

MATRIX OF CONTRACTOR'S SCOPE ON RECTIFICATION AND FAÇADE WORKS_01

Location	Defects and works under contractor's scope	method statement of Checking Before Works	Rectification to Defect Works	Method Statement of Inspection of Completion of works	State of Acceptability by Contractor
	the scope shall derive from pre-construction survey report indicating the defect found at the existing building, the defects indicated are non-exhaustive i.e the same defect that recurring over the same building albeit not within the report shall be under contractor's scope to rectified, executed and complete as part of the scope	the contractor shall carry out it's own preconstruction survey. The survey shall take reference on the requirements below as part of the area to assess the condition/ defects for subsequent rectification works.	Contractor shall adhere to the compliance of the requirements below , prepare method statement of rectification for approval prior to executing the rectification works to the existing defect.	Contractor shall carry out post rectification/works in accordance to the method statement below and shall submit the post construction report in comparison to the pre-construction survey report.	The condition below shall form the basis on which the contractor's rectification works is deems compliance to the contract specification.
	Water treatment and/or waterproofing to leaking spot on Masonry wall and RC roof Water seepage, efflorescence, crack lines, spalling concrete, Flaking, peeling, blistering paint, Discoloration, staining etc	1. Visually assess the external facade and common areas for signs of deterioration, damage, or defects. 2. Photograph existing conditions and when required Infra-red Thermal scanner on areas with suspected water seepage. 3. Document observations with photographs and descriptions and location.	•Cracks < 2mm width, shall be patch with cement-based water-resistant non-shrink polymer modified repair mortar. •Cracks > 2mm width, chisel 'V' groove for plaster cracks of more than 2mm width, clean and inject epoxy repair mortar. •Apply two coats of flexible cementitious waterproofing membrane over the repaired cracks. •Remove the defective concrete and patch with cement-based water-resistant non- shrink polymer modified mortar Mapei Planitop G40SP or equivalent with bonding agent in accordance to the manufacturer's recommendations. •Remove or treat all corroded reinforcement with rust inhibitor primer. If necessary, replace/add new reinforcing bars as directed by the SO. •Remove all flaking, peeling and blistering paint •Repair water seepage, efflorescence, crack lines, spalling concrete to specification •Repaint to specification	The locations shall be inspected upon removal of the existing paint layer, including spalling and cracks on columns/beams/slabs. 1. Visual Inspection: verify that cracks, bubbles, or seams properly sealed, surface is clean and free of water mark 2. Use of Moisture Meters: in situation of uncertainty, contractor to submit a report of thermal scanner of the rectified spot.	1. No situation of water seepage, bubble forming, effrescent effect during the DLP period
	Clearing & repair & replacement of fittings related to rainwater downpipes	1. Picture of the pre-works of conditions of the RWDP	1. To apply water proofing at all penetration, joint. 2. to replace bristle pipe, broken and opened hole 3. to replace rusted screws and strap 4. to Clear out blockage at base of RWDP 5. perform chemical cleaning of the Pipe	1. to carry out the visual inspection and pictorial records of the completed works. 2. identify that the interfacing part is completed with water proofing 3. identify that the stap and screw are in workign conditions	1. water proofing completed at interfacing. 2. all pipe is proper working conditions 3. no debris clocking at bottom of RWDP 4. supporting strap and fixing in working conditions
	(alum cladding) Water treatment and/or waterproofing to leaking spot on metal cladded wall, metal roof metal cladding on feature wall/column and roof panels and wall panels towards lift and painting. Cable trays, pipes, conduits, Ceiling support frames Awning & supporting frames etc	1. to Check on Roof flashing, Copping and Top Cladding to identidy the Leakage of Water 2. to open up the alum cladding (5% of each cladding wall, by area, to structural Engineer selection of panel to be opened up) 3. to records existing condition in pictorial records	1. Construct new Flashing over the interface of elements at area of leak. 2. to apply new sealant over the flashing, upturn (all OR spot area only). 3. to construct new capping with sealant over the glass roof (if any) 4. If fixing details appear to be rusted, to replace the screw and fixture based on S.O instruction. (under VO)	1. to carry out the visual inspection of the completed flashing and to identify no more ponding of water above the flat area. 2. to carry out period-base visual observation to ensure no water mark, eforescent at the metal cladding wall.	1. No situation of water seepage, bubble forming, effrescent effect during the DLP period
