AMENDMENT # 1

DATE: March 25, 2010

TO: All Bidders of Record

FROM: David Martinez, Senior Buyer

SUBJECT: Amendment #1 to T-2770 “MS Elevator Replacement and Maintenance”

This amendment becomes part of the Contract Documents and modifies the original bidding documents as noted below:

1. **Question:** In your recent Request for Bid: #T-2770 - Elevator Replacement & Maintenance, I was not able to locate the section detailing the modernization specifications. This section typically provides preliminary information on the units to be modernized along with list of equipment and component identifying what is to be retained and reused, and what is to be replaced with new.

2. **Answer:** Reference the attached sections 14220 and 14325.

3. **Question:** Will the Mandatory pre-bid be on March 26th or April 2nd?

4. **Answer:** The Mandatory pre-bid meeting has been moved to **April 8, 2010 at 8:00AM local time**.

All other specifications, terms and conditions remain unchanged. Bidders are required to acknowledge receipt of this Amendment in the space provided on Section E, Page 11
# SECTION 14220
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PART 1 GENERAL

1.01 WORK INCLUDED

A. Three (3) traction elevator(s) as follows:
   1. Geared Passenger Elevator(s) Car(s) No. 1, 2 & 3.

B. All engineering, equipment, labor, and permits required to satisfactorily complete elevator modernization required by Contract Documents.

C. Applicable conditions of General, Special, and Supplemental Conditions, Division 1, and all sections listed in Contract Documents “Table of Contents.”

D. Preventive maintenance as described in Section 01800 and Section 14325 herein.

E. Additional equipment or finishes furnished under other sections, installed under this section:
   1. Building announcement speaker(s)
   2. In car Firefighters’ telephone jack(s)
   3. CCTV system
   4. Card reader security system

F. Cartage and Hoisting: All required staging, hoisting, and movement to, on, and from the site including new equipment, reused equipment, or dismantling and removal of existing equipment.

G. Unless specifically identified as “Reuse,” “Retain,” or “Refurbish,” provide new equipment.

H. Protective barrier(s) between car(s) in normal operation and adjacent car(s) in the modernization process. Full depth and height of hoistway.

I. Hoistway, pit, and machine room barricades as required.

1.02 RELATED WORK PROVIDED UNDER OTHER SECTIONS

A. See Section 01900, Related Work Provided Under Other Sections.

1.03 DEFINITIONS

A. Terms used are defined in the latest edition of the Safety Code for Elevators and Escalators, ASME A17.1.

B. Reference to a device or a part of the equipment applies to the number of devices or parts required to complete the installation.

C. Provisions of this specification are applicable to all elevators unless identified otherwise.
1.04 QUALITY ASSURANCE

A. Qualified Contractors: Alternate Contractors must receive approval of Architect, Purchaser, and/or Consultant at least 14 days prior to bid date.

B. Approved Contractors: Alternate Contractors must receive approval of Purchaser and/or Consultant at least 14 calendar days prior to bid date.

1. Geared Elevator(s): KONE, Otis, Schindler, ThyssenKrupp, etc.


C. Compliance with Regulatory Agencies: See Section 01040, Project Procedures.

D. Warranty:

1. Material and workmanship of installation shall comply in every respect with Contract Documents. Correct defective material or workmanship which develops within one year from date of final acceptance of all work to satisfaction of Architect, Purchaser and Consultant at no additional cost, unless due to ordinary wear and tear or improper use or care by Purchaser. Perform maintenance in accordance with terms and conditions indicated in the Preventive Maintenance Agreement.

2. Defective is defined to include, but not be limited to: Operation or control system failures, car performance below required minimum, excessive wear, unusual deterioration, or aging of materials or finishes, unsafe conditions, the need for excessive maintenance, abnormal noise, or vibration, and similar unsatisfactory conditions.

3. Retained Equipment: All retained components, parts, and materials shall be cleaned, checked, modified, repaired, or replaced so each component and its parts are in like new operating condition. Retained equipment must be compatible for integration with new systems. All retained equipment shall be covered under the warranty provisions, of Article 1.04, D., 1. & 2. above. No prorations of equipment or parts shall be allowed on preventive maintenance contract, Section 14325, between the Contractor and Purchaser.

4. Make modifications, requirements, adjustments, and improvements to meet performance requirements of Sections 01700 and 14220.

1.05 DOCUMENT AND SITE VERIFICATION

A. In order to discover and resolve conflicts or lack of definition which might create problems, Contractor must review Contract Documents and site conditions for compatibility with its product prior to submittal of quotation. Review existing structural, electrical, and mechanical provisions for compatibility with Contractor's products. Purchaser will not pay for change to structural, mechanical, electrical, or other systems required to accommodate Contractor's equipment.

1.06 SUBMITTALS

A. See Section 01300, Submittals, and Section 01700, Final Contract Compliance Review, Article 1.03.

1.07 PERMIT, TEST AND INSPECTION

A. Obtain and pay for permit, license, and inspection fee necessary to complete installation.
B. Perform test required by Governing Authority in accordance with procedure described in ASME A17.2 Guide for Inspection of Elevators, Escalators, and Moving Walks in the presence of Authorized Representative.

C. Supply personnel and equipment for test and final review by Consultant as required in Section 01700.

1.08 MAINTENANCE

A. Interim: See Section 01800, Maintenance, Article 1.01, A.

B. Warranty Maintenance: See Section 01800, Maintenance, Article 1.02, A.

C. Preventive Maintenance: See Section 01800, Maintenance, Article 1.03, A.

PART 2 PRODUCTS

2.01 SUMMARY

A. Low-Rise Passenger Elevator(s)

B. Unless specifically identified as “retain existing,” provide new equipment.

<table>
<thead>
<tr>
<th>Existing Equipment</th>
<th>Disposition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number: Car(s) No. 1, 2 &amp; 3</td>
<td>Car(s) No. 1, 2 &amp; 3 Retain Existing</td>
</tr>
<tr>
<td>Capacity: 2,500 #</td>
<td>2,500 # - Retain</td>
</tr>
<tr>
<td>Class Loading: Passenger Class A</td>
<td>Retain Existing</td>
</tr>
<tr>
<td>Contract Speed: 350 F.P.M.</td>
<td>350 F.P.M. - Retain</td>
</tr>
<tr>
<td>Roping: 1:1</td>
<td>Retain Existing – NOTE: See Section 2.06 (M)</td>
</tr>
<tr>
<td>Machine: Geared</td>
<td>Retain Existing – NOTE: Refurbish Existing Machines Per Section 2.05 (B)</td>
</tr>
<tr>
<td>Machine Location: Overhead</td>
<td>Retain Existing</td>
</tr>
<tr>
<td>Supervisory Control: Dover Elevator T-111 Group Automatic Microprocessor-Based System</td>
<td>Group Automatic Microprocessor-Based System - NEW</td>
</tr>
<tr>
<td>Operational Control: Microprocessor-Based System</td>
<td>Group Selective with Microprocessor-Based System - NEW</td>
</tr>
<tr>
<td>Existing Equipment</td>
<td>Disposition</td>
</tr>
<tr>
<td>----------------------------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Motor Control: AC Variable Voltage</td>
<td>AC Variable Voltage Variable Frequency Microprocessor Based with Digital Closed-Loop Feedback - NEW</td>
</tr>
<tr>
<td>Power Characteristics: 480 Volts, 3 Phase, 60 Hertz Field Verify</td>
<td>Retain Existing</td>
</tr>
<tr>
<td>Stops: 5 Front</td>
<td>Retain Existing</td>
</tr>
<tr>
<td>Openings: 5 Front</td>
<td>Retain Existing</td>
</tr>
<tr>
<td>Floors Served: 5 Front</td>
<td>Retain Existing</td>
</tr>
<tr>
<td>Travel: Field Verify</td>
<td>Retain Existing</td>
</tr>
<tr>
<td>Platform Size: Field Verify</td>
<td>Retain Existing</td>
</tr>
<tr>
<td>Minimum Clear Inside Car:</td>
<td>Retain Existing</td>
</tr>
<tr>
<td>Entrance Size: 3’ - 6” Wide X 7’ - 0” High Field Verify</td>
<td>3’ - 6” Wide X 7’ - 0” High - Retain Existing</td>
</tr>
<tr>
<td>Entrance Type: Center Opening</td>
<td>Center Opening - Retain Existing</td>
</tr>
<tr>
<td>Door Operation: Medium Speed Door Operator</td>
<td>Medium Speed, Heavy-Duty Door Operator, Minimum Opening Speed 1-1/2 F.P.S. - NEW</td>
</tr>
<tr>
<td>Door Protection: Full Screen Device</td>
<td>Infrared, Full Screen Device with Differential Timing, Nudging and Interrupted Beam Time - NEW</td>
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<tr>
<td>Safety: Instantaneous Type A</td>
<td>Retain Existing</td>
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<tr>
<td>Guide Rails: Planed Steel Tees</td>
<td>Retain Existing</td>
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<tr>
<td>Buffers: Oil</td>
<td>Retain Existing</td>
</tr>
<tr>
<td>Car Enclosure: As Specified - NEW</td>
<td>$15,000 Allowance Per Cab Interior and 300 – 500 #Weight Allowance For Interior Finishes - NEW</td>
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### Existing Equipment Disposition

