Separation between bus circulation, van circulation, car circulation, and delivery circulation will be developed. Drop off and pick up areas for buses, vans and cars will be separated. New outdoor student spaces, including entrance plazas, outdoor learning environments, outdoor courtyards, and connections to resource areas for education will be developed.

All pedestrian circulation systems and outdoor gathering areas will meet ADA and MAAB accessibility requirements. Emergency access around the building will be a priority.

Site furnishings and plantings will be installed to compliment the new building and site. All disturbed existing mature tree canopy will be replaced on the site with native tree species.

Parking for an assumed 450 vehicles will be developed for the purposes of these alternatives. A final parking count will be developed and incorporated as the alternatives evolve.

The new parking areas will incorporate ADA and MAAB compliant accessibility from accessible parking and loading zones to all accessible building entrances.

Under Construction Alternative B.1.1 through B.8.2 the preferred site option removes about 90% of the existing surface parking and replaces it with a four-level parking garage located west of the school. Most of the current on-site roads will remain as they are. Edgerly Field and the nearby practice fields will not be altered.

Under Construction Alternative C.1.1 through C1.3. the four-level parking garage located west of the schools is preferred. As in the B options, most of the current on-site roads will remain as they are. Edgerly Field and the nearby practice fields will not be altered.

For Alternatives C.1.4. to C3.4. the preferred site design includes a decked parking structure beneath a new activity field. The existing on-site roadways are reconfigured to provide improved entry and exit access, as well as a large gathering area along the northwest edge of the potential building footprint. The option for turf fields and a parking structure is also compatible with these options.

The existing water main and sewer trunk in Steve Miller Drive will serve the new additions. Hydrants and the building will be served from the on-site distribution system. Sanitary waste will discharge via gravity to existing services in the streets. Kitchen waste will discharge via exterior grease traps sized

per Title 5. A new stormwater management system will be incorporated to comply with town and state standards to improve runoff quality and mitigate runoff quantity.

Architectural

All exterior envelope assemblies within the areas of new construction will be designed to meet the robust thermal requirements of the Specialized Stretch Energy Code. Exterior assemblies in renovated areas of the building will be cleaned, repaired and augmented to also meet current energy code requirements. Interior assemblies and materials will be selected to provide the necessary level of durability for the expected 50-75 year life span of the school.

Structural

Modifications to the existing building will require thorough field investigations of the existing structure as existing drawings for most of the building are not available.

All new roof top units will require new supporting roof grillage frames constructed 3 to 4 feet above the existing finished roof. Reinforcement of existing structure (beams, columns, and/or foundations) may also be required to support the new units.

All new roof and floor penetrations for ductwork and piping will require supplemental framing to support the existing roof and floor framing.

Any replacement or additions to utilities under the existing ground floor slab will require cutting out the existing concrete slab, excavating out the existing, and replacing with new utilities.

Options for new stories on the existing wings will require column and foundation reinforcements as well as more significant lateral upgrades for the increased building height.

An expansion joint will be between the existing structure and addition. The existing structure will be analyzed and reinforced for gravity and lateral loads from the current building code. Refer to Code Upgrade (No-New Build) for additional information for modifications of the existing structure. The addition shall be designed for all loads mandated by the current Massachusetts Building Code at the time of permitting.

For the addition, the new foundation systems will consist of isolated reinforced concrete spread footings bearing on bedrock at column locations and conventional reinforced concrete foundation walls with continuous strip footings. At locations of shallow bedrock, the new ground floor level will be a conventional 4” slab-on-grade reinforced with welded wire fabric in the classroom spaces, 5” slab-on-grade in the vocational and common spaces, and 6” slab-on-grade in the new mechanical and electrical rooms. Framed reinforced structural slabs will be included at locations of deeper bedrock. Elevator pits will be 10” thick reinforced concrete foundation walls supported on a continuous 12” thick reinforced concrete mat foundation.

Structural floor framing systems for new construction will consist of composite steel beams and girders framinged to wide flange steel columns. The floor slabs will be 2” x 18 gage galvanized composite steel deck with 5-1/4” of lightweight concrete topping reinforced with wilded wire fabric. All steel beams, girders, and columns will be spray fireproofed.

New roof framing will be wide flange steel beams and girders supported by wide flange steel columns. Steel joists will support the roof at the gymnasium, auditorium, and any other large column-free spaces. The roof framing will be 1-1/2” deep wide-rib meatal roof deck. Roof framing below new rooftop mechanical units will be composite steel beams and girders supporting a 2” galvanized composite deck with 6” of normal weight concrete topping reinforced with welded wire fabric. The concrete pads under the untis will extend at least 5 feet beyond the footprint of the unit on all sides. Galvanized HSS framing will support screenwalls to hide mechanical units from view.

The lateral system of the new addition will be diagonal braced frames, composed of HSS steel sections.

All new concrete will use low carbon mixes requiring Supplemental Cementious Materials (SCMs) and/or Type IL cement to meet or exceed a 10% reduction in Global Warming Potential (GWP) from the regional benchmark. All steel will require a high reycled content and, to the best extent possible, be fabricated at a manufacturering plant utilizing an Electric Arc Furnace.

HVAC

The existing HVAC systems in the renovated buildings will be replaced and the new additions will be provided with new, all-electric systems to comply with the current Massachusetts Energy Code, including the Specialized Stretch Energy Code adopted by the City of Medford. A specific system approach is represented below, but alternative space heating and cooling approaches will be assessed to determine the preferred system.

Phased construction will require on-going operation of portions of the existing HVAC systems to support the continued occupancy of existing building areas. Temporary measures will be included to ensure proper indoor air quality of existing spaces while construction occurs in nearby areas of the site (e.g., added filtration at outdoor air intakes or extending existing outdoor air intakes to be clear of construction zones).

The heating and cooling systems will be based on a ground source geothermal system utilizing vertical boreholes. The geothermal loop will be 40% propylene glycol with distribution from a system of variable volume pumps in a mechanical room. Plate and frame heat exchangers will separate the ground source loop from the interior water loop and associated pumping system, which will support mechanical heating and cooling systems. Space heating and cooling will utilize above-ceiling heat pumps for classrooms and support spaces. Larger spaces will be supported by AHUs with watersource heat pumps.

Ventilation will be provided with rooftop DOAS units, configured with water source heat pumps for conditioning of outdoor air to the classrooms, support spaces, administration, and vocational spaces. VAV terminal units will manage ventilation to individual rooms based on CO2 control.

Specialty systems will be included for ventilation of Science Labs, Kitchens, Kilns, specific vocational classrooms and other such installations.

A new DDC building management system will provide control and monitoring of the HVAC systems and monitoring of selected Plumbing and Electrical equipment and metering.

Plumbing

The existing plumbing systems in the renovated buildings will be replaced throughout the building and the new additions will be provided with new plumbing systems to comply with the current edition of Commonwealth of Massachusetts Building Code (780 CMR) and 248 CMR Fuel Gas and Plumbing Code . Phased construction will require on-going operation of portions of the existing plumbing systems to support the continued occupancy of existing building areas.

New domestic cold service tied from the main water service and a new hot water systems will be provided throughout the facility. A domestic water booster will be required for buildings with high-rise designation however, a hydrant flow test is required to confirm. The entire systems will be replaced, including reduced pressure backflow preventers pipe insulation, pipe labels with flow arrows and valve tags. Domestic hot water supply will be generated through central hot water heaters in mechanical room. The water source heat pump tied to the geothermal loop will be used to generate hot water and meet the domestic water demand. Four 500 gallon storage tanks will be used to meet peak demand.

A 120KW electrical water heater will be connected to the same loop to offset any temperature swing in the storage tank and shall meet the highest hourly demand. Domestic hot water demand for multiple sinks and in science labs will be provided by 24KW tankless water heaters located in each classroom of the science wing. A electrical water heater (approx. 90KW) will be dedicated for pool heating system.

Sanitary, waste and vent systems will be provided throughout the facility and will connect by gravity to the new exterior site sewer system. Where lower level/basement fixtures cannot be drained by gravity, duplex waste ejectors will be provided. Any existing underground piping to be reused will be evaluated for its integrity.

A kitchen waste system will be provided and will connect to a new exterior grease trap in the site by gravity. Point-of-use grease traps will be provided to receive the waste discharge at the triple pot sink, dishwasher, tilting kettle and other grease producing kitchen equipment and floor drains.

The kitchen waste main will run to an exterior grease interceptor. Vent piping will be installed from the exterior grease trap back into the building and to the roof independently.

Tepid water emergency wash systems will be provided throughout all science lab areas and any areas that are subjected to chemical spillage. Equipment will include new ADA compliant emergency shower/eyewash stations.

All emergency shower and eyewash units will include a thermostatic mixing valve set for 60 deg. F, fed from the domestic potable hot and cold-water distribution systems. Hot water will be recirculated to within 15 ft. of each mixing valve.

New above ground storm drainage systems will be provided throughout the facility, including primary and secondary roof drainage systems for each roof area. Primary storm drainage systems will connect to the exterior site storm drainage system by gravity. Overflow (secondary) drains or scuppers shall be installed and discharge independently to 18" above finished exterior grade. The rainwater system will be sized to handle a rainfall rate of 4 inches per hour, with a total runoff from the main roof and the roof deck of just under 1 cubic foot per second. The condition of existing underground storm piping will be evaluated for its integrity. The storm system will be installed in cast iron piping with all horizontal piping insulated to prevent condensation. The storm system will exit at various locations of the building and connect to the municipal storm system. Waste outlets to accept HVAC condensate and sprinkler discharge shall be provided as needed and connect to the storm water piping system.

Acid waste/vent from the Science room laboratory sinks will be discharged to an acid-neutralizing tank prior to the connection to the sewer connection. The acid-neutralizing tank will be placed outside in a concrete vault with pH monitoring system. Laboratory waste piping shall be polypropylene with fused joints. Lab waste Venting will combine and vent through the roof independently from the sanitary vent system.

New compressed air distribution will be provided to some science rooms and vocational training areas. The compressed air unit will consist of duplex compressors, air receiver tank and refrigerated dryer unit. Dedicated compressed air unit will be used for vocational training areas .

New plumbing fixtures will be provided throughout the facility. ADA compliant fixtures will be provided throughout in locations and quantities in accordance with MAAB requirements. Low flow fixtures meeting the requirements of 248 CMR will be provided throughout. 1.28 gal/flush water closets will be provided utilizing hands free and hard wired sensor type flush valves. Urinals will utilize 0.125 gal/flush hands free and hard wired sensor type flush valves.

Lavatories will likewise utilize hands free and hard wired sensor operated 0.35 gpm faucets. Sinks will utilize 1.5 gpm flow restrictors and showers will utilize 1.5 gpm flow shower heads.

Fire Protection

For non-High Rise Construction Options

The scope of the renovation and addition option is to replace the existing sprinkler system throughout and extend the new system into a new addition.

The building will be served by the new 8" fire service line from the campus hydrant line. Cross connection control shall be provided by using a supervised double check valve assembly backflow preventer on the fire service as it enters the building in the Fire pump room adjacent to the exterior building wall.

A new fire hydrant flow test shall be conducted, and the results shall be analyzed to confirm whether a fire pump is required or not. If required, the fire pump will be 750 GPM @ 60 PSI with a 50 HP motor and controller with ATS. A jockey pump will be 20 GPM @65 PSI with a 2 HP motor and controller.

The entire building shall be protected throughout with a wet automatic fire suppression system and fed from an 8" Wet Riser Check Valve in the fire pump room. The system will be a wet sprinkler system with control valve assemblies to limit the sprinkler area controlled to less than 52,000 s.f. as required by NFPA 13-2019. Each floor control station consists of a monitored shut-off valve, flow switch and an Inspector's test valve and sight glass.

A fire department Storz pumper connection will be provided at the exterior wall near site hydrant. The FDC will either be wall-mount or free-standing, depending on the final details and the preference of the Fire Department AHJ.

The system will be designed in accordance with NFPA Standard 13, 2019, the latest Massachusetts State Building Code and local jurisdiction.

Furnish and install all Supervisory Switches, Flow Switches, Pressure Switches, and other Alarm Devices. Install all such devices on the piping and coordinate with the Electrical Subcontractor who shall wire all such devices to the Fire Alarm System. Every shutoff valve installed on this project shall have a supervisory trouble switch wired to the Fire Alarm Panel.

At the Stage, fire department valves will be provided on each side of the stage with a 2 1/2" fire department hose valve with 1 1/2" reducer, cap and chain.

An 8" electric bell will be provided on the exterior.

Class 1 manual standpipe system will be supplied in all new required egress stairs. Standpipe system will be designed in accordance with NFPA Standard 14, 2019, and local Fire Department requirements. Standpipes will be located in each required egress stairway, and adjacent to the Stage. Additionally, standpipes will be located so that no part of the building is more than 200 feet from a standpipe valve. Each standpipe will be equipped with a 2 1/2" fire department hose valve with 1 1/2" reducer at the stair floor landing. At the Stage, fire department valves will be provided on each side of the stage with 1 1/2" hose and nozzle.

Sprinkler heads in areas with finished ceilings will be concealed pendant type and in areas with no suspended ceilings will be upright sprinkler heads. All sprinklers will be quick response heads. Sprinkler heads in mechanical rooms and Gym will be provided with Wire guards.

Elevator machine rooms and hoistways will not be protected with automatic sprinklers in accordance with 780 CMR. A roof manifold will be provided at each roof level with a two-story or greater height.

For High Rise Construction Options

The building will be served by the new 8" fire service line from the campus hydrant line. Cross connection control shall be provided by use a supervised double check valve assembly backflow preventer on the fire service as it enters the building in the Fire pump room adjacent to the exterior building wall.

A new fire pump will be required for the combination of sprinkler/standpipe systems. The fire pump room shall have direct access to the exterior or a 2-hour fire rated passageway to the exterior. The fire pump room shall be 2-hour fire resistance rated and shall be dedicated to fire pump equipment only. The fire pump room shall be minimum 200 sq. ft. The fire pump room should be located on the ground floor of the building. The new fire pump shall be an automatic electric driven horizontal split case fire pump with an automatic transfer switch.

Preliminary calculations estimate the fire pump shall be rated for 80 psi at 1000 gpm and 75 HP motor. Preliminary calculations estimate the jockey pump to be rated for 2 HP.

The entire building shall be protected throughout with a wet automatic fire suppression system and fed from an 8" Wet Riser Check Valve in the fire pump room. The system will be a wet sprinkler system with control valve assemblies to limit the sprinkler area controlled to less than 52,000 s.f. as required by NFPA 13-2019. Each floor control station consists of a monitored shut-off valve, flow switch and an Inspector's test valve and sight glass.

A fire department Storz pumper connection will be provided at the exterior wall near site hydrant. The FDC will either be wall-mount or free-standing, depending on the final details and the preference of the Fire Department AHJ. The system will be designed in accordance with NFPA Standard 13, 2019, the latest Massachusetts State Building Code and local jurisdiction.

Furnish and install all Supervisory Switches, Flow Switches, Pressure Switches, and other Alarm Devices. Install all such devices on the piping and coordinate with the Electrical Subcontractor who shall wire all such devices to the Fire Alarm System. Every shutoff valve installed on this project shall have a supervisory trouble switch wired to the Fire Alarm Panel.

At the Stage, fire department valves will be provided on each side of the stage with a 2 1/2" fire department hose valve with 1 1/2" reducer, cap and chain.

An 8" electric bell will be provided on the exterior.

Automatic Class I standpipe system in the high-rise building `shall be hydraulically designed to provide 100 psi at the topmost hydraulically most remote fire

department hose valve. The design flow shall be 500 gpm for the hydraulically most remote standpipe system riser and 250 gpm for each additional standpipe system riser. The total design flow does not need to exceed 1000gpm for this fully sprinklered building. Standpipes would be designed in accordance with NFPA Standard 14, 2019, and local Fire Department requirements. Standpipes will be located in each required egress stairway, and adjacent to the Stage. Additionally, standpipes will be located so that no part of the building is more than 200 feet from a standpipe valve. Each standpipe will be equipped with a 2 1/2" fire department hose valve with 1 1/2" reducer at the stair floor landing.

Sprinkler heads in areas with finished ceilings will be concealed pendant type and in areas with no suspended ceilings will be upright sprinkler heads. All sprinklers will be quick response heads. Sprinkler heads in mechanical rooms and Gym will be provided with Wire guards.

Elevator machine rooms and hoistways will not be protected with automatic sprinklers in accordance with 780 CMR.

Electrical

The existing utility service will be replaced and upgraded to accommodate the new program, which includes an all-electric HVAC system, electric vehicle (EV) charging stations in a minimum of 2% of the total new off-street parking spaces (per zoning bylaws), provisions for future installation of EV charging stations for a minimum of 20% of the total new off-street parking spaces (per zoning bylaws), code required provisions for photovoltaic arrays, and battery energy storage systems (BESS). The electrical infrastructure to interconnect these systems will require additional coordination with utility, however early assumptions can include:

- Utility reclosure cabinet.
- CT / Metering cabinet (upstream of entire campus electrical interconnections)
- 15,000 Volt switchgear (owned by the school, operated by utility)
- Provisions for four (4) transformers (owned and operated by the school)
- Provisions for solar system interconnect switchboard for the photovoltaic panels and battery storage units.

All this equipment will be located on site, pad-mounted with underground conduit pathways. A screen wall to visually separate the electrical gear from street views will be required per zoning bylaws.

Renewable Energy System

Based on a target EUI of 35, early estimates suggest the size of the total solar system should be 6.5 Megawatts, along with 4.8-Megawatt-hour battery energy storage systems (BESS). The total system will be made up of both roof-mounted photovoltaic (PV) panels, and ground-mounted PV canopies. One transformer is dedicated to the photovoltaic (PV) system, feeding a 8000 Amp 277/480 V solar switchboard. The PV system and battery storage are anticipated to be designed as AC-coupled and will interconnect at the solar switchboard. This setup will allow for independent operation of the solar panel and battery storage for efficiency and reliability.

Power Distribution System

The existing electrical service will be replaced. The existing(3) services substations, 2400-Amp, 1200-Amp, and 600-Amp , 277/480 volt 3-phase 4 wire electrical services provides a power density of approximately 5.5 watts/sf, which is estimated to be significantly undersized for an all-electric code required program.

The new distribution system will consist of two (2) 4000 Amp, 277/480V 3-phase 4 wire switchboards with new underground secondary service conductors extended to pad-mounted transformers on site. Coordination with utility will be required, however at this time it is expected that two (2) transformers will be required for the demand of the high school.

Phased construction will require on-going operation of portions of the existing electrical systems to support the continued occupancy of existing building areas. Temporary measures will be included to ensure existing areas remain fully operational while construction occurs.

Lighting loads, the elevator, large mechanical equipment, and large kitchen electrical loads will be connected to 277/480V panelboards, and all other loads will be connected to 120/208V panelboards.

In the new construction areas, a system of new panelboards separated by use will be provided, located in dedicated electrical rooms throughout the building. Generally, the separate uses are lighting, mechanical and branch circuit loads.

Energy sub-metering system will be provided for monitoring all individual energy end uses that represent 10% or more of the total annual consumption of the building. Sub-meters will be connected to the new building DDC system.

Life Safety/Emergency System

The existing (2) 277/480 volt 3-phase, 4 wire diesel fueled emergency generator and generator distribution system is past it's usable life expectancy. The two generators have been noted to be non-functional and will be replaced with a new 1500kW 277/480 volt 3-phase, 4 wire diesel fueled emergency generator and distribution system will be provided. A docking station for a temporary roll-up generator shall be installed to allow the life safety distribution system to remain active during routine maintenance or generator failure, as well as new control wiring and pathways to comply with latest signal and wiring integrity codes. This will require excavating, replacing, and re-working the existing underground conduit between the generator and the service entrance equipment.

It is estimated that the following items will be connected to the generator system:

- Egress emergency lighting.
- Fire alarm system.
- IT Rooms (power and A/C) including network, door access, intrusion detection, CCTV, PA, telephones.
- Heating system as required to freeze protect the building.
- Elevators.
- Resiliency Level:
- Level 3 for the majority of building.

Level 2, not including food prep requirement, applied to select areas of the building, such as the Gym (plan for attaching portable generator for cooking.

Lighting & Lighting Control

All new interior light fixtures with new, high efficient LED light fixtures fitted with dimmable drivers.

Replace all exterior light fixtures with new, high efficient LED light fixtures fitted with dimmable drivers and full cut-off optics.

A new lighting control system for a new, fully networked lighting control system compliant with the latest energy code. The lighting control system shall include the capability of communicating and controlling ON/OFF 120V power to receptacles in classrooms, offices, corridors, and other spaces required by energy code.

Fire Alarm

A fire alarm system is a fully addressable voice evacuation system consisting of four node panels throughout the campus.

All new initiation and notification devices such as smoke detectors and speaker strobes will be provided. The system to communicate to the Fire Department via an antenna mounted on the roof, and an auto dialer, which is compliant with latest building codes.

A bi-directional antenna (BDA) system shall be installed to comply with latest building code. The BDA system will have capabilities to boost fire department and police department radio communications within the building.

Lightning Protection System

The existing school does not have a lightning protection system. A lightning protection system is not required by code, although it is recommended by NFPA Standards. A system should be assumed to be provided as part of code upgrade and any renovation options.

Telecommunications

The existing telecommunications copper and fiber optic cable infrastructure will be replaced to support data and voice transmission. CAT6A cable will be installed to the end points, with (12) strand OM4 multi-mode and (6) strand OS2 single-mode fiber optic cabling between the MDF and the IDFs. Existing network infrastructure electronics spaces in classrooms and storage spaces will be replaced with secure and climate-controlled rooms to better protect and maintain network electronic equipment. The MDF and IDFs will be replaced with new equipment cabinets, patch panels and overhead cable management components.

The MDF and IDFs will be replaced with new rooms fitted with a new cooling systems, lighting, and generator backed power.

The existing Public Address and Master Clock Systems will be replaced. Classrooms and other learning spaces will be equipped with two-way talkback speakers. Corridors and larger spaces will be equipped with one-way speakers. Clocks will be synchronized and powered via low-voltage wiring. The Public Address and Master Clock systems will be interfaced at the head end.

Classroom technology infrastructure will be upgraded to provide new data and voice communications with a potential wireless access point location in the ceiling. Audiovisual cabling will be installed to allow projection of content from the instructor's computer to the wall-mounted interactive flat panel monitor.

Speech reinforcement systems will be installed in instructional spaces to provide even distribution of instructor and student speech throughout the space, as well as being interfaced to the interactive flat panel monitor to perform the audio functions for audiovisual presentations in the space.

Current wireless access points will be purchased at the time of occupancy.

Security

The district recently completed a security enhancements project that included the installation of new cameras, card readers, and associated access control infrastructure at Medford High School. As part of the preliminary evaluation of alternatives for a new high school facility, an existing conditions walkthrough was performed to document current device locations and distinguish recently installed equipment from older legacy systems. This walkthrough has provided a clear understanding of where new cameras and card readers are deployed and allows the project team to quantify the number of devices that could potentially be salvaged and reused in the new building.

Based on this inventory, selective reuse of newer cameras, card readers, and related control hardware represents an opportunity for capital cost savings and reduced procurement time. An early assessment of device age, condition, remaining useful life, and compatibility with the proposed security platform for the new facility will be essential to confirm which components are suitable for relocation. This information can be incorporated into the cost model to more accurately reflect potential reuse credits.

Any reuse strategy should be balanced against considerations such as warranty transferability, manufacturer support for redeployed equipment, cybersecurity standards, and the long-term maintenance implications of mixing reused and new devices.

Coordination with district IT and security staff will be critical to develop a phased migration plan that maximizes reuse while maintaining system reliability, scalability, and overall campus security objectives.

Audio / Visual

New audiovisual systems will be provided for the Auditorium (including backstage support spaces), music classrooms (including the Band, Chorus, and General Music Classroom), fitness areas (including the Gymnasium, Fitness Room, and Gymnastics Gym), Cafeteria and Large Group Instruction rooms. Where applicable, the systems will be provided with high-resolution video displays/projection, sound systems for speech reinforcement and audio playback, ADA-compliant assistive listening, and integrated AV controls. In addition, broadcast recording equipment will be provided for use by the students in the TV & Film CTE program.

Acoustics

New building utility equipment will incorporate sound attenuating measures, as necessary, for compliance with the community noise emissions requirements established in the Massachusetts Division of Air Quality Control (DAQC) Policy 90-001.

New HVAC equipment and system components and room finishes will be designed for compliance with the LEED Minimum Acoustics Performance prerequisite for HVAC background noise and reverberation time in renovated core learning spaces.

Specialty spaces, such as the auditorium, music classrooms, fitness areas, gymnasia, and large lecture rooms will incorporate room shaping, sizing, finish material strategies, and sound isolating surrounding construction to appropriately suit the acoustic needs of the users.

Hazardous Materials

As expected for a building of this age, there are significant hazardous materials present, despite prior abatement activities that have occurred over the years. For a detailed report on the materials to be abated, see Section 3.1.4.N. Hazardous material abatement is required for both renovated sections of the existing building to remain, as well as portions of the existing building that are to be demolished.

Capacity Constraints

The design capacity of 1,395 students plus the addition of district-wide Pre-K noted in the MSBA Enrollment Projection, and the corresponding educational space needs will be provided by the additions and renovations of these alternatives.

Educational Program Requirements Fulfillment

The Addition/Renovation Alternatives will fulfill Medford High School's Educational Program requirements and the enrollment capacity. However, adjacencies and positioning of some program functions may have limited ability to be optimized in comparison with new construction alternatives.

All elements of Medford High School's robust curriculum are accommodated in spaces that meet current standards by these renovations and additions. Depending on the level and extents of the renovation areas, existing low ceiling heights may remain in renovated sections of the building due to structural constraints. Lack of space above ceilings may place constraints on HVAC system design in those same areas, potentially affecting classroom layout and design in renovation areas.

Schedule Overview

The Addition and Renovation alternatives would require between fifty-one (51) and sixty-nine (69) months to implement; and would all include multiple phases.

For the Addition and Renovation alternatives, portions of the building would come online over the course of the four to six years and students would rotate into those new or renovated portions while other areas of the buildings come offline. The existing B and C Wings cannot be taken offline at the same time given the high quantity of classrooms located in those two wings. There will be a need to have temporary accommodations for many spaces including classrooms, the auditorium and the gymnasium during the course of construction. The costs for modular classrooms have been included as the specific alternative requires. Larger functions such as the auditorium and gymnasium will need to occur in other City buildings/locations or be unavailable for some amount of time.

Cost Overview

The estimated construction cost* is:			
B.1.1:	$626,927,180	B.8.1:	$658,109,604
B.1.2:	$641,799,548	B.8.2:	$649,746,428
B.2.1:	$647,195,083	C.1.1:	$645,774,364
B.2.2:	$653,865,236	C.1.2:	$647,865,413
B.3.1:	$652,900,266	C.1.3:	$655,465,818
B.3.2:	$664,255,958	C.1.4:	$659,314,722
B.4.1:	$670,822,833	C.2.1:	$673,291,873
B.4.2:	$681,519,145	C.2.2:	$661,725,306
B.5.1:	$679,453,385	C.3.1:	$665,396,025
B.6.1:	$672,222,320	C.3.2:	$664,251,990
B.6.2:	$663,994,121	C.3.3:	$651,942,477
B.7.1:	$661,186,282	C.3.4:	$647,640,715
B.7.2	$664,824,631		

The estimated total project cost* is:			
B.1.1:	$806,618,975	B.8.1:	$861,997,005
B.1.2:	$825,209,435	B.8.2:	$851,543,036
B.2.1:	$831,953,853	C.1.1:	$838,377,955
B.2.2:	$840,291,545	C.1.2:	$840,991,766
B.3.1:	$839,085,333	C.1.3:	$850,492,272
B.3.2:	$853,279,947	C.1.4:	$855,303,402
B.4.1:	$861,488,541	C.2.1:	$864,574,842
B.4.2:	$874,858,931	C.2.2:	$850,116,633
B.5.1:	$872,276,732	C.3.1:	$854,705,032
B.6.1:	$879,637,899	C.3.2:	$853,274,987
B.6.2:	$869,352,651	C.3.3:	$814,928,096
B.7.1:	$857,642,852	C.3.4:	$832,510,894
B.7.2	$862,190,788		

*All pricing is based on the total Gross Square Foot (GSF) listed in the Summary of Spaces, which does include costs for all of the spaces listed in the “Other” category in the Summary of Spaces.

Conclusion

The Pros and Cons are summarized as follows:

Pros

- Capitalizes on the embodied carbon and cultural significance of some portion of the existing structure by salvaging it.
- Students, staff and the community may get quicker access to a new or renovated portion of the building during an initial phase, rather than having to wait for the entirety of a new school to be completed.
- Renovating existing high value asset spaces such as the Gymnasium will allow Medford High School to maintain the large size of that existing facility rather than reducing it.
- Allows for the renovation of the pool to be considered as a potential scoping option.

Cons

- When compared to the New Construction alternatives, the Addition Renovation alternatives will have the largest adverse impact on education due to displacements during renovation work.
- Existing structural bays in the B and C wings are undersized for appropriately sized classrooms and labs, requiring inefficient layouts of new spaces.
- These alternatives are generally the most costly due to overhead costs incurred over increased durations of time and temporary accommodations associated with construction logistics.
- Having to work with and match low existing floor-to-floor heights will result in fewer options for HVAC systems.
- All but one of these alternatives will incur added costs and inconvenience due to modular classroom buildings.

F. New Building Construction

Construction Alternative D.1.1: New Building on Site 1 (Parking Lot), High Rise Building designation

Full Demolition of Existing Facility. Construction of 607,250 GSF of new area across 6 Stories.

Alternative D.1.1 would be implemented through multiple phases over fifty-one (51) months.



D.1.1

Construction Alternative D.1.2: New Building on Site 1 (Parking Lot)

Full Demolition of the existing facility. Construction of 607,250 GSF of new area across 4 floors.

Alternative D.1.2 would be implemented through multiple phases over sixty-three (63) months.



D.1.2

Construction Alternative D.2.1: New Building on Site 2 (Edgerly Field), High Rise Building designation

Full Demolition of Existing Facility. Construction of 607,250 GSF of new area across 6 Stories.

Alternative D.2.1 would be implemented through multiple phases over fifty-one (51) months.



D.2.1

New Construction Description

Alternatives D.1.1 – D.2.1 include all New Construction on a combination of Edgerly Field or the southern parking lot, as well as on a portion of the existing building footprint. These alternatives enable the majority of the new school building to be constructed free of the existing high school footprint, which will mitigate impacts to the ongoing functioning of the existing school and minimizes the amount of time that will be required to have a substantially new building up and running. The configuration of the new construction will feature preferred interdisciplinary programmatic adjacencies within a four-to-six-story academic building and beneficial academic adjacencies.

All New Construction options feature a Health, Wellness and Athletics wing with an 18,000 NSF gymnasium, which represents a reduction of approximately 12,000 NSF from the current gymnasium size.

For school and community use the major public access spaces primarily within Performing Arts and Health and Wellness wings have the potential of being organized with direct connection to a central Commons space. This would allow academic wings to be compartmentalized and more easily secured after hours. The Media Center is also a primary public use space and together with the Auditorium and Gymnasium could be organized to connect to the Cafeteria/Commons as a major community gathering space.

Life Safety Code Compliance

The new building would be designed and constructed in full compliance with current life safety codes and standards.

Accessibility Code Compliance

The new building would be designed and constructed to meet all accessibility codes and requirements.

Energy Code Compliance

The City of Medford has adopted the Massachusetts Specialized [Opt-in] Stretch Energy Code. The Renovations or Additions to Existing Buildings Alternative would require compliance with the Specialized [Opt-in] Stretch Energy Code, under the all-electric pathway and based on the major renovation/addition scope of work, with an Energy Use Intensity (EUI) target of 35 KBtu/SF/Yr. The Project will also be required to pursue LEEDv5 Certification under the MSBA Green School Policy, achieving a minimum of LEEDv5 Silver Certification and aspiration for Gold Certification.

Site

Site work with a new building construction would include new vehicular and pedestrian circulation systems. Separation between bus circulation, van circulation, car circulation, and delivery circulation will be developed. Drop off and pick up areas for buses, vans and cars will be separated. New outdoor student spaces, including entrance plazas, outdoor learning environments, outdoor courtyards, and connections to resource areas for education will be developed. All pedestrian circulation systems and outdoor gathering areas will meet ADA and MAAB accessibility requirements. Emergency access around the building will be a priority.

Site furnishings and plantings will be installed to compliment the new building and site. All disturbed existing mature tree canopy will be replaced on the site with native tree species.

Parking for an assumed 450 vehicles will be developed for the purposes of these alternatives. A final parking count will be developed and incorporated as the alternatives evolve.

The new parking areas will incorporate ADA and MAAB compliant accessibility from accessible parking and loading zones to all accessible building entrances.

Under Construction Alternative D.1.1. all parking is consolidated into decked parking beneath a large activity field. Site roadways are nearly entirely reorganized to accommodate decked parking entry and exit access. All gathering space and CTE yards are encouraged to hug adjacent areas of the proposed building footprint. All existing activity fields remain unchanged.

Under Construction Alternative D.1.2. the four-level parking garage located west of the schools is preferred. Edgerly Field will not be altered. All gathering space and CTE yards are encouraged to hug adjacent areas of the proposed building footprint.

The existing water main and sewer trunk in Steve Miller Drive will serve the new additions. Hydrants and the building will be served from the on-site distribution system. Sanitary waste will discharge via gravity to existing services in the streets. Kitchen waste will discharge via exterior grease traps sized per Title 5. A new stormwater management system will be incorporated to comply with town and state standards to improve runoff quality and mitigate runoff quantity.

Architectural

New construction architectural scope will be similar to the new addition architectural scope that was described for the Addition and Renovation alternatives.

Structural

New construction structural systems will be similar to the new addition structural scope that was described for the Addition and Renovation alternatives.

HVAC

The new HVAC system will be similar to the Add/Reno scope with the exception that a temporary installation may be required to support the systems within the school if the geothermal field is located where the existing school is and cannot come online until this demo work is complete. This would entail the use of a boiler and cooling tower (or chiller).

Plumbing

New construction plumbing systems will be similar to the new addition plumbing scope that was described for the Addition and Renovation alternatives.

Fire Protection

New construction fire protection systems will be similar to the new addition fire protection scope that was described for the Addition and Renovation alternatives.

Electrical

The description for all Electrical, Telecommunications, Security and AV systems is similar to that provided for the Addition/Renovation scope.

Acoustics

New building utility equipment will incorporate sound attenuating measures, as necessary, for compliance with the community noise emissions requirements established in the Massachusetts Division of Air Quality Control (DAQC) Policy 90-001.

New HVAC equipment and system components and room finishes will be designed for compliance with the LEED Minimum Acoustics Performance prerequisite for HVAC background noise and reverberation time in renovated core learning spaces.

Specialty spaces, such as the auditorium, music classrooms, fitness areas, gymnasia, and large lecture rooms will incorporate room shaping, sizing, finish material strategies, and sound isolating surrounding construction to appropriately suit the acoustic needs of the users.

Educational Program Requirements Fulfillment

The New Construction Alternatives will fulfill Medford High School's Educational Program requirements and enrollment capacity.

All elements of Medford High School's educational and curriculum goals are accommodated in new spaces that meet current standards.

Schedule Overview

The New Construction alternatives would require between fifty-one (51) and sixty-three (63) months to implement; with one alternative having the potential to be built in a single phase because it does not overlap with the existing building footprint. Other alternatives would involve multiple phases.

The D.2.1 alternative could be built without the need for modular classroom buildings on the site, whereas the D.1.1 and D.1.2 would require the use for temporary modular classrooms.

In these alternatives there will be a need to have temporary accommodations for many spaces including classrooms, the auditorium and the gymnasium during the course of construction. The costs for modular classrooms have been included as the specific alternative requires. Larger functions such as the auditorium and gymnasium will need to occur in other City buildings/locations or be unavailable for some amount of time.

Cost Overview

The estimated construction cost* is:

D.1.1: $689,994,698

D.1.2: $674,174,904

D.2.1: $687,575,718

The estimated total project cost* is:

D.1.1: $893,653,373

D.1.2: $873,878,630

D.2.1: $859,469,647

The Pros and Cons of options D.1.1 – D.2.1 are summarized as follows:

Conclusion

Pros

- One alternative (D.2.1) offers the potential of the current building remaining in use throughout construction, resulting in minimized disruption to education and ongoing MHS building uses
- Single, economical construction phase is a potential with these alternatives
- Most freedom of educational planning and adjacencies
- No modulars is a potential with these alternatives

Cons

- Considerable reduction in the size of the gymnasium space at the school.
- Eliminates the potential of maintaining and renovating the existing pool building.
- Largest amount of congestion on site during construction due to the need to use site area for both the existing building and new building footprints concurrently.
- Requires construction of the new building to be at one extreme end of the site or the other, each of which presents access challenges and limits site design optionality.

3.1.7 Local Actions and Approvals

3.1.7 Local Actions and Approvals

A. Signed Local Actions and Approvals Certification

A copy of the certified vote to submit the PDP is attached.

MEDFORD PUBLIC SCHOOLS

Medford, Massachusetts 02155

medfordhsproject.com

Local Actions and Approvals Certificate

February 25, 2026

Mr. Michael McGurl
Director of Capital Planning
40 Broad Street
Boston, Massachusetts 02109

Dear Mr. McGurl:

The Medford Comprehensive High School Building Committee ("MCHSBC") has completed its review of the Feasibility Study *Preliminary Design Program* for the Medford Comprehensive High School project (the "Project"), and on February 23, 2026, the SBC voted to approve and authorize the Owner's Project Manager to submit the Feasibility Study related materials to the MSBA for its consideration. A certified copy of the SBC meeting minutes, which includes the specific language of the vote and the number of votes in favor, opposed, and abstained, is expected to be approved at the February 25, 2026 SBC meeting and will be provided when an approved, certified copy is received.

Since the MSBA's Board of Directors invited the District to conduct a Feasibility Study on February 26, 2025 the MCHSBC has held 11 meetings regarding the proposed project, in compliance with the state Open Meeting Law. These meetings include:

School Building Committee Meetings

5/12/2025 6:00pm Meeting –	MCHSBC In Person @ Medford HS
OPM Introduction	No action required/taken
Approval of Past Minutes	Motion taken/approved
Adjourn	Motion taken/approved

6/11/2025 6:30pm Meeting –	MCHSBC In Person @ MHS Bistro
Site Options Discussion	Motion taken/approved
DSP Process	No action required/taken
Adjourn	Motion taken/approved

8/11/2025 6:30pm	MCHSBC
Meeting -	Remote via Zoom
Call to Order	No action required/taken.
Approval of Past Minutes	Motion taken/approved
DSP Process and Update	No action required/taken
Education Plan Discussion	No action required/taken
Site Selection Options	Motion taken/approved
Adjourn	Motion taken/approved

9/15/2025 6:30pm	MCHSBC
Meeting -	In Person @ MHS Bistro
Call to Order	No action required/taken
Approval of Past Minutes	Motion taken/approved
Approval of Project Invoices	Motion taken/approved
DSP Process Update	No action required/taken
Adjourn	Motion taken/approved

10/27/2025 6:30pm	MCHSBC
Meeting –	In Person @ MHS Library
Call to Order	No action required/taken
Approval of Past Minutes	Motion taken/approved
Approval of Project Invoices	Motion taken/approved
DSP Results	No action required/taken
Designer Introduction	No action required/taken
Adjourn	Motion taken/approved

11/24/2024 6:30pm	MCHSBC
Meeting	In Person @ MHS Library
Call to Order	No action required/taken
Approval of Past Minutes	Motion taken/approved
Approval of Project Invoices	Motion taken/approved
Approval of Designer Contract	Motion taken/approved
Progress Update – Ed Visioning	No action required/taken
Adjourn	Motion taken/approved

12/22/2025 6:30pm	MCHSBC
Meeting	Remote via Zoom
Call to Order	No action required/taken
Approval of Past Minutes	Motion taken/approved
Approval of Project Invoices	Motion taken/approved
Existing Conditions Update	No action required/taken
Space Summary Update	No action required/taken
Advisory Group Update	No action required/taken
Adjourn	Motion taken/approved

1/14/2026 6:30pm Meeting –	MCHSBC In Person @ MHS Library
Call to Order	No action required/taken.
Approval of Past Minutes	Motion taken/approved
Approval of Project Invoices	Motion taken/approved
Approval of Designer Amendment #1	Motion taken/approved
Review of PDP Alternatives	Motion taken/approved
Adjourn	Motion taken/approved

2/11/2026 6:30pm Meeting –	MCHSBC In Person @ MHS Library
Call to Order	No action required/taken.
Approval of Past Minutes	Motion taken/approved
Approval of Project Invoices	Motion taken/approved
Approval of OPM Amendment #1	Motion taken/approved
Communications Plan Review	Motion taken/approved
Review of PDP Comparative Cost	No action required/taken
Review PSR Options Eval Criteria	No action required/taken
Adjourn	Motion taken/approved

2/23/2026 6:30pm Meeting	MCHSBC Remote via Zoom
Call to Order	No action required/taken.
Approval of Past Minutes	Motion taken/approved
Approval for OPM to Submit the PDP to MSBA	Motion taken/approved
Approval of Changes to Evaluation Criteria	Motion taken/approved
Adjourn	Motion taken/approved

School Committee Meetings

1/26/2026 6:00pm School Committee	Medford School Committee In Person @ City Hall
Call to Order	No action required/taken
Approval of Past Minutes	No action required/taken
Review of MHS Project	No action required/taken
Review the Educational Plan	No action required/taken
Adjourn	Motion taken/approved

2/2/2026 6:00pm School Committee	Medford School Committee In Person @ City Hall
Call to Order	No action required/taken
Approval of Past Minutes	No action required/taken
Review and Approve the Educational Plan	Motion taken/approved
Appoint MPS Superintendent	Motion taken/approved
Adjourn	Motion taken/approved

Other Public Meetings

1/09/2026 2:30pm Public Outreach	Community Forum #1 Remote via Zoom
Call to Order	No action required/taken
Review MSBA Process and Project Schedule	No action required/taken
Review current PDP findings	No action required/taken
Questions and Answer	No action required/taken
Review of PDP Alternatives	No action required/taken
Adjourn	No action required/taken

1/28/2026 6:00pm	MCHSBC Communications Subcommittee Remote via Zoom
Call to Order	No action required/taken
Introductions	No action required/taken
Upcoming Schedule	No action required/taken
Review and Modify Communications Plan	Motion taken/approved
Adjourn	Motion taken/approved

The presentation materials for each meeting, meeting minutes, and summary materials related to the Project are available locally for public review at https://medfordhsproject.com/ and https://www.mps02155.org/about/school-committee/meetings.

To the best of my knowledge and belief, each of the meetings listed above complied with the requirements of the Open Meeting Law, M.G.L. c. 30A, §§ 18-25 and 940 CMR 29 *et seq*.

If you have any questions or require any additional information, please contact Matthew Gulino, Owner's Project Manager at LeftField, at 774-573-8817.

By signing this Local Action and Approval Certification, I hereby certify that, to the best of my knowledge and belief, the information supplied by the District in this Certification is true, complete, and accurate.

By: Breanna Lungo-Koehn

Title: Chief Executive Officer

Date: 2/25/2026

By signing this Local Action and Approval Certification, I hereby certify that, to the best of my knowledge and belief, the information supplied by the District in this Certification is true, complete, and accurate.

By: Dr. Suzanne B. Galusi

Title: Superintendent of Schools

Date: 2/25/2026

By signing this Local Action and Approval Certification, I hereby certify that, to the best of my knowledge and belief, the information supplied by the District in this Certification is true, complete, and accurate.

By: Breanna Lungo-Koehn

Title: Chair of the School Committee

Date: 2/25/2026

B. Certified Copies of School Building Committee Meeting Notes

A draft copy of the SBC Minutes from 2/23/26 is included. These minutes will be certified at the meeting on 02/25/26 and will be forwarded to the MSBA promplty thereafter.

Meeting Minutes
Medford Comprehensive High School Building Committee Meeting
May 12, 2025 at 6:00 p.m. at Medford High School & Zoom

I. Roll call

Voting Members: 15 Present 0 Absent
Non-Voting Members: 9 Present, 1 Absent

Introduction of Lisa Miller to the committee as a non-voting member, MTVHS teacher and Caregiver to Medford students

II. Consent Agenda: Approval of Meeting Minutes

1. January 23, 2025 - CCE Subcommittee
2. February 24, 2025 - Full Committee

Motion to Approve Minutes January 23 Subcommittee Meeting Minutes and February 24 Full Committee Minutes By Tracy Keene, second by Libby Brown 12/0/3- Approved

III. Introduction to Selected OPM: LeftField

- Recap of OPM Selection Process
    - 10 Bids were received with 3 finalists
    - In the queue for review by the OPM Selection Process
- Presentation by the LeftField team to introduce themselves to full committee
    - Spoke about their staffing capacity and ability to handle multiple projects at once
    - Spoke about their experience with Chapter 74 programming
    - Spoke about different preliminary construction options, but emphasized they will study all possible options before Building Committee determines a final decision

IV. RFS for Designer Services

- Introduction to next phase and timeline
    - Designer Selection Panel Process
    - LeftField spoke about their experience in this process and how to navigate their districts only having 3 votes per the MSBA process policy
- Collect input and feedback from the Committee
- Potential approval to submit RFS for MSBA review
    - Discussion on if $600 million was too big of a project cost to list on the RFS
    - Point was made that this is just the number listed on the RFS and is not what the cost of the project will be

Motion to adjust upper bound on RFS Designer Selection from $600 million to $400 million by Luke Preisner, seconded by Aaron Olapade - 2/13/0 Motion fails

Motion to approve RFS as amended by Dr. Suzanne B. Galusi, seconded by Marissa Desmond 14/0/1 - Motion passes

V. Adjournment

Motion to adjourn by Tracy Keene, second by Emily Lazzaro - 15/0/0
Meeting adjourned

Meeting Minutes
Medford Comprehensive High School Building Committee Meeting
June 11, 2025 at 6:30 p.m. at Bistro 489 & on Zoom

I. Roll call

Voting Members: 15 Present 0 Absent
Non-Voting Members: 4 Present, 5 Absent

II. Consent Agenda: Approval of Minutes

- May 12, 2025 - Full Committee Meeting
- June 2, 2025 - Full Committee Meeting

Motion to Approve Meeting Minutes from 5/12/25 & 6/2/25 Full Committee Meeting by Aaron Olapadde, second by Luke Preisner 0/0/0 - Approved

III. Site Options Discussion: Possible removal of Medford Square and Columbus Park as options; only the Medford High property to remain for the Feasibility Study

- Does MSBA care if we are only studying one spot? How were those spots decided?
    - Meetings with the Medford Office of Planning and Development came up with the three potential sites, but after further discussion other sites were either too small or went into different forms of development
- Does the process get sped up if only one spot is studied?
    - Jennifer Carlson from LeftField said that yes the feasibility study gets sped up and costs gets sped up with less fewer surveys
- What are the safety ramification of only doing one site?
    - Jenn Carlson said the LeftField has plenty of experience managing this issue. May pose more logistical planning, but safety is always paramount regardless of where the build is decided on
- Does focusing on one site allow for more flexibility and time to plan to study the current site?
    - Jenn Carlson said yes. The more time dedicated to building one site allows for more design options on that one site
- LeftField is also going to make documents on sites that were explored and provide reasons why those sites weren't feasible.
- Clarification that MSBA does not reimburse spaces such as pools or athletic fields
- Spoke about the community concern that the high school currently resides on the edge of the city. Earlier discussions noted factors including size and cost of flipping school building locations.

Motion for LeftField to do a peer review of the city's prior review of the available spaces in Medford by Luke Preisner, second by Libby Brown 15/0/0

IV. OPM Update and Designer Selection Panel Next Steps

- MSBA's Designer Selection Panel is completely full until the end of September, later than what the committee wanted but lots of other projects in the queue ahead of Medford
- The Educational Program, which is what we can start working on now, is what the design of the building is based on. Factors the needs of students, their schedules, designs of other school buildings
- Next meeting in August will discuss the Designer Selection Process in more detail, but designers are selected on presentation and idea of project, not any costs or contracts

V. Adjournment

Motion to adjourn by Emily Lazzaro, second by Nicole Morell - 15/0/0
Meeting adjourned

Meeting Minutes
Medford Comprehensive High School Building Committee Meeting
August 15, 2025 at 6:30 p.m. on Zoom

I. Roll call

Voting Members: 11 Present 4 Absent
Non-Voting Members: 7 Present, 2 Absent

II. Approval of Meeting Minutes from June 11, 2025

Motion to Approve Meeting Minutes from 6/11/25 Full Committee Meeting by Dr. Suzanne Galusi, second by Libby Brown 11/0/4 - Approved

III. Approval of Project Invoices

Motion to Approve Project Invoices as Amended with Correct Month of July instead of June by Mayor Lungo-Koehn, second by Brian Hilliard 11/0/4 - Approved

IV. Designer Selection Process Update
A. High Level Review of Example Proposal
B. Review Evaluation Materials
C. Questions/Discussion on DSP Process

LeftField Team went over the Designer Selection Process that will begin next month. Over 20 architects have expressed interest in the project. A walkthrough of the building will be happening on August 13. Three members from district will be part of the Designer Selection Panel, joining other MSBA board members. Medford DSP participants will have one month to review the RFP's before the first of two designer selection panels. LeftField also talked about Designer Selection Rating Scale and gave example of Design Proposals.

Luke Preisner asked if this process and documents are public record. Jenny Graham said that they will be public record once the contract with the architect is signed.

Luke Preisner asked about the rating scale that would be used as the committee members read through the proposals. LeftField said that the best way is to review proposals individually then have a group discussion about themes at a full committee meeting. That meeting is scheduled for September 15.

V. Education Plan Update

Work has been ongoing since the end of the 2024-25 school year. Administrators have been providing their input and experience in the creation of the document. Dr. Galusi described how the plan shapes the educational layout and vision of a new building. By department, the document asks what Medford is doing now with the building space vs what Medford would like in a new building. Teacher input will be gathered upon their return to school at the end of August.

VI. Site Selection Matrix

A. Site Options Discussion and Potential Vote: Possible removal of Medford Square and Columbus Park as options; only the Medford High property to remain for the Feasibility Study

LeftField showed a chart of all possible locations discussed throughout the process, including Medford Square, building on the current land of the High School, Playstead Park, Tufts Park, Andrews Middle School, and Columbus park.

Motion to Remove Medford Square and Columbus Park as options for the Feasibility Study by Mayor Lungo Koehn, second by Dr. Galusi 11/0/4

VII. Adjournment

Motion to adjourn by Mayor Lungo Koehn, second by Liby Brown - 11/0/4
Meeting adjourned

Meeting Minutes
Medford Comprehensive High School Building Committee Meeting
September 15, 2025 at 6:30 p.m. at Bistro 489 & on Zoom

I. Roll call

Voting Members: 13 Present 2 Absent
Non-Voting Members: 8 Present, 2 Absent

II. Approval of Meeting Minutes from August 11, 2025

Motion to Approve Meeting Minutes from 8/11/25 Full Committee Meeting by Aaron Olapade, second by Dr. Suzanne Galusi 11/2/2 - Approved

III. Introduction of New Members

A. Voting - Ken Lord Chief Operations Officer
B. Non-Voting - Dr. Kim Talbot, MPS Assistant Superintendent for Academics & Instruction

IV. Approval of August 2025 OPM Invoice

Motion to Approve August 2025 OPM Invoice by Ken Lord, second by Luke Preisner 13/0/2 - Approved

V. Designer Selection Process Proposal Discussion

Four proposals from designers. AI3, Perkins & Will, DLR, and SSMA. The committee went one by one through each firm, talking about the things they liked about each firm, what they didn't like, and questions they would like to ask each firm. Among many themes, committee members routinely spoke about the following when speaking through each of the firms:

- Firm makeup (number of members and consultants, location)
- Experience (history with HS projects, high schools that have a CTE component, size of past high school builds,)
- Vision (design of project, communicating the vision to community, use of existing land, inclusion and emphasis on different spaces such as the pool, theater, Curtis Tufts)
- Project timeline
- Environmental experience (Geothermal and solar opportunities in build, clearing of land)
- History of projects being under budget

VI. Adjournment

Motion to adjourn by Mayor Breanna Lungo-Koehn, second by Luke Preisner - 15/0/0 **-** Approved

Meeting adjourned

Meeting Minutes
Medford Comprehensive High School Building Committee Meeting
October 27, 2025 at 6:30 p.m. at Medford High School Library & on Zoom

Roll call

Voting Members: 14 Present 1 Absent
Non-Voting Members: 7 Present, 3 Absent

I. Approval of Meeting Minutes from September 15, 2025

Motion to Approve Meeting Minutes from 9/15/25 Full Committee Meeting by Mayor Lungo-Koehn, second by Maria D'Orsi 14/0/1 - Approved

II. Approval of September 2025 OPM Invoice

Motion to Approve September 2025 OPM Invoice by Dr. Suzanne B. Galusi, second by Aaron Olapade 14/0/1 - Approved

III. Designer Selection Panel Meeting #1 and #2 Recap

On September 25, 2025, the DSP ranked the four firms as follows and invited the top 3 firms to interview on October 7, 2025.

1. Ai3
2. SMMA
3. Perkins & Will
4. DLR Group & JLA

After the interviews took place on October 7, the DSP re-ranked the firms. The ranks from the first DSP meeting did not carry over. The rankings for those three firms after the interview were:

1. SMMA
2. Ai3
3. Perkins & Will

IV. Top Ranked Firm: Contract Negotiation Process

Contract negotiations are ongoing with SMMA to finalize a contract.

V. Architect Introduction

SMMA introduced themselves and their experience with high school building projects, specifically those who have a CTE component. SMMA outlined the project timeline of the Feasibility study, including the Preliminary Design Phase, and the Preferred Schematic Report. Medford is currently in the Preliminary Design Phase, which includes Educational Visioning and the Educational Programming Plan. Chairperson Graham noted this Educational Programming Plan has been in the works over the course of the summer from Dr. Galusi and other educational administrators.

SMMA took questions from the committee regarding community outreach and factoring in work that has already been done. SMMA highlighted the conversations that will be held with both structured focus groups and meeting community members where they are. SMMA also thanked the committee for their work so far including choosing a building site and the educational programming. SMMA also answered questions regarding drilling and geothermal considerations when building the project.

A community member asked a question regarding follow-up efforts after a project is completed, where SMMA does a Post Occupancy Evaluation to determine what works and doesn't work. This includes conversations with students, staff, and members of the community who worked on the project.

VI. Feasibility Next Steps

The next steps for the project include Educational Visioning & volunteering for Small Groups.

VII. Adjournment
Motion to adjourn by Emily Lazzaro, second by Libby Brown - 14/0/1 **-** Approved

Meeting adjourned

Meeting Minutes
Medford Comprehensive High School Building Committee Meeting
November 24, 2025 at 6:30 p.m. at Medford High School Library & on Zoom

I. Roll call

Voting Members: 12 Present 3 Absent
Non-Voting Members: 8 Present, 2 Absent

II. Approval of Meeting Minutes from October 27, 2025

Motion to Approve Meeting Minutes from 10/24/25 Full Committee Meeting by Joan Bowen, second by Luke Preisner 12/0/3 - Approved

Motion to Approve OPM October Invoices by Joan Bowen, second by Libby Brown 12/0/3 - Approved

Motion to approve contract with SMMA based on Designer Selection Process

III. **Motion to Approve contract with SMMA by Ken Lord, second by Aaron Olapade** 12/0/3 - Approved

IV. Progress Update

A. Educational Visioning

Meetings have been happening, including over 50 with all CTE and educational departments. District administration and project partners have shadowed students, will be going on building tours, and sat in on visioning meetings. These meetings were designed to ask educators what their ideal educational spaces would look like.

B. Progress towards Preliminary Design Program (PDP) deliverable due February 2026

Land and site surveys have begun, including walking throughout the property and finding the boundary of the property. This survey work has begun and is expected to take place until mid-January. Surveyors want to take drone imaging with leaves off the tree and survey land without snow on the ground. Surveyors will be dressed in vests and in pairs. They will also be measuring the sound on the outside and also surveying the building systems inside.

C. Overall Feasibility Study Timeline

4 Advisory teams including Sustainability, Safety & Security, Exterior & Interior Design, and Educational Planning & Equity. These groups will meet 4 times between December 2025 - September of 2026 and advise the School Building Committee on these focus areas.

Also provided a space summary of what is currently in the high school.

V. Adjournment

Motion to adjourn by Ken Lord, second by Aaron Olapade - 12/0/3 - Approved

Meeting adjourned

Meeting Minutes
Medford Comprehensive High School Building Committee Meeting
December, 2025 at 6:30 p.m. on Zoom

I. Roll call

Voting Members: 11 Present 4 Absent
Non-Voting Members: 5 Present, 5 Absent

II. Approval of Meeting Minutes from November 24, 2025

Motion to Table Meeting Minutes from 11/24/25 Full Committee Meeting by Mayor Lungo Koehn, second by Ken Lord 10/0/5 - Approved

III. Approval of November 2025 Invoices

Motion to Approve OPM November Invoices by Ken Lord, second by Paul Melone 10/0/5 - Approved

IV. Existing Conditions Update

SMMA gave an overview of the architecture of the building. They noted there was no thermal insulation of the construction, and the majority of the building is original to its opening in 1970 (excluding some CTE spaces, the science labs, and the Medford Community Media space). Water damage was observed in several locations, and original drawings indicate that earthquake, snowdrift, and modern day wind resistance were not considered in the original design. Accessibility issues can be found both exterior and interior, including the stairs, classroom sinks, lack of accessible parking spaces and barriers found in the majority of public entrances. The HVAC system provides unreliable air quality and ventilation. Wifi system is unreliable due to capacity issues and the electrical systems are beyond their usual life expectancy.

The transit and traffic update showed the amount of parking available on the site and the challenges that come with the traffic pattern, including when students and delivery trucks are entering the site at the same time.

V. Space Summary Update

Completed all of investigative data work and analysis, including visioning, educational plan, advisory team meetings, programming meetings, curriculum analysis, and the existing conditions assessment. SMMA provided the existing square footage of different space category types and

how it compares to MSBA/DESE Guideline Areas. SMMA anticipates the CTE spaces growing considerably in space based on their current space relative to the guidelines set forth by DESE and the MSBA.

VI. Advisory Group Update

Meeting number 1 took place last week for all four advisory teams: Sustainability & MEP Systems, Site, Safety & Security, Ed planning and Equity, and Exterior & Interior Designs. SMMA gathered input for them in their notes and will share common themes found in the upcoming meetings held in January.

VII. Adjournment

Motion to adjourn by Ken Lord , second by Mayor Lungo-Koehn- 11/0/4 - Approved

Meeting adjourned

Meeting Minutes
Medford Comprehensive High School Building Committee Meeting
January 14, 2026 at 6:30 p.m. at the MHS Library & on Zoom

I. Roll call

Voting Members: 14 Present 1 Absent
Non-Voting Members: 9 Present, 1 Absent

II. Communication Subcommittee
    A. Upcoming Meeting
    B. Additional Volunteer Interest

Interested Members should reach out to chairperson Jenny Graham

III. Approval of Meeting Minutes
    A. Meeting Minutes from November 24, 2025
    B. Meeting Minutes from December 22, 2025

Motion to Approve Meeting Minutes from 11/24/25 & 12/22/25 Full Committee Meetings as amended to include date of December 22 on 12/22 minutes by Ken Lord, second by Luke Preisner 13/0/2 - Approved

IV. Approval of December 2025 Invoices (LeftField & SMMA)
    A. LeftField Invoice #7: December 2025 = $25,000
    B. SMMA Invoice #1: November 22, 2025 - January 2, 2026 = $135,000
    C. Total = $160,000

Motion to Approve December Invoices by Ken Lord, second by Libby Brown 13/0/2 - Approved

V. Recommendation to Approve Amendment 1: SMMA
    A. Based on the findings of the phase one geoenvironmental work, this amendment allows ADS Environmental Engineering to proceed with phase two of the geotechnical to further the study on potential volatile organic compounds. This is related to the site's history of it being a potential dump, and existing underground oil tanks.
    B. Amendment Value = $25,300

Motion to Approve Amendment 1 by Aaron Olapade, second by Joan Bowen 13/0/2 - Approved

VI. Presentation of Alternatives Required by the MSBA

Work so far has included how architects arrive at what building size should be. Educational Plan guides the Educational Programming work to shape the overall building size. Alongside this work is existing building and site analysis.

SMMA showed 57 early design concepts, with 29 different cost models.

A. Code Update Option

This option brings all existing systems, ADA, fire safety up to code. This excludes transformation of spaces and their function, which does not support the educational plan the Committee is planning to submit. The building would remain 4 stories high, but would have new facade and energy requirements.

B. Add/Reno Options

SMMA showed designs where certain parts were taken down and where they would be replaced. These include wings of the building being replaced and renovated such as the existing "A", "B," or the vocational wings. In all options, Square footage would be added to the building to support the programming needs. These options include phased renovation ideas and building into existing parking lots or spaces that are on the site. Other options include building up on the existing building, compacting the spread of the building. SMMA noted that anytime construction is happening on the existing site, it involves a phased construction and movement of students.

C. New Building Options

These options would include a completely new building on the existing land that the High School sits on. This would include options that would build a new building in the front of the land close to Winthrop St, and options that would build on the back of the site.

VII. Interactive Input Session to Provide Feedback on Initial Design Options

SMMA led a table top exercise where building committee members placed stickers on their broad favorite designs. These designs were laid out on a table.

VIII. Questions Regarding Options

A. MCSHBC Members

Luke Preisner: The proposed square footage of a new building would be 100,000 square feet bigger. What is the gross square footage? Answer: The gross has not been determined due to final conversations being held to meet the programming and space needs of the building. The gross square footage will be shared at a later meeting once it is determined.

Luke Preisner: What square footage was dedicated to solar capacity given the sustainability goals of the project? Answer: This will be answered by the energy goals of the project. Once that is determined, the design team will work to create cost estimates and alternatives to support different energy needs and outcomes. The design team is already looking at the energy needs of the building.
Luke Preisner: Many of the design options interfere with the current athletic field setups. Is there a limiting factor that made that space undesirable? Answer: from a cost standpoint, building on the west option of the building where the field of dreams is increases the cost of the building given the height of it. There was no preference by quantity but were all based on different cost models. Design team wanted to show different options of where a building could be built on the site.
Aaron Olpade: What are the challenges of building a field on top of a parking structure. Answer: While there are construction and long-term effects, the design team believes this option is feasible enough that it is worth doing a cost estimate.
Paul Ruseau: In an add reno option, how do you convert the old structure into a new building? Answer: Any add/reno options involve ripping the building down to the structure because it does not meet modern instructional code. The interior spaces do not meet the spatial requirements of the MSBA. The LED/platinum designation will incorporate the renovated area but also includes the current structure that may get renovated.
Phil Santos: Have these options been investigated to be feasible to build before cost estimating has happened. Answered: The phasing is the only question that would drive feasibility of different designs. The design team will not eliminate designs based on potential feasibility issues without the committee's approval.
Design Team: In March, the design team will create a tool that will ask committee members which aspects of the project to prioritize in the design process. This includes examples such as cost, parking options, aspects of the design, and others.
Maria D'Orsi: We once talked about an option with a design of working with the Fells. Are there options that show this? Answer: there are no options that go directly into the Fells. The Fells is currently DCR property.

B. Public Comment

Andy 13 George St: Is there an ability to expand the building in the future based on design options? Answer: As part of the MSBA building requirements, you must leave space for the building to expand based on a potential increase in enrollment.
What is the plan for using the extra space that would be created if the building was built up rather than out? And what are the effects of Medford Rezoning efforts that may increase enrollment? Answer: When the MSBA initially certified our enrollment, they initially gave us a projection of 1,200 students. Project leaders worked with the MSBA and city department leaders to show the current projects and enrollment trends that exist.

Rick Orlando: Does the MSBA cover athletic fields and is there an option to expand to increase capacity at middle or elementary schools? Answer: Yes to athletics fields. The inclusion of Pre-k in the design of a new building will open up space and classrooms in the elementary schools. Paul Matterazo: Get advising on geotechnical work given the work in the neighboring apartment unit that is being built. Geotechnical work is undergone and they will show a map of all the rock underneath the surface.

IX. Next Steps

A. Guidance to SMMA on Design Options to be considered for Cost Estimators

Motion to move forward with initial cost estimating for all of the options presented at tonight's meeting by Ken Lord, seconded by Nicole Morell - 14/0/1

X. Adjournment

Motion to adjourn by Dr. Suzanne B. Galusi second by Joan Bowen - 14/0/1 - Approved

Meeting adjourned

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Para tradução em português CLIQUE AQUI
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The Second Regular Meeting of the Medford School Committee

Monday, January 26, 2026
Executive Session 5:15 pm
Regular Meeting 6:00 pm

Agenda

I. Roll Call for Attendance of Members and Student Representatives- 7/0

Graham - present
Mastrobuoni - present
Olapade - present
Parks - present
Reinfeld - present
Ruseau - present
Mayor - present
Student Rep – present

II. Salute the Flag

III. Executive Session

Executive session pursuant to G.L c. 30A (a) (3): the Medford School Committee will convene in Executive Session to discuss collective bargaining with the Teamsters Local 25 Custodians regarding a grievance from September 5, 2025 and the Chair so declares.

Executive session of the Medford School Committee pursuant to G.L. c. 30A §21(a) to conduct a strategy session on the basis that an open meeting may have a detrimental effect on the bargaining positions of the Medford School Committee. Specifically, the Medford School Committee will be discussing ongoing collective bargaining negotiations with multiple bargaining units and pending litigation.

The Medford School Committee will reconvene in public session immediately following the conclusion of the executive session, approximately at 6:00pm.

Motion to enter executive session by Member Reinfeld, second by Member Olapade
Graham() - yes
Mastrobuoni () - yes
Olapade(2) - yes
Parks() - yes
Reinfeld(1) - yes
Ruseau() - yes
Mayor - yes

IV. Good Of the Order

V. Consent Agenda

- Approval of Bills and Payrolls
  - Budget Transfers
- Approval of Capital Purchases
- Approval of Donations
  - ***Tufts University*** $1,000.00 Donation to Center for Citizenship and Social Responsibility
  - ***National Stuttering Association Conference*** -$177.00 donation by Elizabeth Gomez for (3) Speech and Language Pathologists
- Approval of Grants
  - ***Medford Arts Council*** Grant $3700 -Ellen McGlynn & Jason Campbell
  - ***Italian Ministry of Foreign Affairs and International Cooperation*** has awarded $3,549.00 to Medford Public Schools Italian Language Program
- Approval of Field Trips
- Approval of Meeting Minutes
  - ***Regular Meeting - January 5, 2026***

Motion to Approve Consent Agenda by Member Olapade, second by Member Mastrobuoni- 7/0 Approved
Graham() - yes
Mastrobuoni (2) - yes
Olapade(1) - yes
Parks() - yes
Reinfeld() - yes
Ruseau() - yes
Mayor - yes

VI. Report of Subcommittees

VII. Report of the Superintendent

1. **Mustang Moment** (Weather permitting)
2. **Summary of the Youth Behavior Risk Survey (Spring 2025)** - Catherine Dhingra, Office of Prevention & Outreach Manager and Dr. Stacey Schulman, Director of Behavior Health and Counseling for Medford Public Schools
3. **Proposed Educational Plan for the Medford High School Building Project -** Dr. Suzanne B. Galusi, Interim Superintendent and Dr. Kim Talbot, Assistant Superintendent for Academics and Instruction

VIII. Presentations of the Student Advisory Council

Presentations of the Public (not to begin before 7:00 pm)
"Regular Meetings of the School Committee include this 'Presentations of the Public' agenda item to give any resident the opportunity to place a presentation before the School Committee. A resident may only present once at any meeting.

These presentations are an opportunity for the public to make a presentation to the Committee but are not opportunities for dialog with the Committee. If one or more members of the Committee wishes to have a conversation about the topic presented, a member may request that the item be added to a subsequent Regular Meeting.

The details for submitting a presentation can be found within the policy BEDH, Public Comment and Presentations of the Public"

Pursuant to policy BEDH, Public Comment and Presentations of the Public - any resident in the audience may be given permission to speak once on any item on the agenda for up to three (3) minutes. The speaker is expected to keep their comments to the item on the agenda. The speaker must begin their comments by providing their full name and full Medford street address where they reside. A welcoming, inclusive community is both a value of the School Committee and an aspirational goal. We ask for your help in achieving this goal and value your perspective. Employees of the Medford Public Schools are exempt from the residency requirement of this policy. The voice of our employees is welcomed on all matters before this body. When a non-Medford-resident employee is participating in public comment or submitting a presentation of the public they will include their home address and identify themselves as an employee of the Medford Public Schools.

IX. Continued Business

A. Interim Superintendent's Evaluation and Goals Feedback

Motion to approve the Superintendent Review by Member Olapade, second by Member Ruseau- 7/0 Approved

Graham() - yes
Mastrobuoni() - yes
Olapade(1) - yes
Parks() - yes
Reinfeld() - yes
Ruseau(2) - yes
Mayor - yes

B. Election of School Committee Officers

Motion to elect Mayor Breanna Lungo-Koehn as Chair by Member Ruseau, second by Member Graham- 7/0 Approved
Graham(2) - yes
Mastrobuoni() - yes
Olapade() - yes
Parks() - yes
Reinfeld() - yes
Ruseau(1) - yes
Mayor - yes

Motion to elect Jenny Graham as Vice-Chair by Member Mastrobuoni, second by Member Olapade- 7/0 Approved
Graham() - yes
Mastrobuoni(1) - yes
Olapade(2) - yes
Parks() - yes
Reinfeld() - yes
Ruseau() - yes
Mayor - yes

Motion to elect Paul Ruseau as Secretary by Member Olapade, second by Member Graham- 7/0 Approved
Graham(2) - yes
Mastrobuoni() - yes
Olapade(1) - yes
Parks() - yes

Reinfeld() - yes
Ruseau() - yes
Mayor - yes

X. New Business

2026-02 ***Offered By Member Ruseau***

The Medford School Committee appoints Paul Ruseau as the representative to the Shore Educational Collaborative's board of directors.

Date Submitted December 10, 2025
Date Requested to be on Agenda January 26, 2026

Motion to appoint Paul Ruseau as Representative to the Shore Educational Collaborative by Member Graham, second by Member Reinfeld- 7/0 Approved
Graham(1) - yes
Mastrobuoni() - yes
Olapade() - yes
Parks() - yes
Reinfeld(2) - yes
Ruseau() - yes
Mayor - yes

2026-03 ***Offered By Member Graham***

Recommendation for the formation of the below subcommittee chairs and membership:

Strategic Planning

- **Chair:** Jenny Graham
- Members: Erika Reinfeld, Jessica Parks

Facilities & Capital Planning

- **Chair:** Michael Mastrobuoni
- Members: Paul Ruseau, Jessica Parks

Curriculum & Instruction

- **Chair:** Erika Reinfeld
- Members: Jessica Parks, Aaron Olapade

Communications & Community Engagement

- **Chair:** Erika Reinfeld
- Members: Jenny Graham, Mike Mastrobuoni

DEIA

- **Chair:** Aaron Olapade
- Members: Erika Reinfeld, Mike Mastrobuoni

Rules & Policy

- **Chair:** Paul Ruseau
- Members: Jenny Graham, Mike Mastrobuoni

Superintendent Evaluation

- **Chair:** Aaron Olapade
- Members: Paul Ruseau, Jenny Graham

Behavioral Health & Special Education

- **Chair:** Jessica Parks
- Members: Aaron Olapade, Paul Ruseau

Date Submitted January 13, 2026
Date Requested to be on Agenda January 26, 2026

Motion to approve subcommittee appointments by Member Reinfeld, second by Member Mastrobuoni- 7/0 Approved
Graham() - yes
Mastrobuoni(2) - yes
Olapade() - yes
Parks() - yes
Reinfeld(1) - yes
Ruseau() - yes
Mayor - yes

2026-04 ***Offered By Member Reinfeld***

WHEREAS the Medford School Committee will soon vote on a path forward for permanent leadership within Medford Public Schools (MPS); and

WHEREAS the recently issued strategic planning survey includes questions about the broader MPS community's priorities for district leadership;

Be it therefore resolved that the chair of the strategic planning subcommittee will compile the responses relevant to this deliberation and share the data with the full school committee.

