DESIGN & CONSTRUCTION GROUP
THE GOVERNOR NELSON A. ROCKEFELLER
EMPIRE STATE PLAZA
ALBANY, NY 12242

ADDENDUM NO. 1 TO PROJECT NO. 46182

CONSTRUCTION, ELEVATOR, HVAC, AND ELECTRICAL WORK
MODERNIZE ELEVATORS,
PERRY B. DURYEA STATE OFFICE BUILDING
250 VETERANS HWY,
HAUPPAUGE, NY 11788

July 3, 2025

NOTE: This Addendum forms a part of the Contract Documents. Insert it in the Project Manual. Acknowledge receipt of this Addendum in the space provided on the Bid Form.

ELEVATOR WORK SPECIFICATIONS

1. SECTION 140120 ELEVATOR REHABILITATION SUMMARY: Discard the Section bound in the Project Manual and substitute with the accompanying Section (pages 140120 – 1 thru 140120 – 25) noted "Addendum #1".

2. SECTION 142820 ELEVATOR HOISTWAY EQUIPMENT: Discard the Section bound in the Project Manual and substitute with the accompanying Section (pages 142820 – 1 thru 142820 – 8) noted "Addendum #1".

3. SECTION 142861 ELEVATOR LANDING SIGNAL EQUIPMENT: Discard the Section bound in the Project Manual and substitute with the accompanying Section (pages 142861 – 1 thru 142861 – 6) noted "Addendum #1".

END OF ADDENDUM

Brady M. Sherlock, P.E.
Director, Division of Design
Design & Construction

SECTION 140120

ELEVATOR REHABILITATION SUMMARY

PART 1 - GENERAL

1.01 RELATED WORK PROVIDED BY OTHERS

A. Raceway and power feeders, with grounding conductor, between load side of disconnecting means to either the primary of the elevator drive isolation transformers or elevator controller as specified by Elevator Control Manufacturer for all electric traction elevators.

B. Separate branch circuit for each elevator cab lighting and ventilation equipment terminating in a lockable, fused or breaker disconnecting means located in the elevator machine room. Electrical Contractor will provide raceway and wiring from disconnecting means to each elevator controller.

C. Machine room lighting and GFCI protected duplex outlets.
   1. Light switch shall be located on strike side of machine room access door.

D. Pit lighting and GFCI protected duplex outlet in the pit of each elevator.
   1. Light switches shall be located inside of each pit access door.

E. Overhead sheave space lighting and GFCI protected duplex receptacles.

F. Light switches shall be located inside of each overhead/secondary sheave space access door.

G. Separate branch single phase circuit with disconnecting means for elevator dispatch/monitoring system. Electrical Contractor will provide raceway and wiring from disconnecting means to elevator dispatch/monitoring system.

H. Emergency power notification and pre-transfer signaling conductors from automatic transfer switch to the elevator emergency power terminal strip cabinet to be located in elevator machine room. A time delay of approximately 45 seconds shall be required prior to re-application of normal power. Coordinate actual location of terminal strip cabinet with Electrical Contractor.

I. Smoke detection system for Phase I - Emergency Recall Operation, terminating at a terminal strip cabinet in elevator machine room. Coordinate actual location of terminal strip cabinet with Electrical Contractor.

J. Raceway between elevator machine room and Elevator Emergency Operation Panel located in Lobby Station on 1st Floor for interconnection of Phase I Firefighter's Emergency Operation, Emergency Power Status, Elevator Position and Operation Status. (Wiring and interconnections to equipment shall be provided by the Elevator Contractor).

K. Local network connections in elevator machine room and Elevator Emergency Communication Panel located adjacent to Security Desk on 1st floor.

L. Local network connections in elevator machine room and Security Desk on 1st floor for connections to Elevator Management System.

M. Elevator Communication System including raceway and wiring from tele-communications equipment terminating in each elevator control system.

