APPENDIX D
EXTENT AND SCOPE OF SERVICES

A. Pro-Active Full Preventive Maintenance: Contractor shall regularly and systematically, on a continuous basis, examine, clean, lubricate and adjust the vertical transportation equipment and provide unlimited callback service during regular working hours and, as conditions warrant, in accordance with accepted industry standards and the applicable manufacturer's published specifications and technical field notes, including those published internally within the manufacturer's organization, repair or replace all portions of the equipment, except those specifically excluded, including but not limited to the work and coverage described hereinafter.

B. Elevators:

1. Basic Elevator Scope: The services shall include all work and materials expressly required under this RFP or reasonably inferred, whether or not expressly stated herein, including, but not limited to the following:
   a. Hoist machines (complete assemblies), including worms, gears, thrust bearings, drive sheaves, drive sheave shafts and shaft bearings, tachometers, brake assemblies and pulleys, and all other components and parts of the machine and brake;
   b. Hoist motors, including motor windings, field coils, rotating elements (including armatures and commutators), brushes, brush holders, motor bearings, and all other related components and parts;
   c. Generators and power conversion devices, including motor windings, field coils, rotating elements (including armatures and commutators), brushes, brush holders, motor bearings, and all other related components and parts;
   d. Direct Drives and Solid-State Starters, including all micro-processor and/or solid-state components, SCR, IGBT, resistors, capacitors, transformers, contacts, leads, timing devices, computer devices, and all other related components and parts;
   e. Controllers, selectors and dispatching equipment, including all micro-processor and/or solid-state components, relays, resistors, capacitors, transformers, contacts, leads, dashpots, timing devices, computer devices, encoders, tach generators, steel selector tapes (or cables), mechanical and electrical driving equipment, monitors, CRT’s, printers, modems, network switches and all other related components and parts;
   f. Governors, including governor sheave shaft assemblies, bearings, contacts, governor jaws, and all other related components or parts;
   g. Rope brake devices, secondary braking devices,
   h. Car and counterweight safeties, including actuating mechanisms, jaws, and all other related components and parts;
   i. Hoistway equipment, including deflector or secondary sheaves and sheave bearings, car and counterweight guide rails (excluding replacement), top and bottom limit switches, counterweights and counterweight guide shoes including rollers or sliding gib, inductors, cams, tapes and all other related components and parts;
   j. Hoistway entrance equipment, including hoistway door interlocks, hangers, hanger covers and tracks, hoistway door drive assemblies including vanes, drive blocks, clutches, pick-up assemblies, relating devices and bearings, bottom door guides, auxiliary door closing devices (including cables, sheaves, and arms), door restrictor devices, and all other related components and parts;
   k. Car and hoistway door gib, including their attachments to the door panels.
   l. Car equipment, including car guide assemblies, guide rollers or sliding car guides, car door restrictors, car top exhaust fan or blowers, car top 2:1 sheaves, load
weighing or sensing switches, car top inspection stations, car top and bottom lights, car frames, car platforms, and all other related components and parts;

m. Car door operators, including door drive chains, sheaves or belts, car door hangers, hanger covers and rollers, car door contacts, all door protective devices (including screen type detectors, proximity edges, mechanical safe edges and light rays, and all other related components and parts;

n. Pit equipment, including car and counterweight buffers, tape sheave assemblies, governor rope pit tension sheave assemblies, compensating rope sheave assemblies or other pit mounted compensation guides, pit lights, and light fixtures including re-lamping (bulbs furnished by ASU), and all other related components and parts;

o. Alarm bells, emergency stop switches, emergency car lights, and batteries;

p. Car operating panels and their attachments to return panels, hall call pushbutton stations, car, and corridor signals and fixtures (including lighted surrounds or buttons), visual and audible signaling devices, remote status panels and switches, and all other related components and parts;

q. Emergency communication systems including elevator intercom systems and two-way emergency phones;

r. Hoist, compensating, and governor ropes and their fastening means, and all other similar or related components and parts;

s. Seismic Devices, including seismic switches and contacts, derailment devices, and all other related components and parts;

t. Hydraulic (complete assemblies), including elevator pump, motor, motor windings, roped hydraulic cables, governors, plunger single or multi-stage, all plunger packings, V-belts, strainers, valves, mufflers, Victaulic fittings, seals, pit oil return units, emergency return unit and battery;

u. Temporary Alternate Power Supply Systems for traction and hydraulic recovery systems to include, all micro-processor and/or solid-state components, relays, resistors, capacitors, condensers, transformers, inverters, contacts, leads, dashpots, timing devices, computer devices, batteries, chargers and all other related components and parts.