Be it further resolved that this content be delivered to the committee no later than the February 2 meeting and reviewed by all members prior to the aforementioned vote.

Date Submitted January 21, 2026
Date Requested to be on Agenda: January 26, 2026

Motion to approve Resolution 2026.04 by Member Graham, second by Member Parks- 7/0 Approved
Graham(1) - yes
Mastrobuoni() - yes
Olapade() - yes
Parks(2) - yes
Reinfeld() - yes
Ruseau() - yes
Mayor - yes

2026-05 ***Offered By Member Graham***

WHEREAS, the Medford School Committee recognizes the importance of establishing a thoughtful process for deciding how to appoint a permanent Superintendent on July 1, 2026; and

WHEREAS, the School Committee wishes to ensure opportunities for public input and community engagement as part of this process;

NOW, THEREFORE, BE IT RESOLVED, that the Medford School Committee will determine its approach to appointing a permanent Superintendent at its public meeting on February 2, 2026; and

BE IT FURTHER RESOLVED, that the School Committee invites feedback from the public during this meeting; and

BE IT FURTHER RESOLVED, that members of the community who are unable to attend the meeting but wish to provide input may submit feedback via email to the Medford School Committee at Medfordsc@medford.k12.ma.us.

Date Submitted January 21, 2025
Date Requested to be on Agenda January 26, 2026

Motion to approve Resolution 2026.05 by Member Graham, second by Member Ruseau- 7/0 Approved
Graham(1) - yes
Mastrobuoni() - yes
Olapade() - yes
Parks() - yes
Reinfeld() - yes
Ruseau(2) - yes
Mayor - yes

XI. Reports Requested

XII. Condolences

The Members of the Medford School Committee express their sincerest condolences to the family of ***Beverly Gressinger***, Medford Public Schools Payroll Administrative Assistant, Jennifer Dorrough's grandmother.

The Members of the Medford School Committee express their sincerest condolences to the family of ***Robert A. Carbone*** whose Medford Public Schools career spanned over 25 years as an English teacher and Assistant Principal.

The Members of the Medford School Committee express their sincerest condolences to the family of ***Pamela Kilbride***, McGlynn Middle School teacher Patricia Kilbride's mother-in-law.

The Members of the Medford School Committee express their sincerest condolences to the family of ***Michelle A. (Andreottola) Pothier*** who was a graduate of Medford High School and beloved teacher at the Medford Family Network.

XIII. Next Regular Meeting

February 2, 2026 - Alden Memorial Chambers, Medford City Hall in addition to zoom

XIV. Adjournment

Motion to adjourn at 8:39pm by Member Reinfeld, second by Member Graham- 7/0 Approved
Graham(2) - yes
Mastrobuoni() - yes
Olapade() - yes
Parks() - yes
Reinfeld(1) - yes
Ruseau() - yes
Mayor - yes

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The Third Regular Meeting of the Medford School Committee

Monday, February 2, 2026
Regular Meeting 6:00 pm

Agenda

I. Roll Call for Attendance of Members and Student Representatives

Roll Call- 7/0

Graham - present

Mastrobuoni - present

Olapade - present

Parks - present

Reinfeld - present

Ruseau - present (late - 6:04 pm)

Mayor - present

Student Rep - present

II. Salute the Flag

III. Good Of the Order

IV. Consent Agenda

- Approval of Bills and Payrolls
- Approval of Capital Purchases
- Approval of Donations
  - $1,000 Donation from the Schmidt Family to the Orchestra Program
- Approval of Grants
- Approval of Field Trips
- Approval of Meeting Minutes
  - Regular Meeting - January 26, 2026

Motion to approve Consent Agenda by Member Olapade second by Member Mastrobouni-7/0

Consent Agenda

Graham() - yes

Mastrobuoni (2) - yes

Olapade(1) - yes

Parks() - yes

Reinfeld() - yes

Ruseau() - absent

Mayor - yes

V. Report of Subcommittees

VI. Report of the Superintendent

1. **Mustang Moment**
2. **Recommendation to Approve the Proposed Educational Plan for the Medford High School Building Project -** Dr. Suzanne B. Galusi, Interim Superintendent and Dr. Kimberly Talbot, Assistant Superintendent of Academics and Instruction

Motion to approve the Educational Plan allowing the Superintendent to make non-substantive updates to this document prior to submission to MSBA by Member Reinfeld second by Member Graham- 7/0

Graham(2) - yes

Mastrobuoni() - yes

Olapade() - yes

Parks() - yes

Reinfeld(1) - yes

Ruseau() - yes

Mayor - yes

VII. Presentations of the Student Advisory Council

Presentations of the Public (not to begin before 7:00 pm)
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VIII. Continued Business

2026-05 ***Offered By Member Graham***

WHEREAS, the Medford School Committee recognizes the importance of establishing a thoughtful process for deciding how to appoint a permanent Superintendent on July 1, 2026; and

WHEREAS, the School Committee wishes to ensure opportunities for public input and community engagement as part of this process;

NOW, THEREFORE, BE IT RESOLVED, that the Medford School Committee will determine its approach to appointing a permanent Superintendent at its public meeting on February 2, 2026; and

BE IT FURTHER RESOLVED, that the School Committee invites feedback from the public during this meeting; and

BE IT FURTHER RESOLVED, that members of the community who are unable to attend the meeting but wish to provide input may submit feedback via email to the Medford School Committee at Medfordsc@medford.k12.ma.us.

Date Submitted January 21, 2025
Date Requested to be on Agenda January 26, 2026

Motion to appoint Dr. Galusi to be Medford's next Superintendent pending successful contract negotiations by Member Graham, second by Member Olapade

Graham(1) - yes
Mastrobuoni() - yes
Olapade(2) - yes
Parks() - yes
Reinfeld() - yes
Ruseau() - yes
Mayor - yes

IX. New Business

X. Reports Requested

XI. Condolences

XII. Next Regular Meeting

February 9, 2026 - Alden Memorial Chambers, Medford City Hall in addition to zoom

XIII. Adjournment

Motion to adjourn at 7:00 PM by Member Olapade, second by Member Graham-7/0, Unanimous
Graham(2)
Olapade(1)

Meeting Minutes
Medford Comprehensive High School Building Committee Communications & Community Engagement Subcommittee
January 28, 2026 at 6 p.m. on Zoom

I. Roll call

Voting Members: 3 Present 1 Absent
Non-Voting Members: 1 Present 0 Absent

II. Introductions

Joined by members of LeftField OPM and SMMA Design Team. Also joined by Emma Twombly, City of Medford Communications Specialist and Dr. Suzanne B. Galusi, Interim Superintendent of Medford Public Schools

III. Upcoming Schedule & Meetings

IV. Review and Modify the draft of audience based communications plan

V. Assign Ownership for the communications plan

VI. Adjournment

Motion to move the audience based communications plan to the building committee for input by Nicole Morell, second by Maria D'Orsi - 3/0/1 - Approved

Motion to adjourn by Maria D'Orsi second by Nicole Morell - 3/0/1- Approved

Meeting adjourned

Medford High School

Community Meeting #1

01/07/2026



smma LeftField

Medford Connects Community Engagement Team

Call us and leave a message in any language: 781-475-5644



Natasha Barthe
Haitian-Creole Community Liaison
nbarthe@medford-ma.gov



Darline Raymond
Haitian-Creole Community Liaison
draymond@medford-ma.gov



Stacey Moore
African American Community Liaison
semoore@medford-ma.gov



Marileia Barroso
Brazilian-Portuguese Community Liaison
mbarroso@medford-ma.gov



Samira Hayek
Arabic Community Liaison
shayek@medford-ma.gov



Jennifer Alvarez
Spanish Community Liaison
jalvarez@medford-ma.gov

GMAACC

Greater Malden Asian American Community Coalition (GMAACC)
Chinese & Other AAPI Languages
mina.kim@gmaacc.org



Samia Bennett
Families & Youth Connector
sbennett@medford-ma.gov

MEDFORD Connects

Agenda

1. Introductions
2. Process and Schedule
3. Why a New or Reimagined Medford High School?
4. Studying the Educational Needs
5. Studying the Physical Conditions
6. Engaging the Community
7. Adjourn

Medford Comprehensive School Building Committee

The School Committee appointed a **25-member committee** in April of 2024, comprised of Medford's educational leaders, elected and city officials, and community members with expertise across the core subject areas needed to guide this program forward.

Voting Members

Joan Bowen, Director of Pupil Services
Libby Brown, Architect, LEED accredited professional and parent
Marta Cabral, Medford High School Principal
Maria D'Orsi, Medford High School staff member and grandparent
Marissa Desmond, Project manager, architect and parent
Dr. Suzanne B Galusi, Interim Superintendent
Jenny Graham, SBC Chair, School Committee member and parent
Brian Hilliard, Architect with MSBA experience and parent
Emily Lazzaro, City Councilor and parent
Ken Lord, Chief Operations Officer for Medford Public Schools
Mayor Breanna Lungo-Koehn, Mayor of Medford and parent
Paul Melone, Parent and performing arts management experience
Nicole Morell, Communications and sustainability expert and parent
Aaron Olapade, School Committee member
Luke Preisner, Engineer and parent

Non-Voting Members

Bob Dickinson, City of Medford Finance Director
Chad Fallon, Director of Career & Technical Education
Laurie Hodgdon, Principal of Curtis Tufts High School
Fiona Maxwell, City of Medford Chief Procurement Officer
John McLaughlin, Director of Facilities
Lisa Miller, CTE teacher & parent
Will Pipicelli, Director of Communications
Paul Ruseau, School Committee member and parent
Philippe Santos, Civil Engineer and parent
Dr. Kim Talbot, Assistant Superintendent of Academics and Instruction for MPS

Past Members

Larry Brown, Retired MHS CTE teacher
Tracy Keene, MPS parent
Dr. Marice Edouard-Vincent, Former MPS Superintendent
Dr. Peter Cushing, Former MPS Assistant Superintendent for Enrichment and Innovation
Thomas Dalton, Former MPS Communications Director

Owner's Project Manager / LeftField

LeftField is serving as the Owner's Project Manager, representing the City, for the new Medford High School.



Jen Carlson
Project Director



Matt Gulino
Project Manager



Linda Liporto
Director of Interiors



Adele Sands
Education Liaison



Lynn Stapleton
Project Advisor



Jay Faxon
MEP Expert

Designer / SMMA

SMMA is leading the design and educational planning services for the new Medford High School.



Matt Rice
Principal-in-Charge



Helen Fantini
Project Manager



Michael Pardek
Architect



Rosemary Park
Educational Planner: Programming



Mike Pirollo *(MLP Design)*
Educational Planner: Visioning



Erin Prestileo
Civil Engineer



Kate Tooke *(Agency)*
Landscape Architect



Emily Ehlers
HVAC Engineer



Martine Dion
Sustainable Design

smma LeftField

Process and Schedule

Medford Comprehensive School Building Committee

1970
The current MHS was built

2015
Science classrooms renovated

Pre-2022
Medford's school administration worked hard to secure a spot in the **Massachusetts School Building Authority's Core Program** to substantially renovate or rebuild Medford High.

2022
Medford High School was selected as a finalist in the MSBA Core Program

2023
Medford High School was invited into the MSBA Core Program

2025
Medford's High School Project kicks off

Massachusetts School Building Authority (MSBA) / Module 1 and 2

April 2023: MSBA Statement of Interest for MHS:

In April of 2023, Medford High School Submitted their statement of interest to the MSBA.

December 2023: MSBA Board of Directors Approval:

Medford HS was accepted into the MSBA grant program at the December 2023 MSBA Board of Directors meeting.

Module 1: Eligibility Period

During the Eligibility Period, the MSBA and the District worked to outline the over-arching goals of the project and to set the project's school enrollment.

Medford's original assigned enrollment was 1,200, but in working with the District a final enrollment for grades 9-12 is set at 1,395 in addition to a centralization of PreK services, our municipal daycare (Kids' Corner) and Medford Family Network.

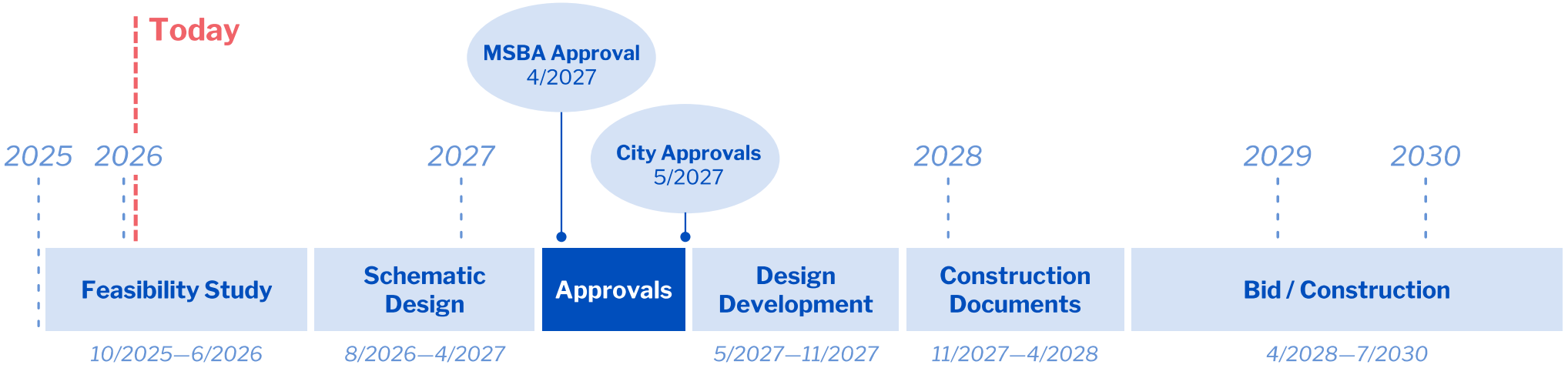
Module 2: Forming the Project Team

During this module, Medford worked with the MSBA to select an Owners Project Manager (OPM), and a Designer.

Owner Project Manager
LeftField Project Management joined the project team in June 2025.

Designer
SMMA joined the project team in November 2025.

Project Timeline



Feasibility Study Key Dates

Preliminary Design Program (PDP) 2/25/2026 submittal to MSBA
Preferred Schematic Report (PSR) 6/25/2026 submittal to MSBA

Schematic Design Key Dates

Schematic Design (SD) Deliverable 2/2027 submittal to MSBA

Feasibility Study and Schematic Design Overview

Medford has three major deliverables during these phases. Once completed, Medford will know what the design looks like, and how much the project will cost.

2/25/2026

Preliminary Design Program (PDP)

Submission Reviewed by MSBA Staff Only – No MSBA Board of Directors Approval Required

- **Existing Conditions Evaluation** - Assessment of current conditions of building and site
- **Visioning and Educational Plan** - District plan documenting present and future of educational delivery
- **Initial Space Summary** - Summary of spaces required to meet educational needs based on Educational Plan
- **Alternative Options Evaluation** – High-level cost alternatives for code compliance, addition/renovation and new construction options based on Educational Plan

Feasibility Study and Schematic Design Overview

Medford has three major deliverables during these phases. Once completed, Medford will know what the design looks like, and how much the project will cost.

6/25/2026

Preferred Schematic Report (PSR)

MSBA Board of Director's Meeting for Approval: 8/2026

- **Existing Conditions Final Evaluation** – Finalized assessment of current conditions of building and site
- **Final Educational Plan** – Finalized District plan documenting present and future of educational delivery
- **Preferred Solution** – Documentation of School Building Committee's single preferred design concept

Feasibility Study and Schematic Design Overview

Medford has three major deliverables during these phases. Once completed, Medford will know what the design looks like, and how much the project will cost.

February 2027
Schematic Design (SD)

MSBA Board of Director's Meeting for Approval: 4/2027

- **Final Design Program** – Documentation defining project scope
- **Schematic Design Documents** - Drawings and Specifications for building and site design
- **Project Scope and Budget** – Agreement with MSBA that documents the project scope, budget, schedule, and potential MSBA participation for a proposed project
- **Project Cost** – Finalized project budget that must be maintained through end of project

Why a new or reimagined Medford High School?

What a new Medford High School could have

- Collaborative learning spaces for students and teachers
- Improved and enlarged CTE and classroom spaces
- Universal accessibility and inclusion
- Modern and expanded Auditorium
- Code compliant and energy efficient systems
- Safe and secure learning and community spaces
- Meaningful connection to outdoor spaces









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The Building's Impact on Educational Delivery

Physical Condition

- Roof is in poor condition with numerous leaks
- Mechanical, electrical, and plumbing systems are at or past life expectancy resulting in costly and frequent repairs
- Multiple and frequent system failures cause portions of the building to be sectioned off from use, disrupting education
- Mechanical system delivers uneven temperatures and air quality through noisy classroom units disrupting student concentration
- Electrical infrastructure is inefficient and limits technology use

Effect on Use and Learning

- Lack of accessibility creates barriers for students and community
- Building is large and difficult to navigate. In many cases, students are unable to arrive to classes on time
- Separated academic and CTE spaces prevent opportunities for interaction– programmatically and socially
- Size and sprawling layout affects administration's supervision/presence within the building

Studying Educational Needs

The Educational Plan

Before receiving MSBA approval, every district must define **the learning experiences it wants for students today and the future.** This happens in the Educational Plan. It becomes the roadmap that defines how students learn, which programs and opportunities should grow, what educators need to deliver high-quality instruction, and what the community values most for its children.

In Medford, the current high school presents constraints that limit many of these opportunities. The Educational Plan allows the district and community to envision learning without those barriers and to articulate the school experience students truly deserve.

Through this process, the Educational Plan ensures that the future high school will not simply be a building—but **a direct reflection of Medford's values, its goals for student success, and its long-term vision for the next generation**.

To design the right high school, we must understand Medford deeply–not only the facility, but the people, programs, and aspirations that shape the district. That is why SMMA is conducting:

- Comprehensive walkthroughs of the existing school building
- Meetings with students, educators, families, and community partners
- Detailed program and department interviews
- Visioning sessions focused on future models of teaching and learning

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Process / Educational Plan and Educational Program

Educational Leadership Team
Superintendent, Ass't Superintendent, Principal, Directors, Educators, School Committee Member (20+ members)

Educational Forum
Educators, Students, Parents, and Community Members (50+ members)

Educators and Building Users (250+ members)





Educational Visioning Sessions

Space Programming Meetings

Educational Plan
(Teaching and Learning Goals)

Guides

Validates and refines

Educational Program
(Program Space Summary)

Overall Building Size
(Gross Square Footage)

Educational Visioning

Interactive Meetings with Staff, Students, Parents, and Partners



Shadow Day / November 20, 2025



School Tours / December 5, 2025



Visioning Sessions / December 9 and 17, 2025





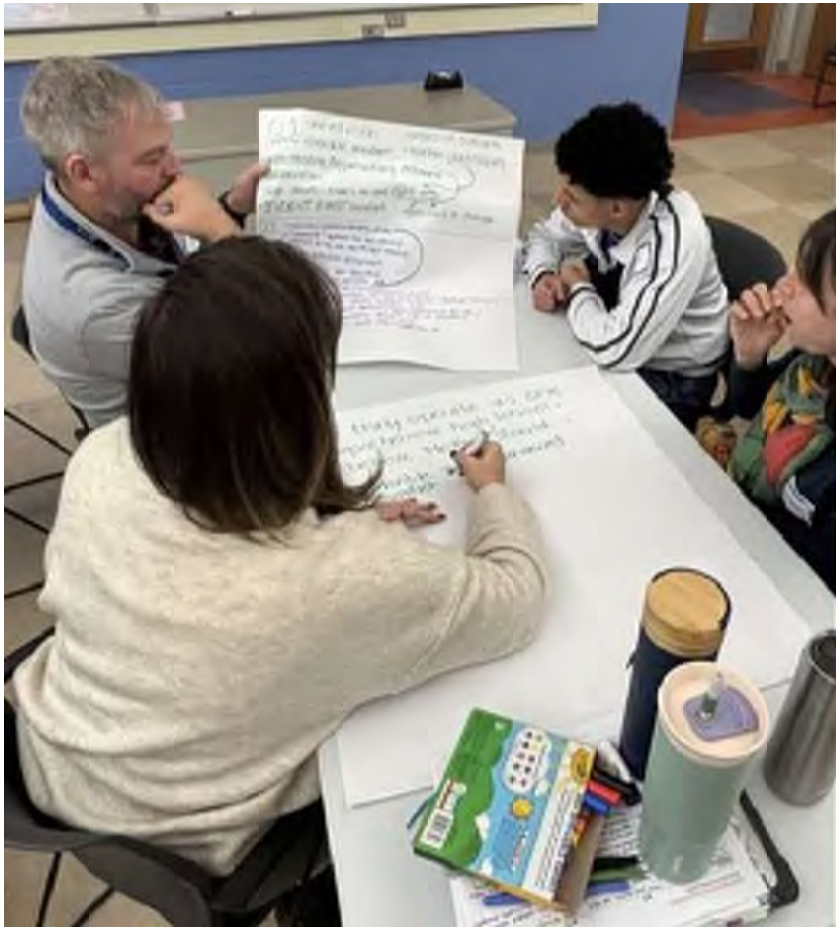
Visioning Outcomes / Development, Culture, and Student Experience

- **Welcoming, inclusive culture** that is grounded in belonging and community
- **Smaller, quiet support spaces** are essential and should be embedded throughout
- **Movement, flexibility, and choice** improve focus, wellness, and engagement
- **Frequent collaboration opportunities** strengthen relationships and learning



Visioning Outcomes / Teaching, Learning, and Organizational Models

- A **comprehensive, integrated high school** that supports multiple pathways and identities within a unified school community
- **Collaborative learning communities** preferred over traditional corridors
- **CTE integrated with academics** expands access to real-world, hands-on learning
- **Shared spaces add value when intentional**, structured, and instructionally driven



Studying the Physical Conditions



Investigations: Ongoing

- Architectural and Structural survey
- Mechanical, Electrical, Plumbing, Fire Protection Survey
- Hazardous Materials Survey
- 3D building scanning
- Site survey
- Wetlands identification (flagging)
- Geotechnical explorations
- Geoenvironmental study
- Traffic counts and observation
- Hydrant flow testing
- Environmental noise survey









Site Observations

- MHS is not visible from the street
- One point of entry from Winthrop Street
- 54% of the site is paved with pockets of bedrock
- Few shade trees contributes to the heat island effect
- 80' of vertical grade change across the site
- 0% of stormwater on site is treated for pollutants
- Majority of accessible parking spaces have slope issues and/or non-compliant signage
- Accessible routes have several issues of non-compliance
- Majority of public entrances have accessibility barriers

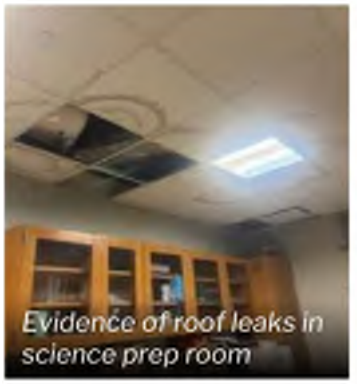


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Building Condition Takeaways

- Building is 55 years old (opened in 1970)
- Lack of accessibility creates barriers for students and community
- Roof is in poor condition with numerous leaks
- All major building systems (mechanical, electrical, plumbing) are at or past life expectancy resulting in costly and frequent repairs
- Multiple and frequent system failures cause portions of the building to be sectioned off from use, disrupting education
- Mechanical system delivers uneven temperatures and air quality through noisy classroom units disrupting student concentration
- Emergency generators for the building are not functional


Significant Ponding on Roof Membrane


Evidence of roof leaks in science prep room


Accessibility barriers at entries

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Engaging the Community

Programming Meetings

1 Principals, Associate Principals, CTE Director: 1st meeting
2 Principals, Associate Principals, CTE Director: 2nd meeting
3 Academic Support
4 Admin. Assistants/Administration/Main Office/Dept Heads
5 Athletics/Pool
6 School Counselors/Psychologists/Adjustment Counselors
7 Custodial and Facilities
8 ELL
9 English
10 Food Service
11 Instructional Technology/IT/AV
12 Library/Media Center
13 Math/Computer Science
14 Media and Technology
15 Nurses
16 PE and Health
17 Performing Arts (Music and Drama)
18 Science
19 Social Studies
20 Special Ed: General Population
21 Special Ed: Specialized Programs
22 Students (a variety with different perspectives)
23 Visual Arts and Design (2D, 3D, Photography, Digital Art)
24 World Language
25 Chapter 74 Programs Kick-Off Meeting
26 Automotive
27 Biotechnology
28 Business Marketing
29 Carpentry
30 Construction Craft Laborers
31 Cosmetology
32 Culinary Arts
33 Early Education and Care
34 Electrical
35 Engineering and Robotics
36 Graphic Design
37 Film & TV
38 Health Assisting
39 Metal Fabrication & Welding
40 Programming and Web Development
41 New/Proposed Programs (with CTE Leadership)
42 Pre-K Program (MEEP)
43 Curtis Tufts High School
44 Daycare - Kids' Corner
45 Central Office
46 After School/ Community Schools
47 Parent Information Center
48 Medford Family Network
49 Medford Community Media

Advisory Teams

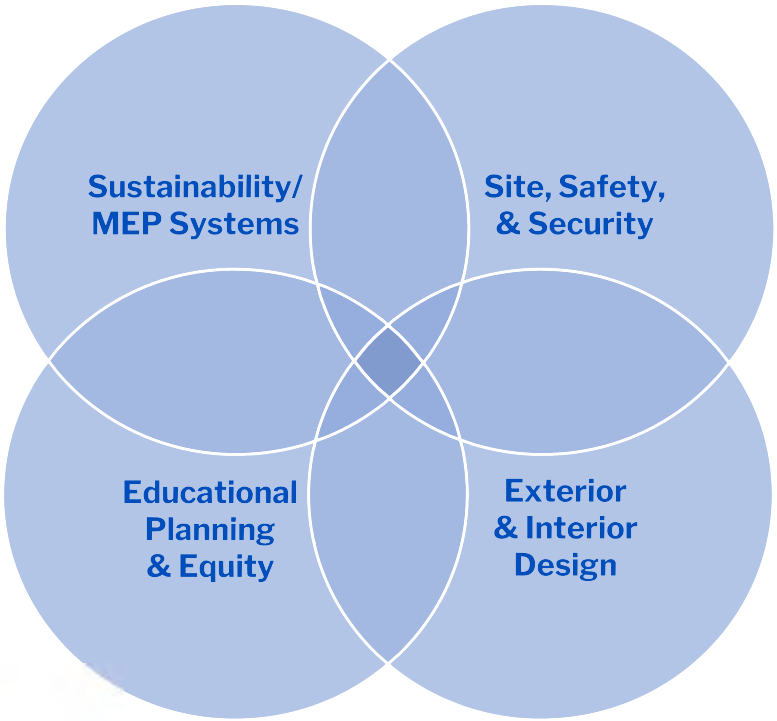
Advisory teams are a method of collecting broad community input on key priorities and desired outcomes for the project. Teams have been formed with Educators, Students, City Departments, Boards & Commissions, and Expert Community Members

Reviews preferred MEP systems, sustainable design features and components, healthy materials; site design and landscape features for environmentally friendly design.

16 team members

Reviews overall goals from educational planning perspectives, educational programming meetings and visioning sessions.

23 team members



Reviews development of the site design for traffic, circulation, safety and security, parking, driveways and circulation, fields, and offsite improvements and coordination with City Departments.

18 team members

Reviews exterior design concepts including composition of form and exterior material selections. Review of the products and materials selected for interior finishes.

18 team members

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Opportunities to Engage

- Project website: **https://medfordhsproject.com/**
- Community Forums and Webinars
- School Building Committee Meetings
- Pop-up Opportunities
- Advisory Teams







Upcoming Meetings

1/14/26 / 6:30 PM / MHS Library

MCHSBC Meeting

A first look at design alternatives

2/11/26 / 6:30 PM / MHS Library

MCHSBC Meeting

Review cost information for 1/14/26 alternatives

2/23/26 / 6:30 PM / MHS Library

MCHSBC Meeting

Finalize submission to the MSBA for Preliminary Design Program (PDP)

3/5/26 / 6:30 PM / MHS Library

MCHSBC Meeting

Community input on design options before June selection

3/23/26 / 6:30 PM / MHS Library

MCHSBC Meeting

Project update

1/26/26 / 6:00 PM / City Hall

School Committee Meeting

Introduction to the Educational Plan Draft for review and input

2/2/26 / 6:00PM / City Hall

School Committee Meeting

Review updated Educational Plan and approval for MSBA submission

Public participation is welcomed and encouraged. Translation services will be made available.

Question & Answer

Use the Q&A Feature on Zoom to type in your question about the Medford High School Building Project.

They will be answered out loud by members of our project team.

Scan QR Code To Provide Thoughts on the Project which will be collected by Project Partners

Thank you.

Additional Information

Frequently Asked Questions (FAQs)

What is the MSBA?

The Massachusetts School Building Authority (MSBA) is a quasi-independent government authority created to reform the process of funding capital improvement projects in the Commonwealth's public schools. The MSBA strives to work with local communities to create affordable, sustainable, and energy efficient schools across Massachusetts.

The MSBA's grant program for school building construction and renovation projects is a non-entitlement competitive program. The MSBA's Board of Directors approves grants based on need and urgency as expressed by the City, Town, Regional School District or independent agricultural and technical school and validated by the MSBA.

The MSBA, which has a dedicated revenue stream of one penny of the state's 6.25-percent sales tax, has made more than $15.1 billion in reimbursements to cities, towns, and regional school districts for school construction projects.

For more project FAQs, visit the website: https://medfordhsproject.com/faqs/

Givens

Whether this project is an addition/renovation or a new build, the new MHS will have:

- Air conditioning and quiet mechanical systems
- Adequate power
- Adequate access to bathrooms for staff and students
- Classrooms with operable windows
- Access to daylighting
- Good acoustics
- Accessibility for all
- Adequate storage
- Dimmable LED lighting
- Ergonomic furniture
- Better site circulation
- Reliable Wi-Fi

3.1.8 Appendices

3.1.8 Appendices

A. Current Statement of Interest

B. Advisory Team Meeting Minutes

C. City of Medford Annual Comprehensive Financial Report

D. LEED Preliminary Scorecard

E. Programming Meeting Minutes

F. Educational Visioning Report

G. PDP Comparative Cost Analysis and PDP Cost Estimate

A. Current Statement of Interest

ATTACHMENT A
Statement of Interest

(District to Attach)

Medford Public Schools
489 Winthrop Street, Medford, Massachusetts 02155 Dr. Marice Edouard-Vincent, Superintendent of Schools

April 13, 2023

Massachusetts School Building Authority
℅ Statement of Interest/Core Program
40 Broad Street, Suite 500
Boston, MA 02109

Re: Statement of Interest - Medford High School - Core Program

To Whom it May Concern:

During the spring of 2022, in anticipation of submitting a Statement of Interest (SOI) for the MSBA's Core Program on behalf of Medford High School (MHS), the Medford Public Schools (MPS) retained the services of CREF, a real estate & facilities firm based in Boston, MA, with extensive experience in school construction. CREF and its partner agency Environmental Health & Engineering, Inc., based out of Newton, completed a joint environmental and facilities condition assessment of MHS. Based on the positive feedback we received in response to that SOI last year, and given the consistency and growing accumulation of the infrastructure-related challenges that we continue to face with our flagship school, we have again relied heavily on that report as well as our own analysis to provide thorough responses to the components of this 2023 SOI application.

This year's SOI was electronically submitted on April 13, 2023. The information derived from the aforementioned report is generally referenced in our SOI as the "CREF report." The CREF report is again attached hereto as an appendix to this SOI on the basis that its conclusions and assessments are consistent with the conclusions that MPS had reached in deciding to submit this latest SOI on behalf of our flagship school. Where appropriate, we have made note of the specific aspects of MHS's deteriorating infrastructure that have worsened in the course of the last year:

- While these challenges have been persistent over an extended period of time, the volume and urgency of the challenges have grown exponentially since the Medford Public Schools submitted its previous Statement of Interest and participated in the MSBA's senior study visit in October of 2022. This year three separate hallways have been forced to be shut down due to the detection of abnormal and potentially dangerous levels of asbestos attributable to broken floor panels.

- Despite the winter of 2022-2023 being relatively mild, the school's pattern of burst pipes has worsened with multiple major failures resulting in the flooding and forced closures of classrooms with costly and expedited repair projects again a near constant phenomenon. During the current school year alone, multiple vocational programs have seen major disruptions to their instructional sequencing due to significant leaks in their lab or shop

areas. Further, multiple guidance offices have been forced to temporarily relocate due to the persistence of the leaking during inclement weather.

- On multiple occasions during the first half of the 2022 - 2023 school year, school administrators and public safety officials were forced to respond to in-school emergencies for which the school's cavernous scale and deficient technologies posted obstacles both with respect to immediate response and subsequent investigatory steps. These incidents, which ranged from medical emergencies to two well-documented physical altercations between students, have laid bare the inherent safety and security deficiencies of Medford High School, as well as the detrimental effect the building has on the school's culture.

As we noted in the final notation box of the SOI, the Medford Public Schools are deeply grateful to the MSBA for the opportunity to be considered for the Core Program. If there is any additional information we can provide, please contact me at 781–393-2442.

Thank you again; we look forward to hearing from you.

Sincerely Yours,

Marice Edouard-Vincent

Dr. Marice Edouard-Vincent,
Superintendent

Massachusetts School Building Authority

Next Steps to Finalize Submission of your FY 2023 Statement of Interest

Thank you for submitting an FY 2023 Statement of Interest (SOI) to the MSBA electronically. **Please note, the District's submission is not yet complete if the District selected statutory priority 1 or priority 3.** If either of these priorities were selected, the District is required to mail the required supporting documentation to the MSBA, which is described below.

ADDITIONAL DOCUMENTATION FOR SOI STATUTORY PRIORITIES #1 AND #3: If a District selects Statutory priority #1 and/or priority #3, the District is required to submit additional documentation with its SOI.

- If a District selects statutory priority #1, Replacement or renovation of a building which is structurally unsound or otherwise in a condition seriously jeopardizing the health and safety of the school children, where no alternative exists, the MSBA requires a hard copy of the engineering or other report detailing the nature and severity of the problem and a written professional opinion of how imminent the system failure is likely to manifest itself. The District also must submit photographs of the problematic building area or system to the MSBA.
- If a District selects statutory priority #3, Prevention of a loss of accreditation, the SOI will not be considered complete unless and until a summary of the accreditation report focused on the deficiency as stated in this SOI is provided.

ADDITIONAL INFORMATION: In addition to the information required above, the District may also provide any reports, pictures, or other information they feel will give the MSBA a better understanding of the issues identified at a facility.

If you have any questions about the SOI process please contact the MSBA at 617-720-4466 or SOI@massschoolbuildings.org.

Massachusetts School Building Authority

School District Medford

District Contact David G Murphy TEL: (781) 393-2100

Name of School Medford High

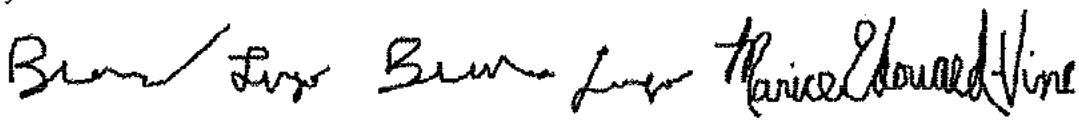
Submission Date 4/13/2023

SOI CERTIFICATION

To be eligible to submit a Statement of Interest (SOI), a district must certify the following:

- ☑ The district hereby acknowledges and agrees that this SOI is NOT an application for funding and that submission of this SOI in no way commits the MSBA to accept an application, approve an application, provide a grant or any other type of funding, or places any other obligation on the MSBA.
- ☑ The district hereby acknowledges that no district shall have any entitlement to funds from the MSBA, pursuant to M.G.L. c. 70B or the provisions of 963 CMR 2.00.
- ☑ The district hereby acknowledges that the provisions of 963 CMR 2.00 shall apply to the district and all projects for which the district is seeking and/or receiving funds for any portion of a municipally-owned or regionally-owned school facility from the MSBA pursuant to M.G.L. c. 70B.
- ☑ The district hereby acknowledges that this SOI is for one existing municipally-owned or regionally-owned public school facility in the district that is currently used or will be used to educate public PreK-12 students and that the facility for which the SOI is being submitted does not serve a solely early childhood or Pre-K student population.
- ☑ Prior to the submission of the SOI, the district will schedule and hold a meeting at which the School Committee will vote, using the specific language contained in the "Vote" tab, to authorize the submission of this SOI. This is required for cities, towns, and regional school districts.
- ☑ Prior to the submission of the SOI, the district will schedule and hold a meeting at which the City Council/Board of Aldermen or Board of Selectmen/equivalent governing body will vote, using the specific language contained in the "Vote" tab, to authorize the submission of this SOI. This is not required for regional school districts.
- ☑ The district hereby acknowledges that current vote documentation is required for all SOI submissions. The district will use the MSBA's vote template and the required votes will specifically reference the school name and the priorities for which the SOI is being submitted.
- ☑ The district hereby acknowledges that it must upload all required vote documentation on the "Vote" tab, in the format required by the MSBA. All votes must be certified or signed and on city, town or district letterhead.
- ☑ The district hereby acknowledges that this SOI submission will not be complete until the MSBA has received all required supporting documentation for statutory priority 1 and statutory priority 3. If statutory priority 1 is selected, your SOI will not be considered complete unless and until you provide the required engineering (or other) report, a professional opinion regarding the problem, and photographs of the problematic area or system. If statutory priority 3 is selected, your SOI will not be considered complete unless and until you provide a summary of the accreditation report focused on the deficiency as stated in this SOI. The documentation noted above must be post-marked and submitted to the MSBA by the Core Program SOI filing period closure date.

LOCAL CHIEF EXECUTIVE OFFICER/DISTRICT SUPERINTENDENT/SCHOOL COMMITTEE CHAIR (E.g., Mayor, Town Manager, Board of Selectmen)

Chief Executive Officer *	School Committee Chair	Superintendent of Schools
Breanna Lungo-Koehn	Breanna Lungo-Koehn	Marice Edouard-Vincent
Mayor		
		
(signature)	(signature)	(signature)
Date	Date	Date
4/13/2023 7:12:52 PM	4/13/2023 7:13:50 PM	4/13/2023 8:47:47 PM

* Local chief executive officer: In a city or town with a manager form of government, the manager of the municipality; in other cities, the mayor; and in other towns, the board of selectmen unless, in a city or town, some other municipal office is designated to the chief executive office under the provisions of a local charter. Please note, in districts where the Superintendent is also the Local Chief Executive Officer, it is required for the same person to sign the Statement of Interest Certifications twice.

Massachusetts School Building Authority

School District Medford

District Contact David G Murphy TEL: (781) 393-2100

Name of School Medford High

Submission Date 4/13/2023

Note

MPS is grateful to MSBA for the opportunity to submit this Statement of Interest. Much of the information provided in this year's SOI is similar, except that the educational and financial implications of our flagship school's infrastructure is imposing increasing challenges to our ability to effective serve the interests of Medford students.

While these challenges have been persistent over an extended period of time, the volume and urgency of the challenges have grown exponentially since the Medford Public Schools submitted its previous Statement of Interest and participated in the MSBA's senior study visit in October of 2022.

This year three separate hallways have been forced to be shut down due to the detection of abnormal and potentially dangerous levels of asbestos attributable to broken floor panels.

Despite the winter of 2022-2023 being relatively mild, the school's pattern of burst pipes has worsened with multiple major failures resulting in the flooding and forced closures of classrooms with costly and expedited repair projects again a near constant phenomenon. During the current school year alone, multiple vocational programs have seen major disruptions to their instructional sequencing due to significant leaks in their lab or shop areas. Further, multiple guidance offices have been forced to temporarily relocate due to the persistence of the leaking during inclement weather.

On multiple occasions during the first half of the 2022 - 2023 school year, school administrators and public safety officials were forced to respond to in-school emergencies for which the school's cavernous scale and deficient technologies posted obstacles both with respect to immediate response and subsequent investigatory steps. These incidents, which ranged from medical emergencies to two well-documented physical altercations between students, have laid bare the inherent safety and security deficiencies of Medford High School, as well as the detrimental effect the building has on the school's culture.

Again, thank you again for your consideration.

The following Priorities have been included in the Statement of Interest:

1. ☐ Replacement or renovation of a building which is structurally unsound or otherwise in a condition seriously jeopardizing the health and safety of school children, where no alternative exists.
2. ☐ Elimination of existing severe overcrowding.
3. ☐ Prevention of the loss of accreditation.
4. ☐ Prevention of severe overcrowding expected to result from increased enrollments.
5. ☑ Replacement, renovation or modernization of school facility systems, such as roofs, windows, boilers, heating and ventilation systems, to increase energy conservation and decrease energy related costs in a school facility.
6. ☐ Short term enrollment growth.
7. ☑ Replacement of or addition to obsolete buildings in order to provide for a full range of programs consistent with state and approved local requirements.
8. ☐ Transition from court-ordered and approved racial balance school districts to walk-to, so-called, or other school districts.

SOI Vote Requirement

☑ I acknowledge that I have reviewed the MSBA's vote requirements for submitting an SOI, which are set forth in the Vote Tab of this SOI. I understand that the MSBA requires votes from specific parties/governing bodies, in a specific format using the language provided by the MSBA. Further, I understand that the MSBA requires certified and signed vote documentation to be submitted with the SOI. I acknowledge that my SOI will not be considered complete and, therefore, will not be reviewed by the MSBA unless the required accompanying vote documentation is submitted to the satisfaction of the MSBA. All SOI vote documentation must be uploaded on the Vote Tab.

SOI Program: Core
Potential Project Scope: Potential New School
Is this a Potential Consolidation? No

Is this SOI the District Priority SOI? Yes

School name of the District Priority SOI: 2023 Medford High

Is this part of a larger facilities plan? Yes

If "YES", please provide the following:

Facilities Plan Date: 2/24/2021
Planning Firm: Collins Center
Please provide a brief summary of the plan including its goals and how the school facility that is the subject of this SOI fits into that plan:

As noted in the Medford Public Schools previous SOI submission, new construction or a substantial building rehabilitation of MHS is a key component of the capital improvement plan and overall commitment to facilities planning that Mayor Breanna Lungo-Koehn released in February of 2021.

In partnership with the Collins Center at UMASS Boston, Mayor Lungo-Koehn unveiled an extensive review and implementation process by which all city facilities and capital assets are being examined and prioritized accordingly with respect to infrastructure improvements. Addressing the deteriorating infrastructure of MHS is also consistent with the maintenance and capital planning exercises performed by the Medford School Committee over the last several years. In these exercises, MHS represents a concentration of prospective costs and critical priorities that exceeds all other school facilities in the district.

At close to 600,000 square feet, MHS represents by far the largest and most complex facility in the city's portfolio, and with the exception of one building housing a small alternative high school program, it is the only school in MPS that was not part of an extensive school construction initiative that took place in the late 1990s and early 2000s. During that time, the City of Medford, in partnership with the Massachusetts School

Building Assistance Program, completed the construction of five state-of-the-art (at the time) school facilities housing six schools (three K-5s, one 6-8, and one K-5 and 6-8 that are housed in one building). As experienced by many other communities, Medford's largest school, MHS, was not addressed at that time. However, two decades later, MPS is eager to recapitalize its commitment to the students and residents of Medford through high-quality and reliable school infrastructure that is both conducive to and imperative for 21st century learning.

Annual discrepancies between essential maintenance and available funding have created a vicious cycle in which emergency plumbing and heating repairs alone have averaged between $60,000 and $100,000 and are being addressed on an ad hoc basis based on allocations from the municipal government's free cash. Despite the mayor and school committee's shared desire to establish a systemized process of capital planning, the operational implications necessitated by the building's deteriorating infrastructure have proven to be both too unpredictable to fully plan for and too steadily urgent to ignore.

These challenges were particularly pronounced over the course of the last year since the district's previous SOI was submitted. Multiple hallways have been forced into closure in order for emergency abatement work to be performed due unusual levels of asbestos being detected from panels being dislodged. This along with the well-documented history of burst pipes and electrical problems have only increased the urgency underlying the facilities master planning that the mayor's work with the Collins Center was intended to mitigate.

In addition to applicable federal and state code requirements (e.g., 521 CMR), the City of Medford has published a Climate Action and Adaptation Plan to which all future municipal projects are expected to adhere. The potential "domino effect" of standards that could not have been contemplated when the building was built in the late 1960s (e.g.,fire alarm and sprinkler installation in 90% of the building or hazardous material abatement) give rise to significant concerns around the cost of renovations and repairs. All of these are current factors in the city and district's deliberations over how to address the MHS situation, which are by far the most complicated and consequential of the Medford community's capital asset challenges.

Please provide the current student to teacher ratios at the school facility that is the subject of this SOI: 13 students per teacher

Please provide the originally planned student to teacher ratios at the school facility that is the subject of this SOI: 20 students per teacher

Does the District have a Master Educational Plan that includes facility goals for this building and all school buildings in District? No

Does the District have related report(s)/document(s) that detail its facilities, student configurations at each facility, and District operational budget information, both current and proposed? No

If "NO", please note that:
If, based on the SOI review process, a facility rises to the level of need and urgency and is invited into the Eligibility Period, the District will need to provide to the MSBA a detailed Educational Plan for not only that facility, but all facilities in the District in order to move forward in the MSBA's school building construction process.

Is there overcrowding at the school facility? Yes

If "YES", please describe in detail, including specific examples of the overcrowding.

Medford High School's enrollment in Ch. 74 vocational programming has increased dramatically since the merger of the two schools in 2017, rising from 22% of eligible students in school year 2017 - 2018 to over 45% of eligible students in school year 2022 - 2023. While MPS takes immense pride in exponential growth of these innovative educational offerings, it is posing a threefold challenge with respect to overcrowding:

(1) First, several programs, including but not limited to Electrical and Health Assisting, are being forced to restrict the number of available seats in their programs due to spatial limitations. Programs like these that need specialized

shop or lab space for students to have meaningful experiential learning are unable to benefit from space that is inefficiently repurposed. This has the potential to diminish the quality and the quantity of vocational offerings MHS can afford students, which has a compounding and negative impact on the overall educational culture the district aspires to establish.

(2) All career and technical educational offerings require related learning spaces to effectuate educational objectives. This includes classroom type settings for CTE instructors to convene their students and engage in thoughtful and penetrating dialogue in addition to shop and lab space. While the vocational wing of MHS was constructed originally as its own vocational school and therefore in some instances provides appropriate shop and lab square footage, the layout of the facility is wanting with respect to companion classroom space. This has resulted in programs (including but not limited to Biotechnology, Carpentry, and Culinary) lacking in this essential element in their students' learning environments.

(3) In addition to the district's inability to provide seats in existing programs commensurate with the level of interest, an analysis by the Metro North Workforce Board has urged the consideration of the development of additional Ch. 74 programs (including but not limited to Plumbing, Animal Science, Dental Assisting, and Information Support Services/Networking). Given the exploding popularity of the school's existing programs, and the interest being expressed in these and other prospective programs, there is a compelling basis to consider the development and adoption of additional programs in environments that are well situated for students to gain proficiency in these workforce-sustaining educational pathways.

Unfortunately, while there is a significant amount of underutilized square footage throughout MHS, the classroom/lab/shop space that could potentially be utilized through the expanded CTE programming and development of these types of programs does not exist. MHS has effectively reached its spatial capacity with respect to vocational programming just as the eagerness on the part of students to explore and participate in these programs has been growing. This is part of why MPS is so eager to explore changes to the infrastructure in which MHS is housed so that the structure of the building itself does not prove too rigid to allow for the appropriate and responsible expansion of educational opportunities for students.

Since the spring 2022 SOI was submitted, MPS has continued to examine how to grow and strengthen the district's award-winning career and technical educational programming. More efficient space and more modern infrastructure is a crucial determinant in that analysis.

Has the district had any recent teacher layoffs or reductions? No

If "YES", how many teaching positions were affected? 0
At which schools in the district?
Please describe the types of teacher positions that were eliminated (e.g., art, math, science, physical education, etc.).

Has the district had any recent staff layoffs or reductions? No

If "YES", how many staff positions were affected? 0
At which schools in the district?
Please describe the types of staff positions that were eliminated (e.g., guidance, administrative, maintenance, etc.).

Please provide a description of the program modifications as a consequence of these teacher and/or staff reductions, including the impact on district class sizes and curriculum.

Does not apply

Please provide a description of the local budget approval process for a potential capital project with theMSBA. Include schedule information (i.e. Town Meeting dates, city council/town council meetings dates, regional school committee meeting dates). Provide, if applicable, the District's most recent budget approval process that resulted in a budget reduction and the impact of the reduction to the school district (staff reductions, discontinued programs, consolidation of facilities).

The annual MPS budgeting process continually includes significant gaps in maintenance and repairs funding due to infrastructure demands of MHS taxing the district's operating budget well beyond any capacity that could be sustained. Emergency repairs to heating and plumbing systems average $60,000 - $100,000 per project. Capital repair projects are determined by Municipal Government based on the availability of Free Cash once that is certified, but that has led to fluctuating capacity and untenable uncertainty with respect to the district's capital planning. Ultimately the volume and scope of the maintenance and repairs necessary to keep the 50+ year old facility operating has proven increasingly unsustainable. This has continued to be true in the winter of 2022-2023 despite relatively mild temperatures.

General Description

BRIEF BUILDING HISTORY: Please provide a detailed description of when the original building was built, and the date(s) and project scopes(s) of any additions and renovations (maximum of 5000 characters).

The Medford High School and Medford Vocational Technical High School complex was constructed during the late 1960s and opened in the fall of 1970. From its opening until 2017 it housed two distinct schools, Medford High School and Medford Vocational Technical High School. In 2017 the Medford School Committee voted to merge the two schools into one comprehensive high school. But despite the forward-looking vision aimed at establishing one flagship school to serve as the epicenter of public education for the Medford community, the facility is designed for the delivery of instruction in a bygone era, namely the early 1970s. The challenges yielded by its antiquated design have been exacerbated with increasing severity by infrastructure that ranges from deteriorating to inoperable. MPS envisions Medford High School as a comprehensive high school with a broad array of academic programming and a host of vocational educational programs sanctioned under M.G.L. Ch. 74. But the 52-year-old facility housing MHS is an obstacle to optimal learning conditions.

To fulfill the educational objectives of the schools' merger, MPS is again submitting an SOI to the Massachusetts School Building Authority's (MSBA) Core Program to explore all avenues toward ensuring the infrastructure of the district's flagship school meets the instructional and operational needs of our students. The current infrastructure has frustrated efforts to merge the two schools, and increasingly, the facility itself is an impediment to executing the school's mission to afford students an engaging, meaningful and rigorous 21st century learning experience.

The facility's deteriorating infrastructure and inherent spatial challenges pose unnecessary barriers to the high-caliber educational experience that is achievable based on the school's commitment to a comprehensive secondary education for all students. As detailed elsewhere in this SOI, the poor condition of the facility casts liens on education as manifested in wildly fluctuating temperatures, variable air quality, and frequent disruptions to learning caused by malfunctioning, inoperative or inadequate infrastructure. Overall, the current MHS facility is continuing to detract from the quality of the education students are receiving and is serving as a detriment to the school's culture and climate.

In 2013 and 2014, MPS partnered with the MSBA to extensively renovate one floor of one wing of MHS. The renovated portion of the school includes 17 labs and classrooms constituting what is referred to throughout this SOI as "the science wing" or "science area." As noted throughout this SOI, the science area of MHS is the exception rather than the rule with regard to the functionality of its infrastructure and its overall conduciveness to high-caliber instruction.

As detailed elsewhere in this SOI, other renovations to the original facility have generally been limited only to a new EPDM roof in 1990 and boiler installations in 2008 and 2014.

The goal of a potential Core Program project through a partnership with MSBA would be to eliminate the near constant distractions that the facility is causing and to establish a more optimal 21st century learning environment that positions all MHS students to thrive during their secondary schooling years and in their post-secondary lives.

Since the district's previous submission, no renovations or repairs have occurred beyond the emergency repairs necessitated by abnormal levels of asbestos and multiple burst pipes that are referenced elsewhere in this year's SOI.

TOTAL BUILDING SQUARE FOOTAGE: Please provide the original building square footage PLUS the square footage of any additions.

570000

SITE DESCRIPTION: Please provide a detailed description of the current site and any known existing conditions that would impact a potential project at the site. Please note whether there are any other buildings, public or private, that share this current site with the school facility. What is the use(s) of this building(s)? (maximum of 5000 characters).

The campus of MHS does not share public or private space that would affect a potential project.

ADDRESS OF FACILITY: Please type address, including number, street name and city/town, if available, or describe the location of the site. (Maximum of 300 characters)

489 Winthrop Street
Medford, MA 02155

BUILDING ENVELOPE: Please provide a detailed description of the building envelope, types of construction materials used, and any known problems or existing conditions (maximum of 5000 characters).

Exterior and Envelope: The design of the MHS was conducted in accordance with the Commonwealth's "Structural Regulations of School Houses." It is a three-story, reinforced concrete structure with multiple low-slope roofs. The foundation construction consists of conventional concrete spread footings to support structural columns. The site walkways around the perimeter of the facility are beyond their useful life expectancy and have been determined to pose potential safety and accessibility challenges, specifically on the west elevation.

The school's envelope components are past their useful life and in need of replacement for both performance and aesthetic reasons. The existing single-pane operable, fixed windows and translucent fiberglass panels all fail to meet contemporary energy efficiency and security standards.

The roofing is antiquated and lacks proper insulation and sustainability elements in addition to opportunities for natural light. It further lacks appropriate protection against rainwater or the capacity to incorporate systems for grey-water use. This is one of several examples of how the facility lacks basic systems intended to maximize efficiency and is so antiquated that an attempt to incorporate modern technology aimed at increasing efficiencies would be untenable.

MHS is separated into quadrants (A, B, G, and H) by a ¾" wide expansion joint system. The flexible sealant used in the original construction has been presumed to contain hazardous materials, complicating any efforts toward improvement or replacement.

The building was found in the CREF report to most likely contain significant quantities of hazardous materials with an abatement or mitigation cost to exceed $10,000,000, not including replacement materials, labor or management fees. In addition, the CREF report found the building's energy utilization benchmarks to be alarmingly high with the building's 2021 EUI of 86.0 kBtu/ft2, or 77% higher than the national average of 48.5 kBtu/ft2 for K-12 schools as reported by CBECS. For MHS to meet Mass Save's energy efficiency target for Zero-Net Energy Buildings of 25 kBtu/ft2, energy intensity would have to be reduced by over 70%.

The exterior of the building superstructure consists of primarily reinforced concrete panels, brick veneer, and mechanically fastened concrete fins. The superstructure has not been significantly improved and was constructed with the original building in 1970-71.

The original exterior concrete wall assembly and fenestration has several punched openings for windows, doors, and vents. Unit ventilator supply and exhaust louvers populate all classroom locations throughout the facility, but experience frequent malfunctions, and many instances, have not been in working order for some time. The sealants around all original openings are in poor condition and failing in most locations.

All exterior assembly intersections (masonry to concrete in most cases) include similar exterior joint sealants original to the building's construction. The caulking at these typical locations are failing and are beyond their

useful life expectancy.

Door openings are enclosed by a mixture of metal door and doorframe assemblies and are sealed with exterior caulking of various types. Most of the openings in the building exterior date to original construction and there are no proximity card readers of any kind. All exterior and interior doors are locked manually by key, reflecting an obsolete system that is both economically inefficient and suboptimal from a security perspective.

At the auditorium, pool and areas surrounding the vocational programs, the exterior assembly includes semi-opaque fiberglass panels allowing minimal daylight into the building. These panels date to the school's original construction, but a study as far back as 2007 by Drummey Rosane Anderson, Inc., and others, noted the panels to be "in very poor condition, and need replacement." As noted in the CREF report, they are well beyond any useful life expectancy.

As stated in the CREF report, the information technology (IT) infrastructure has been periodically added to MHS throughout its 50+ year history, but the school's construction did not contemplate scaling technology, which is reflected in its systems' performance. The CMU block construction inhibits wireless communications and technologies. Modern specifications are unattainable absent major and cost prohibitive reconstruction. Makeshift IDF closets are not located in the optimal locations, do not have appropriate cooling/HVAC and do not have enough dedicated power to support the infrastructure. These deficiencies have and continue to cause power outages and other problems stemming from the ad-hoc nature of their installations (e.g., unshielded CAT5/6 cables running directly over equipment causing melting/breaks).

Has there been a Major Repair or Replacement of the EXTERIOR WALLS? NO
Year of Last Major Repair or Replacement:(YYYY) 1970
Description of Last Major Repair or Replacement:
N/A

Roof Section A
Is the District seeking replacement of the Roof Section? YES
Area of Section (square feet) 215000
Type of ROOF (e.g., PVC, EPDM, Shingle, Slate, Tar & Gravel, Other (please describe)
EPDM covers the largest portion of the building.
Age of Section (number of years since the Roof was installed or replaced) 32
Description of repairs, if applicable, in the last three years. Include year of repair:
The main roof system is an EPDM material single ply construction. The original roof, completed in 1970, was replaced in 1990 and is approximately 215,934 SF in area. The EDPM roof systems are not pitched to drains except for the roof above the new science wing, which was the last major roofing project and occurred when that area of the building was renovated between 2013 and 2014. That newer section over the science wing is a PVC roof construction of approximately 40,000 square feet. Atypically, there is no 16" +/- high parapet at the main roof. The mechanical penthouse is in the central, 30 SF structural bay.

The EPDM roof is in poor condition. In an infrared roof survey prepared by The Garland Company in 2016, several areas were observed to have wet insulation below the rubber membrane. Ponding conditions are readily observable, which were documented in the Garland report. Several puncture holes and associated patching are observable as well. Per that 2016 Garland report, the EPDM roof is well beyond its useful life expectancy and a full replacement was estimated in 2016 to cost upwards of $2 million (2016 dollars), but that pricing did not include the costs of abatement of any hazardous materials within the scope of work.

The district's targeted repair strategies have carried and will continue to carry only a short life expectancy of 1-3 years and is not considered by MPS to be a cost-effective approach at this juncture.

Window Section A
Is the District seeking replacement of the Windows Section? YES
Windows in Section (count) 900

Type of WINDOWS (e.g., Single Pane, Double Pane, Other (please describe))
Single pane steel casement windows and translucent fiberglass panels at the pool, auditorium, and select areas of the vocational area of the building. Classroom windows are single pane casement style.
Age of Section (number of years since the Windows were installed or replaced) 52
Description of repairs, if applicable, in the last three years. Include year of repair:
There have been no comprehensive repairs. The building was constructed with approximately 900 windows throughout the facility. There have been no comprehensive windows replacement or repair initiatives to date. MHS's fenestration consists of single pane steel casement windows that are original to the building's 1960s-1970s era construction, along with translucent fiberglass panels at the pool, auditorium, and select areas of the vocational area of the building.. Classroom windows are single pane casement style windows. Cranks are mostly in working condition but require ongoing costly and tedious maintenance. Caulking and sealants are in poor condition and in need of immediate remediation and replacement. The CREF report referenced a 2007 study they reviewed in which the translucent fiberglass panels were noted as being in "very poor condition and in need of replacement at [that] time."

MECHANICAL and ELECTRICAL SYSTEMS: Please provide a detailed description of the current mechanical and electrical systems and any known problems or existing conditions (maximum of 5000 characters).

The main MHS mechanical room is in D Building and houses infrastructure for buildings A, B and D. The walls of the main mechanical room are painted concrete and CMU. Firestopping is incomplete on the wall elevations. The slab on grade is concrete with 3-4" equipment pads. Key pieces of equipment within the room included heat exchangers for buildings A, B and D; two decommissioned air handler units, domestic hot water tanks and pumps, boilers, electric motor control panels and transformers, the main chemical waste tank, the sprinkler standpipe servicing the new science wing on the third floor, and an obsolete and frequently malfunctioning pneumatic control system. All but the new domestic water equipment was installed at the time the building was constructed, in poor condition and beyond useful life expectancy.

In addition, significant amounts of water frequently pool on the floor. The origin of the water is believed to be a combination of equipment leaks and ground water seepage, which is of particular concern. The analysis in the CREF report is that its origin is possibly related to hydraulic pressure from below the slab system. That report recommended that the under-slab drainage system be assessed to confirm whether pockets of water or artesian wells are present below the building and are a contributing factor to the standing water in the main mechanical room.

As noted below, the overall condition of the boiler room and its boilers are considered adequate, but the impact of the relatively decent functioning boilers is significantly mitigated by the near decrepit conditions of the systems in the adjoining mechanical room, the main mechanical room, and its other auxiliary mechanical room, referred to as the E Building mechanical room. The overall condition of the transformers and generators in that room are in poor condition and beyond their useful life expectancy. In addition, the 20-year old compressor that is housed in the mechanical room adjoining the boiler room does not function properly and when coupled with the fail pneumatic system and the deteriorating thermostats throughout the facility results in a complete lack of temperature controls and the questionable air quality that has raised the ire of educators, students and visitors to the building.

With respect to the incinerator room, wall assemblies are painted CMU and concrete. Interior sealant joints are painted CMU with abutting concrete walls. The flooring is finished concrete. The incinerator has been decommissioned for over 40 years, however, MPS has identified no reports to assess the level of abatement completed.

Boiler Section *1*
Is the District seeking replacement of the Boiler? NO
Is there more than one boiler room in the School? YES
What percentage of the School is heated by the Boiler? 100
Type of heating fuel (e.g., Heating Oil, Natural Gas, Propane, Other)

The heating systems for MHS are composed of low-pressure steam boilers in the school's boiler room and servicing the entirety of the building.
Age of Boiler (number of years since the Boiler was installed or replaced) 14
Description of repairs, if applicable, in the last three years. Include year of repair:
The boilers have been replaced more recently than much of the school's infrastructure, with one replacement boiler being installed in 2008 and two more as part of an MSBA initiative in 2014. In the last year, the district has been forced to install a new (and costly) hot water heater in the boiler room, which was necessitated due to the irreparable breakdown of the existing hot water heater in the spring of 2021.

For heating hot water, low pressure steam from the boilers is provided to multiple hot water heat exchangers located throughout the building in areas where the AHU and classroom UV heating units reside. Heat exchangers and hot water pumping systems are considered to be in fair condition. Domestic hot water for the school is provided by two separate systems, one that is operational and one that is under repair. The first is on the first-floor mechanical room and serves 60% of the facility. The second is on the second floor mechanical room in the vicinity of the gymnasium and locker rooms that serves 40% of the facility. This latter system involves a pair of steam to hot water tanks that are original to the building and is in the process of being replaced with a dedicated system similar to the mechanical room system. The copper distribution piping for domestic cold and hot water throughout MHS is from the original construction, is in poor condition and beyond useful life. Leaks are continually occurring and represent a costly problem for the district.

Has there been a Major Repair or Replacement of the HVAC SYSTEM? YES
Year of Last Major Repair or Replacement:(YYYY) 2020
Description of Last Major Repair or Replacement:
The school's classrooms are served, or intended to be served, by UVs that provide only heating via both hot water coils or steam heating coils. Repairs were completed to the UVs during the 2020 - 2021 school year to improve the frequency of air exchanges to meet heightened air quality standards related to COVID-19. A multitude of motors were repaired, and MERV-8 filters were replaced by MERV-13 filters, resulting in a significant increase in the number of burned-out motors needing to be replaced during SY 21-22 as the motors were not intended to withstand the capacity of the MERV-13 filters. The unit ventilators are the main source of heating in each classroom and function as the primary ventilation. They were installed during the original school construction and are in poor condition and well beyond their useful life expectancy.

Even despite the recent repairs, in a host of classrooms the exhaust system is frequently found to malfunction. In addition to being an intended significant component of MHS's HVAC system, they are part of the exterior opening assembly. Both interior and exterior sealants and caulking are in poor and most cases failing condition and in need of immediate abatement, improvement and/or replacement. MPS has found it exceedingly difficult to find parts for these obsolete units, delaying repairs and frustrating impacted students and staff even further.

More information related to the challenges posed by the school's failing HVAC systems is below.

Has there been a Major Repair or Replacement of the ELECTRICAL SERVICES AND DISTRIBUTION SYSTEM? YES
Year of Last Major Repair or Replacement:(YYYY) 2022
Description of Last Major Repair or Replacement:
There are three electrical transformers located throughout the three mechanical rooms in the school. One of the transformers has begun to show evidence of failure and the district intends to replace it in the near future to avoid a catastrophic systems failure. The main electrical room is located in D Building and houses the electrical power distribution equipment to service the school. The power distribution system includes panels and feeders that were installed during original construction and are now well beyond their useful life expectancy and in poor condition. These highly antiquated electrical systems have proven increasingly unreliable particularly during extreme weather conditions. Power outages are not uncommon during either heat waves or snowstorms. Only a small section of the school's vocational wing features efficient LED lighting, the rest of the school is lit with inefficient earlier technology (T12) and this contributes to the poor energy efficiency to which elevated utilities expenses are partially attributed. The next significant (emergency) capital repair that the district will

undertake is the replacement of a contingency generator necessary to ensure the integrity of the information technology systems in the building in the event of power outages. The science area includes new 480/277V lighting systems and power panels with associated feeders in conduit.

BUILDING INTERIOR: Please provide a detailed description of the current building interior including a description of the flooring systems, finishes, ceilings, lighting, etc. (maximum of 5000 characters).

Main Lobby: The main entry, which is in its original condition up to and including a mural celebrating a then-upcoming national bicentennial celebration, has walls consisting of painted CMU, polished brick, linoleum tiles, and wood paneling. The lobby's floors include original red quarry tile throughout. The CREF report deemed the lobby to be beyond its useful life expectancy and in need of improvement and or replacement due to paint, sealants and caulking materials believed, based on their age, to contain hazardous materials.

Apparent upon entering the building from the school's main entrance is the inconsistency with the facility and modern accessibility standards. The school predates the Americans with Disabilities Act by 20 years, and insufficient modifications have been made to the building since that time. In addition to practical challenges this poses for students, families, community members, and visitors, out-of-code ramps and makeshift restrooms are not in keeping with the district's full-fledged commitment to equity and accessibility. As noted elsewhere in this SOI, poor technology and basic deficiencies like poorly maintained elevators are inconsistent with how the City of Medford and MPS value and prioritize the rights of all those who attend or visit MHS.

Classrooms: Classroom walls are painted CMU and concrete. Flooring in the classrooms is composed of linoleum tile. Ceilings have either exposed concrete deck or suspended acoustical ceiling tile.

Hallways: Wall assemblies are painted CMU and concrete, some of which has ceramic tile and wood panel finishes. Interior sealant joints are painted CMU with abutting concrete walls. Flooring in essentially all locations consists of 9" x 9" flooring tiles installed during the original building construction. A variety of acoustic suspended ceiling tile assemblies are present through the multitude of hallways in the school.

Bathrooms and Building Plumbing: Both student bathrooms and staff bathrooms are similar in their construction and date to the building's origin. Wall assemblies consist of CMU walls with ceramic tile. Flooring tile was installed during the original school construction. The CREF report advised that although 9" x 9" linoleum tile was not observed, the subfloor mastic and leveling compounds should be tested prior to any future improvements.

Plumbing feeding the bathrooms include copper and black iron, installed during the original building construction. Many of the fixtures have been replaced periodically over 50+ years; however, leaks are frequent and common, and the plumbing is in extremely poor condition and beyond its useful life expectancy.

MPS maintenance staff routinely replaces the domestic water copper piping incrementally as leaks and cracks are identified. This occurs on nearly a weekly basis. Very few isolation valves are found in either the copper or black iron piping. Given the age of the building, MPS has grown increasingly concerned that the plumbing system will fail with even greater regularity. A variety of acoustic suspended ceiling tile assemblies include wet spots and stains indicative of the expired shelf life of most of the facility's plumbing systems.

Stairwells: Stairwells located in each quadrant of MHS are painted CMU and concrete walls. Interior sealant joints are painted CMU with abutting concrete walls. Multiple flooring conditions in many locations consist of 9" x 9" flooring tiles installed during the original building construction. A variety of acoustic suspended ceiling tile assemblies are also present throughout MHS.

Cafeterias: There are three cafeterias, two of which have seating capacity of 300 students and one with a seating capacity of 150 students. Wall assemblies within the cafeterias are painted CMU and concrete walls, some of which have tile and wood panel finishes. Interior sealant joints are painted CMU with abutting concrete walls. Flooring includes 9" x 9" flooring tiles installed during the original building construction. The cafeterias include a suspended acoustical ceiling assembly.

Elevators: There are four aging elevators in MHS with three, generally, in working order, but in poor condition. The main elevator, located off the main entry lobby, is a hydraulic powered three-stop cab which was installed during the building's original construction. The cab was observed to be in working condition but has not been modernized and has had maintenance issues recently. Other elevators service the building's loading dock and athletic facilities, both of which are operational but are not modernized and are in poor working condition. A fourth elevator is located in the school's main kitchen and is intended to provide for more efficient delivery of school meals, but has been disabled for over a year due to exorbitant repair cost estimates.

PROGRAMS and OPERATIONS: Please provide a detailed description of the current grade structure and programs offered and indicate whether there are program components that cannot be offered due to facility constraints, operational constraints, etc. (maximum of 5000 characters).

MHS is a 9th through 12th grade comprehensive secondary school that is organized into three "houses," namely House M, House H, and House S. The house system permits the deployment of counseling and support staff to help shepherd students through their secondary school years. The school administration has organized itself around the infrastructure as best they can, but neither the house system nor the school's comprehensive identity as both an academic and vocational hub of learning are served well by the school's antiquated and failing physical structure.

Currently, the facility allows most existing programs to subsist, but with substantial limitations on program expansion and deeper learning that could be realized with more advanced and reliable infrastructure, especially with respect to instructional technology.

As noted elsewhere, the current MHS facility does not support related classroom space for several career and technology/vocational programs, resulting in students having to rely on makeshift classroom space amidst their shop or lab space for this critical aspect of the Ch. 74 CTE programs. In addition, spatial constraints within the CTE area of the building limit the district's ability to expand or grow existing programs and/or to develop and adopt new programs in the current facility.

Faulty electrical systems, unpredictable HVAC systems and crumbling plumbing systems constantly divert student and staff attention away from teaching and learning, making the stable, consistent and effective delivery of instruction more complicated and difficult than it should be.

Finally, the lack of high caliber classroom technology makes the full realization of educators' vision for innovative learning diminished because improvised methods of technology utilization afford educators correspondingly fewer opportunities to engage learners in ways that more modern educational environments could and would provide.

EDUCATIONAL SPACES: Please provide a detailed description of the Educational Spaces within the facility, a description of the number and sizes (in square feet) of classrooms, a description of science rooms/labs including ages and most recent updates, a description of the cafeteria, gym and/or auditorium and a description of the media center/library (maximum of 5000 characters).

MHS's infrastructure exhibits neither aesthetic nor functional qualities essential to its educational mission. Core academic spaces are inadequate to consistently implement contemporary curriculum. Student leaders described their school environment as "bleak," with one noting that "MHS is a brutal place to go to school..." Students have suggested that the building is unwelcoming and resembles a prison, which is exacerbated by rapidly deteriorating infrastructure.

Contributing to the bleak and prison-like feel are dark spaces with inadequate lighting. A considerable number of classrooms are interior spaces with no natural light. In all, MHS has 145 instructional spaces that are classrooms, CTE shops/labs and science labs. There are 116 classrooms or CTE-related rooms, 17 science lab spaces, one library and 11 CTE shops. 49 of these classrooms, or 34.2%, have no windows and no natural light. Classrooms that have windows have extremely diminished natural light due to the concrete structures framing the windows. This inadequate amount of natural light and the punishing aura emanating from the fluorescent lighting elsewhere

have prompted students to respond with skepticism to the district's stated commitment to social and emotional wellness. Upon returning to in-person learning in 2020, multiple students commented that a true investment in mental health would include less dingy learning environments.

