

ROOF ASSESSMENT REPORT

CONLEY ELEMENTARY 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 Conley Elementary School located in the Town of Whitman, 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 Conley Elementary School were performed by Evan Warner on October 8th, 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 Elementary School Building consists of a combination of sloped and flat roof areas. The surface area is predominantly multi-level, flat 60 mil single ply PVC membrane, fully adhered and sloped to internal roof drains, scuppers and external gutters and down-spouts with minor areas of sloped asphalt shingle roofing to pre-formed metal gutters and down-spouts. Roof hatches and mechanical equipment are located throughout the flat roof areas. The roofs are approximately ten years old and mostly in good to fair condition.

3. Observations

The Elementary 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. It should be noted that the PVC membrane along the perimeter five feet +/- depth is loose laid with substrate/rigid insulation well below membrane elevation.

Observation No. 1

Minor ponding of water, low points, main PVC flat roof, coordinates M3 and N3.



Short Term Recommendations

A Remove debris and any organic growth, clean impacted roof areas (currently not reported as leaking).

Long Term Recommendations

Inspect problematic areas yearly; implement short term recommendations as necessary. Coordinate installation of crickets/tapered insulation (to drain water to external gutters) at time of future roof replacement.

Observation No. 2

Ponding water, low points, main PVC flat roof, coordinates L5-L7.



Short Term Recommendations

Inspect area yearly; verify no leaks are evident below.

Long Term Recommendations

Inspect problematic areas yearly; implement short term recommendations as necessary. Coordinate

installation of crickets/tapered insulation (to drain water to roof drains) at time of future roof replacement.

Observation No. 3

Ponding water, low points, main PVC flat roof, coordinates G6, G7-K6, K7.



Short Term Recommendations

Watch for future leaks at ceiling below (currently not reported as leaking).

Long Term Recommendations

Inspect problematic areas yearly; implement short term recommendations as necessary. Coordinate installation of crickets/tapered insulation (to drain water to roof drains) at time of future roof replacement.

Observation No. 4

Poor transitions at perimeter corners, edge blocking protruding/stressing PVC membrane, typical at most inside corners, main PVC flat roof, coordinates, K8, K10, L14,K14,H14.



Short Term Recommendations

Inspect problematic areas yearly; watch for future leaks at ceilings below (currently not reported as leaking) limit foot traffic.

Long Term Recommendations

Coordinate installation of crickets/tapered insulation (to provide smooth, solid transitions and eliminate stress/puncture points) at time of future roof replacement.

Observation No. 5

Protruding fastener heads, main PVC flat roof, coordinates L10, K13.



Short Term Recommendations

Inspect problematic areas yearly; watch for future leaks at ceilings below (currently not reported as leaking) limit foot traffic.

Long Term Recommendations

Remove protruding fasteners, replace with new fasteners/washers and assure proper tight/holding into deck/substrate below.

Observation No. 6

Debris and standing water, no roof drain or gutter system, lower PVC flat roof, coordinate G14.



Short Term Recommendations

Remove debris and standing water, clean roof, inspect area periodically; watch for future leaks at ceiling below (currently not reported as leaking).

Long Term Recommendations

Inspect areas yearly; implement short term recommendations as necessary. Install gutter and downspout. Coordinate installation of crickets/tapered insulation to drain water to new gutter at the time of future roof replacement.

Observation No. 7

Crack at PVC corner flashing, main PVC flat roof, coordinate G14.



Short Term Recommendations

Clean and install compatible roofing cement/sealant.

Long Term Recommendations

Inspect area yearly; implement short term recommendations as necessary until roof replacement.

Observation No. 8

Ponding water, low points, main PVC flat roof, coordinates I12-K12.



