

PON&ASSOCIATES

27 June 2018
File No. 16081-001

Academy of Hope Adult Public Charter School
2315 18th Place NE
Washington, DC 20017

Attention: Ms. Krystal Ramseur, MPA
Senior Manager of Operations

Subject: Quarterly Instrumentation Report No. 8
Academy of Hope
2315 18th Place NE
Washington, DC 20018

Ladies and Gentlemen:

This report provides a summary of readings to date of the crack gauges installed both inside and outside of the building at 2315 18th Place NE, Washington, DC. This work is being performed by Pons & Associates, LLC (Pons & Associates) in accordance with our agreement dated 9 June 2016, authorized by Brian McNamee on 13 June 2016. The most recent photographs of the crack gauges are shown on the attached Photo Log.

Twelve crack gauges were installed on 29 June 2016 on significant cracks identified in previous investigative work completed by others. Crack gauge #7, installed on a wall in an interior downstairs storage room, was re-installed on 29 September 2016 when it was found to be disengaged from the wall. Table I attached to this report provides a summary of crack gauge readings, including initial readings and quarterly readings, with the most recent readings taken on 11 June 2018 for the eighth quarter. Analysis of the crack gauge readings to date indicate that little or no movement of the cracks has occurred since the gauges were installed.

In examining all of the readings to date, crack gauges #'s 1, 2, 3, 4, 5, 9, and 12 have all showed patterns of movement and reversion of movement with overall range of motion of less than approximately 1.0 mm, except for gauge #12 which is discussed below. Crack gauges #6, #7, and #8 have shown very slight movements of 0.3 mm or less for the last seven quarters, and gauges #10 and #11 experienced movement of 1.0 mm along the vertical axis during the first quarter of monitoring, but these readings have changed very little over time. The small magnitudes of movement can likely be attributed to environmental factors such as moisture or temperature changes, or could be related to seasonal changes in the moisture content of underlying plastic soils resulting in some shrink-swell action. The trends in the readings over time support this conclusion.

Crack gauge #12 installed on the western exterior stairwell showed lateral movement to the west (away from the building) of over 2.0 mm and a movement to the north of 1.9 mm over the first two quarters of monitoring. The third quarterly reading (15 March 2017) showed the stairs moved back east towards the wall slightly, narrowing the crack to 1.5 mm, and the northward reading increased slightly to 2.0 mm. The fourth quarterly reading (2 June 2017) showed a continued closure of the crack to only 0.75 mm (west movement) and 0.8 mm (north movement), and the fifth quarterly reading (27 September 2017) showed the horizontal movement reduced to 0.1 mm and the northerly movement the same at 0.8 mm. The sixth quarterly reading (18 December 2017) showed the horizontal movement increased again to 0.2 mm and the northerly movement increased to 1.1 mm. The seventh reading (28 March 2018) showed the horizontal reading to be zero and the northerly movement to be 1.0 mm. The most recent reading showed

the horizontal reading to be 0.2 mm and the northerly movement at 0.4 mm. This pattern of movement is likely related to seasonal changes in the moisture content of underlying plastic soils resulting in some shrink-swell action, or to other environmental factors as noted above, rather than reflective of progressive movement of the stairs relative to the wall.

Based on our analysis of trends in crack gauge readings observed over the last two years, we believe that that changes in the crack gauge readings over time are due to environmental factors such as moisture or temperature changes, or could be related to seasonal changes in the moisture content of underlying plastic soils resulting in some shrink-swell action. In our opinion, continued monitoring of the crack gauges by Pons & Associates is not necessary, but we would encourage Academy of Hope to monitor the cracks periodically. If any changes in the cracks or in the condition of the walls is observed, we recommend that Pons & Associates be contacted to evaluate the cracks and compare them to the conditions we have observed during our monitoring period.

If you have any questions about the information presented in this report, please do not hesitate to contact us.