The vast majority of the building resembles how it did in 1970. Science areas were extensively renovated in 2013-2014 with modern technology, fixtures, furniture and infrastructure. This area includes 17 classrooms/labs, which like the rest of the academic spaces, are approximately 870 square feet in size. With this notable exception, there have been no other major updates to any other section of the building. Classrooms are dotted with cart-based projectors lacking any meaningful instructional technology.

Science areas have comprehensive academic technology that enhances students' experiences, but they also illustrate a stark contrast to the substandard classrooms located throughout the remainder of the facility. Classes are frequently relocated due to heating or plumbing failures. Students do not have faith that the facility will function properly , causing a perpetual sense of distraction. Meanwhile the discomfort caused by fluctuating temperatures are not conducive to deeper learning. Disquieting scenes like students using blankets while in classrooms with failing HVAC are common.

Technology access is also a significant concern. Despite a roughly 1:1 environment, MHS is plagued by spotty and inconsistent network access and suffers from an over reliance on access points and relayers to combat a concrete structure predating the need for WiFi.

The MHS library media center is an interior space lacking adequate HVAC, natural light, technology and, generally, the capacity to support students. The library is 11,000 square feet, with makeshift offices having been constructed over the years to provide office space where there was once centralized cooling. The extremely low ceilings and original unforgiving lighting evoke the feeling of studying in a cave rather than a venue for the thoughtful exchange of ideas. The subpar conditions exacerbate the inequities experienced by high-need learners who would benefit from a more hospitable and technologically equipped media center.

MPS has taken considerable pride in its interscholastic athletics programming and has seen its physical education and health programming as interconnected to its core academic offerings. But some of the locker room facilities are inadequate and reflect the fact that the school opened prior to significant advancements in gender equity. Areas that should be utilized daily by female students have deteriorated to near deplorable conditions, and the facilities for male students are not materially better. With the facility's construction predating Title IX, the inequities between the two locker room facilities are noticeable with respect to size and overall condition. Student leaders and members of the community often describe the gender inequities as both obvious and completely unacceptable.

As noted elsewhere, the repairs to the school's hot water system are nearly complete, but the breakdown of this system rendered the showers unusable, yielding unacceptable conditions.

CAPACITY and UTILIZATION: Please provide the original design capacity and a detailed description of the current capacity and utilization of the school facility. If the school is overcrowded, please describe steps taken by the administration to address capacity issues. Please also describe in detail any spaces that have been converted from their intended use to be used as classroom space (maximum of 5000 characters).

The original design capacity in 1970 was reported to be for 3,500 students. There are currently approximately 1,300 students enrolled at MHS.

Given that there have been virtually no major renovations (with the exception of the science wing in 2014) the presumed actual capacity is not much lower than the original design capacity. However, the organization of the school as one comprehensive high school and the desire to integrate the academic and vocational programming and house model has resulted in various spatial challenges that are only exacerbated by the infrastructure related concerns articulated in this SOI.

MHS has a capacity that well exceeds its current or any projected total student population. However, as noted

elsewhere, the appropriate space for its current or prospective Ch. 74 CTE/vocational programming is severely limited, leading to current and future overcrowding for programming that is considered vital to its identity as a comprehensive high school.

MAINTENANCE and CAPITAL REPAIR: Please provide a detailed description of the district's current maintenance practices, its capital repair program, and the maintenance program in place at the facility that is the subject of this SOI. Please include specific examples of capital repair projects undertaken in the past, including any override or debt exclusion votes that were necessary (maximum of 5000 characters).

Medford has not attempted to conduct override or debt exclusion votes during the lifetime of the MHS facility. The MPS maintenance program consists of an in-house team of custodians and tradespeople who work to keep the existing and aging infrastructure clean and in working order through daily maintenance and ad hoc repairs. In addition, MPS outsources nightly cleaning duties to an external vendor that performs routine custodial work. As noted elsewhere, MPS has been participating in the City of Medford's recent capital planning process in which capital projects are identified, prioritized and then examined for purposes of allocating capital repair funding. In the last two years, capital repairs have been limited either to situations deemed emergencies related to the COVID-19 related disruptions to in-school learning or repairs to infrastructure that has either suffered from a catastrophic failure or is deemed to be on the verge of such a failure. These projects have included the installation of network servers to bolster the virtual environment in which the school (and district's) cloud-based systems operate, the hot water heater, an electrical transformer, and the series of plumbing and HVAC repairs referenced elsewhere in this SOI. Current maintenance practices focus on high need areas and emergency situations, often during school vacations or summer breaks, but this pace is insufficient to address the depth and frequency of the infrastructure challenges and compromises efforts to make Medford High School the true educational epicenter of the Medford community. The Medford School Committee has discussed in various forums the need for a comprehensive capital repair and maintenance program. However, the sheer scope of issues that require repair, remediation or reconstruction at MHS has hindered the ability of the district to enact such a plan and strategic approach.

For an additional exemplar as to the severe challenges with respect to the foreboding nature of capital repairs and maintenance with respect to MHS, consider this additional information related to the school's beleaguered HVAC systems:

MHS's HVAC systems consist of a combination of rooftop air handling units (AHU) central AHUs and unitary classroom unit ventilators (UV). The vast majority of the building is devoid of air conditioning. Central AHU and UV units support the majority of the building and are original to the time of construction. They are all in very poor condition or inoperable. They are all clearly beyond their useful life and replacement would require installation of new distribution components (conduit, ductwork, cabling, etc.).

The ten original central AHUs are designed as mixed air systems combining outdoor and recirculated indoor air. They serve interior zones (in cases in which they do function). They have all long exceeded their useful life, are generally in poor condition and a number of them are non-functional. The remaining operational units require constant maintenance and attention for proper operation.

Temperature controls both for the central AHUs and the classroom UVs are governed by a pneumatic control system original to the building. A few experienced MPS maintenance technicians have mastered the operation of the system, but it is woefully obsolete and requires significant investment in time to properly operate. Control panels servicing multiple AHS units have ceased functioning and the general condition of the system, which is original to the building, is poor and must be run continuously 24 hours a day and seven days a week. This inefficiency is reflected in the very high energy consumption of the facility, stated elsewhere in this SOI.

The rooftop air handling units (AHU) associated with third floor science classroom renovation are newer and modern at approximately 10 years old. These AHU provide 100% outdoor air and are equipped with heat recovery systems.

Air conditioning in MHS is limited to a select set of office spaces with window or portable air conditioning units,

as well as the 17-classroom/lab science area that, as referenced elsewhere, was renovated in 2013-2014. Originally, B Building, representing ? of the school's square footage, was outfitted with a centralized air conditioning system. However, when an absorption system failed catastrophically over 15 years ago, it was determined to be cost prohibitive to undertake repairs leaving the vast majority of the building devoid of any cooling capacity. Students and staff experience sweltering conditions during long portions of the year, detracting from their teaching and learning activities.

Priority 5

Question 1: Please provide a detailed description of the issues surrounding the school facility systems (e.g., roof, windows, boilers, HVAC system, and/or electrical service and distribution system) that you are indicating require repair or replacement. Please describe all deficiencies to all systems in sufficient detail to explain the problem.

MHS represents a composition of infrastructure that is in various states of disrepair or deterioration, with the vast majority of the school's operating systems having outlived their useful life expectancy. As noted elsewhere in this SOI, with the exception of the modernized science area, the remainder of the building's systems including but not limited to its roof, HVAC system, electrical systems, security systems (to the extent they exist), plumbing, and windows detract from the stability and consistency of the school's educational programs through constant malfunctions and failures.

Specifically, the approximately 215k square foot EPDM roof that was installed in 1990 contains wet insulation below the rubber membrane and frequently is subject to ponding on its surface. It is not pitched to drains and is in poor condition. The existing storm water piping and roof drains are also in poor condition.

With respect to windows, classroom windows are thermally inefficient single pane casement style windows with casement cranks that require ongoing costly maintenance. The windows' caulking and sealants are in poor condition and in need of replacement.

The boilers are considered adequate, but their value is compromised by the deteriorating, obsolete or failed infrastructure associated with their operation. The copper distribution piping for domestic cold and hot water was installed during the original construction of the building, in poor condition and beyond useful life exacerbating the challenges posed by the frequency and severity of the leaks and burst pipes discussed elsewhere in this SOI.

The building's HVAC systems are controlled by obsolete pneumatic devices requiring significant ongoing maintenance, with panels intended to control AHU 1 and AHU 2 no longer functioning.

Despite herculean efforts on the part of maintenance staff efforts during the 2020 – 2021 school year to markedly improve air quality throughout the school, dirty ductwork and clogged reheat coils are forcing the district to choose between near constant maintenance on these systems or subpar indoor air quality. UV motors are failing at unsustainable rates due to higher capacity filters intended to maintain more frequent air exchange of the COVID era.

The school's hundreds of classrooms are known to frequently overheat in mild weather patterns and be near uninhabitable during cold streaks.

MHS's power distribution systems include panels and feeders that are essentially all in poor condition and were installed during original construction, exceeding their useful life expectancy. Modern technology and reliable Internet have proven to be virtually impossible to capitalize upon in light of the facility's concrete construction. Crude and makeshift solutions around the ad hoc creation of IT equipment closets that lack appropriate cooling/HVAC and sufficient power represent the extent to which the district has stretched the building's infrastructure beyond acceptable and reasonable measures.

As noted elsewhere in this SOI, MHS has recently been estimated to expend substantially more energy than a typical American school. This was not a shocking conclusion in light of the fact that the original design capacity for the MHS facility was 3,500 students, whereas the current enrollment is approximately 1,300. Specifically, the CREF report found that the building's 2021 EUI of 86.0 kBtu/ft2, or 77% higher than the national average of 48.5 kBtu/ft2 for K-12 schools as reported by CBECS.

For MHS to meet Mass Save's energy efficiency target for Zero-Net Energy Buildings of 25 kBtu/ft2, energy intensity would have to be reduced by over 70%. In light of the disproportionate level of energy consumption, MPS lacks the capacity to effectuate a noticeable reduction in energy consumption. The layout of the building and the volume of Ch. 74 vocational programming make

the strategic use of specific components of the building problematic, and the age and deterioration of the HVAC and electrical systems make virtually all usage inefficient at one level or another.
In addition to the basic infrastructure that has deteriorated throughout the 50+ year use of the building, are a series of deficiencies that represent unacceptable challenges to the school community's safe and secure utilization of the facility. MHS lacks a fire suppression system with the lone exception for the science wing. The school's fire alarm and intercom system require constant maintenance by local vendors upon whose institutional knowledge of the antiquated systems MPS has become beholden. There is no electronic locking system and other vulnerabilities represent a significant departure from what would be considered best practice.

Priority 5

Question 2: Please describe the measures the district has already taken to mitigate the problem/issues described in Question 1 above.

As noted elsewhere in this SOI, the impact of deteriorating infrastructure has posed operational challenges as well as culture and climate challenges, all of which are continuing to have a detrimental impact on the school's capacity to deliver an optimal caliber of instruction. With respect to the operational challenges, the district is now basically in a perpetual state of mitigation. Reoccurring and one-time financial resources alike are being diverted away from teaching and learning to address emergency repairs to failing infrastructure and to minimize disruptions to classroom routines as much as possible. With regard to the most notable discrete mitigation efforts, the MPS has undertaken the following:

The most significant mitigation efforts referenced several times throughout this SOI was the renovation of the science wing in B Building in 2013 – 2014. This renovation effort restored centralized air conditioning to this one floor of one section of the building. It also provides for modern efficient lighting systems and the school's lone fire suppression system.

Through an MSBA partnership, two boilers were installed in 2014 to address heating issues in the building. As noted elsewhere the value of these boilers is diminished significantly by the plethora of associated infrastructure that are failing or in disrepair, i.e. the obsolete pneumatic controls. The original HVAC system continues to support the school to the extent infrastructure of its age and condition can do so.

The original EPDM roof was replaced in 1990, but as noted several times throughout this SOI, it is now well beyond its useful life expectancy and exhibiting evidence of water damage and patched puncture holes that are representative of the ongoing efforts toward mitigation.

Due to a catastrophic failure of one of MHS's two water heater systems in 2021, the installation of a new hot water heater system is nearly complete.

A thorough series of repairs were completed to the classroom UVs during the 2020 - 2021 school year. The purpose of these repairs was to improve the frequency of air exchanges to meet heightened air quality standards related to COVID-19. A multitude of motors were repaired, and MERV-8 filters were replaced by MERV-13 filters, the result of which has been a significant increase in the number of burned-out motors needing to be replaced during the 2021 - 2022 school year as the infrastructure was not intended to withstand the capacity of the MERV-13 filters. The unit ventilators are the main source of heating in each classroom and function as the primary ventilation. They were installed during the original school construction and are in poor condition and well beyond their useful life expectancy.

The MHS fire alarm system is generally original to the building's opening, however 20 years ago a module system unintended for a building of this size and complexity was incorporated into the system to maintain functionality. The science area maintains a more modern addressable system, but the Medford Fire Department has advised MPS on multiple occasions that the current system is inadequate and not in compliance with contemporary standards. MPS invests annually in maintenance to ensure a basic level of functionality, but the cost of a wholesale replacement of a system so intertwined with the facility's infrastructure has been considered financially prohibitive.

Priority 5

Question 3: Please provide a detailed explanation of the impact of the problem/issues described in Question 1 above on your district's educational program. Please include specific examples of how the problem prevents the district from delivering the educational program it is required to deliver and how students and/or teachers are directly affected by the problem identified.

As referenced throughout this SOI, the impact of the building's deficiencies manifest themselves in a multitude of ways, ranging from the broad inability to truly integrate the school's academic and vocational identities, to the persistent distractions caused by having to relocate classrooms due to leaky or burst pipes. The school's culture and climate are destabilized by temperatures that fluctuate uncontrollably and technology that cannot be relied upon. Lighting systems are woefully inefficient, resulting in a diversion of resources that could otherwise be invested in teaching and learning, while providing an atmosphere that is considered bleak, foreboding, and incongruent with the type of affirming educational atmosphere the district is seeking to foster for students.

Again, as noted elsewhere in this SOI, students in a host of Ch. 74 vocational programs lack adequate and appropriate space to engage in their chosen disciplines. Other students are forced to choose programs that they are less passionate about (or to enroll elsewhere) because the school lacks the appropriate spatial capacity to develop and adopt a full range of vocational options for students. And students in all academic and vocational disciplines have become accustomed to draping themselves in sweatshirts and blankets or need to relocate on a moment's notice due to failing infrastructure. These constant disruptions are inconsistent with the standards MPS seeks to represent as an educational institution.

Priority 5

Question 4: Please describe how addressing the school facility systems you identified in Question 1 above will extend the useful life of the facility that is the subject of this SOI and how it will improve your district's educational program.

As noted elsewhere in this SOI, the useful life expectancies of the majority of the systems on which the school's operations rely have already expired. MPS is committed to addressing these deficiencies due to the district's recognition that they are interconnected and interdependent on one another, and the quality of the secondary education students are receiving is contingent upon infrastructure that, at a minimum, is not constantly distracting. Ideally, the school's infrastructure would serve to empower educators and leave students well-situated to capitalize on the vision of a comprehensive educational program that seamlessly integrates the school's academic and vocational programming opportunities.

Please also provide the following:

Have the systems identified above been examined by an engineer or other trained building professional?:
YES

If "YES", please provide the name of the individual and his/her professional affiliation (maximum of 250 characters):

Engineers retained by MPS:

Shaun Finn, Vice President, CREF

Patrick Murphy, Vice President, Project Lead, CREF

Christopher Wood, Director of IT, CREF

Matt Fragala, Managing Principal Consultant, EH&E

Brian Baker, Engineering Support, EH&E

The date of the inspection: 4/14/2022

A summary of the findings (maximum of 5000 characters):

In anticipation of submitting last year's Statement of Interest (SOI), the Medford Public Schools (MPS) retained the services of CREF, a real estate & facilities based in Boston, MA, with extensive experience in school construction. CREF and its partner agency Environmental Health & Engineering, Inc., based out of Newton, completed a joint environmental and facilities condition assessment of Medford High School. MPS's responses to the inquiries within the Statement of Interest are based in part on the information obtained through these reports, which are collectively referenced in the SOI as the "CREF report." The CREF report will be submitted to the MSBA as an appendix to this (SOI) on the basis that its conclusion and assessments are consistent with the conclusions that MPS has reached in deciding to submit this SOI on behalf of our flagship school, Medford High School (MHS).

In addition, in 2016, MPS retained The Garland Company, Inc. (Garland) to complete an infrared roof survey of MHS. As discussed in the district's previous SOI submissions, that report found that the school's main roof system, EPDM, was plagued by numerous wet insulation spots, ponding conditions, anomalies, punctures and weakened repair patches. That report was reviewed in preparation of the CREF report and several of its conclusions are referenced as appropriate throughout this SOI. The urgency of the challenges Garland identified has been exacerbated by the fact that targeted repair solutions have carried a short life expectancy of only 1-3 years and have proven financially ineffective and imprudent.

The CREF report's executive summary stated in relevant part:

The Building likely contains significant quantities of hazardous building materials including asbestos, lead paint, and polychlorinated biphenyls (PCBs). The cost to fully remediate or mitigate the presence of hazardous building materials is estimated to exceed $10,000,000. This does not include associated costs for replacement materials, or the related labor and management fees included in future projects.

The Building exterior and interior sub-element review included in this report cross references building materials in poor condition and in need of replacement with potentially hazardous conditions related to sealants, adhesives, and paint applications.

The HVAC units serving the remaining areas of the Building (including the central air handling units and classroom unit ventilators) are original to the time of construction and appear in very poor condition. Several of the systems inspected were not operational due to mechanical or control issues and are clearly beyond their useful life. Replacement of these units will also require the installation of new distribution components (conduit, ductwork, cabling, etc.) which will likely uncover additional hazardous materials, resulting in a compounding effect on the scope, schedule and budget considerations noted above.

Energy utilization benchmarking indicates the building is more energy intense than average school buildings. The Building's 2021 EUI of 86.0 kBtu/ft2 is 77% higher than the national average of 48.5 kBtu/ft2 for K-12 schools reported by CBECS. For the Building to meet Mass Save's energy efficiency target for Zero-Net Energy Buildings of 25 kBtu/ft2, energy intensity would have to be reduced by over 70%.

Finally, it should be noted that all future projects will need to take into account the City of Medford Climate Action and Adaptation Plan (draft plan published in October 2021), and any applicable Federal, State, and Municipal code requirements that have been put in place in the 50+ years since the facility was initially constructed. This will likely cause a "domino effect" where code required upgrades (eg. fire alarm and sprinkler installation in approximately 90% of the Building) and the resulting hazardous material abatement needs will multiply the cost of the primary renovations to a substantial degree to the point where significant improvements to the existing building must be considered against the cost and long-term value of a full-building replacement.

Priority 7

Question 1: Please provide a detailed description of the programs not currently available due to facility constraints, the state or local requirement for such programs, and the facility limitations precluding the programs from being offered.

As noted elsewhere in this SOI, due to facility constraints, the following programs have reached capacity and cannot accept new students despite there being student interest in these programs: Electricity, Health Assisting, Construction & Craft Laborers, Cosmetology.

These programs currently have a waitlist of students who want to participate in them. In addition, MPS has engaged a variety of external stakeholders including the Metro North Workforce Board to ascertain what programs would best serve the students of Medford the years ahead. At a minimum, MPS would seek to expand MHS's Ch. 74 programs to include Plumbing, Animal Science, Dental Assisting, and Information Support Services and Networking. But further expansions to communications related programming as well as theater and arts classes like set design and construction, sound and lighting design, and sculpture are ones that school administrators have met with student, family and community representatives about developing. These opportunities are currently stalled because the existing MHS facility lacks the spatial capacity in the areas of the building that would be suitable for this type of program expansion.

Priority 7

Question 2: Please describe the measures the district has taken or is planning to take in the immediate future to mitigate the problem(s) described above.

Similar to the efforts that are and have been underway to prevent the building's failing infrastructure from diminishing educational opportunities for students, MPS is also in a perpetual state of mitigation with respect to ensuring the spatial and logistical challenges posed by the current facility do not have disproportionately negative impact on the instructional opportunities available to students. Throughout MHS, classrooms and meeting spaces are being repurposed as learning spaces to support specific programs. Many of these spaces that are being used for purposes other than the ones that were intended or even contemplated at the time of construction and generally are not conducive to CTE programming. As noted elsewhere in this SOI, MHS's CTE programs are rapidly growing and there is evidence of genuine and passionate engagement on the part of students. For this reason, MHS has not slowed its recruitment of students or its encouragement of students committing to the various pathways available, but there is virtually no space remaining in the appropriate areas of the building to repurpose.

MHS has also attempted to take mitigation steps that are unrelated to physical infrastructure in order to combat problems caused by infrastructure. Two years ago, MHS reorganized into a House model to provide students with more individualized counseling and guidance support. This has positioned school staff to develop strong relationships with both students and families for purposes of guiding students toward post-secondary opportunities. This is helpful to the extent the MHS is able to offer programming consistent with student interests but is problematic when MHS cannot offer sufficient seats in the programs in which students are expressing interest. In addition to not maximizing the opportunities for student engagement, this type of disconnect could also serve to exacerbate the school to student (and family) bonds and relationships that have already been battered by the pandemic-related disruptions over the last two years.

In the time since the district last submitted an SOI, MHS has dealt with a series of culture and climate issues exacerbated by the building's poor infrastructure. In the fall of 2022, multiple physical altercations between students was rendered more difficult because of the school's poor layout. While the architecture alone did not cause and would not entirely alleviate these challenges, MPS feels strong that systemic security systems will enhance the district's ability to provide the type of culture and climate MHS students deserve and expect.

Priority 7

Question 3: Please provide a detailed explanation of the impact of the problem described in this priority on your district's educational program. Please include specific examples of how the problem prevents the district from delivering the educational program it is required to deliver and how students and/or teachers are directly affected by the problem identified.

The problems described throughout this SOI have a significant impact on the Medford Public Schools and the district's flagship school, MHS. The school's ability to deliver academic programming has been severely compromised by inadequate, deteriorating or failing infrastructure and the disruptions to student learning that those deficiencies have caused. Students have expressed on numerous occasions that they feel unready and disengaged in a building that does little to nothing from an infrastructure perspective to induce strong student and school community relationships. Students have grown accustomed to frequently moving classrooms in attempts to find learning spaces without leaky ceilings, burst pipes, or inhospitable temperatures. In early 2023, major thoroughfare hallways were forced to be shutdown due to asbestos levels, forcing students to reroute through the cavernous building to reach their classes, with them rarely doing so on time. Students and families have also expressed outrage at the inability of the school environment to provide reliable and accessible technology. While the significant COVID-related influx of external funding has mitigated this challenge, the technological standards under which the school is operating are subpar at best. All of these contribute to a significant disruption to student learning and unstable educational environment that is incongruent with continuous progress and the type of school community MHS seeks to cultivate on behalf of its students.

Name of School	Medford High

CERTIFICATIONS

The undersigned hereby certifies that, to the best of his/her knowledge, information and belief, the statements and information contained in this statement of Interest and attached hereto are true and accurate and that this Statement of Interest has been prepared under the direction of the district school committee and the undersigned is duly authorized to submit this Statement of Interest to the Massachusetts School Building Authority. The undersigned also hereby acknowledges and agrees to provide the Massachusetts School Building Authority, upon request by the Authority, any additional information relating to this Statement of Interest that may be required by the Authority.

Chief Executive Officer *	**School Committee Chair**	**Superintendent of Schools**
Breanna Lungo-Koehn	Breanna Lungo-Koehn	Marice Edouard-Vincent
Mayor		
(signature)	(signature)	(signature)
Date	Date	Date
4/13/2023 7:12:52 PM	4/13/2023 7:13:50 PM	4/13/2023 8:47:47 PM

* Local chief executive officer: In a city or town with a manager form of government, the manager of the municipality; in other cities, the mayor; and in other towns, the board of selectmen unless, in a city or town, some other municipal office is designated to the chief executive office under the provisions of a local charter. Please note, in districts where the Superintendent is also the Local Chief Executive Officer, it is required for the same person to sign the Statement of Interest Certifications twice.



Report of Findings: Focused Facility Condition Review

Medford High School

April 14th, 2022

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Appendices

1. Appendix A – Environmental and HVAC System Review, Medford High School, Medford, Massachusetts (EH&E 25440)

1. Executive Summary

In March of 2022, CREF conducted a focused facility condition review of Medford High School (the "Building") located at 489 Winthrop Street, in Medford, MA. The campus houses students in grades 9-12 for both Medford's high school and vocational school programs. The three-floor facility consists of four connected wings (A, B, C, D) with a combined gross floor area between 530,000 - 600,000 square feet. The Building was reportedly constructed in 1971 and there are approximately 302 classrooms in the facility.

The purpose of this review is to aid the staff in documenting the existing physical conditions of the Building which should be considered during future planning for any major improvements or core replacement initiatives.

Review efforts included a summary level assessment of the facility's interior and exterior physical building condition, a non-destructive review of reported and/or visible hazardous materials, HVAC systems performance, and information systems and infrastructure functionality. Interviews with key management and operations staff were conducted in-person to solicit their observations and experience with the assemblies and systems noted above, and to participate in building tours.

These efforts resulted in this focused assessment of pre-selected facility sub-elements, observed conditions, and health & safety conditional findings to help inform decision making for the capital investment strategy for maintaining, upgrading or replacement of the building.

As main pillars of the project, pertinent documents were reviewed related to design, operations and maintenance of the HVAC systems and hazardous materials management with the following major findings:

- The Building likely contains significant quantities of hazardous building materials including asbestos, lead paint, and polychlorinated biphenyls (PCBs). The cost to fully remediate or mitigate the presence of hazardous building materials is estimated to exceed $10,000,000. This does not include associated costs for replacement materials, or the related labor and management fees included in future projects. [1]

- The Building exterior and interior sub-element review included in this report cross references building materials in poor condition and in need of replacement with potentially hazardous conditions related to sealants, adhesives, and paint applications.

- The HVAC units serving the remaining areas of the Building (including the central air handling units and classroom unit ventilators) are original to the time of construction and appear in very poor condition. Several of the systems inspected were not operational due to mechanical or control issues and are clearly beyond their useful life. Replacement of these units will also require the installation of new distribution components (conduit, ductwork, cabling, etc.) which will likely uncover additional hazardous materials, resulting

[1] Environmental Health & Engineering, *Environmental and HVAC System Review, Medford High School, Medford, Massachusetts (EH&E 25440)*

in a compounding effect on the scope, schedule and budget considerations noted above.[2]

- Energy utilization benchmarking indicates the building is more energy intense than average school buildings. The Building's 2021 EUI of 86.0 kBtu/ft2 is 77% higher than the national average of 48.5 kBtu/ft2 for K-12 schools reported by CBECS. For the Building to meet Mass Save's energy efficiency target for Zero-Net Energy Buildings of 25 kBtu/ft2, energy intensity would have to be reduced by over 70%.

Finally, it should be noted that all future projects will need to account for the City of Medford Climate Action and Adaptation Plan (draft plan published in October 2021), and any applicable Federal, State, and Municipal code requirements (e.g., 521 CMR) that have been put in place in the 50+ years since the facility was initially constructed. This will likely cause a "domino effect" where code required upgrades (e.g., fire alarm and sprinkler installation in approximately 90% of the Building) and the resulting hazardous material abatement needs will multiply the cost of the primary renovations to a substantial degree to the point where significant improvements to the existing building must be considered against the cost and long-term value of a full-building replacement. It is also noted that as cited in Massachusetts Code 521 CMR 3.3.2: "If the work performed, including the exempted work, amounts to 30% or more of the *full and fair cash value* (see **521 CMR 5.38**) of the *building* the entire *building is required to comply with 521 CMR.*"

[2] Environmental Health & Engineering, *Environmental and HVAC System Review, Medford High School, Medford, Massachusetts (EH&E 25440) 2022*

2. Project Background

Medford Public Schools - Buildings & Grounds Department is responsible for the maintenance, management, and planning of the Building. CREF was selected to conduct a focused facility condition review to identify deficiencies in select building systems and prioritize the findings to aid in making key investment decisions about sustaining services within the high school.

This review is intended to identify significant facility components which will need to be addressed either through repair or replacement should any major renovation or substantive upgrades be planned. Many of the facilities building components were observed to be in poor condition and Medford believes it is significantly behind on deferred maintenance and repairs to support the buildings. This report defines those components, identifies the significant deficiencies, and provides recommendations for strategic planning purposes.

2.1 Contract Basis

CREF submitted a response for professional services inclusive of a focused facility condition review dated March 7, 2022. Medford informed CREF of its decision to award CREF the project the following week.

2.2 Goals & Objectives of the Project

The goal of this project is to provide Medford with an understanding of the current condition of facilities included within project scope of work, and to identify and quantify in-scope facility conditions in terms of significant non-cyclical repairs and replacements of building systems, components, and assemblies. The information obtained during this project is to be used to support the development of Statement of Interest (SOI) to be submitted to the Massachusetts School Building Authority (MSBA).

The primary objectives of the project were to::

1. Review, to the extent they were available, existing drawings of the Building prior to the on-site review.
2. Review information provided on past, current and/or planned projects and significant maintenance activities.
3. Interview the facilities team, including the head of buildings and grounds, and /or building engineers knowledgeable regarding the construction and maintenance history of the school to document deficiencies previously identified by the staff.
4. Create a narrative summary describing the major construction features and building systems that comprise the facility.
5. Take photographs to document existing field conditions.
6. Perform a non-destructive visual inspection of the facility to identify in scope component level deficiencies and life-cycle conditions.

2.3 Scope of Work

CREF furnished the personnel, equipment, materials, and other necessary resources to conduct the focused review of the facility. The scope includes field observations and assessment of facility sub elements included below:

1. **Building Exterior and Envelope**
2. **Interiors**
3. **Plumbing**
4. **HVAC**
5. **Fire Protection**
6. **Electrical**
7. **Information Systems**
8. **Security System**

The work was divided into three major tasks:

1. Planning & Information Gathering
2. Field Inspection
3. Information Analysis and Recommendations

3. Scope Activities

CREF conducted a kick-off meeting with representatives of the High School to confirm the project scope, objectives, and approach. The purpose of the meeting was to confirm that both the CREF team and The Building team clearly understood the scope, objectives, and risks of the work to be undertaken before beginning the project. The meeting was held in the Superintendent's Conference Room at Medford High School at 10:00am on March 17th, 2022. The meeting was attended by the individuals listed below representing the Building and CREF.

Medford High School Representatives

David Murphy, Asst. Superintendent for Finance and Operations
John McLaughlin, Director of Buildings and Grounds; Primary Field Contact
John Bissell, Manager of Buildings and Grounds

CREF Representatives

Shaun Finn, LEED AP, CSL; Vice President, Executive Oversight, CREF
Patrick Murphy, EIT; Vice President, Project Lead, CREF
Christopher Wood, CISSP; Director of IT, CREF
Matt Fragala, MS, CIH, CSP; Managing Principal Consultant, EH&E
Brian Baker, PE; Engineering Support, EH&E

3.1 Project Kick-Off Meeting

During the kickoff meeting, the following items were completed and/or discussed:

- Introductions
- Goals & Objectives
- Building Contacts
- Safety & Security
- Scheduling & Site Access
- Escorts
- On-site Interviews
- Clarification of Building Information
- Existing Background Data
- Known Site Restrictions

3.2 Background Data Review

Prior to the beginning the field data collection, CREF reviewed background information provided for the Building. The information provided was in "hard copy" format, located in the plan room adjacent to the Building and Grounds Office. Partial sets of the original as-builts and the new science wing project were located and reviewed. CREF used the information obtained to supplement its understanding of the as-built construction features observed on site.

3.3 On-Site Facility Condition Review

CREF mobilized on site and began data collection on Monday, March 21, 2022. Patrick Murphy, Christopher Wood, Matt Fragala, and Brian Baker performed field data collection.

Patrick Murphy, Shaun Finn, Christopher Wood, Matt Fragala, and Brian Baker performed data review. The on-site inspection was completed on Thursday, March 23, 2022, with a follow up visit on Thursday, March 31st, 2022. John McLaughlin, John Bissel, and Allen Arena provided the building tours during the inspection phase.

This report was reviewed by the following CREF Staff:
Steve Van Ness, AIA; Vice President, Planning and Design
Chris Waltz, AIA; Director, Planning and Design
Ted Gentry, PE; Senior Project Manager

3.4 Escorts and Interviews of School Staff

During the on-site work, the CREF team was escorted by Mr. John Bissell, Manager of Buildings and Grounds. Bissel provided access to all spaces requested, and fielded questions from CREF during the kick-off meeting and during the site walkthroughs. Feedback provided by the Building staff included information describing facility maintenance history, and whether any significant issues, such as leaks were present at the facility. John on also provided information regarding the estimated age of building components at select locations.

3.5 Documentation of Facility Inventory Components

During the walkthroughs, CREF recorded select building elements and sub elements, and components that were significant parts of the as-built construction of the facility.

3.6 Data Analysis

Following completion of the field data collection, data review, CREF conducted an analysis of the data and prepared this report of findings.

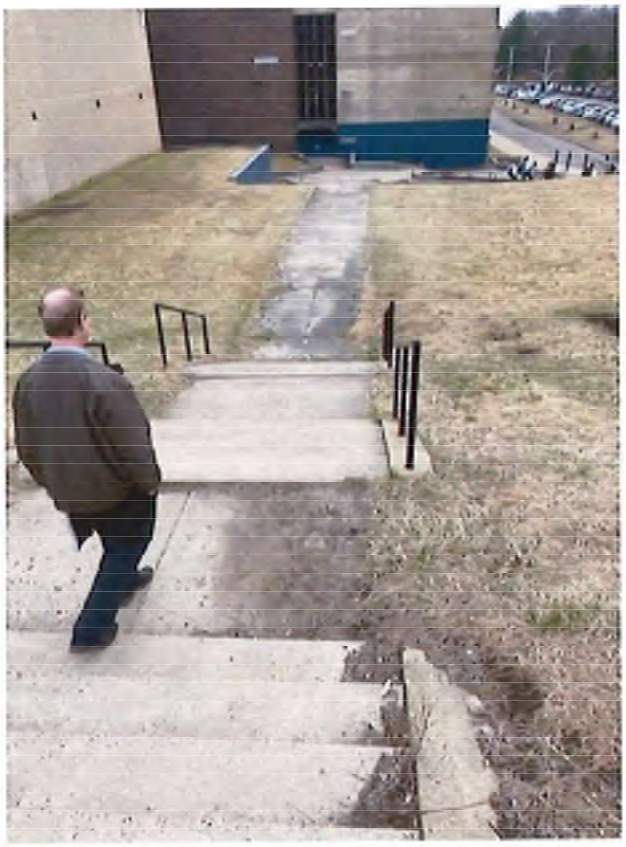
4. Focused Condition Review Findings

Existing Structure

Medford High School is a three-story, reinforced concrete structure with multiple low-slope roofs. The foundation construction consists of conventional concrete spread footings to support structural columns. All concrete noted on the existing plans have a minimum 28-day strength of 3,000 PSI. The reinforced concrete columns and concrete wall sections have a 28 strength of 4,000 PSI. Reinforced steel has a 40,000 PSI yield stress, except for select areas supporting the roof structure, which are 60,000 PSI.

Each roof consists of a 6" thick, one-way reinforced concrete slab spanning 15 feet in the east-west direction to 18" wide by 36" deep reinforced concrete beams. The beams span 30 to 45 feet in the north-south direction and are supported by reinforced concrete columns. Beams typically cantilever (15'-6", with camber) over interior columns, resulting in a 14-foot wide, east-west section of floor with no beams (6" slab only) to facilitate vertical chase ways for infrastructure distribution. These chase way zones are in the second structural bay of the exterior wall, in the north and south portions of the roof (two total). **It is important to note that this chase way zone design significantly impacts future infrastructure distribution and pathway flexibility.**

The floors of the building – the second-floor deck and third floor deck, are reinforced placed concrete. Like the roof construction, the decks consist of 6" think, one-way reinforced concrete slabs spanning 15 feet in the east-west direction. The story heigh is 12'-10"; typically leaving 9'-10" clear height below the 36" deep roof beams.



The design of the school was conducted in accordance with the Commonwealth of Massachusetts, "Structural Regulations of School Houses."

The construction classification for this facility is reinforced concrete floor and roof structure that has a fire resistance rating of at least 2 hours, equivalent to a Type 1 construction. **The existing building does not include a fire suppression system except for the third-floor science wing, renovated in 2013 and completed in 2014.**

The site walkways around the perimeter of the facility are beyond their useful life expectancy, and pose safety and accessibility challenges, specifically on the west elevation noted in the picture to the right.

4.1 Building Exterior and Envelope



The Facility is separated into quadrants (A, B, G, and H) by a ¾" wide expansion joint system. No internal joints were observed in the field or on the plans. **Cross sections of these expansion joints were not visible during the inspection period; however, it is important to note that any flexible sealant used in the original construction should be considered to potentially contain hazardous materials and great care should be taken during any improvement or replacement efforts.**

The roof systems are not pitched to drains except for the roof above the new science wing. Typically, there is a 16" +/- high parapet at the main roof. The mechanical penthouse was located in the central, 30 SF structural bay.



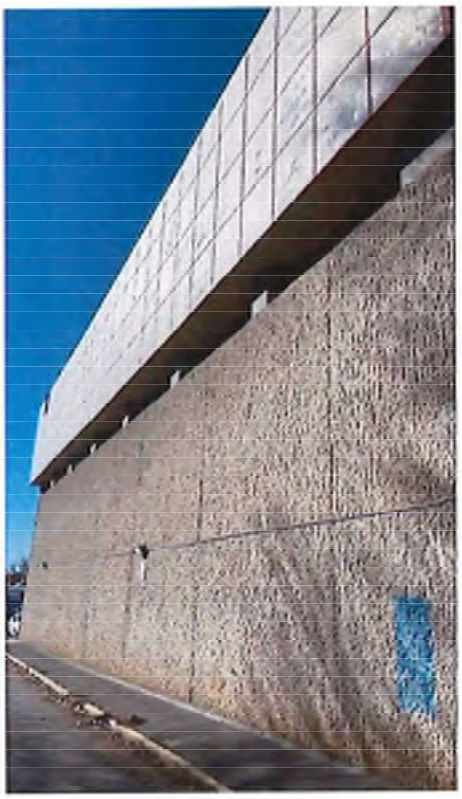
The main roof system is an EPDM material single ply construction. The original roof, completed in 1971, was replaced in 1990 and is approximately 215,934 SF in area. The roof above the new science wing was installed in 2014 and is a PVC roof construction of approximately 40,00 square feet. The EPDM roof was observed to be in poor condition. In an infrared roof survey prepared by The Garland Company in 2016, several areas were observed to have wet insulation below the rubber membrane. There were also ponding conditions observed during our field inspection, many of which were also confirmed within the 2016 Garland Report. Several puncture holes were also observed and had been patched. Per the 2016 Garland Report, the EPDM roof is beyond its useful life expectancy and a full replacement should be budgeted in the range of $1.75M – $2.00M (2016 dollars) [3]. It should be noted that this pricing estimate does not include abatement of any hazardous materials within the scope of work.

The exterior of the building superstructure consists of primarily reinforced concrete panels, brick veneer, and mechanically fastened concrete fins. The superstructure has not been significantly improved and was constructed with the original building in 1971.

The original exterior concrete wall assembly and fenestration was observed to have several punched openings for windows, doors, and vents. Unit ventilator supply and exhaust louvers were observed at all classroom locations throughout the facility. **The sealants around all original openings were observed to be in poor condition and failing in most locations.**

[3] The Garland Company, Inc., *Medford High School – Infrared Roof Survey*, 2016

All exterior assembly intersections (masonry to concrete in most cases) include similar exterior joint sealants original to the building's construction. The caulking at these typical locations is beyond its useful life expectancy. Conditions associated with future replacement **of the joints will be outlined further in the EH&E report (Appendix A).**



At the auditorium, pool and select areas of the Vocational School, the exterior assembly includes semi-opaque fiberglass panels which allow daylight into the interior of the building. These panels were installed during the original building construction and a 2007 study completed by Drummey Rosane Anderson, Inc., with assistance from Simpson Gumpertz & Heger, identified the panels to be "in very poor condition, and need replacement at this time" [4]. They are well beyond useful life expectancy.

Door openings are enclosed by a mixture of metal door and doorframe assemblies and are sealed with exterior caulking of several types. Most of the openings in the building exterior were constructed when the building was originally built in 1971.



[4] Drummey Rosane Anderson, Inc., *Pool Facilities Report*, 2007

The building fenestration consists of single pane steel casement windows which are original to the building. Classroom windows are single pane casement style windows. Cranks appeared to be in working condition but require ongoing maintenance. **Mentioned earlier in this report, caulking and sealants were observed to be in poor condition and in need of immediate remediation and replacement.**



4.2 Building Interior

Main Lobby

The main entry lobby walls consist of painted CMU, polished brick, linoleum tiles, and wood paneling. Floors in the main lobby consist of original red quarry tile throughout. The lobby was observed to be in the original condition, beyond its useful life expectancy and in need of improvement and or replacement. Please refer to the EH&E Report (Appendix A) for more information on paint, sealants and caulking materials present in this location as it should be presumed that hazardous materials are present.

Auditorium



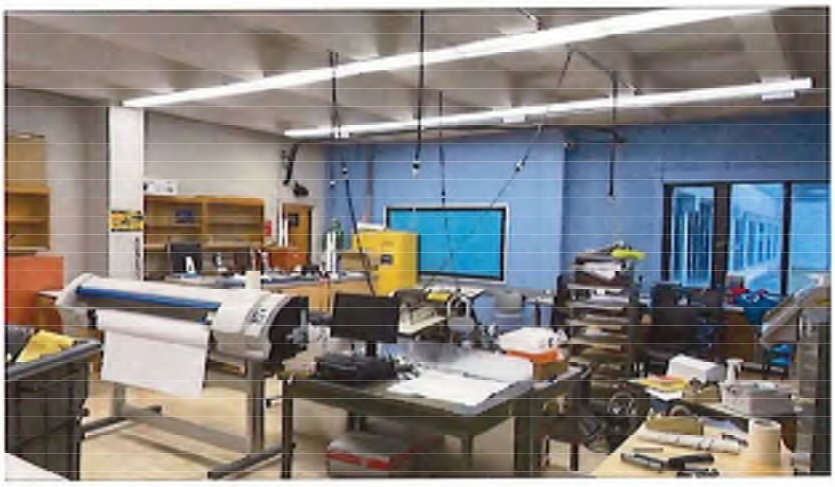
The main auditorium, located adjacent to the main lobby consists of wall elevations of polished brick and painted concrete. The walls were observed to be in well maintained condition. The main auditorium floor consists of a broadloom carpet assembly which was installed as an improvement to the original flooring. The carpet appears to have been installed within the last 10-20 years. The walls consist of painted concrete and CMU with fabric wrapped acoustical panels. The timing of the installation appears to be within the last 10-20 years. The ceiling assembly consists of a finished GWB suspended ceiling which sits below a composite steel and wood framed catwalk assembly.



Lecture Halls

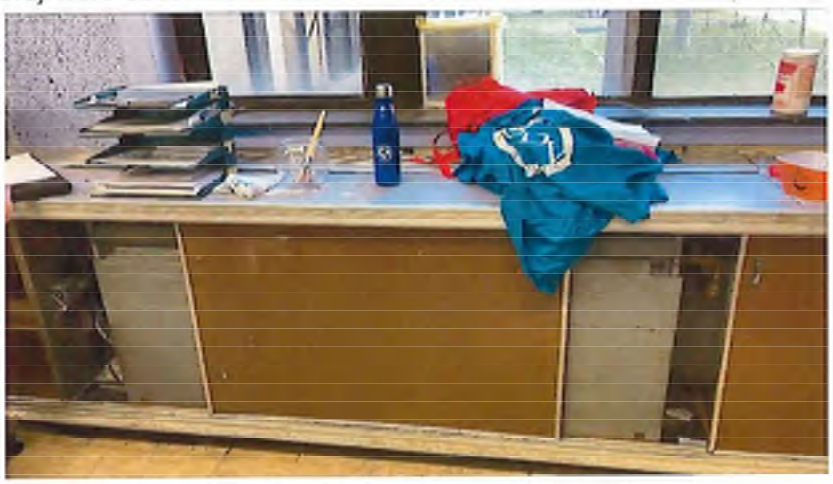
The lecture halls typically were observed to be constructed with the original building in 1970 except for the new science wing lecture hall. The wall construction typically consists of elevations of painted CMU and painted concrete walls with fabric wrapped acoustical panels in select locations. The floors were observed to be linoleum tile. Ceiling assemblies consist of acoustical suspended ceiling tile mechanically hung from the concrete deck. Please refer to the EH&E Report (Appendix A) for more information on paint, sealants and caulking materials present in this location as it should be assumed that hazardous materials are present.

Classrooms and Unit Ventilation



Classroom walls are painted CMU and concrete. Flooring in the classrooms was observed to be linoleum tile. Ceilings were observed to be either exposed concrete deck or suspended acoustical ceiling tile.

Univents (Unit Ventilators) were observed in each classroom and function as the primary ventilation. The ventilators were installed during the original school construction and were observed to be in poor condition, and well beyond useful life expectancy. In most of the classrooms the exhaust did not appear to function. **The ventilators are of particular concern, as they are not only a significant factor of the buildings' HVAC performance, but also are part of the exterior opening assembly. Both interior and exterior sealants and caulking were in poor and most cases failing condition and in need of immediate abatement, improvement and/or replacement. It should be noted that the staff has found it exceedingly difficult to find parts for these obsolete units.**



Please refer to the EH&E Report (Appendix A) for more information on paint, sealants and caulking materials present in this location as it should be assumed that hazardous materials are present.

Prep, Chemical Storage & Work Rooms were observed to be constructed with the original building and presented in the same fashion as the classrooms and offices (painted CMU or concrete walls, linoleum flooring and acoustical suspended ceiling tile.

Corridors

Several corridors within the high school were inspected as part of the survey. Wall assemblies were observed to be painted CMU and concrete, some of which had ceramic tile and wood panel finishes. Interior sealant joints were observed where painted CMU and concrete walls abut. **Flooring observed in all locations consisted of 9" x 9" flooring tiles installed during the original building construction**. A variety of acoustic suspended ceiling tile assemblies were observed. Please refer to the EH&E Report (Appendix A) for more information on paint, sealants and caulking materials present in this location as it should be assumed that hazardous materials are present.











Bathrooms and Building Plumbing

Both student bathrooms and staff bathrooms were observed to be similar in their construction. Wall assemblies consisted of CMU walls with ceramic tile. Flooring tile was installed during the original school construction. **Although 9" x 9" linoleum tile was not observed, the subfloor mastic and leveling compounds should be tested prior to any future improvements.** Plumbing feeding the bathrooms was observed to be copper and black iron, installed during the original building construction in 1970. Many of the fixtures appear to have been replaced over the years, however, leaks were observed, and the plumbing was in poor condition and beyond its useful life expectancy. The maintenance staff has been routinely replacing the domestic water copper piping incrementally as leaks and cracks are identified. Very few isolation valves were observed in either the copper or black iron piping. At approximately fifty years old, the plumbing system of the Building will increasingly continue to fail. A variety of acoustic suspended ceiling tile assemblies were observed. Please refer to the EH&E Report (Appendix A) for more information on paint, sealants and caulking materials present in this location as it should be assumed that hazardous materials are present.

Stairwells

Stairwells located in each quadrant of The Building were observed to be painted CMU and concrete walls. Interior sealant joints were observed where painted CMU and concrete walls abut. Multiple flooring conditions were observed, and in many locations consisted of 9" x 9" flooring tiles which were installed during the original building construction. A variety of acoustic suspended ceiling tile assemblies were also observed. **Please refer to the EH&E Report (Appendix A) for more information on paint, sealants and caulking materials present in this location as it should be assumed that hazardous materials are present.**



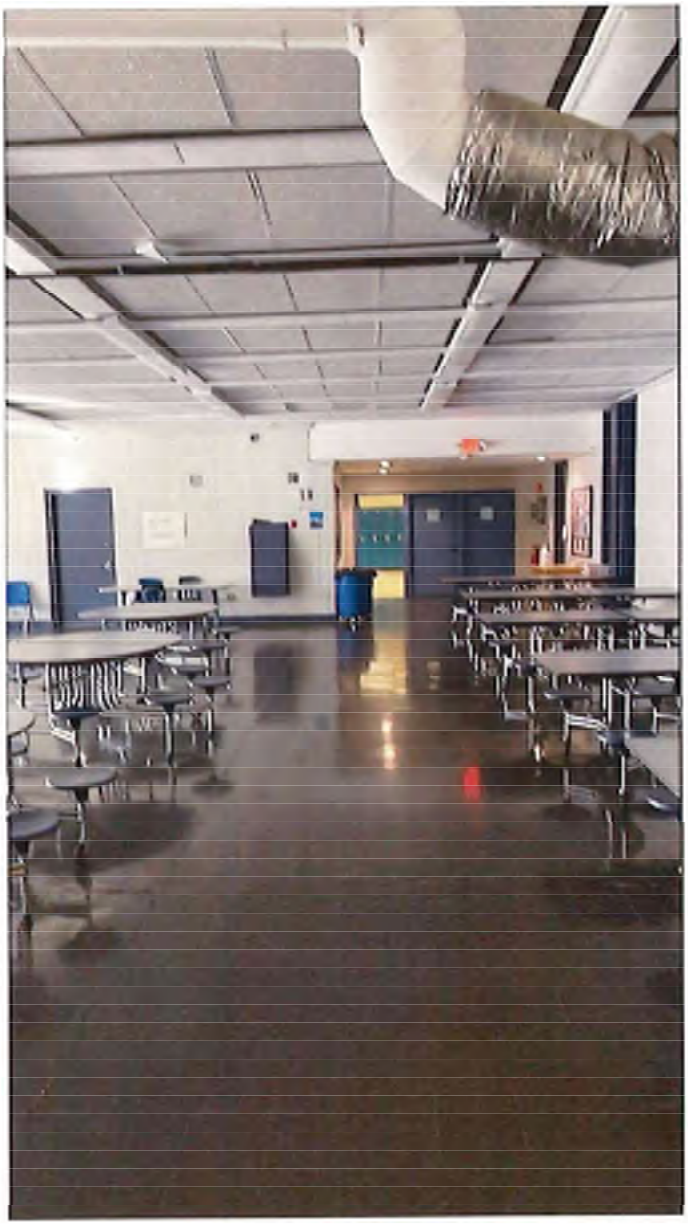
Administrative Space

Administrative wall assemblies were observed to be painted CMU and concrete walls, some of which had ceramic tile and wood panel finishes. Interior sealant joints were observed where painted CMU and concrete walls abut. Flooring was observed to be a combination of red quarry tile and 9" x 9" flooring tiles. which were installed during the original building construction. A variety of acoustic suspended ceiling tile assemblies were observed. Please refer to the EH&E Report (Appendix A) for more information on paint, sealants and caulking materials present in this location as it should be assumed hazardous materials are present.

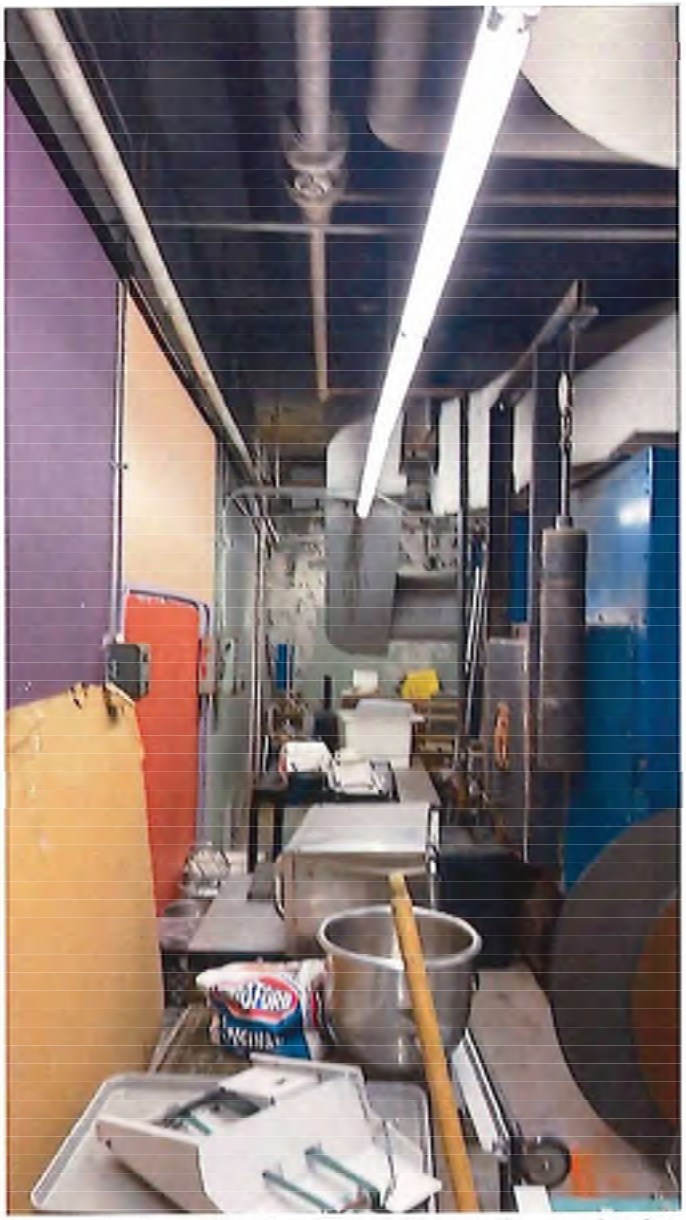
Cafeteria

Wall assemblies within the cafeteria were observed to be painted CMU and concrete walls, some of which had ceramic tile and wood panel finishes. Interior sealant joints were observed where painted CMU and concrete walls abut. Flooring observed in all locations were 9" x 9" flooring tiles which were installed during the original building construction. The cafeteria includes a suspended acoustical ceiling assembly.

Please refer to the EH&E Report (Appendix A) for more information on paint, sealants and caulking materials present in this location as it should be assumed that hazardous materials are present.



Incinerator Room



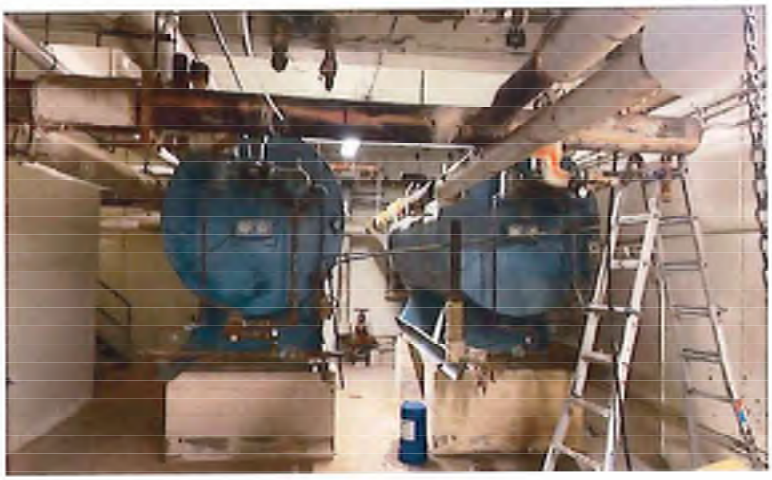
Wall assemblies were observed to be painted CMU and concrete. Interior sealant joints were observed where painted CMU and concrete walls abut. Flooring was observed to be finished concrete. **The incinerator was not working appeared to have been decommissioned over 20 years ago, however, no reports were identified or reviewed to assess the level of abatement completed.**

Please refer to the EH&E Report (Appendix A) for more information on paint, sealants and caulking materials present in this location as it should be assumed that hazardous materials are present.

Elevators

Three elevators were observed and included in this report. All have been maintained and were in working order, but in generally poor condition. The main elevator, located off the main entry lobby, is a hydraulic powered 3-stop cab which was installed during the Building's original construction. The service elevator, located next to the cafeteria, was also installed during the original construction. The cab was observed to be in working condition but has not been modernized and has had maintenance issues recently. The third elevator was also observed to be operational, but in poor working condition.

Mechanical Rooms



The main mechanical room located in Building D houses infrastructure for buildings A, B and D. The walls were observed to be painted concrete and CMU. Firestopping was observed to be incomplete on some of the wall elevations. The slab on grade is concrete with 3-4" equipment pads. On each day during the field inspection period significant amounts of water had pooled on the floor. It was reported that the origin of the water was a combination of equipment leaks and ground water seepage. **This standing water is of particular concern. Its origin is possibly related to hydraulic pressure from below the slab system. The under-slab drainage system should be assessed to confirm whether pockets of water or artesian wells are present below the building and are a contributing factor to the standing water in the main mechanical room.** Key pieces of equipment within the room included heat exchangers for buildings A, B and D; two decommissioned air handler units, domestic hot water tanks and pumps, boilers, electric motor control panels and transformers, the main chemical waste tank, the sprinkler standpipe servicing the new science wing on the third floor, and an obsolete pneumatic control system. All but the new domestic water equipment was observed to be installed at the time the Building was constructed, in poor condition and beyond useful life expectancy.





The school's boiler room provides hot water through facility. Three replacement boilers (2008, 2016) and a hot water system under construction during the site tour are housed within the space. The walls were observed to be painted concrete and CMU. The slab on grade is concrete with 3-4" equipment pads. The condition of the room and the existing equipment was poor the equipment is beyond its useful life expectancy.



4.3 Mechanical, Electrical, Plumbing & Fire Protection Systems

Mechanical (Refer to Appendix A - EH&E Report)



The building zones adjacent to the exterior of the Building were observed to be heated and ventilated by unit ventilators. Originally, the unit ventilators had cooling via a two-pipe change over system that received chilled or hot water from the central plant. The central chiller no longer operates. Please refer to the EH&E Report attached for further condition performance assessment.

The interior, or core area of each quadrant originally had cooling but no longer functions, due to lack of the central chiller being operational. The chiller, which was a steam absorption type, has failed in recent years and has not been repaired or replaced.

Reported deficiencies include dirty ductwork and clogged reheat coils which are contributing to poor indoor air quality. The classroom spaces also overheat in the warmer weather due to lack of air conditioning.

Air Handlers

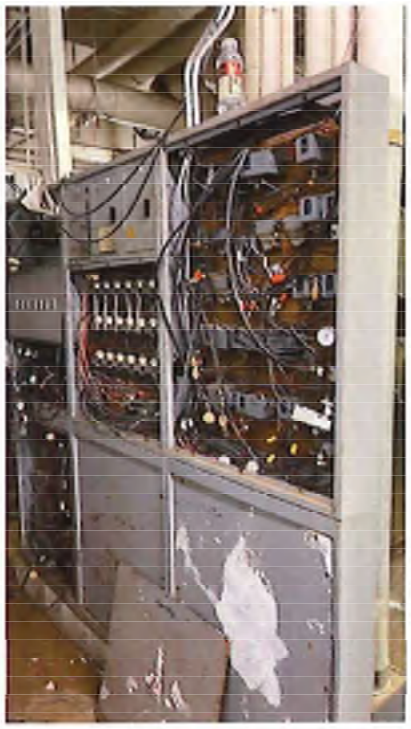
AHU 1 and AHU 2 were observed within the main mechanical room and were not operational at the time of our inspection. Both units were observed to be in poor condition and beyond useful life expectancy. Please refer to the EH&E Report attached for further condition performance assessment.

Heat Exchangers

The heat exchangers for buildings A, B and D were observed within the main mechanical room and were operational and functioning as designed, however, they were installed during the original construction of the building and are beyond useful life expectancy. The heat exchanger located in the C building mechanical room servicing that quadrant was observed in be in the same condition and beyond useful life expectancy. Please refer to the EH&E Report attached for further condition performance assessment.

Pneumatic Controls

The building's HVAC systems were observed to be controlled pneumatically. This system is considered obsolete and requires significant maintenance to be operational. The DDC panel installed to control AHU 1 and AHU 2 is no longer functioning. Please refer to the EH&E Report attached for further condition performance assessment.



Boilers

Three low-pressure steam boilers provide heating to the school. The boilers observed were replacements from the original construction; one in 2008, and two that were installed in 2014. All appeared to be good condition. The obsolete pneumatic controls system, DDC controls, and no building automation system (BAS) are hampering performance of the boilers. Please refer to the EH&E Report attached for further condition performance assessment.

Electrical

The main electrical room located in building D houses the electrical equipment servicing the building. The power distribution system including panels and feeders were observed to be installed during original construction of the building, beyond useful life expectancy and in poor condition.



The new science wing included installation of a new 480/277V lighting system, power and 208/120-volt receptacle, and power panels including associated feeders in conduit. Please refer to the EH&E Report attached for further condition performance assessment.

Fire Alarm

The building fire alarm system on the first and second floor was observed to have been installed during the original construction, in poor condition and beyond its useful life expectancy.

The third-floor fire alarm system was brough up to code in 2013 as part of the new science wing project. A complete, addressable fire alarm system was observed on this floor and in good working order.



Plumbing

The majority of the existing plumbing fixtures in the oldest sections of the Building (except in the new Science Wing) were observed to be in poor condition and beyond useful life expectancy.

The plumbing infrastructure for buildings A, B, and D are located within the main mechanical room. A new domestic hot water heater system was recently installed and in good working condition. The remaining infrastructure housed within the room was installed during the original construction of the building.

Domestic Water Service

The copper distribution piping for domestic cold and hot water throughout the Building was installed during the original construction of the building, in poor condition and beyond useful life expectancy as previously noted. During field observation it was noted by the staff that leaks are an ongoing problem throughout the Building.

Sanitary and Vents

New acid waste and vent piping was observed in the new science wing, in good working condition

Roof Storm Drainage

The existing storm water piping and roof drains were observed to be original to the Building, in poor condition and beyond useful life expectancy.

Please refer to the EH&E Report attached for further condition performance assessment.

Fire Protection

Except for the new science wing, the Building has no active fire suppression system. An automatic sprinkler system was installed to service the new science wing. Standpipes and sprinklers were observed to be supplied from a dedicated 8" water service, entering the building in the main mechanical room.

4.4 Information Systems

On Thursday, March 31st, 2022, a tour of The Building's Information Systems architecture was completed. CREF's Director of IT and Security, Christopher Wood, was escorted around the building by the Building's Network Administrator Allan Arena. Areas examined were the MDF closet in the Network Administrator offices and the IDF closets across the wings of The Building.



As an artifact of the Building's age, IT Infrastructure was added to the Building as technology changed and improved. The Building was not built with scaling technology in mind, and this is reflected in the performance of the systems. The Building's CMU block construction inhibits wireless communications and technologies and cannot be brought to modern specification without major construction.

The Building's IDF closets have been added to the structure ad-hoc and are not located in the optimal locations, do not have appropriate cooling/HVAC, and do not have enough dedicated power to support the infrastructure as it stands and cannot be upgraded. These deficiencies are liable to result in future outages and issues directly as a result of the ad-hoc nature of the installations (e.g., unshielded CAT5/6 cables running directly over equipment causing melting/breaks). The Building and will result in major infrastructure problems down the line.

As noted in other sections, the Building's construction is aging and beyond its useful life expectancy. This is also reflected in many of the IDF rooms where leaks are present. This jeopardizes both the infrastructure and the health of the employees, due to the noted hazardous material condition referenced in Appendix A.

4.5 Security System

The existing public address system was not evaluated or observed during the onsite inspection period. Proximity card readers were not observed to be installed. Exterior Doors (locked during school hours) were observed to be locked manually by key. This system is obsolete, and it is recommended that it is replaced.

4.6 Environmental

Please refer to the EH&E report in Appendix A.

4.7 ADA

Although an ADA assessment was not part of this scope of work, it is noted that the majority of the building construction is original to its 1971 design. Is does not comply with today's guidelines, and will be subject to all applicable codes, including but not limited to Massachusetts Code 521 CRM: Architectural Access Board Section 521 CMR 3.3.1 and/or Section 521 CMR 3.3.2.

5. Recommendations, Qualifications and Exclusions

Building Envelope

The majority of the building envelope components are past their useful life and in need of replacement for both performance and aesthetic reasons. The existing single-pane operable and fixed windows should be replaced by high-performance window systems that incorporate thermally broken, multi-pane glazing with low-e coatings and incorporate solar shading on the appropriate building exposures. At a minimum, the roofing should be replaced with a highly-reflective, light-colored roofing membrane with increased levels of roofing insulation, while some other sustainable options include providing a vegetated roof over part or all of the facility (depending on structural limitations), incorporation of skylights to bring more natural light to interior areas without windows, and installation of a rainwater capture system to provide water for interior grey-water use.

Interior Finishes

Interior finishes are largely outdated and many likely contain hazardous materials in the products themselves or the adhesives and sealants associated with them. Replacement will result in both visual and environmental improvements. The use of low-VOC paints and flooring will improve the indoor air quality while installation of durable, low-maintenance resilient flooring materials will also reduce maintenance time and expense. High-traffic areas can be updated with impact-resistant wall materials to further reduce maintenance needs and high acoustic value ceiling materials can be installed to improve noise control. There is a large number of finish options for all these surfaces and the final product selections will need to be evaluated based on a combination of first cost, life-cycle cost, durability, maintenance needs, "green" characteristics, and overall aesthetic impact.

Sustainability

Although a sustainability assessment was not conducted as part of this project scope, some energy conservation initiatives associated with future improvements and renovations will be significantly constrained by age and design of the school. It is clear that the building's infrastructure may require major upgrades, or full replacements in order to integrate sustainable systems. Additionally, architectural system upgrades to reduce energy consumption will also be significantly constrained.

Mechanical, Electrical, Plumbing, and Fire Protection

Please refer to Appendix A.

5c. Qualifications and Exclusions

CREF's assessment activities were intended as a preliminary review to identify problems and deficiencies; it was not intended to be a detailed analysis of the facility or its components. Although trained professionals exhibited a "standard of care," with this type of preliminary review it is possible that conditions may exist which will affect the performance of the facility, but which may not have been discovered during this review.

The scope of work specifically excluded obtaining and testing materials and CREF did not perform engineering calculations to determine the adequacy of the existing design.

This review was a non-destructive survey only and specifically excluded any investigative techniques such as moisture surveys, water intrusion testing, adhesion or cohesion testing, load testing, etc.. Testing to determine the presence of asbestos, radon, lead based paint, or other potentially hazardous materials was specifically excluded from our scope of work. Our work also excluded the dismantling or removal of casings, housings, insulation, and other enclosures to visually assess a building roof section. Our scope specifically excluded the dismantling or removal of building elements to visually assess building substrates, structural connections, or fasteners.
It was not CREF's intent to find every defect or make detailed remedial designs, but to identify obvious, visually apparent defects and to generally quantify the extent of the observed defect.

Additional Exclusions

- Comprehensive Fire Code Assessment
- Comprehensive ADA Compliance Assessment
- Comprehensive Safety and Security Assessment
- Environment, Social and Governance (ESG) Program Review

Appendix A: Environmental and HVAC System Review, Medford High School, Medford, Massachusetts (EH&E 25440)

Please see attached.

Environmental Health & Engineering, Inc.
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Newton, MA 02459-3328
TEL 800-825-5343
781-247-4300
FAX 781-247-4305
www.eheinc.com

March 31, 2022

Mr. Patrick Murphy
Vice President, Business Development & Strategy
Corporate Real Estate & Facilities, LLC (CREF)
200 High Street
Boston, MA 02110

RE: Environmental and HVAC System Review, Medford High School, Medford, Massachusetts (EH&E 25440)

Dear Mr. Murphy:

Environmental Health & Engineering, Inc. (EH&E) provides this report to Corporate Real Estate & Facilities, LLC (CREF) for the screening level environmental and heating, ventilating, and air conditioning (HVAC) system condition review conducted to support the evaluation of Medford High School (the Building) located at 489 Winthrop Street, Medford, Massachusetts. At the request of CREF, the EH&E project team has completed the characterization study to determine if building materials contain hazardous materials or are potentially contaminated with hazardous materials, the condition of primary components associated with the HVAC systems serving the Building, and energy utilization benchmarking. This information is intended for use by CREF and Medford to aid in the decision-making processes for the needs of the existing structure.

EXECUTIVE SUMMARY

- The Building likely contains significant quantities of hazardous building materials including asbestos, lead paint, and polychlorinated biphenyls (PCBs). The cost to fully remediate or mitigate the presence of hazardous building materials is estimated to exceed $10,000,000.
- The HVAC systems serving the third floor science classroom areas (installed circa 2012 as part of the third floor science classroom renovation project) appeared in good working condition as would be expected given they are relatively new.
- The HVAC systems serving the remaining areas of the Building (including the central air handling units and classroom unit ventilators) are original to the time of construction and appeared in very poor condition. A number of the systems inspected were not operating due to mechanical or control issues. These systems require a significant level of effort by facilities personnel to maintain operability and are in need of replacement, including overall fan systems and associated controls.

- Energy utilization benchmarking indicates the Building is more energy intense than average school buildings. The Building's 2021 EUI of 86.0 kilo (thousand) British thermal unit per square feet (kBtu/ft^2) is 77% higher than the national average of 48.5 kBtu/ft^2 for K-12 schools reported by Commercial Buildings Energy Consumption Survey (CBECS). For the Building to meet Mass Save's energy efficiency target for Zero-Net Energy Buildings of 25 kBtu/ft^2, energy intensity would have to be reduced by more than half.

HAZARDOUS MATERIALS

Hazardous materials review for this project consisted of a review of existing environmental reports, an initial site walkthrough, and preliminary visual assessment for presence of hazardous materials. The walkthrough and visual assessment for hazardous materials at the Building was conducted by EH&E during March 2022. In addition, EH&E utilized information gathered through conversations with personnel knowledgeable about the conditions within the Building.

During the course of EH&E's preliminary survey, four conditions were identified that will require ongoing management under an operations and maintenance (O&M) plan, pre-demolition abatement, or remediation. These conditions include:

- Known presence of installed asbestos-containing materials (ACMs) in many areas of the Building.
- Known presence of lead in paint on installed components throughout the Building.
- Known and suspect presence of several miscellaneous hazardous materials throughout the Building.
- Likely presence (did not confirm with testing) that installed building materials containing polychlorinated biphenyls (PCBs) exist in both accessible and concealed applications.

The following sections provide a summary of the key findings and recommendations from the assessment. Please note that this report is subject to the limitations in Appendix A.

Purpose

This analysis was prepared as a screening level guideline for evaluating hazardous materials associated with the Building and to facilitate initial project planning, sequencing, and abatement cost estimation. This document is not a specification or work plan for hazardous material removal, management, or disposal. A comprehensive specification for the removal, management, and disposal of identified hazardous materials will need to be drafted at a later date, at which time, bidding contractors will be required to verify all information regarding the presence, location, and quantity of hazardous materials or conditions including those listed in this preliminary analysis.

Overview of Hazardous Materials

During March 2022 EH&E conducted a screening level hazardous materials survey for building-related hazardous materials within the Building. An overview of the findings and conditions are provided as follows.

Asbestos-containing Materials (ACMs)

A summary of presumed ACMs and conditions are presented in the 2020 Asbestos Hazard Emergency Response Act (AHERA) report.[1] Significant quantities of friable and non-friable suspect materials that are confirmed and presumed ACMs have been identified as part of the AHERA report. Additional sampling and analysis of these materials is required to determine if they contain asbestos prior to disturbance. This will be accomplished through the completion of a National Emissions Standards for Hazardous Air Pollutants (NESHAPs) compliant asbestos inspection prior to any building renovation or demolition. The confirmed and presumed ACMs are located extensively throughout the interior of the Building. These materials are primarily associated with the 9" x 9" vinyl floor tiles and mastic, sink coatings, stage curtain, caulking in brick, window sills, breeching insulation, vibration cloth, caulking on interior windows, laboratory counter tops, and beige floor tiles and mastic. Currently these materials are managed under an operations and maintenance (O&M) plan.

