

APPENDIX 4C
PLANT SERVICES

1. INTERPRETATION

In this Appendix, in addition to the definitions set out in Schedule 1 of this Agreement:

“Building Systems” means the mechanical, electrical and other systems in or servicing the Facility described in Table 3 of Attachment A to this Appendix;

“Demand Maintenance” means ad hoc and responsive unscheduled Maintenance;

“Early FM Parking Services” has the meaning set out in Section 3.11;

“Elevator Availability” means, in respect of each elevator in the Facility, the amount of time that such elevator was available during a measured period expressed as a percentage and calculated as follows:

$$\text{(Total Time – Down Time) x100 / Total Time}$$

Where:

Down Time is the number of hours that such elevator was unavailable for normal use other than times during which Scheduled Maintenance was performed on such elevator in accordance with the Annual Service Plan in effect; and

Total Time is the total number of hours during the measured period;

“Maintained Elements” means all elements of the Facility and Site constructed or installed pursuant to this Agreement including:

- (a) the Building Systems;
- (b) parking stalls and structures, including the Parking Facilities;
- (c) the Site Improvements;
- (d) the Maintained Equipment;
- (e) utilities, telecommunications connections and other similar infrastructure to the point of connection within NHA’s facilities,

but does not include Category 1 Equipment, Category 2 Equipment, Category 5 Equipment and Category 6 Equipment;

“Maintained Equipment” means Category 3 Equipment and Category 4 Equipment;

“Maintenance” means commissioning, testing, servicing, maintenance, repair, renewal or replacement of the Maintained Elements, other than renewal or replacement of Category 3 Equipment;

“Maintenance Access Times” means the times set out in the Annual Service Plan during which Project Co may perform Maintenance Services;

“Maintenance Services” means Demand Maintenance and Scheduled Maintenance;

“Miscellaneous Maintenance” has the meaning given in Section 3.8 of this Appendix;

“Plant Services” means all of the services and requirements described in this Appendix, including Demand Maintenance and Scheduled Maintenance; and

“Scheduled Maintenance” means planned and preventive Maintenance.

2. SERVICES

2.1 General Requirements

In addition to the standards and specifications set out in Schedule 4 [Services Protocols and Specifications], Project Co will deliver the Plant Services:

- (a) 24 hours per day, 365(6) days per year;
- (b) in a manner which:
 - (1) is efficient, comprehensive and responsive to the needs of Facility Users;
 - (2) ensures a collaborative working relationship with the Authority, its employees and contractors;
 - (3) minimizes, to the extent reasonably possible, any interruption to the use and operation of the Facility by Facility Users;
 - (4) is integrated and co-ordinated with the delivery of all:
 - (A) other Services provided by Project Co; and
 - (B) services delivered by the Authority at the Facility;
 - (5) is safe for all Facility Users; and
 - (6) does not create any environmental hazards;
- (c) in a safe, compliant, functional, working and barrier-free healing environment applying safe working practices including:
 - (1) using recognized risk assessment and management systems; and
 - (2) placing, maintaining and keeping records of all hazard notices and safety signage which are consistent with those used by the Authority;

- (d) in accordance with principles consistent with the initially applicable LEED™ Gold certification points in respect of the Facility;
- (e) having regard for and without limiting the requirements set out in Section 3.2 of Schedule 4 [Services Protocols and Specifications]:
 - (1) CAN/CSA-Z317.1 Special Requirements for Plumbing Installations in Health Care Facilities;
 - (2) CAN/CSA-Z317.10 Handling of Waste Materials in Health Care Facilities;
 - (3) CAN/CSA-Z317.11 Area Measurement for Health Care Facilities;
 - (4) CAN/CSA-Z317.2 Special Requirements for Heating, Ventilation, and Air Conditioning (HVAC) Systems in Health Care Facilities;
 - (5) CAN/CSA-Z317.5 Illumination Systems in Health Care Facilities;
 - (6) CAN/CSA-Z317.13 Infection Control during Construction or Renovation of Health Care Facilities;
 - (7) CAN/CSA-Z318.0 Commissioning of Health Care Facilities;
 - (8) CAN/CSA-Z323.5 Mechanical/Electromechanical Lifting Devices for Persons;
 - (9) CAN/CSA-Z7396.1 Medical Gas Pipeline Systems;
 - (10) CAN/CSA-B44 Safety code for Elevators and Escalators;
 - (11) CAN/CSA-C282-00 Emergency Electrical Supply for Buildings; and
 - (12) CAN/CSA-Z32 Electrical Safety and Essential Electrical Systems in Health Care Facilities.