	(G.Steel) Repair (including painting) & replacement of metal G.S component at railing, parapet, screen Aircon brackets, lighting brackets, lamp post, CCTV poles, AC ledge railings, grilles, balustrades, frames, columns,	1. to Check on Roof flashing, Copping and Top Cladding to identidy the Leakage of Water 2. if it's a cladding system, to open up the alum cladding (5% of each cladding wall) 3. to verify the severity of the rusting condition, if'ts surface rust, to take records of rust to be sand down and patch; it's is at bolt and nut securing to RC beam/column/slab location, extending to Struc Eng for further direction for rectification. 3. to records existing condition in pictorial records	1.Remove loose paint and rust on metal surface by sanding/ screeeping off the rust surface 2.Repair rust to specification - If portion of rust is bigger than 50mm dia in size and with visible hole, to weild new G.S plate panel to cover over the existing opening, sand down, make even and re-paint. 3.If G.S is at existing interfacing location connecting to existing RC/ baseplate and have lost it's firmness to bolt, screw and connection, to replace the bolt with new fixture	1. to records the pictorial condition of the newly painted G.S surface	1. No new forming of rusting of the newly painted surface
	Tighten of sunshade and painting of sunshade and painting. Replace Existing sealant of window frames (masonry surface) Replace Rubber gasket of curtain glass wall replace rubber gasket of façade alum cladding	to check on the self-tapping screw to identify the conditions of the screw. If the screw is rusted, to replace the screw with new S.S 316 self-tapping screw.	1.Replace loose screw, bolt, nut with new S.S 316 of the same size. If existing screw opening is no long able to hold the screw, to open a new opening. 2.To tighten the existing S.S cable fixture and to tighten the existing S.S screw/bolt/fixture 4.Remove existing and recaulk with approved sealant or damaged rubber gasket of fixed windows, to remove existing & replace with new one to match existing ones.	1. To carry out random check of compelted works of 5% on Sealant on interface. 2. To see the self-tapping screw replaced 3. To carry out the water spray test of min 20mins 4. to records post rectified condition	1. Verified New Sealant to interfacing verified all screed not rusted old and new verified sun-shade is painted in new P.U paint 2. verified no water leakage from water spray test
Auditorium & link bridge towards School Bldg, Boundary / Perimeter Walls & Fencing; ; All RC Flat Roof :	Repair to cracks on walls and cracked floor screeds.	•Concrete: Look for cracks (hairline, structural), spalling, delamination, efflorescence, staining, water seepage and reinforcement corrosion indicators (rust stains).	1. Cracks < 2mm width, shall be patch with cement-based water-resistant non-shrink polymer modified repair mortar. 2. Cracks > 2mm width, chisel 'V' groove for plaster cracks of more than 2mm width, clean and inject epoxy repair mortar. 3. Remove defective plaster and skim coat 4. Patched with cement-based water-resistant non-shrink polymer modified repair mortar with bonding agent. 5. Patched with cement-based water-resistant non-shrink polymer modified repair mortar with bonding agent. 6. for tile crack surface, to replace the broken tile and re-acid wash the tile floor. Reapply the grouting to tile	1. visual inspection of paint, replacement of screw and fixture, 2. interfacing sealed with sealant joint recorded with pictorial report	1. No situation of water seepage, bubble forming, effrescent effect during the DLP period 2. pictorial report of fixing parts (screw, joint in working conditions)
	repair to common area floor tile (crack, pop out, fracture)	•Concrete: Look for cracks (hairline, structural), spalling, delamination, efflorescence, staining, water seepage and reinforcement corrosion indicators (rust stains).	1. Cracks < 2mm width, shall be patch with cement-based water-resistant non-shrink polymer modified repair mortar. 2. Cracks > 2mm width, chisel 'V' groove for plaster cracks of more than 2mm width, clean and inject epoxy repair mortar. 3. Remove defective plaster and skim coat 4. Patched with cement-based water-resistant non-shrink polymer modified repair mortar with bonding agent. 5. for tile crack surface, to replace the broken tile and re-acid wash the tile floor. Reapply the grouting to tile	1. visual inspection of the completed patching works	1. pictorial report of completed works signed by RTO
	Repair of lighting protection strips	1. to record existing condition in pictorial records.	1. replace the bonding agent with new 2-sided tap/maxbond/adhesive (water proof)	1. visual inspection with pictorial records of completed works 2. continuity test of the lightning protection strip	1. all bonding pad is being replaced with bonding agent, with pictorial report with verification of RTO 2. Submission of continuity test report.
