SECTION 142101 ELEVATOR/ESCALATOR WARRANTY FULL MAINTENANCE

Revise this Section by deleting and inserting text to meet Project-specific requirements.

USE THIS SECTION FOR OGS PROJECTS UNLESS OTHERWISE DIRECTED. IT MAY ALSO BE USED UPON REQUEST BY OTHER AGENCIES

PART 1. GENERAL

* + - 1. MAINTENANCE DURATION
         1. Within 10 days of contract award, Contractor shall assume Full Maintenance responsibilities as outlined within this specification section, for elevator/escalator(s) [**List Project Specific Units**] which are located in at [**“Facility” “specific building”**].
         2. Within 30 days of award, the DIRECTOR'S REPRESENTATIVE will schedule an initial CAT-1 inspection and test for each unit. Tests will be witnessed by NYS Design and Construction Personnel, QEI, and QEI Trainees. Periodic Testing will be continued annually based on this newly established schedule utilizing the facility's 3rd party QEI inspection vendor. Refer to Section 1.02.N for additional requirements.
         3. As each elevator/escalator is taken out of service as part of the phased modernization, it shall no longer require maintenance. Once the modernization is completed and the elevator/escalator accepted for public use, maintenance will resume under Warranty Maintenance and continue until substantial project completion. Upon substantial project completion, all project elevator/escalator(s) shall remain on Warranty Maintenance for an additional 12 months.

Refer to the Division 01 specifications for the construction schedule and phasing.

* + - * 1. Upon completion of the 12-month Warranty Full Maintenance period, this maintenance agreement will be terminated, and maintenance of the elevator/escalator(s) shall be transferred to a facility Elevator/Escalator Maintenance Contract at the time of termination.
        2. Elevator/Escalator(s) other than those listed above shall not be associated with this maintenance agreement.
      1. CONTRACTOR GENERAL RESPONSIBILITIES
         1. This specification provides for full maintenance service for all equipment specified in the “Equipment to Be Maintained List” (Exhibit A) and any component or accessory not specifically mentioned, which is essential for the proper operation and functioning of the elevators/escalators. The full maintenance service includes the furnishing of all material, labor, supervision, diagnostic tools, laptops, tools, supplies, weights, and other expenses necessary to provide full maintenance service, and repairs of every description, including inspections, tests, adjustments, and replacement parts. Full maintenance service includes all maintenance tasks as described herein, including emergency call back service on an as-needed basis. All maintenance, adjustments, tests, and repairs shall be in compliance with the latest adopted editions of ASME A17.1 Safety Code for Elevators and Escalators, A17.2 Inspector’s Guide for Elevators and Escalators. The terms and requirements of this contract are specified in the singular with the understanding that all provisions shall be applicable to all units unless otherwise specified. The safety practice and procedures in the “Elevator Industry Field Employees Safety Handbook” shall also be followed when performing maintenance and repairs.

Provide Maintenance Control Program (MCP)

Provide "Elevator/Escalator Maintenance Logbook" specifically published for the recording of maintenance, service and testing performed on the elevator/escalator equipment.

Elevator/Escalator Maintenance Logbook to be placed and retained in the elevator machine room/control room.

Record ALL maintenance tasks, repairs, service calls and testing performed.

* + - * 1. All work shall be performed during the regular working hours of the regular working days of the elevator trade, 7:00am to 6:00pm, Monday through Friday, except the following union designated holidays: New Year’s Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, the Friday after Thanksgiving Day, and Christmas Day.
        2. The maintenance tasks associated with the full maintenance service are provided herein. All systems, components, and equipment covered under this agreement shall be maintained at the highest level of efficiency and at an acceptable level throughout the maintenance period. An acceptable level of maintenance is defined as that level of maintenance that will preserve the equipment in unimpaired operating condition (i.e., above the point where deterioration will begin, thereby diminishing the normal life expectancy of the equipment).
        3. The only circumstance where the CONTRACTOR shall not be obligated under this agreement to repair damage at no additional cost is where such damage was caused by vandalism, fire, acts of God, negligence by the facility (DIRECTOR’S REPRESENTATIVE), or other unusual circumstances (except that which is caused by the CONTRACTOR). For repair or replacement of materials that are not covered under the terms of this contract the CONTRACTOR shall present an itemized quote “Chargeable Billing per Contract Terms” (Exhibit B), for material and labor, to the DIRECTOR’S REPRESENTATIVE. The DIRECTOR’S REPRESENTATIVE will decide how to proceed with all repairs. DIRECTOR’S REPRESENTATIVE’S review and approval is required for all out-of-contract work. The DIRECTOR’S REPRESENTATIVE reserves the right to require that the CONTRACTOR submit a completed T&M proposal within 48 hours upon request.
        4. The CONTRACTOR shall provide 24-hour-a-day, 7 days-a-week, callback service, as part of the monthly maintenance fee and at no added cost to the DIRECTOR’S REPRESENTATIVE.

