

**2 DESCRIPTION OF SERVICES/COMMODITIES****2.1 Scope**

- A. Proposer acknowledges that Monona Terrace Community & Convention Center (hereafter Monona Terrace) and the City of Madison (owner) are seeking Proposals for professional expertise in performing proactive, predictive and preventive Complete Maintenance on their portfolio of elevators and escalators (hereafter conveyances). The terms Proposer, Contractor, and Elevator Service Provider are interchangeable, and any reference to specification requirements shall be met by Proposer.
- B. This service is intended to advance safe operation of the Conveyances, to minimize the probability of accidents, to promote the efficient, reliable operation and performance of the equipment, to minimize shutdowns and the disruption of service, to ensure that elevator/escalator safety code requirements are met or exceeded, and to maximize usage of the Conveyances and extend equipment life, through a systematic and documented maintenance control program (MCP).
- C. Proposer shall deliver monthly Complete Maintenance service on all elevators and bimonthly on all escalators, meeting the General and Technical Specifications at a minimum, and tailored to each unit's specific requirements.

**2.2 Location, Contact, And Equipment**

- A. Monona Terrace is located at 1 John Nolan Dr, Madison, Wisconsin.
- B. Michael Waters, Building Maintenance Supervisor, can be reached at 608-261-4154 or [mwaters@mononaterrace.com](mailto:mwaters@mononaterrace.com).
- C. A listing of the Conveyances is provided in Attachment A as a convenience to Proposers, who are responsible for verifying the accuracy of the information in Attachment A.

**2.3 Working Hours**

- A. Scheduled elevator and escalator maintenance is to be performed during regular working hours of International Union of Elevator Contractors regular working days, hereby designated as 7:00 A.M. to 3:30 P.M. Monday-Friday.
- B. Callback service during regular working hours is included.
- C. Preventive maintenance shall be scheduled with the Monona Terrace designated representative.

**2.4 Contract Proposals and Term**

- A. Monona Terrace retains the right to award the elevator and escalator maintenance to different vendors.
- B. The contract term will be for two years. Each contract may be renewed for up to three additional one-year periods by mutual agreement of both parties. Subsequent contracts, if renewed, will be enforced under the same terms and conditions of the original Proposal.
- C. Vendor performance will be taken into consideration in the decision to continue into each of the optional periods or to terminate the elevator and/or escalator contracts.



- D. Upon expiration of the initial term or subsequent one-year renewal(s), this contract will remain in full force and effect on a month-to-month basis, and Monona Terrace or Elevator Service Provider shall give written notification of intent to end contract at least thirty (30) days prior to termination.

## 2.5 Contract Cancellation

- A. Monona Terrace or the City of Madison may terminate the Contract(s) with written notice if they determine the level of service is not acceptable, if recurring service problems exist, or if the Contractor materially fails to perform any of the obligations under this Agreement or Elevator Code. Monona Terrace shall be the sole judge of compliance.
- B. Monona Terrace may also terminate the Contract(s) with written notice should the Periodic Tests required by the SPS 318 Elevator Code and the Technical Specification be past the due date, or for failure to promptly correct elevator inspection violations resulting from the Periodic (annual) elevator inspections or consultant's deficiency list by the Compliance Date.

## 2.6 Other Equipment or Services

- A. This Contract may be amended by the City of Madison to add or delete elevator equipment (conveyances) due to occupancy, modernization, or for any other reason.
- B. Equipment additions and deletions and the corresponding price adjustments to this Contract shall be documented by means of Attachment B: Maintenance Agreement Addendum.
- C. Monona Terrace may amend this Contract to include additional services on the Attachment A conveyances that are provided by Contractor on an as-needed basis throughout the term of the Contract, at additional cost to Monona Terrace.
- D. Monona Terrace reserves the right to solicit proposals and to hire other Contractors to perform work on conveyances that are not covered under this Contract, such as, but not limited to, modernization, upgrades, repairs, or non-covered labor or replacement parts. Monona Terrace also reserves the right to hire other Contractors for the installation or maintenance of new, modernized, or acquired equipment.

## 2.7 Omissions

- A. Any items omitted from the Technical Specification or General and Special Conditions that are reasonably considered to be necessary for the completion of 'Complete Maintenance' service shall be construed to be a part of this section, even if not directly referenced or specified.

## 2.8 Site Inspections

- A. Proposers have the opportunity to examine each Conveyance to determine the condition of the equipment and the accuracy of the information shown in Attachment A prior to submitting a proposal. If a proposer wishes to have a site inspection, please contact Michael Waters for a suitable time.
- B. By submitting a proposal, Contractor acknowledges and fully understands there will be no recourse for negligence or oversight for not examining the equipment and that no adjustments to the proposal price will be permitted.

## 2.9 Qualifications

- A. Proposer shall be competent and experienced in the field of elevator maintenance with a minimum of five (5) years prior experience on equivalent or more complex mid-rise electric elevators, and shall presently service comparable geared traction and hydraulic equipment.



- B. Proposer bears complete responsibility for their employees obtaining the elevator mechanic credential, and shall also maintain the required WI Elevator Contractors' license in good standing.
- C. Proposer shall maintain a local service office within 15 miles of the City of Madison and demonstrate the ability to consistently meet the callback response times required in the Special Conditions.
- D. Contractor shall have a sufficient quantity of competent elevator mechanics on call in order to respond to callback service requests within one hour of receipt of call and to respond to simultaneous requests for service (callbacks).

#### 2.10 Personnel

- A. All elevator maintenance and repair work shall be performed by qualified personnel supervised by Contractor. Subcontracting or assignment of maintenance responsibilities is not permitted without the advance authorization of the Monona Terrace or City of Madison representative.
- B. Such personnel must have been trained in the construction, maintenance, repair, inspection, or testing of the equipment on which they will be working. Contractor agrees to provide sufficient workers, equipment and materials for prompt and diligent execution of the work. The Contractor work force shall be equipped with the skills, tools and equipment, supplies, ongoing training to maintain and improve skills, and sufficiently equipped to properly troubleshoot and repair the elevators, all at no additional cost to the Owner.
- C. Apprentices and Temporary Mechanics (hereafter TM) can be assigned maintenance and repair work only with advance notification to Monona Terrace. The use of an Apprentice or Helper shall be under the direct supervision of a qualified elevator mechanic.
- D. If the assigned personnel do not meet the qualifications and/or do not perform satisfactorily then Monona Terrace can make reasonable requests to the Contractor to remove and assign qualified replacement personnel.
- E. Contractor shall provide personnel that use reasonable care in the performance of Elevator Maintenance Service. Contractor shall make reasonable efforts to ensure that personnel will work in harmony with Building Management and others.

#### 2.11 Security Procedures

- A. Proposer employees shall comply with all new or existing security procedures, background checks, reasonable sign-in and sign-out procedures, etc.

#### 2.12 Notification and Procedures

- A. Mandatory procedures: Proposers employees shall check in with Building Maintenance Supervisor or other designated contact upon arrival each time on site to be made aware of any reported problems that require immediate action and to schedule equipment out of service. Before leaving the premises, they must check out and advise of corrective actions taken or any work in progress.
- B. All regular and overtime Elevator Maintenance time shall be documented by a records management system. Billable special repairs and callbacks require that a physical time ticket shall be furnished at the time of each special repair or callback documenting labor hours on site, travel time, and parts used. Regular maintenance shall be documented by either time tickets or an internet-based records management system. The records management system shall be in addition to the required maintenance records in the machine rooms.