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<tr>
<td>Car Dropped Ceiling Designed for Easy Removal – NEW</td>
<td>Pad Buttons and Vinyl Covered Pads Car(s) No. 1 - NEW</td>
</tr>
<tr>
<td>Battery Powered Emergency Car Lighting. Provide Separate</td>
<td></td>
</tr>
<tr>
<td>Constant Pressure Test Button In Car Service Compartment.</td>
<td></td>
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<tr>
<td>Illuminate Portion of Normal Car Lighting - NEW</td>
<td></td>
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<tr>
<td>Signal Fixtures:</td>
<td>LED Illumination Contractor’s Standard Design - NEW</td>
</tr>
<tr>
<td>Hall and Car Pushbutton Stations:</td>
<td>Dual Hall Pushbutton Risers - NEW</td>
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<tr>
<td>Car Position Indicators:</td>
<td>Single Digital with Car Direction Arrows - NEW</td>
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<tr>
<td>Hall Lanterns:</td>
<td>Firefighters’ Control Panel - NEW</td>
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<tr>
<td>Hall Car Position Indicator:</td>
<td>Digital with Car Direction Arrows at All Floors - NEW</td>
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<tr>
<td>Communication System:</td>
<td>Self-Dialing, Vandal Resistant, Push to Call, Two-Way Communication System</td>
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<tr>
<td></td>
<td>with Recall, Tracking and Voiceless Communication - NEW</td>
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<tr>
<td>Fixture Submittal:</td>
<td>Submit Brochure Depicting Contractor’s Proposed Designs with Bid</td>
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### Additional Features, Car(s) No. 1,2 & 3:

- Car and Counterweight Spring Loaded Roller Guides - NEW
- Car Top Inspection Station - NEW
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<th>Existing Equipment</th>
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<td>Firefighters’ Service, Phase I and II, including Alternate Floor Return - NEW</td>
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<td>Accessibility and Emergency Medical Services Signage - NEW</td>
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<td>Stationary Car Return Panel Arranged for Surface Applied Car Operating Panel - NEW</td>
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<td>Hoistway Access Switches, Top And Bottom Floors - NEW</td>
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<td>Hoistway Door Unlocking Device, All Floors - NEW</td>
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<td>Platform Isolation - NEW</td>
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<td>Load-Weighing Device - NEW</td>
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<td>Anti-Nuisance Feature - NEW</td>
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<td>Independent Service Feature - NEW</td>
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<td>Card Reader Provisions, All Cars - NEW</td>
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<tr>
<td>CCTV Provisions, All Cars - NEW</td>
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<tr>
<td>Firefighters’ Control Panel and Remote Wiring - NEW IF REQUIRED</td>
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<tr>
<td>Machine, Power Conversion Unit, and Controller Sound Isolation - NEW</td>
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<tr>
<td>Tamper Resistant Fasteners for All Fastenings Exposed to the Public - NEW</td>
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</tr>
<tr>
<td>One Year Warranty Maintenance with 24-Hour Call-Back Service - NEW</td>
<td></td>
</tr>
<tr>
<td>Firefighters’ Telephone Jack - NEW</td>
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<tr>
<td>Emergency Paging Speaker Installation - NEW</td>
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### Existing Equipment Disposition

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<tr>
<td>Signage Engraving Filled with Black Paint or Approved Etching Process</td>
<td>NEW</td>
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<tr>
<td>No Visible Company Name or Logo</td>
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<tr>
<td>Wiring Diagrams, Operating Instructions, and Parts Ordering Information</td>
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<tr>
<td>Monitoring System – NEW (IN MACHINE ROOM ONLY)</td>
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<td>System Diagnostic Means and Instructions – NEW</td>
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Alternates, Car(s) No. 1, 2 & 3: See Section 01030

1.) Provide auxiliary car operating panel in each cab.

### 2.02 MATERIALS

A. See Section 01600, Materials.

### 2.03 CAR AND GROUP PERFORMANCE

A. Car Speed: ±3% of contract speed under any loading condition.

B. Car Capacity: Safely lower, stop and hold 125% of rated load.

C. Car Stopping Zone: ±1/4" under any loading condition.

D. Door Opening Time: Seconds from start of opening to fully open:
   1. Car(s) No. 1, 2 & 3: 2.1 seconds.

E. Door Closing Time: Seconds from start of closing to fully closed:
1. Car(s) No. 1, 2 & 3: 2.4 seconds.

F. Car Floor-to-Floor Performance Time: Seconds from start of doors closing until doors are 3/4 open (1/2 open for side opening doors) and car level and stopped at next successive floor under any loading condition or travel direction (13’ – 3” typical floor height):
   1. Car(s) No. 1, 2 & 3: 9.3 seconds.

G. Car Ride Quality:
   1. Horizontal and vertical acceleration within car during all riding and door operating conditions shall be smooth and without any abrupt, jerking movement.
   2. Acceleration and Deceleration: Smooth constant and not less than and not more than 3 feet/second² with an initial ramp between 0.5 and 0.75 second.
   3. Sustained Jerk: Not more than 6 feet/second³.
   4. Measurement Standards: Measure and evaluate ride quality consistent with ISO 18738, using low pass cutoff frequency of 10 Hz and A95 peak-to-peak average calculations.

H. Noise and Vibration Control
   1. Airborne Noise: Measured noise level of elevator equipment and its operation shall not exceed 55 dBA inside car under any condition including door operation and car ventilation exhaust blower on its highest speed. Limit noise level in the machine room relating to elevator equipment and its operation to no more than 80 dBA. All dBA readings to be taken 3'-0" off the floor and 3'-0" from the equipment using the "A" weighted scale.
   2. Vibration Control: All elevator equipment provided under this contract, including power unit, controller, oil supply lines, and their support shall be mechanically isolated from the building structure and electrically isolated from the building power supply and to each other to minimize the possibility of objectionable noise and vibrations being transmitted to occupied areas of the building.

2.04 OPERATION

A. Selective Collective Microprocessor-Based, Car(s) No. 1, 2 & 3:
   1. Operate car without attendant from pushbuttons in car and located at each floor. When car is available, automatically start car and dispatch it to floor corresponding to registered car or hall call. Once car starts, respond to registered calls in direction of travel and in the order the floors are reached.
   2. Do not reverse car direction until all car calls have been answered, or until all hall calls ahead of car and corresponding to the direction of car travel have been answered.
   3. Slow car and stop automatically at floors corresponding to registered calls, in the order in which they are approached in either direction of travel. As slowdown is initiated for a hall call, automatically cancel hall call. Cancel car calls in the same manner. Hold car at arrival floor an adjustable time interval to allow passenger transfer.
   4. Answer calls corresponding to direction in which car is traveling unless call in the opposite direction is highest (or lowest) call registered.
   5. Illuminate appropriate pushbutton to indicate call registration. Extinguish light when call is answered.

B. Group Automatic, Car(s) 1, 2 & 3:
   1. Approved microprocessor-based, group dispatch, car and motion control systems as follows:
      a. KONE: Resolve
      b. Otis: Elevonic
2. Include as a minimum, the following features:
   a. Operate cars as a group capable of balancing service and providing continuity of group operation with one or more cars removed from the system.
   b. Register service calls from pushbuttons located at each floor and in each car. Slow cars and stop automatically at floors corresponding to registered calls. Make stops at successive floors for each direction of travel irrespective of order in which calls are registered except when bypassing hall calls to balance and improve overall service; stop only one car in response to a particular hall call. Assign hall calls to specific cars and continually review and modify those assignments to improve service. Simultaneous to initiation of slow down of a car for a hall call, cancel that call. Render hall pushbutton ineffective until car doors begin to close after passenger transfer. Cancel car calls in the same manner. Give priority to coincidental car and hall calls in assignment.
   c. Operate system to meet changing traffic conditions on a service demand basis. Include provisions for handling traffic which may be heavier in either direction, intermittent or very light. As traffic demands change, automatically and continually modify group and individual car assignment to provide the most-effective means to handle current traffic conditions. Provide means to sense long-wait hall calls and preferentially serve them. Give priority to coincidental car and hall calls in hall call assignment. Accomplish car direction reversal without closing and reopening doors.
   d. Use easily reprogrammable system software. Design basic algorithm to optimize service based on equalizing system response to registered hall calls and equalizing passenger trip time to shortest possible time.
   e. Serve floors below main floor in a manner which logically minimizes delay in passing or stopping at main floor in both directions of travel. Provide manual means to force a stop at the main floor when passing to or from lower levels.
   f. Required Features:
      1) Dispatch Protection: Backup dispatching shall function in the same manner as the primary dispatching.
      2) Delayed Car Removal: Automatically remove delayed car from group operation.
      3) Position Sensing: Update car position when passing or stopping at each landing.
      4) Hall Pushbutton Failure: Provide multiple power sources and separate fusing for pushbutton risers.
      5) Communication link: Provide serial or duplicate communication link for all group and individual car computers.

C. Other Items:
1. Load Weighing: Provide means for weighing car passenger load. Control system to provide dispatching at main floor in advance of normal intervals when car fills to capacity. Provide hall call by-pass when the car is filled to preset percentage of rated capacity and traveling in down direction. Field adjustment range: 10% to 100%.
2. Anti-Nuisance Feature: If car loading relative to weight in car is not commensurate with number of registered car calls, cancel car calls. Systems employing either load weighing or door protective device for activation of this feature are acceptable.
3. Independent Service: Provide controls for operation of each car from its pushbuttons only. Close doors by constant pressure on desired destination floor button or door close button. Open doors automatically upon arrival at selected floor.
D. Firefighters’ Service: Provide equipment and operation in accordance with Code requirements.

E. Automatic Car Stopping Zone: Stop car within 1/4" above or below the landing sill. Maintain stopping zone regardless of load in car, direction of travel, distance between landings, hoist rope slippage, or stretch.

F. Remote Monitoring and Diagnostics: Equip the group dispatch logic controller with standard ports, interface boards, and drivers to accept maintenance, data logging, fault finding diagnostic and monitoring computers, keyboards, modems, and programming tools. The system shall be capable of driving remote color CRT monitor(s) that continually scan and display the status of each car and call.

G. Motion Control: Microprocessor based AC, variable-voltage, variable frequency with digitally encoded closed-loop velocity feedback suitable for operation specified and capable of providing smooth, comfortable car acceleration, retardation, and dynamic braking. Limit the difference in car speed between full load and no load to not more than ±3% of the contract speed.

H. Door Operation: Automatically open doors when car arrives at main floor. At expiration of normal dwell time, close doors. Reopen doors when car is designated for loading.

