

# **ROOF ASSESSMENT REPORT**

## **HANSON MIDDLE SCHOOL**

**NOVEMBER 08, 2010**

**PREPARED FOR:**

**FACILITIES DEPARTMENT**

**WHITMAN HANSON REGIONAL SCHOOL DISTRICT**

# 1. Purpose

This Roofing Assessment Report provides a summary of the inspections performed at the Hanson Middle School located in the Town of Hanson, MA.

Roofing inspections were conducted with the intent of assessing general roofing systems, their condition, and identifying any significant related concerns that may warrant immediate corrective action. This report includes a summary of these inspections, including specific concerns, recommendations for repairs or maintenance, and associated budgetary costs. A description of the inspections is given below.

## Roof Inspection

Roof inspections at the Middle School were performed by Evan Warner on October 8<sup>th</sup>, 2010. Inspections involved an assessment of the current roof conditions, specific observations, photographs, short term recommendations, and long term recommendations for the current problematic conditions.

# 2. Description

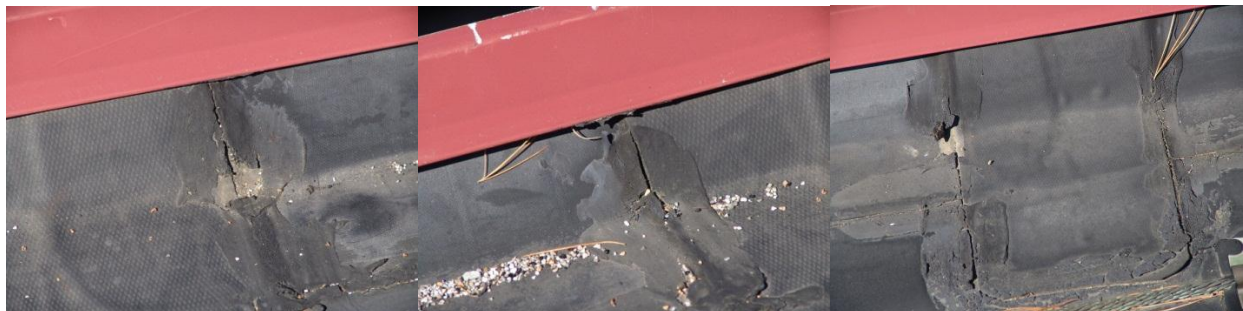
The Middle School Building consists of a combination of sloped and flat roof areas. The surface area is predominantly multi-level, flat 50 mil single ply EPDM membrane, fully adhered and sloped to internal roof drains with minor areas of sloped asphalt shingle roofing to pre-formed metal gutters and down-spouts. Roof hatches, skylights, and mechanical equipment are located throughout the flat roof areas. The roofs are approximately twelve to fifteen years old and mostly in fair condition.

# 3. Observations

The Middle School Building has a number of items that require attention and/or ongoing monitoring. The majority of recommendations in this report involve repairs to improve long term serviceability.

## Observation No. 1

Deteriorated lap sealant, main EPDM flat roof, coordinates D10, D11, C7. Typical condition throughout.



### **Short Term Recommendations**

Remove old sealant, clean, apply compatible roofing cement/sealant.

### **Long Term Recommendations**

Install appropriate EPDM patch.

### **Observation No. 2**

Delaminating seams at lap splices and flashing corners, main EPDM flat roof, coordinates D12, D11, C7.



### **Short Term Recommendations**

Remove old sealant, clean, apply compatible roofing cement/sealant.

### **Long Term Recommendations**

Install appropriate EPDM patch

### **Observation No. 3**

Debris and organic growth at mechanical unit, main EPDM flat roof, coordinate E11. Leaks reported below.



### **Short Term Recommendations**

Clean debris, inspect curb flashings, penetrations, etc. patch and repair.

### **Long Term Recommendations**

Remove and install new curbing/supports and associated at the time of future roof replacement.

**Observation No. 4**

Ponding water, main EPDM flat roof, coordinate G5.



**Short Term Recommendations**

Inspect yearly for evidence of leaks below.

**Long Term Recommendations**

Coordinate modification of tapered insulation/protection board to drain water to external roof scupper at the time of future roof replacement.

**Observation No. 5**

Detached fasteners at lightning prtotection system, main EPDM flat roof, coordinate D6.



**Short Term Recommendations**

Clean and re-fasten with compatible roofing cement/sealant, inspect yearly.