In the event of callback service, a licensed elevator mechanic will report to the site of the call, when requested by the DIRECTOR’S REPRESENTATIVE, in accordance with the following schedule:

Within one (1) hour after the receipt of request for service for any stalled elevator/escalator(s) containing a trapped passenger.

Within two (2) hours after the receipt of request for service for any non-entrapment calls.

The DIRECTOR’S REPRESENTATIVE reserves the right to schedule the callback service for the next regular working day.

Where travel time requirements of a licensed elevator mechanic exceed the response times above, the mechanic shall notify Facility Manager of ETA and provide cell phone number that he/she may be contacted while in route.

* + - * 1. CONTRACTOR shall provide a written Maintenance Control Program (MCP) that meets or exceeds any and all requirements of the latest adopted edition of A17.1 Code, Section 8.6. The MCP shall include, but not be limited to, records of inspection, maintenance, lubrication, repair, replacements, testing and callback services. These records shall be available to the DIRECTOR’S REPRESENTATIVE and elevator personnel at all times. Maintenance tasks and intervals are outlined herein.
        2. All preventive maintenance tasks identified herein shall be completed within the specified frequency as defined in the schedule matrix.
        3. Should it be identified that the quality of the maintenance services being performed is not satisfactory and that the requirements of this Agreement are not being met, the CONTRACTOR will be notified of these deficiencies in writing, and it shall be the CONTRACTOR’S responsibility to make the necessary corrections within ten (10) working days after receipt of such notice.
        4. All parts, materials, components and equipment provided by the CONTRACTOR shall be new and of the same brand name and manufacturer as the item being replaced or with an DIRECTOR’S REPRESENTATIVE pre-approved equal. These parts, materials, components and equipment shall be fully warranted [material] by the CONTRACTOR to be free of defects (manufacturing and workmanship) for one year from installation.
        5. The DIRECTOR’S REPRESENTATIVE will have a maintenance audit performed on the elevator/escalator(s) annually. All deficiencies noted during the maintenance audit that are the responsibility of the CONTRACTOR under the Full Maintenance Agreement shall be corrected within thirty (30) working days of being notified by the DIRECTOR’S REPRESENTATIVE. DIRECTOR’S REPRESENTATIVE shall take into account circumstances that are beyond the control of the CONTRACTOR and shall work with the CONTRACTOR for an extension of time. Within three (3) working days of said notification, CONTRACTOR shall provide the DIRECTOR’S REPRESENTATIVE a schedule which includes, but is not limited to: outlining the required scope of work and start and completion dates for the work. If the deficiencies are not corrected after thirty (30) working days, or the agreed upon time period, the DIRECTOR’S REPRESENTATIVE reserves the right to solicit offers from, and have deficiencies corrected by other sources. The cost of the deficiency corrections shall be deducted from the money owed to the CONTRACTOR as part of the maintenance agreement.
        6. Deficiencies involving riding public safety shall be corrected immediately upon notification by the DIRECTOR’S REPRESENTATIVE.
        7. The CONTRACTOR shall be responsible for maintaining the lighting fixtures installed in car, hoistway, pit, car top, and car emergency lighting. This will include all lighting fixture bulbs, lamps, and tubes. The CONTRACTOR shall be responsible for maintaining the car telephone and associated traveling cable telephone wires. The following items of work are specifically not included as work that the CONTRACTOR is responsible to perform:

ReTain only the relevant paragraph below.

Elevators:

Refinishing of the elevator car interior walls, elevator car interior ceiling, car door panels, and elevator car floor covering

Elevator equipment room lighting ballasts and light fixtures (except bulb replacement)

Hoistway enclosure walls, hoistway door panels and frames and hoistway sills.

Telephone lines from the interface with the elevator

Main line power and cab lighting disconnect switches or circuit breakers

Emergency power plants and associated transfer switches

Replacement of broken cab handrails.

Machine room cooling and heating equipment

Replacement of sump pump

Replacement of smoke/heat detectors and fire alarm system

Escalators:

Refinishing of the escalator shirt and balustrade panels, and escalator floor plates.

Escalator equipment space lighting ballasts and light fixtures (except bulb replacement)

Adjacent building walls and building panels.

Main line power and equipment lighting disconnect switches or circuit breakers.

