PART 1 - GENERAL

1.01 SUMMARY

A. This Section specifies hydraulic elevators.

B. Related Sections: The following sections contain requirements that relate to this section and are performed by other trades.

1. **Electrical:** electrical service to main disconnect in elevator machine room; electrical power for elevator installation and testing; electrical-disconnecting device to elevator equipment prior to activation of sprinkler system; electrical service for machine room; machine room and pit receptacles with ground-fault current protection; lighting in machine room and pit; wiring for telephone service to machine room.

2. **Fire Alarm Systems:** fire and smoke detectors and interconnecting devices; fire alarm signal lines to contacts in the machine room. System can not be self-resetting. System may or may not be tied to the building fire life safety system. **Subject to local fire code.**

3. **Telephone Systems:** ADAAG-required emergency communications equipment single dial tone outside line will be required per elevator and will be run to the corresponding controller.

1.02 REFERENCES

A. Comply with applicable building codes and elevator codes at the project site, including but not limited to the following:

2. ADAAG, Americans with Disabilities Act Accessibility Guidelines.
3. ANSI/NFPA 70, National Electrical Code.
7. Model Building Codes.
8. All other local applicable codes.

1.03 SYSTEM DESCRIPTION: Elevator Arrangement

A. **Performance Requirements for Elevators:**

1. Quantity & Elevator Numbers: Existing Elevators  
   One Elevator – Car #1 @ 75 Main Street, Southington  
   Existing elevator is Dover hydraulic unit

2. Type: Modernization

3. Number of Stops: 75 Main Street, Southington – 3 stops

4. Number of Openings: Same
5. Rise: Field Verify
    75 Main Street, Southington – estimated 30’

6. Piston and cylinder:
    Retain “as is” – Repack if necessary - Field Verify
    See alternate for option to replace

7. Minimum Car Inside:
    Retain w/ cab modifications – See alternates for car interior finishes.

8. Inside Cab Height:
    Retain Existing

9. Entrance Width & Type: Retain

10. Main Power Supply:
    Field Verify

11. Lighting Power Supply: Field Verify

12. Speed: ± 10% of contract speed under any loading condition or direction of travel.

13. Stopping Accuracy: ±1/4” (6.4 mm) under any loading condition or direction of travel.

14. Door Opening/Closing Time:
    1.80 seconds for Center Opening / 2.5 second closing
    4.0 seconds for Side Slide Openings / 4.5 seconds close

15. Floor-to-Floor Time: for 12-ft. (3658-mm) floor height.
    5.5 seconds avg. up run

B. Car Operating Features

1. Full Collective Operation:

   The car shall answer calls in the order in which floors are reached, without respect to the time sequence in which the calls were registered.

   Only car calls and up hall calls shall be answered when the car is traveling in the up direction, and only car calls and down hall calls shall be answered when the car is traveling in the down direction, except in the case of the highest or lowest calls which are answered as soon as they are reached, regardless of the direction of travel of the car.

   When the car reaches the last registered call for the established direction, it shall reverse and proceed to answer calls in the opposite direction if they are present.

2. Anti-nuisance:

   If an excessive number of car calls (quantity to be adjustable) are registered and the passenger load as determined by the weight sensors is less than a predetermined weight, all car calls shall be canceled requiring re-registration of calls.

3. Call Parking Recognition:
Car doors shall only open in response to car and hall demand. Cars being parked without call demand will be parked without door operation.

4. Direction Preference:

At the final stop (highest or lowest call), direction preference shall be given to the hall passenger whereby, if a passenger registers a car call for the original direction of travel before the doors close, it shall not be possible for a waiting passenger at another floor to call the car in the reverse direction.

5. Direction Reversal:

A car without registered car calls arriving at a floor where both up and down hall calls are registered and the hall call is the last one in that direction, shall first respond to the hall call in the direction that the car was traveling; and if no car call is registered for further travel in that direction, the car shall close its doors and immediately re-open them in response to the hall call in the opposite direction. The hall lantern shall always show the direction the car will travel when it leaves a floor.