3. PLANT SERVICES REQUIREMENTS

3.1 Annual Service Plan

Project Co will develop in accordance with Sections 4.1 and 4.2 of Schedule 4 [Services Protocols and Specifications] and implement as part of the Annual Service Plan appropriate policies, procedures, practices, schedules and a self-monitoring inspection and reporting system in respect of the delivery of the Plant Services to the Authority.

3.2 Maintenance Services

Project Co will provide the Plant Services in accordance with this Appendix so that:

- (a) each of the Maintained Elements:
 - (1) is properly and safely maintained in accordance with all Plans;

- (2) remains functional, safe, operationally sound and of good appearance;
 - (3) performs in accordance with their respective design criteria as set out in Schedule 3 [Design and Construction Specifications]; and
 - (4) achieves the requirements set out in Table 3 of Attachment A to this Appendix;
- (b) the Building Systems, including heating, air conditioning, lighting, humidity and mechanical ventilation systems, function in accordance with the requirements set out in Table 3 of Attachment A to this Appendix; and
 - (c) all other Maintained Elements operate as designed and intended.

3.3 First Response Maintenance

Project Co will respond to Demand Requisitions in respect of all Equipment. If the Equipment which is the subject of the Demand Requisition is not Maintained Equipment, Project Co will determine whether the problem relates to the Equipment itself or a Maintained Element supporting the Equipment. If:

- (a) the problem relates to a Maintained Element, Project Co will rectify the problem in accordance with this Appendix; or
- (b) the problem does not relate to a Maintained Element, Project Co will promptly give notice of the problem to the Authority together with a summary of the results of the investigation into the problem conducted by Project Co.

3.4 Maintenance Times

Subject to Section 3.5 of this Appendix, Project Co will perform the Maintenance Services during the relevant Maintenance Access Times and will:

- (a) perform Scheduled Maintenance during the periods agreed in the Annual Service Plan then in effect and will give the Authority 10 days' notice before commencing any such Maintenance; and
- (b) undertake and complete Demand Maintenance within the relevant Response Time and Rectification Period set out in Section 4 of this Appendix and Schedule 8 [Payments].

3.5 Re-Scheduling of Maintenance

Notwithstanding any notice delivered by Project Co pursuant to Section 3.4 of this Appendix, if the Authority, acting reasonably, determines that the times at which Project Co proposes to perform Maintenance will cause material disruption to the operations of the Authority or other Facility Users, the Authority may give notice to Project Co not to carry out such Maintenance until such time as the Authority and Project Co, each acting reasonably, agree on an alternate time. Upon such agreement, the Response Time and Rectification Period for such Maintenance will be adjusted accordingly.

3.6 Elevators

Project Co will:

- (a) operate and maintain all elevators, elevating devices and related equipment at the speeds and in accordance with the elevator design specifications set out in Schedule 3 [Design and Construction Specifications];
- (b) dispatch its on-Site personnel promptly to respond to all elevator alarms or telephone calls from an elevator and initiate the required action to rectify faults and release occupants;
- (c) ensure on-Site maintenance staff are properly trained to safely release trapped occupants within the times specified;
- (d) undertake Scheduled Maintenance of elevators such that at no time will any Functional Area be without elevator service and ensure that not more than one elevator in a bank of two or more elevators is out of service for Scheduled Maintenance;
- (e) include in each Performance Monitoring Report for the relevant period:
 - (1) the calculation of Elevator Availability; and
 - (2) a summary of any elevator failures and corrective actions.

3.7 Building Management System (BMS)

Project Co will:

- (a) operate the BMS to allow for monitoring of the operation of the Facility and the Services from a single location within the Facility and remotely through internet connections accessible to the Authority;
- (b) monitor, control, indicate alarms and provide trending information for all BMS connected sensors and control point;
- (c) provide for the BMS to automatically initiate an alarm and immediately page or otherwise notify staff designated by the Authority of particulars related to any alarmed equipment specified in Schedule 2 [Design and Construction Requirements] or Schedule 3 [Design and Construction Specifications]; and
- (d) include with each Performance Monitoring Report and provide the Authority with continuous direct access (other than during such reasonable periods as the BMS may be undergoing Scheduled Maintenance or emergency Maintenance) to the following information generated by the BMS during the relevant period:
 - (1) critical incident failures;
 - (2) daily, weekly and periodic status reports;

- (3) exception reports by element status;
- (4) trend log data;
- (5) time of occurrence, Response and Rectification; and
- (6) such other information as the Authority may reasonably require.

