

# Mitchell Elementary School

Bridgewater, Massachusetts



## Raymond Design Associates - Architects

- *Gene Raymond Jr., AIA, LEED AP – Project Lead*
- *John Bartecchi – Constructability and Cost Estimating*
- *Jeff Yost – Project Architect*
- *Steven Lamothe, RA, LEED AP – Project Designer*

## Steere Engineering – Structural Engineers

- *Donald Leffert, PE*

## Vertex – Air Quality Consultants

- *Erik Borgesen*

## Garcia Galuska DeSousa – HVAC Engineers

- *Dominic Puniello PE – Mechanical Engineer*

# Study Team

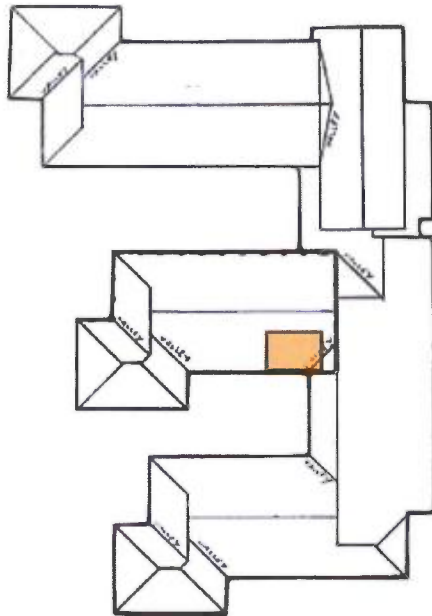




George H Mitchell Elementary School

## Ice Dams and Snow – Winter 2015

RDA



CENTRAL WING- SOUTH OF RIDGE-

- ROOF FAILURE AREA
- TWO DAMAGED TRUSSES IMMEDIATELY WEST OF FAILURE

# Roof Collapse – Winter 2015



## Raymond Design Associates - Architects

- *Introduction*
- *Shuttering Plans*
- *Existing Building Configuration*

## Steere Engineering - Structural Engineers

- *Findings*
- *Recommendations*

## Vertex - Air Quality Consultants

- *Findings*
- *Recommendations*

## Raymond Design Associates - Architects

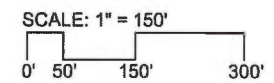
- *Roof Options*
- *Air Quality Recommendations*
- *Program Options*
- *Order of Magnitude Cost Options*