I. Standby Lighting and Alarm: Car mounted battery unit with solid-state charger to operate alarm bell and car emergency lighting. Battery to be rechargeable with minimum 5-year life expectancy. Include required transformer. Provide constant pressure test button in service compartment of car operating panel. Provide lighting integral with portion of normal car lighting system.

J. Standby Power Operation (NOTE: IF BUILDING EMERGENCY POWER IS PROVIDED): Upon loss of normal power, adequate standby power will be supplied via building electrical feeders to simultaneously start and run one car in each group and single cars at contract car speed and capacity.
1. Automatically return one car at a time in each group and single car(s) nonstop to designated floor, open doors for approximately 3.0 seconds, close doors, and park car. During return operation, car and hall call pushbuttons shall be rendered inoperative. As each car parks, system shall immediately select the next car until all cars in a group have returned to the designated floor. If a car fails to start or return within 30 seconds, system shall automatically select the next car in the group to automatically return.
2. When all cars in a group have returned to the designated floor, one car in each group shall be designated for automatic operation. When a service demand exists for 30 seconds and designated car fails to start, next available car in the group shall be automatically selected for operation.
3. Provide separate group selection switch(es) in firefighters’ control panel.
   a. Switch(es) shall be labeled “STANDBY POWER OVERRIDE” with positions marked “AUTO” and appropriate car numbers controlled by each respective switch. Key shall be keyed differently from key utilized for firefighters’ Phase I and II key switch. Key shall be removable in “AUTO” position only.
   b. Switch shall override automatic return and automatic selection functions, and cause the manually selected car to operate. Manual selection shall cause car to start and proceed to designated floor and open and close its doors before standby power is manually transferred to next selected car.
c. Provide “STANDBY POWER” indicator lights, one per car, in firefighters’ control panel. Indicator light illuminates when corresponding car is selected, automatically or manually, to operate on standby power.

4. Successive Starting: When normal power is restored or there has been a power interruption, individual cars in each bank shall restart at five second intervals.

K. Card/Proximity Reader Security System: Provide provisions inside Car(s) No. 1, 2 & 3 for reader unit. Mount reader unit as directed by Architect and cross connect from car pushbuttons to control module in machine room. Reader control unit, mounting brackets, wiring materials, logic circuits, etc., by Security Subcontractor. Provide a filler plate to match card slot size and car return panel finish, including direction of graining, where card slot or proximity reader cutout is not initially utilized. Elevator control systems shall facilitate system tracking of persons accessing secure floors via printout by passenger I.D. number, floor accessed, and time of entry.

L. Pushbutton Crossover Network: Provide an interim crossover network to interface new and old group supervisory systems for purposes of cross cancellation of registered car and hall calls until modernization of individual group is complete.

2.05 MACHINE ROOM EQUIPMENT

A. Arrange equipment in existing machine room spaces.

B. Geared Traction Hoist Machine: Retain existing.
   1. Restore, clean and paint to function and appear in like new condition for beneficial usage of another 20-25 years of service.
   2. Drain, flush and provide new gear lubricant.
   3. Replace worn gears and bearings.
   4. Provide supplemental rope and sheave guards as required.
   5. Retrofit new direct drive, digital, closed-loop velocity encoder on hoist machine.
   6. Provide drip pans to collect lubricant seepage.
   7. Clean and true motor commutator. Provide new commutator brushes.
   8. Other work deemed required to provide specified “like new” operation.
   9. Retrofit new AC V3F induction drive motor to existing gear case.

C. Solid State Power Conversion and Regulation Unit:
   1. Provide solid state, alternating current, variable voltage, variable frequency (ACV3F), I.G.B.T. converter/inverter drives.
   2. Design unit to limit current, suppress noise, and prevent transient voltage feedback into building power supply. Provide internal heat sink cooling fans for the power drive portion of the converter panels. Conform to IEEE standards 519-1992 for line harmonics and switching noise.
   4. Suppress solid-state converter noises, radio frequency interference, and eliminate regenerative transients induced into the mainline feeders or the building standby power generator.
   5. Supplemental direct-current power for the operation of hoist machine brake, door operator, dispatch processor, signal fixtures, etc., from separate static power supply.

D. Encoder: Direct drive, solid-state, digital type. Update car position at each floor and automatically restore after power loss.

E. Controller: UL/CSA labeled.
1. **Compartment:** Securely mount all assemblies, power supplies, chassis switches, relays, etc., on a substantial, self-supporting steel frame. Completely enclose equipment with covers. Provide means to prevent overheating.

2. **Relay Design:** Magnet operated with contacts of design and material to insure maximum conductivity, long life, and reliable operation without overheating or excessive wear. Provide wiping action and means to prevent sticking due to fusion. Contacts carrying high inductive currents shall be provided with arc deflectors or suppressors.

3. **Microprocessor-Related Hardware:**
   a. Provide built-in noise suppression devices which provide a high level of noise immunity on all solid-state hardware and devices.
   b. Provide power supplies with noise suppression devices.
   c. Isolate inputs from external devices (such as pushbuttons) with opto-isolation modules.
   d. Design control circuits with one leg of power supply grounded.
   e. Safety circuits shall not be affected by accidental grounding of any part of the system.
   f. System shall automatically restart when power is restored.
   g. System memory shall be retained in the event of power failure or disturbance.
   h. Equipment shall be provided with Electro Magnetic Interference (EMI) shielding within FCC guidelines.

4. **Wiring:** CSA labeled copper for factory wiring. Neatly route all wiring interconnections and securely attach wiring connections to studs or terminals.

5. **Permanently mark components (relays, fuses, PC boards, etc.) with symbols shown on wiring diagrams.**

6. **Provide controller or machine mounted auxiliary, lockable “open,” disconnect if mainline disconnect is not in sight of controller and/or machine.**

F. **Sleeves and Guards:** Provide 2" steel angle guards around cable or duct slots through floor slabs or grating. Provide rope and smoke guards for sheaves, cables, and cable slots in machine room.

G. **Machine and Equipment Support Beams:** Retain existing in place. Provide all required supplemental supports and attachments.

H. **Governor:** Centrifugal-type, car driven machine room mounted with pull-through jaws and bi-directional shutdown switches. Provide required bracketing and supports for attachment to building structure.

I. **Emergency Brake:**
   1. Provide means to prevent ascending car over-speed and unintended car movement per Code.
   2. Acceptable emergency brake devices:
      a. BODE Rope Brake
      b. Hollister-Whitney Rope Gripper
   3. Mount the auxiliary brake on suitable structural steel supports. Provide a drawing showing the supports, stamped by Professional Engineer verifying the adequacy of the support provided.
   4. Provide control circuits to enable the device to function as required by Code.

### 2.06 HOISTWAY EQUIPMENT

A. **Guide Rails:** Retain main and counterweight guide rails in place.
   1. Clean rails and brackets. Remove rust.
   2. Check all rail and bracket fastenings and tighten.
3. Realign rails as required to provide smooth car ride.
4. Provide supplemental rail brackets and/or backing as required by Code or to enhance
car ride quality.

B. Buffers, Car, and Counterweight: Retain existing.
1. Drain, flush, refill, and test.
2. Rebuild as required and paint.
3. Retrofit switch to limit elevator speed if buffer is compressed.

C. Sheaves: Retain existing.
1. Regroove or replace if required.
2. Check all fastenings and tighten.
3. Replace worn bearings.

D. Counterweight: Retain existing. Retrofit spring dampening roller guide shoes.

E. Counterweight Guard: Metal guard in pit. Where counterweight is provided between
adjacent elevators, provide runway guard next to the adjacent elevator. Retain existing if it
meets current code requirements.

F. Governor Rope and Encoder Tape Tensioning Sheaves: Mount sheaves and support
frame on pit floor or guide rail. Provide frame with guides or pivot point to enable free
vertical movement and proper tension of rope and tape.

G. Hoist Ropes: Retain existing or replace if estimated remaining life is less than five years.
No proration is allowed under terms of Maintenance Agreement.

H. Hoist and Governor Ropes (IF NEW ARE REQUIRED):
1. 8 x 19 or 8 x 25 Seale construction, traction steel type. Fasten with staggered length,
   adjustable, spring isolated wedge type shackles.
2. Governor rope to suit Contractor's specification.

I. Terminal Stopping: Provide normal and final devices. Provide emergency terminal speed
   limiting devices.

J. Electrical Wiring and Wiring Connections:
1. Conductors and Connections: Copper throughout with individual wires coded and
   connections on identified studs or terminal blocks. Use no splices or similar
   connections in wiring except at terminal blocks, control compartments, or junction
   boxes. Provide 10% spare conductors throughout. Run spare wires from car
   connection points to individual elevator controllers in the machine room. Provide four
   pair of spare shielded communication wires in addition to those required to connect
   specified items. Tag spares in machine room.
2. Conduit: Painted or galvanized steel conduit, EMT, or duct. Conduit size, 1/2"
   minimum. Flexible heavy-duty service cord may be used between fixed car wiring
   and car door switches for door protective devices.
3. Traveling Cables: Flame and moisture-resistant outer cover. Prevent traveling cable
   from rubbing or chafing against hoistway or equipment within hoistway. Provide five
   (5) pair of shielded wires and two (2) RG-6/U type coaxial CCTV cables for card reader.
   Provide two (2) RG-6/U coaxial CCTV cables within traveling cable from car
   controller to car top, plus 3'-0" excess loop at both ends. Provide two (2) pair 14
gauge wire for CCTV power.
4. Auxiliary Wiring: Connect fire alarm initiating devices, emergency two-way
   communication system, firefighters' phone jack, paging speaker, CCTV, card reader,
intercom, and announcement speaker and/or background music in each car controller in machine room.

K. Entrance Equipment:
1. Door Hangers: Two-point hanger roller with neoprene roller surface and suspension with eccentric upthrust roller adjustment.
2. Door Tracks: Bar or formed, cold-drawn removable steel tracks with smooth roller contact surface.
3. Door Interlocks: Operable without retiring cam. Paint interlock box flat black.
4. Door Closers: Spring, spirator or jamb/strut mounted counterweight type. Design and adjust to insure smooth, quiet mechanical close of doors.