2. Additional Elevator Scope of Work:

a. Treat all motor windings, as needed, with proper insulating compound that has been approved by the motor manufacturers. Replace any cracked or badly worn field coil windings.

b. Keep all car tops, pits, and hoistways clean and free from dirt, oil, lint, debris, and stored items, and maintain each machine room in clean, neat condition.

c. Renew all wire ropes or hoisting belts as often as is necessary to maintain an adequate factor of safety. Maintain equal tension on all hoisting ropes or belts, and, where appropriate, shorten any hoisting device as necessary to provide continued safe operation and maintain normal traction.

d. Periodically equalize the tension in all hoist and compensating ropes at frequencies sufficient to prevent uneven cable wear and uneven sheave groove wear.

e. Examine, and when conditions warrant, re-groove or replace all sheaves and sheave assemblies, including drive sheaves, governor tension sheaves, secondary or deflective sheaves and compensating sheaves.

f. Keep all wire ropes, hoisting belts, and guide rails clean and free from dirt, lint, rust, or accumulated grease, and keep rail shanks properly painted.

g. Repair or replace conductor cables and hoistway and machine room elevator wiring to prevent shutdowns and provide uninterrupted operation of elevator signals and uninterrupted elevator operation.

h. Disassemble machine brakes annually (unless otherwise agreed), check for and replace worn parts, clean all retained parts, reassemble, lubricate, and adjust for proper operation.
i. Affix by stencil painting and maintain the appropriate elevator numbers on the car crossheads and on all equipment components in the machine rooms and pits, including hoist machines, motor generators, governors, control cabinets, buffers, and compensation sheave assemblies. These numbers shall be a minimum of 1½" high except on the governor or compensation sheave assembly, which may be less if a suitable flat surface of 1½" is not available.

j. Repair damage to car and hoistway door finish when caused by improper adjustment or maintenance of associated door equipment.

k. Maintain the emergency telephone buttons, button contacts, speakers, and wiring to the machine room junction box, in a fully operational condition. Also maintain wiring for the car telephones from the cars to the machine room junction boxes.

l. Replace defective pit illumination using parts supplied by ASU.

m. Maintain, in fully operational condition, the complete Elevator Status or Monitoring Panels and the complete elevator panel in the Fire Command Centers, including all lenses, lights, switches, displays and all associated wiring from the panels to the machine room junction boxes.

n. Re-lamp all signals during regular routine examinations.

3. Additional Services:
   a. Cleaning:
      1) Contractor shall clean elevator equipment, car tops, Hoistways, machine rooms, and pit floors at regular intervals sufficient in frequency to maintain a professional appearance, prevent tracking of dirt, oil, grease, or carbon dust from car tops, pits or machine rooms onto carpeted areas, and to preserve the life of the equipment.
      2) Contractor shall not be responsible for cleaning any equipment made necessary by events beyond its reasonable control or as a result of improper janitorial or building maintenance functions. Unusual conditions, such as on-going construction or “build-out” in the building shall be reviewed with ASU to determine responsibility for cleaning. However, Contractor shall report these conditions immediately to ASU for corrective action.

   b. Painting:
      1) Paint all elevator machine room, hoistway, and pit equipment and all car tops at intervals frequent enough to maintain a professional appearance, prevent rusting, and preserve the equipment. Car tops, and floors in machine rooms, machinery spaces, and pits shall be maintained and painted with a low VOC paint including the color additive “Deck Gray” or other suitable color if approved by ASU.
      2) All paint shall be suitable for the purpose intended and shall be high quality. Application of the paint shall, in all circumstance, comply with current ASME, OSHA, and applicable local codes. Contractor shall schedule all painting procedures with ASU.

   c. Lubrication:
      2) Lubricate the equipment at intervals recommended by the equipment manufacturer or as dictated by the use of the equipment. All lubricants shall be suitable for the purpose intended and shall meet or exceed the minimum requirements specified by the manufacturer of the equipment to which the lubricant is applied.
      3) Lubricants, cleaning fluids and all combustible liquid shall be stored in metal cabinets in the machine room and shall be
disposed of in accordance with OSHA and EPA guidelines. MSDS data sheets shall be posted as required and provided to ASU in a maintained binder for all chemical products stored and/or utilized on ASU’s sites.