N. CCTV cameras including raceway and wiring from existing antenna located on the bottom of each elevator car platform to an interconnection junction box to be located on the top back corner of each elevator cab. Electrical Contractor shall make final connections and perform testing of CCTV cameras. (Elevator Contractor shall provide required power conductors from each elevator control system to the interconnection junction box to be mounted on each car top).

O. Wiring for elevator cab fire speakers terminating in a junction box adjacent to each controller. Coordinate actual location with Electrical Contractor. Electrical Contractor shall make final connections and perform testing of speakers. (Elevator Contractor shall provide wiring from each control system to the speaker in each elevator cab).

P. Security Card Access Control to be located in the car operating panel of each designated elevator cab and hall stations. Electrical Contract shall make final connections and perform testing of the card access system. (The Elevator Contractor shall provide required power and signal conductors from each elevator control system to the car operating panel for connections to the card access readers. The Elevator Contactor will provide assistance with mounting card readers onto hall fixtures).

Q. HVAC conditioning of elevator machine room.

R. Sump and sump pump.

1.02 RELATED WORK SPECIFIED ELSEWHERE

A. Section 011000: Summary of the Work

B. Section 055000: Metal Fabrication

C. Section 078400: Firestopping

D. Section 099101: Construction Painting

E. Section 142101: Elevator and Escalator Warranty Full Maintenance

F. Section 142111: Elevator Hoisting Equipment – Gearless Electric

G. Section 142711: Elevator Cars

H. Section 142813: Elevator Door Operators

I. Section 142816: Elevator Controller and Operation

J. Section 142820: Elevator Hoistway Equipment

K. Section 142821: Elevator Hoistway Entrances

L. Section 142851: Elevator Safety Equipment

M. Section 142861: Elevator Landing Signal Equipment

N. Section 142871: Elevator Emergency Operation and Emergency Signal Devices

O. Section 142881: Elevator Wiring

P. Section 149300: Two Way Communication

1.03 REGULATORY REQUIREMENTS

A. Regulatory Requirements: All design, construction, and tests shall be in accordance with the requirements of the following Codes and Standards, including Referenced Standards:
1. IEBC - 2020 International Building Code as adopted by New York State
2. ASME A17.1-2016 Safety Code for Elevators and Escalators
3. ASME A17.5-2011 Elevator and Escalator Electrical Equipment
4. ASME A17.7-2007 Performance Based Safety Code for Elevators and Escalators
5. NFPA 13-2016 Installation of Sprinkler Systems
6. NFPA 70- 2017 National Electrical Code
7. NFPA 72 -2016 National Fire Alarm Code
8. EN 12016 (May1998): "EMC Product Family Standards for Lifts, Escalators, and Passenger Conveyors Part 2 - Immunity
9. All other Codes, Regulations, Laws, and Ordinances as may govern.

B. Accessibility Requirements: Comply with:
1. Section 4.10 in the U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act" (ADA), Accessibility Guidelines for Buildings and Facilities (ADAAG).
2. Chapter 407 in ICC/A117.1 - 2009, Accessible and Usable Buildings and Facilities
3. Note: Where there is a conflict between the two accessibility standards above, the requirements in the ADA shall prevail.

C. Fire-Rated Hoistway Entrance Assemblies: Hoistway door panels including hardware assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire-protection ratings indicated, based on testing at as close to neutral pressure as possible according to NFPA 252 or UL 10B. Entrances shall contain a 1-1/2-hour fire rated label.

1.04 SCOPE OF WORK

A. Overall Summary: The work of this section shall include the modernization of the five (5) existing passenger and service traction elevators. The capacity and speed will remain the same for the modernized elevators.

1. The Elevator Work Contractor shall operate the elevator(s) as necessary to permit all Contractors to perform the associated work in the elevator hoistways in accordance with their respective contracts.

B. Elevator Maintenance
   1. Maintenance of Elevator #1 through #5 shall be required as outlined under 142101 Elevator Full Warranty Maintenance.