6. Fan and Light Protection:

The cab's fan and light shall automatically turn off if the car is idle for a selectable period of time. As allowed by A17.1 code compliance.

7. Hall Button Protection:

If the hall button signal system fails, all of the cars in the group shall enter Hall Button Protection operation. Each car shall answer all pending car calls. When each car has no further demand, each car shall travel to the lobby and shut down with the doors open.

8. Landing Passing Tone:

An audible signal located in car operating panel shall sound when the car passes or stops at a landing.

9. Independent Service:

Actuation of the Independent Service switch shall remove that car from normal group operation, permitting it to respond only to calls registered on car buttons and making the door close operation subject to the Door Close Button. A car operating on Independent Service shall not respond to hall calls. Car and/or hall lantern operation shall be suspended.

A Call Cancel push-button shall be provided on the car-operating panel. When the button is activated all registered calls shall be canceled and a traveling car will stop at the next landing.

**FIREFIGHTERS' SERVICE OPERATION FEATURES**

1. Firefighters' Service Phase I:

When a building smoke sensor or a keyswitch located at the designated return landing is activated, all cars in the group shall perform an emergency return to the designated landing. The return operation shall be in compliance with applicable codes.

Passengers shall be alerted that the car is returning by a buzzer and a message indicator showing "Please Exit when Doors open" and a Fireman's Hat light is also illuminated.

2. Alternate Return Landing for Phase I:

The car(s), while responding to a Phase 1 Firefighters' Service operation, shall return to a reselected alternate landing if the smoke detector at the designated return landing has been activated.
3. Firefighters' Service Phase II:

This feature shall be activated by the fire fighting personnel using a keyswitch in the car and shall place the elevator under their control. The operation shall be in compliance with applicable codes. This feature shall include a Call Cancel push-button. When the button is activated all registered calls will be canceled and a traveling car will stop at the next landing.

MAINTENANCE OPERATION FEATURES

1 Top of Car Inspection:

Enabling switches in the car operating panel and on top of the car shall make the car and hall buttons inoperative and allow the controls in a fixture on the top of the car to be used to move the car at reduced speed for installation, inspection, and maintenance. This operating station shall include a push-button, which must be continuously depressed to permit the elevator to move in either the up or down direction. The top-of-car inspection station shall include a 125V, 15 Amp convenience outlet with ground-fault-circuit-interrupter protection and a convenience light with switch. The top of car fixture shall also include an emergency stop button.

2. Pit Emergency Stop Switch

A switch, accessible from the pit access door, shall be provided for each car. When a switch is activated, the corresponding car shall stop running.

SECURITY FEATURES

1. ADA Emergency Communications:

This feature shall provide an "Alarm Received" message indicator in the car operating panel fixture having an "Alarm" message indicator, keyswitch, and buzzer. An Alarm Button in the car-operating panel shall activate the message indicator and buzzer in the hall fixture. Activating the keyswitch in the hall fixture shall illuminate the "Alarm Received" message indicator in the car.

A. Door Control Features: Closed Loop Control:

1. Closed loop control Operator will be installed to allow for smooth operation under varying environmental influences such as, temperature, wind, friction, and component variation. It will meet the specified door times and required position and velocity profiles, with consistent running results at all landings.

2. Operating Environment:
   -25°C to 50°C, 90% humidity non-condensing
   Non-operating environment:
   -30°C to 65°C, 95% humidity non-condensing

3. Opening and Closing Times:
   Opening and closing speeds are adjustable. The system will limit closing speed (and hence the time) based on the code requirement of kinetic energy, which depends on the door mass. The code may limit the speed of a heavy bronze lobby door, but at another floor we can move the doors quicker

4. Door Noise:
   Door noise will be 50 dBA. This includes reversals.
5. Door Control & Closing:

1. Door control to open doors automatically when car arrives at a landing in response to a normal hall or car call.

Elevator doors shall be provided with a reopening device that will stop and reopen the car door(s) and hoistway door(s) automatically should the door(s) become obstructed by an object or person.