L. Hoistway Door Unlocking Device: Provide unlocking device with escutcheon in door panel at all floors, with finish to match adjacent surface.

M. Hoistway Access Switches: Mount in wall at top and bottom floor(s). Provide switch with faceplate.

N. Floor Numbers: Stencil paint 4” high floor designations in contrasting color on inside face of hoistway doors or hoistway fascia in location visible from within car.

2.07 HOISTWAY ENTRANCES

A. Frames: Retain existing.

B. Door Panels: Retain existing. Provide new door gib with fire tabs at all floors. Minimum two gib per panel, one at leading edge, and one at trailing edge of each panel

C. Sight Guards: 14 gauge, same material and finish as hoistway entrance door panels. Construct without sharp edges.

D. Sills: Retain existing. Clean and polish. Check and tighten all fastenings.

E. Sill Supports: Retain existing. Check and tighten all fastenings. Replace any sill supports that have rusted to past water damage and field paint with rust inhibitor paint.

F. Fascia, Toe Guards, and Hanger Covers: Retain existing. Provide as required where damaged or missing. Check and tighten all fastenings.

G. Struts and Headers: Retain existing. Check and tighten all fastenings.

H. Finish of Frames and Doors: Clad in stainless steel #4 finish (satin).

2.08 CAR EQUIPMENT

A. Frame: Retain Existing. Check and tighten all fastenings.

B. Safety Device: Retain existing. Check for proper operation, lubricate, check and tighten all fastenings.

C. Platform: Retain existing. Reinforce if required. Check and tighten all fastenings.
D. **Platform Apron:** Provide new extended platform apron to meet Code. Minimum 14 gauge steel, reinforced and braced to car platform front, finish with Contractor's standard finish.

E. **Guide Shoes:** Roller type with three or more spring dampened, sound-deadening rollers per shoe. Maximum roller rotation speed, 350 r.p.m. up through contract car speed.

F. **Finish Floor Covering:** Provided under other sections.

G. **Sills:** Retain existing. Clean and polish. Check and tighten all fastenings.

H. **Doors:** Retain existing. Retrofit dual gib, one at trailing edge and one at leading edge of each panel.

I. **Door Hangers:** Two-point hanger roller with neoprene roller surface and suspension with eccentric upthrust roller adjustment.

J. **Door Track:** Bar or formed, cold-drawn removable steel track with smooth roller contact surface.

K. **Door Header:** Construct of minimum 12 gauge steel, shape to provide stiffening flanges.

L. **Door Electrical Contact:** Prohibit car operation unless car door is closed.

M. **Door Clutch:** Heavy-duty clutch, linkage arms, drive blocks and pickup rollers or cams to provide positive, smooth, quiet door operation. Design clutch so car doors can be closed, while hoistway doors remain open.

N. **Restricted Opening Device:** Restrict opening of car door(s) outside unlocking zone. Plunger type restrictors not acceptable.

O. **Door Operator:** Medium speed, heavy-duty door operator capable of opening doors at no less than 1-1/2 f.p.s. Accomplish reversal in no more than 2-1/2" of door movement. Provide solid-state door control with closed loop circuitry to constantly monitor and automatically adjust door operation based upon velocity, position, and motor current. Maintain consistent, smooth, and quiet door operation at all floors, regardless of door weight or varying air pressure.

P. **Door Control Device:**
   1. **Infrared Reopening Device:** Black fully enclosed device with full screen infrared matrix or multiple beams extending vertically along leading edge of each door panel to minimum height of 7'-0" above finished floor. Provide additional beams full height of door panel(s). Device shall prevent doors from closing and reverse doors at normal opening speed if beams are obstructed while doors are closing, except during nudging operation. In event of device failure, provide for automatic shutdown of car at floor level with doors open.
      a. **Acceptable Infrared Reopening Device:**
         1) Cegard/MAX-154 by CEDES
         2) Gatekeeper by Adams
         3) Lambda II by Otis
         4) Magic Edge by Tri-Tronics
         5) Microlite by ThyssenKrupp
         6) Microscan E by T.L. Jones
         7) Pana40 Plus by Janus
2. **Nudging Operation:** After beams of door control device are obstructed for a predetermined time interval (minimum 20.0 - 25.0 seconds), warning signal shall sound and doors shall attempt to close with a maximum of 2.5 foot pounds kinetic energy. Activation of the door open button shall override nudging operation and reopen doors.

3. **Interrupted Beam Time:** When beams are interrupted during initial door opening, hold door open a minimum of 3.0 seconds. When beams are interrupted after the initial 3.0 second hold open time, reduce time doors remain open to an adjustable time of approximately 1.0 - 1.5 seconds after beams are reestablished.

4. **Differential Door Time:** Provide separately adjustable timers to vary time that doors remain open after stopping in response to calls.
   a. **Car Call:** Hold open time adjustable between 3.0 and 5.0 seconds.
   b. **Hall Call:** Hold open time adjustable between 5.0 and 8.0 seconds. Use hall call time when car responds to coincidental calls.

**Q. Car Operating Panel:**

1. One car operating panel with faceplate, consisting of a metal box containing operating fixtures, mounted behind the car stationary front return panel. Faceplate(s) shall be hinged and constructed of stainless steel, satin finish.

2. Suitably identify floor buttons, alarm button, door open button, door close button and emergency push-to-call button with SCS, Visionmark, or Entrada cast tactile symbols rear mounted. Configure plates per local building code accessibility standards including Braille. Locate operating controls no higher than 48" above the car floor; no lower than 35" for emergency push-to-call button and alarm button.

3. Provide minimum 3/4" diameter raised floor pushbuttons which illuminate to indicate call registration. Include 5/8" high floor designation on face of pushbutton.

4. Provide alarm button to ring bell located on car. Illuminate button when actuated.

5. Provide keyed stop switch at bottom of car operating panel in locked car service compartment. Mark device to indicate “run” and “stop” positions.

6. Provide “door open” button to stop and reopen doors or hold doors in open position.

7. Provide “door close” button to activate door close cycle. Cycle shall not begin until normal door dwell time for a car or hall call has expired, except firefighters’ operation.

8. Provide firefighters’ Phase II key switch with engraved instructions filled red. Include light jewel, buzzer, and call cancel button.

9. Install firefighters’ telephone jack with bezel matching adjacent controls.

10. Provide lockable service compartment with recessed flush door. Door material and finish shall match car return panel or car operating panel faceplate. Inside surface of door shall contain an integral flush window for displaying the elevator operating permit.

11. Include the following controls in lockable service cabinet with function and operating positions identified by permanent signage or engraved legend:
   a. Inspection switch.
   b. Light switch.
   c. Three-position exhaust blower switch.
   d. Independent service switch.
   e. Constant pressure test button for battery pack emergency lighting.
   f. 120-volt, AC, GFCI protected electrical convenience outlet.
   g. Card reader override switch.
   h. Stop switch.
   i. Switch to select either floor voice annunciation, floor passing tone, or chime.
   j. Car lighting dimmer switch.

12. Provide black paint filled (except as noted), engraved, or approved etched signage as follows with approved size and font:
a. Phase II firefighters’ operating instructions on main operating panel above corresponding keyswitch filled red.
b. Car number on main car operating panel.
c. “Certificate of Inspection on File in Building Office” on main car operating panel.
d. “No Smoking” on main car operating panel.
e. Car capacity in pounds on main car operating panel.

R. Car Top Control Station: Mount to provide safe access and utilization while standing in an upright position on car top.

S. Work Light and Duplex Plug Receptacle: GFCI protected outlet at top and bottom of car. Include on/off switch and lamp guard. Provide additional GFCI protected outlet on car top for installation of car CCTV.

T. Communication System:
   1. “Push to Call,” two-way communication instrument in car with automatic dialing, tracking, and recall features with shielded wiring to car controller in machine room. Provide dialer with automatic rollover capability with minimum two numbers.
      a. “Push to Call” button or adjacent light jewel shall illuminate and flash when call is acknowledged. Button shall match car operating panel pushbutton design. Provide uppercase “PUSH TO CALL” “HELP ON THE WAY” engraved signage adjacent to button.
      b. Provide “Push to Call” button tactile symbol, engraved signage, and Braille adjacent to button mounted integral with car front return panel.
   2. Firefighters’ telephone jack in car and firefighters’ panel, with four shielded wires to machine room junction box. Jack bezel shall match adjacent controls.
   3. Install remote speaker(s) provided under Item 1.01, E., 1, in car canopy with drilled speaker pattern, with shielded wiring to machine room junction box.
   4. Provide two-way communication between car and machine room if required by code.

2.09 CAR ENCLOSURE

A. Car Enclosure Passenger/Service Elevator: Retain existing car shell. Remove existing interior finishes, weigh, and document. Check and tighten all fastenings. Provide new interior finishes as specified at $15,000.00 per cab allowance. Verify weight of new interior finishes does not exceed 5% of the weight of removed finishes as allowed by code. Modify shell for application of new signal and pushbutton fixtures.

B. Provide complete as specified herein. Provide the following features as part of the cab allowance:
   2. Interior Wall Finish: Removable panels, color and finish as selected. Include allowance of $15,000.00 per cab and 300-500 lbs. for interior car finishes.
   3. Ventilation: Three-speed type AA exhaust blower mounted to car canopy on isolated rubber grommets. Exhaust blower shall meet requirements of Item 2.03, H.
   4. Lighting: Provide selected fixtures with wiring and hookup. Coordinate with emergency lighting requirements. Provide emergency lighting integral with portion of normal car lighting system. Include required transformer.
   5. Suspended Ceiling: Special design included in allowance in Item 2 above.
   6. Handrails: Minimum 1-1/4” diameter stainless steel across rear wall.
   7. Pads and Buttons or Hooks, Car(s) No. 1: Three-piece removable pads. Two pads covering side walls and adjacent front returns and one covering rear wall. Provide cutouts to access main car operating panel.
2.10 HALL CONTROL STATIONS

A. Pushbuttons: Provide two (2) riser(s) with flush mounted faceplates. Include pushbuttons for each direction of travel which illuminate to indicate call registration. Include approved engraved message and pictorial representation prohibiting use of elevator during fire or other emergency situation as part of faceplate. Pushbutton design shall match car operating panel pushbuttons. Provide enlarged faceplate to cover existing wall blockout and facilitate handicapped access requirements. Include approved engraved message and pictorial representation prohibiting use of elevator during fire or other emergency situation as part of faceplate. Provide any cutting and patching required.