- C. Contractor shall schedule and coordinate the temporary removal of equipment from service for testing or other procedures 48 hours in advance with the Monona Terrace representative or designated representative whenever possible in order to minimize the disruption to normal building operations. Suitable barricades and signage acceptable to Monona Terrace shall be posted by Contractor where requested by the Monona Terrace representative, advising building occupants that a conveyance is out of service.
- D. Monona Terrace will provide for parking one vehicle in most instances. The Contractor will need to call to confirm this prior to each time visiting.

#### 2.13 Billing Procedures

- A. Proposal pricing shall remain fixed for the first two years of the contract. All transportation and travel charges shall be incorporated in the Proposal for regular time callbacks or service.
- B. All invoices shall comply with the pricing and markups established by this specification and Proposal.
- C. An original invoice shall be submitted each quarter. The invoicing format shall be subject to change at any time as subsequently requested by Monona Terrace or the City of Madison.
- D. Maintenance may be billed in advance on a quarterly basis, and invoiced on the first day of the quarterly period beginning on May 1, 2016.
- E. All invoices must be itemized and contain the following information:
  - 1. Contractor's name
  - 2. Remit to address
  - 3. Monona Terrace Purchase Order number
  - 4. The account name, building Elevator or escalator reference number, DSPS State Registration Tag Number, and Regulated Object ID number on which the work was performed
  - 5. Time period of the services invoiced
  - 6. Price per the contract, itemized so that the service and cost can be readily identified as being a part of this Contract
- F. All invoices for Other billable services, including callbacks or non-covered repairs must specify the following:
  - 1. Date of service, time of arrival and departure
  - 2. A complete description of the services provided
  - 3. A complete breakdown of number of labor hours
  - 4. The applicable hourly labor rate(s)
  - 5. Individual parts prices and manufacturer's part number
  - 6. Copy of invoice(s) for replacement parts and materials
  - 7. Copy of invoice(s) for equipment rental charges and markup (if applicable)
  - 8. Copy of subcontractor's invoice (if applicable). Note: no markup allowed
  - 9. Name Monona Terrace representative that authorized the service
- G. Only properly submitted invoices will be processed for payment. Any invoice failing to comply with these provisions may be returned for correction and reissue.
- H. Monona Terrace shall not be responsible for paying any general charges, including but not limited to 'sundries', 'miscellaneous parts charge' or transportation, fuel, or other surcharges.



- I. An electronic copy of the Proposers time ticket shall be provided within 48 hours of each special, callback or repair service to match up with the subsequent invoice.
- J. Overtime is generally not included and any billable overtime must be expressly authorized in advance by the designated Monona Terrace representative. It is agreed that charges for unauthorized overtime will not be considered legitimate and may not be paid.
- K. Contractor shall provide an electronic report on approximately the first of each month of all callbacks taking place the prior month. Report may be delivered to the designated Monona Terrace representative by email or fax. Printouts shall contain detailed callback information, repairs, testing, and entrapments. If Contractor has callback reports available via an internet records management system, Contractor shall set up the quarterly reporting upon request.

2.14 Complete Maintenance with 8 Hour Callback Coverage

- A. All conveyances are under Complete Maintenance Service
- B. Callbacks (requests for service) during regular working hours are included, except for Section 3.22 Excluded Work.

2.15 Semiannual Performance Review

- A. The Proposers Maintenance Supervisor and Sales Representative shall meet with the designated Monona Terrace representatives collectively every six months, or more frequently upon request.
- B. Contractor shall present a maintenance records summary report for review and discussion at each meeting. Reports shall include an analysis of callbacks and a summary of hours worked per building for various time periods. Meeting discussion shall identify performance trends, promote feedback on performance, discuss scheduling pending preventive maintenance tasks, and review any outstanding recommendations or proposals.
- C. The format and content of the report shall be subject to the approval of Monona Terrace.
- D. Recommendations made by Contractor shall be followed up with written proposals where appropriate, and submitted on a timely basis.
- E. It is Proposer's obligation to schedule the semiannual meetings.

2.16 Maintenance Documentation

- A. All regular and overtime Elevator Maintenance shall be documented by a records management system.
- B. Billable special repairs and callbacks require a physical time ticket documenting labor hours on site, travel time, and parts used, and shall be furnished at the time of each special repair or callback.
- C. Regular maintenance shall be documented by either time tickets or an internet-based records management system. The records management system shall be in addition to the required maintenance records in the machine rooms. Access shall be provided to Monona Terrace representatives and Owner's Consultant.

2.17 Required On-Site Documentation

Compliance with ASME A17.1-2013 Req. 8.6.1.2.2 On-Site Documentation is the sole responsibility of the Elevator Service Provider. Failure to comply with requirements defined in this specification and ASME



A17.1-2013 as determined solely by Monona Terrace, shall be construed as failure to perform services required by this Agreement.

- A. On-site Documentation shall be written and permanently kept on-site and available to the specified personnel.
- B. Procedures for inspections and tests not described in ASME A17.2 and unique procedures or methods required for elevator personnel.
- C. Written checkout procedures per Req. 8.6.1.2.2(c).
- D. It is stipulated that all on-site documentation shall become the property of Monona Terrace. The expiration or termination of the maintenance agreement does not allow the Elevator Service Provider to remove any on-site records.

## 2.18 Required On-Site Maintenance Records

- A. Compliance with ASME A17.1-2013 Req. 8.6.1.4.1 On-Site Maintenance Records is the sole responsibility of the Elevator Service Provider.
  - 1. Records shall be kept on-site for immediate viewing by elevator personnel in hard copy or in electronic format including the requirements of 8.6.1.4.1 as clarified by this specification.
  - 2. If in hard copy, keep in the machine room for each elevator and in an agreed upon location for the escalator records.
  - 3. If in electronic format, Elevator Service Provider shall have any equipment required available for immediate viewing of electronic records in each machine room without password restricted access. Electronic escalator records, if provided, shall be retained in an agreed upon location for the Instruction for immediate viewing. Instructions shall be posted on the controller.
- B. Maintenance Control Program Records shall document compliance with the maintenance tasks listed in the MCP, other tests, examinations and adjustments, and the specified scheduled intervals based on 8.6.1.2.1(e) shall be identified, published, and met.
  - 1. A unique maintenance checklist subject to approval by Monona Terrace shall be kept in each machine room or control room.
  - 2. Maintenance records shall be kept up to date, retained, and archived in the elevator machine room or control room, and made readily available to Monona Terrace and elevator inspectors or consultants at all times without charge.
  - 3. Maintenance records in each machine or control room shall include the following activities at a minimum:
    - 4. Description of maintenance task performed, mechanic name and dates;
    - 5. Description and dates of examinations, tests, adjustments, repairs, and replacements;
    - 6. Description and dates of callbacks or reports that are reported to elevator personnel by any means, including corrective action taken.
    - 7. A minimum quarterly record of elevator telephone, alarm operation, emergency lighting, and door restrictor testing shall be included on the maintenance checklist.
    - 8. Copies of all test reports
    - 9. Copies of the periodic (annual) inspection reports and re-inspection reports
- C. Repair and Replacement Records. The record of repair and replacement records shall be included in the on-site maintenance record.