Short Term Recommendations

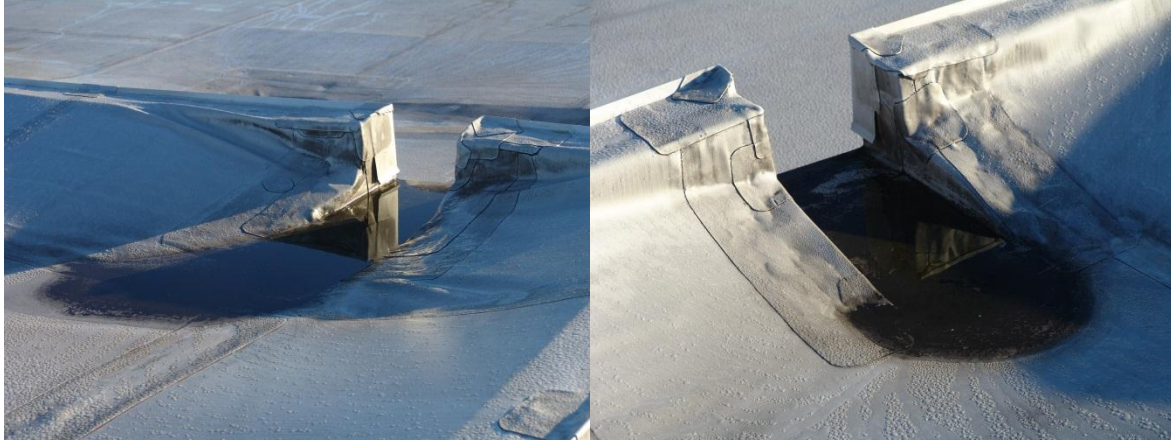
Inspect area yearly; verify no leaks are evident below (currently not reported as leaking).

Long Term Recommendations

Inspect problematic areas yearly; implement short term recommendations as necessary. Coordinate installation/modification of crickets/tapered insulation (to drain water to roof drains) at time of future roof replacement.

Observation No. 9

Water pockets at roof scuppers, upper PVC flat roof, coordinates H12, I12.



Short Term Recommendations

Inspect yearly for evidence of leaks below.

Long Term Recommendations

Coordinate installation of crickets/tapered insulation at roof scuppers to drain water off roof at time of future roof replacement.

Observation No. 10

Ponding water, low point, upper PVC flat roof, coordinate H11.



Short Term Recommendations

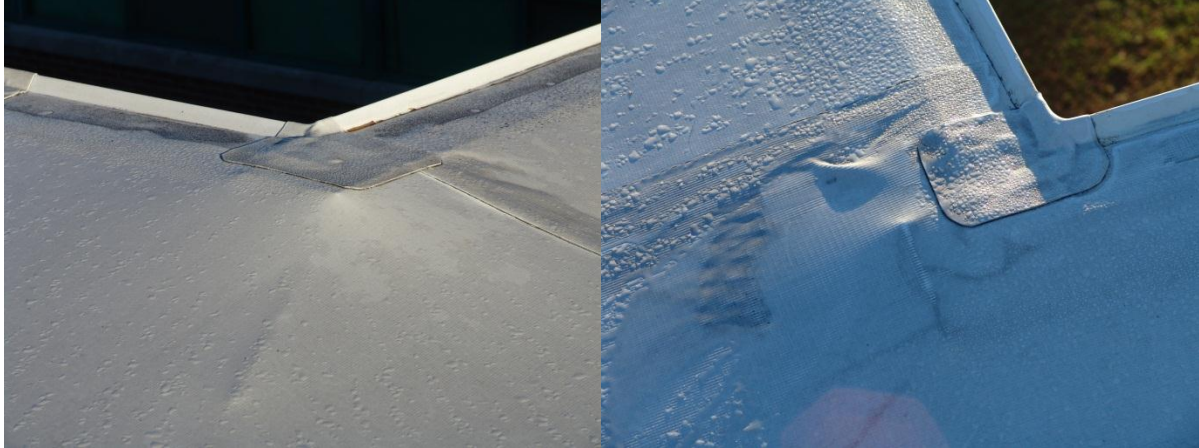
Inspect yearly for evidence of leaks below.

Long Term Recommendations

Coordinate installation of crickets to drain water to scuppers at time of future roof replacement.

Observation No. 11

Poor transitions at perimeter corners, edge blocking protruding/stressing PVC membrane, typical at most inside corners, main PVC flat roof, coordinates, G11, H14.



Short Term Recommendations

Inspect yearly for evidence of leaks below.

Long Term Recommendations

Coordinate installation of crickets/tapered insulation (to provide smooth, solid transitions and eliminate stress/puncture points) at time of future roof replacement.

Observation No. 12

Ponding water, low points main PVC flat roof, coordinates D9, E10.



Short Term Recommendations

Inspect yearly for evidence of leaks below.

Long Term Recommendations

Coordinate installation of crickets/tapered insulation to drain water to roof drains at the time of future roof replacement.

Observation No. 13

Cracks at pitch pocket, main PVC flat, coordinate D8.



Short Term Recommendations

Apply compatible roofing cement/sealant.

Long Term Recommendations

Inspect yearly, implement short term recommendations until roof replacement, replace pitch pocket at that time.

Observation No. 14

Minor ponding water, and protruding fasteners, main PVC flat roof, coordinate D8.