2.11 SIGNALS

A. Hall Lantern, All Car(s): Provide at each entrance to indicate travel direction of arriving car. Illuminate up or down LED lights and sound tone once for up and twice for down direction prior to car arrival at floor. Sound level shall be adjustable from 20-80 dBA measured at 5"-0" in front of hall control station and 3'-0" off floor. Illuminate light until the car doors start to close. Provide advanced predictive hall lantern notification to comply with ADA hall call notification time. Car direction lenses shall be arrow shaped with faceplates. Lenses shall be minimum 2-1/2" in their smallest dimension.

B. Car Position Indicator: Alpha-numeric digital indicator containing floor designations and direction arrows a minimum of 1/2" high to indicate floor served and direction of car travel. Locate fixture in each car operating panel. When a car leaves or passes a floor, illuminate indication representing position of car in hoistway. Illuminate proper direction arrow to indicate direction of travel.

C. Hall Position Indicator, Car(s) No. 1, 2 & 3: Alpha-numeric digital indicator containing floor designations and direction arrows a minimum of 1/2" high to indicate floor served and direction of car travel. Mount integral with hall lanterns at all floors.

D. Faceplate Material and Finish: Stainless steel Satin finish all fixtures.

E. Floor Passing Tone: Provide an audible tone of no less than 20 decibels and frequency of no higher than 1500 Hz, to sound as the car passes or stops at a floor served.

F. Voice Synthesizer: Provide electronic device with easily reprogrammable message and female voice to announce car direction, floor, emergency exiting instructions, etc.

G. Firefighters’ Control Panel: Locate in building fire control room. Fixture faceplate, stainless steel satin finish, including the following features:
   1. Car position and direction indicator (digital-readout or color SVGA display type). Identify each position indicator with car number and group identification.
   2. Indicator showing operating status of car.
   3. Manual car standby power selection switch(es) and power status indicators.
   4. Two-position firefighters’ emergency return switch(es) and indicators with engraved instructions filled red.
   5. Firefighters’ telephone jack.

Fixtures and monitor shall be located as directed by Purchaser. Where applicable, identify all indicators and manual switches with appropriate engraving. Provide conduit and wiring to control panel.
H. Firefighters’ Key Box: Flush-mounted box with lockable hinged cover. Engrave instructions for use on cover per Local Fire Authority requirements.

I. Machine Room Display Unit: Provide groups of elevators with a machine room color SVGA monitor. As a minimum, SVGA monitor shall display the following functions:
1. Car operating in normal/standby power.
2. Car position and direction of travel.
3. Car calls.
4. Hall calls.
5. Operating mode.
6. Door status.
7. Delayed car.
8. Load weighing and by-pass.
9. Car to lobby feature.
10. Car in/out of service.
11. Secured floor control and code entry.

J. Machine Room Monitoring System: Provide on-site monitoring capability for Car(s) No. 1, 2 & 3:
1. Accumulate hall call registration information as part of monitoring capability. Provide memory capacity for at least the preceding five, 24-hour periods, in blocks of 5 or 15-minute segments, running hour to hour (i.e., 2:00 p.m. to 3:00 p.m.) Provide battery backup to prevent loss of accumulated data due to loss of normal power.
2. Accumulate information for retrieval and use as follows:
   a. Visual and printed summary of hall call registration events by floor, direction, and duration, totaled in 5- or 15-minute segments during any 60-minute block using an internal clock.
   b. Visual and printed summary of hall call registration duration averaged for 5 or 15 minute and hourly periods.
   c. Visual and printed summary of percentage of hall calls answered within 30 and 60 seconds in each 5- or 15-minute and hourly periods.
   d. Visual and printed summary of time periods during which individual cars are not in group operation (operating separately or out of service).
3. Accumulate system fault data including nature of fault, time, and day. Store and retrieval capabilities for minimum 30-day period.
4. Provide printer and interface with elevator microprocessor control in the machine room to download data and/or produce a hard copy of stored data. Provide directions and software to accomplish information retrieval.

PART 3 EXECUTION

3.01 SITE CONDITION INSPECTION

A. Prior to beginning installation of equipment, examine hoistway and machine room areas. Verify no irregularities exist which affect execution of work specified.

B. Do not proceed with installation until work in place conforms to project requirements.

3.02 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Deliver material in Contractor’s original, unopened protective packaging.
3.03 INSTALLATION

A. Install all equipment in accordance with Contractor’s instructions, referenced codes, specification, and approved submittals.
B. Install machine room equipment with clearances in accordance with referenced codes, and specification.
C. Install all equipment so it may be easily removed for maintenance and repair.
D. Install all equipment for ease of maintenance.
E. Install all equipment to afford maximum accessibility, safety, and continuity of operation.
F. Remove oil, grease, scale, and other foreign matter from the following equipment and apply one coat of field-applied machinery enamel.
   1. All exposed equipment and metal work installed as part of this work which does not have architectural finish.
   3. Neatly touch up damaged factory-painted surfaces with original paint color. Protect machine-finish surfaces against corrosion.

3.04 FIELD QUALITY CONTROL

A. Work at jobsite will be checked during course of installation. Full cooperation with reviewing personnel is mandatory. Accomplish corrective work required prior to performing further installation.
B. Have Code Authority acceptance inspection performed and complete corrective work.

3.05 ADJUSTMENTS

A. Install rails plumb and align vertically with tolerance of 1/16" in 100'-0". Secure joints without gaps and file any irregularities to a smooth surface.
B. Static balance car to equalize pressure of guide shoes on guide rails.
C. Lubricate all equipment in accordance with Contractor’s instructions.
D. Adjust motors, power conversion units, brakes, controllers, leveling switches, limit switches, stopping switches, door operators, interlocks, and safety devices to achieve required performance levels.

3.06 CLEANUP

A. Keep work areas orderly and free from debris during progress of project. Remove packaging materials on a daily basis.
B. Remove all loose materials and filings resulting from work.
C. Clean machine room equipment and floor.
D. Clean hoistways, car, car enclosure, entrances, operating and signal fixtures.

3.07 ACCEPTANCE REVIEW AND TESTS
A. See Section 01700, Article 1.02, Consultant's Final Observation and Review Requirements.

3.08 PURCHASER'S INFORMATION
A. See Section 01700, Article 1.03, Final Contract Compliance Review.

END OF SECTION
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SECTION 14325
VERTICAL TRANSPORTATION MAINTENANCE AGREEMENT

This Agreement, between Central New Mexico Community College hereinafter called “Purchaser” and ___________________________ hereinafter called “Contractor” shall pertain to the vertical transportation equipment in the following property(ies):

CENTRAL NEW MEXICO COMMUNITY COLLEGE
MAIN. MONTOYA and WEST SIDE CAMPUS
ALBUQUERQUE, NEW MEXICO
EQUIPMENT DESCRIPTION:
HYDRAULIC and TRACTION ELEVATORS

1.01 AGREEMENT INTENT

A. Provide pro-active preventive maintenance for the equipment covered by this Agreement to facilitate the following:
   1. Consistent safe operation of equipment
   2. Maximum operational performance of equipment
   3. Maximum beneficial usage of equipment
   4. Maximum life cycle of equipment
   5. Minimum preventative maintenance hours per unit per month:
      a. Hydraulic elevators one (1) hour
      b. Traction elevators two (2) hours

B. Contractor expressly acknowledges that Purchaser is relying on Contractor’s professional expertise in performance of Services to achieve and maintain Agreement intent.

C. For clarification elevators, escalators, moving walks, etc. may be referred to as “units” or “equipment” in this Agreement.

1.02 AGREEMENT TERM

A. Term of this Agreement shall be three (3) years from ___________________ 2010 through ___________________ 2013, both dates inclusive and for an additional two (2) years, based on annual performance review by Purchaser and/or their representative. Additionally, units added beginning from expiration of their warranty service period, from new construction or modernization will be added to the existing contract.

1.03 CONTRACTOR SERVICES

A. Services shall include all labor, transportation, supplies, materials, parts, tools, scaffolding, machinery, hoists, employee safety equipment, equipment, lubricants, supervision, applicable taxes, and all other work and materials expressly required under this Agreement or reasonably inferred whether or not expressly stated herein.

B. Coordinate and follow the directives of Purchaser with respect to scheduling Services and any deliveries hereunder or at time or times further specified in other provisions of this Agreement.

C. Services shall be performed as follows:
1. In conformance with all provisions of this Agreement.
2. In conformance with all legal statutes and code requirements.
3. In conformance with all applicable original equipment manufacturer’s specifications.
4. In conformance with Purchaser’s rules, policies, regulations, and requirements for work at the Property, as modified and supplemented during term of this Agreement.
5. In conformance with Purchaser’s requirements for cleanup using containers supplied by Contractor.
6. To Purchaser’s satisfaction.
7. By qualified, careful, and efficient employees in conformity with best industry practices.
8. Diligently and in a first class, complete, and workmanlike manner, free of defect or deficiency.
9. In such manner as to minimize any annoyance, interference, or disruption to occupants of Property and their invitees.