Primary door protection shall consist of a two dimensional, multi-beam array projecting across the car door opening. Under normal operation and for any door position, the system shall detect as a blockage an opaque object that is equal to or greater than 1.3 inches (33 mm) in diameter when inserted between the car doors at vertical positions from within 1 inch (25 mm) above the sill to 71 inches (1800 mm) above the sill. Under degraded conditions (one or more blocked or failed beams), the primary protection shall detect opaque objects that are equal to or greater than 4” (100 mm) in diameter for the same vertical coverage. If the system performance is degraded to the point that the 4” object cannot be detected, the system shall maintain the doors open or permit closing only under nudging forces conditions.

The door reopening device shall also include a secondary, three dimensional, triangular infrared multi-beam array projecting across the door opening and extending into the hoistway door zone. The door-opening device will cause the doors to reopen when it detects a person(s) or object(s) entering or exiting the car in the area between the hoistway doors or the entryway area adjacent to the hoistway doors.

The size of the secondary protection zone shall vary as the door positions vary during opening and closing. The width of the zone shall be approximately one-third the size of the separation between the doors (and door and strike plate for single-slide doors) and shall be approximately centered in the door separation. In order to minimize detection of hallway passers-by that are not entering the elevator, the maximum zone penetration into the entryway shall not exceed 20” for any door separation. Normal penetration depth into the entryway from the car doors shall be ~14” for a door separation of 42”. The penetration shall reduce proportionally as the doors close. At door separations of 18” or less the secondary protection system may cease its normal operation since the depth of the zone recedes to where it is inside the hoistway doors. The vertical coverage of the secondary protection shall be ~19” (480 mm) above the sill to ~55” (1400 mm) above the sill (mid-thigh to shoulder of a typical adult).

The secondary protection shall have an anti-nuisance feature which will ignore detection in the secondary zone after continual detection occurs for a significant time period in the secondary zone without corresponding detection in the primary protection zone; i.e. a person/object is in the entryway but does not enter. Normal secondary protection shall be re-enabled whenever detection occurs in the primary zone.

The reaction time of the door detector sub-system shall not exceed 60 milliseconds when both primary and secondary protection capabilities are active; nor 40 milliseconds when the secondary protection is disabled.

2. Door Nudging:
Door nudging operation to occur if doors are prevented from closing for an adjustable period of time.

3. Adjustable Door Dwell Time:
The time interval that elevator doors stand open after a stop shall be independently adjustable for car call stops and hall call stops. A separate door time shall be adjustable for lobby door hall calls.
4. Nudging:
If the doors are prevented from closing for a fixed time period, the Car Door Protective Device shall be rendered inoperative, a buzzer shall sound on the car and the doors shall close at approximately half speed and torque. Normal operation shall resume at the next landing reached by the car.

5. Door Time Open Protection:
If the car doors do not open completely within a predetermined time, the car shall extinguish its hall and car direction lanterns (if provided), sound the in-car alarm buzzer, and shall if part of a group, remove itself from group operation. Then the car shall proceed to the next landing in its direction of travel (or reverse direction from a top or bottom landing) and again attempt to open its doors fully. If the car moves to three consecutive landings without being able to open its doors fully, it shall shutdown with the doors closed.

6. Door Time Close Protection:
If the Nudging Operation does not completely close the car doors within a predetermined time, the car will extinguish its hall and car direction lanterns (if provided), sound the in-car alarm buzzer, and shall, if part of a group, remove itself from group operation. Then the car shall open its doors fully and again attempt to close them. If the car cannot fully close its doors after three attempts, it shall shutdown with the doors open. Every two minutes the car shall retry closing its doors.