Emergency power plants and associated transfer switches

Replacement of sump pump

Replacement of smoke/heat detectors and fire alarm system

* + - * 1. The [**“insert name”]** Building operates 24 hours a day/7 days a week. If an elevator/escalator is continuously out-of-service for more than forty-eight (48) hours, then the DIRECTOR’S REPRESENTATIVE reserves the right to deduct 10% from the total amount of the next monthly maintenance invoice. If the downtime exceeds thirty (30) continuous days, then the

DIRECTOR’S REPRESENTATIVE reserves the right to deduct the entire monthly maintenance fee for the elevator/escalator or 15% from the total amount of the next monthly maintenance invoice, whichever is greater. The length of time that an elevator/escalator is out-of-service shall be measured by the DIRECTOR’S REPRESENTATIVE; beginning at such time the DIRECTOR’S REPRESENTATIVE notifies the CONTRACTOR that the elevator/escalator is out-of-service or that an unsafe condition exists and ending at such time the elevator/escalator is safely placed back into service. The DIRECTOR’S REPRESENTATIVE may interrupt the total “downtime” duration.

The DIRECTOR’S REPRESENTATIVE reserves the right to extend the thirty (30) continuous days under special circumstances involving long lead time for a special part.

* + - * 1. All elevators/escalators shall be appropriately inspected every six (6) months, annually, and every five (5) years by a certified elevator/escalator inspection service contracted by the DIRECTOR’S REPRESENTATIVE. (after initial CAT-1’s listed in section 1.1 B, these tests may be witnessed be either OGS personnel or 3rd party inspectors). The CONTRACTOR shall provide any needed equipment to perform the pretest examinations and tests at no additional cost to the DIRECTOR’S REPRESENTATIVE. The CONTRACTOR shall provide all necessary weights and testing equipment, an adequate quantity of qualified journeyman elevator mechanics familiar with the equipment to perform tests and assist the inspector at no additional cost to the DIRECTOR’S REPRESENTATIVE. The CONTRACTOR shall periodically examine and test all safety devices, governors, oil buffers, etc. The CONTRACTOR shall make formal safety tests and inspections as required and outlined in the current adopted edition of ASME A17.1. These tests shall be conducted in the presence of a certified QEI Elevator Inspector. Tests performed on 1 and 5-year intervals will be scheduled to comply with the 1 and 5-year intervals specified in the current adopted edition of ASME A17.1 Appendix N. The CONTRACTOR shall furnish test and condition reports to the DIRECTOR’S REPRESENTATIVE after each test. After tests have been performed, all load weighing devices, etc. shall be checked and adjusted as required to meet manufacturer’s recommendations. Cars shall not be placed in service until all tests, checks and adjustments are completed, and the elevator/escalator(s) are in proper working condition. The CONTRACTOR will not be held responsible for any damage to the building and equipment (excluding elevator/escalator and related elevator/escalator equipment) caused by these tests, unless such damage is a result of negligence by the CONTRACTOR. Failure to follow correct procedures to prevent damages and failure to perform a pretest examination shall be considered negligence by the CONTRACTOR. If, during the inspection/testing of a particular elevator/escalator, such elevator/escalator fails; CONTRACTOR shall continue the inspection/testing procedure with other elevator/escalator(s) so as not to delay the overall inspection/testing process. CONTRACTOR shall provide a separate crew to repair deficiencies.
        2. Monthly testing of Firemen’s Service, as required in the current adopted edition of ASME A17.1, shall be performed by the DIRECTOR’S REPRESENTATIVE. DIRECTOR’S REPRESENTATIVE shall record findings of Monthly Firefighters’ Emergency Operation Tests in Elevator/Escalator Maintenance Logbook.
        3. Sixty (60) days prior to the expiration of the agreement, the CONTRACTOR and DIRECTOR’S REPRESENTATIVE will make a complete examination of the elevator/escalator(s) covered under the agreement. The CONTRACTOR shall coordinate and schedule the examination with the DIRECTOR’S REPRESENTATIVE. The DIRECTOR’S REPRESENTATIVE shall determine if such an examination is warranted. The DIRECTOR’S REPRESENTATIVE, at its expense, reserves the right to contact an independent Elevator Inspector if such an examination is warranted. The DIRECTOR’S REPRESENTATIVE, with the assistance of the independent Elevator Inspector, will prepare a Deficiency Report listing all deficiencies noted during the examination. The CONTRACTOR shall correct all deficiencies as required by this contract, prior to the expiration of the agreement or risk being deemed a Non-Responsible vendor for any future contracts.
        4. The CONTRACTOR shall be completely responsible for their work, including any damages or breakdowns caused by their failure to take appropriate action.
        5. The CONTRACTOR shall not make changes or alterations to the existing mechanical equipment, circuits, circuit wiring, or sequencing, and may not alter the original circuit or wiring design of the elevators/escalators unless authorized in writing by the DIRECTOR’S REPRESENTATIVE. The CONTRACTOR shall submit any such proposed change to the DIRECTOR’S REPRESENTATIVE for approval and shall include complete legible drawings and wiring diagrams, as well as a complete description of the proposed change. Prior to submitting the proposed change, the CONTRACTOR shall, at its own expense, obtain comments from the original equipment manufacturer concerning the overall effect of such changes on the system. If changes are made, the CONTRACTOR shall provide the DIRECTOR’S REPRESENTATIVE with three (3) copies of as-built drawings of the modifications including a complete description of the changes.
        6. The CONTRACTOR shall maintain a complete set of current, legible schematic wiring diagrams in each elevator/escalator machine room/space for the elevators/escalators contained therein. At the end of the contract term, all schematic diagrams shall be left in the machine rooms.
        7. The Contractor shall maintain all elevator/escalator equipment in machine rooms, hoistways, and pits in a clean orderly condition, free of dirt, rust, dust and debris.
        8. The Contractor shall not be responsible for upgrading equipment to meet changes in Code requirements as may be recommended or directed by insurance companies, Federal, State, Municipal, or other Governmental authorities. The Contractor shall notify the DIRECTOR’S REPRESENTATIVE of any Code changes that affect the site specific equipment and/or conditions.