D. Materials: The term “materials” shall include all tangible property, whether designated as materials, goods, parts, or otherwise. All such materials shall be:
   1. New.
   2. Best quality and suitable for their intended uses.
   3. Obtained from or recommended by original manufacturer(s) of equipment for replacement or repair, including parts redesigned by and recommended as replacement parts by the original equipment manufacturer(s). Equivalent parts may be used if approved by Purchaser in writing.
   4. Parts requiring repair shall be rebuilt to “like new” condition.
   5. All lubricants shall be suitable for purpose intended and shall meet or exceed minimum requirements specified by original manufacturer of equipment to which the lubricant is applied.
   6. All materials delivered and stored at the Property which are intended to become part of the completed Services shall pass to Purchaser upon installation.
   7. Provide metal cabinets of suitable size for storage of materials in each machine room. No open storage of materials shall be permitted. Contractor shall stock cabinets with adequate renewal parts and lubricants to maximize beneficial usage of equipment covered by this Agreement.
   8. Lubricants, cleaning fluids, and all combustible liquids shall be stored in a metal cabinet in machine room and shall be disposed of in accordance with Federal or local jurisdiction guidelines. A metal can with lid shall be provided in each machine room for temporary storage of oily rags.
   9. Consideration shall be given in regard to obsolescence of systems, materials, or parts only when both the original equipment manufacturer(s) and after-market elevator industry suppliers no longer manufacture or rebuild required parts or assemblies. Rebuilt parts and/or assemblies are acceptable when documentation is provided indicating parts and/or assembly meets all design requirements of the original part and/or assembly.

E. No parts or equipment required by Services may be removed from the Property without written approval of Purchaser. This does not include renewal parts stocked on site by Contractor, which shall remain Contractor’s sole property until installed on the equipment. Expeditiously replenish parts/materials as utilized.

F. Initiate, maintain, and supervise all safety precautions and programs in connection with Services and comply with all applicable safety laws. Take all reasonable precautions for safety of Purchaser, Purchaser’s tenants, Purchaser’s employees, Contractor’s employees, and other persons on or about Property.
G. Repair, to satisfaction of Purchaser, any damage to the Property and adjacent areas caused by performance of Services.

H. Additional services:
   1. Attendance and assistance to facilitate cleaning of the exterior glass surface of observation elevator car enclosure(s) and the interior surface of the glass enclosed hoistways of observation elevators.
   2. Attendance and assistance to facilitate relamping of architectural lighting in equipment pits, hoistways, or elevator car tops.
   3. Attendance and assistance to facilitate maintenance, repair or replacement of elevator car air conditioning systems.

1.04 CONTRACTOR’S EMPLOYEES

A. This Agreement is not one of agency, partnership, master-servant, or joint employer, but one with Contractor engaged in the business of providing Services hereunder as an independent contractor. Contractor shall have sole responsibility for means, methods, techniques, procedures, and safety precautions in connection with performance of Services.

B. Contractor shall be responsible for the supervision and execution of Services by its employees.

C. Contractor shall employ a sufficient number of trained and capable employees to properly, adequately, safely, and promptly provide Services. All matters pertaining to employment, training, supervision, compensation, promotion, and discharge of Contractor’s employees are the responsibility of the Contractor, who is in all respects the employer and Purchaser shall have no liability with respect thereto.

D. Contractor agrees each of its employees is properly qualified and will use reasonable care in the performance of Services. If Purchaser, in Purchaser’s sole opinion, determines for any reason that the qualifications, actions, or conduct of any particular Contractor employee has violated this Agreement by performing unsatisfactory Services, interfering with operation of Property, bothering or annoying any occupants, other contractors or subcontractors then at Property, or that such actions or conduct are otherwise detrimental to Purchaser, then upon receipt of Purchaser’s written notice, Contractor shall immediately provide qualified replacement person(s).

E. Contractor shall not engage any subcontractors or other parties to perform Services unless first approved in writing by Purchaser. Purchaser’s acceptance of subcontractors or other parties shall not relieve, release, or affect in any manner any of Contractor’s duties, liabilities, or obligations hereunder, and Contractor shall at all times be and remain fully liable hereunder.

1.05 CONTRACTORS HOURS AND MANNER OF WORK

A. Services, except as otherwise noted under this Agreement, including unlimited emergency callback service, shall be performed between the hours of 7:00 a.m. and 5:00 p.m. Monday through Friday. Provide overtime callback service at no additional cost under the following conditions:
   1. Passenger entrapments.
   2. Elevator group control system malfunctions.
   3. Two (2) or more elevators out of service in any elevator group.

B. Response time for callback service:
1. During the hours identified in Item 1.05, A., Contractor shall arrive at Property within sixty (60) minutes from time of notification of equipment problem or failure by Purchaser.

2. During the hours identified in Item 1.05, A., Contractor shall arrive at Property in response to passenger entrapment calls within thirty (30) minutes from time of notification by Purchaser.

3. After hours, Contractor shall respond to callback service within sixty (60) minutes from the time of notification by Purchaser.

4. Purchaser, at its sole discretion, may reduce monthly Agreement amount by $300/occurrence for Contractor’s repeated failure to meet callback response time.

C. Callback is defined as any request for service or assistance by Purchaser or Purchaser’s representative when any unit is not available for beneficial usage due to equipment shutdown or malfunction.

D. If a unit is shut down due to equipment failure for more than seventy-two (72) continuous hours, maintenance billing for that unit shall be suspended until unit is restored to beneficial usage, excluding scheduled equipment repairs.

E. Removal of units from beneficial usage to facilitate Services shall be coordinated with and approved by the Purchaser, unless removal is necessitated for emergency repair or adjustment. Purchaser agrees to permit Contractor to remove units from service for a reasonable time during hours identified in Item 1.05, A., to perform Services.

1.06 CONTRACTOR’S EXECUTION OF SERVICES

A. Regularly and systematically examine, clean, lubricate, adjust, and as conditions warrant, repair or replace all vertical transportation equipment covered under this Agreement. Consistently maintain machine room(s), hoistway(s), pit(s), car top(s), and equipment in or on these areas in a clean condition.

B. Check and adjust individual and/or elevator group operational system(s) at planned intervals to ensure all control circuits and time settings are properly adjusted to minimize system response time to registered car and hall calls and maximize car and/or group operational performance.

C. Lubricate equipment at intervals recommended by original equipment manufacturer or as dictated by equipment use or adverse environmental conditions.

D. Paint equipment at intervals to maintain a consistent professional appearance, prevent rusting, and preserve the equipment. Floors in machine room(s), machinery space(s), and pit(s) shall be painted “deck gray.” All paint shall be suitable for the purpose intended, of high quality, and shall not emit noxious odors while curing. Schedule all painting procedures with Purchaser.

E. Provide replacement lamps to maintain adequate lighting in elevator machine room, secondary sheave level(s), overhead sheave space(s), and pit(s).

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

G. When, as a result of examination or testing of the equipment, Contractor identifies corrective action is required, Contractor shall proceed expeditiously to make required repairs, replacements, and adjustments. If Contractor believes such work is not
Contractor's responsibility, a written report signed by Contractor shall be delivered to Purchaser for further action with exception of a safety or potential safety situation, in which case, Contractor shall expeditiously correct the problem.

H. Services shall be all inclusive with following exclusions only:
   1. Installation of new attachments or performance of newly mandated tests recommended or directed by inspecting entities, insurance companies, and federal, state, or municipal governmental authorities subsequent to the date of this Agreement. In the event of new or retroactive requirements, required by such authorities, Contractor shall provide written notice and proposal to Purchaser within ten (10) working days of effective date.
   2. Callbacks, repairs, modifications, adjustments, or replacements required due to negligence, vandalism, accident, or misuse of the equipment by anyone other than the Contractor, its employees, subcontractors, servants or agents, or other causes beyond the Contractor’s control except ordinary wear.
   3. Repair or replacement of Property items, such as hoistway or machine room walls, floors, car interior finishes, car finish floor material, hoistway entrance frames, car and hoistway door panels, car and hoistway door sills, signal fixture faceplates, and fire alarm initiating devices. Exception: see Item 1.06, F.
   4. Mainline and auxiliary disconnecting means, fuses, and electrical feeders to equipment control panel(s) in machine rooms.
   5. Lamps for normal car illumination.
   6. Failure or fluctuations of property electric power, air conditioning, or humidity control.
   7. Ingress by water or other material into machine room, hoistway, car enclosure, or pit.
   8. Purchaser loading unit in excess of its rated car capacity or load classification.
   9. Audio and visual devices.
  10. Shrinkage, settlement, or movement of building.
  11. Underground hydraulic piping and cylinders.

Above exclusions shall apply except to the extent that they arise out of or are caused by the negligence, breach of contract, or breach of statutory duty of the Contractor, his employees, agents, subcontractors, or others for whom he is responsible.

1.07 CONTRACTOR COMPLIANCE WITH LAWS

A. Contractor agrees to comply with all existing laws, codes, rules, and regulations set forth by appropriate authorities having jurisdiction in location where Services are performed. In the event of differing testing requirements between Agreement requirements and local codes or ordinances, the more stringent requirement shall prevail.

B. Schedule, coordinate, and complete statutory and other equipment tests including, but not limited to:
   1. Annual no load slow speed test of car safeties, governors, and buffers.
   2. 5-year, full load, full speed test of car safeties, governors, and buffers.
   3. Monthly firefighters’ service operational tests.
   4. Annual pressure relief tests on hydraulic elevators.
   5. Annual standby power operation test(s) on elevators.
   6. Monthly operational tests: battery pack car emergency lighting, monthly car emergency communication device, and battery pack car lowering devices or car rescue devices.

C. Provide Purchaser with a minimum of five (5) working days prior notification of tests so a Representative of the Purchaser may witness all tests. Submit written reports to Purchaser within ten (10) working days of completion of tests, confirming findings including corrective
action(s) required and taken. Affix and maintain governmental jurisdiction number designation(s) on all unit equipment in the machine room(s) and pit(s) including hoist machine, pump unit, controller, car crosshead, electrical disconnect switch(es), buffer(s), etc.

D. Affix metal tags to the tested devices and provide Purchaser with written documentation clearly indicating the type of test, date of test, Contractor performing test, and applicable code rule.