**Long Term Recommendations**

Indicative of aging roofing systems, implement above recommendation.

**Observation No. 6**

Ponding water, main EPDM flat roof, coordinates D5-D6. Leaks reported in adjacent areas below,

recently repaired.



### **Short Term Recommendations**

Inspect yearly for evidence of leaks below. Investigate alternate, adjacent sources- louvers, windows and masonry wall construction.

### **Long Term Recommendations**

Coordinate modification of tapered insulation/protection board to drain water to external roof scupper at the time of future roof replacement.

### **Observation No. 7**

Open seam at lap splice, main EPDM flat roof, coordinates E7, B8.



### **Short Term Recommendations**

Remove old sealant, clean, apply compatible roofing cement/sealant.

### **Long Term Recommendations**

Install appropriate EPDM patch.

### **Observation No. 8**

Missing shingle tabs, upper sloped asphalt shingle roof, coordinate B13. Typical of eight locations,

C13, E13, F14, F15.



**Short Term Recommendations**

Replace damaged shingles.

**Long Term Recommendations-NA**

**Observation No. 9**

Delaminating seams at lap splices, upper EPDM flat roof, coordinate F12.



**Short Term Recommendations**

Remove old sealant, clean, apply compatible roofing cement/sealant.

**Long Term Recommendations**

Install appropriate EPDM patch.

**Observation No. 10**

Ponding water, low flat EPDM roof, coordinate I13.



**Short Term Recommendations**

Inspect yearly for evidence of leaks below.

**Long Term Recommendations**

Coordinate modification of tapered insulation/protection board to drain water to external roof scupper at the time of future roof replacement.

**Observation No. 11**

Loose roof-to-wall LCC counter flashing, coordinates F12-H12.



**Short Term Recommendations**

Inspect yearly for evidence of leaks below.

**Long Term Recommendations**

Coordinate modification fastening/adhering flashing to wall – set in roofing cement/water-cut-off mastic under constant pressure at the time of future roof replacement.

**Observation No. 12**

Missing shingle tabs, lower sloped asphalt shingle roof, coordinate G8.



**Short Term Recommendations**

Replace damaged shingles.

**Long Term Recommendations-NA**

**Observation No. 13**

Leaks at classroom ceiling below expansion joint/roof to wall transition above, under main EPDM roof coordinates D12-E12.



**Short Term Recommendations**

Remove and replace EPDM membrane covering expansion joint and run up adjacent wall.

**Long Term Recommendations-NA**

**Observation No. 14**

Leaks at corridor ceiling below expansion joint/roof to wall transition above, under main EPDM roof coordinates F11-F12.





**Short Term Recommendations**

Refer to Observation #3 for likely source of water and recommendations.

**Long Term Recommendations-NA**

**Observation No. 15**

Failing patches and seam sealant, high EPDM flat roof, coordinate G4, F4.



**Short Term Recommendations**

Clean debris and sealant; install compatible seam sealant.

**Long Term Recommendations**

Repair with EPDM patch. Inspect all sealant, seam and patch conditions as part of ongoing maintenance at regular intervals.

**Observation No. 16**

Detached fasteners at lightning prtotection system, main EPDM flat roof, coordinate D6.



**Short Term Recommendations**

Clean and re-fasten with compatible roofing cement/sealant, inspect yearly.

**Long Term Recommendations**

Indicative of aging roofing systems, implement above recommendation.

**Observation No. 17**

Open seams at roof-to-wall flashing/termination bar, high EPDM flat roof, coordinate A3.



**Short Term Recommendations**

Seal/set in compatible sealant.

**Long Term Recommendations-NA**

**Observation No. 18**

Damaged/missing shingles high asphalt shingle roofs, coordinates A2, J2. No Photo.

**Short Term Recommendations**

Replace damaged shingles.

**Long Term Recommendations-NA**

**Observation No. 19**

Failing patches and seam sealant, high EPDM flat roof, coordinate A2.



**Short Term Recommendations**

Clean debris and sealant; install compatible seam sealant.

**Long Term Recommendations**

Repair with EPDM patch. Inspect all sealant, seam and patch conditions as part of ongoing maintenance at regular intervals.

**Observation No. 20**

Lifted EPDM patch, low EPDM flat roof, coordinate D1.



**Short Term Recommendations**

Clean debris and sealant; set in compatible seam sealant.

**Long Term Recommendations**

Repair with EPDM patch.