SUPPLEMENTARY MATERIALS
Facility maintenance and management: a health care case study
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APPENDIX 1. Data gathering: sheet and grading criteria for exterior envelope components

The exterior envelope (roof, exterior walls, windows)

Subject	Details	
Structure	Roof	Flat Slanting
	Sealing (Waterproofing)	Single layer Bituminous sheets Double layer bituminous sheets P.V.C E.P.D.M sheets Tar coating Other: _____
	Exterior Walls	Blocks Concrete Curtain walls
	Windows	Aluminum Wooden
Failures	Roof – Dampness or Leaks	12 times a year, or more 6–11 times a year 2–5 times a year Annually Less than annually
	Exterior Walls – Leaks	12 times a year, or more 6–11 times a year 2–5 times a year Annually Less than annually
	Windows	Grading as per Appendix II: 20 40 60 80 100
Maintenance Policy	Breakdown Preventive Combined Remarks: _____	
Visual inspections	Frequency: Never Every two years, or less frequently Annually Half-yearly Quarterly (Once every three months)	
Type of action: Waterproofing	Every two years, or less frequently Annually Half-yearly (seasonally)	
Further Treatments	_____ _____ _____	

APPENDIX 2. Exterior envelope grading criteria

Windows

100 Very good	80 Good	60 Satisfactory	40 Run-down	20 Dangerous
Window frames are intact, almost no defects, no penetration of moisture through openings.	Initial wear in a few openings or frames, such as cracked paint, broken or missing metal fittings, etc.	Initial general wear, such as peeling paint, or instances of mechanical damage that can be repaired in the course of a general overhaul.	Considerable wear of wooden parts (cracks, rot). Penetration of moisture through openings. Physical damage. Many parts require replacement.	Most of the openings cannot be repaired. Penetration of moisture into the interior of the building. Mechanical damage to frames and openings. Cracks in the contact area between frame and wall.

Exterior walls

100 Very good	80 Good	60 Satisfactory	40 Run-down	20 Dangerous
No cracks or other damage to the walls.	Local, non- systematic cracks, up to 0.1 mm wide.	A few scattered cracks, up to 0.5 mm wide, mainly at joints with concrete elements.	Diagonal cracks, up to 1.5 mm wide, between openings or near columns.	Disassociation between wall and skeleton, or diagonal cracks over 1.5 mm wide.

Roofing

100 Very good	80 Good	60 Satisfactory	40 Run-down	20 Dangerous
No cracks or visible damage to the roofing. No leaks through the roof. Drainage system intact and in good condition (no signs of puddles or accumulation of water on roof).	No cracks on the roof and no signs of accumulated moisture. Drainage system in satisfactory condition. Insulation appears to be slightly worn.	Cracks in the insulation layer, but still no penetration of moisture into the interior of the building, and/or drainage system does not meet the requirements.	Cracks on roofing and penetration of moisture into the interior of the building, and/ or drainage system in non-satisfactory condition.	Cracks discernible on roof, signs of accumulation of water on the roof, insulation in non-satisfactory condition, and/ or insufficient drainage piping, roof slopes not appropriate.

Exterior wall finishes

100 Very good	80 Good	60 Satisfactory	40 Run-down	20 Dangerous
Covering is completely intact, no cracking, no shedding and no peeling of the covering is discernible.	Local hair-cracks or local development of fungi discernible along horizontal edges of covering.	Visible cracking over less than 5% of the covering surface, or isolated instances of shedding of cover material.	Visible cracking over more than 5% of the covering surface area, or peeling or substantial shedding of the cover material.	A substantial part of the cover material has peeled off or has been shed, fungi has grown over a substantial part of the remaining covering.