E. Contractor’s failure to execute statutory tests mandated by either national codes or local jurisdictions or regulations within 30 calendar days of required time constraint shall subject Contractor to a $200.00 per calendar day penalty on each unit for each infraction beginning on the 30th day subsequent to the required date and continuing until Purchaser receives written notification from Contractor of completion of required test. Statutory tests include, but are not limited to, Items 1.07, B., 1-6. Contractor shall attempt to schedule said tests in the presence of local enforcing authority and/or persons designated by Purchaser. Scheduling difficulties shall not exempt Contractor from performing tests in compliance with applicable code or regulatory requirements.

1.08 SPECIAL CONDITIONS

A. Upon arrival and departure from property, all Contractor employees shall report to designated property personnel (location) and manually sign a log book indicating name of person, time of arrival, purpose of visit, i.e. callback, preventive maintenance, scheduled repair, Supervisor’s inspection, etc., a brief description of work accomplished, including car and/or group designation, and time of departure. Manual log provided by Purchaser.

B. Conspicuously post Preventative Maintenance Schedule and work log in each machine room. Alternately, collect preventive maintenance history and testing logs electronically within unit computer control system. Data shall be accessible by Purchaser via manual log or web access and hard copy printout at all times.

C. At least quarterly or more often if requested, provide summary and review of all callbacks and unit downtime with Purchaser. The intent of this review is to minimize callbacks by developing consistent communication between the Contractor and Purchaser relative to callback trends, unit downtime, and their causes.

D. Maintain Purchaser’s complete set of straight line wiring diagrams in good condition. Drawings shall be consistently updated and properly noted with “as built” conditions with any changes or modifications to circuits resulting from control modifications, parts replacement, or equipment upgrades made by Contractor during Agreement term. Purchaser shall be allowed to reproduce these “as built” drawings and retain sole possession of these drawings in event Agreement is cancelled. If Agreement is cancelled, Purchaser will withhold final payment due Contractor until all as built/as modified set(s) of wiring diagrams are delivered to Purchaser.

E. Equipment manufacturer’s electronic diagnostic devices required to facilitate services, including fixed and hand held devices, shall be maintained and upgraded by Contractor during the term of this Agreement.

F. Local or National inspection fees in regard to operation of equipment covered by this Agreement shall be paid by the Purchaser. Fees for reinspection due to Contractor’s failure to expeditiously eliminate deficiencies covered by Services shall be paid by Contractor.
G. Purchaser may provide information to enable Contractor to render Services hereunder, or Contractor may learn information about Property or develop such information from Purchaser. Contractor agrees:
1. To treat and to obligate Contractor’s employees, subcontractors, and suppliers to treat as confidential all such information whether or not identified by Purchaser as confidential.
2. Not to disclose any such information or make available any reports, recommendations, and/or conclusions which Contractor may make on behalf of Purchaser to any person, firm, or corporation or use the same in any manner, whatsoever, without first obtaining Purchaser’s written approval, except to the extent necessary in connection with performing Services or when required by law.
3. Contractor shall not, in the course of performance of this Agreement or thereafter, use or permit the use of Purchaser’s name or the name of any affiliate of Purchaser, or the name, address, or any picture or likeness of or reference to the Property in any advertising, promotional, or other materials prepared by or on behalf of Contractor without the prior written approval of Purchaser.

1.09 EQUIPMENT PERFORMANCE REQUIREMENTS

A. Equipment listing, type, and individual car performance requirements are covered under Appendix B of this Agreement. Equipment performance requirements indicated are the minimum standard and are not the sole criteria for judging Contractor’s performance. Consistent failure to meet performance requirements shall be grounds for cancellation of this Agreement.

B. Contractor shall maintain a quiet and comfortable car ride with smooth acceleration, deceleration, and accurate stop. Door operation shall be smooth and quiet.

1.10 EQUIPMENT USAGE CRITERIA

A. Mean Time Between Callbacks (MTBCB Penalty):
   1. Average MTBCB shall not be less than 90 days for all units covered by this Agreement. If average MTBCB on all covered units falls below 90 days, a lump sum penalty of $100/unit shall be deducted from the contract amount due Contractor and for each subsequent month in which MTBCB is not achieved.
   2. The minimum allowable MTBCB rate shall be 45 days for any individual unit within a property. Penalty for units less than 45 days: $400.00 per occurrence.
   3. MTBCB applies immediately to units Contractor had under contract prior to the effective date of this Agreement and after 180 days for those units not under contract prior to this Agreement.
   4. MTBCB shall be presented to the Purchaser as part of the review processes described in 1.08 C above.

B. If this Agreement is renewed beyond its initial term, the penalty provisions shall continue as specified.

1.11 PURCHASER’S RIGHT TO AUDIT SERVICES

A. Purchaser reserves the right to make, or cause to be made, such audits and tests whenever necessary to ascertain that Services are being fulfilled. Deficiencies noted shall be submitted, in writing, to the Contractor. Contractor shall expeditiously correct deficiencies within thirty (30) working days at its expense.
B. A qualified vertical transportation consultant acceptable to both parties may be retained by Purchaser to perform audit of Services and mediate disputes. If such audit is directed by Purchaser and the results indicate an overall lack of preventative maintenance as specified in this document, the audit fees shall be deducted from the Contractor monthly billing.

1.12 AGREEMENT AMOUNT AND ANNUAL LABOR/MATERIAL ADJUSTMENT

A. During term of this Agreement, Purchaser shall pay Contractor on or before last day of each and every month the sum of $________________, including all applicable taxes, for faithful performance of Services completed for prior month subject to the following:

1. Agreement amount shall be subject to review and adjustment at the end of each 12 month period thereafter. 80% of Agreement price shall be adjusted to reflect increase or decrease in labor cost based on the straight time rate of Elevator Mechanics in area wherein equipment covered by this Agreement is located. The remaining 20% shall be adjusted to reflect increase or decrease in material cost based on Producer Price Index for Metals and Metal Products as published by United States Department of Commerce, Bureau of Labor Statistics. Total price escalations shall be limited to a maximum of 5% in any one (1) year period. Contractor shall provide thirty (30) day advance notification to Purchaser of pending price adjustment for both labor and material. Initial Agreement base rates are as follows:

Mechanic Labor Rate Including Fringe Benefits Applicable: $__________
U. S. Metal Products Index: $__________

2. The words “fringe benefits” mean employee benefits granted in addition to direct hourly labor rate, and include but are not limited to accruals for pensions, vacations, paid holidays, group life, and group health insurance. Fringe benefits shall not include any direct or indirect costs based on labor.

3. If straight time work is required, outside scope of Services, hourly rates below apply. If overtime work is required, within the scope of Services, Purchaser will pay only difference between straight time and overtime labor at hourly rates indicated below. If overtime work is required outside scope of Services, straight time rate plus applicable overtime premium will be basis for hourly charges. Contractor may adjust rates in accordance with Item A. above, labor portion only.

<table>
<thead>
<tr>
<th>Billing Rates</th>
<th>Mechanic</th>
<th>Helper</th>
<th>Crew</th>
</tr>
</thead>
<tbody>
<tr>
<td>Straight Time</td>
<td>$________</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>Overtime Premium (1.7 Time)</td>
<td>$________</td>
<td>$________</td>
<td>$________</td>
</tr>
<tr>
<td>Overtime Premium (Double Time)</td>
<td>$________</td>
<td>$________</td>
<td>$________</td>
</tr>
</tbody>
</table>

4. Payment for Services shall not be deemed acceptance of defective, deficient, or non-conforming Services.
1.13 INSURANCE

A. Prior to commencing work, Contractor shall secure required insurance, at its sole cost, and submit certificate of confirmation naming indemnified parties as additional insured. Said policies, including an endorsement which states that such insurance will not be cancelled or materially changed unless Purchaser is given thirty (30) days notice, in writing, of the intention of said insurer to cancel or change any such policy. In the event Property is owned by a joint venture or other multi-party entity, all joint venture partners or parties with an equity interest in the ownership shall be named as additional insureds. Contractor’s insurance shall be primary to any applicable loss. With Purchaser’s prior approval, an Owners & Contractors Protective Liability (OCPL) Policy may be substituted for commercial general liability coverage. Following are minimum insurance coverage requirements:

<table>
<thead>
<tr>
<th>Type Of Insurance Coverage</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workers’ Compensation And Occupational Disease</td>
<td>Statutory Limits</td>
</tr>
<tr>
<td>Employer’s Liability (Including Occupational Disease Coverage)</td>
<td>$1,000,000</td>
</tr>
<tr>
<td>Commercial General Liability, Including Operations, Contractual, And Completed Operations Coverages, Occurrence Basis</td>
<td>$1,000,000 Combined Single Limit For Bodily Injury And Property Damage</td>
</tr>
<tr>
<td>Commercial Automobile Liability Covering Owned, Non-Owned And Hired Vehicles Used In The Performance Of The Services</td>
<td>$1,000,000 Combined Single Limit For Bodily Injury And Property Damage</td>
</tr>
</tbody>
</table>

B. Commercial General and Automobile Liability: Contractor shall maintain a policy of property damage and public liability insurance, including automobile coverage which shall protect the Purchaser against any liability imposed by law for damages, for injury to property or for bodily injuries, including death, suffered or claimed to have been suffered by reason of any direct or indirect negligent act or omission of any employee, servant or agent of the Contractor.

C. Nothing in this Agreement shall be construed to mean that Contractor assumes any liability on account of accidents to persons, or property, except those directly, or indirectly, due to negligent acts or omissions of Contractor, its employees, subcontractors, servants or agents. Contractor shall not be held responsible or liable for any loss or damage due to any cause beyond its control, including, but not limited to, acts of government, strikes, lockouts, fire, explosion, theft, floods, riot, civil commotion, war, malicious mischief, or act of God, with the exception of explosion caused by action or inaction of Contractor, its employees, subcontractors, servants or agents which shall be the responsibility of the Contractor. Dates for performance or completion of any ongoing maintenance or corrective action required shall be extended by such length of time as may be reasonably necessary to compensate for unavoidable delay.