It should be noted that locations in the Building where ACM is present, other potential hazardous materials can exist. Prior to conducting any work involving the removal of ACMs, other potentially hazardous materials must be appropriately addressed or controlled.

The U.S. Environmental Protection Agency (EPA) NESHAPs regulation, Title 40 Code of Federal Regulations (CFR) Section 61.145 requires, prior to building demolition or renovation, the removal and disposal of friable asbestos-containing building materials or those materials that will become friable as a result of demolition or renovation work. The Commonwealth of Massachusetts classifies materials as asbestos-containing materials (ACMs) when they contain greater than or equal to 1.0% asbestos. Trace concentrations (less than 1.0%) of asbestos require transport as ACM waste to an out of state facility. EH&E recommends that anyone handling building materials with trace concentrations of asbestos be properly notified of the material's asbestos status.

The existing inspections under the AHERA regulations require that friable materials be assessed for asbestos content and condition. They do not address concealed building materials that would be subject to disturbance during demolition. EH&E recommends that a comprehensive

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[1] Universal Environmental Consultants, *AHERA 2020 Three-Year Re-Inspection Report, High School, 489 Winthrop Street.*

NESHAPs inspection be performed prior to any renovation or demolition to characterize all building materials.

Cost estimates provided in the AHERA report and adjusted for inflation indicate that remediation of accessible ACMs in the Building with associated monitoring will cost approximately $1,050,000.

Lead-based Paint

Lead-containing paints and coatings were identified in the Building as part of a limited investigation prior to the Science Laboratory Renovation project in 2012/13. Prior sampling identified several paints with concentrations greater than 0.1 milligrams per square centimeter (mg/cm^2) of lead. The identified materials include maroon, brown, and tan paint on CMU block, red paint on a pegboard, and light brown paint in the stairwell. This survey was limited in scope to the Science Laboratory renovation area; however, it is likely that these paints are present in other areas of the Building. The 2012/13 inspection was conducted to support demolition and waste managment efforts, and was not designed to support child occupancy of the building. Massachusetts Department of Early Education and Child Care requires that if a program serves any child younger than five years old, the licensee must provide evidence of a lead paint inspection from the local board of health, or the Massachusetts Department of Public Health, or a private lead paint inspection service and compliance with the Department of Public Health regulations at Title 105 Code of Massachusetts Regulations (CMR) Section 460.000, *Lead Poisoning Prevention and Control.*

The evaluation conducted by EH&E in March 2022 does not constitute a compliance inspection as defined under Childhood Lead Poisoning Prevention Program (CLPPP) regulations and it is not currently known if lead-containing paint is present in all areas of the Building. Review of the CLPPP database indicates that a location at the Building underwent an initial lead paint inspection on January 1, 1998. The inspector was Diane Ciano (License #3146). No additional listings were present in the database for 489 Winthrop Street, Medford, MA. It is not clear that the inspection ("Unit 1013" in the database) was conducted in the daycare area; however, given the use of the building, it is a likely location for inspection. The report states "At the time of inspection there were lead hazard found on the property. The inspection showed areas that did not meet Massachusetts rules for lead safety. Lead paint was found in poor condition (chipping or peeling), or on areas of windows that could make dust, or in areas where young children could reach it."

In order to achieve compliance with lead regulation for areas of the Building occupied by young children under 5 years of age, if not already obtained, Medford should take action to obtain a current Letter of Full Deleading Compliance. Therefore, the cost estimate provided in this report

includes an allowance for lead inspection services. This work must be completed by a Massachusetts licensed lead inspector.

One option for de-leading compliance is to make these surfaces intact with simple encapsulation at an approximate cost of $5 – $8 per square foot (SF). If, to support renovation, full removal and disposal, the cost would be approximately $12 – $15 per SF. An additional cost of $1,800 – $2,500 is estimated for contractor mobilization. Cost estimates are summarized in Table 1:

Table 1 Summary of Estimated Costs for Lead Paint Remediation, Medford High School, Medford, Massachusetts

Remediation Activity Cost Item	Estimated Cost*
Inspection and Reporting	$14,000 – $20,000
Contractor Mobilization (Lump Sum)	$1,800 – $2,500
Surface Stabilization/Encapsulation ($5 -$8/SF)	$25,000 – $40,000
Full Removal ($12- $15/SF)	$60,000 – $75,000
Total Cost - Surface Stabilization/Encapsulation	$40,800 – $62,500
Total Cost - Full Removal	$75,800 – $97,500
Total	$40,800 – $97,500

SF square feet

* All costs are approximate and must be verified by bidding contractor(s). Estimated cost assumes remediation of 5,000 square feet of space in the Building.

Any contractor that will disturb, remove, or dispose of materials coated with paint, containing lead in any amount, is subject to the OSHA *Lead Construction Standard,* 29 CFR 1926.62. OSHA requires employers to provide a complete worker protection and exposure program for any renovation or demolition activities where lead is present in paint at any concentration. A hazard assessment must be completed to determine site-specific requirements for compliance. Programs must address respiratory protection and include personal air sampling for the various tasks being performed.

Lead-containing wastes must be removed and disposed in accordance with all applicable regulations. The concentrations of lead in painted waste materials are not considered highly elevated but will require proper characterization testing prior to disposal. This is typically performed using the Toxicity Characteristic Leaching Procedure to ensure proper disposal.

Miscellaneous Hazardous Materials

Various types of miscellaneous hazardous materials (potential PCB ballasts, mercury-containing light bulbs, refrigerants, transformers, etc.) were observed throughout the Building. These materials are required to be removed and containerized for proper management prior to disposal.

EH&E observed several suspect miscellaneous hazardous materials in the Building including:

- Fluorescent light tubes (both installed and in storage) that may contain mercury.
- Fluorescent light ballasts that may contain PCBs.
- Exterior lighting that may contain mercury or other heavy metals.
- Refrigerant in white goods, coolers, and heating, ventilating, and air-conditioning equipment.
- Lead-acid batteries associated with emergency exit signs.
- Lubricants for servicing compressors and mechanical equipment.

EH&E recommends proper handling and disposal of all miscellaneous hazardous materials prior to any renovation or demolition activities. Estimated cost for removal and disposal of miscellaneous hazardous materials is approximately $125,000.

PCB-containing Building Materials

Multiple exterior caulk applications were observed in transition and expansion joints and are assumed to be present in materials concealed under newer window systems. These sealants should be assumed to contain or cover previous materials installed during the PCB era. If present, the remediation and mitigation of PCBs will likely be the largest hazardous materials expense associated with renovations of the existing Building.

Polychlorinated biphenyls (PCBs) had numerous commercial applications before they were banned in the U.S. in 1978. Those uses included the addition of PCBs to building construction materials, such as adhesives, paint, and caulk. Numerous methods for abatement and mitigation are available. In September 2009, the EPA provided initial guidance to property managers, particularly administrators of schools, on approaches to managing potential exposures to PCBs in building materials. The guidance from EPA complements the requirements in Title 40 Part 761 of the Code of Federal Regulations for characterization and disposal of waste materials that contain PCBs. PCBs were reported to have been sold in the U.S. from 1958 through 1971 for use as plasticizers or as a component of numerous industrial products. The construction of the Building occurred during this time period.

The PCB regulations do not specify a schedule for determination of PCB-containing materials as waste or a timeline for remediation of PCB waste. This aspect of the regulations provides the opportunity for property owners to identify the remediation strategy that is most appropriate for a building with PCB containing materials. The costs of removing exterior PCB caulk and contaminated porous materials, primarily concrete, using hand and mechanical tools normalized to building size, can typically range between $9 to $18 per square foot of indoor building space. The variation in costs reflects many factors including the amount and accessibility of PCB-contaminated building materials and must be verified by bidding contractor(s). Estimated cost of PCB remediation of the Building range from $4,680,000 to $9,360,000.

Preliminary Cost Information Summary

Within the Building, different types of hazardous materials or conditions exist within the same area or location and, as a result, the means and methods to appropriately address such materials may overlap or conflict. Careful planning by the project team and execution by the contractor(s) selected to conduct work is critical in ensuring that the removal, containerization, and disposal of hazardous materials are conducted in a manner that does not impact the safety of people or create release of contaminants to the environment.

Preliminary cost estimates are included by remediation activity in Table 2.

Table 2 Summary of Estimated Costs for Hazardous Building Materials Remediation, Medford High School, Medford, Massachusetts

Remediation Activity Cost Item	Estimated Cost*
Accessible Asbestos Containing Building Materials (ACBM)	$900,000
ACBM Project Design, Monitoring and Air Sampling	$145,000
Polychlorinated Biphenyl (PCB)-containing Building Materials	$8,000,000
PCB-containing Soil	$750,000
Lead-based Paint Limited Areas for Child (less than 5) Occupancy	$97,500
Universal Waste and Refrigerants	$125,000
Total	$10,000,000

* All costs are approximate and must be verified by bidding contractor(s).

MECHANICAL AND PLUMBING SYSTEMS

Heating, Ventilating, and Air-conditioning Systems

HVAC service for Medford High School is provided through a combination of rooftop air handling units (AHUs), central AHUs, and unitary classroom unit ventilators (UVs).

The rooftop AHUs are approximately 10 years old and were installed as part of the 2012 renovation of the third floor science classrooms. These AHUs provide 100% outdoor air and are equipped with heat recovery systems. There are three rooftop AHUs in total, and all provide heating and cooling to the spaces served. The rooftop AHUs and associated systems appeared in good condition, and all appeared to be operational.

The central AHUs are original to the building (circa 1967-69) and were designed as mixed air systems delivering a combination of outdoor air and air recirculated from the occupied spaces. There are approximately 10 central AHUs in total, which provide service to interior zones within the facility including interior offices and classrooms, the auditorium and band areas, locker rooms, the kitchen, and the administrative offices. With the exception of the AHU serving the administrative offices, all central AHUs are designed to provide heating only through either a hot

water or steam heating coil. The AHU serving the administrative offices also provides cooling through a direct expansion cooling coil and an air-cooled condenser located on the roof.

The central AHUs appeared in poor condition and have exceeded their useful life. A number of the central AHUs were not operating at the time of inspection due to mechanical issues or control related problems. According to facilities staff, these units require constant maintenance to maintain operability and constant attention to ensure they are controlling properly. As currently operated, these AHUs are unable to consistently meet the year round thermal and ventilation needs of the spaces served and are in need of complete replacement, including fan systems and controls.

Spaces situated along the perimeter of the Building are ventilated and thermally conditioned with individual classroom unit ventilators. These units are floor mounted and located on the exterior wall of the space. The UVs are original to the building and provide a mixture of outdoor air and air recirculated from the space served. Outdoor air is provided to the UVs through a side wall outdoor air intake that is integral to the UV. The UVs provide heating only using a hot water heating coil. The UVs surveyed as part of the assessment are in poor condition and in need of replacement. Some UVs inspected were not operating and, therefore, are not providing appropriate ventilation to the spaces served.

Automatic temperature controls for the originally installed HVAC equipment, (including central AHUs and classroom UVs) is through a pneumatic control system. This control system is original to the building and is in generally poor condition. Further, this system does not allow for facility personnel to readily assess system control points or to be notified upon system or component failure. In addition, the pneumatic control system does not allow for facilities personnel to set system operational schedules and as such, systems are operated continuously 24/7. The control system for the rooftop AHUs and the associated systems included as part of the 2012 science classroom renovation project is through direct digital control. This control system is in good condition and allows for the maintenance of set points and operational scheduling.

There are multiple exhaust fans serving the facility, which provide general exhaust for classrooms and dedicated exhaust for specific areas including the gymnasium and locker rooms, vocational technical shops, toilet rooms, etc. Exhaust fans observed by EH&E as part of the March 2022 assessment showed that they appeared in relatively good condition.

Boiler and Heating Hot Water Systems

The heating system for the building comprises three low pressure steam boilers located in the boiler room on the northeast corner of the facility. The three boilers are relatively new and were a replacement of existing boilers. Two of the boilers were installed circa 2014 and the third boiler was installed circa 2007. All boilers appeared in good condition.

For heating hot water, low pressure steam from the boilers is provided to multiple steam to hot water heat exchangers located throughout the facility where the steam is used to generate hot water for AHU and classroom UV heating (note that a small number of the original AHUs are provided direct steam for heating). Hot water generated through the steam to hot water heat exchanges is distributed to the AHU and UV heating coils through hot water circulation pumps. Heat exchanger and hot water pumping systems appeared in fair condition and operational.

Domestic Hot Water Systems

The domestic hot water for the school is provided by two separate systems, one located within the first floor south mechanical room (serves about 60% of facility), and the second located in the second floor northwest mechanical room in the vicinity of the gymnasium and locker rooms (serves about 40% of facility).

The domestic hot water system located in the first floor mechanical room comprises a set of dedicated hot water boilers that provide hot water to a set of storage tanks. These systems appeared in good working order. The domestic hot water system located in the northwest quadrant of the facility comprises two steam to hot water storage tanks that are original to the building. These systems are provided plant steam to heat and maintain the temperature of water within the tanks. These tank systems are in the process of being replaced with a dedicated domestic hot water heating system similar to that in the south mechanical room.

OVERVIEW OF ENERGY UTILIZATION BENCHMARKING

Benchmarking energy use involves comparing a building's energy utilization to similar buildings in the region. The energy use of a building is dependent of the size, use of the space and operations. The Building has 532,000 ft^2 of floor area used for classrooms, administrative offices, a gymnasium, and a 25-yard indoor heated swimming pool. For school buildings, factors including the age of the building and energy intensive equipment may increase the Energy Use Intensity (EUI). EUI is the energy use of a building per square foot of space and is often used to compare energy use across buildings in the same way that miles per gallon is used to compare fuel economy across vehicles. The energy use and weather normalized EUI for the Building from 2014 to 2021 is shown in Figure 1. The EUI ranged from 55.6 to 86.0 kBtu/ft^2 over the past 8 years with an average of 67.3 kBtu/ft^2. The Building's 2021 EUI of 86.0 kBtu/ft^2 is 77% higher than the national average of 48.5 kBtu/ft^2 for K-12 schools according to the Commercial Buildings Energy Consumption Survey (CBECS).[2] In 2020, Boston K-12 Schools reported EUIs

[2] Energy Star. 2021. *Technical Reference: U.S. Energy Use Intensity by Property Type*. Accessed on March 28, 2022, from: https://portfoliomanager.energystar.gov/pdf/reference/US%20National%20Median%20Table.pdf

from 4.5 to 139.7 kBtu/ft^2, with an average of 52.7 kBtu/ft^2 (N = 137).[3] In 2020, the Building was less efficient than 82% of Boston K-12 schools. In the past 3 years, the Building's EUI has increased from 55.6 kBtu/ft^2 in 2018 to 86.0 kBtu/ft^2 in 2021, possibly due to increased ventilation demands in response to the COVID-19 pandemic. The trends in Building EUI indicate that energy use is increasing, and the Building is less energy efficient than the national and regional averages.

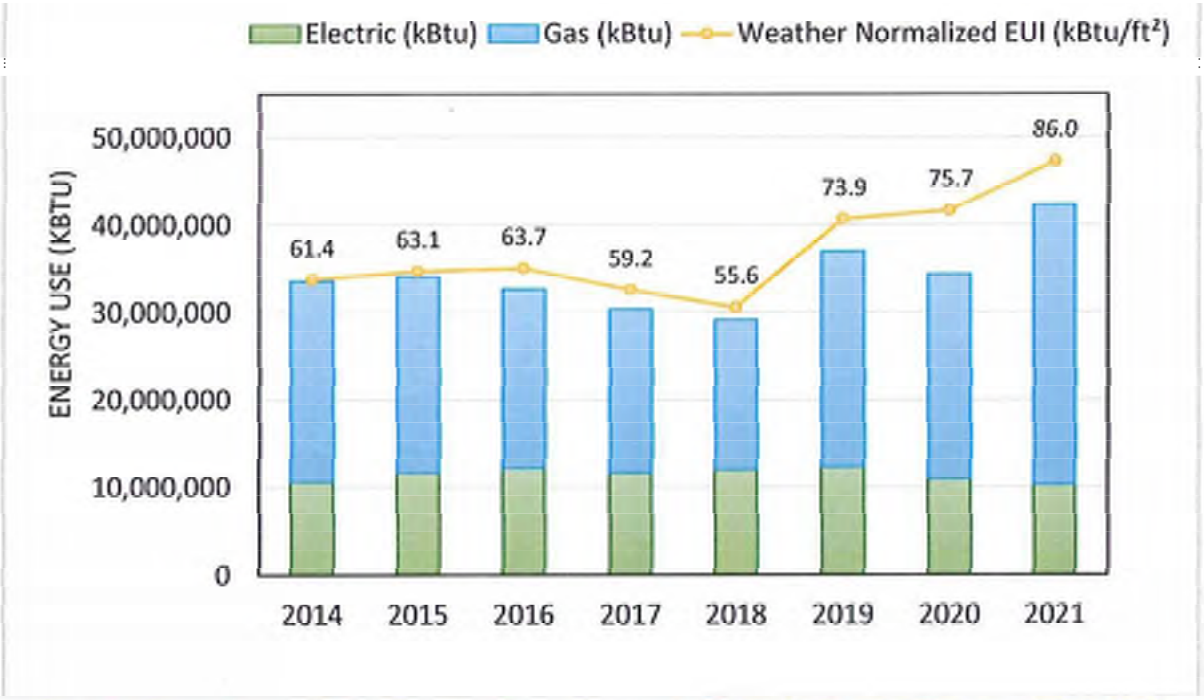


Figure 1 Energy Use and Weather Normalized Energy Use Intensity (EUI) for Medford High School from 2014 to 2021[4]

According to the U.S. Department of Energy, space heating and cooling and lighting account for approximately 70% of energy use in schools.[5] In 2021, the Building used 35.8 billion Btus of energy, 77.5% of which was from natural gas. Natural gas is primarily used in cooler months for heating, while electricity has many end-uses including lighting and space cooling in some parts of the Building. A 2009 study of 30 schools in Massachusetts assessed EUIs for fuel and electricity for standard and green buildings. The study reported an average fuel (gas and oil) use intensity of 42 kBtu/ft^2 (range 28 to 81 kBtu/ft^2) for standard schools compared to

[3] City of Boston. 2021. *2021 Reported Energy And Water Metrics.* https://data.boston.gov/dataset/b09a8b71-274b-4365-9ce6-49b8b44602ef/resource/a7b155de-10ee-48fc-bd89-fc8e31134913/download/2021-reported-energy-and-water-metrics.xlsx

[4] Gas bills for June 2020 and June 2021 were missing. Electric bills from May 2021 and June 2021 were missing. The gas usage for October 2019 was flagged as anomalous for being 16 times the average usage for the month of October.

[5] Energy Star. 2006. *Energy Star Building Manual: Chapter 10. Facility Type: K-12 Schools.* p. 3. Accessed on March 28, 2022 from: https://www.energystar.gov/sites/default/files/buildings/tools/EPA_BUM_CH10_Schools.pdf

34 kBtu/ft^2 (range 22 to 45 kBtu/ft^2) for green schools.[6] The gas intensity in 2021 for the Building was 60 kBtu/ft^2, which is 42% higher than the median for standard schools in Massachusetts. The electric EUI for the Building was lower than the median, likely due to the fact that most of the schools surveyed were built after 2000 and had air-conditioning in the entire building.

Energy efficiency in Massachusetts schools has improved over time due to state initiatives and energy saving projects. In March 2021, Massachusetts passed legislation to commit to net-zero emissions in 2050.[7] Several Massachusetts schools, have designed net-zero buildings, where the school produces as much energy as it consumes.[8] New construction or major renovation Zero-Net energy projects must have a target EUI of 25 kBtu/ft^2 or less.[9] For the Building to meet the energy efficiency target of 25 kBtu/ft^2, energy intensity would have to be reduced by more than half.

If you have any comments or questions, please contact either of us at 1-800-TALK EHE (1-800-825-5343).

Sincerely,

Matt A. Fragala, M.S., C.I.H., CSP
Managing Principal Consultant/Project Manager

Brian J. Baker, P.E.
Principal Engineer

Appendix A Limitations
Appendix B References

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[6] MRET and MSBA. 2009. *Massachusetts Green Schools: Post-Occupancy Study of Energy Efficiency.* p. 34. Accessed on March 28, 2022 from: https://chps.net/sites/default/files/MA_POStudy_FINAL_110509.pdf

[7] https://www.mass.gov/news/governor-baker-signs-climate-legislation-to-reduce-greenhouse-gas-emissions-protect-environmental-justice-communities#:~:text=The%20legislation%20signed%20by%20Governor,of%20no%20less%20than%2050%25

[8] https://www.massschoolbuildings.org/programs/story_of_a_building/Dec_2021

[9] Mass Save. *Commercial New Construction or Major Renovation Path 1: Zero-Net Energy / Deep Energy Savings.* Accessed on March 29, 2020 from: https://www.massschoolbuildings.org/sites/default/files/edit-contentfiles/Programs/Story_Of_A_Building/May_2021/New_Construction_Overview_Path1.pdf

APPENDIX A
LIMITATIONS

1. Environmental Health & Engineering, Inc.'s (EH&E) assessment described in the attached report number 25440, *Environmental and HVAC System Review, Medford High School, Medford, Massachusetts* (hereafter "the Report"), was performed in accordance with generally accepted practices employed by other consultants undertaking similar studies at the same time and in the same geographical area; and EH&E observed that degree of care and skill generally exercised by such other consultants under similar circumstances and conditions. The observations described in the Report were made under the conditions stated therein. The conclusions presented in the Report were based solely upon the services described therein, and not on scientific tasks or procedures beyond the scope of described services.

2. Observations were made of the site as indicated within the Report. Where access to portions of the site was unavailable or limited, EH&E renders no opinion as to the condition of that portion of the site.

3. The observations and recommendations contained in the Report are based on limited environmental sampling and visual observation and were arrived at in accordance with generally accepted standards of industrial hygiene practice. The sampling and observations conducted at the site were limited in scope and, therefore, cannot be considered representative of areas not sampled or observed.

4. When an outside laboratory conducted sample analyses, EH&E relied upon the data provided and did not conduct an independent evaluation of the reliability of these data.

5. The purpose of the Report was to assess the characteristics of the subject site as stated within the Report. No specific attempt was made to verify compliance by any party with all federal, state, or local laws and regulations.

APPENDIX B
REFERENCES

EPA 40 CFR 61.145. National Emissions Standards for Hazardous Air Pollutants. *Code of Federal Regulations*, Title 40, Part 61, Section 145, Standard for Demolition and Renovation. Washington, DC: U.S. Environmental Protection Agency.

EPA 40 CFR 763. Asbestos. *Code of Federal Regulations*. Title 40, Part 763, Subpart E, Asbestos-Containing Materials in Schools. Washington, DC: U.S. Environmental Protection Agency.

EPA 40 CFR 763.85. Asbestos. *Code of Federal Regulations*, Title 40, Part 763, Section 85, Inspections and Reinspections. Washington, DC: U.S. Environmental Protection Agency.

MADEP 310 CMR 7.15. Air Pollution Control. *Code of Massachusetts Regulations.* Title 310, Part 7, Section 15, Asbestos. Boston, MA: Commonwealth of Massachusetts, Department of Environmental Protection.

MADLS 453 CMR 6.14, The Removal, Containment or Encapsulation of Asbestos. *Code of Massachusetts Regulations,* Title 453, Part 6, Section 14, Work Practices and Other Requirements for Asbestos Response Actions, Boston, MA: Commonwealth of Massachusetts, Department of Labor Standards.

OSHA 29 CFR 1910. Occupational Safety and Health Standards. *Code of Federal Regulations.* Title 29, Part 1910. Washington, DC: U. S. Occupational Safety and Health Administration.

OSHA 29 CFR 1926. Safety and Health Regulations for Construction. *Code of Federal Regulations*, Part 29, Title 1926. Washington, DC: U.S. Occupational Safety and Health Administration.

OSHA 29 CFR 1926.62. Safety and Health Regulations for Construction. *Code of Federal Regulations*, Part 29, Title 1926, Section 62, Lead. Washington, DC: U.S. Occupational Safety and Health Administration

OSHA 29 CFR 1926.1101. Safety and Health Regulations for Construction. *Code of Federal Regulations*, Part 29, Title 1926, Section 1101, Asbestos. Washington, DC: U.S. Occupational Safety and Health Administration.

Medford Public Schools

489 Winthrop Street, Medford, Massachusetts 02155

From the Medford School Committee April 3, 2023

Resolved: Having convened in an open meeting on April 3, 2023, prior to the SOI submission closing date of April 14, 2023, the School Committee of the City of Medford, in accordance with its charter, by-laws, and ordinances, has voted to authorize Superintendent Marice Edouard-Vincent to submit to the Massachusetts School Building Authority the Statement of Interest Form dated April 2023 for Medford High School located at 489 Winthrop Street which describes and explains the following deficiencies and the priority categories for which an application may be submitted to the Massachusetts School Building Authority in the future.

The Medford School Committee hereby further specifically acknowledges that by submitting this Statement of Interest Form, the Massachusetts School Building Authority in no way guarantees the acceptance or the approval of an application, the awarding of a grant or any other funding commitment from the Massachusetts School Building Authority, or commits the City of Medford to filing an application for funding with the Massachusetts School Building Authority.

2023 Medford High School MSBA Core Program Statement of Interest Summary:

Replacement, renovation or modernization of school facility systems, such as roofs, windows, boilers, heating and ventilation systems, to increase energy conservation and decrease energy related costs in a school facility.

Having been originally constructed in 1970 and with substantial portions of the building's infrastructure dating from that time, Medford High School's (MHS) operating systems, including but not limited to its pneumatic-controlled HVAC systems, roofs, windows, plumbing, and electrical systems have long outlived their useful life expectancy and/or are in very poor working condition. In addition to major energy deficiency challenges posed by these antiquated systems, which were identified recently in a facilities condition assessment and accompanying follow up analysis, the MHS facility features suboptimal ADA accessibility, fire safety, security and technology infrastructure that would potentially be addressed through an MSBA partnership.

MPS seeks to submit this Statement of Interest to explore possible remedies to environmental challenges plaguing MHS attributable to highly antiquated systems like single pane windows and plumbing and heating systems that have too frequently proved inadequate to withstand the fluctuations in weather patterns that are inevitable in the greater Medford area. In addition to escalating and wasteful utilities expenses, extreme temperatures and leaky or burst pipes have yielded significant disruptions to learning environments for students and educators.

While these challenges have been persistent over an extended period of time, the volume and urgency of the challenges have grown exponentially since the Medford Public Schools submitted its previous State of Interest and participated in the MSBA's senior student visit process over the course of the last year. Three separate hallways have been forced to be shut down due to the detection of abnormal and potentially dangerous levels of asbestos attributable to broken floor panels. Despite the winter of 2022-2023 being relatively mild, the school's pattern of burst pipes has worsened with multiple major failures resulting in the flooding and forced closures of classrooms with costly and expedited repair projects a near constant phenomenon. Finally, multiple critical incidents requiring rapid responses from public safety officials, ranging from medical emergencies to two well-documented physical altercations between students, have laid bare the inherent safety and security deficiencies of Medford High School during the current and, as yet unfinished, school year.

As noted just one year ago when students returned to in-person learning in school year 2020 - 2021 after the pandemic-related shutdowns, MPS made a concerted effort to repair HVAC systems in order to meet heightened air quality standards that were believed to help mitigate the spread of COVID-19. These efforts along with an emphasis on fresh air to increase the frequency of air exchanges in confined spaces put additional pressure on HVAC systems that by virtue of their age alone were overly taxed. In the aforementioned report and studies, MHS was estimated to expend 77% more energy than an average American school facility. While MPS will continue to identify ways to identify energy efficiency strategies in the short term, the continued reliance on a 600,000 square foot facility that now houses a fraction of the student population it once did will continue to pose major challenges from an energy conservation perspective.

Finally, while frequent air quality testing and environmental analysis has continued to demonstrate that MHS is currently a safe environment for students and staff, the materials used to build the school over 50 years ago yield considerable challenges with respect to costs and the removal of hazardous materials in the event of significant repair work, which given the school's poor functioning electrical and plumbing infrastructure represents an ongoing considerable financial risk.

Replacement of or addition to obsolete buildings in order to provide for a full range of programs consistent with state and approved local requirements.

In 2017, after decades of functioning as two distinct schools housed in one building, the Medford School Committee voted to merge Medford High School and Medford Technical Vocational High School into one comprehensive high school featuring a broad array of academic and approved ch. 74 vocational programming. Since that time, MHS has seen an increasing number of students choose to commit to studying in one of Medford's 15 approved ch. 74 vocational programs, rising from 22% of the eligible students in school year 2017 - 2018 to 45% today. This increasing investment and interest on the part of Medford students and families in vocational programming

has made the full integration and cohesion of the entire school community an urgent priority for the Medford Public Schools.

In addition to the climate and logistical challenges posed by the environment deficiencies referenced above, the antiquated infrastructure of MHS has also posed instructional and enrollment challenges in light of the increasing competitiveness of the school's vocational programs. Several of the ch. 74 programs lack adequate related classroom space, which significantly diminishes educators' ability to convene groups of students to engage in focused discussions on the disciplines they are learning. In addition, several programs, including but not limited to Health Assisting and Electrical, have found their enrollments necessarily capped due to a scarcity of space in their labs and shops.

In addition to the district's inability to provide seats in existing programs commensurate with the level of interest, an analysis by the Metro North Workforce Board has urged the consideration of the development of additional ch. 74 programs including but not necessarily limited to Plumbing, Animal Science, Dental Assisting, and Information Support Services/Networking. Given the exploding popularity of the school's existing programs, and the interest being expressed in these and other prospective programs, there is a compelling basis to consider the development and adoption of programs that will position students to gain mastery of these workforce-sustaining educational pathways.

In addition to the need to meet the demands of the Medford community by offering a full complement of vocational programming, MPS is eager to consider ways to more fully integrate what were once two schools into a comprehensive school community so students can leverage a diverse array of academic and vocational programming in an environment that is well-suited to meet their instructional needs. To that end the aforementioned environmental deficiencies that lead to wildly fluctuating temperatures and classes that are routinely relocated to other sections of the building due to burst pipes, damaged heating coils, or failing technology systems has become an all-too-common distraction to the educational environment that MHS students require. During the current school year alone, multiple vocational programs have seen major disruptions to their instructional sequencing due to significant leaks in their lab or shop areas. Further, multiple guidance offices have been forced to temporarily relocate due to the persistence of the leaking during inclement weather. In addition to these types of distractions, the building's culture is negatively affected by an antiquated architectural structure in which over one third of the learning environments offer either no or virtually no natural light.

Students have frequently described their flagship school as bleak with a persistent sense of foreboding that is exacerbated by multiple undersized cafeterias that cause supervisory challenges to staff and logistical challenges for students seeking fresh and hot meals. Venues that should serve as hospitable gathering places for the school community like the auditorium and lecture halls are instead associated with constantly malfunctioning HVAC systems that diminish both opportunities for learning and the overall school culture.

Finally, while the district has invested in staffing and security cameras to help ensure the school's physical safety, the lack of optimal security infrastructure constitutes a subtle but persistent distraction to students. This too is not a problem in the abstract. On multiple occasions during the first half of the 2022 - 2023 school year, school administrators and public safety officials were forced to respond to in-school emergencies for which the school's cavernous scale and deficient technologies posted obstacles both with respect to immediate response and subsequent investigatory steps.

These deficiencies are indicative of how the school's aging and deteriorating infrastructure has affected both the development of educational programs and the capacity for students and staff to thrive from a teaching and learning perspective within those programs.

Signed by the Chair of the Medford School Committee, Mayor Breanna Lungo-Koehn

City of Medford

OFFICE OF THE CITY CLERK

City Hall - Room 103
85 George P. Hassett Drive
Medford, Massachusetts 02155

Telephone
(781) 393-2425
FAX: (781) 391-1895

Adam L. Hurtubise
City Clerk
ahurtubise@medford-ma.gov

April 12, 2023

Mr. James A. MacDonald
Chief Executive Officer
Massachusetts School Building Authority
40 Broad Street
Boston, MA 02109

Dear Mr. MacDonald:

On April 11, 2023, the Medford City Council voted to approve Paper **23-090**, the MSBA Statement of Interest on behalf of Medford High School. The vote to approve the paper was seven in favor and zero opposed.

I have included with this letter a certified copy of the Council Paper, including a certified record of the vote total.

I have also included the Seal of the City of Medford on this letter.

Thank you for your attention to this matter. Please feel free to contact me if you have any questions.

Sincerely yours,

Adam L. Hurtubise
City Clerk

Medford City Council

11-23 4-11-23 2023

Paper # 23- 090

Subject: Support Ltr iNBD Applic

	YES	NO	ABSENT
Sc Lewis Public			
Sc. Lewis VICE PRESIDENT BEARS	✓		
COUNCILLOR CARAVIELLO	✓		
COUNCILLOR COLLINS	✓		
COUNCILLOR KNIGHT	✓		
COUNCILLOR SCARPELLI	✓		
COUNCILLOR TSENG	✓		
PRESIDENT MORELL	✓		
TOTAL	7	0	

IN CITY COUNCIL, APRIL 11, 2023

23-090

April 5, 2023

Via Electronic Delivery
To the Honorable President and
Members of the Medford City Council
Medford City Hall
Medford, MA 02155

Re: MSBA Statement of Interest

Dear President Morell and Members of the City Council:

I respectfully request and recommend that your Honorable Body approves the Massachusetts School Building Authority (MSBA) Statement of Interest on behalf of Medford High School that has been prepared by the Medford Public Schools for consideration for the MSBA's Core Program. This submission is in follow up to the March 27th letter you received from the Superintendent of Schools.

Superintendent Marice Edouard-Vincent will be available at your meeting should there be any questions or additional information that members would like to obtain.

Thank you for your consideration.

MSBA REQUIRED FORM OF VOTE TO SUBMIT STATEMENT OF INTEREST

Resolved: Having convened in an open meeting on April 11, 2023, prior to the SOI submission closing date, the City Council of the City of Medford, in accordance with its charter, by-laws, and ordinances, has voted to authorize Superintendent Marice Edouard-Vincent to submit to the Massachusetts School Building Authority the Statement of Interest Form dated April 2023 for Medford High School located at 489 Winthrop Street which describes and explains the following deficiencies and the priority categories for which an application may be submitted to the Massachusetts School Building Authority in the future.

The Medford City Council hereby further specifically acknowledges that by submitting this Statement of Interest Form, the Massachusetts School Building Authority in no way guarantees the acceptance or the approval of an application, the awarding of a grant or any other funding commitment from the Massachusetts School Building Authority or

commits the City of Medford to filing an application for funding with the Massachusetts School Building Authority.

2023 Medford High School MSBA Core Program Statement of Interest Summary:

Replacement, renovation or modernization of school facility systems, such as roofs, windows, boilers, heating and ventilation systems, to increase energy conservation and decrease energy related costs in a school facility.

Having been originally constructed in 1970 and with substantial portions of the building's infrastructure dating from that time, Medford High School's (MHS) operating systems, including but not limited to its pneumatic-controlled HVAC systems, roofs, windows, plumbing, and electrical systems have long outlived their useful life expectancy and/or are in very poor working condition. In addition to major energy deficiency challenges posed by these antiquated systems, which were identified recently in a facilities condition assessment and accompanying follow up analysis, the MHS facility features suboptimal ADA accessibility, fire safety, security and technology infrastructure that would potentially be addressed through an MSBA partnership.

MPS seeks to submit this Statement of Interest to explore possible remedies to environmental challenges plaguing MHS attributable to highly antiquated systems like single pane windows and plumbing and heating systems that have too frequently proved inadequate to withstand the fluctuations in weather patterns that are inevitable in the greater Medford area. In addition to escalating and wasteful utilities expenses, extreme temperatures and leaky or burst pipes have yielded significant disruptions to learning environments for students and educators.

While these challenges have been persistent over an extended period of time, the volume and urgency of the challenges have grown exponentially since the Medford Public Schools submitted its previous State of Interest and participated in the MSBA's senior student visit process over the course of the last year. Three separate hallways have been forced to be shut down due to the detection of abnormal and potentially dangerous levels of asbestos attributable to broken floor panels. Despite the winter of 2022-2023 being relatively mild, the school's pattern of burst pipes has worsened with multiple major failures resulting in the flooding and forced closures of classrooms with costly and expedited repair projects a near constant phenomenon. Finally, multiple critical incidents requiring rapid responses from public safety officials, ranging from

medical emergencies to two well-documented physical altercations between students, have laid bare the inherent safety and security deficiencies of Medford High School during the current and, as yet unfinished, school year.

As noted just one year ago when students returned to in-person learning in school year 2020 - 2021 after the pandemic-related shutdowns, MPS made a concerted effort to repair HVAC systems in order to meet heightened air quality standards that were believed to help mitigate the spread of COVID-19. These efforts along with an emphasis on fresh air to increase the frequency of air exchanges in confined spaces put additional pressure on HVAC systems that by virtue of their age alone were overly taxed. In the aforementioned report and studies, MHS was estimated to expend 77% more energy than an average American school facility. While MPS will continue to identify ways to identify energy efficiency strategies in the short term, the continued reliance on a 600,000 square foot facility that now houses a fraction of the student population it once did will continue to pose major challenges from an energy conservation perspective.

Finally, while frequent air quality testing and environmental analysis has continued to demonstrate that MHS is currently a safe environment for students and staff, the materials used to build the school over 50 years ago yield considerable challenges with respect to costs and the removal of hazardous materials in the event of significant repair work, which given the school's poor functioning electrical and plumbing infrastructure represents an ongoing considerable financial risk.

Replacement of or addition to obsolete buildings in order to provide for a full range of programs consistent with state and approved local requirements.

In 2017, after decades of functioning as two distinct schools housed in one building, the Medford School Committee voted to merge Medford High School and Medford Technical Vocational High School into one comprehensive high school featuring a broad array of academic and approved Ch. 74 vocational programming. Since that time, MHS has seen an increasing number of students choose to commit to studying in one of Medford's 15 approved Ch. 74 vocational programs, rising from 22% of the eligible students in school year 2017 - 2018 to 45% today. This increasing investment and interest on the part of Medford students and families in vocational programming has made the full integration and cohesion of the entire school community an urgent priority for the Medford Public Schools.

In addition to the climate and logistical challenges posed by the environment deficiencies referenced above, the antiquated infrastructure of MHS has also posed instructional and enrollment challenges in light of the increasing competitiveness of the

school's vocational programs. Several of the Ch. 74 programs lack adequate related classroom space, which significantly diminishes educators' ability to convene groups of students to engage in focused discussions on the disciplines they are learning. In addition, several programs, including but not limited to Health Assisting and Electrical, have found their enrollments necessarily capped due to a scarcity of space in their labs and shops.

In addition to the district's inability to provide seats in existing programs commensurate with the level of interest, an analysis by the Metro North Workforce Board has urged the consideration of the development of additional Ch. 74 programs including but not necessarily limited to Plumbing, Animal Science, Dental Assisting, and Information Support Services/Networking. Given the exploding popularity of the school's existing programs, and the interest being expressed in these and other prospective programs, there is a compelling basis to consider the development and adoption of programs that will position students to gain mastery of these workforce-sustaining educational pathways.

In addition to the need to meet the demands of the Medford community by offering a full complement of vocational programming, MPS is eager to consider ways to more fully integrate what were once two schools into a comprehensive school community so students can leverage a diverse array of academic and vocational programming in an environment that is well-suited to meet their instructional needs. To that end the aforementioned environmental deficiencies that lead to wildly fluctuating temperatures and classes that are routinely relocated to other sections of the building due to burst pipes, damaged heating coils, or failing technology systems has become an all-too-common distraction to the educational environment that MHS students require. During the current school year alone, multiple vocational programs have seen major disruptions to their instructional sequencing due to significant leaks in their lab or shop areas. Further, multiple guidance offices have been forced to temporarily relocate due to the persistence of the leaking during inclement weather. In addition to these types of distractions, the building's culture is negatively affected by an antiquated architectural structure in which over one third of the learning environments offer either no or virtually no natural light.

Students have frequently described their flagship school as bleak with a persistent sense of foreboding that is exacerbated by multiple undersized cafeterias that cause supervisory challenges to staff and logistical challenges for students seeking fresh and hot meals. Venues that should serve as hospitable gathering places for the school community like the auditorium and lecture halls are instead associated with constantly

malfunctioning HVAC systems that diminish both opportunities for learning and the overall school culture.

Finally, while the district has invested in staffing and security cameras to help ensure the school's physical safety, the lack of optimal security infrastructure constitutes a subtle but persistent distraction to students. This too is not a problem in the abstract. On multiple occasions during the first half of the 2022 - 2023 school year, school administrators and public safety officials were forced to respond to in-school emergencies for which the school's cavernous scale and deficient technologies posted obstacles both with respect to immediate response and subsequent investigatory steps.

These deficiencies are indicative of how the school's aging and deteriorating infrastructure has affected both the development of educational programs and the capacity for students and staff to thrive from a teaching and learning perspective within those programs.

Very truly yours,

Mayor Breanna Lungo-Koehn

Medford Public Schools

March 27, 2023
489 Winthrop Street, Medford, Massachusetts 02155 Dr. Marlce Edouard-Vincent, Superintendent of Schools

Medford City Council % President Nicole Morrell
85 George P. Hassett Drive, Room 207
Medford, MA 02155

Re: Upcoming MSBA Core Program Application

Dear President Morrell and Honorable Members of the Medford City Council:

As you may recall, one year ago the Medford Public Schools submitted to your honorable body a request for authorization to submit a Statement of Interest to the Massachusetts School Building Authority (MSBA) on behalf of Medford High School. We were delighted in the summer of 2022 when we learned that representatives from the MSBA would be conducting what is known as a "senior student" visit to MHS, which occurred in October of 2022. While we ultimately did not move forward to the next stage of the process last year, known as the eligibility period, we were both heartened and

encouraged when the MSBA communicated to us our hope that we would resubmit our application during the application period for 2023. It is for that reason that we will, via a mayoral communication, submit to you at your first meeting in April the required statutory language in the hope that you will again authorize the submission of our SOI.

The Statement of Interest (SOI) is a preliminary step in seeking support from the MSBA to examine our community's options with respect to the future of Medford High School. It does not commit the city to any specific plan or course of action, nor would acceptance of the SOI necessarily represent a commitment on the part of the MSBA to support a specific strategy with regard to either extensively renovating or potentially rebuilding Medford High School. However, in order to get into the MSBA's pipeline for consideration of a potential project, submission of the SOI is a necessary first step. For that reason we have engaged in ongoing consultations with experts in the field of school construction and rehabilitation, specifically vendors with significant experience and involvement in other successful MSBA projects, to determine how to best position our application for favorable consideration by the MSBA. As I relayed to you last year at this time, should we be successful, there will be a lengthy, inclusive, and professionally guided process by which to determine the potential options before the Medford community.

It is not uncommon for communities to advocate before the MSBA for projects over a period of years, and in addition to 2022, your honorable body unanimously approved applications like this in 2018 and 2019. I again would respectfully ask for your support. Thank you as always for your continued support of the Medford Public Schools.

Yours in Continued Partnership,

Marice Edouard-Vincent

Dr. Marice Edouard-Vincent,
Superintendent of Schools

CC: Medford School Committee

Councillor Collins moved to waive reading of the paper in lieu of a synopsis from the Superintendent (Councillor Caraviello second)—approved.

Addressing the Council:

Dr. Marice Edouard-Vincent, Superintendent of Schools

Councillor Knight moved for approval (Vice President Bears second)—approved on a roll call vote of seven in favor and zero opposed.

Department of Elementary and Secondary Education
Massachusetts School Building Authority
Chapter 74 Vocational Technical Education Viability Documentation

Date: Jun 25, 2024

School District (the "District"): Medford Public Schools

Superintendent: Dr. Marice Edouard-Vincent

Author(s) of the Chapter 74 Viability Form (Name, Title): Jenny Graham MCHSBC Chair, Dr. Peter J. Cushing Assistant Superintendent of Enrichment and Innovation, Chad Fallon Director of Medford Vocational Technical High School

This form and other information and evidence referenced herein must be submitted as a component of all Massachusetts School Building Authority (https://massschoolbuildings.org/about) projects that include plans to:

- Continue to offer existing Chapter 74 state-approved Vocational Technical Education (VTE) programs;
- Expand the size of, contract the size of, or close existing Chapter 74 state-approved Vocational Technical Education (VTE) programs; and/or,
- Add new Chapter 74 state-approved Vocational Technical Education (VTE) programs.

Completed forms and attachments should be returned to the MSBA Project Coordinator.

NOTE: The information provided by MSBA applicants does not eliminate the requirement to engage the MA Department of Elementary and Secondary Education's Chapter 74 New Program Application process in its entirety **in the year prior** to the proposed program's opening. However, submission of this information will allow DESE to provide MSBA with a "**viability**" letter that would result in a potential recommendation that the MSBA Board of Directors vote to authorize the district to proceed into the schematic design phase of the building project.

A. Overview of Chapter 74 Programs

1. **General Information.** Complete the table below for all current and proposed Chapter 74 Programs to be considered for inclusion in the proposed project.

Chapter 74 Program Offerings	2023 - 2024 Enrollment	Proposed Capacity /Applicable School Year	Comment*
Existing			
Automotive Tech	30	40 FY26	In addition to space needs, the district will need an additional teacher to reach expanded capacity. See attached for School Committee approval.
BioTechnology	17	30 FY26	
Business Marketing	19	20 FY26	Space limitations
Carpentry	20	30 FY26	
CCL - Construction & Craft Laborers	39	45 FY26	
Cosmetology	24	37 FY25	In addition to space needs, the district will need an additional teacher to reach expanded capacity. See attached for School Committee approval.
Culinary	34	35 FY25	
Early Childhood	18	30 FY26	

Electrical	40	60 FY26	In addition to space needs, the district will need an additional teacher to reach expanded capacity. See attached for School Committee approval.
Graphic Design	18	20 FY25	
Health Assisting	32	50 FY27	In addition to space needs, the district will need an additional teacher to reach expanded capacity. See attached for School Committee approval.
Media Tech	29	40 FY26	
Metal Fabrication	12	15 FY26	The district will need an additional teacher to reach expanded capacity in the area of 30 students. Space is not currently an issue for expansion.
Robotics & Engineering	34	40 FY26	
Programming and Web Design	23	20 FY25	
Grade 9 Exploratory	298	300 (EST)	
Proposed New			
Dental Assisting	N/A	24, FY29	Plan to begin programming before the new HS; timeline dependent on DESE approval and budget allocation
Veterinary Science	N/A	24, FY28	Plan to begin programming before the new HS; timeline dependent on DESE approval and budget allocation
Criminal Justice/Protective Services	N/A	Proposed Capacity 30, FY26	Dual enrollment opportunity with Bunker Hill Community College
Plumbing/HVAC		24, New High School	The Plumbing CTE program cannot begin before space is available in the new HS.
Information Systems - OT/Networking - Cyber Security		24, FY27	Plan to begin programming before the new HS; timeline dependent on DESE approval and budget allocation
Total	687	938	

** Indicate whether the program is an existing program, proposed to be expanded, a new program, a program to be scaled down, or program to be discontinued.*

2. **School Committee Support.** Provide a copy of the school committee meeting minutes, which include language and outcome of the vote regarding the Chapter 74 Programs to be studied as part of the feasibility study for the proposed project.

   Medford Response:
   Expansion plans were presented to the School Committee on 5/20/2024. See the attached presentation. Motion by Member Graham for the School Building Committee to explore the program expansions and new programs outlined in the SBC feasibility study, second by Member Reinfeld - 7/0 passed

B. <u>If Expanding the Size of Existing Chapter 74 Programs</u>

1. **General Information.** Please provide the name of your district, and the existing Chapter 74 program(s) you are proposing to expand in conjunction with this MSBA project.

   Medford Response:

Medford Public Schools seeks to expand several CTE programs due to waitlist data compiled over several years. We are seeking expansion in the following Chapter 74 programs: Automotive Technology, Cosmetology, Electrical, and Health Assisting. These programs historically are over-subscribed and a waitlist is generated. See above for proposed expansion plan. The School Committee approved the expansion plan unanimously at the 5/20/2024 School Committee Meeting.

2. **Student Demand.** Please provide evidence of increased student demand for the Chapter 74 programs you propose to expand. The best source of data for this would include recent waitlist trend data for both entrance to the school (which will provide evidence for the expansion of 9th grade exploratory) and in student selection of programs after completing exploratory.

   Medford Response:
   Currently, we have 687 students participating in a CTE program (including CTE Exploratory). Due to enrollment constraints, we are not able to offer any seats to out-of-district students, which we have done in many of the past years. The practice of admitting out-of-district students ended in school year 23/24 due to enrollment constraints. For the programs listed as "Expanded," we have reviewed waitlist data for the past five years, which demonstrates the need for expanded CTE opportunities across programs. Many always have more requests than seats available (noted in the chart above).
   - School year 21/22 - 14
   - School year 22/23 - 65
   - School Year 23/24 - 47

C. **If Adding New Chapter 74 Programs**

1. **General Information.** Please provide the name of your district, and the new Chapter 74 program(s) you are considering applying for in conjunction with this MSBA project.

   Medford Response:
   Medford Public Schools is seeking new program approval in the following Chapter 74 program areas: Criminal Justice, Dental Assisting, Information Systems, Plumbing/HVAC, and Veterinary Science.

2. **Alignment with Regional Workforce Development Priorities and Critical Industries and Occupations.** The Governor's Office and DESE seek to ensure that Chapter 74 program approvals align with regional workforce needs. The Department encourages Chapter 74 program applications that:
   - Align with regional occupational priorities as outlined in the state's MassHire regional workforce development Blueprints; and
   - Demonstrate evidence of consultation and collaboration involving regional MassHire Boards (formerly Workforce Investment Boards); school districts, including regional vocational technical school districts and, where applicable, county agricultural school districts; postsecondary educational institutions; and other key regional stakeholders as appropriate.

   Proposed programs that do not align with priorities and critical needs as outlined in a regional Blueprint may still be viable, if they are accompanied by an analysis of need that is grounded in labor market demand, student demand, and support from the stakeholders listed above.

REGION 1: Berkshire - Includes Berkshire Workforce Area REGION 2: Pioneer Valley - Includes Franklin/Hampshire and Hampden Workforce Areas REGION 3: Central Massachusetts - Includes North Central and Central Massachusetts Workforce Areas REGION 4: Northeast - Includes Greater Lowell, Lower Merrimack and North Shore Workforce Areas REGION 5: Greater Boston - Includes Boston (Private Industry Council), Metro North, and Metro South/West (Partnerships for a Skilled Workforce) Workforce Areas

REGION 6: Southeast - Includes South Shore, Brockton, Bristol, and New Bedford Workforce Areas
REGION 7: Cape Cod and Islands - Includes Cape Cod and Islands Workforce Area

Does the Chapter 74 program (or programs) you are considering align with a priority industry sector and/or occupation for your region of the Commonwealth for the next 5 to 10 years?

Medford Response:
The Medford High School CTE program plans to add Veterinary Science, Criminal Justice, Plumbing, Dental Assisting, and Information Services, all of which align with the following statements:

☒ Yes, the program(s) we are considering align with a priority or critical **industry and occupation** within the region. Again, this is true for Veterinary Science, Criminal Justice, Plumbing, Dental Assisting, and Information Services based on our industry sector research.

3. **Labor Market Demand.** If the proposed program does not align with regional priorities or critical industries and occupations outlined in Question 2 above, it is the obligation of the applicant to make a compelling case for the viability of the program with respect to labor market demand. If you were able to answer 'Yes' to any of the conditions described in Question 2 above, no further labor market demand information is required.

Medford Response:
Not Applicable

4. **Student Demand.** Please provide preliminary evidence of student demand for the proposed new programs (this could include recent waitlist trend data, waitlist data for similar/proximate programs, and student demand for the new program(s) statewide and regionally). This is particularly important for proposed new capital-intensive programs such as those in the Agriculture and Natural Resources, Construction, or Transportation Clusters, or a program like Advanced Manufacturing.

Medford Response:
On Monday, May 20, 2024, District and School leadership presented evidence-based expansion plans to the Medford School Committee that align with our regional blueprints and local demand. The presentation is included as an appendix to this document. Of 332 survey responses from our 7th and 8th grade students:

- 83.1% expressed interest in adding Criminal Justice Protective Services to our vocational portfolio
- 66.9% expressed interest in adding Information Systems to our vocational portfolio
- 52.1% expressed interest in adding Dental Assisting to our vocational portfolio
- 59.8% expressed interest in adding Plumbing/HVAC to our vocational portfolio

5. **Consultation with Industry, MassHire Boards, and Postsecondary Partners.** New Chapter 74 programs under consideration must be planned in consultation with industry experts and postsecondary partners. The formal Chapter 74 application process requires the formation of Program Advisory Committee (see Program Advisory Committee for VTE Form). For the purposes of a MSBA project, preliminary consultation with your MassHire board, associated industries, and higher education representatives (where applicable) in your region is sufficient. Please provide evidence that this consultation has occurred and that such consultation included information about workforce and job development demands or job market trends and student demand.

Medford Response:

Three separate meetings were conducted (4/21/24, 5/1/24, 5/8/24) with our local MassHire agency for the purposes of aligning our new and expanded CTE program opportunities with local employment needs as well as what occupations are seen as "critical" to the industry over the coming years. A labor market data request was completed by the representatives at MassHire, which allowed us to see current data to support our plan to open new Chapter 74 programs that meet the demands of our region. As we reviewed potential program additions, we consulted our regional blueprints and viewed the hiring demand for each. We have worked with DESE on program expansions in the past and are prepared to comply with DESEs requirements around program advisory committees.

6. **Consultation with other potential providers of Chapter 74 programs in your region.** Please provide a description of any consultation that has already been conducted, along with consultation that is planned. See specific consultation expectations in the Consultation Appendix to guide your description.

Medford Response:
Our consultation with schools in our region has been limited to startup costs, startup planning, and survey consultation for developing a student survey of interests.

D. Consultation Appendix. Please review and address all parts that apply to your situation.

1. For Districts that are Members of Regional Vocational Technical Schools

Medford Response:
Not Applicable

DESE requires that applicant school districts that are members of regional vocational technical school districts consult, and provide evidence of consultation, with the regional vocational technical school district.

This expectation applies regardless of whether the program under consideration duplicates one currently available within the regional vocational technical school district. Consultation between school districts considering new Chapter 74 programs and the regional vocational technical school districts to which they belong is intended to encourage cooperation in the provision of technical programming, the coordination of efforts, and strategic alignment with regional workforce needs.

A. Please specify the regional vocational technical school district of which the prospective applicant is a member.

B. Does the program(s) you are proposing duplicate one currently offered at the regional vocational school district indicated above?

- ☐ No
- ☐ Yes

C. Have you engaged in discussions with the regional vocational technical school district regarding your consideration of the program(s) indicated above with respect to your MSBA project?

- ☐ No
- ☐ Yes, and I'm attaching additional documentation of these discussions

2. For Regional Vocational Technical Schools

Medford Response:
Not Applicable

DESE requires that regional vocational technical school districts consult, and provide evidence of consultation, with all member cities and towns. This expectation applies regardless of whether the program(s) under consideration duplicates ones currently available within any member cities and towns. Consultation between the regional vocational technical school districts and member cities and towns is intended to encourage cooperation in the provision of technical programming, the coordination of efforts, and strategic alignment with regional workforce needs.

A. What are the member cities and towns that comprise the regional vocational technical school district?

B. Have you engaged in discussions with all cities and towns that are members of your regional vocational technical school district regarding your consideration of the program(s) indicated above in relation to an MSBA funding application?

- ☐ No
- ☐ Yes, and I'm attaching additional documentation of these discussions

3. For Districts located within Bristol, Essex or Norfolk Counties:

Medford Response:
Not Applicable

NOTE: DESE requires that applicants consult, and provide evidence of consultation, when the Chapter 74 program(s) under consideration duplicates one already offered at Bristol County Agricultural High School, Essex North Shore Agricultural and Technical High School, or Norfolk County Agricultural High School in the same county. Consultation between school districts considering creation of Chapter 74 programs and the county agricultural school districts is intended to encourage cooperation in the provision of agricultural programming, the coordination of efforts, and strategic alignment with regional workforce needs.

A. Is your school district located within Bristol, Essex or Norfolk County?

Medford Response:
No

B. Are any program(s) you are proposing identical to a Chapter 74 program currently being offered at your Agricultural High School?

Medford Response:
Not Applicable

C. Have you engaged in discussions with your Agricultural High School regarding your consideration of the program(s) indicated above in relation to an MSBA funding application?

- ☐ ***Medford Response:***
- ☐ Not applicable.

4. For all applicants: Duplicating Programs Offered at High Schools in Close Proximity

NOTE: DESE requires that applicants consult, and provide evidence of consultation, when the Chapter 74 program(s) under consideration duplicates one already offered in another school district at a school in close proximity. Consultation between school districts considering creation of Chapter 74 programs and school districts offering the identical program at a school in close proximity is intended to encourage cooperation in the provision of technical programming, the coordination of efforts, and strategic alignment with regional workforce needs. DESE suggests the following geographical boundaries to assist districts in determining "close proximity" as follows:

- For school districts in areas east of Route 495, any Chapter 74 programs within 5 miles of the proposed Chapter 74 program(s)

- For school districts west of 495, to the east border of Berkshire County, any Chapter 74 programs within 10 miles of the proposed Chapter 74 program(s)
- For school districts in Berkshire County, any Chapter 74 programs within 20 miles of the proposed Chapter 74 program(s)

A. *Are any of the programs you are proposing identical to a Chapter 74 program currently being offered in another school district in a school in close proximity?*

Medford Response:
Yes

B. *What are the names of the school districts currently offering identical Chapter 74 programs at a school in close proximity?*

Medford Response:
- *Somerville High School*
- *Cambridge Rindge & Latin*

C. *Have you engaged in discussions with the school district(s) with schools in close proximity offering the same program regarding your consideration of the program indicated above in relation to an MSBA funding application?*

Medford Response:
No, we have not engaged in discussion with the school district(s) indicated above. The schools noted above currently limit their enrollment to students from their own city. Similarly, Medford's focus is to provide programming to Medford resident students. Survey data from our students indicates that offering this programming will fulfill the unmet needs of the students of Medford.

Massachusetts School Building Authority

School District Educational Profile Questionnaire (the "Questionnaire")

Date June 30, 2024

Name of School District (the "District"): Medford Public Schools

Name of Priority Statement of Interest School: Medford High School

Author(s) of the Educational Profile Questionnaire (Name, Title):
Marice Edouard-Vincent, Superintendent
Suzanne B. Galusi, Assistant Superintendent
Peter J. Cushing, Assistant Superintendent
Joan Bowen, Director of Pupil Services
Marta Cabral, Principal
Chad Fallon, Career Technical Education Director

As part of the District's invitation into the Eligibility Period, the MSBA is seeking the following information as a way to confirm what the District provided in its 2023 Statement of Interest and discussions during the Senior Study, and to further inform our understanding of the School District's facilities, teaching methodology, and program offerings.

SECTION ONE: District-wide Facilities

A. Please confirm the following pre-populated MSBA 2016 School Survey information for all public schools in the District using a "Y" for accurate and "N" for not accurate. Additionally, please complete any non pre-populated information.

School Name	Grades originally intended to be served in the school facility	Grades currently served in the school facility	Year Founded	Last Add or Reno Year	Total GSF	Y/N
Brooks Elementary School	PreK-5	PreK-5	2003	N/A	99,000	Y
Missituk Elementary Schoo	PreK-5	PreK-5	2003	N/A	91,000	Y
Curtis-Tufts High School	9-12	9-12	1924	N/A	18,800	Y
John J. McGlynn Elementary School	PreK-5	K-5	2001	N/A	80,000	Y
John J. McGlynn Middle School	6-8	6-8	2001	N/A	106,090	Y
Madeleine Dugger Andrews Middle School	6-8	6-8	2001	N/A	104,040	Y

School Name	Grades originally intended to be served in the school facility	Grades currently served in the school facility	Year Founded	Last Add or Reno Year	Total GSF	Y/N
Medford High		Pre-K, 9-12	1970	2013 Science Wing	330,000	Y
Medford Voc Tech High V&A-HS	9-12		1970	N/A	84,509	Y
Milton Fuller Elementary Roberts School	PreK-5	PreK-5	2003	N/A	91,000	Y

B. Using the space below, please describe how students progress from grades K to 12 (e.g. students from North Elementary School attend East Middle School, students from South Elementary School attend West Middle School, and students from both middle schools attend ABC High School). Additionally, please update any inaccurate School Survey data that was pre-populated.

Medford Public Schools encompasses a total of four (4) elementary schools (PreK-5), two (2) middle schools (6-8), and one (1) high school (9-12) which includes a separately located therapeutic high school (Curtis-Tufts) (9-12). At the elementary level (K-5), students are typically assigned to a specific school based on their residential address. However, exceptions may be made for those needing specialized programs, such as Special Education or English Language Learner programs (Language-Based, Learning Group, Access, Therapeutic Learning Program, Connections, Newcomer).

For the transition from grade 5 to grade 6, a lottery is conducted to determine middle school placement, with students being assigned to either McGlynn Middle School or Andrews Middle School. Again, exceptions exist for students requiring specialized programming, who are instead assigned based on programming needs rather than through the lottery process.

At the close of 8th grade, all students are automatically assigned to Medford High School. This school serves students in grades 9-12. Based on need, students are enrolled in Medford's therapeutic high school programming, Curtis-Tufts, which serves students in grades 9-12.

All students in grade 9 are scheduled to participate in Freshmen Exploratory which allows students to rotate through all CTE Programs during quarters 1 and 2, except for those at Curtis-Tufts. For students interested in one of our vocational programs, they then select their top three choices for grades 10 - 12 pathways. Students are placed in one of their top 3 CTE choices. If all of those CTE choices are full, then the students are waitlisted and invited to join the program once space becomes available. See Medford's Chapter 74 Viability Form for additional details.

SECTION TWO: Current Priority Statement of Interest School, Medford High School

A. Please complete the chart below indicating the number of each room type currently in the Medford High School. Please use the Comments column to further describe a program, if applicable.

ROOM TYPE	No. of Rooms (e.g. N/A, 1, 2, etc.)	Comments
CORE ACADEMIC SPACES		
Pre-Kindergarten (indicate full/ half day in the Comments column)	2	1 classroom each in both the Make Way for Kids and Kids' Corner programs
Kindergarten (indicate full/ half day in the Comments column)	N/A	
Grade 1	N/A	
Grade 2	N/A	
Grade 3	N/A	
Grade 4	N/A	
Grade 5	N/A	
Grade 6	N/A	
Grade 7	N/A	
Grade 8	N/A	
Math (Grades 9-12)	14	
Science/ General Classroom (Grades 9-12)	1	
Science Lab/ Demonstration (Grades 9-12)	17	
Social Studies (Grades 9-12)	13	
English (Grades 9-12)	14	
World Language (Grades 9-12)	10	
Other (indicate program in the Comments column)	17	5 English Learner ELA, 1 English Learner Math, 1 English Learner Science, 1 English Learner Social Studies, 1 room for professional development/meetings, 8 IT closets (servers, switches & other IT Spaces)
SPECIAL EDUCATION	39	19 classrooms, 20 small service spaces
ART	3	
MUSIC	13	3 Classrooms, 1 Music Library, 1 Music Tech Lab, 8 Instrument Storage Rooms
Practice Rooms	8	
HEALTH & PHYSICAL EDUCATION	18	
Adaptive PE Spaces	0	Adaptive uses same spaces as other PE/Health classes
Gymnasiums/fields/pool/fitness center/gymnastics room/classrooms	18	2 gyms, 2 fields, 1 fitness center/weight room, 1 gymnastics room, 1 Athletic Director Office, 1 Assistant Athletic Director/Director of Physical Education and Health Office, 1 Administrative Assistant Office,

ROOM TYPE	No. of Rooms (e.g. N/A, 1, 2, etc.)	Comments
		3 Health / Physical Education Classrooms, 2 Batting Cages, 1 Athletic Training Room, 1 - 8 Lane Swimming Pool, 1 Boys PE Locker Room, 1 Girls PE Locker Room
MEDIA CENTER	32	1 large workroom with librarian's office, 2 small workrooms with 1 attached office, 3 storage closets/rooms, 1 office with a work area for an assistant, 1 office/workroom for technician, 3 classrooms, 1 small lab with an office, 1 large lab with 1 office, 4 offices with closets, 1 former darkroom now being used for storage, 1 small storage closet, 1 large storage room for equipment, 1 presentation room, 1 computer science classroom, 1 large lab with 25 workstations, 1 small interior classroom, 1 Director's office, 1 small office with closet, 2 small, windowless offices, 1 CCSR presentation space, 1 Makerspace, 1 main library room for over 100 chairs, and 12 Mac workstations - one wall is all window facing the inner courtyard with high top tables and bean bag seating for students.
DINING & FOOD SERVICE	3	There are 3 cafeterias 1 Main Kitchen 3 Serving lines
MEDICAL SUITE	1	Medical Suite with nurses' office
Nurses' Office	6	1 main office with waiting area and administrative space, 1 storage space, 2 treatment spaces, 1 confidential nurse office, 1 bathroom with shower
ADMINISTRATION & GUIDANCE	47	3 House Office Suites include the following (3x10): • 1 AP office • 5 Counseling offices • 1 Storage Room • 1 Conference Room • 1 Administrative Assistant

ROOM TYPE	No. of Rooms (e.g. N/A, 1, 2, etc.)	Comments
		Space/Waiting Room • 1 Special Education/Director Office 1 Main Office that includes the following (1x11): • 1 Principal Office • 1 Associate Principal Office • 1 Security/Camera Office • 1 SRO Office • 1 Kitchenette • 1 Vault for record storage • 1 main waiting room with space for 2 administrative assistants • 1 Conference room • 1 Counseling office • 1 Office for Attendance Office.Engagement Specialist • 1 Director of Humanities Office 1 CTE Main Office that includes the following (1x6): • 1 CTE Director Office • 1 waiting room with space for 2 administrative assistants • 1 Grants office • 1 storage closet • 1 Special Education Office • 1 Counseling Office
OUTDOOR LEARNING	0	
AUDITORIUM	4	3 lecture halls, 1 large hall that has approximately 350 seats and serves as a performance auditorium despite having substandard electrical, seating, and theatrical performance options.
NATATORIUM	1	Medford High School has an 8-lane swimming pool. **(Also Listed Above)**
DESE APPROVED CHPT 74 SPACES	26	Auto Technology + Related Classroom, Biotechnology, Business Marketing, Carpentry + Related Classroom, Construction and Craft Laborers + Related Classroom, Cosmetology + Related Classroom, Culinary Arts + Related Classroom, Early Childhood Education + Related Classroom, Electrical + Related Classroom, Engineering and Robotics + Related Classroom,

ROOM TYPE	No. of Rooms (e.g. N/A, 1, 2, etc.)	Comments
		Graphic Design + Related Classroom, Health Assisting + Related Classroom, Media Technology + Related Classroom, Metal Fabrication, Programming and Web Design,
NON-CHPT 74 ENRICHMENT PROGRAM SPACES	0	
NON-SCHOOL DISTRICT SPACES	0	
OTHER (indicate type of program in the Comments column)	36	1 lab for Project Transition program as well as the Living Lab (mock apartment for Project Transition students ages 18-22), 6 classrooms for Kids' Corner: A district-provided daycare facility for school and municipal employees. (There are also spots for community children to attend.), 1 classroom for Make Way for Kids: A preschool program organized and run by the Medford High School Vocational Program servicing community children ages 2.8 to 5 years, 20 offices for Central Administration Office wing consists of: Finance Department, Human Resource Department, Buildings & Grounds Department, Communications Manager, Superintendent, 2 Assistant Superintendents, Director of Student Services, and our district Data Analyist, 2 conference rooms for central administration, 2 classrooms for Medford Family Network: (Organization that provides wrap-around services to community families and their children from birth to age 8), 4 offices for Medford Family Network

B. Describe how 1) core spaces, 2) specialty spaces, and 3) non-traditional spaces described above are currently used (e.g. multiple schools operating in a single building, the library also serves as Special Education pull out space, the cafeteria doubles as a gymnasium, etc.)

Medford High is adjacent to the Middlesex Fells Reservation, managed by the state Department of Conservation and Recreation, with nearly 1km of shared boundary of the natural environment, forming a vital element of the School's visual character. The School's elevated position also offers stunning views of the Boston skyline.

The Medford High School campus includes traditional core academic spaces (classrooms/laboratories), specialty spaces, and non-traditional spaces (lecture halls, a Gym with a Pool, and three student cafeterias that function as swing spaces when necessary). The campus also includes an integrated Career &

Technical Education/Vocational program that shares all common spaces.

Core spaces

Currently, core academic spaces are used by teachers who remain in their classrooms throughout the day. They do not travel to other spaces except for teachers who co-teach in general education classrooms/settings, as the campus lacks specialty teaching spaces. Medford High School offers college preparatory, honors, and advancement placement courses. Additionally, Medford High School partners with Bunker Hill Community College, where students can enroll in college-level courses for credits toward graduation.

Vocational teachers who lead an individual program occupy two spaces: their classroom and their related shop. Medford High School offers departmental courses based on the MassCore and the Massachusetts Chapter 74 Frameworks for Career Technical Programs.

Specialized spaces

- Theater: Medford High School does not have an auditorium or large enough space to gather students together as a single community. It does have a theater space that houses our theater and music programs and course offerings. The theater is used daily for classes and doubles as a meeting space as needed by Medford Public Schools. Despite its deficient technology, there is high community demand for the space when school is not in session.
- Athletics Complex: Amidst the forested backdrop of the Middlesex Fells Reservation, Medford High School currently offers indoor and outdoor athletic facilities for activities such as swimming, basketball, volleyball, soccer, and lacrosse. These facilities include an 8-lane, 25-yard-long indoor swimming pool, a 270 by 110-foot indoor gymnasium, and the outdoor Edgerly Sports Complex, a 7.5-acre turf field.
- Indoor Swimming Pool: During the school day, the pool is used during physical education classes, including certification of all students to meet a Medford graduation requirement, and for our swim team. This pool serves the entire community and supports many programs, including lifeguard training, swim lessons, lap swimming, water aerobics, private rentals, and neighboring community/private swim teams.
- Indoor Gymnasium: The 270 by 110-foot indoor gym is used throughout the day for Physical Education classes. It doubles as a space for school-incorporated movement breaks, which require the use of dividers to separate the space, including during lunch periods. It hosts High Schoolers and community activities year-round. The facility has a four-lane indoor track, but the surface has deteriorated and is no longer suitable for competitive use.
- Associated accessory facilities: These include boys' and girls' locker rooms/showers, a gymnastics room with a gymnastics floor, pommel horse, vault, beam, and other associated gymnastics equipment, three athletics offices, an athletic trainer room with examination tables, therapeutic whirlpools and storage facilities for equipment, two batting cages, and a fitness center weight room combination space. These spaces currently have a high energy use intensity factor (as indicated in the EH&E report, 2022).
- Edgerly Sports Complex: The Medford Field of Dreams is an outdoor complex with 2 regulation soccer/lacrosse turf fields and a grass football practice field. It does not contain an outdoor track. The turf field was installed in 2010 and is comprised of turf and crumb rubber. The facility is not accessible according to today's ADA standards.
- Media Center: The large and spacious library has been repurposed in many ways since it opened

in 1970 and now houses several additional specialized spaces. The Media center houses several district administrative offices, our Center for Citizenship and Social Responsibility (CCSR) program that encourages student-directed community service projects, our maker space, our district technology center, computer science classrooms, and a traditional library/media center space. It once housed a darkroom that has since become a storage closet. Media Center: The library is also used for the following purposes due to lack of space:

  - CTE classroom space due to the lack of space in the vocational wing
  - State and National assessment space for students to take tests

- Project Transition Living Lab: This is a mock apartment for students with disabilities ages 18-22 who are enrolled in Project Transition. The curriculum is focused on individual students' transition from school to adult life. This space allows students to learn and generalize daily living skills, community-building skills, and vocational skills required for when they exit the program at age 22.
- Kids' Corner: A joint effort by the district and city to provide a daycare program for the children of Medford's school and municipal employees. The program contains six classrooms (young infant, older infant, young toddler, older toddler, preschool, and PreK) for children aged 2 months to 5 years. We also ensure space is available for high school students who require childcare throughout the school year.
- Medford Early Education Program (MEEP): Originally housed in the Medford High School building, but due to various space constraints over the years, programming is now housed in each of our elementary schools. MEEP is our inclusive preschool program designed to serve students with and without disabilities. MEEP serves students ages 3 through 5 who are not yet eligible for kindergarten. There are up to 15 children in each class. Up to seven students in each class are students with disabilities whose IEP Teams have placed them in that specific classroom. Up to eight students in each class are students without disabilities who enter through the application process.