Short Term Recommendations

Inspect yearly for evidence of leaks below and/or material deterioration, limit foot traffic.

Long Term Recommendations

Remove protruding fasteners, replace with new fasteners/washers and assure proper tight/holding into deck/substrate below. Coordinate installation/modification of crickets/tapered insulation (to drain water to roof drains) at time of future roof replacement.

Observation No. 15

Rotting plywood dog house not flashed to roof, main PVC flat roof, coordinate G3.



Short Term Recommendations

Inspect yearly.

Long Term Recommendations

Remove and rebuild/fasten enclosure onto PT curbing, properly flash to main roof membrane at the time of future roof replacement.

Observation No. 16

Protruding fastener head at roof drain, main PVC flat roof, coordinate F6.



Short Term Recommendations

Inspect problematic areas yearly; watch for future leaks at ceilings below (currently not reported as leaking) limit foot traffic.

Long Term Recommendations

Remove protruding fasteners, replace with new fasteners/washers and assure proper tight/holding into deck/substrate below.

Observation No. 17

Crushed roof vents (3), sloped asphalt shingle roof, D6-D7.



Short Term Recommendations-NA

Long Term Recommendations

Replace crushed vents.

Observation No. 18

Protruding fastener heads, upper PVC flat roof, coordinates H2, I2.



Short Term Recommendations

Inspect problematic areas yearly; watch for future leaks at ceilings below (currently not reported as leaking) limit foot traffic.

Long Term Recommendations

Remove protruding fasteners, replace with new fasteners/washers and assure proper tight/holding into deck/substrate below.

Observation No. 19

Ponding water, high PVC flat roof, coordinate G2. Leaks in adjacent Art Room below have been reported. Transition of flat to sloped roof with integral vent is likely to allow wind driven water in through vent. Similar ponding water condition occurs at coordinates J2 and N2, G1, I1, J1 and L1 (no leaks reported).



Short Term Recommendations

Install backer-rod and sealant to block transition vent extend ten feet beyond area of ponding water.

Long Term Recommendations

Remove/modify alum.as required to provide scupper relief system at the center of each ponding area. Alternately, remove alum. Transition vent, install new, lower transition to sloped roof area and install box/roof vents (to vent top area of shingled roof).

Observation No. 20

Lifted gravel stop spring clip, high PVC flat roof, coordinate G12.



Short Term Recommendations

Inspect yearly for evidence of leaks below.

Long Term Recommendations

Coordinate proper installation of gravel stop, spring clip and PVC roof edge termination at the time of future roof replacement. Refer to manufacturer's standard/recommended installation details.

Observation No. 21

Protruding fasteners at sloped asphalt shingle roof area, coordinate O4.



Short Term Recommendations

Remove protruding fasteners, apply compatible roofing cement.

Long Term Recommendations-NA

Observation No. 22

Torn/missing roof shingles (six feet), at sloped asphalt shingle roof area, coordinate O4.



Short Term Recommendations

Remove protruding fasteners, install new shingles to match existing.

Long Term Recommendations -NA

Observation No. 23

Debris and organic matter in gutter at lower sloped asphalt shingle roof, coordinates N6-O6.



Short Term Recommendations

Remove debris and clean gutter.

Long Term Recommendations

Inspect yearly; implement short term recommendations as needed.

Observation No. 24

Detached gutter bracket at lower sloped asphalt shingle roof, coordinate N6.



Short Term Recommendations

Remove debris, and fasten bracket.

Long Term Recommendations-NA

Observation No. 25

Poor roof-to-wall transition, EIFS too close to shingle roof. Organic matter build-up, deteriorating EIFS siding at lower sloped asphalt shingle roof, coordinate N6.





Short Term Recommendations

Remove debris and clean shingles/siding; install backer-rod and compatible sealant.

Long Term Recommendations

Cut back EIFS a minimum of 8" above roof surface, patch EIFS, install metal roof-to-wall flashing with reglet or termination bar set in water-cut-off-mastic.

Observation No. 26

Poor roof-to-wall transition, EIFS too close to shingle roof. Organic matter build-up, deteriorating EIFS siding at lower sloped asphalt shingle roof, coordinate P6.





Short Term Recommendations

Remove debris and clean shingles and siding. Cut back EIFS a minimum of 8" above roof surface, patch EIFS, install metal roof-to-wall flashing with reglet or termination bar set in water-cut-off-mastic. Install backer-rod and compatible sealant.

Long Term Recommendations-NA