### 3 TECHNICAL SPECIFICATIONS

#### 3.1 General

- A. Contractor shall at the prescribed time interval at a minimum: examine, lubricate, perform adjustments, clean, paint, test, all conveyances, and shall repair or replace all worn or defective components due to ordinary wear.
- B. Shutdowns for callbacks and entrapments shall be minimized. Verifiable shutdown frequency shall be maintained at an average of three per unit or less over any 12 month interval.
- C. Since all conveyances are on Complete Maintenance, Contractor shall absorb the cost of callbacks during regular working hours, except Section 3.22 Excluded Work.
- D. All work shall be performed promptly, completely, in a competent manner, free of defects, in conformance with good industry standards and practices, and shall conform to the original manufacturer's specifications.
- E. The Contractor shall furnish all trained personnel, tools and equipment; diagnostic and troubleshooting hardware, software, and technical product manuals; software including archiving, updating, and replacement; lubricants, cleaning fluids and cleaning supplies; employee safety equipment and training; supervision, and other items required to perform work, whether or not expressly stated.

#### 3.2 Code Requirements

- A. All work shall comply with the Elevator Codes in effect, currently the Wisconsin Administrative Code Chapter SPS 318 effective 9/1/2014 and ASME A17.1-2013 and their successor Codes when adopted in Wisconsin during the term of this Contract. Maintenance and testing services shall also comply with the A17.2 - 2012 Guide for Inspection of Elevators, Escalators, and Moving Walks, the ADAAG Americans with Disabilities Act Accessibility Guidelines, and the NFPA 70 National Electrical Code and NFPA 72 National Fire Alarm Code edition in effect at the time of installation or alteration.
- B. Section 8.6 of the ASME A17.1-2013 Safety Code for Elevators and Escalators is designated as the minimum standard for Maintenance, Repair, and Replacement on all conveyances, which shall be maintained in accordance with Section 8.6.1 through 8.6.11.
- C. Contractor shall apply for any permits necessary for covered work and shall pay those permit and inspection fees, except for the periodic (annual) inspections, which will be paid by Monona Terrace. Reinspection fees due to deficiencies that are the responsibility of Contractor per terms of this MCP shall be paid by Contractor.
- D. Contractor shall acquire, pay for, and maintain any licenses currently or subsequently required for the company or their employees during the term of this Agreement, and keep them in good standing and effect for the duration of the Elevator Maintenance Services Contract.

#### 3.3 Elevator Maintenance Tasks (Minimum Frequency In Parenthesis)

##### A. General Maintenance Procedures

- 1. At the minimum monthly frequency, ride each elevator and perform a general safety inspection, checking initial floor stops in both directions of travel, releveing, door operation, ride quality, and make adjustments as required for consistent and smooth operation. (Each monthly inspection)



- D. Callback Records: Contractor is required to keep all maintenance records, including reported trouble, dates, time, and corrective action(s) taken that are reported by any means to elevator personnel.
- E. Maintenance records shall be kept up to date, retained, and archived in the elevator machine room or control room, and made readily available to Monona Terrace and elevator inspectors or consultants at all times without charge. All maintenance records shall be the property of Monona Terrace. The expiration or termination of the maintenance agreement does not allow Contractor to remove any maintenance records.
- F. Record of Hydraulic Oil. A written record shall be kept accessible in the machine room of all hydraulic elevators, documenting the quantity of hydraulic fluid added to the system and emptied from leakage collection containers and pans.
1. Elevator Service Provider shall be solely responsible for compliance with the provisions of ASME A17.1-2013 Requirement 8.6.5.7, and SPS 318,1708 (2)(g) and recording oil level on a quarterly basis at a minimum. Copies shall be made available to Monona Terrace without charge, as requested.
  2. When hydraulic fluid loss cannot be accounted for, subsequent elevator testing required by Elevator Code shall be conducted without additional cost to Monona Terrace.
- G. Firefighters' Emergency Operation - The quarterly Firefighters' Operation exercise required by ASME A17.1-2013 Requirements 8.6.1.4.1(c)(2) and 8.6.11.1 shall be the responsibility of the Elevator Service Provider.
1. Firefighters' Operation shall be exercised on regular time quarterly (once each 3 months) at a minimum on all applicable units (exceptions noted above) and findings documented in the machine room, with the cost included in the Proposal.
  2. Elevator Service Provider shall also remain responsible for performing the Category 1 test of Firefighters' Operation.

Each Periodic Test shall be documented by a metal test tag on the controller with specific Code reference, and on City of Madison Fire Department test reports available on site.

#### 2.19 Management Audits

- A. Contractor shall perform audits of the elevators and escalators by supervisory personnel to ensure compliance with the requirements of the Technical Specification, and share the written audit results with Monona Terrace.
- B. At least 50% of the conveyances shall be audited in the first 12 months, with the remaining 50% in the subsequent 12 months.

#### 2.20 Written Reports

- A. Contractor shall at any time during the term of this contract, upon the request of Monona Terrace or the City of Madison:
1. Provide a report of inspections, repairs, callbacks, or replacements made by Contractor, itemized as to parts installed or services performed.
  2. Provide an account of reported incidents or accidents investigated by Contractor.
  3. Provide prompt written recommendations and pricing for elevator repairs or upgrades.



2. At the minimum monthly frequency, inspect signal fixtures, including position indicators, call registration pushbuttons, car or hall lanterns, and the operation of all accessibility devices required by ICC/ANSI A117.1, SPS 69, ADAAG 4.10, and ADAAG 4.13. Make adjustments, repairs, replacements or other corrections. (Each monthly inspection)
  3. Firefighters' service operation shall be exercised quarterly on all applicable units and the findings documented in the machine room or control room. (Quarterly)
- B. Machine Rooms - Maintain elevator machine rooms, including controllers and power units.
1. Maintain or renew hydraulic power units and components, including control valves and manifolds, O-rings and gaskets, strainers, springs, pumps, motors, V-belts, mufflers and sound isolation couplings, hoses, shutoff valves, pipe or pressure line and fittings, power unit reservoir, etc. for proper operation and to prevent leakage, which shall not be permitted to accumulate. (Semiannual)
  2. Maintain controllers, selectors, and dispatching equipment per equipment manufacturer's specifications, renew worn or defective components. Disassemble, clean, and adjust power contactors and other relays or components, and proactively replace worn, burned, or defective contacts, shunts or leads, arc shields, fuses, relays, coils, springs, cams, resistors, switches, transformers, transducers, condensers, power supplies, amplifiers, dashpots, timing devices, overloads, rectifiers, wiring, printed circuit boards and connectors, other solid state or electronic components, or any other devices as required. Severe arcing shall be corrected. Temporary wiring shall not be used. Renew all controller fans and air filters. Clean controller cabinet, install covers. Replacements for all fuses and controller contacts shall be available in the machine room or company vehicle. (Bimonthly)
  3. Verify the operation of group or supervisory systems and make adjustments as required at intervals to insure all circuits and settings are properly adjusted to minimize control system response time for car and hall calls. (Semiannual)
  4. Machine and control rooms shall be kept clean, floors painted, and trash and debris removed. All covers and labeling shall be in place. Replacement parts shall be provided and organized. (Semiannual)
  5. Callback service and repairs necessary during regular working hours should the elevators fail to function properly after Monona Terrace's testing of emergency power systems, is included at no additional cost. (Upon request)
  6. Contractor shall monitor and maintain the hydraulic fluid level in the power unit reservoir (Quarterly). Contractor shall immediately investigate and correct any loss of hydraulic fluid. Loss of hydraulic fluid that cannot be accounted for shall result in Contractor removing the equipment from service and promptly conducting leak down and pressure tests as specified in ASME A17.1-2013, Req 8.11.3.2 at no additional cost to Monona Terrace.
- C. Pits
1. Maintain and renew equipment in elevator pits, including spring buffers, limit and leveling switches, traveling cables and attachments, selector tape and accessories, steel tapes, guides and fastenings, etc. (Quarterly)
  2. Bottom of car equipment shall be examined, cleaned, and lubricated where required including roller or sliding guides and under car light and receptacles, where provided. (Quarterly)