Non-traditional/Other Spaces

- Lecture Halls: Due to the lack of appropriate space, Lecture Halls are used to cover teacher absences because the district lacks adequate substitute teachers to cover all absences. Instead, the lecture halls are staffed, and multiple classes simultaneously report to the same space. There, students are expected to access Google Classroom and complete any work assigned by their teacher.
- Administrative Offices: The public school system's central office is housed within Medford High School. This includes the Superintendent, Assistant Superintendents, Finance and Payroll, Communications, Human Resources, Buildings and Grounds, Parent Information Center and Registration, Department Offices of English Learners, Special Education, Nursing and Health, and Curriculum Directors.
- Community Usage: Medford High School is actively used by the community via our rental program for our theater space, gymnasium, pool, cafeteria, and library space to hold meetings, practices, and performances, our foyer to host special events, and individual classrooms for group and club meetings. Rental fees cover the costs of maintenance and staffing to support the events. There are some evening programs that take advantage of our vocational shops and community interested in an expanded offering.
- Medford Family Network (MFN): MFN is a citywide organization housed at Medford High

School that provides wrap-around services to community families and their children from birth to age 8.

- Parent Information Center: The PIC serves as a central hub for the school district and provides a wide range of important services. It includes the registration office, EL Department, Special Education Department, Family and Community Engagement Office, and the Nursing Department. The Parent Information Center assists families and caregivers as they navigate their transition into the school system. It serves as a valuable resource for addressing any questions or needs that may arise, ultimately providing vital support to ensure a smooth and successful experience within the district.

C. Using the space below, provide information about Medford High School's current teaching methodology (e.g. technology integration, self-contained classroom, team teaching, project based, departmental, or cluster). Include class size policies and, if applicable, scheduling particulars.

Teaching Methodology

- General Education: Medford High School's current teaching methodologies resemble a more traditional approach to instruction due to the lack of modern classroom space and cooperative and project-based learning spaces. With the merger of Medford High School, which included the previously separate vocational school in 2017, the configuration and landscape of the building could not be integrated, and the current configuration is not conducive to collaboration between CTE and core academic classes. At this time, Medford High School supports and encourages project-based learning. However, this approach is currently restricted by the space available and isolated within traditional classroom spaces and the library. Lastly, departmental cohesion has been impacted by the location of classrooms, which impedes collaboration within departments.
- Special Education sub-separate and inclusion classes: Medford High School offers co-taught inclusion classes that include two teachers (a general education teacher and a special education teacher). Additionally, special education delivery services range from co-teaching and resource room classes to self-contained programs for students with disabilities in Grades 9-12. The self-contained classes include Learning Group, Language Based, Therapeutic Learning program, ACCESS, and Project Transition. Our Special Education methodology consists of the following:
    - Massachusetts Curriculum Frameworks adapted for instruction at the entry skill level. There is a focus on ILS, self-determination, vocational, community, and communication skills.
    - Small group/individual special education instruction outside the general education classroom with explicit instruction in all academic areas.
    - Periodic small group instruction to preview, review, clarify, and reinforce general education content through scaffolded, multi-sensory repetition and modeling, as well as structured assistance in organizing and managing materials and planning long-term assignments.
    - A therapeutic learning environment that utilizes an interdisciplinary approach toward learning, with therapeutic interventions and social skills training enmeshed within the curriculum and during day-to-day school activities. Access to in-the-moment intervention is available on an as-needed basis. Inclusion of a clearly defined classroom structure that incorporates individual self-management learning opportunities built on a positive behavior support structure

- English Learners: Each English Learner student is placed in our English Language Education

(ELE) program, designed to meet their English Language Proficiency (ELP) level, as determined by assessments in Reading, Writing, Listening, and Speaking in English.

- Our ELE model is a Sheltered English Immersion (SEI) structure that includes English as a Second Language instruction taught by a licensed ESL teacher and Sheltered Content Instruction taught by a dual-certified or SEI-endorsed content teacher.
- Medford High School has five ESL-level classes in addition to content classes in Life Science, Biology, World History, US History, and Integrated Mathematics for newcomer students. We also have literacy classes and a foundational math class for students who have had interruptions in their education.
- All English learner students participate in electives and exploratory classes with their peers and can participate in all extracurricular and sports activities.

Technology Integration

All Technology needs are integrated into classrooms ensuring the following:

- All students are 1:1 with a school-issued Chromebook
- All staff are issued a school MacBook Air
- Classrooms are equipped with a projector; some classrooms have promethean boards that are on mobile carts.
- Currently, Medford High School does not have interactive smartboards, sound system(s) in classrooms, or landline phones in individual classrooms.
- Due to the structure and age of the building, reliable access to the Internet is an ongoing issue across the campus.

Class Size Policies and Scheduling Practices

The collective bargaining agreement between Medford Public Schools and the Medford Teachers Association states that academic subjects have an average maximum amount of 25 students per teacher, while vocational teachers have an average maximum of 18 students.

Medford has long had two disparate schedules servicing the traditional high school and vocational schools. The schedules limit access to programming for vocational students in particular and restrict enrollment in the arts and foreign languages. We have completed an assessment of how to integrate the schedule and intend to adopt the new schedule in Fall 2025. The new schedule will maintain flexibility to allow co-op assignments for our Juniors and Seniors in particular vocational programs AND create access to the arts and foreign languages. We anticipate significant benefits for our students in traditional high school programming, including enhanced elective offerings.

SECTION THREE: Proposed Priority Statement of Interest School, Medford High School

A. Please complete the chart below indicating the number of each room type proposed, if known at this time. The District should modify the included grades in the 'Room Type' column to reflect any grade configuration(s) the District is interested in studying during Feasibility Study, as already presented to the MSBA in the 2023 Statement of Interest and as discussed during the District's Senior Study. In a case where the District is considering multiple grade configurations, the widest grade span should be included (i.e. if the District is interested in studying their current 1-4 configuration, a K-5 configuration, and a K-8 configuration, the 'Room Type' column should include all grades between Grade K and Grade 8).

ROOM TYPE	No. of Rooms (e.g. N/A, 1, 2, etc.)	Comments
CORE ACADEMIC SPACES		
Pre-Kindergarten (indicate full/ half day in the Comments column)	11	5 dedicated to full-day programs 6 dedicated to half-day programs
Kindergarten (indicate full/ half day in the Comments column)	N/A	
Grade 1	N/A	
Grade 2	N/A	
Grade 3	N/A	
Grade 4	N/A	
Grade 5	N/A	
Grade 6	N/A	
Grade 7	N/A	
Grade 8	N/A	
Math (Grades 9-12)	16	14 classrooms (instructional spaces) 2 storage spaces (curriculum, materials)
Science Instructional Space (Grades 9-12)	22	17 lab/ demonstration spaces 1 general science space 2 storage/staff prep space 2 storage spaces (curriculum, materials)
Social Studies (Grades 9-12)	16	14 classrooms (instructional spaces) 2 storage spaces (curriculum, materials)
English (Grades 9-12)	16	14 classrooms (instructional spaces) 2 storage spaces (curriculum, materials)
World Language (Grades 9-12)	12	10 classrooms (instructional spaces) 2 storage spaces (curriculum, materials)
Other (indicate program in the Comments column)	17	5 English Learner ELA, 1 English Learner Math, 1 English Learner Science, 1 English Learner Social Studies, 1 room for professional development/meetings, 8 IT closets (servers, switches & other IT Spaces)
SPECIAL EDUCATION	41	15 small group spaces (academic and related services included) 1 Learning Group 1 TLP 1 Access ** Project Transition listed below (Living Lab) 1 storage space for PT equipment 2 administrative offices 1 sensory room 19 classrooms
ART	7	3 classrooms (1 with kiln space, and 1 with adjoining dark room space- proper

ROOM TYPE	No. of Rooms (e.g. N/A, 1, 2, etc.)	Comments
		ventilation), 1 computer lab for graphic design, 1 gallery space, 2 large storage room(s)
MUSIC	15	3 Classrooms, 1 Studio with adjoining music library, 1 Music Tech Lab, 8 Instrument Storage Rooms 2 orchestra/choice practice spaces
Practice Rooms	16	
HEALTH & PHYSICAL EDUCATION		
Adaptive PE Spaces	1	
Gymnasium	18	2 gyms, 2 fields, 1 fitness center/weight room, 1 gymnastics room, 1 Athletic Director Office, 1 Assistant Athletic Director/Director of Physical Education and Health Office, 1 Administrative Assistant Office, 3 Health / Physical Education Classrooms, 2 Batting Cages, 1 Athletic Training Room, 1 - 8 Lane Swimming Pool, 1 Boys PE Locker Room, 1 Girls PE Locker Room
MEDIA CENTER	42	2 large workrooms with librarian's office, 3 small workrooms with 1 attached office, 3 storage closets/rooms, 1 office with a work area for an assistant, 1 office/workroom for technician, 3 classrooms, 1 small lab with an office, 2 large lab with 1 office, 4 offices with closets, 1 former darkroom now being used for storage, 1 small storage closet, 1 large storage room for equipment, 1 presentation room, 1 computer science classroom, 1 large lab with 25 workstations, 1 small interior classroom, 1 Director's office, 1 small office with closet, 2 small, windowless offices, 2 presentation spaces,

ROOM TYPE	No. of Rooms (e.g. N/A, 1, 2, etc.)	Comments
		1 Makerspace 6 small group spaces 1 main library room for over 100 chairs, and 12 Mac workstations - one wall is all window facing the inner courtyard with high top tables and bean bag seating for students.
DINING & FOOD SERVICE	6	1 comprehensive dining hall and 1 for a more quiet space for students, 2 administrative spaces, 1 dry storage room, 1 chemicals closet
MEDICAL SUITE	8	1 main office with 2 treatment rooms, 1 isolation room, 1 record room, 1 room for private caregiver meetings, 1 bathroom, and 1 waiting area
Nurses' Office; Health Center	8	Expanded space to house an on-site health center; if space can be located in the current building, the team will begin pursuing grant funding to begin the program in 2026. The new building should be configured to allow for programming to exist.
ADMINISTRATION & GUIDANCE	47	3 House Office Suites include the following (3x10): • 1 AP office • 5 Counseling offices • 1 Storage Room • 1 Conference Room • 1 Administrative Assistant Space/Waiting Room • 1 Special Education/Director Office 1 Main Office that includes the following (1x11): • 1 Principal Office • 1 Associate Principal Office • 1 Security/Camera Office • 1 SRO Office • 1 Kitchenette • 1 Vault for record storage • 1 main waiting room with space for 2 administrative assistants • 1 Conference room • 1 Counseling office • 1 Office for Attendance Office.Engagement Specialist • 1 Director of Humanities Office 1 CTE Main Office that includes the following (1x6):

ROOM TYPE	No. of Rooms (e.g. N/A, 1, 2, etc.)	Comments
		• 1 CTE Director Office • 1 waiting room with space for 2 administrative assistants • 1 Grants office • 1 storage closet • 1 Special Education Office • 1 Counseling Office
OUTDOOR LEARNING	4	
AUDITORIUM	25	1 full size auditorium, 5 storage/tech rooms, 3 rehearsal spaces, 1 ticketing area/lobby, 1 mini stage, 1 coat room, 6 dressing rooms, 1 green room, 1 sound booth, 1 lighting booth, 1 recording studio, 1 costume storage/wardrobe room 1 laundry facility for care and maintenance of costumes, 1 prop shop/scenery shop
NATATORIUM	1	
DESE APPROVED CHPT 74 SPACES	35	Auto Technology + Related Classroom, Biotechnology + Related Classroom, Business Marketing, Carpentry + Related Classroom, Construction and Craft Laborers + Related Classroom, Cosmetology + Related Classroom, Culinary Arts + Related Classroom, Early Childhood Education + Related Classroom, Electrical + Related Classroom, Engineering and Robotics + Related Classroom, Graphic Design + Related Classroom, Health Assisting + Related Classroom, Media Technology + Related Classroom, Metal Fabrication + Related Classroom, Programming and Web Design, Dental Assisting + Related Classroom, Veterinary Science + Related Classroom, Criminal Justice/Protective Services, Plumbing/HVAC + Related Classroom,

ROOM TYPE	No. of Rooms (e.g. N/A, 1, 2, etc.)	Comments
		Information Systems - OT/Networking - Cyber Security
NON-CHPT 74 ENRICHMENT PROGRAM SPACES	0	
NON-SCHOOL DISTRICT SPACES	0	N/A
OTHER (indicate type of program in the Comments column)	46	1 classroom for Project Transition program as well as 1 Living Lab (mock apartment for Project Transition students ages 18-22), 12 classrooms for Kids' Corner: A district-provided daycare facility for school and municipal employees. (There are also spots for community children to attend), 1 classroom for Make Way for Kids: A preschool program organized and run by the Medford High School Vocational Program servicing community children ages 2.8 to 5 years, 20 offices for the Central Administration Office wing consists of Finance Department, Human Resource Department, Buildings & Grounds Department, Communications Manager, Superintendent, 2 Assistant Superintendents, Director of Student Services, and our district Data Analyst, 2 conference rooms for central administration, 1 School Committee office, 1 School Committee conference room, 3 classrooms for Medford Family Network (Organization that provides wrap-around services to community families and their children from birth to age 8), 4 offices for Medford Family Network

B. Describe how 1) core spaces, 2) specialty spaces, and 3) non-traditional spaces described above are proposed to be used, if known at this time. Additionally, if there are proposed changes, indicate how they will impact space needs and what training to support teaching staff will/ may be provided.

In Medford's 2022 Statement of Interest, our district indicated that our two priorities are (1) replacement, renovation, or modernization of school facilities to increase energy conservation and decrease energy costs and (2) replacement or addition to obsolete building to provide a full range of programs consistent with state and approved local requirements. Our infrastructure needs to be modernized, made more efficient, and expanded to include a full range of programming within the scope of approved state and local requirements.

Medford is open to exploring several sites for the location of the new Medford High School, including the current site. We know that Medford is generally space-constrained and likely has only a few viable options for consideration, including Medford Square and Columbus Park.

If Medford High School remains in its current location, there is a particular concern about managing stormwater runoff from the adjacent Fells Reservation and designing a sustainable site that responsibly mitigates climate events that we have experienced at the current site. The design strategies employed could offer unique learning opportunities for students to engage with right outside their classrooms.

The City has prioritized improving open spaces through an Open Space Master Plan (OSMP) that strengthens Medford's climate change resilience through park and open space design and improves the ecological quality of the property. The Medford High School project should be leveraged to accomplish as many OSMP goals as possible. These include

1. "Green" parking lot to increase evapotranspiration and promote cooling
2. Porous pavement or ADA Accessible permeable pavers when replacing pavement
3. Vegetated bioswale or retention areas for traffic calming and stormwater management
4. Embankment stabilization with native plantings
5. Establishment and cultivation of connections to and along the City's natural resources
6. Expanded and diversified recreational programming for City residents

As discussions surrounding future programming and space utilization at Medford High School progress, several key areas have already been identified for further consideration. These include core spaces, specialty spaces, and non-traditional spaces, all of which have the potential to enhance and diversify the educational experience for students and address current needs within the school. These include but are not limited to:

Core Spaces

The ultimate goal of the core spaces is to create a dynamic and inclusive learning environment that meets the diverse needs of all students, supports academic and personal growth, and can be used flexibly in the years to come. We would like to explore larger classrooms for collaborative learning and create flexible spaces that could accommodate different teaching styles and group sizes in addition to small shared breakout spaces adjacent to classrooms for small-group instruction. We would like to bring additional common spaces to the facility to serve as multi-purpose spaces for both academic and social purposes and provide students with opportunities to engage and communicate with one another.

- General Education Classrooms: Medford High's general education spaces will promote diversity and inclusivity by focusing on grade-level standards and culturally affirming practices. The school embraces Universal Design for Learning (UDL) to provide equitable opportunities for all students while prioritizing technology integration and collaboration among faculty. Strategic grouping of core academic departments and designated meeting spaces within each department will promote collaboration among staff. Dedicated maker spaces encourage hands-on and creative learning, while unconventional instructional spaces foster innovative and engaging experiences for all students.
- Alternative High School Program: To address the various needs of students who are not progressing academically and socially, we seek to include alternative programming within Medford High School. The program will launch in the fall of 2024 in a retrofitted space. As we look forward, we believe this model would best be accomplished in a designated section/wing of the building with classroom spaces adjacent to one another. A community space for building relationships, housing meetings, and norm-setting is also needed. Having a dedicated bathroom for the program would be ideal.
- Vocational Programming: One key area of focus is the CTE offerings. The school aims to upgrade and enhance its 15 Chapter 74 programs to meet the industry's ever-changing standards.

This would involve creating additional space—including outdoor areas—to maximize enrollment and provide students with the necessary resources to excel in these programs. We are also looking into the possibility of expanding shop opportunities to create five new CTE programs (Animal/Veterinary Science, Criminal Justice/Protective Services, Dental Assisting, Plumbing/HVAC, and IT/Networking)

- Special Education Classrooms: Special education classrooms ensure compliance with legal requirements, such as the Individuals with Disabilities Education Act (IDEA) in the United States, which mandates that students with disabilities receive a free appropriate public education (FAPE) tailored to their individual needs. Special education classrooms are designed to provide a supportive and inclusive educational environment that empowers students with disabilities to achieve academic success, develop essential skills, and reach their full potential. They play a crucial role in ensuring equitable access to education and promoting the overall well-being of students with diverse needs.

  Special education classrooms are specifically designed to address the unique learning needs of students with disabilities or exceptionalities. Here are some key aspects they typically focus on:

  1. **Individualized Education Plans (IEPs):** Each student in special education has an IEP tailored to their specific needs, goals, and learning styles. This document guides the curriculum and instructional strategies.
  2. **Differentiated Instruction:** Teachers in special education classrooms use various teaching methods and materials to accommodate diverse learning styles and abilities. This could include visual aids, manipulatives, or adaptive technology.
  3. **Support Services:** These classrooms often provide additional support services such as speech therapy, occupational therapy, physical therapy, counseling, or behavioral interventions, depending on the students' needs.
  4. **Modifications and Accommodations:** Teachers make modifications (changes in what is being taught or expected) and accommodations (changes in how students access learning) to ensure that all students can participate meaningfully in the curriculum.
  5. **Emotional and Behavioral Support:** Many students in special education may require assistance with emotional regulation or behavior management. Special education classrooms provide strategies and support to address these needs.
  6. **Social Skills Development:** Teaching social skills and promoting social interactions among students is an important aspect of special education classrooms. This can include structured activities, peer modeling, and explicit teaching of social norms.
  7. **Transition Planning:** For older students, special education classrooms often focus on preparing them for life after school, including vocational training, independent living skills, and transition to post-secondary education or employment.
  8. **Parent and Family Involvement:** Special education classrooms often work closely with parents and families to ensure continuity of support and to incorporate home-based strategies into the educational plan.

  Overall, special education classrooms aim to create a supportive and inclusive environment where students with disabilities can learn, grow, and achieve their full potential academically, socially, and emotionally.

- English Learner Classrooms: The EL program requires modern classroom space and dedicated space for families to register and for student testing.

- Co-location of Curtis Tufts at Medford High School: Co-locating Curtis Tufts' therapeutic day program into the Medford High School setting can offer several advantages and benefits for students. We want to maximize accessibility to mental health services, strengthen stakeholder collaboration, and improve access to our vocational and extracurricular programs for the 20+ students who rely on this program. It has not previously been possible to co-locate this program because it relies on separate and dedicated space that is differently configured than Medford High School. We believe it's ideal to explore this at this time to both improve the student experience and reduce our reliance on an aging building that lacks modern and efficient infrastructure. The team that has explored this possibility and recommended to the School Committee that we student this as part of feasibility has outlined the following benefits:
    1. **Convenience and Accessibility**: By placing the therapeutic program within Medford High school, students can easily access mental health services without needing to leave the school premises. This reduces barriers to seeking help and increases the likelihood that students will utilize the services.
    2. **Integration with Academic Environment**: Co-location allows for seamless integration of therapeutic interventions with the academic curriculum and school activities. Therapists and counselors can collaborate with teachers and administrators to support students' overall development and well-being.
    3. **Immediate Support for Crisis Situations**: In cases of immediate need or crisis situations, having a therapeutic program on-site ensures that students can receive prompt intervention and support. This can prevent the escalation of issues and promote safety within the school community.
    4. **Support for At-Risk Students**: Therapeutic programs often cater to students at risk of academic failure, dropout, or other negative outcomes. By providing targeted support, these programs can help these students stay engaged in school and achieve their full potential.
    5. **Fostering a Supportive Atmosphere**: Co-location creates a supportive and inclusive school culture where mental health is prioritized. It sends a message that seeking help is normal and encouraged, thereby reducing the stigma associated with mental health challenges.
    6. **Collaboration and Coordination**: Co-locating allows for better coordination and collaboration between therapists, counselors, teachers, and other school staff. They can work together to identify students who may benefit from additional support and develop personalized plans to meet their needs.
    7. **Tailored Interventions**: Therapists in a co-located program can provide tailored interventions that address the specific needs of high school students, such as academic stress, social pressures, identity development, and family dynamics. This targeted approach can lead to more effective outcomes.
    8. **Educational and Emotional Growth**: The integration of therapeutic services within the school environment supports not only students' emotional growth but also their educational success. Students are better equipped to manage challenges and fully engage in their academic pursuits.
    9. **Parental Involvement and Support**: Co-location facilitates easier communication and parental or guardian involvement in their students' therapeutic journey. Parents or guardians can be more actively engaged in understanding and supporting their child's mental health needs.

10. **Cost and Resource Efficiency**: Co-location can optimize the use of resources and funding by leveraging existing school infrastructure and personnel. It may reduce costs associated with transportation or separate facilities while maximizing the impact of therapeutic services.
11. **Modeling Healthy Behaviors**: By integrating mental health services into the school setting, co-location models healthy behaviors and coping strategies for students, promoting lifelong wellness practices.
12. **Preparing for College and Career**: By promoting emotional and mental well-being, therapeutic programs prepare students to navigate the challenges they may face in higher education, the workforce, and adult life. They are better equipped to handle stress, setbacks, and transitions effectively.
13. **Building Life Skills**: Beyond academic knowledge, therapeutic programs equip students with essential life skills crucial for personal and professional success. These skills include resilience, communication, decision-making, and problem-solving abilities.

- Kids Corner: Medford has hosted the Kids Corner program for many years. School and city staff rely on the high-quality care provided at very competitive rates. Additional classroom space will allow us to increase tuition and open additional slots to community members. The lack of childcare in Medford is the subject of much discussion.
- Early Education and Childcare Center: The creation of space either freestanding structures on the same site or a small wing of the building) will allow us to centralize our early childhood programming into an Early Childhood Center and allow the possibility to expand our pre-K options We know that 40% of our kindergartners (~120 annually) come to Kindergarten without any prior formalized education We believe that this population could be served with expanded pre-K programming through our Medford Early Education Program programming that serves more full day enrollments. We cannot expand programming today because our elementary schools that currently house the programs are at or over capacity. Centralizing our Early Childhood portfolio will increase access to specialized services. We would also house our Medford Family Network program and our Parent Information Center in this center. Moving this programming to the campus will also alleviate space issues at our elementary schools to handle growing enrollment and a dire need for expanded after-school programming.

Specialized Spaces

- Performing arts. The performing arts are vital to Medford High School's educational framework. The new performing arts department space, equipped with a state-of-the-art auditorium that can host our entire student population and practice rooms, would significantly enhance the school's ability to cultivate these essential skills. Key features would modernize our existing capabilities, including:
    - Modern Auditorium: A spacious auditorium with tiered and accessible seating to ensure optimal viewing for all audience members.
    - Advanced Acoustics, Sound, and Lighting: Equipped with advanced acoustic engineering to ensure high-quality sound distribution, a comprehensive lighting system with programmable stage lights, spotlights, ambient lighting, and state-of-the-art audio equipment, including microphones, speakers, and soundboards, to ensure clear and powerful sound reproduction.
    - Flexible Stage Design and Backstage Facilities: A versatile stage that can accommodate

various types of performances, from drama and musicals to concerts and dance recitals, technology for digital backdrops, projections, and multimedia presentations, and ample backstage space with dressing rooms, makeup areas, green rooms, and storage for props and costumes.
    - Rehearsal Spaces: Dedicated practice rooms and rehearsal studios equipped with mirrors, ballet bars, and sound systems.
    - Lobby and Ticketing Area: This welcoming lobby features a ticketing area, concession stands, a coat room, and restrooms.
    - Mini stage: A smaller stage to welcome guest speakers and smaller student performances.

- Athletic spaces
    - Indoor Pool
        - The swimming pool is a cornerstone element of the Medford Physical Education program. Following the accidental drowning of a graduate shortly following graduation in 2019, Medford Public Schools has implemented mandatory water safety and swimming courses for all students.
    - Indoor Gymnasium
        - Restore/replace the indoor track, which is no longer suitable for competition use.
        - Gymnasium climate control systems are outdated and require replacement whether the gymnasium remains in place or is replaced entirely.
    - Associated Spaces: Boys' and girls' locker rooms/showers, a gymnastics room with gymnastics floor, pommel horse, vault, beam, and other associated gymnastics equipment, 3 athletics offices, expanded athletic trainer rooms with examination tables, therapeutic whirlpools and storage facilities for equipment, two batting cages, and fitness center weight room combination space.
    - Adaptive PE space: This space will include wheelchair accessibility, sensory-friendly environments, and a variety of adaptive equipment, such as modified sports gear and adjustable gym apparatus. It will also have modern safety features and interactive technology to enable adaptive gaming options. Through collaborative areas and inclusive design principles, the space will promote social interaction and community.
    - Outdoor Athletic Fields: The current Edgerly turf field is at the end of its life and will require replacement with ADA-compliant accessibility and parking. In addition, exploring the creation of an outdoor track would increase access to track programming for students who must travel across the city to the city's athletic complex for practices. The current high school campus has ample opportunity to explore the creation of additional regulation fields for our athletics teams and/or overhauled practice fields. If Medford High School is relocated elsewhere in the city, additional planning and feasibility studies would be required to ensure no loss of athletics spaces.

- Media Tech: We envision a library media space that has access to outdoor space and includes a space large enough for at least 2 classes or faculty events/meetings that could be closed off by a moveable wall depending on the need for size or to accommodate more than one group, with presentation ability on both sides, several (2 or 3) fully automated labs for teaching library and technology classes, individual and small group spaces where students can work individually and not be distracted, containing a table and up to four chairs, preferably with a glass/clear wall for sightlines and modern technology, spaces for small groups to collaborate, study carrels,

traditional library space for books and reading, a maker space for science and technology activities. The space should also include adequate space for staff who manage the facility, including a large workroom with storage areas, meeting areas, and two circulation desks/workstations that are ADA compliant and are movable depending on need or for events.

Non-Traditional Spaces

- Connection to the Environment: The intention is for a future high school building to connect more meaningfully with its site and natural surroundings. This is of particular interest if the building remains in its current location given its unique position within the Middlesex Fells Reservation but would also apply if the High School were to move to another location. These connections can manifest as formal outdoor learning opportunities with direct access to and integration with the landscape, outdoor classroom spaces, and even simply a priority to provide views to nature from the interior and opportunities to break down the massing of the building with landscaped pockets to provide a respite from the built environment.
- Student-run cafe to bring access to our Chapter 74 Culinary Program to students who cannot normally take advantage of our Bistro 489 restaurant.

C. Using the space below, provide information about the Medford High School's proposed teaching methodology, if known at this time (e.g. technology integration, self-contained classroom, team teaching, project-based, departmental, or cluster). Include any changes to class size policies, if applicable.

Medford High School's teaching philosophy is centered on the belief that every student has the potential to learn and grow when given a supportive and engaging educational environment. Medford High School educators create a classroom atmosphere that is inclusive, respectful, and engaging, where students feel encouraged to ask questions, explore ideas, and take academic risks.

At Medford High School, we believe in a student-centered approach to teaching. Students are encouraged to explore through project-based learning, where the student leads their learning with support from the educator. The educator's role is to provide the tools, resources, space, and scaffolds to support students in building their knowledge and skills while promoting their autonomy, critical thinking, and problem-solving abilities. Additionally, Medford High School strives to make learning relevant and meaningful by connecting the curriculum to real-world examples and applications that resonate with students' interests, lives, and experiences.

Overall, the proposed teaching methodology for Medford High will embrace a more inclusive, collaborative, technologically advanced approach to secondary education. The district's work to align schedules is an important first step to creating an environment ready to take on updates on how we teach students. We've begun re-examining how time is maximized in the instructional block, and this work will continue after the schedule changes are implemented. We want to create and deliver learning experiences that equip students with knowledge, skills, and strategies that can be transferred to real-world applications beyond Medford High School. As we've done in our vocational programs, we want to explore an increase in project-based learning and look forward to having flexible space that allows us to consider how our programming in the Center for Citizenship and Social Responsibility (CSSR), which relies on project-based learning, can be integrated into the instructional day.

The district has discussed implementing Universal Design for Learning (UDL), a framework designed to maximize teaching and learning for all staff and students. At its core, UDL addresses the systemic barriers

that result in inequitable learning opportunities and outcomes for students. The UDL approach considers the needs of all learners, including students with disabilities. A less compartmentalized and more flexible building will boost our ability to implement UDL.

Faculty collaboration will be a critical component of achieving this vision of a 21st-century learning environment. We would like to explore how different building layouts will promote integrated learning with more collaborative meeting spaces, co-teaching, and planning spaces. We want all our departments to have the dedicated space needed to collaborate on shared lessons, common assessments, and interdisciplinary units of study.

Lastly, collaboration among educators is fundamental to our vision of a 21st-century learning environment. To facilitate this, we want to explore modern space configurations that make collaboration easier. We know that co-teaching and shared responsibility require dedicated time and space for collaboration on shared lessons and assessments. This will also allow peer coaching to become an integral part of our professional culture.

SECTION FOUR: Community Engagement

A. Describe the community outreach that has occurred to this point, and any future plans and goals related to engaging the community on the Medford High School project. If considering grade reconfiguration, consolidation of facilities, and/or a change to the current teaching methodology, describe the outreach and discussions that have occurred to this point and any future plans to engage the community on the proposed changes. Additionally, indicate whether the District has determined whether or not an override or debt exclusion might be required for full project funding.

Community Outreach

Community interest in this project is high. We received over 100 applications for 9 community member spots on the MHSBC. We plan to capitalize on this interest early and often, including as many voices as possible in the design process so that the new space can be a hub of activity for the entire community in the coming years. The establishment of the Communications and Community Engagement Subcommittee by the MHSBC is pivotal for ensuring transparent and inclusive communication throughout the project. Their plan includes proactive communication channels to keep the community informed, surveys in the summer of 2024 to gauge community questions and concerns and robust public input opportunities. We will separately reach out to the City's array of boards and commissions during the summer of 2024 to understand the perspective of each board/commission and how they'd like to be involved as the project progresses. Engagement strategies will vary, including town hall meetings and online forums. Transparency and accountability are emphasized, with a commitment to sharing updates openly. The committee remains adaptable to evolving community needs, aiming to foster trust and collaboration throughout the project.

Grade Reconfiguration and Facility Consolidation

The district is due to revisit its strategic plan in the coming years, and the School Committee's Subcommittee on Strategic and Capital Planning will work in concert with the Superintendent's office to ensure robust public input into that plan. We believe that our Educational Profile submission and the overarching vision of the SBC for the project provide ample opportunity to craft a visionary plan for teaching and learning at our high school.

Medford is interested in co-locating our Curtis-Tufts program, which currently has an enrollment of 20

from grades 9-12. In addition, the School Committee has held subcommittee meetings and invited community members, current and former students, and teaching staff to provide input to evaluate the potential to consolidate the Curtis-Tufts School within the campus of the future high school. There is overwhelming community support to make this transition with a re-envisioned space at the high school. The School Committee voted on June 3, 2024, to unanimously support exploring the co-location of the Curtis-Tufts onto the Medford High School campus.

The Curtis-Tufts High School is the in-district therapeutic day public high school program for students grades 9-12 with intensive specialized needs. The school supports and helps students acquire the communication, academic readiness, community, life skills, and social skills necessary to have a purposeful and independent life, and strives to help each student reach their fullest potential. The program designs and delivers specialized services that promote academic, social, and career independence in the most inclusive settings possible to meet the needs of students who struggle with academic achievement as well as social/emotional needs who require a smaller therapeutic setting.

Co-location of the Curtis-Tufts program at Medford High School would provide students with the social and emotional support within the program but also provide access to high school and vocational school academic classes, electives, CTE programming, extracurricular activities, and athletics. Overall, the co-location of our public therapeutic day program will provide an opportunity to improve accessibility, reduce stigma, promote integration, share resources, and garner the school community support, all of which are essential for providing effective and sustainable mental health services with academic rigor.

We are also interested in returning to a centralized model for our Medford Early Education Program to allow for program expansion, improve our ability to deliver services, and alleviate space concerns at our elementary schools, where programming was moved when space constraints were presented at the high school complex.

Teaching Methodology

Our work to integrate our two high school schedules is a critical first step to enabling a discussion about teaching methodology with our staff and then with our community. Scheduling discussions will happen during the FY25 school year, with an implementation planned for September 2025.

Override/Debt Exclusions Required

Medford is prepared to use free cash to fund its feasibility study requirements with the MSBA. On June 25, 2024, the Medford City Council voted 6 in favor and 1 absent to appropriate $3,000,000 in free cash to support the feasibility study. That funding will be allocated to a special appropriation account, and the project can proceed as soon as possible.

We know that this project will require a debt exclusion to fully fund it, and we understand that the communication plan that the SBC creates needs to provide ample opportunity for the community to provide input throughout the process.

SECTION FIVE: Attachments

A. Please attach to this completed Questionnaire any Executive Reports or Conclusions of reports or studies related to: Coordinated Program Review, Master Plan/ Facilities Plan (if not already on file), and NESDEC/NEASC reports (if not already on file). Below, list all documents attached (as applicable).

Documents attached:

- Tiered Focused Monitoring Report
- Comprehensive Review District Report (AIR) - DESE
- Targeted Focused Monitoring Report - EL
- NEASC - 10 years old/5 year follow up

Should you have any questions as you complete this document, please contact your Project CoordiN/Ator, Allison Sullivan, at:
Massachusetts School Building Authority
617-720-4466
Allison.Sullivan@massschoolbuildings.org

B. Advisory Team Meeting Minutes

Advisory Team - Interior & Exterior Design 1

Project Name:	Medford High School	Project Number:	25100
RE:	Advisory Team - Interior & Exterior Design	Meeting Date:	12/16/2025
Prepared by:	Sarah Long	Meeting Number:	1
Distribution:	Attendees		

Owner

- [ ] Lujayen Alsayrafi, *MHS Student*
- [x] Libby Brown, *SBC Member*
- [x] Alex Bushkoff, *Medford Resident*
- [x] Marta Cabral, *MHS Principal*
- [x] Griscel Diaz, *Medford Resident*
- [x] Chloe Dorcellus, *MHS Student*
- [x] Paul Ellis, *Medford Resident*
- [x] Suzanne B. Galusi, *MPS Interim Superintendent*
- [x] Jenny Graham, *SBC Chair, School Committee Vice Chair*
- [x] Brian Hilliard, *SBC Member*
- [ ] Din Ho
- [x] Ken Lord, *MPS Chief Operating Officer*
- [ ] Lisa Malone
- [ ] Nicole Morell
- [ ] William Pipicelli
- [x] Jennifer Rigano, *Medford Teacher*
- [x] Paul Ruseau, *SBC Member, School Committee Member*
- [x] Jesse B. Strauss, *Medford Resident*
- [x] Delia Wendel, *Medford Resident*
- [x] Eric Zeckman, *Medford Resident*

SMMA

- [x] Soala Ajienka, *Architectural Designer*
- [x] Lucas Carriere, *Architectural Designer*
- [ ] Helen Fantini, *Project Manager*
- [x] Sarah Long, *Sr. Interior Designer*
- [x] Michael Pardek, *Director of Design, Architect*
- [x] Matt Rice, *Principal-in-Charge, Architect*
- [x] Abigail Ransmeier, *Head of Research*

Leftfield

- [x] Jen Carlson, *Project Director*
- [x] Matt Gulino, *Project Manager*

Item No.	Action	Discussion
01.01	Record	Meeting # 1 Agenda - Welcome & introductions - Overview of the Advisory Team process & milestones - Goals & aspirations discussion - listening - Next steps
01.02	Record	Overview of Advisory Team Process & Milestones - Four Advisory Teams - not individual silos of discussion; all are connected but each team gives space for deeper discussion ○ Each team will produce a set of recommendations for the full SBC to review and approve - Objective of Exterior & Interior Design AT: Reviews exterior design concepts including composition of form and exterior material selections. Review of the products and materials selected for interior finishes such as flooring, paint colors, wall finishes and ceilings.

		- Overall process: 4 meetings ○ Listen > Review & Respond > Confirm & Recommend > Reconvene - Goal is for the new school to open in Fall 2030 - Currently in the "Empathy" and "Define" portion of design thinking
01.03	Record	Goals & Aspirations Discussion Four minutes were provided for each member; submit any additional thoughts or questions via email: • Exterior - simplicity/longevity/timeless design, do more with less for materials; maintenance is a concern so simplicity for materials is important; there is a lot to be learned from the existing building; Interior - chair of materials taskforce professionally; focus on healthy materials, red list free as a baseline, no PVC, durability/timeless materials; health and well-being of the occupants is priority; healthy, non-trendy materials to serve a purpose, being careful about selection and all materials should have a real reason to be there • Agrees with statement above, likes concrete and brick as well. This speaker's specialty is in construction administration and cost analysis - value for money with materials is extremely important, how do more with less. Sustainability is a huge issue - are we going for passive house/LEED/etc., environmentally friendly materials (no vinyl)? Asked how this will be bid, noting that Construction Managers are invaluable at the earliest possible stages. Adds that they have 25 years of experience in construction so happy to overlap with other groups; need to make the bureaucratic process as explicit as possible for all involved. [Matt Gulino from Leftfield noted that the project will likely pursue chapter 149a, CM at Risk.] • Exterior - agrees with statement above re: longevity, avoid trendy; wants modern but also warm and welcoming. The high school is on a beautiful plot of land and not a main road so sight lines out to the Fells and downtown Boston are important. Interior should also be timeless. Cleanliness is super important, walls and spaces that can be cleaned. Expressed hesitancy about carpet. Hopes that people see themselves in the building and adapt to the population; flexible spaces for students to have autonomy. Good sight lines for staff and students is important as is bringing Medford community inside the school. Design should be timeless but also make it feel like Medford HS just in a brand new space. Core values and the mustang mascot should be incorporated. Community spaces that hold all of us, not just Medford but students and staff as well • How to make this space safe and comfortable, physically and emotionally safe for staff and students and focus on well-being? Interested in flexible classrooms. How can this be a community hub and have spaces for the community to use? Maintenance is a concern - unfinished wood looks nice at first but doesn't weather well. Sustainability has been covered, but what is the connection to nature, how can we connect students to nature? How can we support student identity/school pride/Mustangs? Consider a mural; accessible and inclusive design • We have to keep it simple but want to make sure the design is inclusive and represents the culture and the whole community; safe space for every student; comfortable and relaxed; not trendy but wants it to feel like Medford. • Most things already mentioned. When deciding on materials, consider flexibility and how things can be changed out in time. Focus on demographics and diversity of Medford; entrances should be welcoming and building should be inviting, and wayfinding is important, especially for after hours and athletics. Public areas could incorporate Medford history and important people. Theater size for performances should be considered. Would like to see dedicated rooms for after hour clubs so they don't have to fight for space. Flexibility of the classrooms is critical as times change; combining vocational and classrooms - flexibility/adaptability is important. Colors and floors should be lively and not dull and dark. Japanese Language School of Greater Boston uses the current MHS, their space needs should be considered for the new school. Recommend taking into account that the existing school may have been built on top of a trash dump. Consider multiple languages for signage • Likes the idea of a sense of ownership - the expectation should be that this ownership changes hands as the students change, create intentional ways for the students to have ownership but also make it flexible and easy to evolve in classrooms as well as common spaces, create connection to other students, give students accountability/ownership, insists upon evolution as students move through the space; Mustang logo - lots of discussion around this offline that can be brought to this group. Exterior design - maximize the incredible view of the Boston skyline; special events and teaching spaces on roof. Wants to create a space students want to be in. What is possible for playing fields? Wayfinding is critical. There are cool artifacts in the bistro but wouldn't know the significance unless talked to a "Medford dinosaur" - how do we bring those elements in but also teach people? The building should tell its own story. • The speaker noted that he has a lot of educators in his family, son is in robotic/engineering, has an interest in CTE spaces; experience in architecture and working on schools, can be a liaison with teachers and the SBC; excited for what SMMA brings to the table - materials, cost analysis, timeless design; interested in space planning and programming; phasing/scheduling will be important and potentially complex. Important to adhere to the guiding principles from the students' perspectives as outlined in the student development meeting. There is a paradigm shift for how students learn and teachers teach so they walk into a space they are ready for in 2030 - things change now, not then. • The speaker noted that they were heavily involved in 7 school building projects; durability of materials

		is very important - concerns with too much drywall. Glazed block is very durable. Consider blending materials between reno/addition spaces. Roof top access for classroom use (science, views). Easily maintainable materials and building overall easy to maintain (easy access). Stormwater runoff water at exterior shouldn't wash away landscaping. Kids' Corner program with playground space is required. Ease of cleaning the building - no waxed floors. Enough display space for student work - purpose built spots for murals (not just tack on after the fact), and ways to hang things that won't damage the walls • The speaker noted that they had worked in the building for 18 years. Traffic and parking are big issues and the flow of entering the site and building should be considered; many people get lost going to the gym, better signage/entrances/wayfinding are needed as the building is used often after school. Interior should represent students and the school, do a great job doing this now and have designated painting locations for students. Recommends against a lot of white spaces; want it to be clean but balance with colors/murals is important. Classrooms should have ways to hang things up/paint, walls should be easy to hang things on so the school can be altered easily to reflect the students. [• [From chat: locations of classrooms in relation to CTE spaces and the cafeteria, light and windows are important, a good connection and layout with any part of the current building that is being kept needs to be thought through] • Architectural digest of most beautiful schools in each state and didn't agree with majority; Watertown (terrible site) and Newtown (liked). Keep in mind that the majority of voters don't have students but pride in the building is important; the exterior should reflect the wonderful teaching on the inside. Medford has very little public meeting space. Project should wow the community • Advocate for visual and performing arts - they should not be tucked away in corners of the building. Visual and performing arts are a highly valued part of the school and should be visible; this is an opportunity to proudly showcase Medford (like the library). • Health and environmental concerns are important - civic/public spaces are where we turn to in times of crisis and are beacons of hope, places of gathering. There are real social values attached to schools for the community. Looking for a school that is rooted in a wholesome history, inclusive in its reach and representation; should be designed in part with storytelling in mind - what is it like at drop off, what is it like to integrate nature. Recommends reinforcing the importance of context in history and culture; creative spaces and quiet spaces are important. Wants a school gesturing towards the future but anchored in history • Schools in Medford are important assets - schools bring people to a community; flexible/adaptable spaces. The library is a great example of an updated community resource; as technology and pedagogy changes want to make sure the building can be what we need to be in the future.
01.04	MR	Next Steps - Meeting #2: the design team will speak to the priorities brought up today, as well as: ○ Potential material and system palettes ○ Educational visioning input ○ Building orientation ○ Technical requirements ○ Precedents - recent high school designs ○ Medford design vernacular / context

Medford High School



Exterior and Interior Design Advisory Team Meeting

Meeting #1

12/16/2025

smma

LeftField

THE RIGHT CHOICE IN PROJECT MANAGEMENT

Meeting #1 Agenda

- Welcome & Introductions
- Overview of the Advisory Team Process & Milestones
- Goals & Aspirations Discussion - Listening
- Next Steps

Welcome & Introductions

Exterior and Interior Design / Team Intro



Matt Rice
Principal-in-Charge



Helen Fantini
Project Manager



Michael Pardek
Architect



Lucas Carriere
Architectural Designer



Sarah Long
Interior Designer



Soala Ajienka
Architectural Designer

1. Lujayen Alsayrafi
2. Libby Brown
3. Alex Bushkoff
4. Marta Cabral
5. Griscel Diaz
6. Chloe Dorcellus
7. Paul Ellis
8. Suzanne Galusi
9. Jenny Graham
10. Brian Hilliard
11. Din Ho
12. Ken Lord
13. Nicole Morell
14. Jen Rigano
15. Paul Ruseau
16. Jesse Strauss
17. Delia Wendel
18. Erik Zeckman

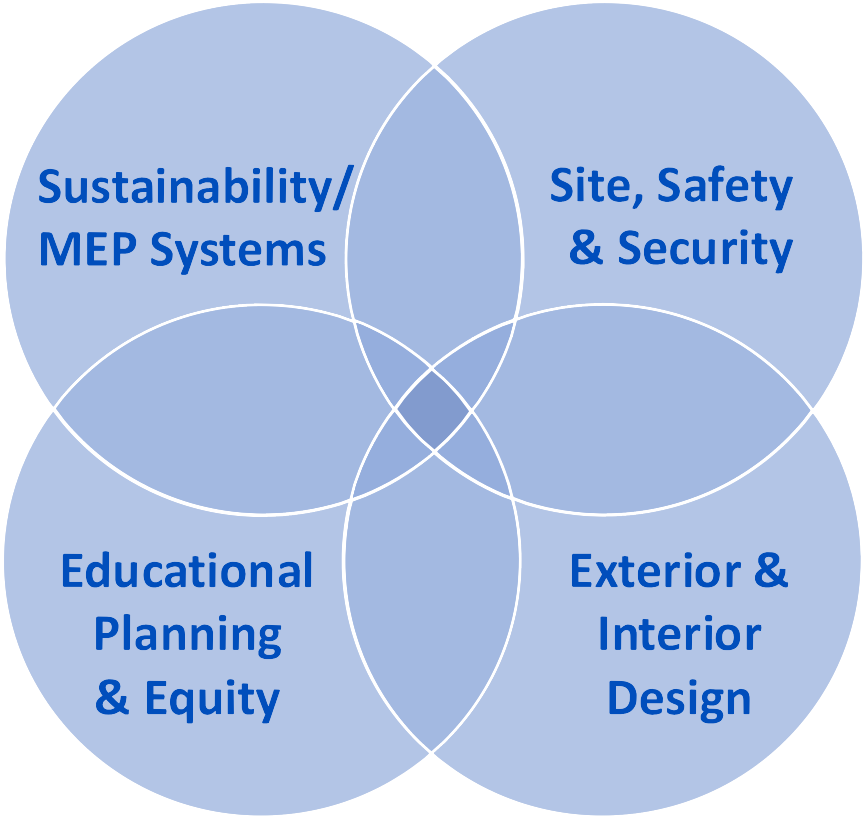
Overview of Advisory Team Process & Milestones

Community Stakeholder Engagement / Advisory Teams

Advisory teams are a method of collecting broad community input on key priorities and desired outcomes for the project.

***Who* : Educators, Students, City Departments, Boards & Commissions, Expert Community Members**

Reviews preferred MEP systems, sustainable design features and components, healthy materials; site design and landscape features for environmentally friendly design.



Reviews development of the site design for traffic, circulation, safety and security. Includes conversations about parking, driveways and circulation, fields, and offsite improvements and coordination with City Departments.

Reviews overall goals from educational planning perspectives, educational programming meetings and visioning sessions.

Reviews exterior design concepts including composition of form and exterior material selections. Review of the products and materials selected for interior finishes such as flooring, paint colors, wall finishes and ceilings.

Exterior and Interior Design / Objective

Objective: Reviews exterior design concepts including composition of form and exterior material selections. Review of the products and materials selected for interior finishes such as flooring, paint colors, wall finishes and ceilings.



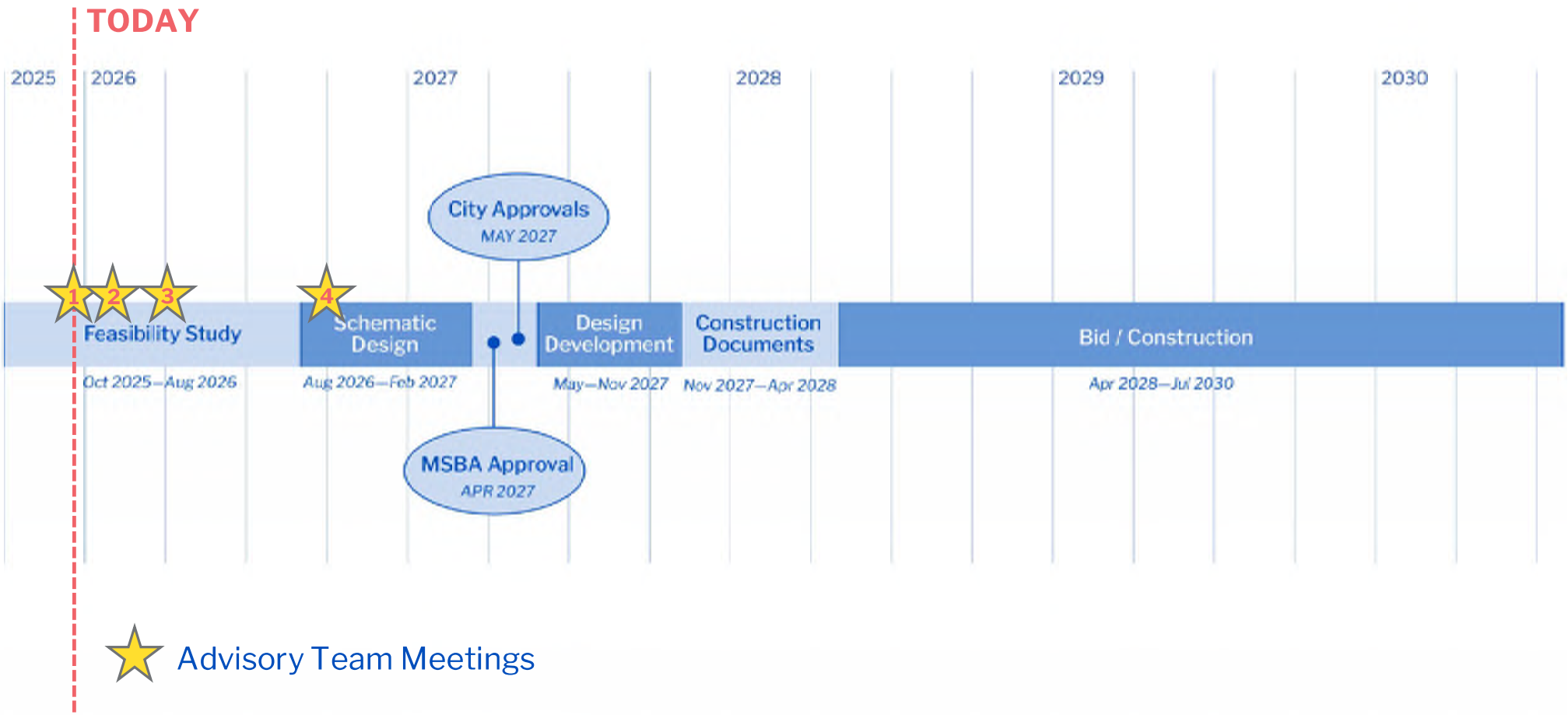


Exterior and Interior Design / Objective

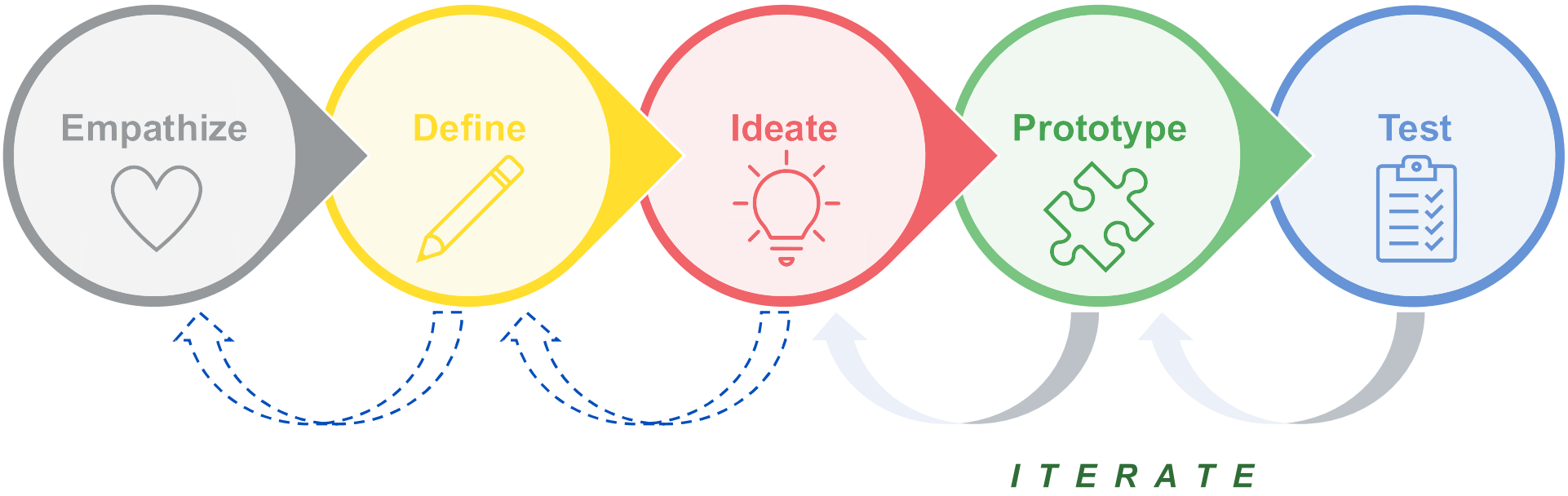
1. Listen — 12/16
2. Review & Respond — 1/15
3. Confirm & Recommend — TBD
4. Reconvene — TBD

smma

Project Timeline



Exterior and Interior Design / Design Thinking



smma

Your Goals & Aspirations

1. Lujayen Alsayrafi
2. Libby Brown
3. Alex Bushkoff
4. Marta Cabral
5. Griscel Diaz
6. Chloe Dorcellus
7. Paul Ellis
8. Suzanne Galusi
9. Jenny Graham
10. Brian Hilliard
11. Din Ho
12. Ken Lord
13. Nicole Morell
14. Jen Rigano
15. Paul Ruseau
16. Jesse Strauss
17. Delia Wendel
18. Erik Zeckman

Next Steps



Exterior and Interior Design / Objective

1. Listen — 12/16
2. Review & Respond — 1/15
3. Confirm & Recommend — TBD
4. Reconvene — TBD

smma

Next Steps/ What to Expect in Meeting #2

Objective: The design team will speak on the topics below as well as the priorities brought up by the advisory team today.

Topics

- Potential material and system palettes
- Educational visioning input
- Building orientation
- Technical requirements
- Precedents – recent high school designs
- Medford design vernacular / context

When & Where?

January 15th, 4:00 – 5:30 PM
Remote / Hybrid

Thank you.



Educational Planning and Equity / Design Goals and Aspirations

- What objectives do you want to address in this process?

- How will we measure success?

Exterior and Interior Design / What is “PDP” ?

In the Preliminary Design Program:

…the District and its team collaborate with the MSBA to

- *Document their educational program*
- *Generate an initial space summary*
- *Document existing conditions*
- *Establish design parameters*
- *Develop and evaluate alternatives*
- *Recommend the most cost effective and educationally appropriate preferred solution*

Advisory Team – Sustainability & MEP Systems 1

Project Name:	Medford High School	Project Number:	25100
RE:	Advisory Team - Sustainability & MEP Systems	Meeting Date:	12/16/2025
Prepared by:	Brenda Lam	Meeting Number:	01
Distribution:	Attendees		

Owner

- [x] Libby Brown, *SBC Member, Architect*
- [x] Suni Dillard, *Medford Resident, Sustainability Leader at HMFH Architects*
- [x] Austin Ditz, *Medford Resident, Solar Project Manager*
- [x] Audrey Feitor, *Medford High School Teacher*
- [x] Jenny Graham, *Chair of SBC, Vice Chair of School Committee*
- [x] Chris Hogan, *Medford Resident*
- [x] Elisabeth Krautscheid, *Medford Resident, MassSave Decarbonization Program*
- [x] Ken Lord, *MPS Chief Operating Officer*
- [ ] Sarah Michelman
- [ ] Nicole Morell, *SBC Member*
- [x] Jessica Parks, *Medford Resident, MIT Energy Efficiency Project Manager*
- [x] Brenda Pike, *City of Medford Climate Policy Planner*
- [x] Luke Preisner, *SBC Member*
- [x] Chris Richard, *Medford Resident, Senior Project Superintendent at Turner*
- [x] Paul Ruseau, *SBC & School Committee Member*
- [x] Nathan Scott, *Medford Resident, Capital Construction at Tufts University*

SMMA & Consultants

- [x] Martine Dion, *Director of Sustainable Design*
- [x] Brenda Lam, *Sustainable Design Project Coordinator*
- [ ] Helen Fantini, *Project Manager*
- [x] Matt Rice, *Principal-in-Charge, Architect*
- [x] Abigail Ransmeier, *Head of Research*
- [x] Soala Ajienka, *Architectural Designer*
- [x] Emily Ehlers, *Mechanical Engineer*
- [x] Andrew Barros, *Electrical Engineer*
- [x] Anthony Jimenez, *Electrical Engineer*

- [x] James Job, *Plumbing & Fire Protection Engineer*, AKAL Engineering
- [x] Tommaso Bitossi, Transsolar

Leftfield

- [x] Jen Carlson, *Project Director*
- [x] Matt Gulino, *Project Manager*
- [x] Adele Sands, *Educational Liaison*

Item No.	Action	Discussion
01.01	Record	**Meeting # 1 Agenda** • Welcome & introductions • Overview of the Advisory Team process & milestones • Goals & aspirations discussion - listening • Next Steps
01.02	Record	**Overview of Advisory Team Process & Milestones** • Four Advisory Teams - not individual silos of discussion; all are connected but each team gives space for deeper discussion ○ Each team will produce a set of recommendations for the full SBC to review and approve • Objective of Sustainability & MEP Systems: Reviews preferred MEP systems, sustainable design features and components, healthy materials; site design and landscape features for environmentally friendly design. • Sustainable Design Givens include: MSBA Green School Policy, Massachusetts Specialized Stretch Energy Code, and Medford Sustainable Goals and Guidelines. **Overall process: 4 meetings** • Listen > Review & Respond > Confirm & Recommend > Reconvene • If there are any additional comments following this meeting, any comments can be sent to Matt Gulino for distribution (mgulino@leftfieldpm.com)
01.03	Record	**Goals & Aspirations Discussion**

- Participant has previous experience working with sustainability in school projects and is co-chair for Carbon Leadership Forum in Boston. Focus on holistic approach to sustainability (not only thinking about daylight & views). Carbon is very important and would like to see what portions of the school can be saved, and understanding embodied carbon. Daylight studies are important as it impacts students' ability to learn and for staff retention. Consider circularity for materials and also health of individuals creating the materials for the school. There is a community outside of Medford to consider for local materials and labor. For vocational school, would like to see interaction of that and core academics and how each can benefit. Outdoor spaces can be tricky on this site. Energy efficiency is a given; geothermal seems cost-effective, and with vocational programs, can be used to teach students and tax payers. Bringing them along is important and getting that message to the community.
- Energy efficiency is given and low-hanging fruit. Solar and storage should be on board to bring overall energy down. We should understand what steps can be taken to get solar and storage to cover as much as possible from outside. As a future parent, there is a demand for electricians and vocational programs. Creating a building so that it is part of the education is important, including an environment with access to solar and storage so that students can directly learn from it. As goals are being put together, what steps can the City take to make some financial decisions that can lock in future benefits (safe harboring); benefits need to be realized. Working with utility as the school is going to be one of the larger loads for the City.
- Has seen how small decisions are not taking into account the bigger picture and taking account of Medford as a whole (example of using compostable materials, but it is being sent to landfill to be burned). Water is a big issue. Need to make sure money and effort results into something that works. Regarding the section of the building redone recently, and there are many things that are not working. Roof has been repaired at least 4 times and still leaking. It may not be realistic or feasible to not have sort of gas line for the culinary department or science labs (not for heating). Vocational and high school are integrated learning. Big proponent of the Fells and outdoor space access is important. Would like to see green space in building for health and wellness, as well as a green roof.
- Consider what things are available to our community including energy efficiency and cost incentives. Do not repeat what Medford is known for (cheap buildings that don't work).
- Projects on this scale should focus on simplicity to be successful. Excited for the project for the community and LEED standard.
- There is a lot of experience on this committee. We need to pick efficient systems that work properly for acoustics. Daylighting is important. Consider light shelves for daylighting. Need extra ventilation for kitchen, janitor closets, and CTE, which will increase energy use. The building may need gas because of the CTE programs. High ceiling fans are not ideal and difficult to get access to the equipment. MassSave programs are important for incentives. It is very important for the facilities staff to be involved in the design process as they will be maintaining the systems long-term and monitoring energy efficiency once occupied. Would like to see the LEED highlights at next meeting.
- It is important to focus on outcomes, and knows firsthand what works & what does not. Interested to see energy cost projections and those become budget drivers. We should try to reduce energy costs. Interested in Commissioning (Cx) process and repeat Cx to make sure things are functioning properly. Ensure the staff is fully trained to maintain the building.
- Importance of embodied carbon. Think about siting and passive approaches to energy and sustainability, not fully relying on the systems to do the work. Think about how occupants interact with building. Facilities team needs to understand how the building works. Learning and using the building as a classroom by including it in education (signage, engagement strategies). Commissioning and retro-commissioning are important. Fault detection systems used to flag issues on a regular basis.
- Net Zero building with no fossil fuels, solar, ground source, air tight enclosure, passive house strategies, reduced embodied carbon. Wiring for EV stations to include wiring for future buses. Consider indoor air quality (LEED strategies). Consider reducing impermeable surfaces (Green Score for buildings) as flooding has occurred in the past.
- Understand the pros and cons of solar. Think about practicality and gas-fired emergency generator. Interested in embodied carbon and potential renovation in certain spaces. Would like to see survey of the MEP systems in the surrounding schools, including LEED rating and energy use. Additionally, would like to see the LCCA and cost analysis (total costs/operating costs, payback, break even chards). Would like to see assessment of vertically tall new build on the current grass practice fields, and understand there will be many different options. Need to understand energy needs of the pool.
    - MSBA Heat Pump May 2025 Report: https://massschoolbuildings.org/sites/default/files/edit-contentfiles/Programs/ARP/MSBA_Heat_Pump_Report_Final_Summary_Website.pdf
    - Somerville High School MSBA Report: https://www.shsproject.org/resources/2016.06.03-Somerville-PSR-Submission---FULL-COMPILED.pdf

- Wants to be proud of this project for the Medford community and to change the stigma of Medford having broken school systems. Important for the school to be maintained and not too complex for those running the school. Issue with power company and it is a massive undertaking, challenged with electrification process and lack of infrastructure. Need to engage with utility company early.

		• Interested in passive building strategies as the focus is on outcomes. Issues with power company - previously purchased induction range and the grid couldn't handle it, and had to buy new gas equipment. Cost is always increasing with time. Review MSBA Report for initial costs and system options comparison. • School first - not a sustainable building. School needs to be functional and reliable for the students and staff. Tight envelope is important - need to educate people to operate building properly. Specialized Stretch code is a success, no need to go beyond.
01.04	MR	Next Steps • Meeting #2: Hybrid setup to allow for ease of communication. The design team will speak to the priorities brought up today, as well as: ○ Medford Public Schools experience with systems – best practices and lessons learned ○ All-electric MEP systems ○ Renewable Energy ○ Net-Zero Energy ○ Exterior Materials & Massing/Orientation ○ Embodied Carbon ○ Healthfulness • Interior materials • Indoor air quality • Access to daylight & outdoors ○ Sustainable Sites • Meeting #2 is scheduled for 1/15 at 5:30 pm.

Medford High School



Sustainability and MEP Systems Advisory Team Meeting

Meeting #1

12/16/2025

smma

LeftField

THE RIGHT CHOICE IN PROJECT MANAGEMENT

Meeting #1 Agenda

- Welcome & Introductions
- Overview of the Advisory Team Process & Milestones
- Sustainability Givens
  - MSBA Green School Policy
  - Massachusetts Specialized Code
  - Medford Goals
- Goals & Aspirations Discussion - Listening
- Next Steps

Welcome & Introductions

Sustainability and MEP Systems / Team Intro

SMMA



Matt Rice
Principal-in-Charge



Helen Fantini
Project Manager



Soala Ajienka
Architectural Designer



Andrew Barros
Electrical Engineer



Emily Ehlers
Mechanical Engineer

SMMA



Martine Dion
Sustainable Design
Director



Brenda Lam
Sustainable Design
Team Member

Transsolar



Tommaso Bitossi
Sustainable Design
Consultant

AKAL



James Job
Plumbing and Fire
Protection Engineer

1. Libby Brown
2. Suni Dillard
3. Austin Ditz
4. Audrey Feitor
5. Jenny Graham
6. Chris Hogan
7. Elisabeth Krautscheid
8. Ken Lord
9. Sarah Michelman
10. Nicole Morell
11. Jessica Parks
12. Brenda Pike
13. Luke Preisner
14. Chris Richard
15. Paul Ruseau
16. Nathan Scott

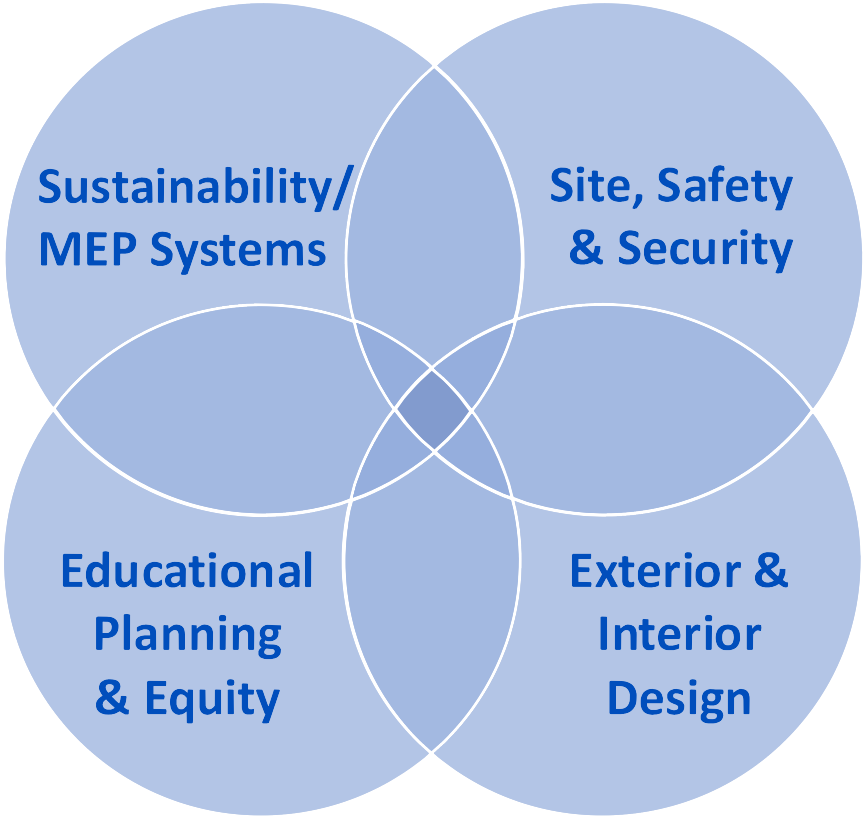
Overview of Advisory Team Process & Milestones

Community Stakeholder Engagement / Advisory Teams

Advisory teams are a method of collecting broad community input on key priorities and desired outcomes for the project.

***Who* : Educators, Students, City Departments, Boards & Commissions, Expert Community Members**

Reviews preferred MEP systems, sustainable design features and components, healthy materials; site design and landscape features for environmentally friendly design.

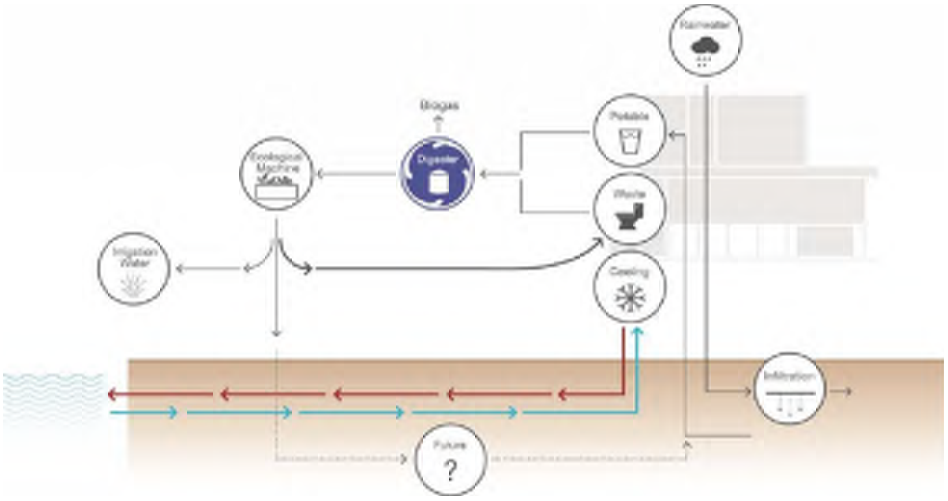


Reviews development of the site design for traffic, circulation, safety and security. Includes conversations about parking, driveways and circulation, fields, and offsite improvements and coordination with City Departments.

Reviews overall goals from educational planning perspectives, educational programming meetings and visioning sessions.