7. Door Protection:
Infrared door protection o be installed.

8. Car & Hoistway Doors – RETAIN

9. Install new door locks or refurbish to new.
Replace existing spring closer with new spirator type spring closer if required.
Modernization Scope of work to be preformed: Passenger Elevator(s)
Those items are shown as ads in the following scope of work:

Retain or Replace as Needed per Code

Duty, Travel
Stops and openings
Machine(s)
Motor
Valve
Control systems
Rupture valve and shut off valve
Start configuration
Emergency operations
Pit stop switch
Inspection station
Car Operating Panel(s)
Communications
Car Position Indicator (car)
Car Position Indicator (hall)
Braille
Floor passing chime
Emergency car lighting
Hall button stations
In Car ADA Lantern
Hall Lanterns
Car guides
Car frame
Door operator’s
Interlocks
Door Restrictors
Door protection
Car door tracks, hangers
Car Door
Hoistway door tracks, hangers
Hoistway doors
Hoistway door closers
Hoistway limits
Handrails
Cab Finishes
Signage
Cross Cancellation Tool
Controller REM Ready
Toe Guards

A. **Power Unit** – Provide a new submersible power unit in a self contained assembly consisting of an Oil tank, pump, motor, Maxton valve, and muffler. Drive system should be isolated by rubber vibration mountings.

B. **Controller** – Microprocessor based car controller with supervisory control system. Systems should be using serial link wiring and interface between car/corridor station control boards and the machine room. The controller enclosure shall be designed for proper ventilation. Separate 110volt service disconnects will be provided by the elevator contractor.

C. **Hydraulic Jack Assembly** – Retain existing, perform a pressure test of 350 PSI to insure internal systems are functioning correctly.
D. **Leveling Devices** – Provide a new hoistway reader system which will provide automatic two way leveling +/- ¼” of landing in an

E. **Guide Shoes** – Retain and refurbish as needed.

F. **Hoistway switches** – Retain

G. **Car Top Inspection Station** – Provide a new three buttons code compliant station.

H. **Emergency Lowering System** – Provide a emergency lowering device feature capable of returning the elevator to the lobby in the event of a power failure. The system shall consist of a battery supply capable of returning the elevator to the lobby.

I. **Low Oil Device** – A low oil device control circuit will be provided to automatically stop the car should the oil level become insufficient to permit the car to travel to the top landing.

J. **Door zone Restriction Devices** – Install door zone locking devices to meet code.

K. **Static Type Door Edge** – Install and infrared door detector system equivalent to the Otis Lambda III-D.

L. **Painting and finishes** – All new equipment shall be painted or provide galvanized to restrict rust. The machine room floor will be painted with Gray concrete sealing paint.

M. **Wiring** – New travel cables with 10% spares and three extra 22 Ga. shields and 5 extra 18 wires will be installed. All new hoistway wire will be installed including fire resistant wire in the door locks. Travel cables will be installed to prevent chaffing.

N. **Hall Push Buttons** – New surface mount fixtures will be installed to eliminate cutting and patching. The units will be provided with 10,000-hour low voltage LEDs. Drawings must be submitted for approval prior to ordering.

O. **Car Operating Panel** – A new car-operating panel will be provided to cover existing holes. New panel will be Stainless steel #4 and will include emergency lighting system, a digital position indicator, ADA hands free phone and all controls required by code.

P. **Car enclosure** – Cab shell will be retained and a new cab finish will be supplied. Cab finishes will be provided. A cab allowance of $0000.00 should be added to the price of this contract for this work.

**Work by Others** – the following work will be the responsibility of the building owner.

A. Drywall required in hoistway and machine room.

B. Installation of pit ladders as required by code.

C. Fire alarm systems.

D. Electrical upgrades required by code.

E. Machine room upgrades as required by code.

F. Installation of single contacts and wiring from the disconnect to the controller for the sensing contact for the ERU unit. Elevator contractor to provide requirements for the supplied unit.

**SYSTEM DESCRIPTION: PERFORMANCE**

1. Speed: ±10% of contract speed under any loading condition or direction of travel.

2. Stopping Accuracy: ±1/4” (3.2 mm) under any loading condition or direction of travel.

**PROVIDE EQUIPMENT ACCORDING TO SEISMIC ZONE: 4**

1. Strap feedline every 9’.

2. Tie down tank and pump unit.

3. New shut off valve in machine room.

4. Rupture valve in pit

**1.04 SUBMITTALS**

A. Product Data: Submit manufacturer’s product data for each system proposed for use. Include the following:

1. Signal and operating fixtures, operating panels and indicators.

2. Cab design, dimensions and layout.

3. Electrical characteristics and connection requirements.
4. Expected heat dissipation of elevator equipment in machine room (BTU).