      1. GENERAL REQUIREMENTS FOR ALL SERVICE VISITS
         1. Perform all work in a safe, organized manner.
         2. Repairs and maintenance are to be performed with equipment properly tagged and locked out. The equipment is to be disabled, and all switch or switchgear surveyed and positioned to prevent shock hazards and the release of stored energy. Ensure that site personnel are aware of equipment status and potential hazard.
         3. CONTRACTOR’S servicing technicians will be required to sign in and out in accordance with DIRECTOR’S REPRESENTATIVE established procedure.
         4. All work under this contract shall be performed by skilled, competent elevator mechanics directly employed and/or supervised by the CONTRACTOR. Elevator mechanic helpers and/or elevator mechanic apprentices may be used, provided they are under the direct supervision of a journeyman elevator mechanic on site at all times. Direct supervision means working under constant guidance or simultaneously with an elevator mechanic. All elevator mechanics shall have a minimum of three (3) years of experience maintaining elevator/escalator(s). Technicians shall have training and experience with facility-specific elevator controls. Sufficient personnel shall be assigned to complete maintenance in a timely manner. The mechanic will perform tests, checks, inspections, calibrations, adjustments, component replacements, repairs, and diagnostic assessment of the systems. The CONTRACTOR shall provide documentation to the DIRECTOR’S REPRESENTATIVE of the competency of the personnel assigned to provide this service. DIRECTOR’S REPRESENTATIVE reserves the right to review the CONTRACTOR’S technician qualifications and approve or reject all service providers based on their training and experience. DIRECTOR’S REPRESENTATIVE reserves the right to conduct a security background check or otherwise approve any employee, Subcontractor or agent furnished by CONTRACTOR and to refuse access to or require replacement of any personnel for cause based on, including but not limited to, professional, technical or training qualifications, quality of work or change in security status or non-compliance with the DIRECTOR’S REPRESENTATIVE’S security or other requirements. Such approval shall not relieve the CONTRACTOR of the obligation to perform all work in compliance with the Contract terms.
         5. Report to the DIRECTOR’S REPRESENTATIVE any situations or observations, which could adversely affect the safety of DIRECTOR’S REPRESENTATIVE’S staff, riding public or the operation of the elevator/escalator(s).
         6. As documented in the Maintenance Control Program submit a completed Preventive Maintenance Checklist (all items initialed, including all recommendations) “in layman’s terms” for each piece of equipment serviced at the end of each visit to the DIRECTOR’S REPRESENTATIVE or his assigned designee, for review prior to leaving the site. Should both the DIRECTOR’S REPRESENTATIVE and designee be unavailable, prior to leaving the site the CONTRACTOR shall submit the Preventive Maintenance Checklists via fax/e-mail to the DIRECTOR’S REPRESENTATIVE or his assigned designee within 24 hours of leaving the site. The mechanic must initial the “Elevator/Escalator Maintenance Logbook” for each maintenance task successfully completed. If a specific task is not applicable to a specific piece of equipment, note, “N/A” on the Checklist along with a written notation explaining the reason for the “N/A” entry. DIRECTOR’S REPRESENTATIVE assumes that all tasks not initialed, were not performed. The CONTRACTOR is required to provide written documentation describing why any task was not successfully performed. Successful completion/written documentation justifying non-performance for all tasks is required before invoices will be paid.
         7. CONTRACTOR shall submit to the DIRECTOR’S REPRESENTATIVE monthly reports listing all inspections, repairs, testing and callbacks, no later than five (5) business days after the end of each calendar month. DIRECTOR’S REPRESENTATIVE reserves the right to change the format as needed. No contract payment will be approved without completion of this requirement. As part of the monthly report, the CONTRACTOR shall submit a line graph that shows the trend in callbacks and juxtaposes it against industry standards.
         8. Repair any and all damage caused by CONTRACTOR to the building or property, to the satisfaction of the DIRECTOR’S REPRESENTATIVE.
         9. Upon request of the DIRECTOR’S REPRESENTATIVE, CONTRACTOR shall be available to review issues such as recent work performed, quality of work, performance, and outstanding deficiencies. The CONTRACTOR will not receive additional compensation to attend these meetings.
         10. The proper off-site disposal of all waste oil, empty containers and other waste material shall be the responsibility of the CONTRACTOR. CONTRACTOR is to provide to the DIRECTOR’S REPRESENTATIVE all Federal, State and Local documentation required (waste manifests, bills of lading, etc.) for disposal of any hazardous and/or regulated waste.
         11. Only one (1) elevator per bank shall be taken out of service at any one (1) time for regular maintenance, lubrication and servicing. The time of day that each elevator can be shut down for routine maintenance shall be scheduled with the DIRECTOR’S REPRESENTATIVE to minimize the disruption caused by the elevator down-time. The CONTRACTOR shall inform the DIRECTOR’S REPRESENTATIVE the reason(s) the elevator/escalator will be out of service and what time the elevator/escalator is expected to be put back in service for proper and safe operation. When an elevator/escalator is taken out of service for maintenance, a sign shall be placed at each opening stating, “This elevator/escalator is out of service, please use another elevator/escalator."
         12. The CONTRACTOR shall maintain on-site spare parts in order to minimize downtime for spare parts procurement. CONTRACTOR shall provide a metal storage cabinet in the machine room to store spare parts. A list of minimum spare parts to be stored on-site and have on-hand locally, or available within 24 hours, are listed in “Spare Parts List” (Exhibit C). The supply of spare parts should be sufficient for the full maintenance and expedient emergency repair of the elevator/escalator(s).
         13. The CONTRACTOR shall not remove operating components from active elevators/escalator(s) for the installation in non-functioning elevators/escalator(s) for the purpose of troubleshooting, unless pre-approved by the DIRECTOR’S REPRESENTATIVE.