### 3 TECHNICAL SPECIFICATIONS

#### 3.1 General

- A. Contractor shall at the prescribed time interval at a minimum: examine, lubricate, perform adjustments, clean, paint, test, all conveyances, and shall repair or replace all worn or defective components due to ordinary wear.
- B. Shutdowns for callbacks and entrapments shall be minimized. Verifiable shutdown frequency shall be maintained at an average of three per unit or less over any 12 month interval.
- C. Since all conveyances are on Complete Maintenance, Contractor shall absorb the cost of callbacks during regular working hours, except Section 3.22 Excluded Work.
- D. All work shall be performed promptly, completely, in a competent manner, free of defects, in conformance with good industry standards and practices, and shall conform to the original manufacturer's specifications.
- E. The Contractor shall furnish all trained personnel, tools and equipment; diagnostic and troubleshooting hardware, software, and technical product manuals; software including archiving, updating, and replacement; lubricants, cleaning fluids and cleaning supplies; employee safety equipment and training; supervision, and other items required to perform work, whether or not expressly stated.

#### 3.2 Code Requirements

- A. All work shall comply with the Elevator Codes in effect, currently the Wisconsin Administrative Code Chapter SPS 318 effective 9/1/2014 and ASME A17.1-2013 and their successor Codes when adopted in Wisconsin during the term of this Contract. Maintenance and testing services shall also comply with the A17.2 - 2012 Guide for Inspection of Elevators, Escalators, and Moving Walks, the ADAAG Americans with Disabilities Act Accessibility Guidelines, and the NFPA 70 National Electrical Code and NFPA 72 National Fire Alarm Code edition in effect at the time of installation or alteration.
- B. Section 8.6 of the ASME A17.1-2013 Safety Code for Elevators and Escalators is designated as the minimum standard for Maintenance, Repair, and Replacement on all conveyances, which shall be maintained in accordance with Section 8.6.1 through 8.6.11.
- C. Contractor shall apply for any permits necessary for covered work and shall pay those permit and inspection fees, except for the periodic (annual) inspections, which will be paid by Monona Terrace. Reinspection fees due to deficiencies that are the responsibility of Contractor per terms of this MCP shall be paid by Contractor.
- D. Contractor shall acquire, pay for, and maintain any licenses currently or subsequently required for the company or their employees during the term of this Agreement, and keep them in good standing and effect for the duration of the Elevator Maintenance Services Contract.

#### 3.3 Elevator Maintenance Tasks (Minimum Frequency In Parenthesis)

##### A. General Maintenance Procedures

- 1. At the minimum monthly frequency, ride each elevator and perform a general safety inspection, checking initial floor stops in both directions of travel, releveling, door operation, ride quality, and make adjustments as required for consistent and smooth operation. (Each monthly inspection)



2. At the minimum monthly frequency, inspect signal fixtures, including position indicators, call registration pushbuttons, car or hall lanterns, and the operation of all accessibility devices required by ICC/ANSI A117.1, SPS 69, ADAAG 4.10, and ADAAG 4.13. Make adjustments, repairs, replacements or other corrections. (Each monthly inspection)
  3. Firefighters' service operation shall be exercised quarterly on all applicable units and the findings documented in the machine room or control room. (Quarterly)
- B. Machine Rooms - Maintain elevator machine rooms, including controllers and power units.
1. Maintain or renew hydraulic power units and components, including control valves and manifolds, O-rings and gaskets, strainers, springs, pumps, motors, V-belts, mufflers and sound isolation couplings, hoses, shutoff valves, pipe or pressure line and fittings, power unit reservoir, etc. for proper operation and to prevent leakage, which shall not be permitted to accumulate. (Semiannual)
  2. Maintain controllers, selectors, and dispatching equipment per equipment manufacturer's specifications, renew worn or defective components. Disassemble, clean, and adjust power contactors and other relays or components, and proactively replace worn, burned, or defective contacts, shunts or leads, arc shields, fuses, relays, coils, springs, cams, resistors, switches, transformers, transducers, condensers, power supplies, amplifiers, dashpots, timing devices, overloads, rectifiers, wiring, printed circuit boards and connectors, other solid state or electronic components, or any other devices as required. Severe arcing shall be corrected. Temporary wiring shall not be used. Renew all controller fans and air filters. Clean controller cabinet, install covers. Replacements for all fuses and controller contacts shall be available in the machine room or company vehicle. (Bimonthly)
  3. Verify the operation of group or supervisory systems and make adjustments as required at intervals to insure all circuits and settings are properly adjusted to minimize control system response time for car and hall calls. (Semiannual)
  4. Machine and control rooms shall be kept clean, floors painted, and trash and debris removed. All covers and labeling shall be in place. Replacement parts shall be provided and organized. (Semiannual)
  5. Callback service and repairs necessary during regular working hours should the elevators fail to function properly after Monona Terrace's testing of emergency power systems, is included at no additional cost. (Upon request)
  6. Contractor shall monitor and maintain the hydraulic fluid level in the power unit reservoir (Quarterly). Contractor shall immediately investigate and correct any loss of hydraulic fluid. Loss of hydraulic fluid that cannot be accounted for shall result in Contractor removing the equipment from service and promptly conducting leak down and pressure tests as specified in ASME A17.1-2013, Req 8.11.3.2 at no additional cost to Monona Terrace.
- C. Pits
1. Maintain and renew equipment in elevator pits, including spring buffers, limit and leveling switches, traveling cables and attachments, selector tape and accessories, steel tapes, guides and fastenings, etc. (Quarterly)
  2. Bottom of car equipment shall be examined, cleaned, and lubricated where required including roller or sliding guides and under car light and receptacles, where provided. (Quarterly)



3. Pits shall be kept clean of all accumulated dirt, grease, lint, trash, debris, etc., and shall not be used for storage. (Quarterly)
4. Monitor and renew plunger jack packings and seals and means to collect leakage. The jack packing gland or drip ring shall be kept clear of foreign matter. Excessive jack packing leakage shall be corrected and packings or seals, guide bearings, packing glands, pressure line fittings, seals, or gaskets, synchronization ropes or sheaves, and exposed piping, renewed. (Semiannual)
5. Maintain automatic oil return systems, where provided; keep in working order and renew or replace with closed container not exceeding 5 gallons upon failure. (Semiannual)