1.05 MODERNIZATION DEVELOPMENT SUMMARY

A. Scope: Listed below is a general outline of the scope of work for the replacement of the existing elevator equipment. Exact provisions of the scope are specified herein.
   1. Hoisting Equipment: Replace the overhead geared traction machines. The new machines shall be gearless alternating current with integral emergency brake to provide unintended movement and ascending car overspeed protection and will be installed in the current location.
      a. Only one elevator may be removed from service at a time.
         1) Where an additional elevator needs to be removed from service for a limited time duration, Contractor may request removal of elevator from service. Director's Representative approval required.
      b. Modernization of elevator to be performed in the following sequence.
         1) Phase 1 -Elevator #3 & Elevator #4
         2) Phase 2- Elevator #1
         3) Phase 3- Elevator #2
         4) Phase 4- Elevator #5
      c. Where a change to the scheduled modernization sequence would be beneficial to equipment installation, Contractor may request a different sequence for Director's Representative review. Director's Representative approval required.
   2. Machine and deflector sheaves shall be engineered to be compatible.
   3. Elevator Control Equipment: Replace the elevator control systems.
      a. Separate and remove existing controllers as required to install new elevator controls as specified on drawings.
      b. Provide mechanic support for weekend power shutdown and transfer of elevator control power supply from existing elevator machine room disconnect panel to new elevator disconnect panel.
      c. Provide Operational and Motion Control
      d. Provide Elevator Management System
   4. Provide isolation transformers.
   5. Hoistway Equipment: Replace buffers and limit switches.
   6. Elevator Wiring, Raceways and Travel Cable: Replace all hoistway, secondary machine space, machine room, travel cable, wiring and raceway. The raceway in the hoistway may be reused if suitable for use with the new equipment.
   7. Car Safety Systems: Replace all safety plank equipment.
   8. Replace over-speed governors, tension weight assemblies, and governor ropes.
   9. Car Frame and Platform: Rebuild the car frames and platforms. Replace the roller guide assembly rollers.

10. Counterweight Assembly: Retain and reuse the counterweight assemblies. Rebalance to provide a 45-50% overbalance as specified by elevator control and machine manufacturer. Replace the roller guide assembly rollers.
11. Compensating Assembly: Where compensation is additionally required by gearless machine manufacturer design, provide Whisper Flex type.
12. Car Enclosure:
    a. Elevators 1 – 4: Replace cab shell, car interior, sub flooring and finish flooring.
    b. Elevator 5: Replace cab shell, car interior, sub flooring and finish flooring.
    c. Car Doors and Hardware: Replace the car door assemblies.
13. Signaling Fixtures and Devices: Replace all hall and car fixtures.
14. Elevator Emergency Panel: Provide elevator emergency panel to replace existing Emergency Panel located on the First Floor Lobby.
15. Emergency Communication Panel: Provide emergency communication panel in 1st floor security room
16. Hoistway Entrances: Retain and refinish frames. Replace all doors and door hardware.
17. Remove and dispose of all elevator equipment superseded by the work, including, but not limited to, the existing machines, sheaves, controllers, rope grippers, buffers, governors, door operators, car and hoistway door hardware and all related appurtenances.

B. Due to various machine designs, the existing rope drop configuration for the elevators may not accommodate all manufacturers' machines. In the event the new machine requires repositioning, the Elevator Contractor shall be responsible for all engineering, labor, and material costs associated with same.
    1. Contractor to include engineering costs to include evaluation of reactions and a signed and stamped drawing by a New York State Professional Engineer. Drawing(s) shall indicate calculations.

C. Elevator Contractor shall be responsible for any and all supplemental support steel required for their equipment.

D. The extent of Work to be performed shall include all labor, supervision, equipment, material, and services necessary to fully comply with the intent of these specifications and applicable drawings.