D. “Force Majeure” under this Agreement shall mean in relation to either party any circumstances beyond the reasonable control of that party (including without limitation any strike, lockout, or other industrial action).

1. If either party is affected by Force Majeure it shall promptly notify the other of the nature and extent of the circumstances in question.

2. Notwithstanding any provision of this Agreement neither party shall be deemed to be in breach of this Agreement or otherwise liable to the other for any delay in
performance or the non-performance of any of its obligations under this Agreement, to the extent that the delay or non-performance is due to any Force Majeure of which it has notified the other party, and the time for performance of the obligation shall be amended accordingly.

3. If at any time the Contractor claims Force Majeure in respect of the obligations under this Agreement with regard to the supply of the Services, the Purchaser shall be entitled to obtain from any other person such Services as the Contractor is unable to provide.

1.14 INDEMNIFICATION

A. The Contractor acknowledges that it has reviewed site and equipment conditions covered by this Agreement prior to the date of commencement of this Agreement. The Contractor shall indemnify the Purchaser against any claims during the Term of this Agreement for adjustment, repair, or replacement of all equipment for which the Contractor is responsible under this Agreement.

B. To extent permitted by law, Contractor shall indemnify and hold harmless Indemnified Parties from and against any and all claims, demands, losses, damages, injuries, liabilities, expenses, penalties, judgments, liens, encumbrances, orders and awards, whether foreseen or unforeseen, direct or indirect, special or consequential, all of which are collectively referred to as "claims," however caused, which directly or indirectly relate to or result wholly or in part from, or are alleged to relate or result wholly or in part from:
   1. Services performed or required to be performed by Contractor.
   2. Any violation of this Agreement by Contractor.
   3. Any action or omission of Contractor outside the scope of this Agreement.

C. Such indemnity shall include reasonable attorneys’ fees, experts’ fees, court costs, and other related expenses arising out of any matter covered by foregoing indemnity, except to extent of claims excluded under Items 1.14, D. Contractor shall initially defend claims hereunder on behalf of Indemnified Parties through counsel approved in writing by Purchaser (not unreasonably withheld), until such time as such counsel determines that exclusion in Item 1.14, D. may apply, or such counsel otherwise has a conflict of interest, or Purchaser or Purchaser’s insurer reasonably determines that such counsel’s performance is unsatisfactory. Contractor’s counsel shall then withdraw its representation of Indemnified Parties and transfer all relevant files and documents to a counsel designated, in writing, by Purchaser or other Indemnified Party. Purchaser or other Indemnified Party shall assume responsibility at that time for its defense and payment of its attorney’s fees and costs are subject to reimbursement of such reasonable attorney’s fees and costs by Contractor unless Item 1.14, D. applies.

D. Such indemnity shall not apply to the extent of claims caused by the negligence or willful misconduct of the party or parties seeking to be indemnified, whether determined by a court of competent jurisdiction with all appeals expired or exhausted, or pursuant to a written settlement and release agreement reasonably approved in writing by Contractor and Purchaser, and by their respective insurers, if applicable. For purposes of this clause "negligence" by an Indemnified Party shall not include its passive failure to supervise Contractor.

E. The term “Indemnified Parties” herein shall mean Owner, Purchaser and their respective subsidiaries, beneficiaries, parents, shareholders, affiliates, directors, officers, partners, agents, servants and employees of all of the foregoing, and anyone else acting for or on their behalf.
F. Notwithstanding foregoing Items 1.14, A., B., and C., such indemnity shall be limited, with respect to claims for indirect damages only, to the amount of $1,000,000.00 per occurrence, plus reasonable attorneys’ fees and other defense costs.

G. Contractor’s obligations under this Provision shall survive expiration or earlier cancellation of this Agreement for one year.

1.15 AGREEMENT CANCELLATION

A. Purchaser shall have the right to cancel this Agreement at the end of its initial term or at the end of any subsequent term upon ninety (90) calendar day’s prior written notice to Contractor. Contractor shall advise the Purchaser of pending Agreement expiration a minimum of six (6) months in advance.

B. If Contractor violates any provision or fails to properly provide Services required by this Agreement, Purchaser shall advise Contractor of deficiencies and shall allow Contractor a reasonable period, thirty (30) working days unless otherwise agreed, to correct deficiencies at Contractor’s expense and to Purchaser’s sole satisfaction. If Contractor fails to comply in allotted time, Purchaser shall have right to cancel Agreement upon thirty (30) calendar days written notice to Contractor, or Purchaser, after an additional ten (10) calendar days written notice to Contractor, may perform or cause to be performed all or any part of Services and Contractor agrees that it will reimburse Purchaser for any expense incurred. Purchaser shall deduct said expense from any sum owing Contractor. The waiver by Purchaser of a breach of any provision of this Agreement by Contractor shall not be construed as a waiver of any subsequent breach by Contractor.

C. If Property is sold or a change of management occurs, this Agreement shall remain in force unless cancelled by Contractor, Owner, or Management Company upon thirty (30) calendar day’s written notice to other party.

D. Purchaser may choose to modernize all or a portion of vertical transportation units during term of this Agreement. Modernization is defined as replacement of elevator motion and supervisory control systems. If Contractor is considered in compliance with terms of this Agreement, Contractor shall be one of the Elevator Contractors requested to submit a modernization proposal. If Contractor is not the selected Modernization Contractor, this Agreement shall, upon written notice by Purchaser to Contractor, be immediately cancelled.

E. If Agreement is cancelled, Contractor agrees to take action reasonably necessary to cause an orderly cessation and transition of Services to Purchaser or another Contractor designated by Purchaser without detriment to rights of Purchaser or to continued operation of Property including, but not limited to, refraining from any interference or disruption of occupants or other contractors. Without limiting generality of foregoing, Contractor shall immediately deliver to Purchaser all reports, records, as-built wiring diagrams, portable electronic diagnostic devices, access codes, and other materials and documentation related to and required to facilitate Services required by this Agreement. Purchaser shall withhold payments due Contractor until receipt of required information and devices.

1.16 NOTICES

A. All notices which are required to be given hereunder shall be in writing and shall be sent to the address of the parties to Agreement or such other address as the parties may designate by notice given in accordance with the provisions of this clause. Any such notice may be delivered personally or by first-class pre-paid letter, email or facsimile transmission, and shall be deemed to have been served by hand when delivered, if by first class mail forty-
eight (48) hours after posting, and if by email or facsimile transmission when dispatched, provided that a confirming copy is sent by first class pre-paid post to the other party at the address specified within twenty-four (24) hours after transmission.

B. Each party will notify the other when they become aware of the death or injury to any person or damage to property arising from the use of the Equipment

1.17 PURCHASER'S RESPONSIBILITIES

A. Provide clear, safe, and convenient access to Property and equipment rooms.

B. Maintain car lighting, telephone lines to controller terminal(s), equipment room electrical switch gear, and electrical feeders to unit controllers.

C. Maintain equipment room heating and air conditioning systems.

D. Maintain fire alarm initiating devices in elevator lobbies, machine rooms, hoistways, etc.

E. Prevent storage of Property or other Contractors' equipment or supplies in unit equipment rooms and obstruction of equipment room access corridors and doors.

F. Maintain standby power generator systems and related switch gear and feeders.

G. Maintain equipment rooms, hoistways and pits in code compliant dry condition.

H. Coordinate with Contractor in regard to equipment retrofits such as security systems, new car interior finishes, car interior TV systems, etc.

I. During Property construction and/or modernization, make provisions to limit infiltration of dust and debris into equipment and equipment spaces.

1.18 PREVIOUS REPRESENTATIONS

A. All previous communications or agreements, written or verbal, are hereby abrogated and this writing constitutes the whole Agreement between the parties hereto.

1.19 EXTENT OF LAW

A. This Agreement shall be interpreted in accordance with the laws of the State of New Mexico.

1.20 TIME

A. Time shall be of the essence in the performance of the terms of this Agreement.

1.21 EXECUTION

A. IN WITNESS WHEREOF, the parties have executed this Agreement the date noted below.
CONTRACTOR

BY: ____________________________
TITLE: __________________________
DATE: __________________________

PURCHASER

BY: ____________________________
TITLE: __________________________
DATE: __________________________

END OF SECTION
APPENDIX A
CONTRACTOR'S PREVENTIVE MAINTENANCE SCHEDULE/PROCEDURE
Insert Schedule Here
APPENDIX B
EQUIPMENT TYPE AND
PERFORMANCE REQUIREMENTS
A. Elevator Performance Requirements (Based on 12’ – 0” floor to floor heights and 3’ – 6” wide by 7’ – 0” high center opening doors and an average hydraulic speed of 100 fpm, traction speed of 350 fpm):

<table>
<thead>
<tr>
<th>Elevator</th>
<th>Floor To Floor Time (Seconds)</th>
<th>Door Open Time (Seconds)</th>
<th>Door Close Time (Seconds)</th>
<th>Stopping Accuracy (Inch)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HYDRAULIC</td>
<td>14.0</td>
<td>2.1</td>
<td>2.4</td>
<td>±1/4&quot;</td>
</tr>
<tr>
<td>TRACTION</td>
<td>9.1</td>
<td>2.1</td>
<td>2.4</td>
<td>±1/4&quot;</td>
</tr>
</tbody>
</table>

1. Floor-to-floor time is measured from start of door(s) close until car is stopped at next typical successive floor, in either direction of travel, and door(s) is 3/4 open. Typical floor height 12’ – 0”.
2. Door open time is measured from start of door(s) open until door(s) is fully open.
3. Door close time is measured from start of door(s) close until door(s) is fully closed.
4. Door closing force shall be no more than 30 lbf. Door closing force is measured with door(s) at rest and between 1/3 and 2/3 closed.
5. Car stopping accuracy shall be measured under all load conditions.
6. Rated car speed, regardless of load, shall not vary more than ± 10% for hydraulic and 5% for traction.