D. Cars

1. Stopping accuracy shall be monitored and maintained at plus or minus 1/4", regardless of load conditions. (Monthly) Button lamps in the same car or hall station shall be of the same color and brightness, and pushbutton and position indicator lamps must illuminate brightly enough to be readily detected by passengers. (Bimonthly)
2. Regularly test, renew, and keep the elevator communications system in working order, including renewing hands-free elevator telephones, intercoms in car enclosures, alarm buttons, and all associated wiring back to the elevator controllers. Document regular
3. Inspect and repair or replace all worn, damaged, or missing signal fixtures and components in car including but not limited to buttons, lenses, arrows, button caps and inserts, Braille, lamps and LED's, lenses, jewels, key switches, key bezels or collars, and audible signals. testing on maintenance check chart. (Quarterly)
4. Batteries for emergency lighting, emergency lowering, telephone, processors, or other batteries shall be examined and inspected, circuits tested and charger output recorded. Maintain and renew batteries, battery chargers, monitors, and all other components as required. (Quarterly)
5. Maintain car ventilation, handrail fastenings, and emergency lighting. (Quarterly)
6. Maintain all door operator equipment, door reopening devices, keep car door operation adjusted for optimum performance. Ensure that door closing kinetic energy, door closing speeds, and closing force are maintained within Code requirements including on Firefighters' Operation. (Quarterly)

E. Car Tops, and Hoistways

1. Maintain cars and hoistways including guide rails, pits, car tops, and equipment in these areas in a consistently clean condition. (Quarterly)
2. Keep hoistways clean of all accumulated dirt, grease, dust, etc., including divider beams, ledges, landing sills, fascia, and headers. Contractor shall maintain hoistway cleanliness throughout the year. Keep the car guide rails clean of lint and lubricant free, or where sliding type guide shoes are used, properly lubricated without excess lubricant. (Quarterly)
3. Clean top of car, check, adjust, and renew all devices, including roller or slide guides, switches, top of car lights and receptacles, inspection station, selectors and tape readers, fans and blowers, cab stabilizers, etc. Maintain emergency car exits in closed position,



locked from the car top. Car tops shall be kept free of oil, dirt, and rubbish, and shall not be used for storing lubricants, spare parts, tools, or other items. (Quarterly)

4. Maintain and renew all landing and car door or gate components to ensure both the safe operation and the smooth and quiet door performance. Maintain the clearances between door panels, door frames, hoistway enclosure, and sills. Maintain and renew car and/or hoistway door restrictors and safety retainers and secondary retainers. Clean, lubricate, adjust, and where required, renew all components for door operators, car and hoistway door hangars, car door clutch, interlocks, closers, relating cables, drive arms and linkages, belts, chains, brushes, cams, switches, sprockets, rollers, upthrusts, gibs, hangars and hangar tracks, hoistway door astragals, non-vision wings, door reopening devices, and car gate switches. (Quarterly)

F. Outside Hoistway

1. Inspect lobby call stations and repair or replace all worn, damaged, or missing components including, but not limited to buttons, button caps and inserts, lamps and LED's, jewels, key switches, and key bezels or collars. Lamps in the same hall stations at a landing shall be of the same color and brightness. (Bimonthly)
2. Renew devices in lobby position indicators including lenses, digital display and drivers. (Quarterly)
3. Devices in Lobby Status Panels or located in lobby or Fire Command Center are to be checked for normal operation and all components and wiring repaired or replaced as necessary to restore proper operation. (Semiannual)
4. Hoistway access switches, where provided, shall be maintained. (Semiannual)

3.4 Escalator Maintenance Tasks (Minimum Frequency In Parenthesis)

A. General Maintenance Procedures

At the minimum bimonthly inspection frequency, ride each escalator and perform a general safety inspection, listening for unusual noises, observing ride characteristics, step-skirt clearances, skirt panels, balustrades, decking, trim, and fasteners, handrails and handrail operation, combplates, and lighting. Make adjustments as required for consistent and smooth operation.

B. The following inspections and tests shall be made as often as needed, but on no less than an annual basis. Corrective repairs shall be made where deficiencies are identified.

1. Landing floor plates shall be flush with the floor and properly secured in place.
2. Check demarcation and combplate lighting, which shall remain on whenever the escalator is in service. Renew where required.
3. Keep escalators properly lubricated at all times, wipe up oil from steps or floor plates.
4. Verify operation of stop switches, access cover audible signals, and keyed start switches.
5. Inspect caution signs, missing or damaged signs shall be replaced.
6. Inspect skirt panels, damaged skirt panels shall be replaced or repaired.
7. Test all skirt obstruction switches for proper operation.
8. Measure step-skirt and loaded gap clearances, make adjustments as required to maintain compliance with Elevator Code.
9. Balustrade panels and decking shall be flush with no sharp edges or excessive gaps and moldings shall be flush with no loose or missing fasteners. Replace damaged balustrades.
10. Tighten loose ceiling intersection guards, those damaged or missing shall be renewed by Owner.



11. Combplates shall properly engage with step treads. Broken teeth and missing fasteners shall be replaced. Where two adjacent teeth are missing, the escalator shall be removed from operation. Combplate impact devices shall be tested to verify proper operation.
12. Inspect steps for broken step treads or risers, tracking, and alignment with combplates.
13. Verify handrail condition, speed, tension, speed monitoring device stall alarm and switch. Ensure that handrail entry devices are in place and properly adjusted. Inspect handrails for wear or cracks, especially at splices. Renew handrails and associated components as required.
14. Install suitable barricade and flooring protection at each landing prior to performing maintenance.
15. The interiors of escalators and their components shall be cleaned to prevent an accumulation of oil, grease, lint, dirt, or refuse. An examination with partial step removal to determine if cleaning is necessary shall be required at least once a year. Accumulation of lubricants, lint, dirt, debris, etc shall be removed and pits and drip pans kept clean.
16. Maintain pits at upper and lower ends in clean condition, empty drip pans and wipe clean. Test pit stop switch, light, and receptacle.
17. Inspect controller, including all relays, printed circuit boards and connections, and other components. Measure and record voltage.
18. Periodically inspect step rollers and bearings, step chains, axle bushings, and renew worn or noisy equipment for quiet and smooth operation. Periodically clean tracks, examine track extensions and guides, lubricate. Check operation of up thrust switches at both landings.
19. Remove balustrade panels to inspect handrail roller and guide assemblies, adjust spring tension, check drive chains and belts, pulley, and fastenings.
20. Check machine and motor operation. Clean motor and gear case, lubricate motor bearings. Change gear case oil at frequency consistent with manufacturer's specifications and replace leaking seals. Inspect overspeed governor, where provided.
21. Inspect main drive shaft brake, maintain torque within manufacturer's specifications, and adjust as needed. Verify brake stopping distance.
22. Inspect, adjust, lubricate, and where required, promptly renew or rebuild machine drives and gear reducers, drive chains, sprockets, sprocket teeth, and gears. Tension and renew sprocket bearings, newel bearings, drive chains, and belts. Check for proper lubrication.
23. Test function of missing step device and step up thrust device.
24. Perform all required annual tests, then complete and distribute Periodic Escalator Test report, provide tag in lower wellway marked with company performing test and date of test. Testing shall include Step/skirt Performance Index and Loaded Gap. All adjustments for compliance with Category One Periodic Tests shall be made as part of this Agreement.