1.06 DESCRIPTION OF EXISTING ELEVATORS

A. ELEVATORS #1, #2, #3, #4
    1. Operational Configurations
    2. Passenger Geared Traction-Group Operation
        a. To be modified with gearless machines
    3. Original Installation Date: 1972
    4. Original Manufacturer: Armor Elevator Co.
    5. Date Modernized: 1993
        a. Controls
        b. Cab and Fixtures
    6. Rated Load:

a. 3500 lbs.
7. Power: 480V-3PH-60HZ (Contractor shall verify)
8. Rated Speed: 350 FPM
9. Elevator Controller: Virginia Controls Micro Digital DC
10. Leveling: Two way automatic.
11. Stops:
    a. B, 1-6 (7-Front openings)
12. Type of Machines: Armor OH Geared
13. Roping:
    a. 1:1
14. Compensation: Cable Compensation
    a. N/a
15. Machine Area Floor: Concrete.
16. Net Car Size (Inside):
    a. 5'-3" W x 7'-6" D
17. Hoistway Entrances: 3'-6" x 7'-0" Single Speed-Center Opening
18. Car Doors: 3'-6" x 7'-0" Single Speed-Center Opening
19. Signals in Car:
    a. Main and Auxiliary car operating panels
    b. Car position indicator
    c. Car direction fixture in entrance jamb
    d. Firefighters Service Phase II controls
    e. Auto-dialer telephone.
    f. Card Reader Security
20. Signals at Landings:
    a. Hall call buttons with call register lights
    b. Hall position indicators and lanterns
    c. Firefighters Service Phase I controls at the 1st floor lobby
    d. Emergency Power selection switch
    e. Emergency panel and related elevator functions at 1st floor lobby
    f. Emergency Communication Panel in 1st floor Security Room
        1) Provide Audio/Text/Video features

B. ELEVATORS #5
1. Service Geared Traction-Simplex Operation
    a. To be modified with gearless machines
2. Original Installation Date: 1972
3. Original Manufacturer: Armor Elevator Co.
4. Date Modernized: 1993
    a. Controls
    b. Cab and Fixtures
5. Rated Load:
    a. 4000 lbs.
6. Power: 480V-3PH-60HZ (Contractor shall verify)
7. Rated Speed: 200 FPM
8. Elevator Controller: Virginia Controls Micro Digital DC
9. Leveling: Two way automatic.
10. Stops:
    a. B, BR, 1-6 (7-Front openings and 1-Rear opening)
11. Type of Machines: Armor OH Geared
12. Roping:

a. 1:1
13. Compensation: Cable Compensation
14. Machine Area Floor: Concrete.
15. Net Car Size (Inside):
    a. 5'-3" W x 7'-6" D
16. Hoistway Entrances: 4’-0" x 7'-0" Two Speed Side Slide Opening
17. Car Doors: 4’-0" x 7'-0" Two Speed Slide Side Opening
18. Signals in Car:
    a. Main and Auxiliary car operating panels
    b. Car position indicator
    c. Car direction fixture in entrance jamb
    d. Firefighters Service Phase II controls
    e. Medical Emergency selection switch
    f. Auto-dialer telephone.
    g. Card Reader Security
19. Signals at Landings:
    a. Hall call buttons with call register lights
    b. Hall position indicators and lanterns
    c. Firefighters Service Phase I controls at the 1st floor lobby
    d. Emergency Power selection switch
    e. Medical Emergency selection switch
    f. Emergency (Lobby) panel and related elevator functions at 1st floor lobby
    g. Emergency Communication Panel in 1st floor Security Room
        1) Provide Audio/Text/Video features

1.07 DEFINITIONS

A. Definitions in ASME A17.1 as well as those listed below apply to work of this division.
1. Company Field Advisor: An employee of the Company which lists and markets the primary components of the elevator equipment under their name, who is certified by the Company to be technically qualified in design, installation, and servicing of the required products, or an employee of an organization certified by the foregoing company to be technically qualified in design, installation, and servicing of the required products.
2. Defective Elevator Work: Operation or control system failure, including excessive malfunctions; performances below specified ratings; excessive wear; unusual deterioration or aging of materials or finishes; unsafe conditions; need for excessive maintenance; abnormal noise or vibration; and similar unusual, unexpected, and unsatisfactory conditions.
3. Service Elevator: A passenger elevator that is also used to carry freight.
4. Passenger Elevator: An elevator used primarily to carry persons other than the operator and persons necessary for loading and unloading.
5. Freight Elevator: An elevator used primarily for carrying freight and on which only the operator and the persons necessary for unloading and loading the freight are permitted to ride.
6. Machine Room: An enclosed machinery space outside the hoistway intended for full body entry, which contains the hydraulic or traction machine and controller. Room can also contain electrical/mechanical equipment used directly in connection with the elevator.