Sincerely yours,
PONS & ASSOCIATES, LLC



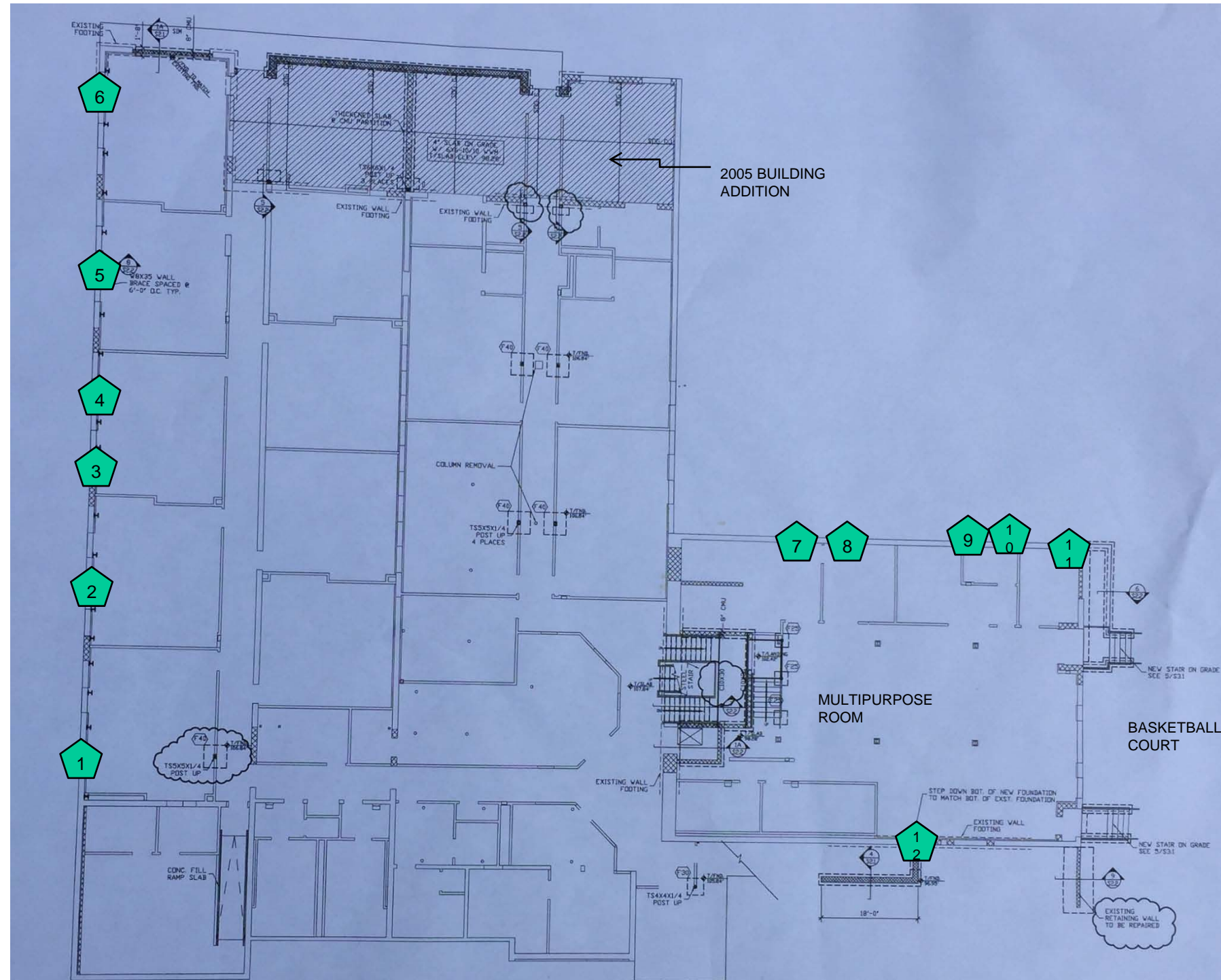
Elizabeth Austin, P.E. (VA)
Associate



Fernando Pons, P.E.
Principal

Attachments

- Figure 1 - Crack Gage Location Plan
- Table I Summary of Crack Gauge Readings
- Photo Log (1 page)



← 18TH PLACE NE →

NOT TO SCALE

LEGEND:



DESIGNATION AND APPROXIMATE LOCATION OF CRACK GAGES

NOTES:

1. MAP IS IMAGE OF SHEET S1.1 FOR TREE OF LIFE PUBLIC CHARTER SCHOOL BUILDING ADDITION/RENOVATION STRUCTURAL PLAN, SHEET S1.1, PREPARED BY STRUCTURAL DESIGN GROUP, DATED 18 APRIL 2005