### 3.5 Maintenance Control Program

- A. Maintenance Control Program (MCP) - A written Maintenance Control Program for each unit shall be provided by Elevator Service Provider to maintain each conveyance in compliance with ASME A17.1-2013 requirement 8.6 and shall be located in the machine room or control room and viewable on-site by any elevator personnel at all times.
- B. The MCP shall include, but not be limited to, the Code required maintenance tasks, maintenance procedures, and examinations and tests list with the associated requirement (see 8.6.4 through 8.6.11). Where maintenance tasks, maintenance procedures, or examinations or tests have been revised in 8.6, the MCP shall be updated by Elevator Service Provider.
- C. The MCP shall reference On-Site Documentation (see 8.6.1.2.2) and On-Site Maintenance Records (see 8.6.1.4.1) that record the completion of all associated maintenance tasks specified in 8.6.1.4.1(a).



- D. The MCP shall specify examinations, tests, cleaning, lubrication, and adjustments of the conveyances at scheduled intervals and repairing or replacing all worn or defective components shall be identified and documented for each conveyance based on:
1. Equipment age, condition, and accumulated wear
  2. Design and inherent quality of the equipment
  3. Usage
  4. Environmental conditions
  5. Improved technology
  6. The manufacturer's recommendations for any SIL rated devices or circuits
  7. The manufacturer's recommendations based on any ASME A17.1/CSA B44.7 approved components or functions.
- E. The specified intervals for component examinations, tests, cleaning, lubrication, and adjustments of the conveyances shall be determined for all conveyances.

### 3.6 Examination

- A. Contractor shall examine all components and systems per intervals established in the MCP for each conveyance. When deficiencies are observed during the examination of the conveyances, Contractor shall proceed immediately with corrective action except for Section 5 Excluded Work. However it is stipulated that excluded items require authorization in order to proceed with non-covered work.
- B. Contractor shall immediately make repairs needed to correct existing malfunctions or potential malfunctions that can be determined by reasonable examination methods, and to be on call to make such repairs if and when malfunction or failure should occur.
- C. Contractor is encouraged to establish a regular service schedule for the elevator and escalator maintenance with Monona Terrace, on at least two days each month. (Example: 2<sup>nd</sup> and 4<sup>th</sup> Tuesdays of the month).
- D. Contractor shall schedule and coordinate the temporary removal of equipment from service 48 hours in advance with the Monona Terrace representative or designated representative whenever possible in order to minimize the disruption to normal building operations. Failure to schedule non-emergency examinations, adjustments, or repair work may result in Contractor being denied access to perform such work until properly scheduled and approved by Monona Terrace.

### 3.7 Lubrication

- A. Lubricate equipment at intervals recommended by the equipment manufacturer, or more frequently as dictated by use of the equipment.
- B. All parts of the machinery and equipment requiring lubrication shall be lubricated with lubricants equivalent to the type and grade recommended by the equipment manufacturer.
- C. All excess lubricant shall be cleaned from the equipment. Containers used to catch leakage shall not be allowed to overflow and floors and wellways shall be kept clean.
- D. All lubricants and cleaning compounds and materials shall be provided by Contractor for their use on all conveyances at no additional cost to Monona Terrace.
- E. Hydraulic fluid is included by Contractor for elevators.

### 3.8 Adjustment



- A. Adjustments shall be made to keep the elevators and escalators maintained per the manufacturer's specifications and good industry standards for performance.
- B. Trained employees of Contractor shall use reasonable care to keep the equipment in proper adjustment and in safe operating condition and to meet elevator code requirements.
- C. Contractor shall make or verify adjustments at regular intervals to maintain compliance with Section 4.03 Performance Standards contained in this Technical Specification.

### 3.9 Cleaning

- A. Maintain cars, machine rooms, car tops, hoistways, and equipment in these areas in a consistently clean condition at intervals established in the MCP.
- B. Keep hoistways clean of all accumulated dirt, grease, dust, etc., including counterweight, cable shackles, guide rails, divider beams, ledges, landing sills, fascia, and headers. Contractor shall maintain hoistway cleanliness throughout the year.
- C. Pits and escalator wellways shall be kept clean of all accumulated dirt, grease, lint, trash, debris, etc., and shall not be used for storage.
- D. Cleaning compounds or fluids, wipers or rags, vacuum cleaners, brooms, mops, etc. shall be provided by Contractor for their use as required, at no additional cost to Monona Terrace.

### 3.10 Painting

- A. Paint the equipment, including car tops, at intervals frequent enough to maintain a professional appearance, prevent rust, and preserve the equipment.
- B. Care shall be used in the painting of equipment to make certain that it does not interfere with the proper functioning of components.
- C. Floors in machine rooms shall be kept clean and painted.

### 3.11 Parts Replacement

- A. All parts or components shall be replaced when worn or defective as conditions warrant.
- B. Where a defective part directly affecting the safety of operation is identified, the equipment shall be taken out of service until the defective part has been adjusted, repaired, or replaced.
- C. Contractor shall promptly procure replacement parts either the same day, or delivered F.O.B. destination within 24 hours. The cost of replacement parts including overnight freight charges as required and installation labor is included in the Complete Maintenance Bid price.
- D. Contractor shall immediately notify the designated representative when any parts or components require repair or replacement, and in their judgment are excluded from coverage under this Contract. Contractor shall furnish a written price quotation on a prompt and timely basis, as a means of obtaining authorization to procure the required or requested parts. However, all repairs to the conveyances must be performed promptly.
- E. Monona Terrace reserves the right to furnish any replacement parts not covered by the Contract.
- F. Contractor shall provide an extensive on-site inventory of common replacement parts specific for the equipment, stored in metal cabinets furnished by Contractor in machine rooms or control rooms OR in company vehicles for Complete Maintenance. The selection of parts shall be



sufficient for normal maintenance and repair of the equipment in order to provide efficient and proactive maintenance.

- G. Replacement parts shall be made with parts of at least equivalent material, strength, and design.
- H. Where a listed/certified device is replaced, the replacement shall be subject to the applicable engineering or type test as specified in ASME A17.5.
- I. Where a component in a listed/certified device is replaced, the replacement component shall be subject to the requirements of the applicable edition of ASME A17.5 and/or the engineering or type test in ASME A17.1-2013 Req 8.3. Each replacement component shall be plainly marked for identification in accordance with the certifying organization's procedures.

### 3.12 Repairs And Supplementary Repairs

- A. Care should be taken during operations such as torquing, drilling, cutting, and welding to ensure that no component of the assembly is damaged or weakened so as to affect the safe operation of the equipment.
- B. Regular callback service shall proceed without interruption until complete and the conveyance has been returned to service.
- C. Repair work shall be pursued during regular working hours without interruption until complete. However if overtime is authorized by the Monona Terrace representative or other authorized representative, work shall continue until the conveyance has been returned to service.
- D. For authorized repairs outside of normal business hours, Contractor may invoice Monona Terrace for time on site at the difference between the regular time and applicable overtime rates provided on the Bid Form.
- E. Should Contractor's examinations discover items which require repair and/or replacement and, in their judgment are excluded from coverage, Contractor shall immediately show the designated Monona Terrace representative or other designated representative such items whenever possible, in order to obtain authorization to proceed.
- F. Monona Terrace may authorize supplemental repairs at Contractor's proposed pricing or may at its discretion authorize such repair work to proceed on a time and material basis using the labor and material markup rates provided on the Bid Form.
- G. Supplemental repairs authorized in writing by Monona Terrace shall proceed without any deposit or prepayment due to Contractor. Payment shall be invoiced after completion; however Contractor may issue progress billings should the authorized work not be completed after 7 days. In the event of conflicting terms with Contractor's written proposals, the terms contained in this Contract shall govern.
- H. The billing rates for supplementary repairs, unless negotiated by Contractor and the City of Madison, shall be the applicable regular and overtime rates provided by Contractor on the Bid Form. Contractor's employees shall provide Monona Terrace with copies of work orders documenting all time and material work and travel time, mileage, and other expenses at the time the work is done.