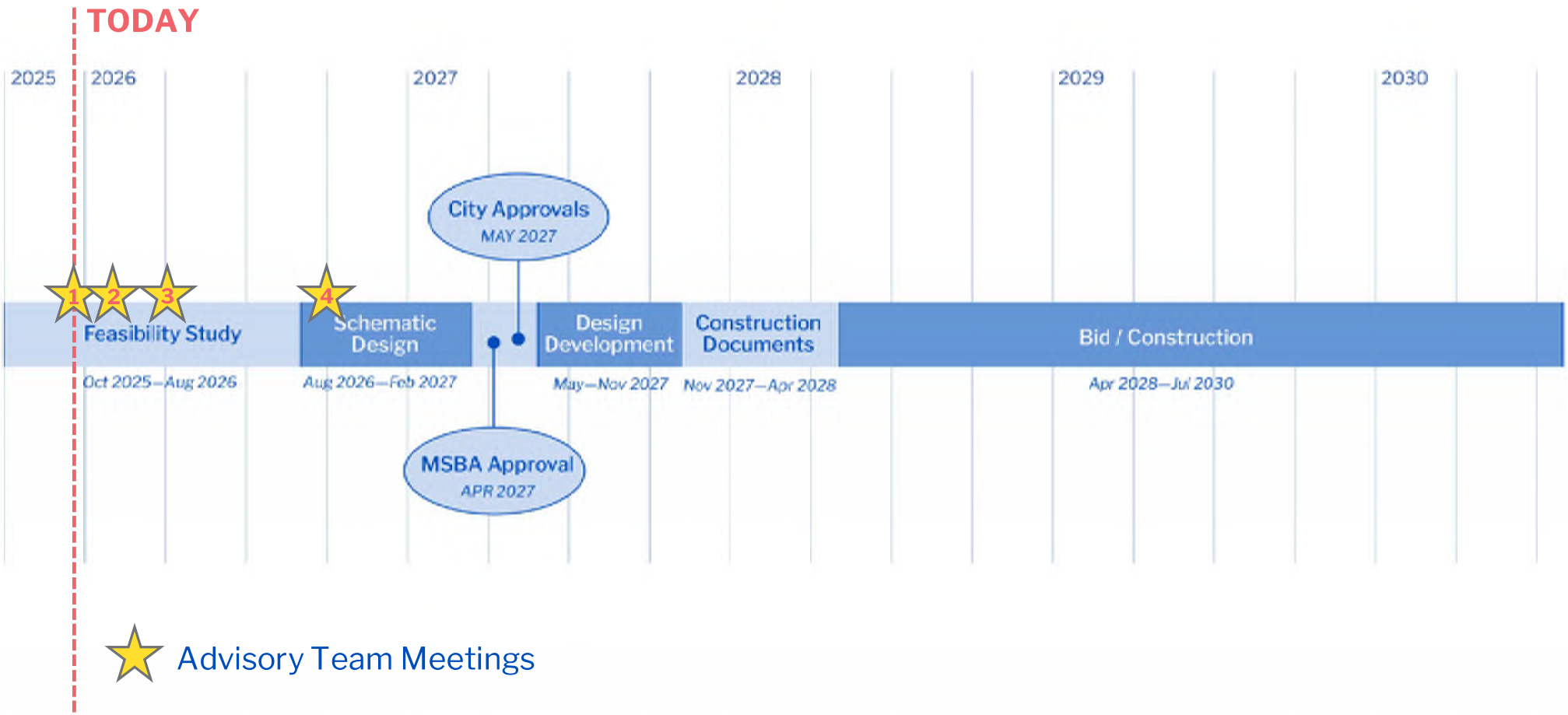
Reviews exterior design concepts including composition of form and exterior material selections. Review of the products and materials selected for interior finishes such as flooring, paint colors, wall finishes and ceilings.

Objective: Reviews preferred MEP systems, sustainable design features and components, healthy materials; site design and landscape features for environmentally friendly design.





Project Timeline



1	Listen	12/16
2	Review & Respond	1/15
3	Confirm & Recommend	TBD
4	Reconvene	TBD

Sustainability Givens

Sustainability Givens

MSBA Green School Policy

Massachusetts Specialized Code

Medford Goals

Sustainability Givens – MSBA Green School Policy

MSBA Green School Policy:

- LEED Silver
- Stretch Energy Code
- MEP/BE/Ongoing LEED Commissioning
- 3 LEED MR/IEQ points

MSBA 4% Additional Reimbursement:

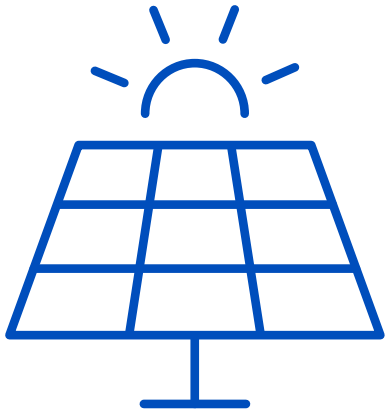
- Specialized Stretch Energy Code (3%)
- 5 LEED MR/IEQ points

Project will pursue the LEED version 5.

Sustainability Givens – Massachusetts Specialized Code

1. **Full Compliance with the Standard Stretch Energy Code**
2. **Specialized Stretch Energy Code - Three Pathways**

- All-Electric HVAC & DHW
- Fossil Fuel Heating – Electrification of Heating Readiness
- Fossil Fuel Heating – Renewable Energy



Sustainability Givens – Medford Goals

1. Go Green Medford
2. Solar Ordinance (Solar PV)
3. Sustainable Design Guidelines



Your Goals & Aspirations

Next Steps



1	Listen	12/16
2	Review & Respond	1/15
3	Confirm & Recommend	TBD
4	Reconvene	TBD

Next Steps/ What to Expect in Meeting #2

Objective: The design team will speak on the topics below as well as the priorities brought up by the advisory team today.

Potential Topics

- Medford Public Schools experience with systems – best practices and lessons learned
- All-electric MEP systems
- Renewable Energy
- Net-Zero Energy
- Exterior Materials & Massing/Orientation
- Embodied Carbon
- Healthfulness
    - Interior materials
    - Indoor air quality
    - Access to daylight & outdoors
- Sustainable Sites

When & Where?

January 15th, 5:30 – 7:00 PM

Remote / Hybrid

Thank you.



In the Preliminary Design Program:

…the District and its team collaborate with the MSBA to

- *Document their educational program*
- *Generate an initial space summary*
- *Document existing conditions*
- *Establish design parameters*
- *Develop and evaluate alternatives*
- *Recommend the most cost effective and educationally appropriate preferred solution*

Advisory Team – Educational Planning & Equity 1

Project Name:	Medford High School	Project Number:	25100
RE:	Advisory Team – Educational Planning & Equity	Meeting Date:	12/18/2025
Prepared by:	Soala Ajienka	Meeting Number:	01
Distribution:	Attendees		

Owner

- [x] Joan Bowen, *Head of Student Services*
- [ ] Marta Cabral, *Principal*
- [x] Nicole Chiesa, *Director of English Language and Social Studies*
- [x] Suzanne Galusi, *Interim Superintendent MPS*
- [x] Jenny Graham, *Chair of SBC, Vice Chair of School Committee*
- [x] Sydney Hamel, *Student*
- [x] Catherine Hatch, *Medford Academy*
- [x] Faiza Khan, *Director of Mathematics for District*
- [ ] Megan Leclaire, *EL Teacher*
- [x] Colleen Mahany, *Special Education Teacher*
- [ ] Rebecca Matloff, *School Adjustment Counselor*
- [x] Madeline McDonough, *Teacher*
- [x] Dana McMahon, Teacher
- [x] Chelsea McNiff, *EL Director*
- [ ] Robert O'Leary, *Athletic Director Medford Public Schools*
- [x] Lisa Miller, *Programming & Web Development Teacher*
- [x] Aaron Olapade, *SBC Member, School Committee Member*
- [x] Annemarie Rigas, *Medford Parent*
- [x] Norman Rousseau, *Biotechnology Teacher*
- [x] Stacey Schulman, *Director of School Counselling and Behavioral Health*
- [x] Cooper Su, *Student*
- [x] Kim Talbot, *Assistant Superintendent*
- [x] Jonathan Wilson, *Biology and anatomy Teacher*

SMMA & Consultants

- [x] Soala Ajienka
- [x] Helen Fantini
- [x] Matt Rice
- [x] Rosemary Park

- [ ] Mike Pirollo, MLP Integrated Design

Leftfield

- [x] Jen Carlson
- [ ] Matt Gulino
- [x] Adele Sands

Item No.	Action	Discussion
01.01	Record	**Meeting # 1 Agenda** • Welcome & introductions • Overview of the Advisory Team process & milestones • Goals & aspirations discussion - listening • Next Steps
01.02	Record	**Overview of Advisory Team Process & Milestones** • Four Advisory Teams - not individual silos of discussion; all are connected but each team gives space for deeper discussion ○ Each team will produce a set of recommendations for the full SBC to review and approve • Objective of Ed Planning & Equity: Reviews overall goals from educational planning perspectives, educational programming meetings and visioning sessions.

		Overall process: 4 meetings • Listen > Review & Respond > Confirm & Recommend > Reconvene • Goal is for the new school to open in Fall 2030 • Currently in the "Empathy" and "Define" portion of design thinking • Next meeting is 1/13
01.03	Record	**Goals & Aspirations Discussion** • Equitable learning services for students with disabilities. Spaces that promote learning and equity for students. Likes collaborative working spaces experienced in schools (school tours organized by Mike Pirollo) visited. Would like to see students continue receiving services that they get now and none of it be shortchanged. • School staff has had the privilege to dig deep into the work required through the planning process. The focus should be on trying to create spaces that are flexible enough, so teachers can deliver learning that students need. This is an opportunity to create a flagship experience for the community. Creating a building that grows with the community, not just for the next few years but many years to come. There are not that many spaces for teachers to grab lunch together and have meetings. Would like to see better art spaces. Overall, Community and Flexibility should be the main drivers. • Fortunate to have been in a lot of these meetings and looking forward to noting who to call on when it's time to make decisions. What does equity look like in motion, rather than just words? How can outcomes and intentions match closely? • Prioritize having safe spaces for students interested in all kinds of topics, where they feel comfortable while connecting with other students with those same interests. Would be great to see spaces to destress, decompress, and appropriate for students to do what they need and then reemerge in class and be fully engaged. • Students' day is dynamic and not as repetitive as a lot of students feel like it is now. Would like to see movement prioritized and students being able to go to different spaces. There's a lot of schools with different types of spaces that staff have seen but how would they be utilized in a full way instead of doing things in the same way? • Collaboration spaces for students. Currently, there's not that many collaboration spaces, where teachers and students can meet and learn from each other, where good discourse can exist and student work can even be displayed. Would be great if Math, CTE and Science were co-located. Interested in the concept of a math Lab, that runs during the day that can then extend to a before-school space for students and after school • How can we reduce the stigma of being a special education student? Think of dimmable lights, flexible furniture, sound absorbers, breakout spaces in cotaught classrooms. Spaces for students in grades 9-12 to learn more adaptive life skills, space for emotional support for students who need it. Spaces that deflate emotional stress, minimize high anxiety spaces, multi-use flex space to help with motor needs and sensory needs. • Students thrive in comfortable spaces that are conducive to productive routines. Not 'word salad' but how are students really going to exist in spaces. Design and create modern, flexible, community spaces for breakout activities, appropriate spaces for all students. Would be great to have better Music areas. • Chapman Middle School model is a great idea, having more common spaces in a central area. Humanities would like more spaces to meet and collaborate, including ELA. Teachers like the connection to nature, the ability to teach outdoors, small stage, projection capabilities, A writing center has been disused in visioning meetings. ELA and humanities, having such resources close together will help improve students' skills. A lot of support teachers are scattered across the building and design team should think mindfully about where support is and where teachers' rooms are. Medford is a historic city and so having elements of that history showcased is a great thing. Classroom spaces opening up into shared spaces is a great idea. Safety, entrance, entry and parking lot considerations. Revised entry and floor levels. Quiet spaces, Safe spaces for students, that are well maintained. Quality of space and experience for students should be prioritized. • The EL Department , similar to Special Education has similar programming needs. There are classes with a mix of students in different grades and sheltered content classes. Would be great if ESL program was embedded with the rest of the teams at the school and not separate. While content classes are sheltered they are 'content-first' and should not just be identified as sheltered. Would be great to see a greater bridge between the ESL world and the EL world. While the Registration area is well positioned now, would be great to see even more visible registration and EL department offices. This would be good for greater community that utilizes these services. • Advocating for CTE, they have a very unique set of needs that should be acknowledged and responded to. Excited about the idea of the Model House that all the Vocational students who are involved in the building industry can work on. Curious about the organization of teacher's classrooms and spaces, academic, shared? How will the decisions play out? There were really useful tours to other schools. Would like to see Collaborative spaces of different kinds that get used in different ways. There's a lot to learn from other communities and how they use their spaces. Hearing teachers and administrators in other schools has been very useful. • Excited about the many good ideas expressed so far. Interested to see Equity not just as an abstract idea, but the experience of everyone who uses the school. Students have different sensory needs and so would like to see a building that's not asking the students to change needs based on what's on offer, but asking the students what they need . There's a difference between families and students that have been here for a long time versus families that just

		moved to the city. Would like to see a multi-tiered design that offers multi-tiered needs for community. There should be a focus on creating competitive edge in terms of offerings for students, considering families who are debating the needs for the students and thinking of sending them out of district to other non-public schools. • Advocating for students with disabilities, with robust IEPs and who need multiple services. Would like to see focus on reducing the stigma of going into specialized spaces. If we develop the school from the point of view of people who have accessibility needs and everyone will benefit. Would like to see Inclusion vs. Segregation. Teachers are far from each other currently. How can a space for inclusion be integrated? • There's a growing demand for CTE education. Would like to see a new space for biotech that's accessible to everybody. • House model is working quite well now, where each student has a school counselor and another adjustment counselor that provides students a home base to go to. There's increasing need for mental health services. It would be great to have a counselling center for school, where guests can come in and present. Would be good to have a dedicated space for community mental health care within health suite. Need to add a nurse practitioner that can do meds management. • In current role, goal is to deliver on the promise that students who leave school are better off than when they came in. Advocate design for flexibility that allows students to adapt as they need to , develop identities, both social and education based. Let them grow in the sunlight rather than dark spaces. Liked cafeteria in schools toured, with multiple types of seating. Somerville was a good example of this. Space with good sight lines, so staff can monitor students, space for quiet cafeteria moments, library spaces, adjacencies, cluster of rooms having an adjacent space with all of them sharing amenities which looked like it worked well instead of a situation where the teachers need to book spaces weeks before hand. Design for the adults too, where adults can collaborate with each other. • There were some missed opportunities in classrooms in schools that were visited. Wish there were more whiteboards, more vertical spaces. The classrooms themselves were good as they allowed for collaboration. See community spaces not just a novel space, but as spaces that provide better learning than what exists in classroom. Café spaces with larger and smaller space on the side, Chapman style. Occupational therapy and smaller versatile physical education rooms are needed. • Think of longevity beyond now and the fact that school will outlive a lot of us. Good to coalesce social studies and humanities to allow for more collaboration and the crossovers that already exist. Space to accommodate global collaboration. Students meet virtually with from around the world, Space to accommodate simulations like Model UN. A Writing Center would be beneficial to a lot of the departments. On the tours, it was very useful to see Project Based Learning and teachers would like to do that more. Maintaining the historical aspects of Medford and expressing them in the school environment.
01.04	Matt Rice	**Next Steps** • Meeting #2: Hybrid setup to allow for ease of communication. The design team will speak to the priorities brought up today, as well as: ○ Toilets – General Use and All Gender Design ○ Schedule ○ Community Use ○ Areas of respite and wellness ○ Comprehensive School Approach ○ Equity and Inclusion today in the future

Medford High School



Educational Planning and Equity Advisory Team Meeting

Meeting #1

12/18/2025

smma

LeftField

THE RIGHT CHOICE IN PROJECT MANAGEMENT

Meeting #1 Agenda

- Welcome & Introductions
- Overview of the Advisory Team Process & Milestones
- Goals & Aspirations Discussion - Listening
- Next Steps

Welcome & Introductions

Educational Planning and Equity / Team Intro

SMMA



Matt Rice
Principal-in-Charge



Helen Fantini
Project Manager



Rosemary Park
Educational
Programmer: Planner



Soala Ajienka
Architectural Designer

MLP



Mike Pirollo
Educational
Visioning Consultant

LeftField



Matt Gulino
Project Manager



Jen Carlson
Project Director



Adele Sands
Educational Liaison

smma

Educational Planning and Equity / Team Intro

1. Joan Bowen
2. Marta Cabral
3. Nicole Chiesa
4. Chad Fallon
5. Suzanne Galusi
6. Jenny Graham
7. Sydney Hamel
8. Catherine Hatch
9. Faiza Khan
10. Megan LeClair
11. Colleen Mahany
12. Rebecca Matloff
13. Madeline McDonough
14. Dana McMahon
15. Chelsea McNiff
16. Lisa Miller
17. Aaron Olapade
18. Rob O'Leary
19. AnneMarie Rigas
20. Norm Rousseau
21. Stacey Schulman
22. Cooper Su
23. Kim Talbot
24. Jon Wilson

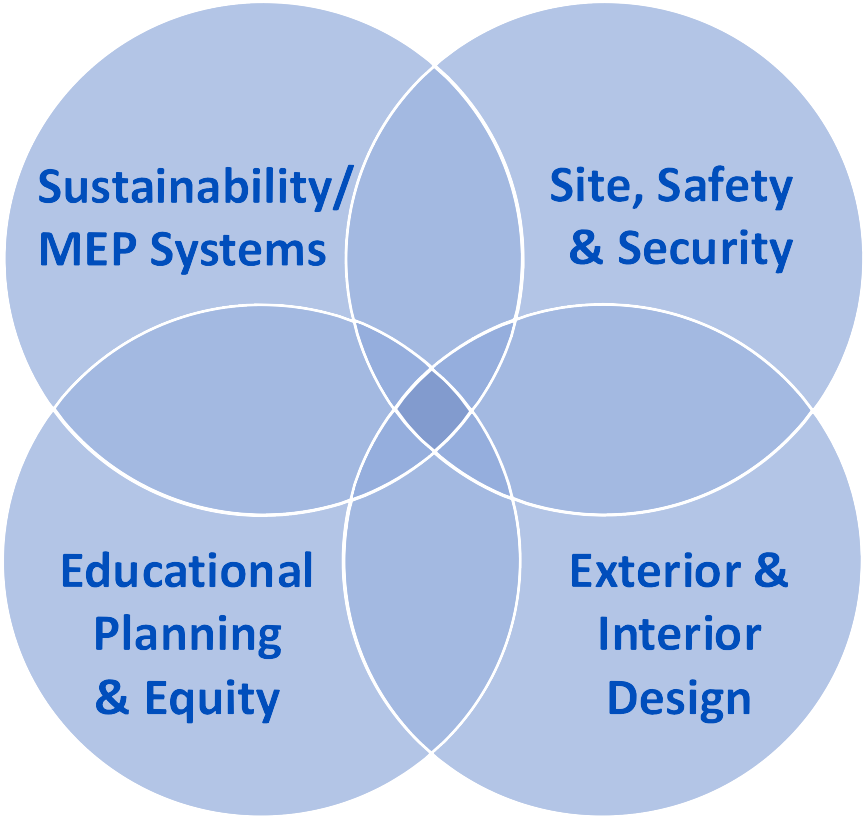
Overview of Advisory Team Process & Milestones

Community Stakeholder Engagement / Advisory Teams

Advisory teams are a method of collecting broad community input on key priorities and desired outcomes for the project.

***Who* : Educators, Students, City Departments, Boards & Commissions, Expert Community Members**

Reviews preferred MEP systems, sustainable design features and components, healthy materials; site design and landscape features for environmentally friendly design.



Reviews development of the site design for traffic, circulation, safety and security. Includes conversations about parking, driveways and circulation, fields, and offsite improvements and coordination with City Departments.

Reviews overall goals from educational planning perspectives, educational programming meetings and visioning sessions.

Reviews exterior design concepts including composition of form and exterior material selections. Review of the products and materials selected for interior finishes such as flooring, paint colors, wall finishes and ceilings.

Educational Planning and Equity / Objective

Objective: Review overall goals from educational planning perspectives, educational programming meetings, and visioning sessions.

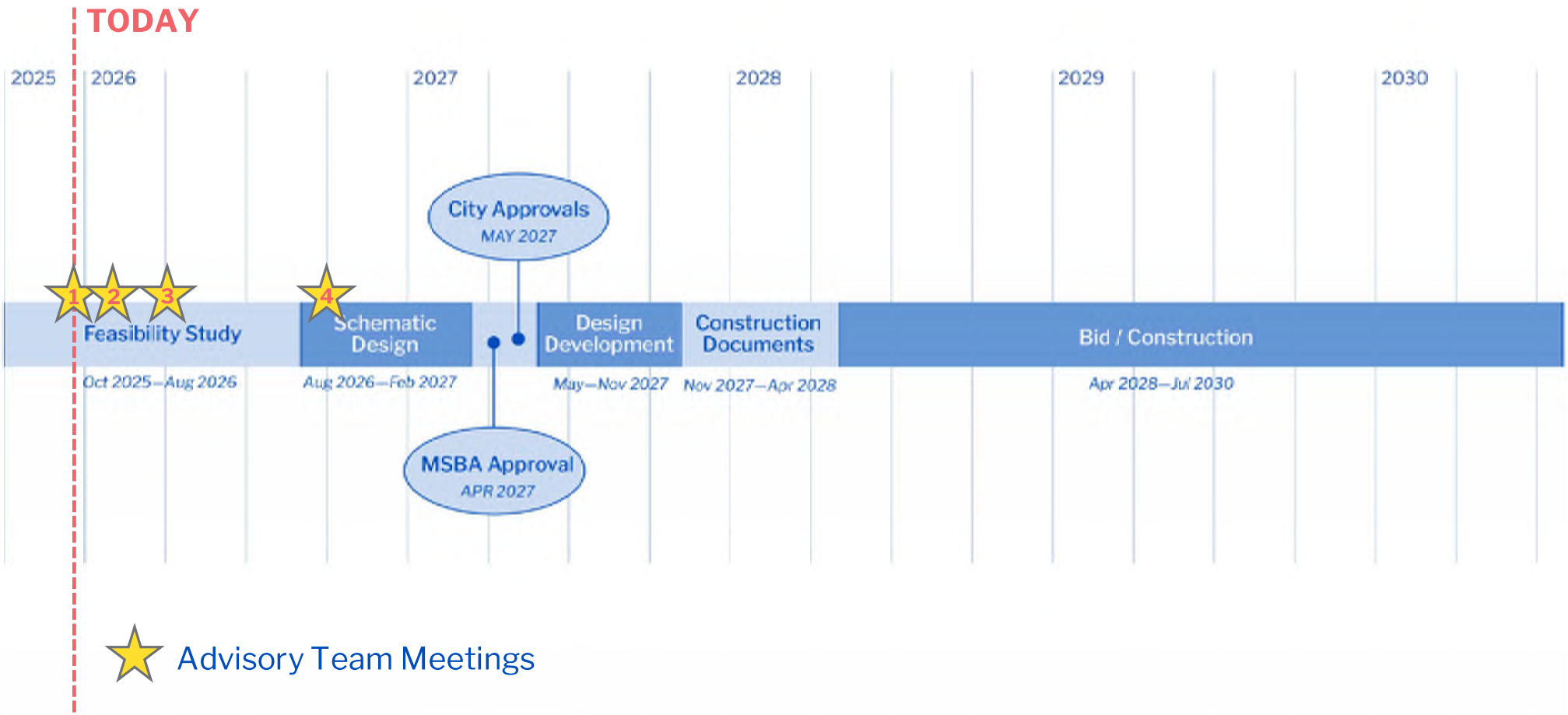









Project Timeline



1. Listen 12/18
2. Review & Respond 1/13
3. Confirm & Recommend TBD
4. Reconvene TBD

Your Goals & Aspirations

Next Steps



1. Listen 12/18
2. Review & Respond 1/13
3. Confirm & Recommend TBD
4. Reconvene TBD

Next Steps/ What to Expect in Meeting #2

Objective: The design team will speak on the topics below as well as the priorities brought up by the advisory team today.

Topics

- Toilets – General Use and All Gender Design
- Schedule
- Community use
- Areas of respite and wellness
- Comprehensive school approach
- Equity and Inclusion today and in the future

When & Where?

January 13th, 4:00 - 5:30 PM
Remote / Hybrid

Thank you.



Medford High School



Site, Safety, and Security Advisory Team Meeting

Meeting #1

12/18/2025

smma

LeftField

THE RIGHT CHOICE IN PROJECT MANAGEMENT

Meeting #1 Agenda

- Welcome & Introductions
- Overview of the Advisory Team Process & Milestones
- Goals & Aspirations Discussion - Listening
- Next Steps

Welcome & Introductions



Site, Safety, and Security / Team Intro

SMMA



Matt Rice
Principal-in-Charge



Helen Fantini
Project Manager



Laura Swan
Civil Engineer



Soala Ajienka
Architectural Designer

Agency



Kate Tooke
Landscape Architect

GHT



Matt Allain
Security Systems Consultant

LeftField



Matt Gulino
Project Manager



Jen Carlson
Project Director

Site, Safety, and Security / Team Intro

1. Nicole Branley
2. Chief Buckley
3. Theresa Carr
4. Amanda Cintrella
5. Matt DeMeo
6. Chief Evans
7. Matt Galusi
8. Jenny Graham
9. Brian Hilliard
10. Joe Hogan
11. Alicia Hunt
12. Nick Karinge
13. Ethan Lay-Sleeper
14. Ken Lord
15. Sean Mangan
16. Tim McGivern
17. John McLaughlin
18. John Prestigiovanni
19. Melissa Young

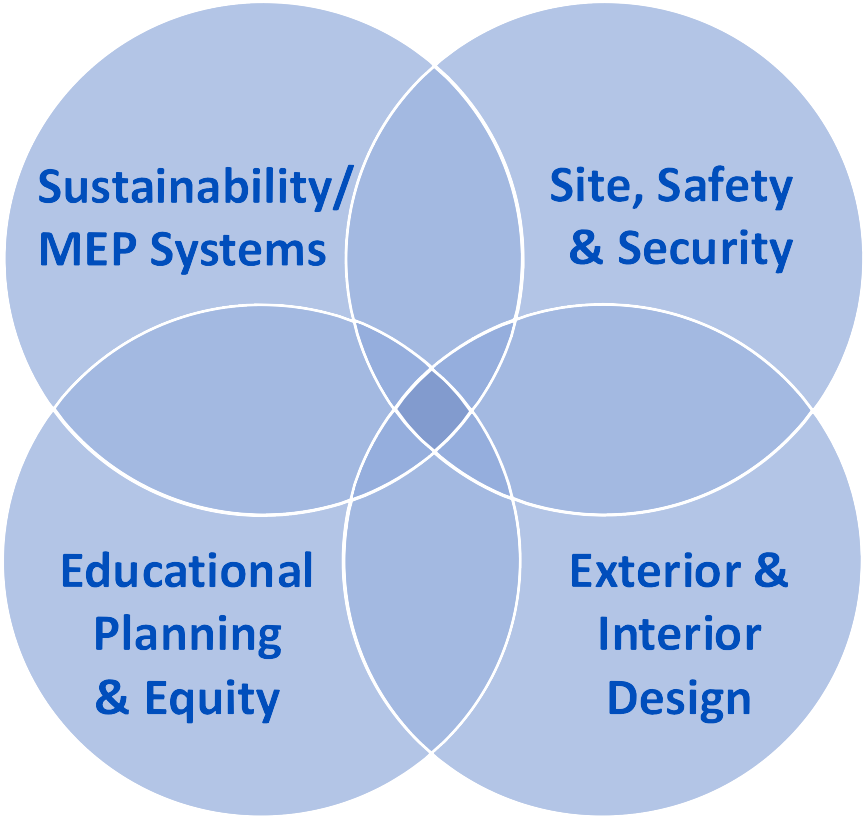
Overview of Advisory Team Process & Milestones

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Reviews overall goals from educational planning perspectives, educational programming meetings and visioning sessions.

Reviews exterior design concepts including composition of form and exterior material selections. Review of the products and materials selected for interior finishes such as flooring, paint colors, wall finishes and ceilings.

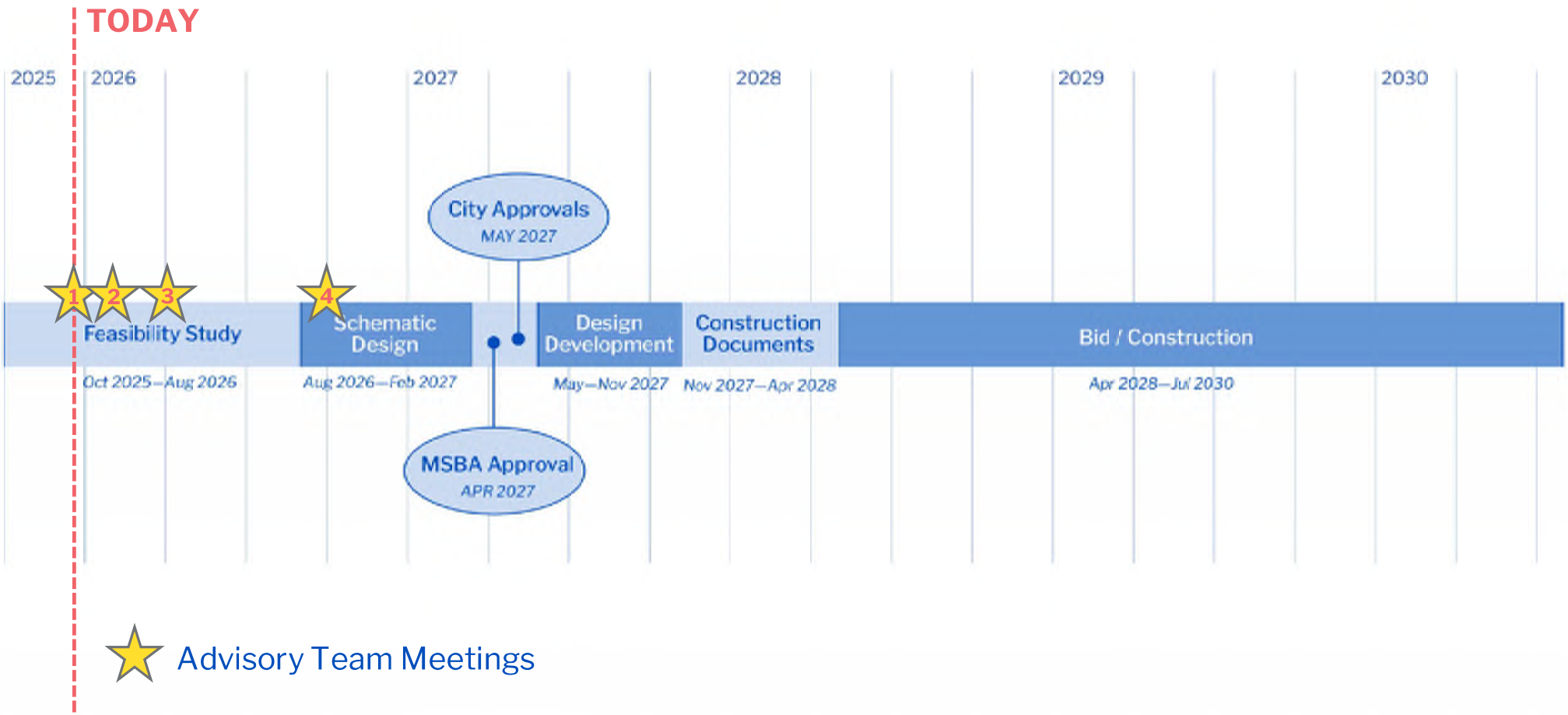
Site, Safety, and Security / Objective

Objective: Reviews development of the site design for traffic, circulation, safety and security. Includes conversations about parking, driveways and circulation, fields, and offsite improvements and coordination with City Departments.



smma

Project Timeline



1. Listen — 12/18
2. Review & Respond — 1/13
3. Confirm & Recommend — TBD
4. Reconvene — TBD

Your Goals & Aspirations

Next Steps



1. Listen — 12/18
2. Review & Respond — 1/13
3. Confirm & Recommend — TBD
4. Reconvene — TBD

Next Steps/ What to Expect in Meeting #2

Objective: The design team will speak on the topics below as well as the priorities brought up by the advisory team today.

Topics

- CPTED (Crime Prevention Through Environmental Design)
- Transparency / views
- Active security technology
- Site materiality and permanence
- Site amenities
- Circulation (pedestrian/bike/car/bus/service/first responder)
- Interior connections: Site/Building integration (outdoor learning environments, etc.)
- Exterior connections: Site integration/connection with the community
- Construction logistics

When & Where?

January 13th, 5:30 – 7:00 PM

Remote / Hybrid

smma

Advisory Team – Site, Safety & Security 1

Project Name:	Medford High School	Project Number:	25100
RE:	Advisory Team - Site, Safety & Security	Meeting Date:	12/18/2025
Prepared by:	Helen Fantini	Meeting Number:	1
Distribution:	Attendees		

Owner

- [x] Nicole Branley, *Resident*
- [x] Chief Jack Buckley, *Chief of Police*
- [x] Theresa Carr, *Resident, Transportation Planner*
- [x] Amanda Centrella, *Medford Open Space Planner*
- [ ] Matthew DeMeo
- [x] Chief Todd Evans, *Medford Fire Chief*
- [x] Matt Galusi, *MHS PE Teacher*
- [x] Jenny Graham, *SBC Chair, School Committee Vice Chair*
- [x] Brian Hilliard, *SBC Member, Architect*
- [ ] Joe Hogan, *MHS Student*
- [x] Alicia Hunt, *Director of Planning, Development & Sustainability, Medford*
- [x] Nick Karinge, *Disabilities Director, Medford*
- [x] Ethan Lay-Sleeper, *Architect/Planner*
- [x] Ken Lord, *MPS Chief Operating Officer*
- [x] Sean Mangan, *Director of Operations for Armstrong Ambulance*
- [x] Tim McGivern, *Commissioner of Public Works, Medford*
- [x] John McLaughlin, *MPS Director of Buildings & Grounds*
- [x] John Prestigiovanni, *MHS Sports Coach*
- [x] Melissa Young, *Resident, Cambridge municipal employee*

SMMA & Consultants

- [x] Soala Ajienka, *Architectural Designer*
- [x] Helen Fantini, *Project Manager*
- [x] Erin Prestileo, *Civil Engineer*
- [x] Matt Rice, *Principal-in-Charge, Architect*
- [x] Laura Swan, *Civil Engineer*
- [ ] Kate Tooke, *Landscape Architect, Agency*
- [x] Kazia Rodrigo, *Landscape Designer*, Agency
- [x] Matt Allain, *Security Consultant*, Good Harbor Techmark

Leftfield

- [x] Jen Carlson, *Project Director*
- [ ] Matt Gulino, *Project Manager*

Item No.	Action	Discussion
01.01	Record	Meeting # 1 Agenda - Welcome & introductions - Overview of the Advisory Team process & milestones - Goals & aspirations discussion - listening - Next Steps
01.02	Record	Overview of Advisory Team Process & Milestones - Four Advisory Teams - not individual silos of discussion; all are connected but each team gives space for deeper discussion ○ Each team will produce a set of recommendations for the full SBC to review and approve - Objective of Site, Safety & Security AT: Reviews development of the site design for traffic, circulation, safety and security. Includes conversations about parking, driveways and circulation, fields, and offsite improvements and coordination with City Departments. Overall process: 4 meetings ○ Listen > Review & Respond > Confirm & Recommend > Reconvene

		- Goal is for the new school to open in Fall 2030 - Currently in the "Empathy" and "Define" portion of design thinking
01.03	Record	Goals & Aspirations Discussion • Work with security monitors in the school. Recommends that someone from the CTE side is part of the conversation. • There are some security issues that cannot be discussed in public. This is a historic, difficult site; access and egress. Suggests a need for more than one road. Make sure that the building stairs and doors are named logically. Communications on site are difficult – radios in building do not work well currently. The building is not "easy" to understand it. [The team noted that there will be separate conversations about security]. • Medford Safe Routes member, Walk Medford, etc. Would like to open up the building to Winthrop – it's too far back. Need to encourage less driving – bike to transit. Need sidewalks on both sides of the access road. Likes the permeability to the Fells. CTE aspect is so important – would love to see the students involved in the process and construction. • This is a high school first, but also a community resource. It feels insulated from the neighborhood – not welcoming. Balance welcome with security. How can athletic fields respond to climate (heat). Wants to encourage biking and alternate means of transit. Open campus – how to make sure it is safe but open to public. • Access is a concern – dead end on site is difficult for the fire apparatus. Would like to explore a secondary access, improved fire lanes, hydrant locations with access to athletic fields. Need to see plans to provide more feedback on spaces of higher concern and will provide input on construction phasing. Interest in RTUs and PV – access to the roof and perimeter protections. • Interest a modern, state of the art building. As a 1992 graduate, noted a lot of blind areas in the building that are hard to monitor. Would like to see a flow around the building – the dead end is a real issue. Need emergency egress but acknowledges difficulty. Fells athletics trail – 1 mile – continue to use. Fields – need to make sure there is sufficient parking for athletic events. Loves to see community use, but would like to see that those spaces are sealed off from students / ability to shut it off. Focus on high visibility spaces for collaboration. Can bus drop off area be designated for buses only for better safety? • A place for all modes of transportation to have designated space – can the buses be central and not in conflict with cars? Need for better flow. Is there space for track and field and football field? Field of dreams is deteriorating. Key to the project – maintain and improve the community spaces – pool, theater, playing fields. Space is not maximized. Would love to see view to the city, either from the roof or within the building. Requested more information on artificial turf fields – are they safe? Sees an opportunity to "create space" and give citizens a reason to vote "yes." • Difficult site – flow issues. Public transit is very limited and students have a difficult time getting to the buses on time – would like to see a late bus option. Curious about the phasing. Likes idea of street presence and providing views to the City of Boston. • Constrained site. Could the building be taller/tighter? No ADA access for viewing area for the pool – cannot hold meets here. Speaker's daughter was so worried about getting lost in the high school that she created a model to help understand it. Speaker is actively working on transportation issues – pair with senior citizen needs. Goal is net zero building so assumes there will be solar. • Main issue is accessibility. Speaker did not attend MHS due to accessibility and it is too large. Ramp to main entry is way too steep. Students need to be able to travel through the building – needs to be compact. This is a community building but there is awareness that it is not accessible. • Site planning goals – safe, welcoming, first responders able to effectively manage, access to outdoor learning, clear separation of modes of transport. Room for future additions, logical field layouts, protected crossings, structural integrity, proper drainage, natural surveillance. Safe but not like a fortress. Fewer entries into building, secure main entry, ability to monitor parking areas. Fells access should be primary – safe and visible – gateway to the Fells. More natural hydrology. Site circulation – separation of modes of transport. Well lit, but no light pollution. Segregate public spaces from academics – multi-use. Fully accessible site. CISSA provided advice on his last project – very interested in interior and exterior • Design of circulation and its maintenance is his focus. All lighting to City standards. Erosion control during construction. Notes that Steve Miller Drive is a public road. • Site circulation is a huge issue. Saturday morning is a big issue – circulation and parking. Loves the idea that this is the "flagship" and view to the City of Boston. Domed athletic field? Improved security, better lighting are needed. • Collaboration across departments is critical. Dead end site is a huge concern – has been to MFN at night and it is confusing. Doesn't like feeling stuck on the site. Modern flow is needed. We should be asking for more buses from the MBTA.

01.04	MR	Next Steps - Meeting #2: the design team will speak to the priorities brought up today, as well as: ○ CPTED (Crime Prevention Through Environmental Design) ○ Transparency / views ○ Active security technology ○ Site materiality and permanence ○ Site amenities ○ Circulation (pedestrian/bike/car/bus/service/first responder) ○ Interior connections: Site/Building integration (outdoor learning environments, etc.) ○ Exterior connections: Site integration/connection with the community ○ Construction logistics - SMMA will investigate the possibility for this next meeting to be hybrid.

Advisory Team – Educational Planning & Equity 2

Project Name:	Medford High School	Project Number:	25100
RE:	Advisory Team – Educational Planning & Equity	Meeting Date:	01/13/2026
Prepared by:	Soala Ajienka	Meeting Number:	02
Distribution:	Attendees		

Owner

- [x] Joan Bowen, *Head of Student Services*
- [x] Marta Cabral, *Principal*
- [x] Nicole Chiesa, *Director of English Language and Social Studies (virtual)*
- [x] Chad Fallon, *CTE Director*
- [x] Suzanne Galusi, *Interim Superintendent MPS*
- [x] Jenny Graham, *Chair of SBC, Vice Chair of School Committee (virtual)*
- [x] Sydney Hamel, *Student (virtual)*
- [x] Catherine Hatch, *Medford Academy (virtual)*
- [x] Faiza Khan, *Director of Mathematics for District*
- [ ] Megan Leclaire, *EL Teacher*
- [ ] Colleen Mahany, *Special Education Teacher*
- [ ] Rebecca Matloff, *School Adjustment Counselor*
- [x] Madeline McDonough, *Teacher (virtual)*
- [ ] Dana McMahon, Teacher
- [x] Chelsea McNiff, *EL Director (virtual)*
- [ ] Robert O'Leary, *Athletic Director Medford Public Schools*
- [x] Lisa Miller, *Programming & Web Development Teacher*
- [x] Aaron Olapade, *SBC Member, School Committee Member (virtual)*
- [ ] Annemarie Rigas, *Medford Parent*
- [x] Norman Rousseau, *Biotechnology Teacher (virtual)*
- [x] Stacey Schulman, *Director of*

SMMA & Consultants

- [x] Soala Ajienka
- [x] Helen Fantini *(virtual)*
- [x] Matt Rice
- [x] Rosemary Park

- [ ] Mike Pirollo, MLP Integrated Design

Leftfield

- [x] Jen Carlson *(virtual)*
- [x] Matt Gulino*(virtual)*
- [x] Adele Sands *(virtual)*

School Counselling and Behavioral Health (virtual)
- [x] Cooper Su, *Student*
- [x] Kim Talbot, *Assistant Superintendent*
- [ ] Jonathan Wilson, *Biology and anatomy Teacher*
- [x] Jack Haverty, *AP Somerville NWF/Resident*

Item No.	Action	Discussion
02.01	Record	**Meeting # 2 Agenda** • Welcome & introductions • Process & milestones • Topics and Priorities - Takeaways from Meeting #1: 1. Equity, Inclusion and Belonging 2. Wellness and Wellbeing, 3. Student Identity and Expression 4. Flexible and future ready 5. Community Connection • Next Steps
02.02	Record	**Overview of Advisory Team Process & Milestones** • Four Advisory Teams - not individual silos of discussion; all are connected but each team gives space for deeper discussion ○ Each team will produce a set of recommendations for the full SBC to review and approve • Objective of Ed Planning & Equity: Reviews overall goals from educational planning perspectives, educational programming meetings and visioning sessions. • Today, the project is advancing in the feasibility stage. • SMMA presented a list of givens: Air conditioning and quiet mechanical systems, adequate power, adequate access to bathrooms for staff and students, classrooms with operable windows, access to daylighting, good acoustics, accessibility for all, adequate storage, dimmable LED lighting, ergonomic furniture, better site circulation, reliable Wi-Fi
02.03	Record	**1. Equity, Inclusion and Belonging** <u>Integrated learning community</u> • Opportunity to embed often siloed communities such as Special Education, CTE, House Offices, Science, Small group rooms, and breakout spaces that all support the variety of needs among the student body. A cluster can include a variety of all of these spaces. • This embeddedness demonstrates to students that help is always available. It creates a sense of welcome for students and removes stigmas that may exist. SMMA will work closely with MHS to identify opportunities for adjacencies. • **<u>Discussion:</u>** ○ If CTE shops are isolated from each other within the clusters, what implications could that have on the CTE culture? ○ There are CTE programs that could benefit from being more integrated with the rest of the school community ○ Registration hub is a good location to embed the ideas of an integrated learning opportunity with Student Identity and Expression and Community Connection <u>Toilet Room: Multi-User Designs</u> • There are different attitudes around toilet rooms and this is a significant point of

		focus of the space planning process. • There is the opportunity for all-gender rooms • SMMA highlighted prior projects where schools have built in flexibility to their binary gender toilet rooms to be converted to All- Gender Designs at a later date. • The plumbing code in Medford has changed to allow a more inclusive model to be integrated • Precedent: RISD Student Success Center: Private stalls with a common wash hand basin at the center • Design of the toilet rooms also includes signage that illustrates the purpose of the room, than on the gender. This approach ensures that exclusion right from identifying the location of a toilet room, before even using the room • **Comments:** ○ A lot of students at the High School use the single use stalls when the option is nearby and available. ○ Students highlighted the importance for individual stalls to have doors that go from floor to ceiling. This ensures that all the stalls are closed off when in use. The difficulty with a lot of examples seen elsewhere is the as currently, there are gaps present between stalls ○ The idea of a convertible binary to all-gender design could work well.
02.04	Record	**2. Wellness and Wellbeing** Student Spaces • Variety of ways such spaces of wellbeing and wellness can be introduced, including but not limited to breakout spaces along hallways, outdoor student spaces that all encourage movement and sensory engagement • It is important to create spaces with high visibility that also provide a sense of belonging to students • **Comments:** ○ It is important to note that the flexible breakout spaces for students are not only designed to be safe but also appropriate for students with high visibility in their location and use Staff Spaces • Medford High School is also a workspace and recognizing that means creating spaces that are equally welcoming and attuned to the needs of staff. • Important to provide break rooms for staff to recharge as well Teacher Planning Rooms that provide a focused work environment that staff may need • Important to create spaces with high visibility that also provides a sense of belonging to students • **Comments:** ○ How have schools that have had shared classrooms, utilized the shared staff spaces? There is difficulty to play out new models when they have not been tried before. What can be learned from other school projects? ○ If staff rooms are shared, do they truly provide the opportunity for more heads-down focused work? This needs to be calibrated clearly in the designs as quiet spaces are important for teachers, If they no longer have assigned classrooms ○ School districts around the Commonwealth of Massachusetts are having these conversations around how the framework for sharing classrooms among teachers could be setup. ○ MSBA provides guidance on quantity of classrooms based on student population and other factors. Part of this guidance is in aligning the school schedule and space planning, Classrooms are calculated to be used more than 85% of the time following formulas that guide the classroom sizes. ○ SMMA, also delves deeply into these calculations and ensures all possible scenarios are accounted for.
02.05	Record	**3. Student Identity and Expression** It is important that students are able to take pride in the identity they have set up for

		themselves. SMMA presented 2 examples of CTE shops from previous projects that showcase how design can achieve this Cosmetology • Community facing, encouraging the feeling that students are working in a professional setting • **Comments:** ○ If CTE shops are isolated from each other within the clusters, what implications could that have on the CTE culture Health Assisting • Students interface with a range of equipment that they'll see in the real world and confidence in their ability to emerge in the workforce is increased • **Comments:** ○ Waltham High School designed by SMMA is a good representation of how realistic a Health Assisting shop could be. It has an anatomage, which is a full size digital version of the human body and a space setup identical to medical offices. Visual and Performing Arts incl. Black Box Theatre • There are opportunities to showcase student work • Not tucking Arts program spaces into their own bubble, but creating the opportunities for interface, between department. • **Comments:** ○ For example, A CTE student interacts with performing Arts and is inspired to take a music class and vice versa, an art student encounters CTE student work and takes an elective School Store • Allowing students to take pride in their work, have store be more visible • **Comments:** ○ Waltham High School is a good example of a student run school store taking on a life of its own
02.06	Record	**4. Flexible and future ready** Agile Classrooms • Allow for spaces to be easily reconfigured and adaptable, without being disruptive to learning sequence • An adaptable classroom accommodates a range of students' learning styles. • **Comments:** ○ It is important that desk space in classrooms are sufficient for all student needs, accommodating the tools and materials utilized during class time. Collaboration Spaces • Visioning activities have identified types and purposes of such collaboration spaces • Used not only across departments but also by the community
02.07	Record	**5. Community Connection** The building should reflect Medford's identity while being designed to serve students and the community for generations. Community spaces should serve as active learning environments in addition to being places to gather. Dining Commons and Media Center • Quiet Dining as an alternative has come up a significant number of times • **Comments:** ○ Today, Unity and Equity come through in the Dining, Athletics and Library spaces. Student connections are best made in those locations ○ In student belonging video earlier in the year, these spaces were also central and highlighted ○ The new school timetable will have 3 lunch periods coordinated within a

		single cafeteria. ○ Centralizing the cafeteria will help to support the goal of this being an important space for student connection.
02.08	SMMA	**Next Steps** • Meeting #3, March 10th at 4pm • A Focus on Design Aspects, with color-coded assessment to be carried out by Advisory Team: Green (full agreement), Yellow (Items that may not be needed), Red (items that will not be taken forward) • Subsequently, Items carried forward in agreement will be put before School Building Committee

Medford High School



Educational Planning and Equity Advisory Team Meeting

Meeting #2

01/13/2026

smma

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THE RIGHT CHOICE IN PROJECT MANAGEMENT

Meeting #2 Agenda

- Welcome & Introductions
- Priorities from Meeting #1
- Next Steps

Welcome & Introductions



Educational Planning and Equity / Team Intro

SMMA



Matt Rice
Principal-in-Charge



Helen Fantini
Project Manager



Rosemary Park
Educational
Programmer: Planner



Soala Ajienka
Architectural Designer

MLP



Mike Pirollo
Educational
Visioning Consultant

LeftField



Matt Gulino
Project Manager



Jen Carlson
Project Director

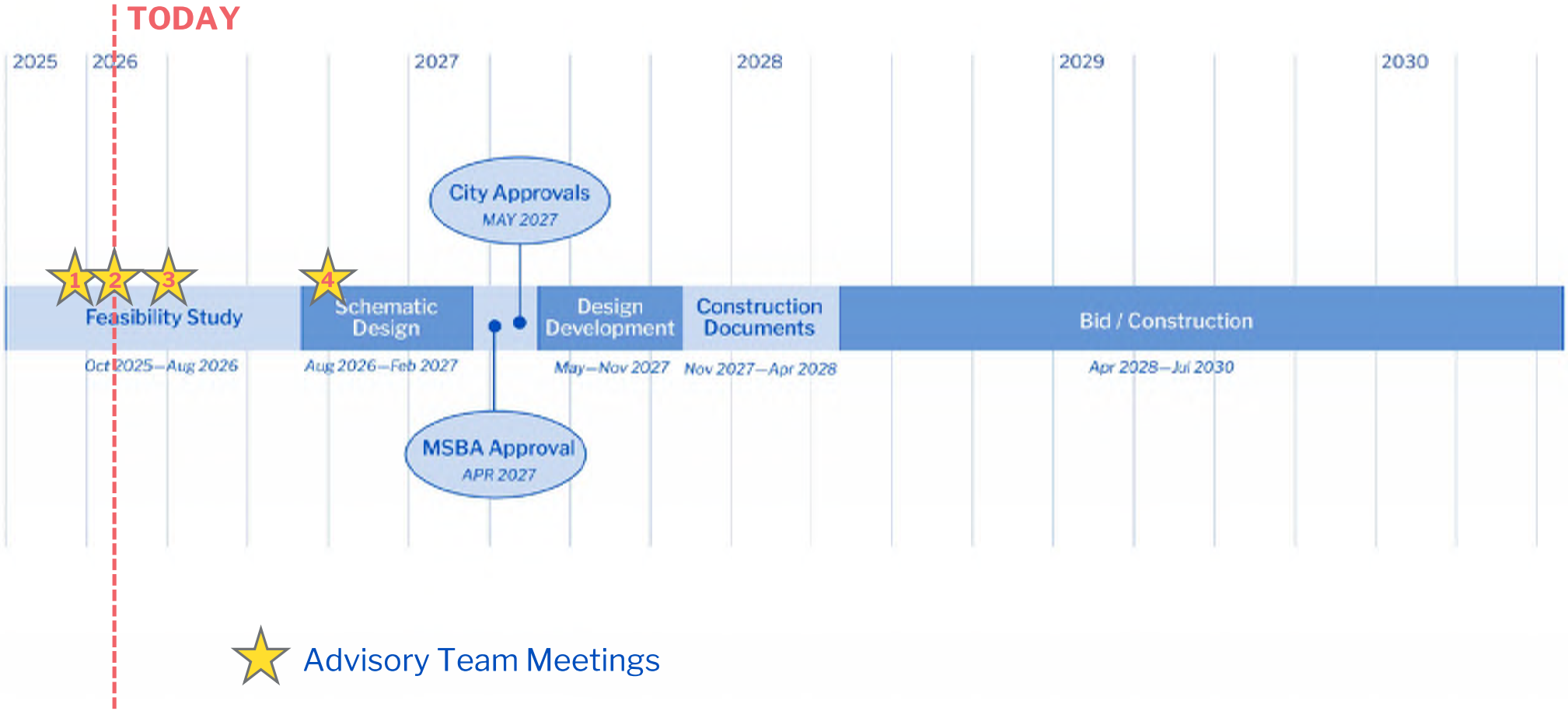


Adele Sands
Educational Liaison

smma

1. Joan Bowen
2. Marta Cabral
3. Nicole Chiesa
4. Chad Fallon
5. Suzanne Galusi
6. Jenny Graham
7. Sydney Hamel
8. Catherine Hatch
9. Faiza Khan
10. Megan LeClair
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13. Madeline McDonough
14. Dana McMahon
15. Chelsea McNiff
16. Lisa Miller
17. Aaron Olapade
18. Rob O'Leary
19. AnneMarie Rigas
20. Norm Rousseau
21. Stacey Schulman
22. Cooper Su
23. Kim Talbot
24. Jon Wilson

Project Timeline

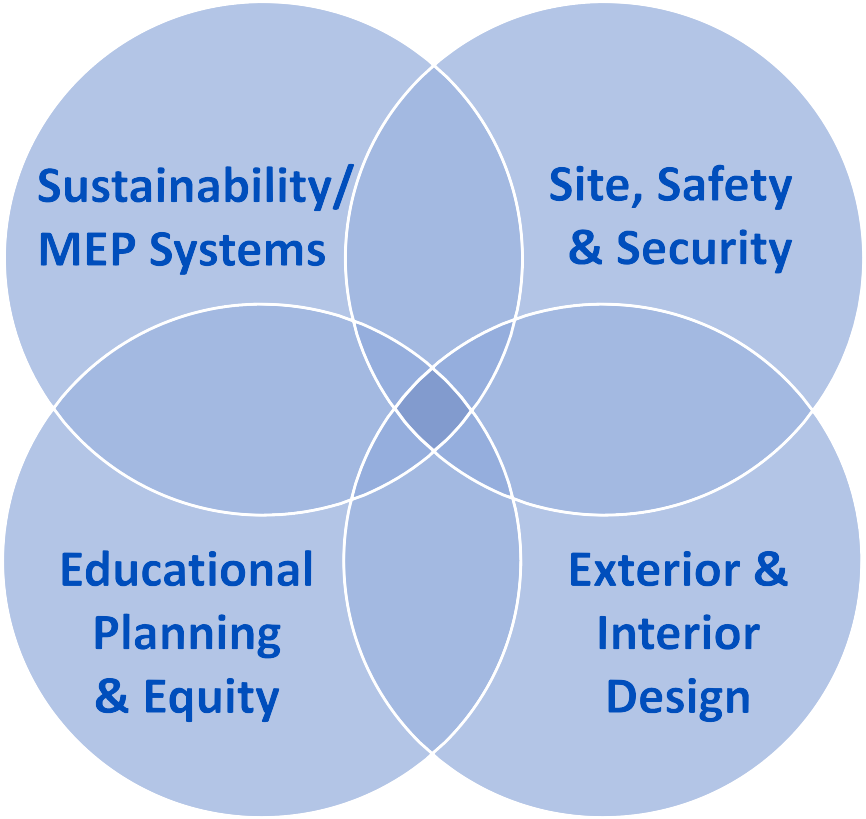


Community Stakeholder Engagement / Advisory Teams

Advisory teams are a method of collecting broad community input on key priorities and desired outcomes for the project.

***Who* : Educators, Students, City Departments, Boards & Commissions, Expert Community Members**

Reviews preferred MEP systems, sustainable design features and components, healthy materials; site design and landscape features for environmentally friendly design.



Reviews development of the site design for traffic, circulation, safety and security. Includes conversations about parking, driveways and circulation, fields, and offsite improvements and coordination with City Departments.

Reviews overall goals from educational planning perspectives, educational programming meetings and visioning sessions.

Reviews exterior design concepts including composition of form and exterior material selections. Review of the products and materials selected for interior finishes such as flooring, paint colors, wall finishes and ceilings.

Topics & Priorities
from Meeting #1

Topics and Priorities

1. **Equity, Inclusion and Belonging (14 min.)**
    a. Equity should be experienced daily through inclusive spaces that reduce stigma and support all learners (including toilet rooms).
    b. Integrating Special Education, EL, and student support services throughout learning communities strengthens inclusion and belonging.
    c. The House model is important for providing continuity, relationships, and access to counseling and support.

2. **Wellness and Well-being (14 min.)**
    a. Student well-being is supported through calming, sensory-responsive environments (for decompression and reset) and access to mental health services.
    b. Staff need dedicated spaces for both recharging and connection to colleagues

3. **Student Identity and Expression (14 min.)**
    a. CTE programs require intentional, purpose-built spaces and benefit from integration with academic areas.
    b. Visual and performing arts are critical to student identity and expression and should be highly visible.
    c. Students should see themselves reflected in the school.

Topics and Priorities

4. **Flexible and Future-Ready (14 min.)**
    a. The building should be flexible and adaptable, supporting differentiated learning styles, movement, and future change.
    b. Interdisciplinary adjacencies support collaboration and richer learning experiences.
    c. Collaboration spaces for students and staff are essential and should be easily accessible and adjacent to learning areas.
    d. The building design should support robust course offerings.

5. **Community Connection (14 min.)**
    a. The building should reflect Medford's identity while being designed to serve students and the community for generations.
    b. Community spaces should function as active learning environments in addition to being places to gather.

Givens

Whether this project is an addition/renovation or a new build, the new MHS will have:

- Air conditioning and quiet mechanical systems
- Adequate power
- Adequate access to bathrooms for staff and students
- Classrooms with operable windows
- Access to daylighting
- Good acoustics
- Accessibility for all
- Adequate storage
- Dimmable LED lighting
- Ergonomic furniture
- Better site circulation
- Reliable Wi-Fi

Equity, Inclusion and Belonging / Integrating Special Ed, Core Academics, CTE

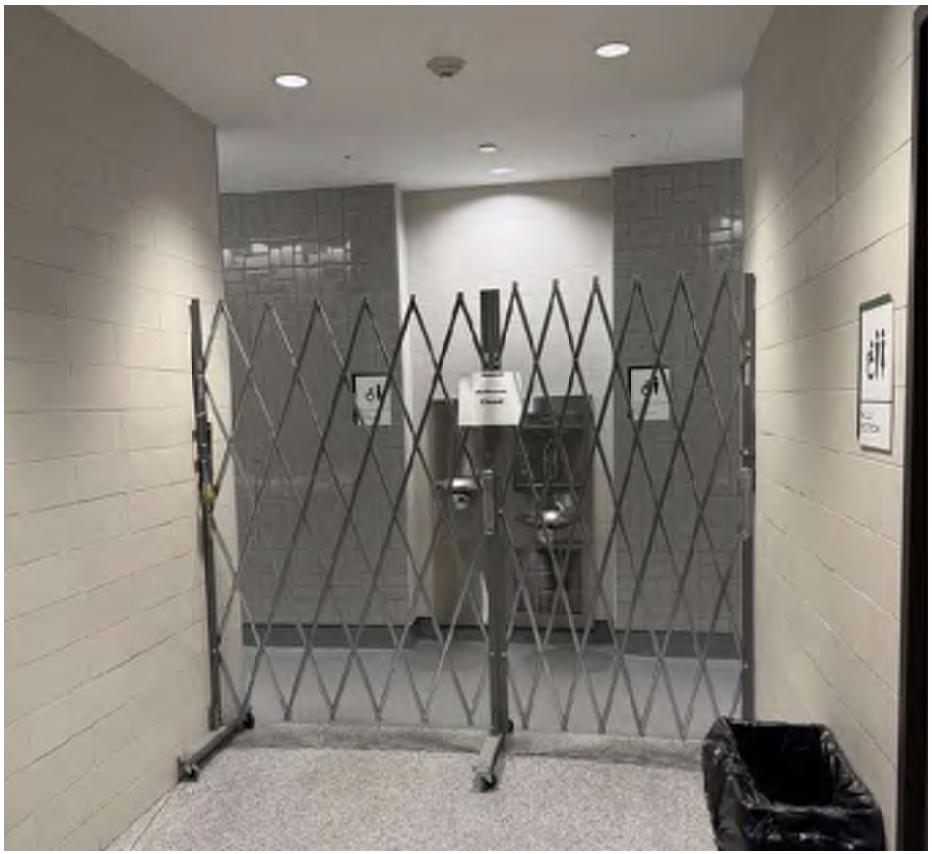


LEGEND

- Core Academic
- Science
- Teacher Planning
- Special Education
- CTE Ch. 74 Programs
- Administration & Guidance
- Hallway
- Vertical Circulation
- Non-programmed spaces

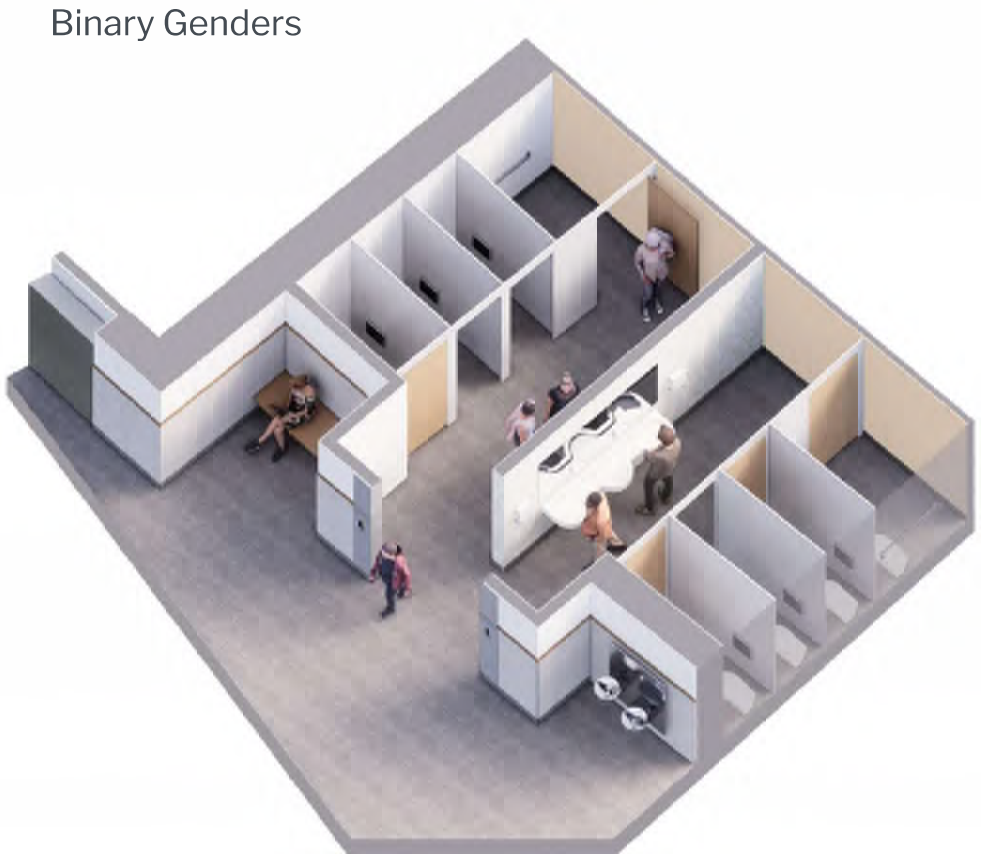
Equity, Inclusion and Belonging / Toilet Room: Multi-User Designs





Equity, Inclusion and Belonging / Toilet Room: Multi-User Designs

Traditional Design for Binary Genders



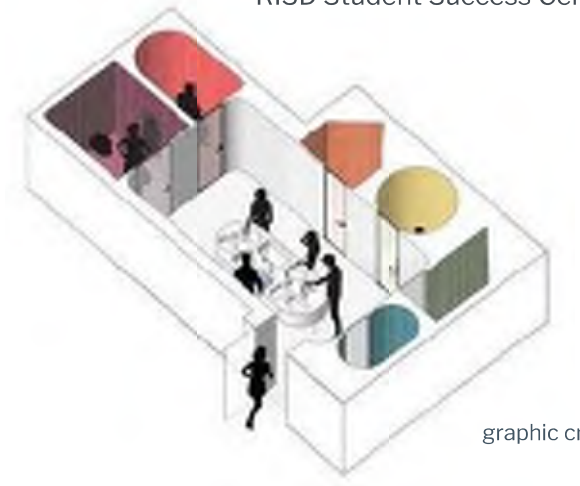
Converted All-Gender Design



Equity, Inclusion and Belonging / Toilet Rooms: All-Gender Toilet Room Precedents



RISD Student Success Center, Providence, RI



graphic credit: WorkAC



- Panelized partition systems offer greater flexibility and lower first costs.
- Doors can have a small bottom gap to allow some acoustic access to facilitate assistance.
- All Full-Height Stall options require dedicated systems per stall–lighting, fire protection, exhaust, smoke detection, vape detection.

Equity, Inclusion and Belonging / Toilet Rooms: Signage

Binary Gender Restrooms



Single User Gender Neutral Restroom



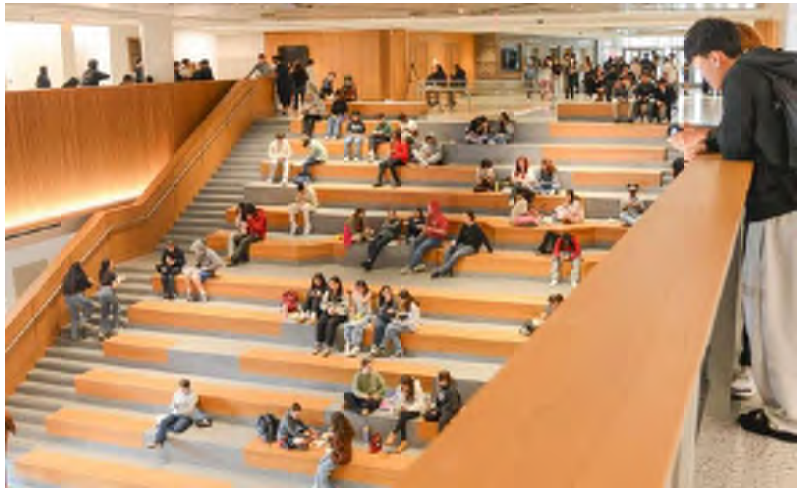
All-Gender Restroom



Wellness and Well-being / Student Spaces









Wellness and Well-being / Outdoor Gathering and Sensory Gardens









Wellness and Well-being / Staff Spaces





Student Identity and Expression / Cosmetology





smma LeftField

Student Identity and Expression / Health Assisting







smma LeftField

Student Identity and Expression / Visual and Performing Arts





Student Identity and Expression / Black Box





Student Identity & Expression / School Store





Student Identity and Expression & Community Connection / Culture









smma LeftField

Flexible and Future-Ready / Agile Classrooms



Individual-based learning



Group-based learning



Flexible and Future-Ready / Collaboration Spaces





Community Connections / Large Group Instruction





Community Connections / Dining Commons and Media Center





Next Steps



shinra

1. Listen 12/18
2. Review & Respond 1/13
3. Confirm & Recommend 3/10
4. Reconvene 9/2026

Next Steps/ What to Expect in Meeting #3

Objective: The Advisory Team will review recommendations as to Educational and Equity scope elements to include in the program (which were discussed in Meetings 1 and 2). Scope items will be characterized as givens, items warranting team discussion, or items that are not recommended for inclusion in the project.

When & Where?
March 10th at 4:00 pm
Remote / Hybrid

smma

Thank you.



Medford High School



Site, Safety, and Security Advisory Team Meeting

Meeting #2

01/13/2026

smma

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THE RIGHT CHOICE IN PROJECT MANAGEMENT

Meeting #2 Agenda

- Welcome & Introductions
- Topics & Priorities– Takeaways from Meeting #1
- Next Steps

Welcome & Introductions



Site, Safety, and Security / Team Intro

SMMA



Matt Rice
Principal-in-Charge



Helen Fantini
Project Manager



Laura Swan
Civil Engineer



Soala Ajienka
Architectural Designer

Agency



Kate Tooke
Landscape Architect

GHT



Matt Allain
Security Systems
Consultant

LeftField



Matt Gulino
Project Manager

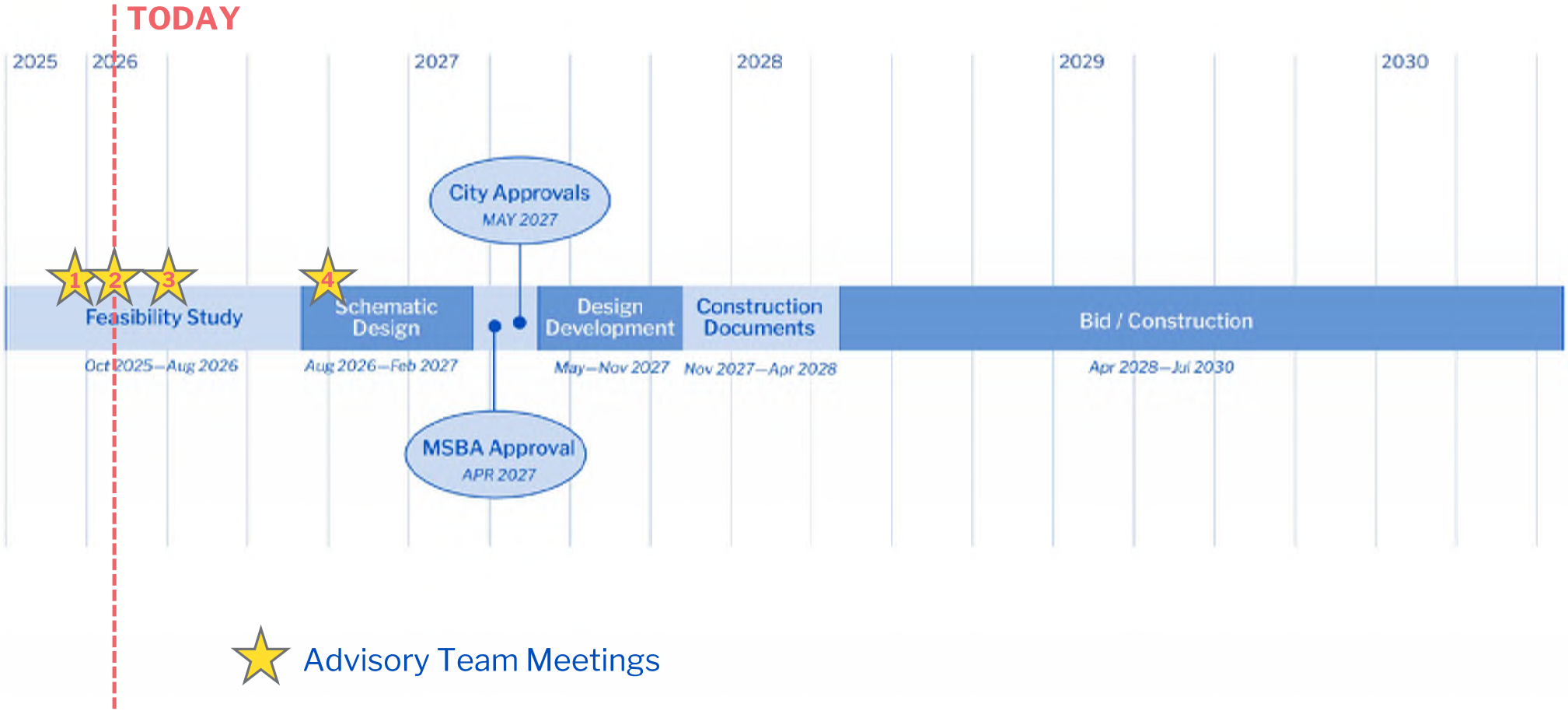


Jen Carlson
Project Director

Site, Safety, and Security / Team Intro

1. Nicole Branley
2. Chief Buckley
3. Theresa Carr
4. Amanda Cintrella
5. Matt DeMeo
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Project Timeline

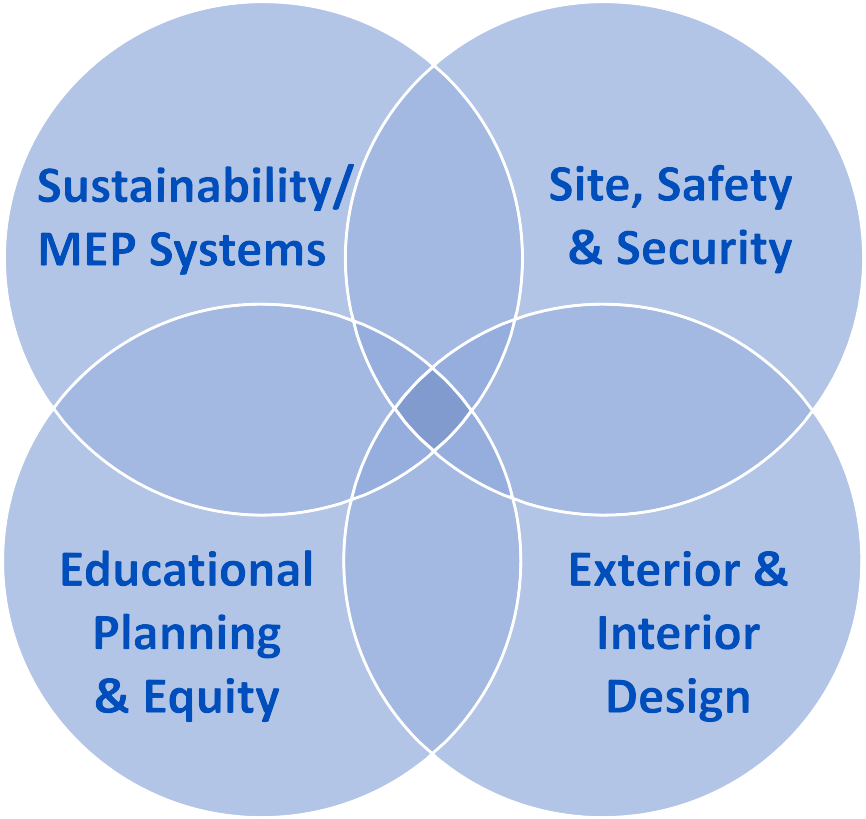


Community Stakeholder Engagement / Advisory Teams

Advisory teams are a method of collecting broad community input on key priorities and desired outcomes for the project.