4) All used lubricant shall be removed from the site and properly disposed of in accordance with OSHA and EPA standards. Contractor shall be responsible for facilitating the removal and disposal however ASU as Owner shall be listed as the generator.

d. Adjustment: Adjust the equipment as necessary:
1) To its originally designed performance.
2) When required to maintain performance standards specified in this RFP.
3) When necessary to preserve the useful life of a part or assembly.
4) When necessary to prevent or eliminate Tenant Sensitive items from becoming adversely noticeable to building’s tenants.
5) Additionally, Contractor shall check and adjust the elevator dispatching systems and make necessary tests at such intervals as are required to ensure all systems are operating properly. If required to complete such system checks, this work shall be completed during overtime at no additional cost to ASU.

e. Repairs and Replacements: Make repairs and/or replace all worn, damaged, or broken parts or components. Parts or components requiring repair shall be rebuilt to “as new” condition. Parts or components shall be replaced:
1) When worn beyond normal adjustment limits.
2) When necessary to ensure continued normal operation.
3) When necessary to extend the useful life of the elevators or any of their components.
4) When necessary to continue safe, dependable operation in accordance with ASME A17.1 and A17.2 Code.
5) When necessary to continue performance of the equipment in accordance with its original design.
6) When necessary to maintain the performance, standards specified in this RFP, including the elevator performance, smoothness, and quietness of operation.
7) When more than one elevator requires repair, ASU, upon consultation with Contractor, shall establish priorities of accomplishment.
8) Contractor shall coordinate major repair work with ASU during designated curricular breaks in an effort to minimize the impact to service availability. Sufficient personnel shall be provided at all times to accommodate this requirement.
9) Contractor shall supply sufficient repair crews at all times to support the specified key performance indicators as it relates specifically to accrued repair hours, unscheduled units down for repair and pending unit repairs.
10) When necessary due to Contractor and/or ASU identified safety related concerns, more specifically with adjacent running equipment: Contractor shall provide the necessary screening required to prevent incidental contact with and/or subsequent shutting down of additional adjacent equipment necessary to perform the repairs, which are required. This requirement of the Contractor shall not relieve, release, or affect in any manner any of Contractor’s duties, liabilities, or obligations hereunder, and Contractor shall at all times be and remain fully liable hereunder for the safety of its employees, the public and the equipment.
f. Manufacturers’ Parts and Lubricants: In performing the Services, Contractor agrees to provide parts used by manufacturers of the equipment for replacement or repair, and to use lubricants obtained from and/or recommended by the manufacturer of the equipment. Where materials or equipment are designated in these specifications by a trade or manufacturer’s name, it is so designated primarily to establish standards of quality, finish appearance, and performance. It is not the intent of ASU to limit the choice of materials and equipment to the specific product designated. Substitutions for materials or equipment specifically designated in the manufacturer’s specification shall be submitted to ASU and such requests shall be accompanied by complete data on which ASU can make determination on the merits of the proposed substitutions. The substitution request shall be submitted with detailed written information stating how the product proposed compares with, or differs from, the designated product in composition, size, performance, reliability, cost advantages, etc. All items approved for substitution shall be subject to all applicable provisions of the original specification. All specific requirements of the original specifications must be adhered to. All necessary modifications shall be made in the article specified by trade name type or model of manufacturer’s equipment to make it conform to the original requirements of the specifications and the actual conditions under which the product is required to be used. All substituted items and or changes shall comply with the latest adopted version of ANSI/ASME A17.1.