### 3.13 Periodic Tests

- A. Periodic tests of hydraulic elevators and escalators shall be performed as required by the ASME A17.1 and SPS 318 elevator codes in effect. All associated costs shall be the responsibility of



Contractor, who shall provide the following periodic tests at a minimum. Code references below are provided from the ASME A17.1-2013 code for convenience.

Hydraulic Elevators

8.6.5.14 Category 1

8.6.5.16 Category 5

Escalators

8.6.8.15 Category 1

- B. Contractor is responsible for providing suitable test weights where required, without additional cost to Monona Terrace. Contractor shall be held accountable for any damage incurred to building property, including damage to finished surfaces, such as car enclosures and elevator or building flooring resulting from the performance of testing. Such damage shall be repaired to the satisfaction of Monona Terrace at Contractor's expense.
- C. Contractor shall provide all test instruments, computers, software, manuals, and other tools or equipment for their own use as required to satisfy code requirements, at no additional cost to Monona Terrace.
- D. The annual Category 1 test of emergency power will be scheduled by Monona Terrace in approximately each December during regular working hours. Elevator Contractor shall proceed with this test at no additional cost to Monona Terrace, using scheduled service time.
- E. Periodic tests shall be completed proactively by the due date, typically 12 months from the date of previous testing. Any tests already due at the time of commencement of this Contract shall be performed within 45 days.
- F. Documentation - A metal tag shall be attached to the controller indicating the type of test completed, code references, and the date and company performing the tests in compliance with Elevator Code requirements. Written reports of tests shall be submitted to the Madison Fire Department and to the Monona Terrace Building Maintenance Supervisor or other designated representative. A copy of all test reports shall be maintained in each machine room or in an agreed upon location for escalator test records.
- G. When hydraulic fluid loss cannot be accounted for, subsequent testing required by the Elevator Code shall be conducted without additional cost to Monona Terrace.

3.14 Periodic Inspections

- A. Fees for the initial periodic (annual) inspections as required by the current ASME A17.1 and SPS 318 Elevator Safety Codes are the responsibility of Monona Terrace.
- B. The Contractor shall promptly correct deficiencies cited by the Authority Having Jurisdiction (AJH) at the periodic inspections, at the Contractor's own expense, except for Section 5.01 Excluded Work.
- C. Reinspection fees due to deficiencies that are the responsibility of Contractor per terms of this Technical Specification shall be paid by Contractor.

3.15 Notice To Repair or Replace

- A. Contractor shall comply with the written recommendations of Monona Terrace, with periodic inspection reports by the Madison Fire Department or other Elevator Inspector licensed by the Wisconsin Department of Safety and Professional Services (DSPS), and deficiency listings from Owner's consultant.
- B. However, Contractor is not required to install new attachments on the equipment where they did not previously exist, without compensation.



### 3.16 Controllers, Wiring, And Wiring Diagrams

- A. Up-to-date wiring diagrams detailing circuits of all electrical protective devices and critical operating circuits (ASME A17.1-2013 Req 8.6.1.2.2(a) shall be available in the machinery space, machine room, control space, or control room.
- B. Monona Terrace will initially provide a set of elevator wiring diagrams, and Contractor shall copy or replace as their condition warrants without charge.
- C. All new electrical changes or modifications shall be incorporated onto the wiring diagrams, and following the modifications Contractor shall provide a second set of wiring diagrams containing all changes or modifications to Monona Terrace without charge.
- D. All wiring diagrams for each conveyance are to be considered the property of the Owner and shall not be removed from the premises.

### 3.17 Accident Reporting

- A. Contractor shall cooperate with Monona Terrace in complying with the accident reporting requirements of SPS 318.1013 Accident Reporting.
- B. It is understood and stipulated that Contractor upon becoming aware that an injury has occurred, will immediately remove the conveyance from service. Contractor shall also remove the conveyance from service if, in their opinion, the elevator becomes unsafe to operate.
- C. Next notify the designated Monona Terrace representative, upon becoming aware that an accident has occurred or that an unsafe condition exists.
- D. Offer assistance to Monona Terrace in providing the immediate telephone accident notification to the City of Madison or State of Wisconsin and submitting a written report within 48 hours.
- E. Prohibit repairs, adjustments, or removal of parts from the premises until the local Code authority grants permission.

### 3.18 Diagnostic Equipment/Product Manuals

- A. Contractor shall provide its maintenance personnel with the appropriate service tools, parts manuals, product information, etc. to enable Contractor to proficiently troubleshoot, diagnose, and maintain all equipment listed in Attachment A.
- B. These tools and documentation provided by Contractor shall remain the property of Contractor and shall not be construed to obligate the Contractor to give, disclose, or in any manner transfer such tools to Monona Terrace.
- C. Contractor shall hold and save Monona Terrace and all Contractor Agencies, officers, agents, and employees harmless from liability due to patent or copyright infringement arising from the use of service tools, or in the performance of the maintenance work in any way.

### 3.19 Hazardous Materials

- A. Contractor shall furnish a Material Safety Data Sheet and proper labeling for each hazardous and non hazardous chemical used in any Monona Terrace facility in compliance with OSHA Hazard Communication Standards and good elevator industry practices.



- B. All cleaning fluids, lubricants, and combustible fluids shall be kept to the minimum required for normal use and shall be kept in OSHA approved containers.
- C. Oily rags or wipers may be temporary stored in metal containers furnished by Contractor, however they shall not be allowed to accumulate and shall be emptied on a quarterly basis at a minimum.

### 3.20 Safety

- A. Proposer shall be solely responsible for initiating, instituting, enforcing, maintaining, and supervising all safety precautions and programs, which shall be in conformance with good industry standards and practices; and shall take all reasonable precautions for the safety of property, employees, visitors, and the general public.
- B. Contractor safety program shall meet or exceed the minimum safety standards of the Elevator Industry Field Employees' Safety Handbook, as written by the National Elevator Industry Safety Committee and available from Elevator World, Inc.
- C. Contractor shall be solely responsible for providing all safety training to their employees in compliance with State, Federal, or local requirements including, but not limited to, Lockout/Tag out, Electrical Safety, Mechanical Stored Energy, Hazardous Communication, Blood borne Pathogens, and Accessing Elevator Pits, Car Tops, and Confined Spaces.
- D. Monona Terrace reserves the right to request and review records documenting evidence of training received, and to require at no cost, that Proposers personnel successfully complete training programs conducted by Monona Terrace, its affiliates, or agents.
- E. Contractor shall perform periodic audits of employees by supervisory personnel to ensure compliance with their safety training and policies.