B. Shop Drawings: Submit approval layout drawings. Include the following:
   1. Driving machine, controller, governor and other machine room component locations.


1.05 QUALITY ASSURANCE

A. Manufacturer: Provide elevators manufactured by a firm with a minimum of 10 years experience in fabrication of elevators equivalent to those specified.

B. Installer: the manufacturer shall have 5 years installation experience on hydraulic elevators and be able to show six (6) similar projects completed in the last two (2) years.

C. Regulatory Requirements: Elevator system design and installation shall comply with the latest versions of ASME A17.1 – 1996 and California Title 8
   1. Elevator shall be designed in response to Americans with Disabilities Act Accessibility Guidelines (ADAAG).

D. Permits and Inspections: Provide licenses and permits and perform required inspections and tests.

1.06 DELIVERY, STORAGE AND HANDLING

A. Elevator equipment at the agreed upon date; the building or the site will provide a location suitable storage area on the premises.

1.07 WARRANTY

A. The elevator contractor’s acceptance is conditional on the understanding that their warranty covers defective material and workmanship. The guarantee period shall not extend longer than one (1) year from the date of completion or acceptance thereof by beneficial use, whichever is earlier, of each elevator. The guarantee excludes ordinary wear and tear or improper use, vandalism, abuse, misuse, or neglect or any other causes beyond the control of the elevator contractor and this express warranty is in lieu of all other warranties, express or implied, including any warranty of merchantability or fitness for a particular purpose.

1.08 MAINTENANCE SERVICE

A. A quality maintenance service consisting of regular examinations, adjustments and lubrication of the elevator equipment shall be provided by the elevator contractor for a period of new installation maintenance period: (3) months after the elevator has been turned over for the customer’s use. This service shall not be subcontracted but shall be performed by the elevator contractor. All work shall be performed by competent employees during regular working hours of regular working days and shall include emergency 24-hour callback service. This service shall not cover adjustments, repairs or replacement of parts due to negligence, misuse, abuse or accidents caused by persons other than the elevator contractor. Only genuine parts and supplies as used in the manufacture and installation of the original equipment shall be provided.

B. Provide price for a 1-year Full Service preventive maintenance agreement and a 5-year agreement.
PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURER

Provide hydraulic elevators:
A. Otis Elevator Company
B. ThyssenKrupp/Dover
C. KONE Inc.
D. Or Equivalent – non manufacturer equipment to be installed must be accepted with a confirmation in writing that the equipment and materials will be supported technically and in parts availability for a minimum of 10 years from the date installed.

2.02 MATERIALS

A. Steel


B. Stainless Steel: Type 300 Series complying with ASTM A167, with standard tempers and hardness required for fabrication, strength and durability.

Supply with mechanical finish on fabricated work in the location shown or specified with texture and reflectivity required (Federal and NAAMM Nomenclature). Protect with adhesive plastic film or paper covering.

All finishes specified as "satin" to be Manufacturer's standard directional polish that complies with commercial No. 4 requirements.

All finishes specified as "mirror" to be Manufacturer's standard mirror polish that complies with commercial No. 8 requirements.

C. Bronze: Cold finished muntz metal type UNS C28000-H02 complying with ASTM B36/B36M.

Supply with mechanical finish on fabricated work in the location shown or specified with texture and reflectivity required (Federal and NAAMM nomenclature) Protect with adhesive plastic film or paper covering.

All finishes specified as "satin" to be Manufacturer's standard directional polish that complies with commercial No. 4 requirements.

All finishes specified as "mirror" to be Manufacturer's standard mirror polish that complies with commercial No. 8 requirements.