***Who* : Educators, Students, City Departments, Boards & Commissions, Expert Community Members**

Reviews preferred MEP systems, sustainable design features and components, healthy materials; site design and landscape features for environmentally friendly design.



Reviews development of the site design for traffic, circulation, safety and security. Includes conversations about parking, driveways and circulation, fields, and offsite improvements and coordination with City Departments.

Reviews overall goals from educational planning perspectives, educational programming meetings and visioning sessions.

Reviews exterior design concepts including composition of form and exterior material selections. Review of the products and materials selected for interior finishes such as flooring, paint colors, wall finishes and ceilings.

Site, Safety, and Security / Objective

Objective: Reviews development of the site design for traffic, circulation, safety and security. Includes conversations about parking, driveways and circulation, fields, and offsite improvements and coordination with City Departments.



smma

Topics & Priorities
from Meeting #1

Site, Safety, and Security / Recap

What We Heard...



Topics and Priorities

Topics:

1. Balancing Open Campus & Community Access with Safety (15 min.)
2. Mobility and Access (15 min.)
    - A Connected Medford Destination
3. Program and Operations (15 min.)
    - Active Every Day, Year Round
4. Physical Site (15 min.)
    - Between the Fells and the City
5. Construction site safety (10 min.)

Balancing Open Campus & Community Access with Safety

CPTED (Crime Prevention Through Environmental Design) Principles



Crime Prevention Through Environmental Design (CPTED) is an approach that focuses on designing the physical environment to reduce opportunities for crime and enhance safety. The success of a CPTED plan relies on a holistic approach, combining physical design elements with policies, procedures, and community involvement. Regular evaluations and adjustments should be made to adapt to changing circumstances and emerging threats.

When developing a CPTED plan for a school, several design considerations should be taken into account:

1. Natural Surveillance
2. Natural Access Control
3. Territorial Reinforcement
4. Maintenance and Visibility
5. Activity Support

Balancing Open Campus & Community Access with Safety

Window Security



Window Blinds



Window Security Film



Ballistic Resistant Glass

Site, Safety, and Security

Balancing Open Campus & Community Access with Safety

Security Management Systems / Access Control Systems







smma

Balancing Open Campus & Community Access with Safety

Security Communication System

Communication

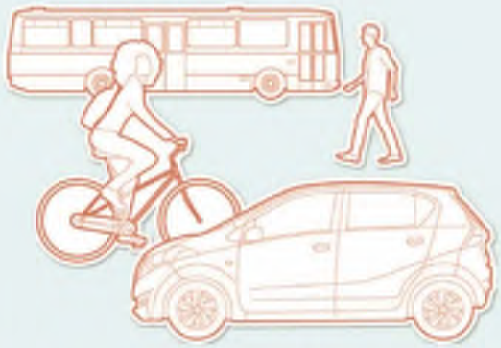
- Empower your security team by providing tools such as two-way communication, cameras and mobile apps.
- Communicate between hallways, common areas, exterior entrances and site elements.
- Door stations provide calling points for parents/visitors to request access or for emergency communication.



Topics and Priorities

You shared feedback and ideas in three key categories:

MOBILITY + ACCESS



A Connected Medford Destination

- Arrival and egress
- Circulation
- ADA Compliance
- Emergency access and service

PROGRAM + OPERATIONS



Active Every Day, Year Round

- Site amenities
- School and community resources
- Site security and management

PHYSICAL SITE



Between the Fells and the City

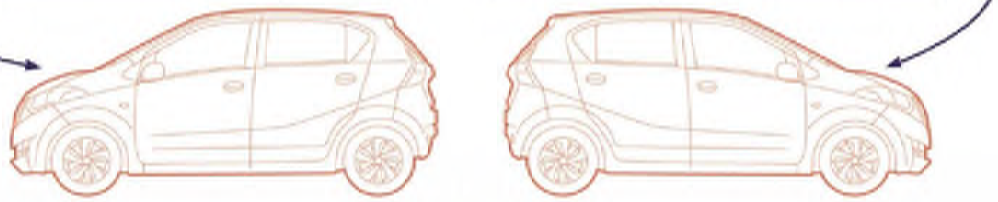
- Topography and vegetation
- Construction logistics
- Site materiality, character and permanence

A Connected Medford Destination

The community arrives on wheels, on foot, and by transit!

37% of trips to the school overall are made in family vehicles.

Fewer car trips are made in the afternoon than in the morning.



by **Car**
(parking on site and drop off)



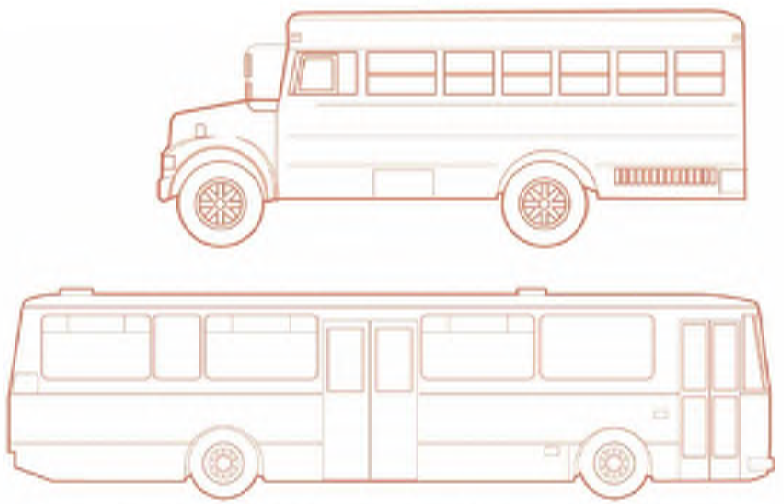
by **Bike**



on **Foot**

62% of students within 1 mile walk or bike, making up 22% of overall students.

51% of students who live 2+ miles away from school ride either school or MBTA bus.



by **MBTA Bus** and **School Bus**

A Connected Medford Destination

Routes to school are through neighborhoods and the Fells.



A Connected Medford Destination

Parking is pervasive and vehicles are prioritized in site circulation.



Legend

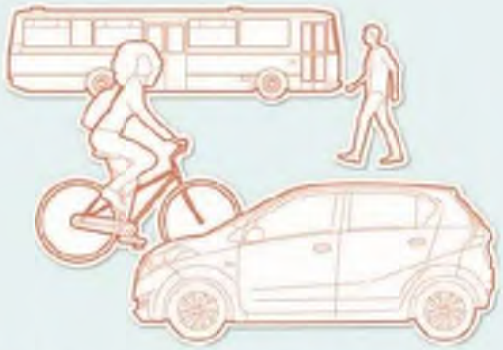
- Vehicle Routes
- Bus Routes
- Bus Stops
- Pedestrian Routes
- Trails
- Fence
- Trailheads
- Bike Parking
- Vehicle Parking

Approximately

476

parking spaces on the site

Note! Traffic Consultant is working on capacity analyses!

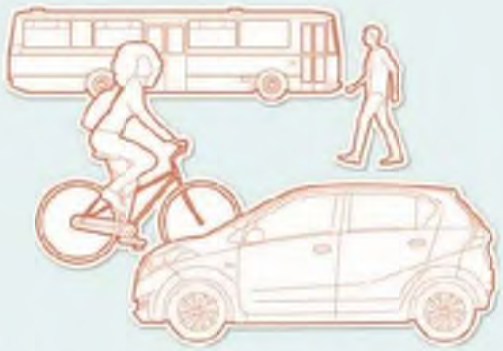


A Connected Medford Destination

What other challenges or opportunities related to circulation would you like to discuss tonight?

In December you shared these priorities...

- Create a campus that feels welcoming, legible, and **easy to navigate**, with clear wayfinding and logical zoning of uses.
- Ensure **safe pedestrian routes** with generous, well-lit walkways, accessible entrances, and protected crossings, especially near drop-off zones.
- Design for **clear emergency egress** and gathering areas, with obvious evacuation routes and access for fire, police, and EMS.
- Provide **safe, efficient circulation** for buses, parent dropoff, student drivers, service vehicles, and pedestrians, with **clearly separated paths**.
- Provide a **hierarchy of trails and outdoor spaces**—from fully accessible multiuse loops close to the building to more rustic study paths at the Fells edge—so recreation is welcomed but directed away from erosion-prone or ecologically-critical areas.



A Connected Medford Destination

What other challenges or opportunities related to circulation would you like to discuss tonight?



Active Every Day, Year Round

The campus serves a broad diversity of users from a deeper demographic than just high school.



Students

2024-2025 Quick Facts

1,195 total students:

- 52% are low income
- 56% have high needs
- 34% have non-English first language
- 20% have disabilities

2024-2025 Quick Facts

- 130 teachers
- 9.2 students per 1 teacher



Faculty



Staff



Parents



Community

The Medford Parks and Open Space plan reported that 1/4 of the public interviewed visited campus 10+ times a year.

The Medford Early Education Program serves ages 3 - 5, with up to 15 children per class.



Preschoolers

Active Every Day, Year Round

This site is dominated by service and circulation, with athletic, entry, and program spaces secondary.



Legend

- Fields
- Road, Service Area, and Parking
- Building
- Play Areas
- Outdoor Yard Space
- Entry

- Bistro 489
- Childcare
- Robotics Lab
- Kitchens
- Automotive Workshops
- Pool
- Science Lab
- Marching Band Practice Area
- Soccer Field / Turf
- Bike Path
- Trailhead



Opportunities exist to better integrate outdoor spaces, provide outdoor amenities (like seating, shade, bike racks, and planting), and improve wayfinding across the campus.



Many walkways, plazas, and landscaped areas are in poor condition, showing signs of stormwater runoff erosion and wear that compromises ADA access.

Active Every Day, Year Round

The City has identified improving stormwater management and slope stabilization as priorities for the site!



Takeaways from the Open Space and Recreation Plan

- Medford Highschool is within the Top 5% Urban Heat Areas in the Region.
- There is a desire to increase permeability of the site.
- Need to stablize banks with plantings.

Takeaways from the Comprehensive Plan

- Strong desire to diversify the character and use of open spaces and facilities.
- Provide activities and spaces to gather for all ages and abilities.



What other challenges or opportunities related to program would you like to discuss tonight?

In December you shared these priorities...

- Treat the campus and adjacent Fells interface as an **outdoor laboratory for CTE and science programs**, embedding longterm monitoring plots, weather and hydrology stations, and forest inventory study areas into the site plan.
- Develop **dedicated outdoor classrooms**, teaching forests, and restoration zones.

- This is a high school first, but also a community resource. Design outdoor spaces that can **host community events**, field days, and joint school–Friends of the Fells programs, positioning the high school as a **regional hub for learning** about sustainable forest management, restoration, and responsible outdoor recreation.

- **Prioritize climate resilience** (stormwater infiltration and heat mitigation) into athletic fields and parking.
- **Cluster active recreation fields and high-intensity play** areas away from the most sensitive ecological zones, using paths, plantings, and gentle grading to buffer noise, lights, and foot traffic.



Active Every Day, Year Round

What other challenges or opportunities related to program and operations would you like to discuss tonight?



Between the Fells and the City

The Fells are home to a diversity of species and an opportunity for stewardship.



Blue Jay | White-Tailed Deer | Eastern Chipmunk | Barred Owl | Red Fox | Red-Tailed Hawk



Ferns | Hemlocks | Oaks | Lady's Slippers

Invasive Species

Stinging Nettle | Japanese Knotweed | Wild Garlic | Oriental Bittersweet

Between the Fells and the City

A mostly paved and impermeable site with pockets of bedrock.



Approximately

54%

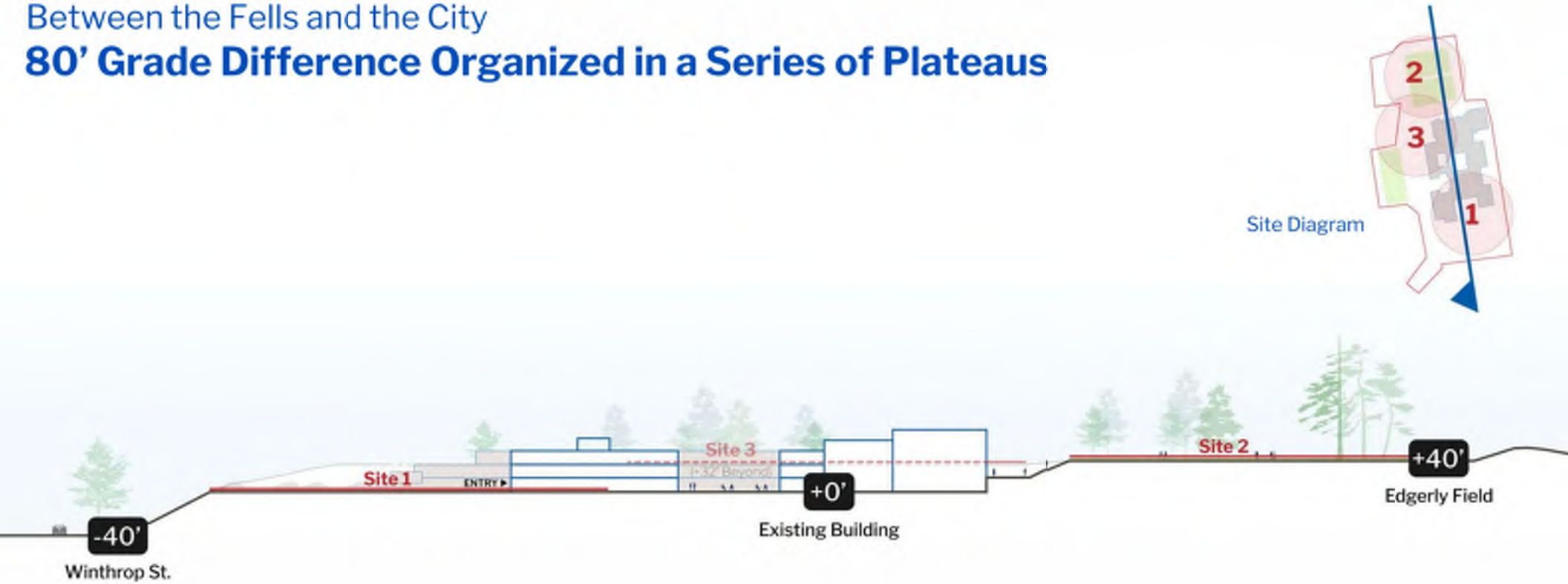
of the site is impermeable

Legend

- Waterbody
- Palustrine Forested Wetland
- Evergreen Forest
- Deciduous Forest
- 1ft Contours
- Property Boundaries
- Vernal Pools

Between the Fells and the City

80’ Grade Difference Organized in a Series of Plateaus





Between the Fells and the City

What other challenges or opportunities related to the physical site would you like to discuss tonight?

In December you shared these priorities...

- **Design with the site**: Locate buildings, fields, and parking based on topography, drainage, and environmental constraints, while allowing room for future additions.
- Designate a **continuous band of protected and enhanced open space** along the Fells edge that prioritizes native plant communities, wildlife connectivity, and ecological function over ornamental landscaping.
- Use site grading, planting, and stormwater systems to **restore more natural hydrology** along the Fells interface, reducing runoff, erosion, and pollution entering nearby forest and wetland systems.
- Establish **shared stewardship goals** with Friends of the Fells and the City so site maintenance standards (mowing regimes, pesticide policies, lighting, and snow management) support habitat quality and darksky principles near the Fells. Embed **student-led stewardship** into ongoing site operations, so the landscape is comanaged as part of the educational program.



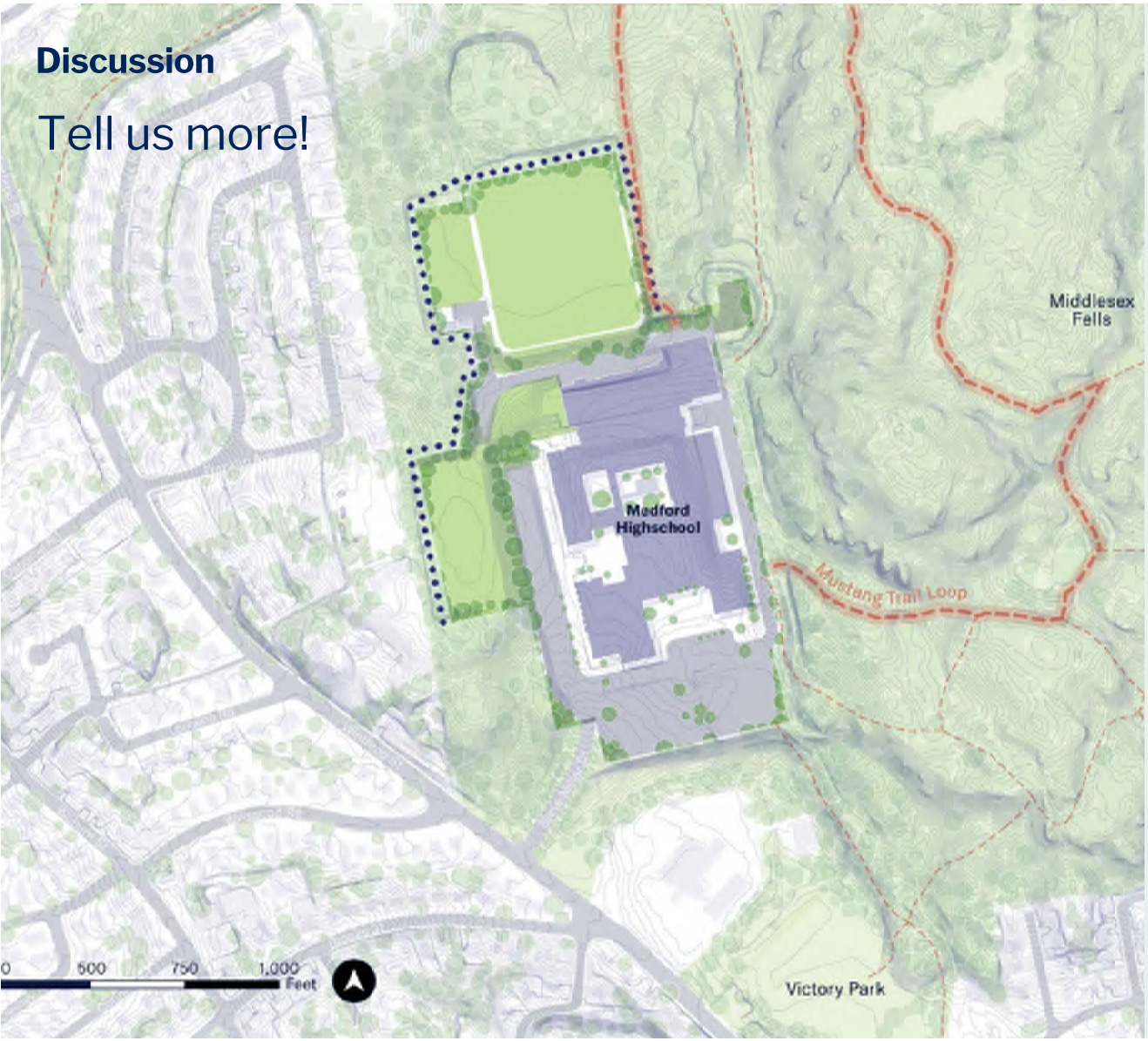
Between the Fells and the City

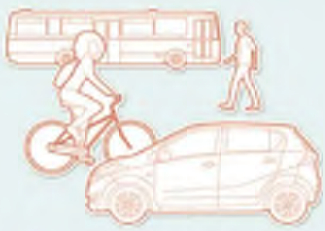
What other challenges or opportunities related to the physical site would you like to discuss tonight?



Discussion

Tell us more!





A Connected Medford Destination

MOBILITY + ACCESS

- Arrival and egress
- Circulation
- ADA Compliance
- Emergency access and service



Active Every Day, Year Round

PROGRAM + OPERATIONS

- Site amenities
- School and community resources
- Site security and management



Between the Fells and the City

PHYSICAL SITE

- Topography and vegetation
- Construction logistics
- Site materiality, character and permanence

Construction Site Safety

Separate construction activities from school activities



Scaffolding for access to roof work

Emergency vehicle pathways during construction





Construction fencing around active work site





Temporary signage

Safe and well marked paths for all users

Next Steps



1. Listen — 12/18
2. Review & Respond — 1/13
3. Confirm & Recommend — 3/11
4. Reconvene — TBD

Next Steps/ What to Expect in Meeting #3

Objective: The Advisory Team will review recommendations as to what type Site, Safety & Security design elements to include in the project (which were discussed in Meetings 1 and 2). Scope items will be characterized as givens, items warranting team discussion, or items that are not recommended for inclusion in the project.

When & Where?
March 11th at 5:30 pm
Remote / Hybrid

Thank you.



smma

Advisory Team – Site, Safety & Security 2

Project Name:	Medford High School	Project Number:	25100
RE:	Advisory Team - Site, Safety & Security	Meeting Date:	01/13/2026
Prepared by:	Helen Fantini	Meeting Number:	2
Distribution:	Attendees		

Owner

- [x] Nicole Branley, *Resident*
- [ ] Chief Jack Buckley, *Chief of Police*
- [x] *Marta Cabral, MHS Principal*
- [x] Theresa Carr, *Resident, Transportation Planner*
- [x] Amanda Centrella, *Medford Open Space Planner*
- [x] *Paul Covino, Provisional Police Chief*
- [x] Matthew DeMeo
- [ ] Chief Todd Evans, *Medford Fire Chief*
- [x] Matt Galusi, *MHS PE Teacher*
- [x] Jenny Graham, *SBC Chair, School Committee Vice Chair*
- [x] Brian Hilliard, *SBC Member, Architect*
- [x] Joe Hogan, *MHS Student*
- [x] Alicia Hunt, *Director of Planning, Development & Sustainability, Medford*
- [x] Nick Karinge, *Disabilities Director, Medford*
- [x] Ethan Lay-Sleeper, *Architect/Planner*
- [x] Ken Lord, *MPS Chief Operating Officer*
- [ ] Sean Mangan, *Director of Operations for Armstrong Ambulance*
- [x] Tim McGivern, *Commissioner of Public Works, Medford*
- [x] John McLaughlin, *MPS Director of Buildings & Grounds*
- [x] John Prestigiovanni, *MHS Sports Coach*
- [x] Melissa Young, *Resident, Cambridge municipal employee*

SMMA & Consultants

- [x] Soala Ajienka, *Architectural Designer*
- [x] Helen Fantini, *Project Manager*
- [ ] Erin Prestileo, *Civil Engineer*
- [x] Matt Rice, *Principal-in-Charge, Architect*
- [x] Laura Swan, *Civil Engineer*
- [x] Kate Tooke, *Landscape Architect, Agency*
- [x] Kazia Rodrigo, *Landscape Designer*, Agency
- [x] Berit Schurke, Landscape Designer, Agency
- [x] Matt Allain, *Security Consultant*, Good Harbor Techmark
- [x] Cody Lattin, Good Harbor Techmark

Leftfield

- [x] Jen Carlson, *Project Director*
- [x] Matt Gulino, *Project Manager*
- [x] *Adele Sands, Education Liasion*

Item No.	Action	Discussion
02.01	Record	Meeting # 2 Agenda - Welcome & Introductions - Topics & Priorities– Takeaways from Meeting #1 - Next Steps
02.02	Record	Topics & Priorities – Takeaways from Meeting #1 1. **Balancing Open Campus & Community Access** CPTED (Crime Prevention Through Environmental Design) was reviewed by Matt Allain. Avoid an institutional feel and adhere to the 5 principals: a. Natural Surveillance b. Natural Access Control c. Territorial Reinforcement d. Maintenance & Visibility e. Activity Support This works best when the design and policies all align. Window security will be considered – will consider use of blinds, security film and impact resistant glazing. Electronics support the goal through use of access control systems. Communications systems will be proposed to allow for required communications from within and outside of the building (athletic fields). Matt Rice noted that there will be separate meetings with first responders as some information

that should not be discussed in public.

Discussion: A participant noted that MHS is not a formal entrance to the Fells – very concerned about safety. However, because people can park at MHS, it is used in that way.

2. **Mobility and Access**
   Kate Tooke reviewed metrics on modes of transportation to the site: car, bike, by foot and bus (school and MBTA). There is only one dedicated school bus route from North Medford. It was noted that some walking routes traverse through the Fells. A large portion of the site is dedicated to parking and circulation. There are 476 spaces. Noted that there are some barriers to those coming on foot from north and west. Traffic consultant will provide a report on parking capacity. Priorities from Meeting 1 include: ease of navigation, safe pedestrian routes, clear emergency access, safe, efficient circulation with clearly separated paths and maintained and clear access to the Fells.

   Discussion: A question was raised about how many students actually walk or bike to school. Kate noted that the data came from a Safe Routes to School survey. Planning office may have additional information and there is a push in the community to increase walking and biking. The Mustang Loop (1 mile) was designed and partly built by students. Any changes to this should be carefully considered – there is "sentimentality." Matt noted that the Principal may be able to gather more current data on walking/biking, inclusive of electric scooters. We could also use better delineation between users of the school bus versus MBTA. Kate noted that more information is needed about why there is not greater use of buses, walking or biking. The design team also needs to understand morning versus afternoon differences. A member noted that there needs to be a focus on sidewalk safety from his perspective as a powerchair user as well as more accessible trails that have proper signage. This may be a challenge given wetlands issues. [*In the chat: Friends of the Fells (Chris Redfern is a contact) may be a good partner/resource to bring into the conversation around any adjustments the further connect the school site and the Fells.]*

3. **Program & Operations**
   Kate noted that this campus is widely used by the public – all ages – the building, fields, pool, Fells. Athletic fields also occupy a large percentage of the site. Recent plans indicate there is a desire to diversify uses on the site. Feedback from Meeting 1 included: more educational uses with the Fells/outdoors such as an outdoor lab for CTE and science, a dedicated outdoor classroom, ability to host more community events, being a regional hub for learning, prioritizing climate resilience and positioning active recreation away from ecologically sensitive areas.

   Discussion:
   Athletic Fields: There is a desire to include football and track on the site – would like to see exploration of bringing these fields onto the site. Baseball and softball is also played off site. It would be great to grow athletics by having fields on site – this is an equity issue for those students that do not have transport to off-site fields. Softball is located in south Medford – distant from the school. Kate noted that it would be helpful to have a conversation with Athletics to understand which sports can share fields.
   Gardens for Food Production: A desire to grow food was expressed – edible landscapes. Matt Rice noted that this can be challenging when prime growing season is when the school is not occupied, but this can be dealt with by not segregating gardens in interior courtyards.
   Street Presence: A question arose about what options there might be to increase presence of the school as viewed by Winthrop Street.
   Educational Site Signage: Someone noted that including interpretive signage on the site to highlight design and sustainability aspects.

4. **Physical Site**
   Kate noted that Advisory Team members expressed a lot of love for the Fells. It is a rich, diverse environment with many opportunities to learn about environmental stewardship. The high school site has really been carved out of the Fells. There are visible bedrock outcroppings, and 54% of the site is impermeable. Building was placed on plateau – a big land shaping move – and there are stormwater management challenges. Priorities include designing with the site, providing a band of protected open space, restoring natural hydrology and stewardship, shared with the Friends of the Fells, City, District and students.

   Discussion: A team member wanted to ensure that the design team was aware of flooding issues that have been problems in the past. It is important to make sure that outdoor classrooms are universally designed. A member expressed Interest in adding a mountain bike pump track.

5. **Construction Site Safety**
   Laura noted that there will be many measures to keep the school and construction activities get underway: fending, scaffolding for roof access, emergency vehicle pathways, clear signage. Logistics will be developed once an option is selected. Matt Rice noted that a Construction Manager at Risk will be the one to develop a logistics plan.

   Discussion: A question was raised about where construction workers will park. Matt Rice acknowledged that construction will need to happen when school is in session. Accessibility and emergency egress must be maintained throughout construction. A question was raised regarding

		where students will have classes during construction. Matt Rice responded that this will depend on which option is pursued and that it is too soon to tell.
02.03	SMMA	Next Steps **Meeting 3**: The Advisory Team will review recommendations as to what type Site, Safety & Security design elements to include in the project (which were discussed in Meetings 1 and 2). Scope items will be characterized as givens, items warranting team discussion, or items that are not recommended for inclusion in the project ("traffic light" categorization: green, yellow, red). The design team will be looking for consensus on these items. **Next Meeting:** March 11th at 5:30 pm, Remote / Hybrid

Advisory Team - Interior & Exterior Design 2

Project Name:	Medford High School	Project Number:	25100
RE:	Advisory Team - Interior & Exterior Design	Meeting Date:	01/15/2026
Prepared by:	Soala Ajienka	Meeting Number:	02
Distribution:	Attendees		

Owner

- [ ] Lujayen Alsayrafi, *MHS Student*
- [x] Libby Brown, *SBC Member*
- [ ] Alex Bushkoff, *Medford Resident*
- [ ] Marta Cabral, *MHS Principal*
- [x] Griscel Diaz, *Medford Resident*
- [x] Chloe Dorcellus, *MHS Student*
- [x] Paul Ellis, *Medford Resident*
- [x] Suzanne B. Galusi, *MPS Interim Superintendent*
- [x] Jenny Graham, *SBC Chair, School Committee Vice Chair*
- [x] Brian Hilliard, *SBC Member*
- [ ] Din Ho
- [x] Ken Lord, *MPS Chief Operating Officer*
- [ ] Nicole Morell
- [x] William Pipicelli
- [x] Jennifer Rigano, *Medford Teacher*
- [x] Annemarie Rigas, *Medford Parent*
- [x] Paul Ruseau, *SBC Member, School Committee Member*
- [x] Jesse B. Strauss, *Medford Resident*
- [x] Delia Wendel, *Medford Resident*
- [x] Eric Zeckman, *Medford Resident*

SMMA

- [x] Soala Ajienka, *Architectural Designer*
- [x] Lucas Carriere, *Architectural Designer*
- [ ] Helen Fantini, *Project Manager*
- [x] Sarah Long, *Sr. Interior Designer*
- [x] Michael Pardek, *Director of Design, Architect*
- [x] Matt Rice, *Principal-in-Charge, Architect*
- [x] Abigail Ransmeier, *Head of Research*

Leftfield

- [x] Jen Carlson, *Project Director*
- [x] Matt Gulino, *Project Manager*

Item No.	Action	Discussion
02.01	Record	Meeting # 2 Agenda - Welcome & Introductions • Topics & Priorities– Takeaways from Meeting #1 • Meeting #1 Recap ○ Medford's Civic Architecture ○ Exterior Materials ○ Interior Design and Materials ○ Experiential Graphic Design (XGD) • Next Steps
02.02	Record	**Project Timeline** • Progress: The schedule is on track, with a projected opening in Fall 2030

		• Design team presented Alternatives to be costed to the School building committee in 01/14/2026 • 29 different costing options were put forward as discrete cost approaches .
02.03	Record	**Topics & Priorities – Takeaways from Meeting #1** Key Phrases conveyed in last discussion: Flexibility, community, Timeless over Trendy, Simplicity and Restraint, Value Driven material choices, Learn from the existing building, Every material must earn its place • Materials, Health and Sustainability ○ Healthy materials as a baseline ○ Occupant wellbeing is paramount ○ Maintenance realism ○ Sustainability expectations are high • Community Hub and Civic Role ○ High School as a true civic Asset ○ Clear entrances and circulation ○ Public gathering space ○ Visible and celebrated ○ Beacon in times of crisis • Flexibility, Adaptability and Student Ownership ○ Classrooms and common spaces must evolve when necessary ○ Materials should allow easy replacement, reconfiguration and personalization ○ Student Ownership: incorporating artefacts, items of care students have created and making sure they see themselves in the school • Site, Views, Nature and Place ○ Preserve and maximize views to the Fells and the Boston Skyline ○ Strong connection to nature ○ Landscape Durability ○ Site has history ○ Building that's rooted in Landscape • Identity, Belonging and School Pride ○ The school should feel strongly like Medford High School and not somewhere else *"We start with belonging and purpose, express that through timeless identity, deliver it with purposeful materials and healthy systems, and enable it through flexible spaces that evolve over time."* • <u>Discussion:</u> ○ The three rings are a good way to frame the topics of discussion. ○ One of the most impactful stages of the process was getting to hear the students express their opinions of the space they wanted to see during the visioning process.
02.04	Record	**1. Medford's Civic Architecture** Civic Buildings are a great way to identify materials that have meaning in the community. • Armory, 1891 Romanesque Revival: Rustic stone, castle-like turrets • Bigelow Block, 1886 Late Victorian/Queen Anne Style, brick and copper as key materials • Chevalier Theater, 1939 Greek Revival, built during a time of crisis after the Great Depression. An example of wanting to evoke nostalgia for a previous time • City Hall, 1937, Colonial Revival • Medford Public Library, 2022 Contemporary Civic. Rooflines inspired by shipbuilding, and Clippership Wharf • Medford Police, 2021 Contemporary Civic demonstrates its utility • Medford High School is contemporary to the times in the 70's. A publication spread from that time gives an insight into how people saw the school • <u>Discussion</u>: ○ Medford High School and the Police Station feel different from the rest of the buildings in the presentation. City Hall feels warmer in contrast with Medford High School that now feels cold. ○ The difference between a lot of the civic buildings highlighted and Medford High School is the civic component. The High School provides an opportunity to teach students how to be civic minded and show up for each other in the community. ○ Nostalgia is not an appropriate method of communicating the story of the city. While shipbuilding is a part of the history of Medford, there were also enslaved people at the time these buildings were constructed. ○ The focus should be on the future and not nostalgia for the past. The question is how do we create a better future for students and not just a reflection of what has existed before. ○ A good narrative here is the disparate nature of the character of the buildings in Medford. The

		narrative should be on accessibility and making the school a welcoming and open place for everyone as opposed to the current building form now which looks like hydro power plant ○ One thing that the Medford building affords in its rather extraordinary DNA are opportunities for diverse relationships to exterior space (far more than any of the other Civic examples on the slide that was shared previously during the civic building discussion). At current MHS, exterior gathering spaces are forgotten, poorly connected and underutilized, but they are there to be rediscovered, reimagined or to help guide potential designs. The best civic buildings have an element of democracy - open, inviting for diverse ways to exchange and share, moments to unite (at different scales). How can we ensure that the new MHS is a civic hub through its unique open character? What cues can we take from the building's current bones (regardless of re-use or re-build?)
02.05	Record	**2. Exterior Materials** • In other School Buildings in the district, brick dominates • A crucial point to consider and design with is the longevity and intended lifespan of the high school with materials that can last 70 years • Brick/Stone/Precast, Thin Medford Stone, Metal Panes and Tiles, Porcelain Panel and phenolic Panels, Terracotta curtain wall as potential options • Cost is a crucial factor in material considerations as well as Energy and sustainability • Important to consider durability vs Cost of Materials. Brick is cheaper, lasts long and so it is often the most popular choice for civic buildings • Important consideration is material adjacencies and compositions between glazing and opaque wall assemblies • How would a building be used outside of school hours? How can it be a beacon? • Light is an important tool to design with. At night, the reverse happens where glazing becomes the most visible • Somerville High School, Roxbury Prep HS, Concord Middle School as SMMA precedents • <u>Discussion</u> ○ Interest and curiosity about the horizontal shading devices on windows that help reduce incident solar radiation ○ Windows in the new school would be operable to allow teachers have control over their immediate environment. ○ Interest in the landscape and material strategy of Concord Middle School. With how rich the Medford High School terrain is, could there be a concept around strata on the building façade, where layers from nature to the interior? ○ The site has a lot of material underneath that would be excavated. What are some opportunities when that material is uncovered, where the building can have a conversation with the environment, the striations ○ Conversations with the fire chief will be pursued about access around the site and into the courtyard outdoor classrooms.
02.06	Record	**3. Interior Design** The crucial elements of Texture, Space, Color, Lighting and Pattern and appropriate illumination for learning activities 1. Purposeful, Durable and value-driven interior materials 2. Visual and physical connection to the interior 3. Designed to encourage student engagement and autonomy including patterns, colors and materials that provide wayfinding and stimulate movement 4. Design should be rooted in a timeless neutral palette that is intentional Guiding Design Elements all influenced by the Programming Plan and intentions for the school 1. Connection to nature, 2. Celebrating Diversity 3. Flexible spaces, 4. Comfort and well being 5. Durable and timeless materials 6. Equitable and universal design 7. Access to daylight and Views <u>Discussion</u> ○ Some floors are durable but there may be a look to them that's not appealing e.g. wax floors used in MHS Science Lecture Hall today ○ Health Assisting example from Waltham HS is a great example of good interior design. The flooring helps delineate the space in a great way ○ While the spaces are beautiful, there could be the issue of sensory overload for students who have a difficult time in such spaces. It is important to make interiors more accessible with enough contrast between elements to ensure that students have smooth time using the space
02.07	Record	**4. Experiential Graphic Design (XGD)/High Level Goals** • Consider the experience of the students, staff, and community through space

		• Create Educational Opportunities through Graphics
02.08	SMMA	**Next Steps** • Meeting #3: March 10 at 5.30, Remote/Hybrid • Review the spreadsheet with all the topics from the first and second sessions • Group will move through list identifying items to take forward and others to not move forward with. Color-coded assessment to be carried out by Advisory Team: Green (full agreement), Yellow (Items that may not be needed), Red (items that will not be taken forward) • Subsequently, Items carried forward in agreement will be put before School Building Committee

Medford High School



Exterior and Interior Design Advisory Team Meeting

Meeting #2

01/15/2026

smma

LeftField

THE RIGHT CHOICE IN PROJECT MANAGEMENT

Meeting #2 Agenda

- Welcome & Introductions
- Topics & Priorities
  1. Meeting #1 Recap
  2. Medford's Civic Architecture
  3. Exterior Materials
  4. Interior Design and Materials
  5. Experiential Graphic Design (XGD)
- Next Steps

Welcome and Introductions



Exterior and Interior Design / Team Intro



Matt Rice
Principal-in-Charge



Helen Fantini
Project Manager



Michael Pardek
Architect



Lucas Carriere
Architectural Designer



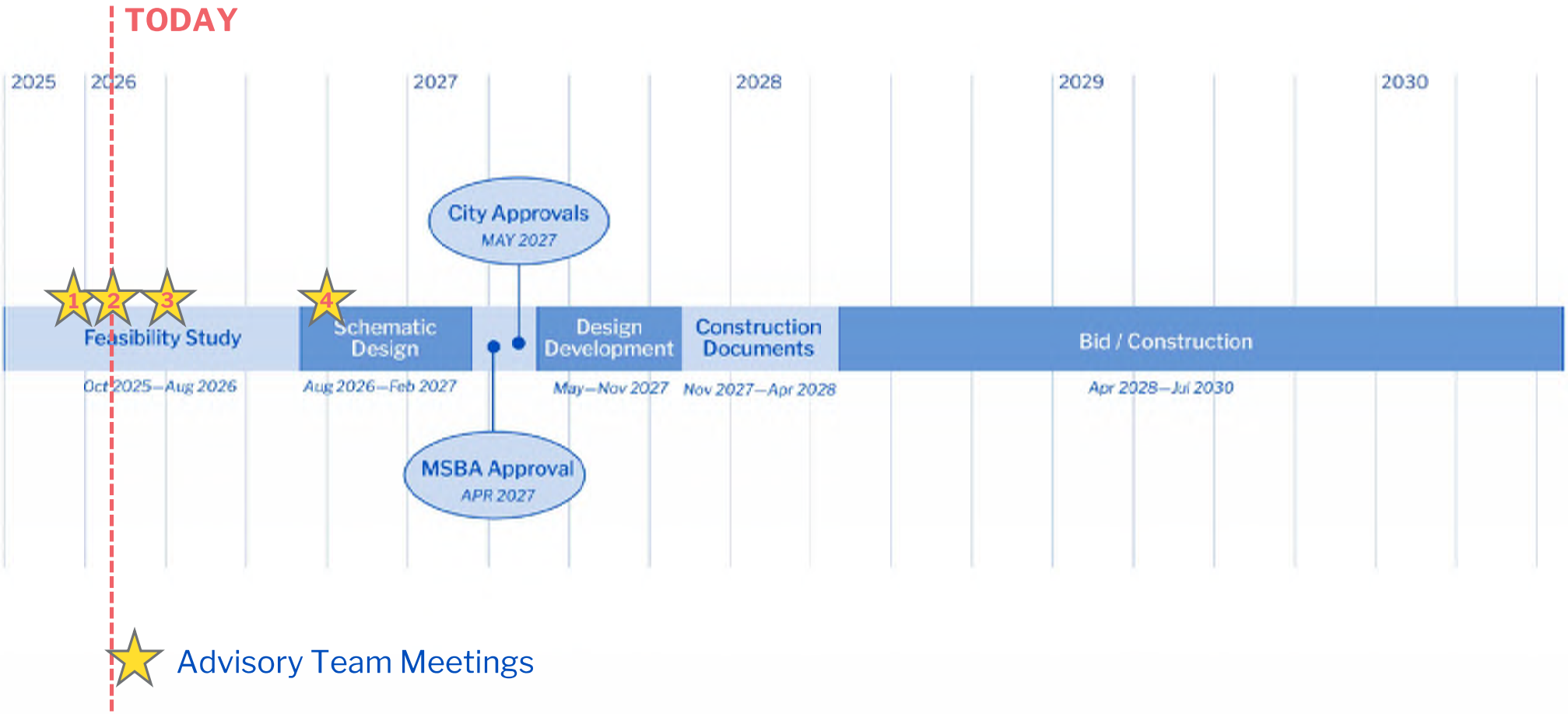
Sarah Long
Interior Designer



Soala Ajienka
Architectural Designer

1. Lujayen Alsayrafi
2. Libby Brown
3. Alex Bushkoff
4. Marta Cabral
5. Griscel Diaz
6. Chloe Dorcellus
7. Paul Ellis
8. Suzanne Galusi
9. Jenny Graham
10. Brian Hilliard
11. Din Ho
12. Ken Lord
13. Nicole Morell
14. Jen Rigano
15. Paul Ruseau
16. Jesse Strauss
17. Delia Wendel
18. Erik Zeckman

Project Timeline

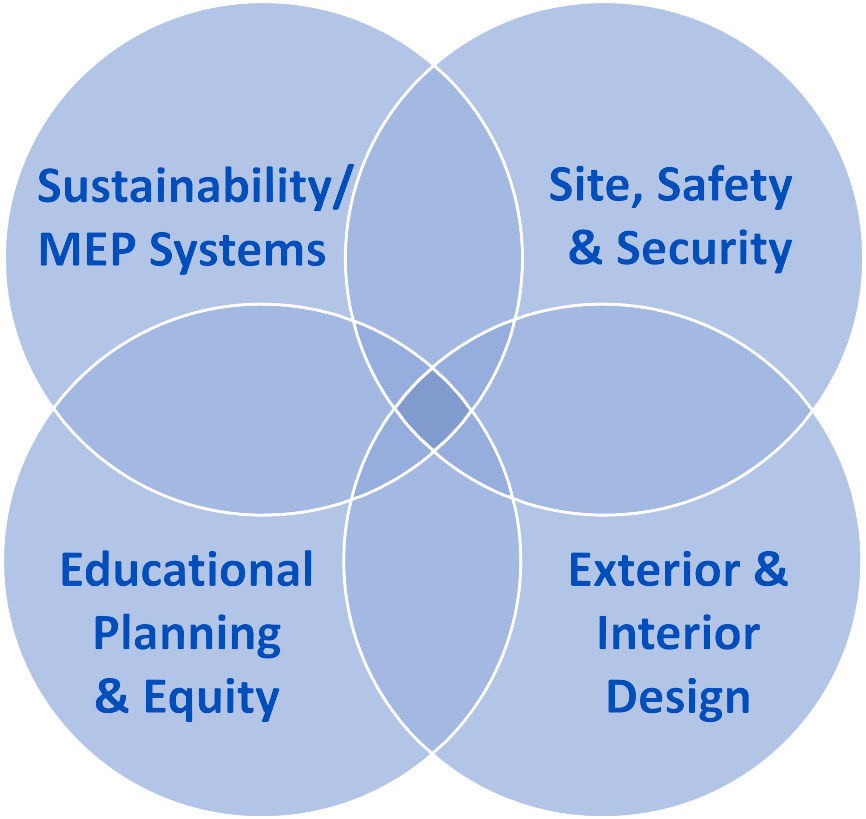


Community Stakeholder Engagement / Advisory Teams

Advisory teams are a method of collecting broad community input on key priorities and desired outcomes for the project.

***Who* : Educators, Students, City Departments, Boards & Commissions, Expert Community Members**

Reviews preferred MEP systems, sustainable design features and components, healthy materials; site design and landscape features for environmentally friendly design.



Reviews development of the site design for traffic, circulation, safety and security. Includes conversations about parking, driveways and circulation, fields, and offsite improvements and coordination with City Departments.

Reviews overall goals from educational planning perspectives, educational programming meetings and visioning sessions.

Reviews exterior design concepts including composition of form and exterior material selections. Review of the products and materials selected for interior finishes such as flooring, paint colors, wall finishes and ceilings.

Process / PDP Alternatives

We are here!

Educational Leadership Team
Superintendent, Asst. Superintendent, Principal, Directors, Educators, School Committee Member (20+ members)

Educational Forum
Educators, Students, Parents, and Community Members (50+ members)

Educators and Building Users (250+ members)

Educational Visioning Sessions *(100% complete)*

Space Programming Meetings *(100% complete)*

Existing Building & Site Analysis
(75% complete)

Educational Plan
(Teaching and Learning Goals)
(50% complete)

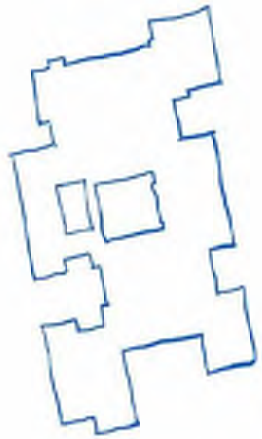
Guides

Validates and refines

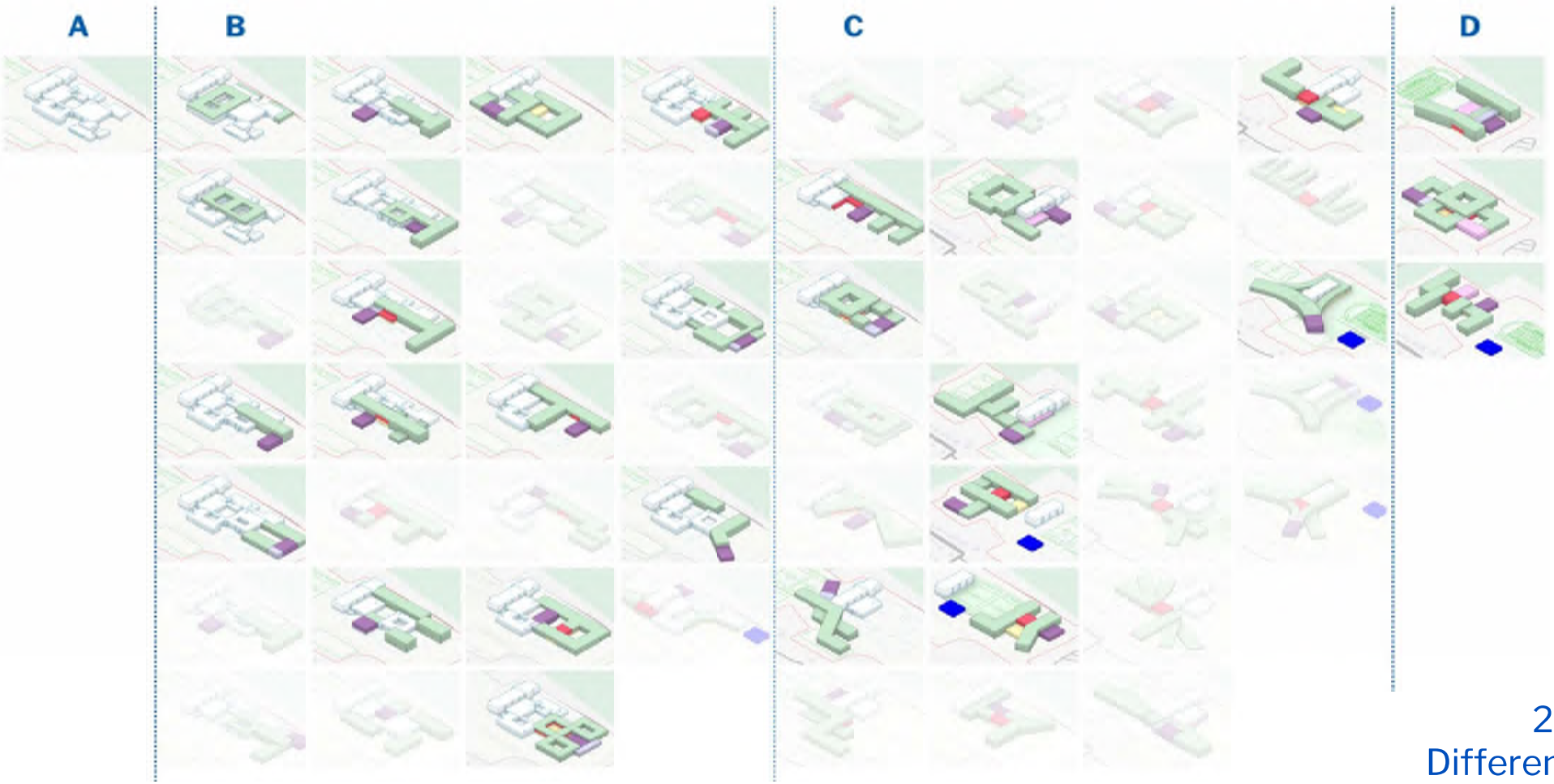
Educational Program
(Program Space Summary)
(75% complete)

Overall Building Size
(Gross Square Footage)

Alternatives for high level Cost Estimating



Alternatives for High Level Cost Estimating / Grouping Identical Cost Models



29
Different
Cost Models

1. Meeting #1 Recap

What We Heard at Meeting #1



Core Design Ethos: Timeless, Purposeful, and “Do More with Less”

Timeless over trendy: Avoid fashions that age quickly. The building should still feel right in 30–50 years.

Simplicity and restraint: Fewer materials, used more intentionally.

Value-driven material choices: Durability, lifecycle cost, and ease of maintenance matter as much as aesthetics.

Learn from the existing building: Concrete and brick are respected for their longevity and honesty.

Every material must earn its place: Nothing decorative without purpose.

Materials, Health, and Sustainability (Baseline Expectations)

Healthy materials as a baseline
- Red List–free
- No PVC / no vinyl
- Low-toxicity, durable, non-trendy finishes

Occupant well-being is paramount—physical and emotional safety.

Maintenance realism:
- Hesitation around carpet
- Concerns about unfinished wood weathering poorly
- Avoid waxed floors
- Minimize drywall where possible; glazed block for durability

Sustainability expectations are high, with open questions about targets (Passive House, LEED, etc.), but strong agreement that environmental responsibility must be embedded, not cosmetic.

Community Hub & Civic Role

There is a strong desire for the school to function as a **true civic asset**: Spaces for community use after hours must be intuitive, welcoming.

Clear entrances and circulation for athletics, performances, and events are essential.

Medford lacks **public gathering space**—this school can help fill that gap.

Visual and performing arts should be **visible and celebrated**, not hidden

Civic spaces should feel like **beacons in times of crisis**—places of gathering, stability, and hope.

Flexibility, Adaptability, and Student Ownership

Flexibility emerged as both a spatial and cultural value:

Classrooms and common spaces must evolve as pedagogy and students change

Materials and systems should allow **easy replacement, reconfiguration, and personalization**.

Strong interest in:

- Flexible classrooms
- Dedicated after-hours club spaces
- Purpose-built locations for murals and student work
- Walls designed to accept hanging, painting, and display without damage

Student ownership is critical—but intentionally designed so ownership can “change hands” as cohorts move through the school.

Site, Views, Nature, and Place

The site itself is seen as a major asset:

- Preserve and maximize **views to the Fells and the Boston skyline**.
- Strong interest in **connection to nature**, daylight, and outdoor learning.

Rooftop access for:

- Science
- Teaching spaces
- Events

Attention to stormwater management and **landscape durability**.

Awareness of site constraints, including the possibility of historic landfill conditions.

The building should feel **rooted in its landscape**, not isolated from it.

Identity, Belonging, and School Pride

The building should **feel unmistakably like Medford High School**, just renewed.

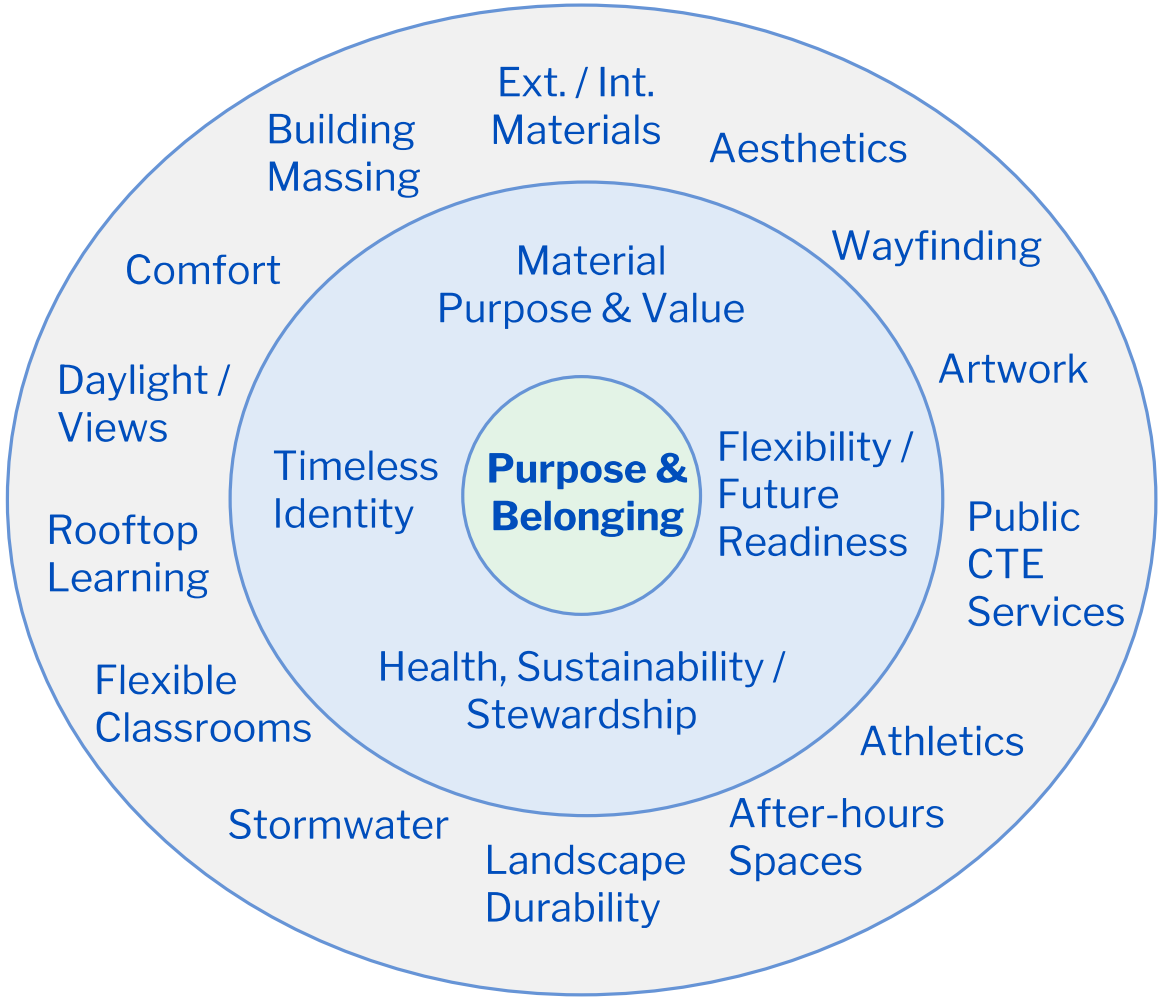
Students, staff, and the broader community should **see themselves reflected**.

The **Mustang identity** matters—but should be thoughtfully integrated, not superficial branding.

Pride is not just for families; **most voters don't have students**, yet still want civic pride in the building.

The school should **tell its own story**—through architecture, graphics, artifacts, murals, and displays that explain *why* things matter, not just that they exist.

We start with belonging and purpose, express that through timeless identity, deliver it with purposeful materials and healthy systems, and enable it through flexible spaces that evolve over time.



smma

2. Medford's Civic Architecture





Ship Building (1630-1870)



Brick Making (1650-1750)


Exterior Materials / Armory, 1891 Romanesque Revival



Exterior Materials / Bigelow Block, 1886 Late Victorian / Queen Anne Style

Exterior Materials / Chevalier Theater, 1939 Greek Revival (New Deal)



Exterior Materials / City Hall, 1937, Colonial Revival (New Deal)



Exterior Materials / Medford Police, 2021 Contemporary Civic



Exterior Materials / Medford Public Library, 2022 Contemporary Civic



Sign of the Times/ Late Modern















with the present, is proud to have the distinction of being the first graduating class of the new Medford High School. We would be remiss in our responsibilities to begin our account in any other manner.





A man-made beauty evolved that rivaled its own natural order . . .





As the natural terrain was reshaped by dirt, concrete, and earth-moving machines . . .







A world of coherence and order
that even nature could envy
was excitedly emerging . . .





Surely brick and mortar
cannot live and breathe . . .

But just as surely,
this brick and mortar
will allow for as deep a breath
of educational inquiry and opportunity
as we could ever desire . . .










"Everything that exists is in a manner the seed of that which will be"
— M. Aurelius

What connections exist between Medford's civic architecture and this project?

















3. Exterior Materials



Exterior Materials / Schools Across the District



Missituk Elementary



Brooks Elementary



McGlynn Middle School



Andrews Middle School



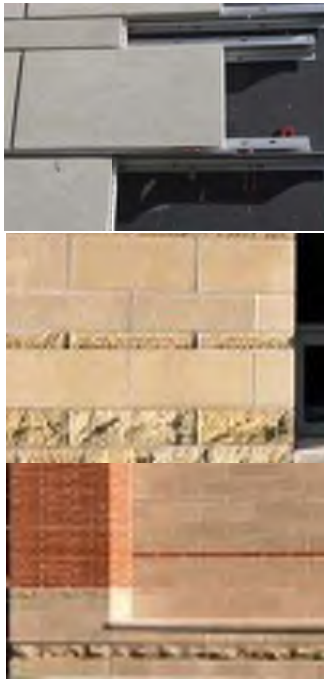
Roberts Elementary

Exterior Materials / Potential Materials and Systems

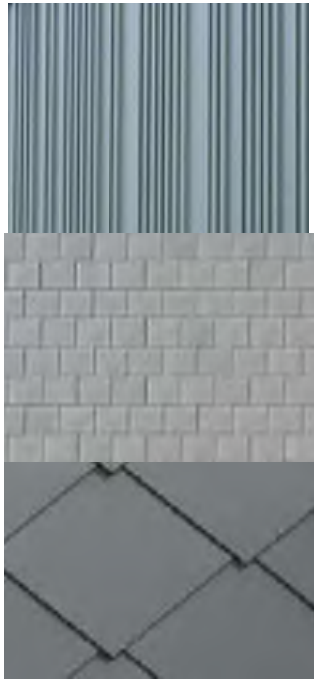
Brick / Stone / Precast



Thin Mfd. Stone



Metal Panel
Metal Tiles



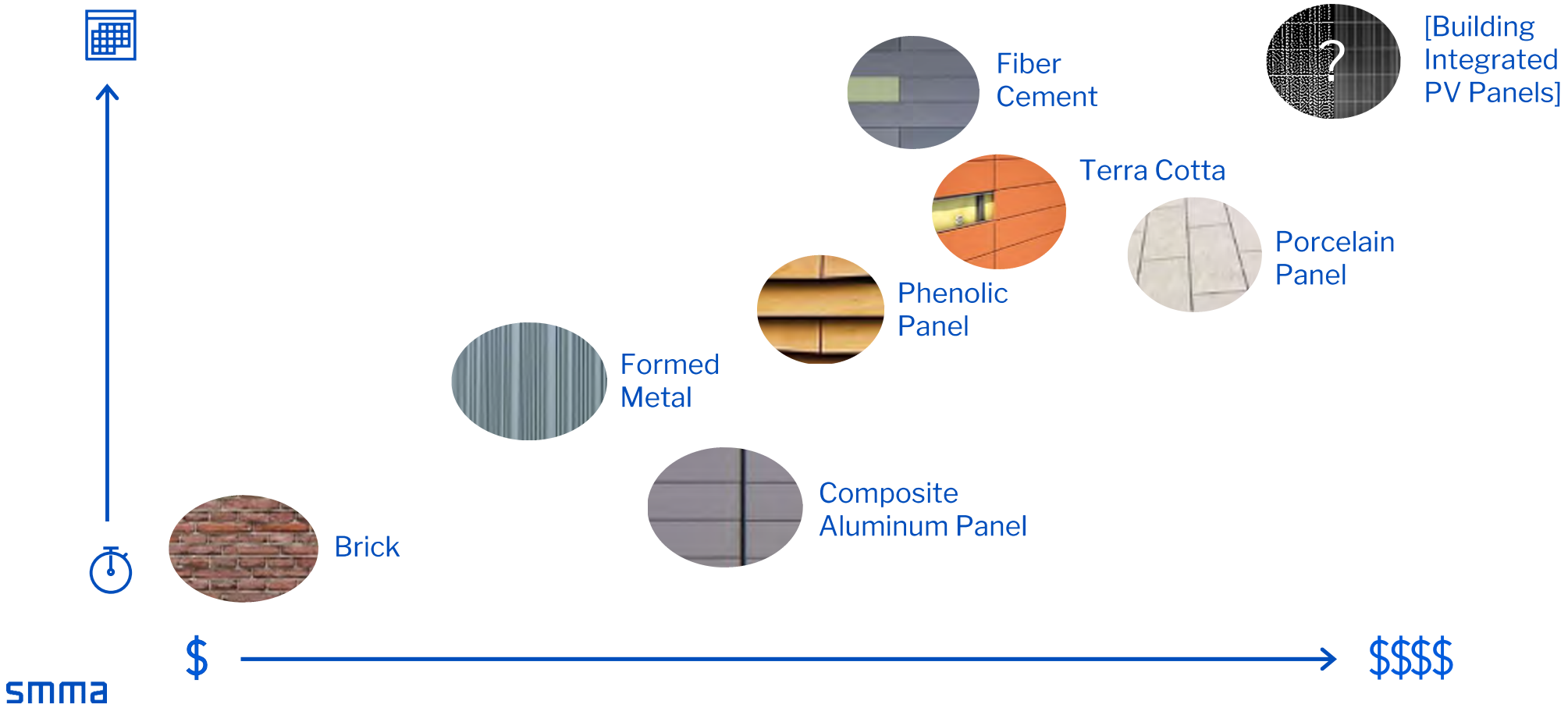
Porcelain Panel
Phenolic Panel



Terracotta
Curtain Wall



Exterior Cladding Materials / Market Outlook



smma








GRAFTON HIGH SCHOOL

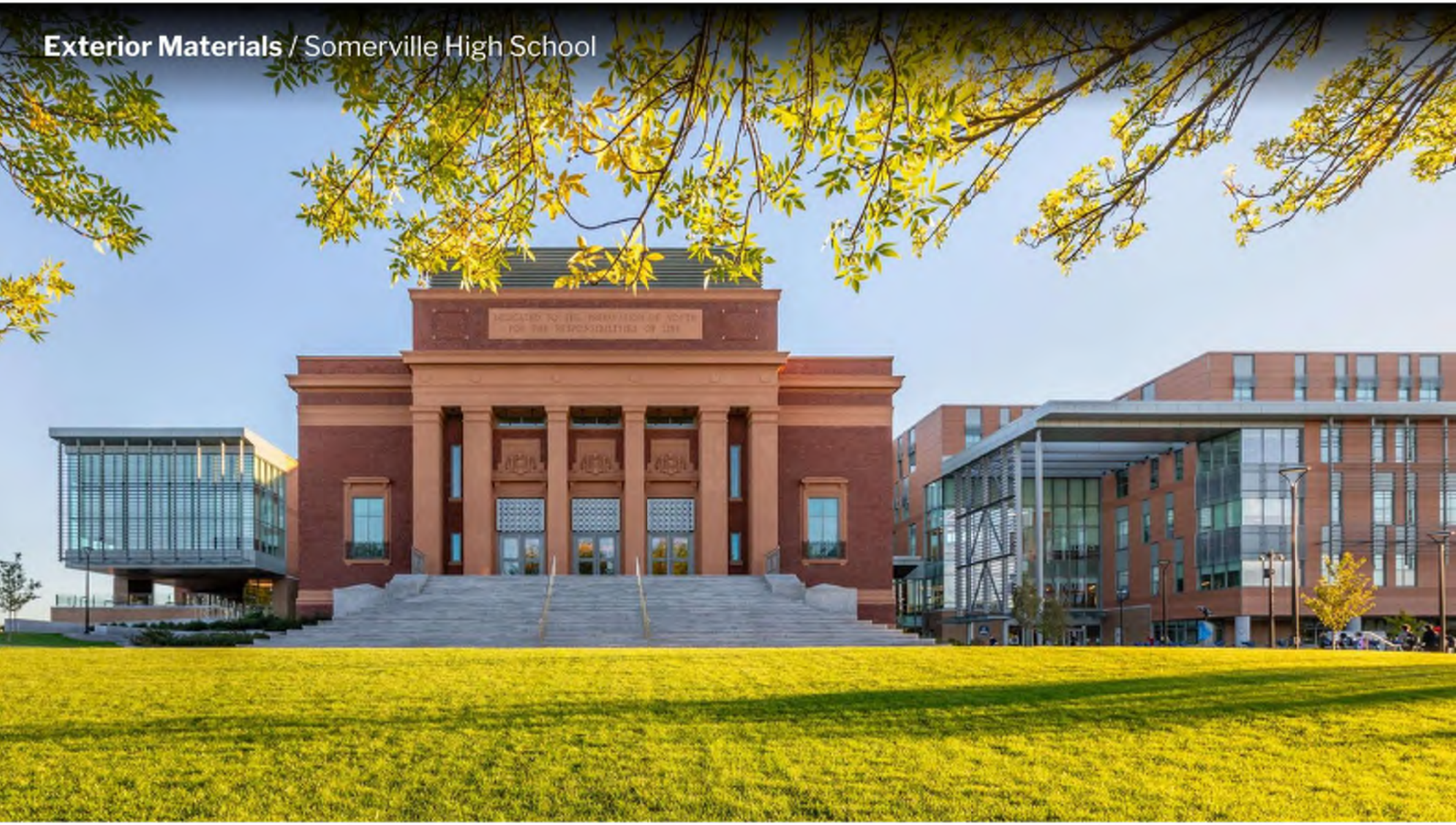





Exterior Materials / Waltham High School

Exterior Materials / Wakefield Memorial High School




Exterior Materials / Somerville High School

Exterior Materials / Roxbury Prep / *School in the City*

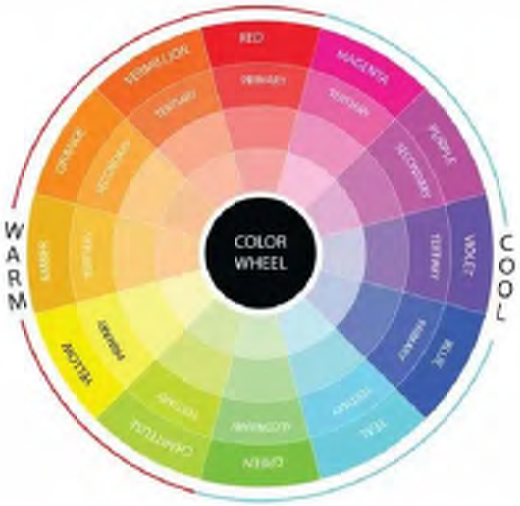



Exterior Materials / Concord Middle School / *School in the Woods*

4. Interior Design and Materials

Key Elements of Interior Design

- **Space** is three dimensional; it creates flow, defines zones, and determines layout. It is closely to the Educational Plan and considers scale, balance, harmony, and lighting.
- **Color** is more than just an aesthetic; it can influence mood, support accessibility goals, and affect spatial perception. Color can also help with wayfinding and support school identity.
- **Lighting**, both natural and artificial, affects how space and objects are perceived. It must provide illumination for activities taking place, but also impacts mood, enhances color, and accents objects or areas.
- **Texture** is the way an object feels, either physically or visually. It can reinforce design concepts, differentiate objects and surfaces from each other, and impact lighting.



- **Pattern** is the intentional repetition of forms, lines, or other design elements. It provides visual rhythm and structure.

Interior Design / Medford High School Goals?



1. The interior materials will be **purposeful**, **durable**, and **value-driven**. Materials will support the building's **maintenance** and **sustainability** goals.
2. The interior design will relate to the exterior design and palette. Glazing on the exterior of the building will create a **visual and physical connection** to the interior.
3. The building will be designed to encourage **student engagement** and **autonomy**. Patterns, colors, and materials will provide **wayfinding** and **stimulate movement** throughout the space.
4. The interior design will be rooted in a **timeless**, neutral palette. Complementary accent colors and materials will be layered on the base palette in **intentional** ways.