	Perimeter fencing & gate painting including water meter bunkwall; Painting of Guardhouse, Painting of height limit bar; Painting of the building wall including external facade wall, internal common corridor wall, riser doors, ductings /bars, staircases, internal staircase wall (include Riser doors, M&E room door & frames, Staircase doors & frames, Classroom doors & frames etc) Painting to car park area including soffit, wall, car park parking lot, driveway arrang, side strip, warning sign in approved car park / elastromatic paint to match existings Painting of general common wall area (excluding internal room wall but inclded common internal corridor, staircase wall shaft)	Paint: Assess for peeling, blistering, cracking, fading, discoloration, and mildew growth. Metal surface: Checks for corrosion, paint delamination etc Concrete: Look for cracks (hairline, structural), spalling, delamination, efflorescence, staining, water seepage and reinforcement corrosion indicators (rust stains). Brick: Check for cracks, spalling, mortar joint deterioration, efflorescence, water staining, and bulging. 1. Check Surfaces: for visible signs of damage such as cracks, flaking paint, or peeling. 2. Look for Moisture: water stains, mold, or mildew, which may indicate moisture issues underlying the surface. 3. Perform adhesion test by using tape to see if any paint is flaking off. Apply a strip of masking tape and pull it off quickly; if paint comes off, it may require sanding or priming 4. Use a moisture meter to check to ensure < 15% moisture content before painting 5. Inspect for any signs of sagging, bulging, or warping that may indicate structural issues.	<ul style="list-style-type: none">Remove all flaking, peeling and blistering paintRepair water seepage, efflorescence, crack lines, spalling concrete to specificationsurface crack: to patch with structural groutingMoisture: to apply water proofing and to stop water seepageall flacky surfaces to be sand and prim off.the structure to be rectified with re-bar strenghtneingRepaint to new painting to specification	1. visual inspection of surface crack (especially at previous cracked area) 2. re-inspect moisture for content 3. re-apply adhesive test after new application of paint 4. inspection of surface eveness	1. picture report showing crack rectified 2. moisture content < 15% 3. picture report of adhesive test passed. 4. picture report showing eveness in surface
	carpark lots line, road directional arrows, driveway painting warning floor painting	1. records and identify colour and diagraph, outline of the existing arrow, sign, car park and number 2. records and identify number of car park	1.Paint all previous painted white lines, red lines, yellow lines, numbers, speed bumps, directional arrows and letterings of the parking bays. 2.All drain metal gratings/manhole covers throughout the whole estate shall be painted with enamel paint complying with NEA requirements. 3.All horizontal go-straight arrows and right/left turn arrows including the road humps at the basement car park shall be painted. 1. apply new elastromeric paint with matching colour over the existing directory / carpark/ number etc	1. visual inspection of completeness of the car park and driveway paint	1. visual report of completed works