D. Aluminum: Extrusions per ASTM B221; sheet and plate per ASTM B209.

E. Plastic Laminate: ASTM E84 Class A and NEMA LD3, Fire-rated Grade (FR-50), 0.050" (1.3 mm) up to 1/16" (1.6 mm) nominal thickness.
Exposed surfaces to have color and texture selected by Architect from Manufacturer's standard selection.

F. Fire Retardant Treated Particleboard Panels: Minimum 1/2" (16 mm) thick backup for natural finished wood and plastic laminate veneered panels, edged and faced as shown, proved with suitable anti-warp backing; to meet ASTM E84 Class "A" rating with flame-spread rating of 25 or less, registered with appropriate authorities for elevator finish materials.

G. Natural Finish Wood Veneer: Standard thickness 1/36" (0.7 mm) to 1/42" (0.6 mm), thoroughly dried conforming to ANSI/HPMA HP-1983, Premium Grade. Specie and finish to be chosen from elevator manufacturer's standard selection.

H. Paint:

Unexposed Steel and/or Iron: Clean exposed metal of oil, grease, scale and other foreign matter and paint one shop coat of Manufacturer's standard rust-resistant primer. Primer shall be of a low V.O.C. water-based type. Galvanized metal need not be painted.

Exposed Steel: Clean exposed metal of oil, grease, scale and other foreign matter. Eliminate any dents, scratches, or other defects that would affect the final finish. For material delivered with primer coat only, apply two coats of manufacturer's standard powder coated primer. For material delivered with a finish coat apply an additional two coat of manufacturer's standard powder coated of a color selected by the Architect from the manufacturer's standard color selection.

2.03 EQUIPMENT: MACHINE ROOM COMPONENTS – Repaint floors to like new condition.

A. Controller: A microcomputer based control system shall be provided to perform all of the functions of safe elevator motion. Included shall be all of the hardware required to connect, transfer and interrupt power, and to protect the motor against overloading. The system shall also perform car and group operational control.

Each controller cabinet containing memory equipment shall be properly shielded from line pollution. The microcomputer system shall be designed to accept reprogramming with minimum system down time.

All high voltage (110V or above) contact points inside the controller cabinet shall be protected from accidental contact in a situation where the controller doors are open.

B. Motion Control: A microprocessor based motion control system with a dictated position and velocity profile shall be provided.

C. Remote Elevator Monitoring: Install a remote monitoring device to allow 24 hour off site monitoring of the health of the elevator system and to dispatch a service call as required in an entrapment.

2.04. EQUIPMENT: HOISTWAY COMPONENTS

A. Carframe: RETAIN

B. Alternate for Cab interior to be provided

C. Hoistway Operating Devices: RETAIN AND MODIFY
Normal terminal stopping devices shall be provided to slow down and stop the car automatically at the terminal landings and to automatically cut off the power to inhibit the cars travel beyond the terminal landings. All devices should be refurbished to new operation.
D. Buffers: RETAIN
Buffers shall be installed in the pit as a means for stopping the car and counterweight at the bottom limits of travel. Buffers shall be provided with a switch that prevents the car from moving if the buffer's plunger is not in its fully extended position.

E. Guide Rails: RETAIN
Steel elevator guide rails, erected plumb and securely fastened to the building structure, shall be furnished to guide the car and counterweight.

F. Roller Guides: RETAIN AND REFURBISH
Rubber-tired roller guides shall be mounted on top and bottom of the car to engage the guide rails. All worn guides to be replaced.

G. Platform: RETAIN
The car platform shall be of all steel construction.

2.04 CAB ENCLOSURE RETAIN AND ADD CAB ALLOWANCE FOR $00,000.00 each car.
Car interior finishes will be added by addendum.

2.05 EQUIPMENT: HOISTWAY ENTRANCES - RETAIN

A. Doors: REPLACE AND REFURBISH
Refurbish door locks, replace rollers, retain hangers and gibbs to achieve an as new operation.

B. Entrance Markings: NEW - Entrance jambs shall be marked with 4” x 4” (102 mm x 102 mm) plates having raised floor markings with Braille adjacent. Markings shall be provided on both sides of the entrance.