1. MAINTENANCE REQUIREMENTS
   * + 1. WARRENTY FULL MAINTENANCE
          1. The contractor shall bi-weekly (every other week) examine, adjust, lubricate, clean, and when conditions warrant, repair or replace the following items and components thereof and all other mechanical or electrical equipment, including, but not limited to the following:

Elevators

Maintain the entire elevator system components not specifically excluded elsewhere by this specification. The following shall apply based on elevator type.

Traction Elevator Equipment: Entire machine, including housing, permanent magnet AC motor, sheave shaft and bearings, solid state VVVF drive, deflector sheave, sheave shaft and bearings, machine brake and brake assembly, emergency brake/rope brake and component parts.

Hydraulic Elevator Equipment: Entire hydraulic power unit including housing, pump, motor, valves, piping, pipe fittings/seals, muffler, belts and fluid.

Controller: All components including all relays, printed circuit boards, solid state starter, solid state components, resistors, condensers, transformers, leads, electrical timing devices, computer devices.

Car Positioning System: Encoder, tape, reader, and ancillary equipment.

Hoistway door interlocks, hoistway door hangers, hanger rollers, up-thrust rollers, tracks, bottom door gibs, and closers.

Hoistway limit switches, slowdown switches, leveling switches and associated cams and vanes.

Car and counterweight roller/slide guide assemblies complete.

Door operators including motors, operator linkage, door infrared protective devices, car hangers, hanger rollers, tracks, car door contact, and clutch.

Traveling cables, and elevator control wiring in hoistway and machine room.

Governor including governor sheave and shaft assembly bearings, contact jaw, over-speed switch, and governor tension assemblies.

Car safety mechanism and load weighing equipment.

Hoist cables, belts, governor cables. Including adjustment and shortening of same as required by code.

Car and counterweight buffers.

Fixture contacts, push buttons, key switches and locks, lamps and sockets of button stations (car and hall), hall lanterns, position indicators (car and hall), direction indicators, solid state components and LEDs.

The hydraulic cylinder head seals, packing and wiper rings. The entire piston assembly.