PONS&ASSOCIATES

*Environmental, Geotechnical
Engineering and Facilities Consulting*

ACADEMY OF HOPE
2315 18TH PLACE NE
WASHINGTON, DC 20018

CRACK GAGE LOCATION PLAN

JULY 2016

FILE NO. 16081-001

FIGURE 1

TABLE I

SUMMARY OF CRACK GAUGE READINGS

2315 18TH PLACE, NE, WASHINGTON DC
ACADEMY OF HOPE CHARTER SCHOOL

Crack Gauge	Date: 29 June 2016		Date: 29 Sept. 2016		Date: 20 Dec. 2016		Date: 15 March 2017		Date: 2 June 2017		Date: 27 Sept. 2017	
	Horiz. Axis	Vert. Axis	Horiz. Axis	Vert. Axis	Horiz. Axis	Vert. Axis	Horiz. Axis	Vert. Axis	Horiz. Axis	Vert. Axis	Horiz. Axis	Vert. Axis
1	0 mm	0 mm	0 mm	0 mm	0 mm	0 mm	1 mm	0 mm	0 mm	0 mm	0 mm	(-) 0.3 mm
2	0 mm	0 mm	0 mm	0 mm	0.1 mm	0.3 mm	0.5 mm	0.3 mm	0 mm	0.2	0 mm	0.1 mm
3	0 mm	0 mm	0.5 mm	0 mm	1 mm	0 mm	1 mm	0 mm	0.1 mm	0 mm	0 mm	0 mm
4	0 mm	0 mm	0 mm	0 mm	0.3 mm	0 mm	0.3 mm	0 mm	0 mm	0 mm	0 mm	0 mm
5	0 mm	0 mm	0 mm	0 mm	0 mm	0 mm	0.2 mm	(-) 0.3 mm	0 mm	(-) 0.3 mm	0 mm	(-) 0.2 mm
6	0 mm	0 mm	0 mm	0 mm	0 mm	0 mm	0 mm	0 mm	0 mm	(-) 0.2 mm	0 mm	(-) 0.2 mm
7	0 mm	0 mm	0 mm	0 mm	0 mm	(-) 0.2 mm	0 mm	(-) 0.2 mm	0 mm	(-) 0.2 mm	0 mm	(-) 0.2 mm
8	0 mm	0 mm	0 mm	0 mm	0 mm	0 mm	0 mm	0 mm	0 mm	0 mm	0 mm	(-)0.05 mm
9	0 mm	0 mm	0 mm	0 mm	0.9 mm	0.3 mm	0.9 mm	0.3 mm	0.3 mm	0 mm	0.1 mm	(-) 0.3 mm
10	0 mm	0 mm	0 mm	(-) 1.0 mm	0.1 mm	(-)1.0 mm	0.1 mm	(-) 0.75 mm	0.1 mm	(-) 0.75 mm	0 mm	(-) 1.0 mm
11	0 mm	1.0 mm	0 mm	1.0 mm	0 mm	1.0 mm	0.3 mm	1.0 mm	0.5 mm	1.0 mm	0.2 mm	1.0 mm
12	0 mm	(-) 1.0 mm	2.0 mm	(-) 1.0 mm	2.1 mm	(-) 1.9 mm	1.5 mm	(-) 2.0 mm	0.75 mm	(-) 0.8 mm	0.1 mm	(-) 0.8 mm