g. Adequate Parts and Parts Storage:
   1) Contractor shall maintain an adequate inventory of spare parts and components to permit timely replacement and repairs without delay. All parts, materials, lubricants, rags, cleaning fluids, combustible liquids, and other materials and supplies shall be kept and stored in U.L. rated metal cabinets, provided by Contractor, properly secured, in each machine room, unless code required clearances would be violated by the presence of such cabinets. All materials and supplies kept in these cabinets shall be neatly arranged, and cabinet doors shall be left in the fully closed position after each visit.
   2) Contractor shall keep an adequate supply of service and diagnostic tools, test equipment, contacts, switch parts, coils, conductors, cables, springs, holders, supports, resistors, relays, lamps, condensers, tubes, transformers, car and hall buttons, fuses, PC boards, regulators, power supplies, control modules, and other parts as deemed necessary by ASU, in order to facilitate prompt elevator repairs.
   3) Cabinets shall be sufficient in number and size to store all parts, materials, and supplies out of sight. No parts, materials, or supplies shall be stored on top of cabinets, on the floors, or any other place where they are visible.
   4) Contractor agrees to bear all risks of loss, injury, or destruction of goods and materials such as spare parts, tools, etc., stored at the site provided during the maintenance contract. Such loss, injury, or destruction shall not release the contractor from any obligation herein.

h. Prompt Corrective Action: When, as a result of an examination, a need for corrective action is apparent and the corrective action is within the scope of Contractor’s responsibility, Contractor shall proceed immediately to make such replacements,
repairs, and/or corrections. If Contractor reasonably believes the corrective action is not within the scope of Contractor’s responsibility, and no safety or potential safety problem exists, Contractor shall immediately and verbally notify ASU, followed by a written report within Twenty-Four (24) hours of the examination. If a safety or potential safety problem exists, Contractor shall notify ASU and immediately take immediate corrective action to neutralize the safety concern, regardless of scope of responsibility, and follow up immediately with a written report to ASU of the issue, mitigation and proposed remedy.

A. Escalators

1. Basic Escalator Scope:
   a. Drive Machines, including worms, gears and bearings, drive chains, sprockets, bushings, shafts, belts, governors, and all other related components and parts.
   b. Brakes, including brake coils, arms, bearings, sheaves, linings, contacts, and all other related brake components and parts.
   c. Motors, motor windings, rotating elements, bearings, shafts, and all other related components and parts.
   d. Step chains, tracks, step chain sprockets, step chain tension devices, and all other related components and parts.
   e. Controllers, including all relays, contacts, coils, resistors, operating and motor circuits, magnets and magnet coils, transformers, rectifiers, solid state devices, and all other related components and parts.
   f. Handrails, handrail drives (including drive chains and sheaves), handrail brush guards, handrail guides or guide rollers, alignment devices, and all other related components and parts.
   g. Steps, step treads, step wheels and rollers, step axles and axle bushings, step risers, and all other related components and parts.
   h. Comb plates, floor plates, and all other related components and parts.
   i. Stop buttons, slack step chain switches, skirt safety switches, step up-thrust switches, handrail entry switches, comb-step impact devices, stopped handrail devices, missing or displaced step switches, and all other related components and parts.
   j. Truss heaters, comb plate heaters, or other heaters provided by original installer.
   k. Remote maintenance monitoring devices.
   l. Main line disconnects located within truss, if provided by original equipment installer.

2. Additional Escalator Scope of Work:
   a. Contractor shall maintain handrail drives so that handrails operate at substantially the same speed as the steps.
   b. Contractor shall maintain step treads, comb plates and step risers so that the step riser cleats mesh with the slots on the adjacent step treads, and the comb plate teeth mesh with and are set into the slots in the step treads.
   c. Contractor shall maintain the balustrade section fastenings and attachments and the trim moldings so that adjoining surfaces conform to ASME A17.1-2010.
   d. Escalator Clean-Down: Once every year, Contractor shall provide a complete clean-down of each escalator. All steps shall be removed, cleaned thoroughly, and examined for cracks or other defects. All exposed parts and components of each escalator shall be examined for excessive wear. Worn parts, including step rollers, shall be replaced, and each escalator shall be completely lubricated. After reassembly, safety devices shall be tested, and the escalator adjusted for proper operation. All escalator clean-down work shall be performed during hours agreed upon with ASU.
e. Contractor shall perform testing and maintain all step to skirt clearances within the limits required by the local Authority Having Jurisdiction under code A17.1 – 2010 or later.

f. Contractor shall maintain all operating and safety devices provided at the time of installation and listed in ASME A17.1-2010 or later, so that they operate and function as required by the code.