Shutoff and overspeed valve assemblies

Escalators

Maintain the entire escalator system components not specifically exclude elsewhere by this specification.

Entire machine, including housing, permanent magnet AC motor, sheave shaft and bearings, solid state VVVF drive, sprockets, machine brake and brake assembly, emergency brake and component parts.

Controller: All components including all relays, printed circuit boards, solid state starter, solid state components, resistors, condensers, transformers, leads, electrical timing devices, computer devices.

Steps and Step Chains, roller, guides tracks, combplates and associated equipment

Skirt panels, balustrades.

Operating, monitoring and safety devices, limit switches, safety switches, obstruction devices and associated cams and vanes.

Handrails, newels, handrail entry's, guides, belts and rollers

Fixture contacts, push buttons, key switches and locks, lamps indicators, solid state components, demarcation components and LEDs.

Safety, Caution and Operational Signage

General Operation condition.

* + - * 1. CONTRACTOR shall:

Elevators: Keep the guide rails free of rust. Renew guide shoe rollers as required to insure smooth and satisfactory operation. Contractor shall also examine and make necessary adjustment or repair to the following accessory equipment including re-lamping of signal equipment: hall stations, car stations, and direction indicators.

Escalators: Keep the equipment free of rust. Renew step, chain and handrail newel rollers as required to insure smooth and satisfactory operation. Contractor shall also examine and make necessary adjustment or repair to the following accessory equipment including re-lamping of signal equipment: hall stations, Escalator stations, and direction indicators.

* + - * 1. CONTRACTOR shall be responsible for keeping the exterior of the elevator/escalator machinery and any other parts of the equipment subject to rust, painted with heat resistant enamel and presentable at all times. The machine windings shall be treated as needed, with proper insulating compound as recommended by the machine manufacturer.
        2. Cleaning and refinishing interior of cars and exterior of elevator hoistway doors and frames and escalator panel finishes are excluded from this contract.
        3. Monthly Firefighters’ Recall Service: The following current adopted edition of the A17.1 Code test shall be performed monthly by the DIRECTOR’S REPRESENTATIVE:

Phase 1- EMERGENCY RECALL OPERATION: Initiate by inserting Firefighters’ key in Fire Recall switch at the designated level. Turn key to “ON” position. Wait for the for elevators to return to the designated level and their doors to fully open. If test is for Phase I only, turn key to “RESET” and then to “OFF” position and remove.

Phase 2 - EMERGENCY IN CAR OPERATION: Remove key from designated level Fire Recall switch while still in the “ON” position. In the elevator place Fire Operation key switch to “ON” position. Register at least one floor car. Doors should remain open. Press “Door Close” button and hold until doors are fully closed. When car stops at next floor doors shall remain closed. Press “Door Open” button and hold until doors are fully open. Place key switch to “HOLD” position. Try registering a car call. Car shall not respond. Return key to “OFF” position. Elevator will proceed to the designated level. Remove key, repeat for next elevator.

CLEAR: To clear fireman’s recall test, insert key into designated level key switch. Turn to “RESET” and then to “OFF” position and remove key.

* + - * 1. Correct any deficiencies found. CONTRACTOR shall be responsible for the correction of deficiencies. Monthly Firefighters’ Recall Logbook shall be available to elevator personnel and to the AHJ.
      1. ITEMS OF WARRANTY FULL MAINTENANCE WORK
         1. The Warranty Full maintenance specified herein is considered the minimum for all equipment. If specific equipment covered by this Contract requires additional preventive maintenance for safe, reliable operation, as specified by the manufacturer, the CONTRACTOR shall perform the required additional preventive maintenance without added cost to the DIRECTOR’S REPRESENTATIVE.
         2. The items listed below are all-inclusive with regards to the equipment. Covered elevators may be traction or hydraulic, passenger or freight, standard or machine room less configuration.
         3. Bi-Weekly (Every other week)

ELEVATOR)

Perform general inspection of machine, sheaves, and brake. Lubricate as required.

Perform general inspection of power units, piping and valves.

Ride car and observe operation of doors, leveling, reopening devices, pushbuttons, lights, etc.

Check door operation and reopening devices. Doors should open and close smoothly, quietly, and without slamming. Verify that door open speed is within installed specifications and door closing force does not exceed A17.1 code requirements. Inspect operator belt for wear and tension. Replace/adjust as necessary.

Check leveling operation. Clean and adjust leveling switches, hoistway vanes, magnets, and inductors. Repair and/or adjust for proper leveling.

Inspect interior of cab. Test telephone or intercommunication system, normal and emergency lights, fan, and emergency alarm. Make needed repairs.

Visually inspect controller. Verify cooling fan operation. Repair as necessary.