7. Machinery Space: A space inside or outside of the hoistway, intended to be accessed with or without full bodily entry, that contains elevator equipment, and could also contain electrical and/or mechanical equipment used directly in connection with the elevator. The space could also contain the electric driving machine.
8. Singular Device: Reference to a device or a part of the equipment applies to the number of devices or parts required to complete the installation.
9. Rebuild: To extensively repair. Requires pieces of the object to be newly made so that the object may function. To rebuild an object means the object cannot be repaired by fixings its existing pieces.
10. Refinish: To change the surface of an object as to give it a new appearance.
11. Restore: To return an object to a level of quality equal to that of when it was made.
12. Retain: To keep an existing object in its current position.
13. Refurbish: To return an object to a level of quality equal to that of when it was made.
14. Reuse: To keep and use an object in its current condition unless specified.

1.08 SUBMITTALS

A. Waiver of Submittals: The "Waiver of Certain Submittal Requirements" in Section 013300 does not apply to the Work of Division 14.

B. Product Data (Manufacturer's catalog sheets, specifications, and installation) for the following:
1. Gearless machine and motor data
2. Control and landing systems including all options and accessories.
3. Elevator Management/Status Monitoring System.
4. Isolation transformer
5. Terminal stopping devices
6. Car and counterweight guide members
7. Governor and tension weight frame
8. Interlocks, door hangers and tracks, closers
9. Door operator and clutch
10. Door protection device
11. Car top inspection station
12. Emergency light unit
13. Visual emergency communication system
14. ADA Signage and miscellaneous elevator signage
15. Fixtures (Hall, Car, etc…)
16. Travel cable
17. Hoist ropes, governor ropes, and compensation rope
18. Finished floor covering.

C. Shop Drawings: Drawing minimum size 11"x 17"
1. Scaled drawing of installed machine with all attachment points and methods including the weight of all components including blocking assembly.
a. Drawings shall be sealed/stamped by a licensed New York State Professional Engineer only where the hoist machine configuration and

bearing points have changed, or if an emergency brake (rope gripper) is not an integral part of the machine assembly.

2. Machine room plans & layouts (equipment layout, room size, etc.).
   a. Include weight of each piece of equipment.
   b. Provide heat emissions for controller, machine, isolation transformer, shown as a total BTU/Hr for machine room.
3. Power and heat load confirmation data.
4. Elevator pit plans.
5. Control system wiring diagrams and sequence of operation, including parts listing and troubleshooting manual.
6. Car enclosure plans & details.
7. Details of hoistway entrance work
8. Car, hall, and signal fixtures, including elevator emergency panel.
9. Maintenance Control Program
   a. Provide Elevator Maintenance Logbook for approval. Logbook shall be published and bound specifically for the purposes of recording maintenance, service and testing tasks performed on the elevator equipment.
   b. Provide a detailed schedule of maintenance tasks and recommended frequencies for the ongoing maintenance of the elevator equipment.

D. Samples:
   1. As requested by the Director's Representative for finish selection.

E. Quality Control Submittals:
   1. Installers' Qualifications Data
      a. Name of each person who will be performing the Work.
      b. Names and addresses of the required number of similar projects that each person has worked on which meet the experience criteria.
   2. NYS Certificate of Asbestos Awareness Training: Required for each mechanic and helper working on this project.
   3. NYS Allied Trades Asbestos Course Training. (Required for each mechanic and helper assisting with the preparation of items that will be abated by the Licensed Abatement Contractor).
   4. Welding: All welding shall be performed by a Certified Welder in accordance with applicable sections of ANSI/AWS D1.1 or ANSI/AWS D1.3.
      a. Current welder's certificate

F. Test Reports:
   1. QEI Acceptance Inspection and Test Report
   2. Field Test and Data Reports
      a. Installation specific electrical and mechanical performance data
      b. See Section 140120-Exhibit A: Field Test and Data Report (FTDR)
      c. FTDR to be complete by elevator installation contractor and available for Qualified Elevator Inspector personnel prior to start of QEI inspection.