### 3.21 Waste Disposal

- A. Contractor shall dispose of all waste products used for or generated by the elevators offsite, in full compliance with OSHA and EPA environmental laws, regulations, and guidelines.
- B. Waste products include, but are not limited to, cleaning compounds or fluids, waste cloths or wipers, lubricants, old parts, containers, oil absorbent or oil absorbent pads, waste oil, and other waste or debris.
- C. The disposal of waste products is generally not permitted in onsite building waste receptacles and dumpsters without approval of Monona Terrace.
- D. Any oil or hazardous waste must be legally disposed of offsite at Proposers own expense. A documented audit trail must be provided to the Monona Terrace or City of Madison representative upon request for the disposal of hazardous waste and oil.

### 3.22 Excluded Work

- A. Contractor is not responsible for excluded work shown below. However, Contractor must obtain authorization from the designated Monona Terrace representative for parts and labor that in their judgment is excluded from coverage under this Contract. For such callbacks and supplemental repairs, Contractor's responding mechanic must physically show the affected components to the Monona Terrace representative whenever possible, at the time of the incident or callback. Excluded parts and labor shall generally be provided in addition to the Contract price, using the applicable classification and corresponding rate schedule provided on the Bid Form.



1. Adjustments, repairs, or replacements necessitated by vandalism, negligence, or misuse of the equipment by anyone other than Contractor, their employees, or agents.
2. The repair, refinishing, or replacement of car and hoistway door panels, car door sills, car gates, or hoistway entrance frames and sills. However, Contractor shall repair damage to door(s), and car enclosure finishes when caused by improper adjustment or maintenance of the equipment.
3. Car enclosure panels and finishes, car ceilings, lamps for car illumination, and car finish flooring.
4. Hoistway and machine room enclosures, lighting, heating, ventilation, and sprinklers.
5. Mainline and emergency power disconnect switches and associated fuses, and feeders to terminals on each elevator or escalator controller.
6. Underground hydraulic cylinders and buried hydraulic pressure line piping.
7. Fire alarm initiating devices in elevator lobbies, machine rooms, and hoistways. Sprinklers and associated heat detectors and shunt trip power modules.
8. Pit or machine room sump pumps and drains.
9. Fire extinguishers in machine rooms.
10. Telephone service to terminals on elevator controller.
11. Escalator ceiling intersection guards.
12. Obsolescence: If original equipment manufacturer components or parts are no longer available, Contractor shall furnish a reasonable substitute for the original equipment manufacturer parts of equal quality, or provide rebuilt components. For the purpose of this Contract, obsolescence shall be defined as the unavailability of required new, substitute, or reconditioned replacement parts, from both the manufacturer and third party market sources. Where replacement parts for discontinued products are still available for purchase, those associated parts and all labor are included. Should required parts be unavailable and no direct substitute is available, then the component may be considered to be obsolete. No other consideration shall be given in regard to obsolescence of parts, components, or systems.



#### 4 PERFORMANCE

##### 4.1 Sole Authority

- A. Monona Terrace shall have the final determination of all performance and performance standards at their sole discretion, and shall have full access to inspect Contractor's services at any time.
- B. Monona Terrace may monitor performance at any time by utilizing employees, inspectors, consultants, insurance carriers, or others at their own expense, to insure that Contractor is performing in accordance with the terms of the Technical Specification. However, any inspection so made shall not relieve Contractor from any obligation to provide materials and workmanship strictly in compliance with this Contract.
- C. Such employees, inspectors, consultants, or insurance carriers may utilize generally accepted elevator industry maintenance guidelines when evaluating Contractor maintenance performance, including, but not limited to those published in the NEII-1 Building Transportation Standards and Guidelines by the National Elevator Industry, Inc.

##### 4.2 Performance Evaluation Criteria

- A. Maintenance benchmarks or minimum performance levels have been established to quantify elevator performance. Contractor agrees to maintain the elevators to the following performance standards, as defined in this section. Minimum performance standards are also defined for each elevator in Section 4.3. *It is acknowledged that longer door times may be requested by Monona Terrace, which will affect the door and floor-to-floor performance times.*
- B. Speed – shall not vary from rated speed more than + 10% for hydraulic installations and escalators, regardless of load.
- C. Elevator Performance (floor-to-floor) time – measured from the start of door close until the elevator is stopped level at the next successive floor, in either direction of travel, with the car doors approximately 3/4 open. Performance time is shown for a 12 ft. floor height. For floors that exceed 12 ft. from floor to floor, add the adjustment time shown in the next column in Section 4.03 for each foot of net travel exceeding 12 ft.
- D. Door Open Time – measured from the start of doors opening until the doors are fully open, or nominally, until the doors are approximately 2" from fully open.
- E. Door Closing Time – measured from the start of doors closing until doors are fully closed.
- F. Door Closing Force – measured with the door at rest and between 1/3 and 2/3 closed. See ASME A17.2 Inspector's Guide for procedure. Door closing force shall not exceed 30 lbs.
- G. Floor Stopping Accuracy – The accessibility Code requires that the car sill initially stops within 1/2" of the landing sill vertically. Elevators with microprocessor control equipment shall stop within 3/8". Stopping and leveling accuracy shall be measured and maintained under various loading conditions.
- H. Ride Quality and Acceleration – Contractor shall maintain a comfortable elevator ride with smooth start, acceleration, deceleration, stop, and change in rate of acceleration (jerk). Instruments such as a Maxton SafeTach performance meter may be used to evaluate ride.
- I. Noise – Although NEII performance standards include maximum noise levels in decibels, a subjective evaluation will serve to identify unusual or excessive noise for this MCP. There should be no perceptible hoistway noises audible inside the car enclosure as the elevator moves through the hoistway, within reason.



- J. Door operators and associated equipment shall be adjusted to NEII Performance Standards; however, the design limitations of the existing door operator shall be taken into consideration. Contractor shall maintain all door operator equipment and accessories including:
1. The doors should open and close smoothly, quietly, and without rumbling or slamming.
  2. If nudging is furnished, the closing speed during nudging operation must meet Code requirements.
  3. All installed door reopening devices should be fully functional or shall be renewed. Electronic devices should provide sufficient range to reverse door without physical contact.
  4. Door closing kinetic energy and closing force must be within Code requirements, including when door reopening devices are rendered inoperative on Phase I Recall Operation.
  5. Rattles, squeaks, or other noises in the door operation, including linkage, hangars, and closers should be corrected.
  6. Mechanical pivots and fastenings of drive arms, clutch, or linkage should be free from excessive wear and properly lubricated.
  7. Car and landing and door panel guides (gibs) not worn or loose. Sill or hangar safety retainers, if so equipped, shall be properly engaged.
  8. Door or gate hangar sheaves and tracks shall be clean and lubricated. Rollers with flat spots and noisy or worn bearings renewed, and rough tracks shall be made smooth or replaced. Hangar safety retainers shall be maintained and renewed.
  9. Up thrusts should be adjusted with minimum clearance to track to prevent the doors from jumping the track.
  10. Hoistway door closers shall automatically return open doors to the fully closed and locked position throughout the door opening. Noisy reel closers shall be replaced.
  11. Hoistway door interlocks and car gate switch or contact shall be maintained to ensure safe and reliable operation.
  12. Hoistway door restrictors, where provided, shall be maintained to prevent the opening of car and hoistway doors outside of the landing zone. Door restrictors shall never be disabled.