Replace all burned out lamps in elevator cars, machine room, and pit.

Replace any defective LED indicators in car operating panel and hall fixtures.

Remove litter, dust, oil, etc. from the machine room.

Clean car sills.

Clean hoistway sills.

ESCALATOR

Ride each escalator checking ride quality and observe operation.

Inspect for handrail slippage, cracking, or missing pieces.

Check step tread and combplate teeth and identify missing or broken teeth.

Verify skirt brushes are secure and not missing any sections.

Verify step and landing demarcation equipment is proper.

Inspect shirt and balustrade panels for damage, jagged or sharp edges.

Verify Operational and Caution signage is in good condition.

Perform repairs or replacements of any deficient items.

* + - * 1. Monthly

ELEVATOR

Perform Bi-Weekly checks.

Check car and hoistway doors. Clean, adjust and lubricate door tracks, hangers, up-thrust eccentrics, and door relating linkages. Check door gib chassis for tightness and gibs for proper sill clearance.

Check fire extinguisher for full charge. Report to DIRECTOR'S REPRESENTATIVE if charge is abnormal.

Perform general inspection of hydraulic power unit.

Check oil level in reservoir and empty drip pans.

Maintain machine room hydraulic oil log

Inspect and clean the car top.

Observe operation of signal and dispatching system.

Perform Firefighters' Service Phase I and limited floor Phase II check.

Clean machine room of all debris.

Clean pits of all debris.

Check cylinder head packing, seals and wiper ring for excessive seepage and replace as required.

Observe brake operation and adjust or repair if required.

ESCALATOR

Perform Bi-weekly checks.

Check chain oilers and reservoir oil levels.

Check step and chain rollers, tracks and guides.

Check settings of broken chain, step upthrust and skirt safety switches.

Verify running clearances and step gaps.

Verify handrail speed and entry devices are operational.

Verify operation of podium emergency stop and alarm.

Observe brake operation and adjust or repair if required.

Clean debris from machinery spaces.

Clean handrails of any oils or dust

Perform repairs or replacements of any deficient items.

* + - * 1. Quarterly

ELEVATOR

Perform Monthly checks.

Inspect all rope fastening. Clean governor and hoist ropes, lubricate hoist ropes if needed. Inspect all rope hitches and shackles and equalize rope tension.

Check adjustment of car and counterweight roller/slide guides.

Check interlocks. Adjust or repair if required.

Inspect governor rope tension sheave fastenings and adjust as necessary.

ESCALATOR

Perform Monthly checks.

Verify all escalator safety switches are operational and properly adjusted.

Check carriage tension.

Perform repairs or replacements of any deficient items.

* + - * 1. Semi-Annually

ELEVATOR

Perform Quarterly checks.

Check Controller. Clean with blower. Check all resistance tubes and grids. Check operation of overloads. Clean and inspect fuses and holders and all controller connections. Check terminal connections for tightness.

In hoistway examine guide rails, cams and fastenings. Inspect and test limit and terminals switches.

Clean all dirt, dust, and debris from sheaves, landing sills, bottom of platform, car tops, counterweights and hoistway walls.

Inspect sheaves to ensure they are tight on shafts. Sound spokes and rim with hammer for cracks.

Examine all hoist ropes for wear, lubrication, and tension. Replace, lubricate and adjust as required to meet code requirements.

Check hoistway tape hitches and broken tape switch.

Check car stile channels for bends or cracks of the car frame, cams, supports and car steadying plates.

Clean all parts of safeties and lubricate moving parts to assure their proper operation. Check and adjust clearance between safety jaws and guide rails. Visually inspect all safety parts.

Inspect machine, machine brake pads and disc, and drive sheave. Check for bearing wear. Inspect brake surface of emergency brake and clean deposits of brake pad powder. Ensure that faces of brake pads are parallel to hoist ropes.

Check oil level in car and counterweight oil buffers and add oil as required.

ESCALATOR

Perform Quarterly checks.

Remove steps and decking covers as need to provide complete truss inspection of tracks, steps, step chains, handrail guides.

Lubricate complete escalator system per manufacturer recommendations.

Vacuum handrail newels, interior truss and mechanical spaces

Perform repairs or replacements of any deficient items.

* + - * 1. Annually

ELEVATOR

Perform Semi-annual checks.

Thoroughly clean car and counterweight guide rails using a nonflammable or high flash point solvent to remove lint and dust. Vacuum down elevator hoistway.

Remove, clean and lubricate brake cores on machine brakes, clean brake pads. if necessary and inspect for wear. Adjust brake for proper operation.