3.8 Miscellaneous Maintenance Services

Project Co will:

- (a) within 24 hours notice from the Authority (not counting days that are not Business Days) , respond to Demand Requisitions for general labour services including:
 - (1) the installation and hanging of white boards, pictures, art work shelving and other items of a similar nature affixed to the walls of the Facility; and
 - (2) other similar services typically performed by the physical plant department of a similar health care facility,

(“**Miscellaneous Maintenance**”); and
- (b) complete such Miscellaneous Maintenance within two weeks of the Demand Requisition.

3.9 Maintenance Equipment and Supplies

Project Co will provide, maintain, clean and replace as required all equipment, supplies, apparatus and consumable items required to deliver the Plant Services, including scaffolding, craneage, tackle, machinery, tools or other equipment.

3.10 Parking Facilities

Project Co will be responsible for the Maintenance of the Parking Facilities as a Maintained Element and in accordance with Table 2 of Attachment A . Project Co will not be responsible for the revenue operations of the Parking Facilities, including the following:

- (a) provision, maintenance and lifecycle of parking systems (gates, revenue systems, signage etc.);
- (b) management of permits;
- (c) management of daily parking;
- (d) revenues collection;
- (e) traffic management;
- (f) enforcement and security; and

- (g) response to parking trouble calls such customer support related to parking revenue operations.

3.11 Early FM parking Service

In addition to the Plant Services delivered after the Service Commencement Date, Project Co will, from and after the Parking Commencement Date, provide all Plant Services related to the Parking Facilities to be constructed as a parkade adjacent to the Facility (“**Early FM Parking Services**”).

4. PERFORMANCE INDICATORS

	Indicator	Service Failure Level	Response Time	Rectification Period (Availability conditions not breached)	Recording Frequency	Monitoring Method
	Maintenance					
4.1	Demand Requisitions for Demand Maintenance made during Hours of Operation (other than Miscellaneous Maintenance) carried out in accordance with this Appendix	Stat/Emergency – High Urgent – Medium Routine - Low	Stat/Emergency – 20 minutes Urgent –1 hour Routine – 24 hours	Stat/Emergency – 4 hours Urgent – 12 hours Routine – 168 hours	Per Occurrence	Performance Monitoring Report
4.2	Demand Requisitions for Demand Maintenance made outside of Hours of Operation (other than Miscellaneous Maintenance) carried out in accordance with this Appendix	Stat/Emergency – High Urgent – Medium Routine - Low	Stat/Emergency – 1 hour Urgent –1 hour commencing from commencement of the next Hours of Operation Routine – 24 hours	Stat/Emergency – 4 hours Urgent – 12 hours Routine – 168 hours	Per Occurrence	Performance Monitoring Report
4.3	Miscellaneous Maintenance (other than Demand Maintenance) carried out in accordance with this Appendix.	Low	24 hours	2 weeks	Per Occurrence	Performance Monitoring Report

	Indicator	Service Failure Level	Response Time	Rectification Period (Availability conditions not breached)	Recording Frequency	Monitoring Method
4.4	Maintained Elements that are not the subject of Demand Maintenance are maintained in accordance with this Appendix.	Medium	N/A	N/A	Per Occurrence	Performance Monitoring Report
4.5	Project Co performs Maintenance at the times permitted in Sections 3.4 and 3.5 of this Appendix.	High	N/A	N/A	Per Occurrence	Performance Monitoring Report
4.6	Project Co carries out 100% of Scheduled Maintenance on life safety, emergency systems and statutory/regulatory requirements within the times scheduled in the Annual Service Plan.	High	N/A	N/A	Per occurrence	Performance Monitoring Report
4.7	Project Co carries out 85% of all other Scheduled Maintenance within the times scheduled in the Annual Service Plan. All Deferred Maintenance to be completed within 30 days of its scheduled date.	High	N/A	N/A	Per occurrence	Performance Monitoring Report
	Elevators					
4.8	Elevator Availability of not less than 96.5% for each elevator within the Facility during each Payment Period.	High – per elevator	N/A	N/A	Monthly	Performance Monitoring Report