C. Sight Guards: RETAIN

D. The fascia, RETAIN

2.06 EQUIPMENT: SIGNAL DEVICES AND FIXTURES – fixture approvals must be submitted with the proposal.

A. Applied car operating panel(s) shall be furnished. It shall contain a bank of round mechanical illuminated buttons marked to correspond to the landings served, an emergency call button, door open and door close buttons, and switches for lights, inspection and the exhaust fan. The emergency call button shall be connected to a bell that serves as an emergency signal. All buttons to have both raised and Braille markings. LED button illumination with 1/8” projecting target.

B. Other devices in the car-operating panel shall include:
   1. In car stop – keyswitch
   2. Firefighters' Service Phase I message indicator and buzzer.
   3. Firefighters' Service Phase II keyswitch and Call Cancel Button and
   4. Fire hat light to meet code.

C. Car Position Indicator:
1. A 16-segment, digital, vacuum fluorescent car position indicator shall be integral to the car-operating panel. The position of the car in the hoistway shall be shown by the illumination of the indication corresponding to the landing at which the car is stopped or passing.

Or

2. A 16-segment, digital, L.E.D. display car position indicator shall be integral to the car-operating panel. The position of the car in the hoistway shall be shown by the illumination of the indication corresponding to the landing at which the car is stopped or passing. **Re-cladding of the header or a faceplate to cover-up the existing multi light position indicator is necessary no matter which option is chosen.**

D. F. "Handsoft®" telephone shall be provided which has been designed in response to ADAAG requirements.

E. Emergency car lamp to be lit upon loss of power to the car operating panel.

F. Independent Service Keyswitch.

G. Card Reader provisions for Owner's card reader system provided by others.

H. All Hall fixtures shall be of the surface mount type to eliminate cutting and patching of the walls.

I. Hall Call Buttons: mechanical illuminated buttons with raised markings shall be provided. At each terminal landing, a fixture containing a single button shall be provided and at each intermediate landing, a fixture containing "UP" and "DOWN" buttons shall be provided. When a call is registered by momentary pressure on a hall button, that button shall become illuminated and shall remain illuminated until the call is answered.

J. Fixture should cover existing hole in wall and **NO cutting and patching should be required.**

K. One access keyswitch per car at upper and lower landings for maintenance.

L. Data Plate with capacity in pounds, Manufacturer's logo, and car number, no smoking sign and all code compliant signage to be engraved in the cop.

M. Fixture Finish: **satin stainless steel #4**

N. Landing Passing Signal: A chime bell shall sound in the car to tell a passenger that the car is either stopping at or passing a floor served by the elevator.

O. Firefighters' Service Phase I keyswitch [optional: <with indicating light>] at a designated landing.

### 2.07. EQUIPMENT: ERECTION WIRING

**NEW TRAVEL CABLES** – INCLUDING 10% SPARES, 5 extra 18 Ga. wires marked security and 3 extra shielded pairs.

A. Erection Wiring: All wiring and electrical interconnections shall comply with the governing codes. Insulated wiring shall have flame retarding and moisture-proof outer covering, and shall be run in conduit, tubing or electrical wireways. Traveling cables shall be flexible and suitably suspended to relieve strain on individual conductors.
3.00 - EXECUTION:

A. ACCEPTABLE INSTALLERS: The elevator system shall be installed by the Manufacturer.

B. EXAMINATION: Prior to commencing elevator installation, the elevator contractor shall examine hoistway, hoistway openings, pits, and machine rooms, as constructed; verify all critical dimensions; and examine all other conditions under which elevator work is to be installed. The elevator contractor shall notify the General Contractor in writing of any dimensional discrepancies or other conditions detrimental to the proper installation or performance of elevator work. The elevator contractor shall not proceed with until unsatisfactory conditions have been corrected in a manner acceptable to the elevator contractor.

C. PREPARATION: Refer to Article 1.02 (Related Work Specified Elsewhere) for the description of preparatory work to be done by other than the elevator contractor.