Dispatching and group supervisory control system operations shall be checked. The systems, dispatching scheduling and emergency servicing shall be tested and adjusted in accordance with manufacturer’s literature. The CONTRACTOR shall prove to the satisfaction of the DIRECTOR’S REPRESENTATIVE that the system functions properly. Checking out of the group supervisory system shall be performed during other than normal working hours with no inconvenience to the using public.

Additionally, car speeds shall be checked, and adjusted, to maintain contract speed. A report covering time intervals, dispatch times on various programs, door standing time and door opening and closing speeds, and car speeds shall be furnished to the DIRECTOR’S REPRESENTATIVE. CONTRACTOR shall be responsible to correct any and all deviations from specified operations.

Follow machine manufacturer’s recommendation regarding type of grease to be used for the machine bearings. (If applicable).

Perform ALL manufacturer recommended and ASME A17.1 Category 1 Annual Testing requirements in the presence of a Qualified Elevator Inspector (QEI). Annual testing shall be conducted within 30-days of the completion of the Warranty Full Maintenance period.

ESCALATOR

Perform Semi-annual checks.

Remove a minimum of 50% of the steps and clean interior truss and incline pan of oil and debris.

Check structural condition of steps.

Perform Load-gap and Step/Skirt performance index testing.

Preform ALL manufacturer recommended and ASME A17.1 Category 1 Annual Testing requirements in the presence of a Qualified Elevator Inspector (QEI). Annual testing shall be conducted within 30-days of the completion of the Warranty Full Maintenance period

1. EXHIBITS
   * + 1. GENERAL
          1. The exhibits below shall be considered part of this elevator/escalator maintenance agreement.

EXHIBIT A - EQUIPMENT TO BE MAINTAINED.

EXHIBIT B - CHARGEABLE BILLING PER CONTRACT TERMS.

EXHIBIT C – SPARE PARTS LIST

**EXHIBIT A**

**EQUIPMENT TO BE MAINTAINED**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Building | Elevator(s)  Escalator(s) | Description | Elevator Type | Capacity | Speed | No. of Floors | Controller |
| ( )  Building | ( ) | ( ) | ( ) | ( ) | ( ) | ( ) | ( ) |
| ( ) Building | ( ) | ( ) | ( ) | ( ) | ( ) | ( ) | ( ) |
| ( ) Building | ( ) | ( ) | ( ) | ( ) | ( ) | ( ) | ( ) |

**EXHIBIT B**

**CHARGEABLE BILLING PER CONTRACT TERMS**

Contractor: Building:

Contract No.: Elevator No:

Proposal No.: Date of Service:

Invoice No.: Day of Service:

Description of Work:

Explanation why work is not covered under contract:

**LABOR COST**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Worker Description | Time Arrived | Time Job Completed | Hours | Cost |
| Mechanic |  |  |  |  |
| Helper |  |  |  |  |
| OT Mechanic |  |  |  |  |
| OT Helper |  |  |  |  |
| **Total:** | | | |  |

**MATERIALS COST**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Item | Quantity | Cost Per Unit | % Mark-Up | Total Cost |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| **Total:** | | | |  |

**EXHIBT C**

**SPARE PARTS LIST**

* + - * 1. The CONTRACTOR shall maintain on-site, as a minimum, the following replacement

parts:

ELEVATOR

Five (5) fuses of each size, type, and current rating

Adequate supply of replacement LED lamps

Four (4) each type of car and hoistway door hanger rollers

One (1) each type hoistway door interlock assembly, complete

One (1) infrared door detector, receiver, and transmitter along with associated

cables

One (1) set of rollers for car and counterweight roller guide assemblies

One (1) plug-in relay for each type used

Two (2) replacement LED lamps for cab lights

ESCALATOR

Five (5) fuses of each size, type, and current rating

Adequate supply of replacement demarcation LED lamps and/or inserts

Ten (10) each type of step roller and step chain roller.

Ten (10) each type of combplate.

Ten (10) each type of operational and caution signage.

Five (5) each type of safety activated switch assemble.

Five (5) each type of plug-in relay.

Two (5) each type of step.

Two (2) sets of skirt brushes.

* + - * 1. The CONTRACTOR shall warehouse at its local office or have available within 24 hours of need, the following replacements parts as applicable to maintained equipment:

Door operator motor

Door clutch

Printed circuit boards each type used, including power supplies

Printed circuit boards for signal fixtures

Transformers for each type and size used

VVVF Drive

* + - * 1. The CONTRACTOR shall warehouse at its local office or have available within 14-days of need, the following replacements parts:

Handrails

Step Chains

* + - * 1. All spare parts shall be on site no later than 30 calendar days prior to start of Warranty Full Maintenance.

END OF SECTION 142101