	Indicator	Service Failure Level	Response Time	Rectification Period (Availability conditions not breached)	Recording Frequency	Monitoring Method
4.9	If an elevator is out of service and occupants are trapped, maintenance staff respond and safely release occupants.	High	20 minutes	30 minutes	Per Occurrence	Performance Monitoring Report
	Other					
4.10	Project Co complies with all testing and reporting requirements under all applicable Authority policies, policies of insurance and all applicable Laws.	Medium	N/A/	N/A	Per occurrence	Performance Monitoring Report
4.11	Records and information obtained and accessible to the Authority, in accordance with Schedule 14, including access to the Performance Monitoring Program, the BMS, the CMMS and all Help Desk records.	Medium	24 hours	48 hours	Per occurrence	Annual Report
4.12	All hazard notices and safety signs are maintained, recorded, located and displayed correctly, and fully serviceable.	Medium	NA	NA	Per Occurrence	Performance Monitoring Report

	Indicator	Service Failure Level	Response Time	Rectification Period (Availability conditions not breached)	Recording Frequency	Monitoring Method
4.13	Project Co implementing and adhering to all other elements of the Annual Service Plan related to Plant Services and not otherwise addressed in Section 3	Low	N/A	N/A	Per occurrence	

Note: N/A means "not applicable" and that the table does not indicate or specify a Response Time or Rectification Period for the specified Performance Indicator.

ATTACHMENT A

TABLES TO APPENDIX 4C

Table 1: Failure or Request for Service Categories

Service Category	Definition
Stat/Emergency	Service required immediately and is considered a serious emergency, including: <ul style="list-style-type: none"> • issues having an immediate impact on patient care; • safety problems exposing Facility Users to danger; • emergency repairs to prevent further damage (i.e. burst pipe); and • equipment failure or operating difficulties which could result in the loss of critical utilities including heat, water, electricity, emergency power and medical gases.
Urgent	Service required as soon as possible to address problems not presenting an immediate danger.
Routine	Maintenance and repairs required for non-emergencies not having an immediate effect on patient care such as leaking taps, faulty doors and windows or equipment breakdowns or work not requiring immediate attention such as repairs to damaged walls, furniture or fixture installations.

Table 2: Service Standards

Element	Standard
General	<ul style="list-style-type: none"> • In general, all elements of building fabric, fixtures and fittings, floor and floor coverings, and furniture and equipment will at all times be functional, operational and satisfy the design and performance requirements as required for Service Commencement. • All elements are to be maintained, repaired and refreshed as required to meet the performance specifications of the design criteria as set out in Schedule 3 [Design and Construction Specifications] and consistent with a building maintained in accordance with all applicable Laws, Authority Policies and Good Industry Practices. • Access to all mechanical & electrical equipment rooms, and service areas will be restricted to authorized personnel. • All elements will be subject to Availability Conditions.
Exterior Enclosure and Building Fabric	<ul style="list-style-type: none"> • Sound, secure and weatherproof. • Substantially free from damp penetration, cracking, spalling and peeling. • Substantially free from stains and other cosmetic faults. • Substantially free from debris, algae, moss growth. • Exterior window surfaces cleaned periodically to maintain a reasonable appearance in accordance with Good Industry Practice. • Green roof maintained in accordance with Good Industry Practice