D. INSTALLATION: Comply with manufacturer's instructions and recommendations for work required during installation.

E. TEMPORARY USE OF ELEVATORS: Three- (3) phase power must be available before cars can be placed on temporary acceptance. Should any elevator be required for use before final completion, others shall provide without expense to elevator contractor, if required, temporary car enclosures, requisite guards or other protection for elevator hoistway openings, main line switch with wiring, necessary power, signaling devices, lights in car and elevator operators together with any other special labor or equipment needed to permit this temporary usage.

The elevator contractor shall be reimbursed for any labor and material which is not part of the permanent elevator installation and which is required to provide temporary elevator service. In addition, the elevator contractor’s temporary acceptance form shall be executed before any elevator is placed in temporary service, and the cost of power and operation, maintenance of the equipment and rehabilitation of equipment shall be paid for by others. When an elevator is used for temporary service, the elevator contractor may as a result of the temporary service, extend the completion date. The elevator contractor shall provide notice of the extension at the time the elevator is made available for the temporary service.

F. DEMONSTRATION: The elevator contractor shall make a final check of each elevator they have modified to assure operation. Each elevator shall run in test mode of 24 hours without shutdown prior to the turnover to the building.

4.0 WORK BY OTHERS:

A. New mainline disconnects and wiring from disconnects to the first controller point of attachment. **This work will be completed prior to the start of the modernization. A machine room layout showing locations of new equipment must be submitted within 30 days after award of contract.**

B. Guards on existing lighting and installation of new GFI outlets in machine room and pit.

C. Modification to existing smokes detector system to accommodate the A17.1-1996 elevator code.

D. Supply of single dry contact from the disconnect of each car to the corresponding controller for emergency power operation. 1 - pre transfer and 1 – building normal power. **Manufactures requirements must be supplied within 30 days of contract.**

E. Installation of one dedicated phone line to new controllers.

F. Installation of one lockable cab lighting circuit to each of the new controllers.

G. Access panel in overhead for smoke detector as required.

PROJECT SPECIFIC WORK SCHEDULE
A. All new controllers and associated equipment (machine room) must be installed and wired prior to the removal of the first existing car from service.

B. All work generating a large amount of noise: anchoring down equipment, cutting for Car operating Panels, and any other must be done during off hours between 10:00 PM and 6:00 am. This will be at no additional cost to the building owner. **Unless agreement is made between contractor and the building prior.**

**BID SHOULD INCLUDE THE FOLLOWING:**

A. Price to modify one hydraulic elevator $____________________

B. Alternate to include a laminate wall interior with frame ceiling $____________________

C. Alternate to replace hydraulic cylinder and piston assembly with PVC protected cylinder $____________________
NONCOLLUSION AFFIDAVIT

AFFIDAVIT

STATE OF ________________________________________________

COUNTY OF _______________________________________________

_________________________ being duly sworn according to the law,

deposes and says:

1. That he/she is ________________________________ (a partner/officer) of the firm of
   __________________________________, the party making the foregoing proposal, that such proposal is genuine and
   not collusive or sham; that said Proposer has not colluded, conspired, connived, or agreed, directly or
   indirectly, with any Proposer or person, to put in a sham proposal or to refrain from submitting a proposal, and
   has not, in any manner directly or indirectly, sought by agreement or collusion, or communication or
   conference, with any person, to fix the price of this or any other proposal, or to secure any advantage against
   ______________________ or any person interested in the proposed contract; and that all statements in said
   proposal are true.

   _________________________
   (Firm Name)

   _________________________
   By:

   _________________________
   (Signature of Proposer)

   _________________________
   (Title)
An officer of the firm duly authorized to bind the firm to the proposal submitted must sign all proposals. Responses to all sections of this proposal must be completed where appropriate and included in the sealed package submitted to the Town Manager. Failure to properly sign the proposal and include all required information may result in the rejection of the proposal.

The information in this proposal and all attachments hereto is true and correct, and the officer signing below is duly authorized to bind this firm to such proposal.

Signed this _______________ day of ______________________, 20___.

By: _________________________________

Name of Officer: _________________________________

Title of Officer: _________________________________

Name and Address of Firm:

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________