# Study Scope



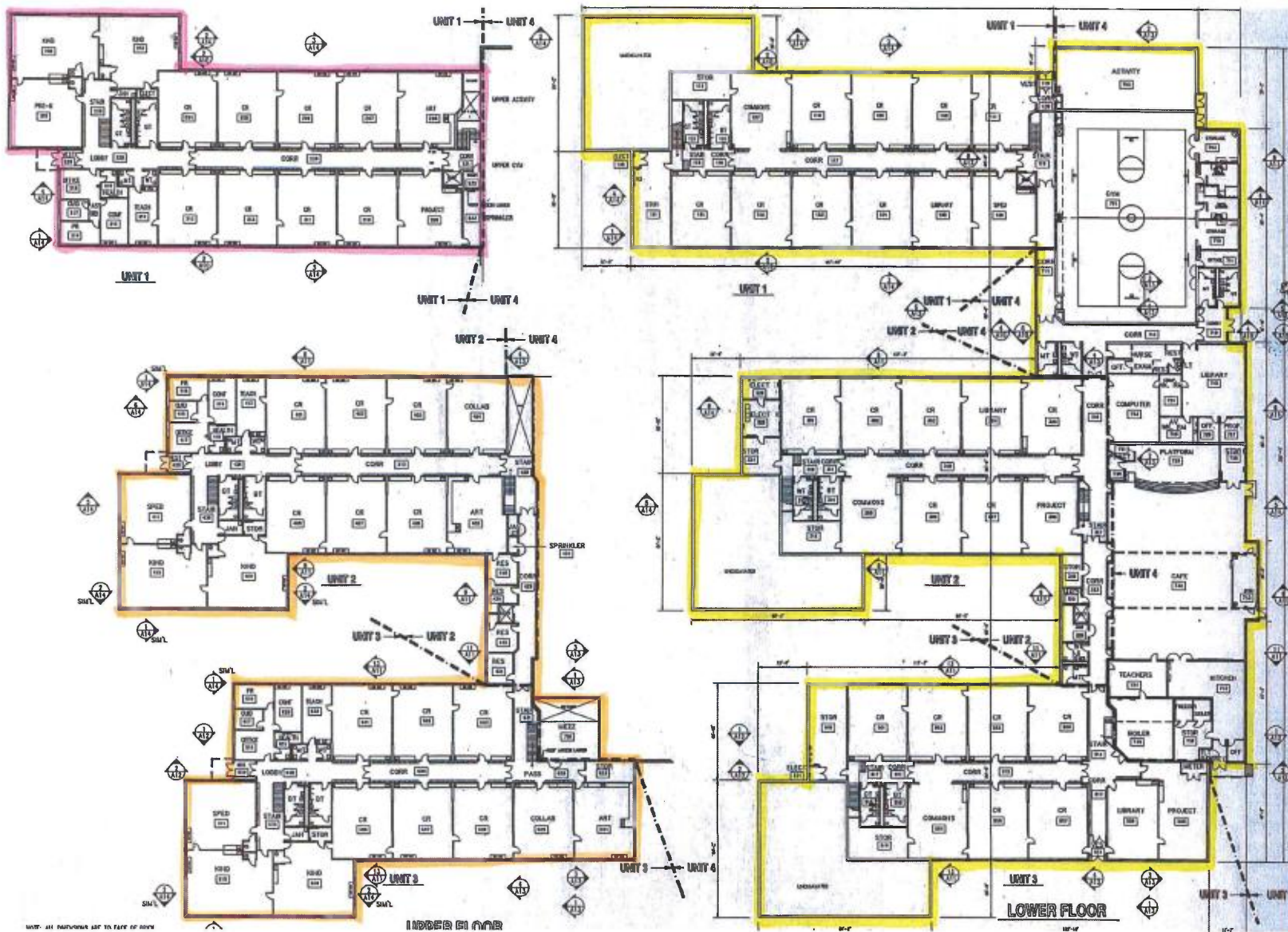
**OPTION #1 - BASE REPAIRS - 134,235SF**