Interior Design Principles / Guiding Design Elements



Connections to nature / *Waltham HS* ↑

Comfort and well-being focused / *Waltham HS* →



← *Celebrating diversity* / *Waltham HS*

↓ *Adaptable and flexible spaces* / *Waltham HS*

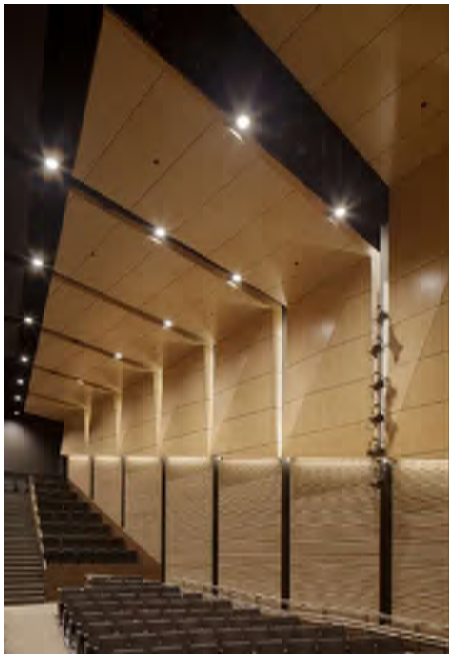




Interior Design Principles / Guiding Design Elements







↑ *Durable and timeless materials* / *North Middlesex Regional HS*

↖ *Honoring history while embracing the future* / *Somerville HS*

← *Intuitive wayfinding and placemaking* / *Waltham HS*



← *Equitable and universal design* / *Andover West ES*

↓ *Access to daylight and views* / *Ayer Shirley Regional HS*



Interior Materials / Healthy Material Options and Goals

- **LEED:** a certification program and framework for designing, constructing, and operating healthy, efficient, and cost-saving buildings
  - LEED v5 Silver is an MSBA requirement

- **The Red List:** a list of chemicals representing the “worst-in-class” chemicals and elements common in the building industry that pose serious health or environmental risks
  - Helps prioritize health of building occupants

- **The Living Building Challenge (LBC):** a rigorous building certification program defining the most advanced measure of sustainability in the built environment
  - Guiding principles to consider

Healthy Interior Material Options and Goals / LBC Red List Declaration Status

- **RED LIST FREE** products disclose 100% of ingredients present at or above 100 ppm (0.01%) in the final product and do not contain any Red List chemicals.
- **RED LIST APPROVED** products disclose a minimum of 99% of ingredients present in the final product and meet the requirements through one or more *approved exceptions*.
- **DECLARED** products disclose 100% of ingredients present in the final product but contain one or more Red List chemicals that are not covered by an approved exception.



Declare.

Gold Bond® High Strength Fire-Shield 60® Gypsum Board
Gold Bond Building Products, LLC
provided by National Gypsum Company

Final Assembly: Multiple US Locations
Life Expectancy: 60+ Year(s)
End of Life Options: Recyclable (100%), Landfill

Ingredients:

Gypsum Core: Gypsum; Vermiculite; STARCH; Continuous Filament Glass Fiber; Non-Reactable; Dextrose; Sodium polynaphthalenesulfonate[1]; Boric acid; Polygrate Sodium; Metaphosphoric acid (H3P3O9), trisodium salt; Undisclosed (< 0.06%)[2]; Poly(oxy-1,2-ethanediyl), alpha-sulfo-omega-hydroxy-, C9-11-alkyl ethers, sodium salts; POTASSIUM SULFATE; Glycerine; Sodium bisulfate; **Paper Facing:** Mixed Recycled Paper; Starch; Alkenyl succinic anhydride

[1]LBC Temp Exception RL-009 - Formaldehyde
[2]LBC Temp Exception RL-004b - Proprietary Ingredients in Declare

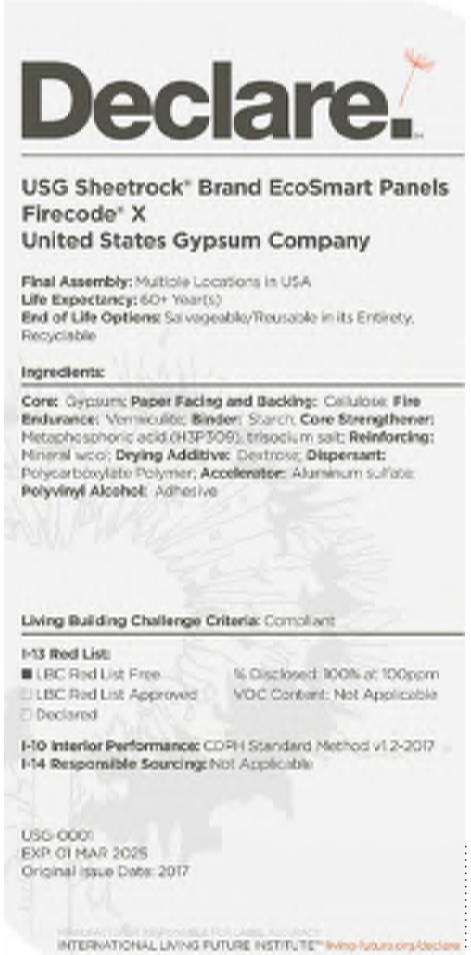
Living Building Challenge Criteria: Compliant

I-13 Red List:
☐ LBC Red List Free — % Disclosed: 99.94% at 100ppm
■ LBC Red List Approved — VOC Content: Not Applicable
☐ Declared

I-10 Interior Performance: CDPH Standard Method v1.2-2017
I-14 Responsible Sourcing: Not Applicable

NGC-0002
EXP. 01 MAR 2026
Original Issue Date: 2023

INTERNATIONAL LIVING FUTURE INSTITUTE living-futures.org/declare



Declare.

USG Sheetrock® Brand EcoSmart Panels Firecode® X
United States Gypsum Company

Final Assembly: Multiple Locations in USA
Life Expectancy: 60+ Year(s)
End of Life Options: Salvageable/Reusable in its Entirety; Recyclable

Ingredients:

Core: Gypsum; **Paper Facing and Backing:** Cellulose; **Fire Endurance:** Vermiculite; **Binder:** Starch; **Core Strengthener:** Metaphosphoric acid (H3P3O9), trisodium salt; **Reinforcing:** Mineral wool; **Drying Additive:** Dextrose; **Dispersant:** Polycarboxylate Polymer; **Accelerator:** Aluminum sulfate; **Polyvinyl Alcohol:** Adhesive

Living Building Challenge Criteria: Compliant

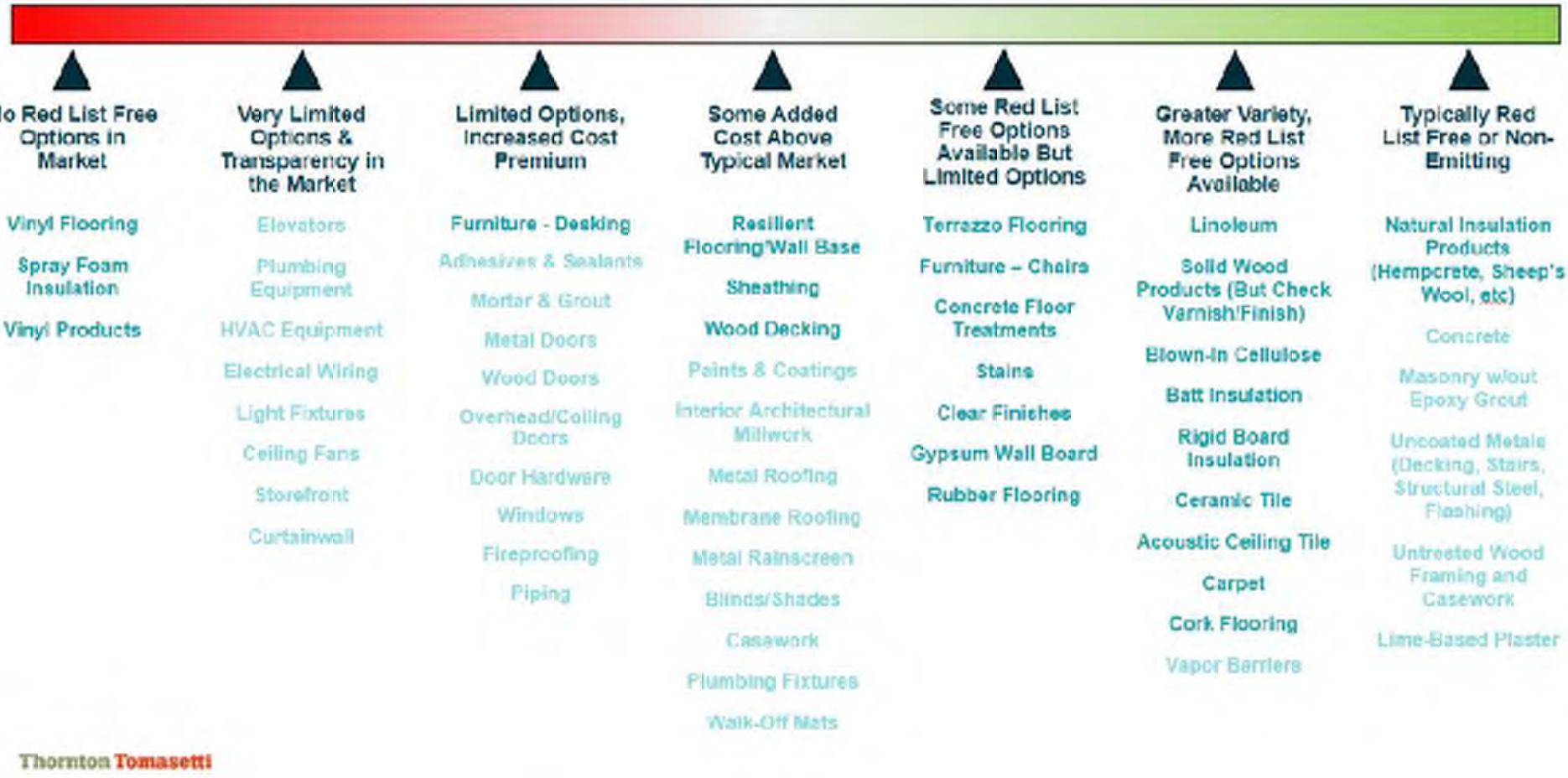
I-13 Red List:
■ LBC Red List Free — % Disclosed: 100% at 100ppm
☐ LBC Red List Approved — VOC Content: Not Applicable
☐ Declared

I-10 Interior Performance: CDPH Standard Method v1.2-2017
I-14 Responsible Sourcing: Not Applicable

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EXP. 01 MAR 2025
Original Issue Date: 2017

INTERNATIONAL LIVING FUTURE INSTITUTE living-futures.org/declare

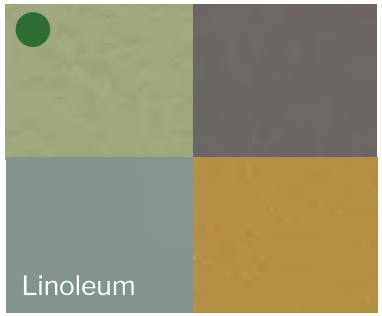
Healthy Interior Material Options and Goals / Material Considerations



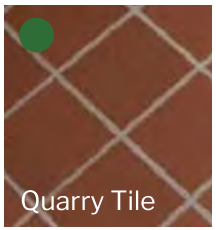
Typical Interior Materials

Red List Free Product
Red List Approved Product
Declared Product

Flooring

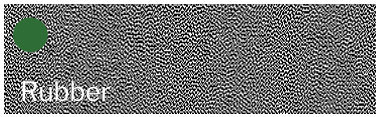


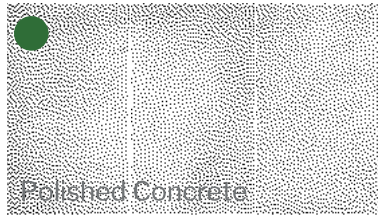








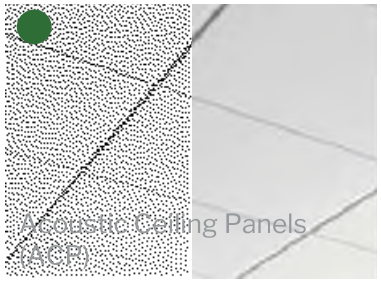


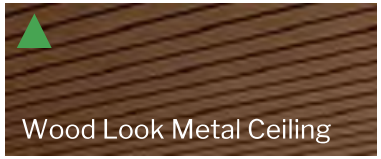






Ceilings



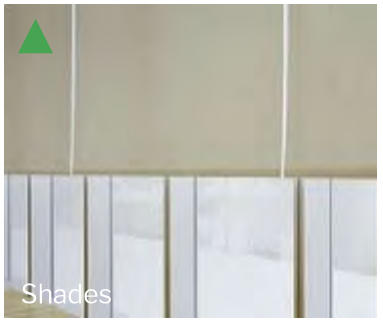






Windows





Note: Materials shown are preliminary examples and not project specific

Typical Interior Materials

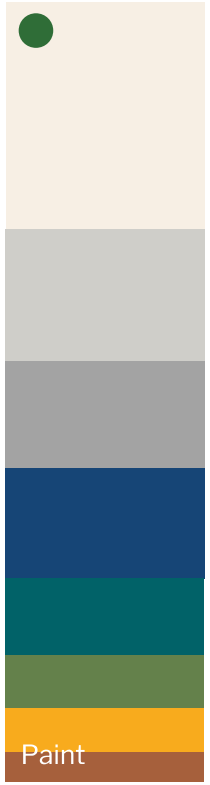
Red List Free Product
Red List Approved Product
Declared Product

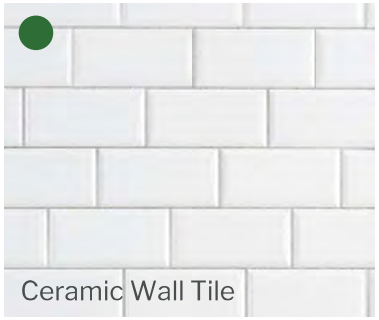
Walls



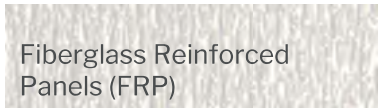




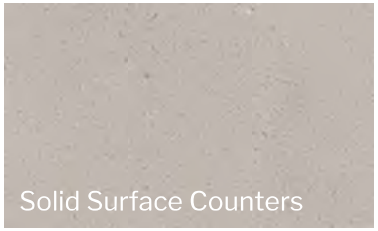




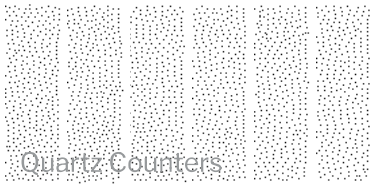




Casework and Millwork











Note: Materials shown are preliminary examples and not project specific

5. Experiential Graphic Design (XGD)



Experiential Graphic Design (XGD) / 3 Key Questions

What is the content?

Story & Messaging

Where is it going?

Context & Environment

What does it look like?

Style & Material

Experiential Graphic Design (XGD) / High Level Goals

- Connect the students, staff, and community to the space and connect individual spaces through a cohesive system of graphic installations
- Respond to interior, architectural, and site concepts and elements
- Create visual and content strategies that allow for engaging educational opportunities inside and outside the classroom
- Provide clear and functional wayfinding and enhance placemaking throughout the school

Goals / Connect individuals to the space



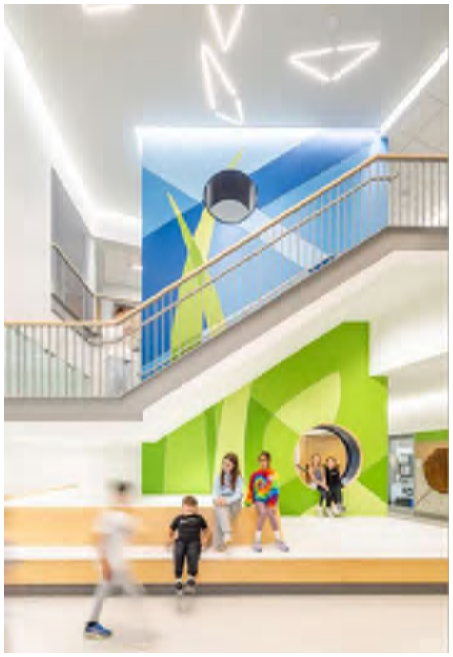
Dining commons / Waltham HS ↑

Lobby / Hunnewell ES →



← *Dining Commons / Wakefield Memorial HS*

↓ *Dining Commons / Excel Charter HS*





Goals / Responsive Graphic Design









↖ *Community lobby / Somerville HS*

↑ *Media center / Wakefield Memorial HS*

← *Breakout spaces / Waltham HS*

Goals / Create educational opportunities



Architectural Drafting Hallway / Somerville HS ↑

Informational signage / Waltham HS →



Educational posters / Waltham HS →





Goals / Wayfinding and Placemaking

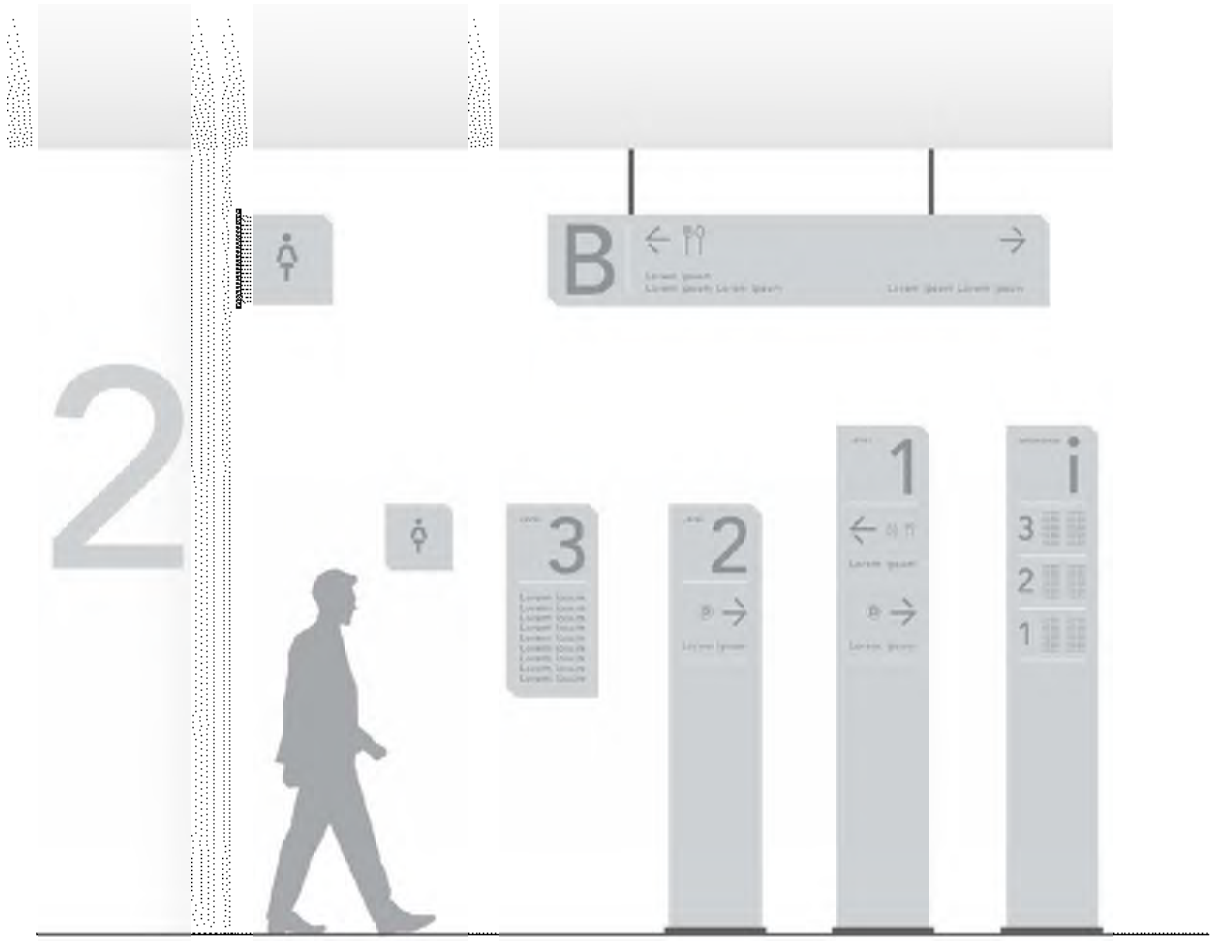




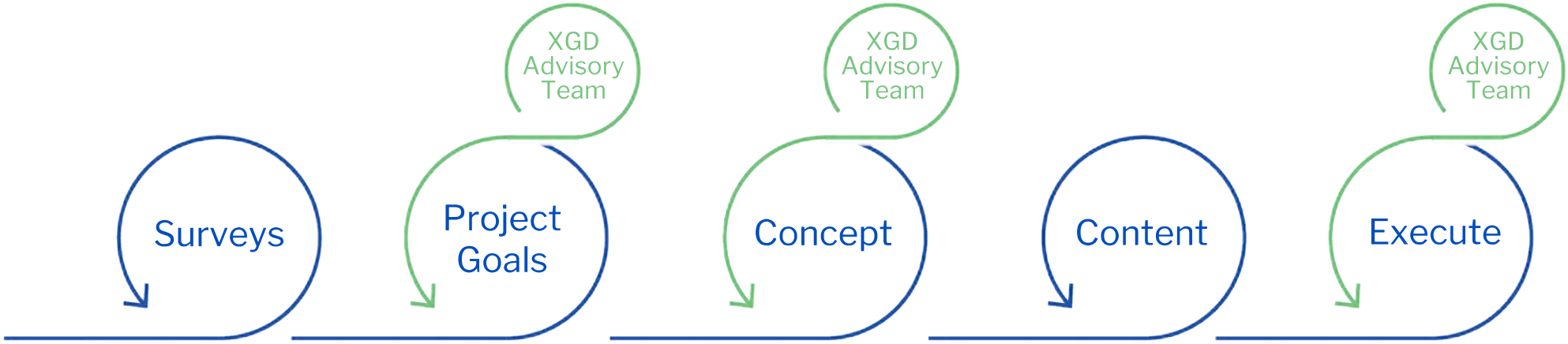







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Experiential Graphic Design (XGD) / Schematic Design Process



Staff, students, and community. Informs project goals.

Informs visual style and content strategy

Create visual style and content strategy. Apply to selected case studies

Research and collection of all content

Creation and documentation of all graphics

Next Steps



Exterior and Interior Design / Objective

1. Listen — 12/16
2. Review & Respond — 1/15
3. Confirm & Recommend — 3/10
4. Reconvene — 9/2026

smma

Next Steps / What to Expect in Meeting #3

Objective: The Advisory Team will review recommendations as to what goals for exterior and interior design elements are recommended to be carried forward as part of the project (evolving from the discussion in Meetings #1 and #2). Scope items will be characterized as givens, items warranting team discussion, or items that are not recommended for inclusion in the project.

When & Where?
March 10th at 5:30 pm
Remote / Hybrid

Thank you

Advisory Team – Sustainability & MEP Systems 2

Project Name:	Medford High School	Project Number:	25100
RE:	Advisory Team - Sustainability & MEP Systems	Meeting Date:	01/15/2026
Prepared by:	Brenda Lam	Meeting Number:	02
Distribution:	Attendees		

Owner

- [x] Libby Brown, *SBC Member, Architect at Goody Clancy*
- [x] Suni Dillard, *Medford Resident, Sustainability Leader at HMFH Architects*
- [x] Austin Ditz, *Medford Resident, Solar Project Manager*
- [x] Audrey Feitor, *Medford High School Teacher*
- [x] Jenny Graham, *Chair of SBC, Vice Chair of School Committee*
- [x] Chris Hogan, *Medford Resident*
- [ ] Elisabeth Krautscheid, *Medford Resident, MassSave Decarbonization Program*
- [x] Ken Lord, *MPS Chief Operating Officer*
- [x] Sarah Michelman, *Medford Resident, Sustainable Design Consultant at The Green Engineer*
- [ ] Nicole Morell, *SBC Member*
- [x] Jessica Parks, *Medford Resident, MIT Energy Efficiency Project Manager*
- [x] Brenda Pike, *City of Medford Climate Policy Planner*
- [x] Luke Preisner, *SBC Member*
- [x] Chris Richard, *Medford Resident, Senior Project Superintendent at Turner*
- [x] Paul Ruseau, *SBC & School Committee Member*
- [x] Nathan Scott, *Medford Resident, Capital Construction at Tufts University*

SMMA & Consultants

- [x] Martine Dion, *Director of Sustainable Design*
- [x] Brenda Lam, *Sustainable Design Project Coordinator*
- [x] Helen Fantini, *Project Manager*
- [x] Matt Rice, *Principal-in-Charge, Architect*
- [x] Abigail Ransmeier, *Head of Research*
- [x] Soala Ajienka, *Architectural Designer*
- [x] Emily Ehlers, *Mechanical Engineer*
- [x] Andrew Barros, *Electrical Engineer*
- [ ] Anthony Jimenez, *Electrical Engineer*
- [x] Sarah Long, Interior Designer

- [x] James Job, *Plumbing & Fire Protection Engineer*, AKAL Engineering
- [ ] Tommaso Bitossi, Transsolar

Leftfield

- [x] Jen Carlson, *Project Director*
- [x] Matt Gulino, *Project Manager*
- [ ] Adele Sands, *Educational Liaison*

Item No.	Action	Discussion
02.01	Record	**Meeting #2 Agenda** • Welcome & introductions • Overview of the Advisory Team process & milestones • Topics and Priorities - Takeaways from Meeting #1 ○ LEEDv5 Preliminary Overview ○ Climate Resiliency ○ Embodied Carbon ○ Healthfulness, Environmental Quality Literacy ○ Life Cycle Cost Analysis - Cost Effectiveness Overview • Next Steps
02.02	Record	**Overview of Advisory Team Process & Milestones** • Four Advisory Teams - not individual silos of discussion; all are connected but each team gives space for deeper discussion

		○ Each team will produce a set of recommendations for the full SBC to review and approve • Objective of Sustainability & MEP Systems: Reviews preferred MEP systems, sustainable design features and components, healthy materials; site design and landscape features for environmentally friendly design. • Sustainable Design Givens include: MSBA Green School Policy, Massachusetts Specialized Stretch Energy Code, and Medford Sustainable Goals and Guidelines. **Overall process: 4 meetings** • Listen > Review & Respond > Confirm & Recommend > Reconvene **Goals & Aspirations Discussion** • Participant was not present at previous meeting for the goals and aspirations discussion. Conveyed goal for resiliency and building as a community resource, in the case that residents need food/water/etc. Passive survivability is important to maintain comfortable temperatures in case of emergencies. The building to be designed also as an emergency shelter. This topic needs to be discussed with first responders to understand the city's perspective.
02.03	Record	**Topics and Priorities - Takeaways from Meeting #1** 1. **LEEDv5 Overview**: SMMA provided an overview of the LEED version 5 credit categories and a preliminary assessment for the LEED version 5 Scorecard for the proposed project. The base MSBA reimbursement requires LEED Silver. Gold/Platinum will require assessment of LEED points from SMMA. Medford to discuss/aspiration for LEED Gold or Platinum. Several LEED credits have costs tied to them, such as renewable energy. LEED Gold or Platinum schools are not awarded greater reimbursement from MSBA. Additional reimbursement is tied to certain IAQ and Materials credits. Discussion: ○ At Wakefield Memorial HS (WMHS), the community confirmed LEED Silver minimum and voiced aspiration to LEED Gold. Wakefield has municipal power company, while Medford does not, and would like to understand applicability in terms of energy storage when compared to Medford. The design team noted that the WMHS battery storage system did not affect LEED as it was not included in the base project and installed as a separate scope. ○ Existing building's peak loads need to be reviewed. The design team noted that they will collaborate with Medford's energy manager to review the data. ○ Net Zero and Passive House are valuable goals. ○ LEED Platinum is nice, but the full life cycle cost of operating the building is more important. Reimbursement from MSBA is also important. ○ LEED Silver and code minimum is preferred. Systems to be tried and true technology (what we can afford). Cutting edge technology may be difficult to maintain or replace in long run. 2. **Climate Resiliency:** SMMA provided an overview of the topics of Climate Resiliency, which includes Energy Efficiency, MEP Systems, Operations & Systems Maintenance, Passive Design Strategies, Solar PV & Energy Storage, and EV Charging. SMMA discussed sustainable site attributes and water conservation, which are part of LEED (givens). The project will optimize energy performance to meet MSBA thresholds, all supported by the MA Specialized Stretch Energy Code. Passive strategies are a priority. Commissioning is part of LEED and mandated by the MSBA. The predicted Energy Use Intensity goal for this project is 25-35, which is typical for modern school buildings. This will be achieved through passive design strategies, high-performance insulated enclosure, triple-glazing, all-electric HVAC and plug load management. The design team will track total building carbon of the existing facility versus the proposed design, including operational and embodied carbon, over 60 years. HVAC Design Considerations include Comfort & Health, Safety, LCCA, Reliability, Maintenance, Controls, and Space. System Operations is

critical from beginning of the design process and work with who will operate system. The SMMA teas has met with Facilities department to discuss the importance of training, educating the staff, commissioning, and operating systems as they are designed. The potential HVAC system options to be assessed include ground source heat pump, air to water heat pump, air source heat pump, or hybrid of systems - to be looked at more closely in the next design phase.
Solar PV and Energy Storage topics covered the Medford Solar PV policy, which is mandated for all buildings greater than 10,000 SF, sized 50% of the roof areas / 90% of top level of uncovered parking structures. As part of Specialized Stretch Code, the all-electric pathway requires 40% readiness or the fossil fuel pathway requires installation of Solar PV equivalent to fossil fuel emissions. The additional solar PV area opportunities include parking, walkways, outdoor classrooms, roof (high canopy, patio, screens) and/or building-mounted. Renewable energy contributes to LEEDv5 additional points.
Discussion:

- The CxA scope needs to be reviewed and confirmed with the MSBA for updates as it relates to LEEDv5.
- The MSBA reimbursement varies by community and scope of eligible costs.
- Question regarding MHS have rate dispatching storage on regular basis; assuming how much PV and how much to be offset (or is battery only used for demand response). The design team noted that it is typically standard commercial rate. The cost analysis includes cost escalation. The use of the battery storage is up to facilities management (take advantage of demand response) or manage/hold storage and use when it peaks.
- Solar to be owned by City or School. Note that the rate differs if community owns the system versus contracted out.
- School is the highest energy user in the community, and so demand charges are expensive. Consider energy storage vs savings from demand response for the batteries.
- HVAC System Operations is huge point of contention as the classrooms can get very uncomfortable. In the past, individual control over the rooms and currently is not functional. The systems and operations need to allow teachers to control their own rooms.
- In the SOI (2019) Report, there is data from 9 year period of the EUI including electric and natural gas usage. Encourage community to review. A PPA vs purchase system requires cost benefits analysis. Reimbursement varies widely, what is reimbursable and what is not (i.e. Revere as an example is getting approximately 80%). Question regarding the 57 PDP design concepts that vary with PV deployment and other aspects, and how the concepts are being reviewed. Solar suitability to be included in the overall evaluation criteria and any input from the advisory groups. The design team noted that in terms of how the overlap of this group and SBC review, it will not be reduced until the PSR phase. This group will provide input on topics and evaluation criteria, which should be set before the next phase.

3. **Embodied Carbon**: SMMA provided an overview of Embodied Carbon requirements of LEED and embodied carbon reduction strategies. The Project team will look to go beyond minimum LEED requirements, with no/low cost. Most of embodied carbon resides in enclosure and structure. The project will utilize low-carbon materials including steel and concrete, as well as insulation and other building materials. Additionally, embodied carbon reduction strategies include exposed ceilings and mass timber/wood structure. Mass timber/wood structure feasibility will be reviewed by the team as the design develops.
   Discussion:
   - Costs of timber/wood structure needs to be studied. Wood structure with exposed wood ceilings would reduce costs of ceiling panels.
   - The building code and restrictions are to be considered, including sprinkler systems, fire-protection systems and fire proofing, when designing the structural system.

		4. **Healthfulness, Environmental Quality and Literacy:** SMMA provided an overview of healthfulness, environmental quality and literacy. Healthfulness is tied to an enhanced indoor environmental quality, which is supported by daylight, lighting design, thermal and acoustic comfort, and IAQ practices (such as flush-out). Healthy materials (Red List) will be screened when reviewing building products, which will support LEED v5. The design team noted the importance of environmental literacy to support student engagement and integration with the vocational trade programs. Environmental literacy can be supported by a green education program, outdoor classrooms, and occupant behavior and monitoring - the school and site as educational tools. Discussion: ○ Stress on the importance of due diligence when reviewing the all-electric versus gas options. Supports not looking at VRF as an option. ○ Passive House Certification has significant soft costs that are community may not understand. There are 29 concepts. Passive house requires an envelope analysis. We have not narrowed down the sustainability criteria for those particular goals and determine goal vs strategy. We are setting goals and SMMA is providing the strategies. A lot of money spent on the certification to just have the certification. Design to what the certification says, students still getting positive value of the design (still benefits students and tax payers). Need to understand how we operate and what it takes in the future. ○ Water consumption and conservation to be further discussed. ○ Consider light wells as done at an Arlington project. 5. **LCCA - Cost Effectiveness** SMMA provided an overview of the Life Cycle Cost Analysis (LCCA) approach. The design team will conduct a 50-year life cycle analysis comparing the systems, includes building, enclosure and mechanical, which accounts for installation, replacement, and maintenance costs. It includes incremental costs comparing the systems and also accounts for the incentives. Discussion/Comments: ○ School Committee has confirmed LEED version 5. The aspiration to Gold should be assessed. Supportive of the many design options. It is important to look at costs of heat and electrify this building. This group to review the evaluation criteria to narrow our concepts.
02.04	SMMA	Next Steps • Meeting 3: The Advisory Team will review recommendations as to what Sustainable Design and MEP Systems design elements to include in the project (which were discussed in Meetings 1 and 2). Scope items will be characterized as givens, items warranting team discussion, or items that are not recommended for inclusion in the project. The design team will be looking for consensus on these items. • Meeting #3 is scheduled for 3/11/2026 at 4:00 pm.

Medford High School



Sustainability and MEP Systems Advisory Team Meeting

Meeting #2

01/15/2026

smma

LeftField

THE RIGHT CHOICE IN PROJECT MANAGEMENT

Meeting #2 Agenda

- Welcome & Introductions
- Overview of the Advisory Team Process and Milestones
- Goals & Aspirations – Takeaways from Meeting #1
  - LEEDv5 Preliminary Overview
  - Climate Resiliency
  - Embodied Carbon
  - Healthfulness and Environmental Literacy
  - Life Cycle Cost Analysis Overview
- Next Steps



Welcome & Introductions



Sustainability and MEP Systems / Team Intro

SMMA



Matt Rice
Principal-in-Charge



Helen Fantini
Project Manager



Soala Ajienka
Architectural Designer



Andrew Barros
Electrical Engineer



Emily Ehlers
Mechanical Engineer

SMMA



Martine Dion
Sustainable Design
Director



Brenda Lam
Sustainable Design
Team Member

Transsolar



Tommaso Bitossi
Sustainable Design
Consultant

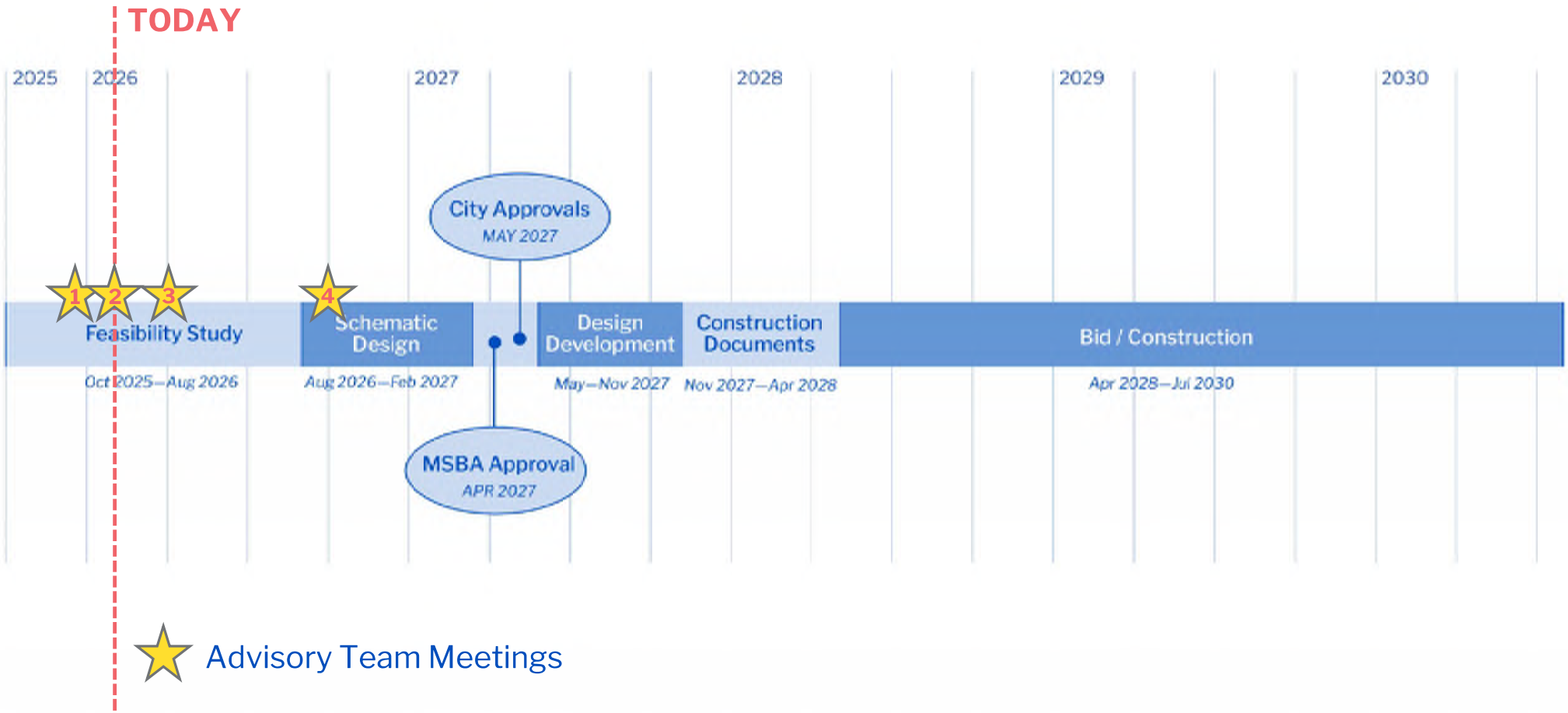
AKAL



James Job
Plumbing and Fire
Protection Engineer

1. Libby Brown
2. Suni Dillard
3. Austin Ditz
4. Audrey Feitor
5. Jenny Graham
6. Chris Hogan
7. Elisabeth Krautscheid
8. Ken Lord
9. Sarah Michelman
10. Nicole Morell
11. Jessica Parks
12. Brenda Pike
13. Luke Preisner
14. Chris Richard
15. Paul Ruseau
16. Nathan Scott

Project Timeline

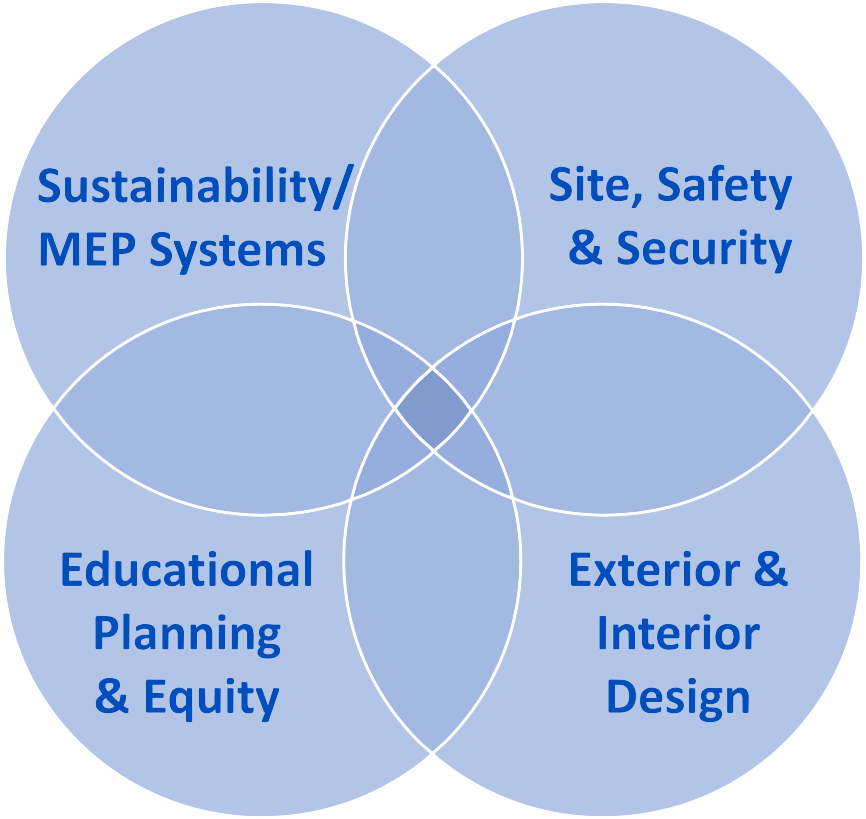


Community Stakeholder Engagement / Advisory Teams

Advisory teams are a method of collecting broad community input on key priorities and desired outcomes for the project.

***Who* : Educators, Students, City Departments, Boards & Commissions, Expert Community Members**

Reviews preferred MEP systems, sustainable design features and components, healthy materials; site design and landscape features for environmentally friendly design.

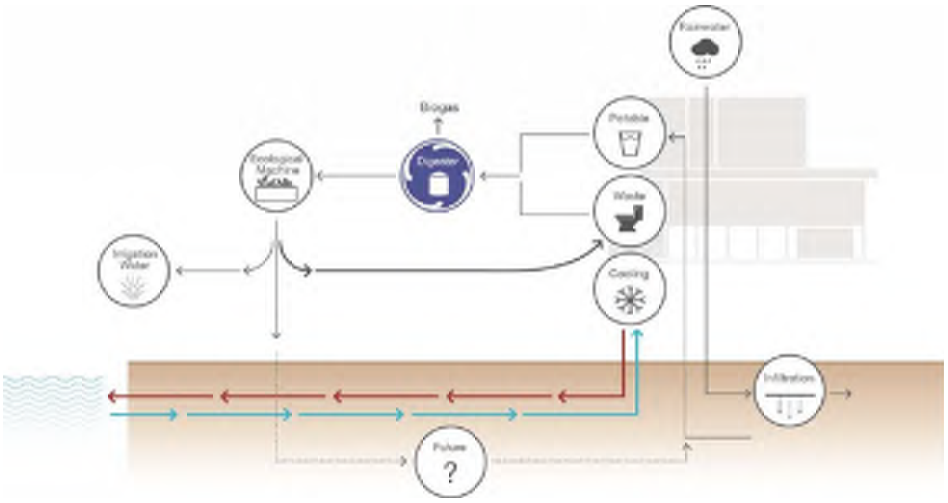


Reviews development of the site design for traffic, circulation, safety and security. Includes conversations about parking, driveways and circulation, fields, and offsite improvements and coordination with City Departments.

Reviews overall goals from educational planning perspectives, educational programming meetings and visioning sessions.

Reviews exterior design concepts including composition of form and exterior material selections. Review of the products and materials selected for interior finishes such as flooring, paint colors, wall finishes and ceilings.

Objective: Reviews preferred MEP systems, sustainable design features and components, healthy materials; site design and landscape features for environmentally friendly design.





Topics & Priorities
from Meeting #1

Givens

1. **Massachusetts Specialized Energy Stretch Code**
2. **MSBA:**
   - **LEEDv5 Silver Certification**
   - **Commissioning**
   - **Healthy Materials credits**
3. **Medford Solar Policy**
4. **Medford Sustainability Guidelines**

Topics and Strategies

1. **LEEDv5 Overview** [10 min]
2. **Climate Resiliency** [20 min]
   - Energy Efficiency
   - MEP Systems
   - Operations & Systems Maintenance
   - Passive Design Strategies
   - Solar PV & Energy Storage
   - EV Charging
3. **Embodied Carbon** [10 min]
4. **Healthfulness, Environmental Quality & Literacy** [10 min]
   - Enhanced Ventilation
   - Daylight Optimization
   - Access to Nature, Outdoor classrooms
5. **LCCA – Cost Effectiveness** [10 min]

LEED Preliminary Overview

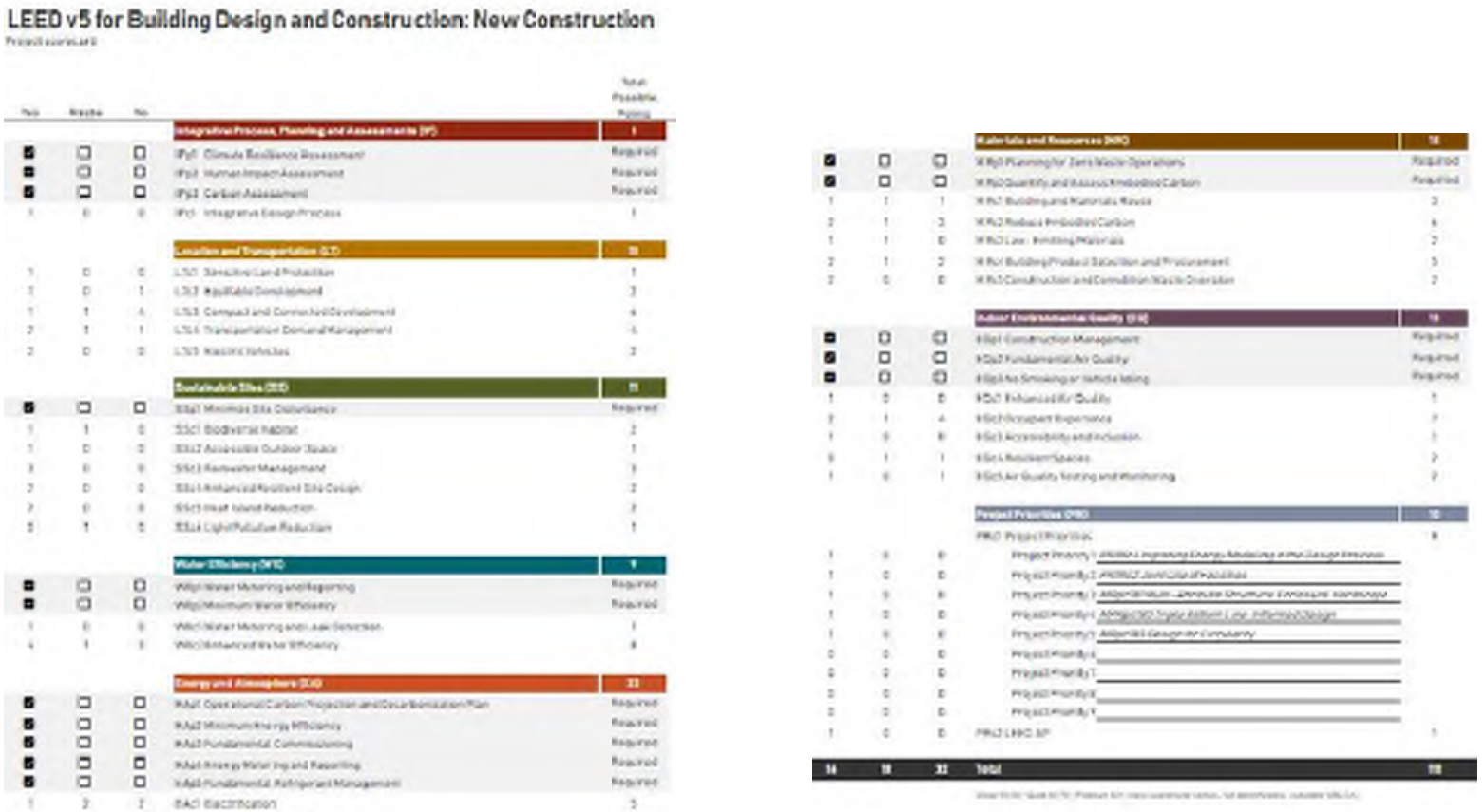


Sustainability and MEP Systems – LEEDv5 Silver Certification

- Integrative Process, Planning, and Assessments
- Location and Transportation
- Sustainable Sites
- Water Efficiency
- Energy and Atmosphere
- Materials and Resources
- Indoor Environmental Quality
- Project Priorities



Sustainability and MEP Systems – LEEDv5 Silver Certification



LEED v5 for Building Design and Construction: New Construction

Yes	Maybe	No		Total Possible Points
			Integrative Process, Planning and Assessments (IP)	**1**
■	☐	☐	IPp1 Climate Resilience Assessment	Required
■	☐	☐	IPp2 Human Impact Assessment	Required
■	☐	☐	IPp3 Carbon Assessment	Required
1	0	0	IPc1 Integrative Design Process	1
			Location and Transportation (LT)	**18**
1	0	0	LTc1 Sensitive Land Protection	1
2	0	1	LTc2 Equitable Development	2
1	1	4	LTc3 Compact and Connected Development	4
2	1	1	LTc4 Transportation Demand Management	4
2	0	0	LTc5 Electric Vehicles	2
			Sustainable Sites (SS)	**11**
■	☐	☐	SSp1 Minimize Site Disturbance	Required
1	1	0	SSc1 Biodiverse Habitat	2
1	0	0	SSc2 Accessible Outdoor Space	1
3	0	0	SSc3 Rainwater Management	3
2	0	0	SSc4 Enhanced Resilient Site Design	2
2	0	0	SSc5 Heat Island Reduction	2
0	1	0	SSc6 Light Pollution Reduction	1
			Water Efficiency (WE)	**9**
■	☐	☐	WEp1 Water Metering and Reporting	Required
■	☐	☐	WEp2 Minimum Water Efficiency	Required
1	0	0	WEc1 Water Metering and Leak Detection	1
4	1	3	WEc2 Enhanced Water Efficiency	8
			Energy and Atmosphere (EA)	**33**
■	☐	☐	EAp1 Operational Carbon Projection and Decarbonization Plan	Required
■	☐	☐	EAp2 Minimum Energy Efficiency	Required
■	☐	☐	EAp3 Fundamental Commissioning	Required
■	☐	☐	EAp4 Energy Metering and Reporting	Required
■	☐	☐	EAp5 Fundamental Refrigerant Management	Required
1	2	2	EAc1 Electrification	5
1	1	3	EAc2 Reduce Peak Thermal Loads	5
5	3	1	EAc3 Enhanced Energy Efficiency	10
3	1	1	EAc4 Renewable Energy	5
4	0	0	EAc5 Enhanced Commissioning	4
1	0	1	EAc6 Grid Interactive	2
0	1	1	EAc7 Enhanced Refrigerant Management	2
			Materials and Resources (MR)	**13**
■	☐	☐	MRp1 Planning for Zero Waste Operations	Required
■	☐	☐	MRp2 Quantify and Assess Embodied Carbon	Required
1	1	1	MRc1 Building and Materials Reuse	3
2	1	3	MRc2 Reduce Embodied Carbon	6
1	1	0	MRc3 Low-Emitting Materials	2
2	1	2	MRc4 Building Product Selection and Procurement	5
2	0	0	MRc5 Construction and Demolition Waste Diversion	2
			Indoor Environmental Quality (EQ)	**16**
■	☐	☐	EQp1 Construction Management	Required
■	☐	☐	EQp2 Fundamental Air Quality	Required
■	☐	☐	EQp3 No Smoking or Vehicle Idling	Required
1	0	0	EQc1 Enhanced Air Quality	1
2	1	4	EQc2 Occupant Experience	7
1	0	0	EQc3 Accessibility and Inclusion	1
0	1	1	EQc4 Resilient Spaces	2
1	0	1	EQc5 Air Quality Testing and Monitoring	2
			Project Priorities (PR)	**10**
			PRc1 Project Priorities	8
1	0	0	Project Priority 1 ENERGY: Improving Energy Modeling & Pre-Design Efficiency	
1	0	0	Project Priority 2 PROJECT DURATION OF POSITIONS	
1	0	0	Project Priority 3 ADAPTABILITY - ENHANCED STRUCTURE EXPANSION CAPABILITY	
1	0	0	Project Priority 4 ARMSTRONG TRIPLE BOTTOM LINE - INTERNALIZATION	
1	0	0	Project Priority 5 ARMSTRONG CORPORATE COMMUNITY	
0	0	0	Project Priority 6	
0	0	0	Project Priority 7	
0	0	0	Project Priority 8	
0	0	0	Project Priority 9	
1	0	0	PRc2 LEED AP	1
34	**18**	**33**	**Total**	**110**

Sustainability and MEP Systems – LEEDv5 Silver Certification

LEEDv5 Overview

- Project registration during Design Development phase.
- Project required to LEEDv5 Silver Certified - MSBA

LEEDv5	LEED Silver (MSBA Required) [50 points minimum]	LEED Gold [60 points minimum]
Integrated Process, Planning and Assessments	1	1
Location & Transportation	7	9
Sustainable Sites	9	11
Water Efficiency	5	6
Energy & Atmosphere	15	22
Materials & Resources	8	12
Indoor Environmental Quality	5	7
Project Priorities	6	9
TOTAL	**56**	**74**

Aspiration to Gold/Platinum Certification?

Climate Resiliency

Energy Efficiency
MEP Systems
Operations & Systems Maintenance
Passive Design Strategies
Solar PV & Energy Storage
EV Charging

Sustainable Sites

Stormwater Management Optimization

Urban Heat Island Reduction

- Light colored roof & paving
- Green vegetated roofs, Trees for shading

Transportation Demand Management

- Bicycle Storage and maintenance
- Green vehicles: EV Charging Stations (10% installed)

Accessible Outdoor Space

- Optimization and access to green recreational areas.
- Outdoor classrooms, garden, etc.

Biodiverse Habitat

Water Efficiency

Outdoor Water Reduction

- Low/No Irrigation
- Native Plants

Indoor Water Reduction

- 20% Min. Reduction [MSBA]
- 30-40% Reduction Goal [LEEDv5 Silver]

Water Sub-Metering

Water Leak Detection

Energy and Atmosphere

40% > ASHRAE 90.1-2019/2022
- MSBA required threshold (# points)
- LEEDv5 credit criteria is Source Energy Based
- Supported through the MA Specialized Stretch Code
- Siting/Orientation and Passive Strategies

Electrification

Decarbonization Planning [pre-requisite]

Advanced Energy Metering

Grid Interactive
- Demand Response Readiness

Enhanced Ozone-Friendly Refrigerants

Enhanced Commissioning (Cx):
- MEP, Bldg. Enclosure Cx and ongoing Cx [MSBA required]

Renewable Energy
- Installed (1-5 pts) or procured (1 pt)

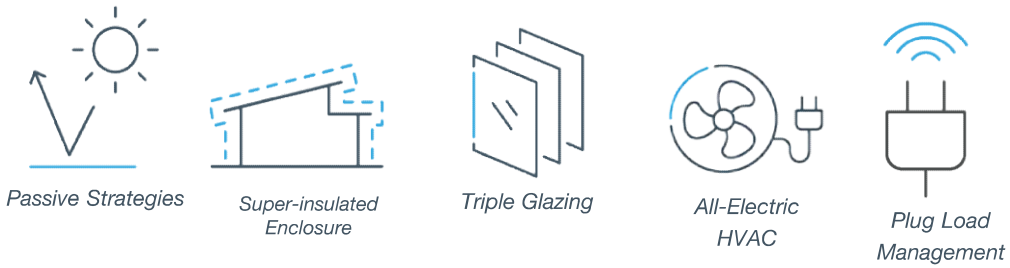
Sustainability and MEP Systems – Climate Resiliency

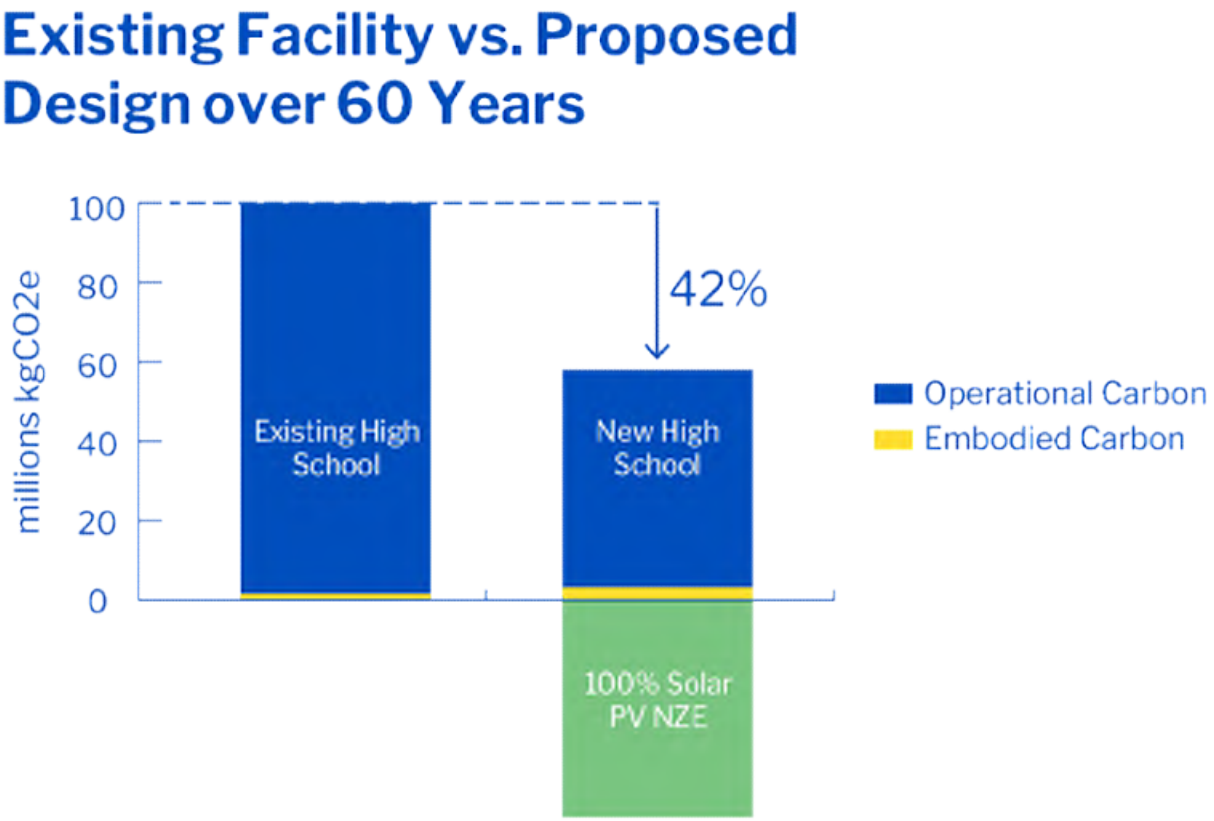
Predicted EUI Goal

25-35

kBtu/SF/Yr. [Goal]

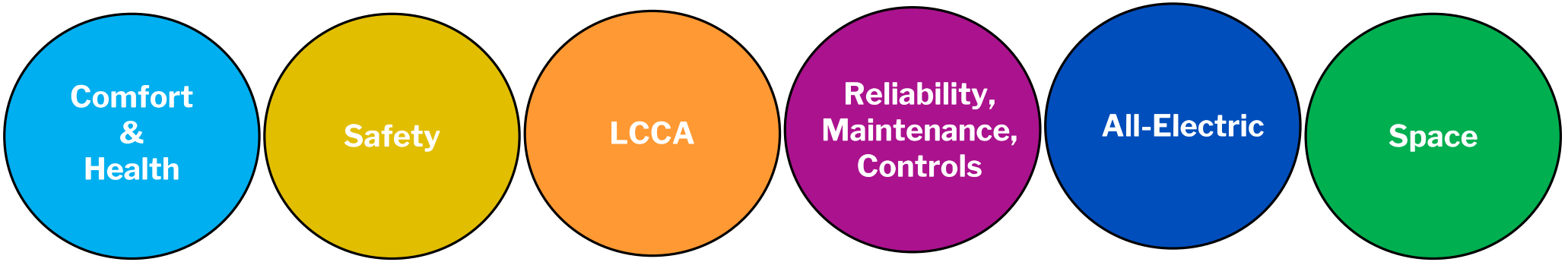
Realistic impact of vocational trade programs consideration





Total Building Carbon

Sustainability and MEP Systems – HVAC Design Considerations



Acoustics

Temperature Control

Occupant Experience

Refrigerants

Indoor Air Quality

Alarms

Incentives

Upfront & Operational Costs

Embodied & Operational Carbon

System Lifespan

All-Weather Operation

Setpoints & Schedules

Centralized BMS

MA Specialized Stretch Code Req.

LEED V5

Site Potential

Roof Space

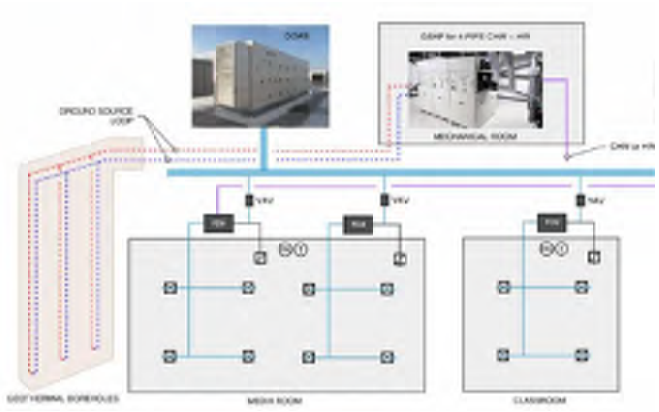
Sustainability and MEP Systems – System Operations

- **Building Operations and System Maintenance**
  - Well-trained Facilities Team
  - Educating the Staff
  - Building systems that operate as designed
  - Commissioning

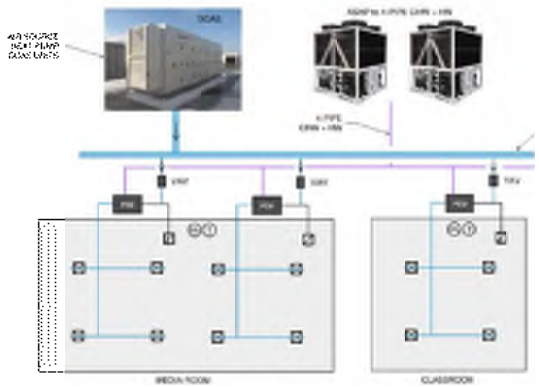


Sustainability and MEP Systems – Potential HVAC System Options

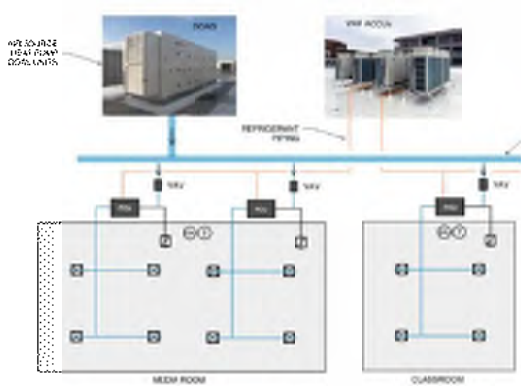
Ground Source Heat Pump



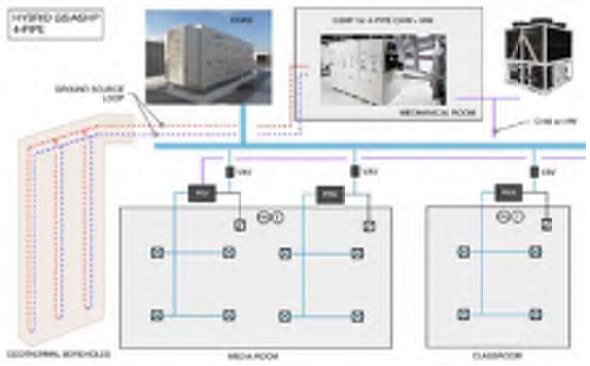
Air Source to Water Heat Pump



Air Source Heat Pump



Hybrid



Sustainability and MEP Systems – Solar PV and Energy Storage

Medford Solar PV Policy: Required for >=10,000 sq-ft

- Sized 50% of the roof area of all buildings
- 90% of Top Level of uncovered parking structures
- Exemptions: Unsuitable space, roof shaded 50% of the year, building conversions with insufficient structural load capacity.

Specialized Stretch Code:

- All Electric Pathway: Standard Stretch Code: 40% of usable roof area
- Fossil Fuel [heating, DHW]: Install Solar PV equivalent to fossil fuel emissions (culinary, pool, labs, other vocational programs)
- Battery Storage Readiness

LEEDv5:

- Contributes to additional points (TBD)

Additional Solar PV Area Opportunities:

- Parking, Walkways, Outdoor Classrooms Arrays
- Roof: High Canopy, Occupied Area (Patio) and Roof Screens
- Building Mounted BIPV: Awnings, Wall (vertical)



Source : SMMA



Source : Solar Design Associates (SDA)

smma

Sustainability and MEP Systems – Electric Vehicle Charging Stations

Level 1 Charging

- Flexible charging options

Level 2 Charging

- LEEDv5 - 5% or 10%
- Infrastructure readiness for future installations
  - Medford req. 20% EV Ready
  - Stretch Code req. 20% EV Ready

Level 3 Charging

- Utility infrastructure required

Charging Stations Power Usage		
Electric Bus (Level 3)	**Electric Vehicle** (Level 2)	**Electric Bicycle** (Level 1)
50 - 150 kWatts DC Current	**3.3 - 8.3 kWatts** AC Current	**1.5 kWatts** AC Current





Embodied Carbon



Sustainability and MEP Systems – Embodied Carbon

Materials and Resources

Reduce Embodied Carbon

- LEEDv5 LCA credit
- ***Medford: TBD % Goal***
- Low Carbon Materials
- Building Re-use
- Environmental Product Declarations (EPDs)

Construction Waste Management

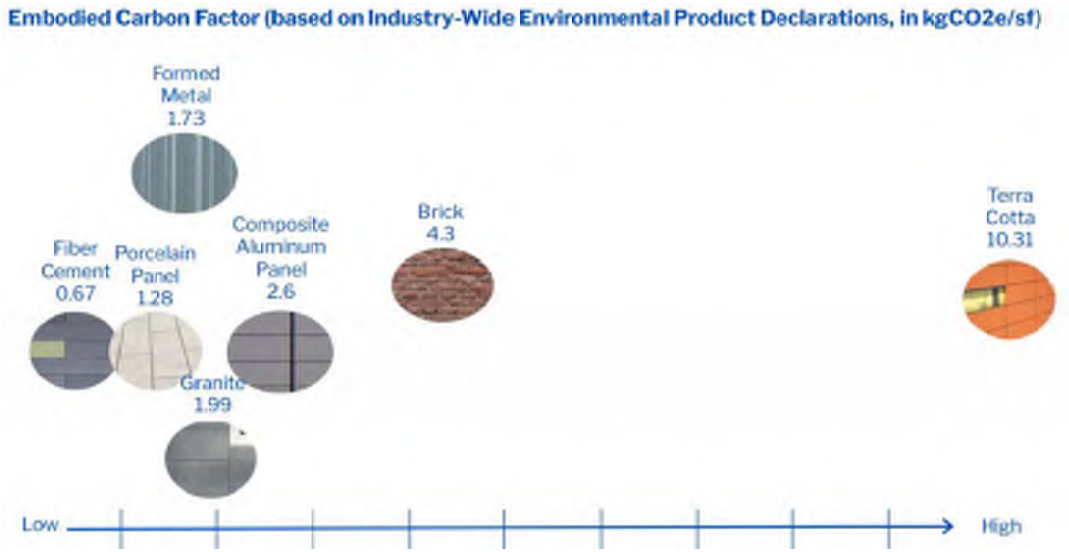
- 95% Goal

Sustainable Building Products Selection

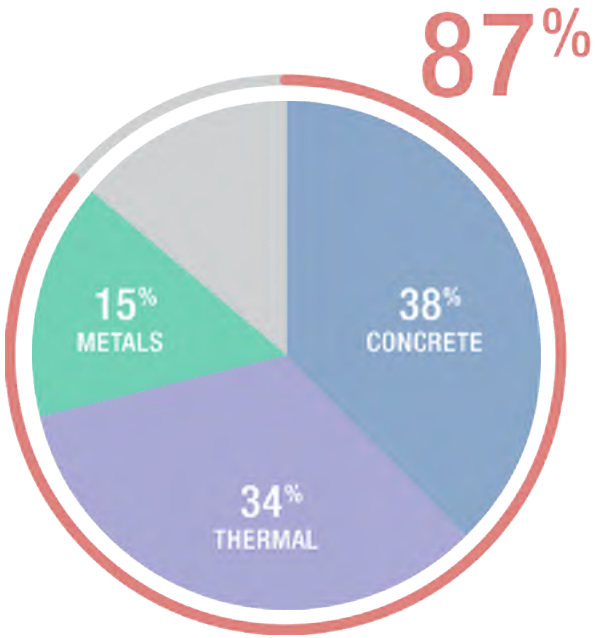
- Recycled Content, FSC Wood, Regional Materials
- Low- emitting, Health Product Declaration (HPDs)
- Declare/ Red List

Zero Waste Operations

- Recycling Planning and Program



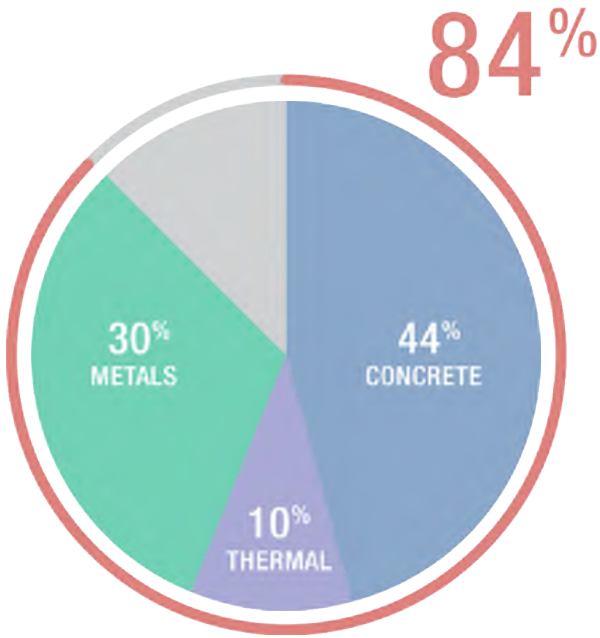
Embodied Carbon



Somerville High School
Embodied Carbon

Building Enclosure & Structure

Building Interior



Waltham High School
Embodied Carbon

Low Carbon Materials

Low Carbon Concrete

Structural Steel

- Optimization of recycled content

Low Carbon Materials

- Insulation
- Low Carbon Gypsum
- Exposed Ceilings, where applicable

Consideration for Mass Timber/Wood Structural Components

- Full Structure Option
- Hybrid Option

Healthfulness, Environmental Quality & Literacy

Indoor Environmental Quality

Daylight Optimization
Enhanced Air Quality Strategies
Occupant Experience
- Interior Lighting Design
- Acoustical Performance
- Thermal Comfort
- Access to Views

Construction IAQ Practices
[Flush Out]



Source : SMMA – Somerville HS

Sustainability and MEP Systems – Healthfulness, Enhanced Indoor Air Quality

Healthfulness

Healthfulness:

- Access and Interaction with Nature
- Red List Materials Screening *[beyond LEED]*
- Biophilia
- Ventilation Flush Out at/prior occupancy

Environmental Literacy

- Outdoor Classrooms
- Educational Program Integration:
  - Signage
  - STEM & Comprehensive Programs



URBAN FOREST
Heat island mitigation
Habitat Connectivity
Air Quality Improvement

URBAN MEADOW
Habitat Connectivity
Pollinator Habitat





EMERGENT WETLAND
Flood Control
Water Quality Improvement
Biodiversity Support

Low Emitting and Red List Materials

- Target Red List materials priority list to be presented to SBC
- Schematic Design: Decision on Red List materials to be included in the specifications

TIER 1: LEED Equivalency	TIER 2: Targeted Categories	TIER 3: Division 9 Focus	TIER 4: Division 9 & Beyond
LEEDv4 or LEED v4.1 equivalency for materials credits (HPDs for all identified product categories)	Identify the **Top 5** product categories to vet using a class-based approach to chemical removal such as The Red List. [LEEDv5]	Vet all finishes in Division 9 using the Red List or a class-based approach	Vet all finishes in Division 9 and include other targeted products that have the largest impact on human and environmental health