Element	Standard
Internal Finishes, Doors, Partitions, Fixtures, Finishes and Equipment	<ul style="list-style-type: none"> • Will function and operate as intended without fault. • Substantially free from structural cracks, deflection and other defects. • Substantially free from damp penetration, spalling, peeling, lifting. • Substantially free from stains and other cosmetic faults. • Substantially free from damage. • Finishes are complete, free from surface degradation and maintained within an acceptable level of normal wear and tear. • The floors and floor coverings are free from tears, scoring, cracks or any other damage that is unsightly and/or could cause a health and safety hazard. • Note: Cleaning of interior window surfaces not performed by Project Co.
Utility Connections and Services	<ul style="list-style-type: none"> • Secure, safe, maintained and serviced in accordance with the Annual Service Plan, the Authority central plant and utility company requirements.
Elevators, Controls & Equipment	<ul style="list-style-type: none"> • All components to be fully functional in accordance with the design criteria as set out in Schedule 3 [Design and Construction Specifications]
Mechanical & Plumbing Systems	<ul style="list-style-type: none"> • All systems will function as intended without unreasonable noise, vibration or leaks. • All elements and components are safe, sound and secure. • Substantially free from dust and corrosion which has a negative impact on health or safety. • Substantially free from dust and corrosion which could have a negative impact on performance or which do not have a reasonable appearance. • Substantially free from dust, corrosion, erosion and organic growth. • Mechanical ventilation and exhaust systems, units, ductwork and diffusers maintained and cleaned regularly per relevant codes and Good Industry Practice. • Maintained and tested in accordance with the Annual Service Plan • Maintained to deliver to the design performance criteria and parameters as set out in Schedule 3 [Design and Construction Specifications]) • All life safety and fire fighting equipment will be maintained in accordance with relevant codes and standards
Electrical Systems	<ul style="list-style-type: none"> • All normal and emergency power systems and associated gear will be operational, secure and tested in accordance with the Annual Service Plan. • All panels, wiring, fittings, fixtures, controls and safety devices will be properly housed, fastened securely and labelled. • All alarms, electrical communications, data transmission installations, cabling and associated equipment to be fully functional, operational and maintained in accordance with the Annual Service Plan. • All controls and Building Management Systems fully functional.
Parking (Underground and Parking Structures Only)	<ul style="list-style-type: none"> • Respond to trouble calls relating to the physical infrastructure of the parking facilities (not calls related to parking lot operations) • Line painting and re-surfacing • Snow and ice removal including upper deck of parkade, entrance, exits, ramps and circulation routes

Element	Standard
	<ul style="list-style-type: none"> • Mechanical sweeping of parking stalls, ramps and circulation areas • Periodic washing • Clean up of oil and gas spills and other vehicle fluids • Garbage and debris removal • Maintenance of fire suppression systems and equipment

Table 3: Service Standards, Heating, Ventilation, Air Conditioning, Noise and Lighting

Temperature Control:	<ul style="list-style-type: none"> • Temperature for designated areas is to be maintained within control tolerances from the set point as per Schedule 3, Appendix 3B [Mechanical HVAC (Space Design Comfort, Ventilation and Pressurization) and Medical Gas].
Relative Humidity:	<ul style="list-style-type: none"> • Return air humidity for designated areas maintained within humidity control tolerances as per Schedule 3, Appendix 3B [Mechanical HVAC (Space Design Comfort, Ventilation and Pressurization) and Medical Gas].
Minimum Outdoor Air Percentage:	<ul style="list-style-type: none"> • Supply air volumes for designated areas maintained to percentage of design airflow quantities as per Schedule 3, Appendix 3B [Mechanical HVAC (Space Design Comfort, Ventilation and Pressurization) and Medical Gas].
Minimum Total Air Changes Per Hour:	<ul style="list-style-type: none"> • Minimum outdoor and total air exchanges for designated areas maintained in compliance with design criteria as per Schedule 3, Appendix 3B [Mechanical HVAC (Space Design Comfort, Ventilation and Pressurization) and Medical Gas].
Relative Pressurization:	<ul style="list-style-type: none"> • Relative pressurization for designated areas maintained as per Schedule 3, Appendix 3B [Mechanical HVAC (Space Design Comfort, Ventilation and Pressurization) and Medical Gas].
Steam	<ul style="list-style-type: none"> • Steam supplied to the designated areas in accordance with Schedule 3, Appendix 3B [Mechanical HVAC (Space Design Comfort, Ventilation and Pressurization) and Medical Gas].
Sound Transmission	<ul style="list-style-type: none"> • Sound transmission levels for designated areas maintained within the design tolerances as per Schedule 3, Appendix 3D [Sound Transmission Ratings].
Illumination Levels	<ul style="list-style-type: none"> • All lighting systems must be fully functional, safe and remain within 15% of the lux levels specified in CSA Standard Z317.5-98 Illumination Systems in Health Care Facilities and in accordance the lighting requirements set out in Schedule 3, Appendix 3C [Electrical].