Crack Gauge	Date: 18 Dec. 2017		Date: 28 Mar. 2018		Date: 11 June 2018							
	Horiz. Axis	Vert. Axis	Horiz. Axis	Vert. Axis	Horiz. Axis	Vert. Axis	Horiz. Axis	Vert. Axis	Horiz. Axis	Vert. Axis	Horiz. Axis	Vert. Axis
1	0 mm	(-) 0.3 mm	0.3 mm	(-) 0.1 mm	0 mm	-0.2 mm						
2	0 mm	0.1 mm	0.5 mm	0.2 mm	0 mm	0.4 mm						
3	0 mm	0 mm	0.8 mm	0 mm	0 mm	0 mm						
4	0 mm	0 mm	0 mm	0 mm	0 mm	0 mm						
5	0 mm	(-) 0.2 mm	0 mm	(-) 0.3 mm	0 mm	(-) 0.8 mm						
6	0 mm	(-) 0.3 mm	0 mm	(-) 0.3 mm	0 mm	(-) 0.8 mm						
7	0 mm	(-) 0.2 mm	0 mm	(-) 0.2 mm	0 mm	(-) 0.2 mm						
8	0 mm	0 mm	0 mm	0 mm	0 mm	0 mm						
9	0.3 mm	0 mm	0.8 mm	(-) 0.2 mm	0.3 mm	(-)0.1 mm						
10	0 mm	(-) 1.0 mm	0.1 mm	(-) 1.0 mm	0.2 mm	(-) 1.0 mm						
11	0.2 mm	1.1 mm	0.2 mm	1.1 mm	0.3 mm	1.1 mm						
12	0.2 mm	(-) 1.1 mm	0 mm	(-) 1.0 mm	(-) 0.2 mm	(-) 0.4 mm						



Photo 1: Crack gauge 1 position on a vertical crack on the north exterior wall.



Photo 2: Close up view of crack gauge 1.



Photo 3: Crack gauge 2 position on a vertical crack on the north exterior wall.

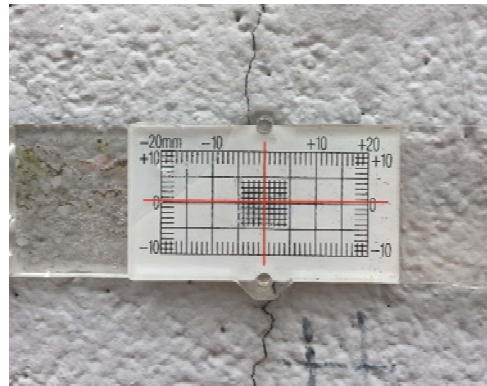


Photo 4: Close up view of crack gauge 2.



Photo 5: Crack gauge 3 position on a vertical crack on the north exterior wall.

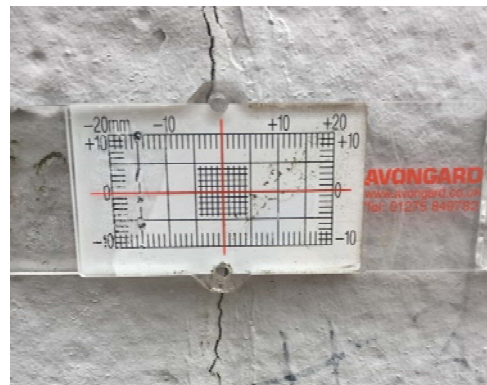


Photo 6: Close up view of crack gauge 3.



Photo 7: Crack gauge 4 position on a vertical crack on the north exterior wall.



Photo 8: Close up view of crack gauge 4.



Photo 9: Crack gauge 5 position on a vertical crack on the north exterior wall.

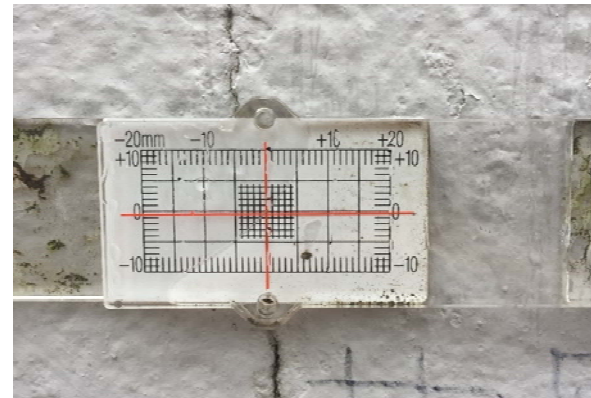


Photo 10: Close up view of crack gauge 5.



Photo 11: Crack gauge 6 position on a diagonal crack on the north exterior wall.

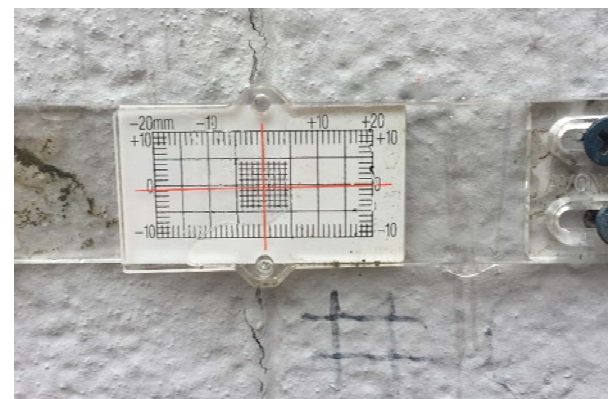


Photo 12: Close up view of crack gauge 6.