K-3: 940 PUPILS  
PK: 105 PUPILS  
TOTAL: 1,045 PUPILS PK-3



# Existing Site Plan





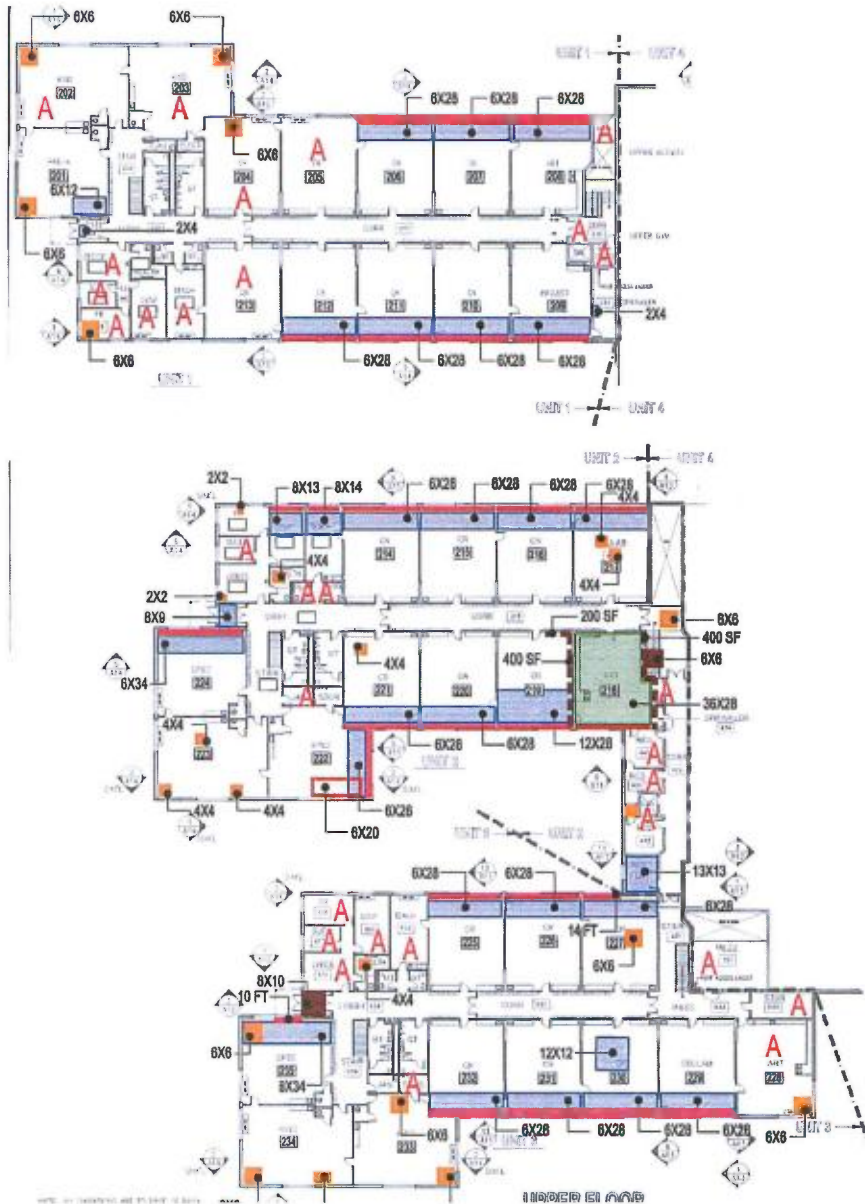
# Existing Floor Plans





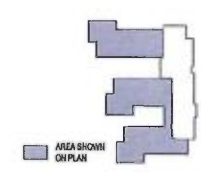
## Shuttering Plan – Fall 2015





**DRAWING KEY:**

<b>A</b>	NO WORK
<b>TYPE 1</b>	INSTALL 6" (R-19) FIBERGLASS BATT INSULATION IN EXISTING STUD BAYS FULL HEIGHT OF WALL. SCREW 3/4" X 2 1/2" WOOD STRAPPING HORIZONTALLY @ 2'-0" O.C. ON METAL STUDS. STAPLE 5 MIL POLY VAPOR BARRIER TO WOOD STRAPPING AND TAPE ALL SEAMS. INSTALL 6" (R-19) FIBERGLASS BATT INSULATION ALONG WEB OF 24 INCH STEEL BEAM. REFER TO SECTION 5A2.0
<b>TYPE 2</b>	INSTALL 6" (R-19) FIBERGLASS BATT INSULATION ALONG WEB OF 24 INCH STEEL BEAM
<b>TYPE 3</b>	INSTALL (R-38) FIBERGLASS BATT INSULATION ON EXISTING CEILING STRAPPING. PROVIDE 3" LONG VENT BAFFLES AT EAVES. PROVIDE CONTINUOUS POLY VAPOR BARRIER FULL HEIGHT AND LENGTH OF AREA DEPICTED. TAPE ALL SEAMS AND PENETRATIONS, TYP.
<b>TYPE 4</b>	INSTALL (R-15) FIBERGLASS BATT INSULATION AND CONTINUOUS POLY VAPOR BARRIER ON EXISTING 3 1/2" STUDS / 4 FT HIGH
<b>TYPE 5</b>	NEW SPRAY FOAM INSULATION ON UNDERSIDE OF ROOF DECK TO MEET R-38 INSULATION VALUE
<b>TYPE 6</b>	INSTALL 1X2 WOOD STRAPPING AND (R-38) FIBERGLASS BATT INSULATION
<b>TYPE 7</b>	INSTALL NEW AC GRID / GWS LAY-IN PANELS AND (R-38) FIBERGLASS BATT INSULATION OVER IT. EXISTING GRID SYSTEM IS 16" X 48"
<b>TYPE 8</b>	INSTALL NEW 1/2" GWS TO EXISTING STRAPPING. INSTALL NEW (R-38) FIBERGLASS BATT INSULATION AND CONTINUOUS POLY VAPOR BARRIER
<b>TYPE 9</b>	FRAME AND INSULATE CHEEK WALLS FROM TOP WALL TO UNDERSIDE OF SLOPED ROOF
6X28	DIMENSIONS GIVEN ARE IN FEET, TYPICAL



# Shuttering Plan – Upper Floor