Photo 13: Crack gauge 7 position in an interior storage room.

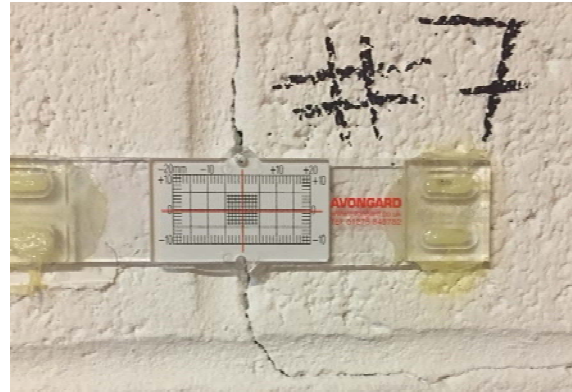


Photo 14: Close up view of crack gauge 7.



Photo 15: Crack gauge 8 position on a diagonal crack in an interior storage room.

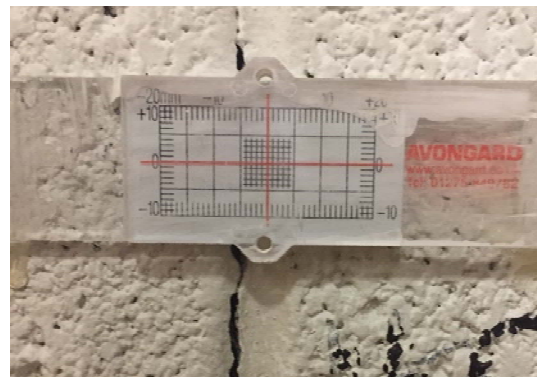


Photo 16: Close up view of crack gauge 8.



Photo 17: Crack gauge 9 position on a vertical crack in an interior storage room.



Photo 18: Close up view of crack gauge 9.



Photo 19: Crack gauge 10 position on a diagonal crack in an interior storage room.

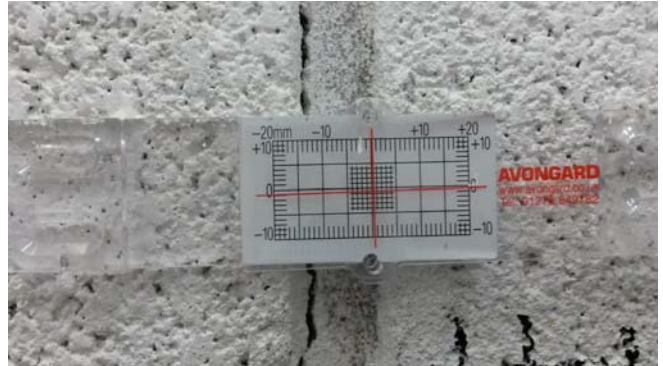


Photo 20: Close up view of crack gauge 10.



Photo 21: Crack gauge 11 position on a low diagonal crack inside the electrical room.



Photo 22: Close up view of crack gauge 11.



Photo 23: Crack gauge 12 positioned between the wall and the exterior west staircase.

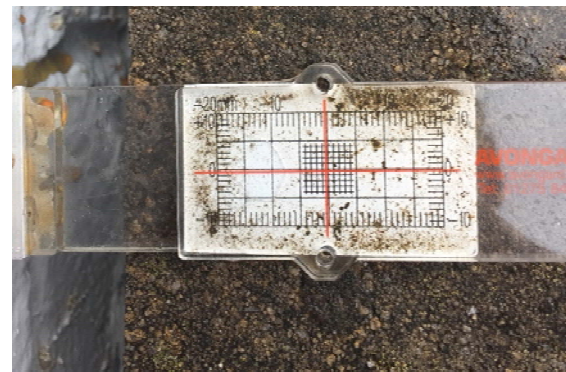


Photo 24: Close up view of crack gauge 12.