G. Contract Closeout Items:
   1. Operation and Maintenance Data: Deliver 3 copies, covering the installed products to the Director's Representative. Include as-built wiring diagrams showing the control system installed under this project. Mount and hang one copy of diagrams in the elevator machine room. Each sheet of the wiring

diagrams shall be laminated in plastic and will become the property of the Owner.

2. Diagnostic Devices: Deliver all diagnostic and/or programming tools required for maintenance and periodic testing to the Owner. If the control system contains a SIM card to access the information required to diagnose faults or conduct periodic tests, these shall remain with the control system and will become the property of the Owner. Include manuals containing all passwords, set up parameters, fault coding and all other operational and maintenance requirements.
   a. Diagnostic tool and level of software must be adequate to allow a qualified third-party elevator mechanic to troubleshoot and adjust system parameters for optimum system performance and to perform code required safety tests. A "dumb" tool is not acceptable.
   b. The diagnostic tool shall be non-proprietary and shall not require recharging to maintain its memory or authorization for use. The tool shall not use software which requires periodic reprogramming or reauthorization. Software programs shall be stored in non-volatile memory. The tool shall not contain a self-degrading chip.
   c. To protect manufacturers' intellectual property rights, the diagnostic tool may be programmed to operate on only the serial numbered units installed under this contract. Diagnostic tool shall be permanently mounted in the controller or be of hand-held type.
   d. The Contractor shall demonstrate the functionality of the tool for compliance with the requirements of this specification.
3. Maintenance Control Program
4. Copy of the Approved shop drawing submittals
5. Operational and adjustment manuals
   a. Controllers
   b. Door Operators
   c. Emergency Communications

H. Key Turnover: Furnish five (5) spare keys of each key type listed including all key switches installed in car operating panel, fire service, independent service, hoistway access, run/stop switch, fan/light, control cabinet access, elevator emergency panel including all functions, etc. Turn all keys over to the Directors Representative.

1.09 PERSONAL PROTECTIVE EQUIPMENT

A. All Personal Protective Equipment shall be furnished by the Elevator Contractor in full compliance with OSHA requirements.

1.10 KEY SWITCH SCHEDULE

A. Security Key Types and Cores: Where electro-mechanical locks are specified, provide Best 7 pin premium type with removable cores as listed below.
   1. Security Key Type required for the following only.
      a. In-car Stop Key switch
      b. Service cabinet Lock in car operating panel.
      c. Car and Hall Call Security Lockout/Enable keyswitches
      d. Machine Room/Space Door

2. Permanent cores shall be provided prior to completion of each elevator and keyed in accordance with the Facility key schedule. Keying shall be coordinated with the Facility locksmith.
3. Contractor shall ensure that the cylinder cutouts match key switch configurations to prevent the body from rotating during use. As decided by the Owner's Representative, any key switches that rotate within the fixture plate due to mis-cut cylinder holes will require complete replacement of the fixture at the Contractors expense.
    a. Prior to purchase of permanent cores, Contractor shall verify site specific core types with facility locksmith required to meet facility security standards.

B. Group 1: Restricted keys are restricted to elevator personnel in accordance with ASME A17.1 Part 8, including but not limited to the following:
1. Hoistway door unlocking devices.
    a. Door Interlock release key
2. Escutcheon plug key
    a. FEO-K1 ASME A17.1 National Standard Fire Service Key
3. Controller Cabinet key
4. Inspection Operation/Hoistway Access key switch
5. In-Car Stop key switch

C. Group 2: Authorized Personnel keys covers access or operation of equipment by authorized or elevator personnel in accordance with ASME A17.1 Part 8, including but not limited to the following:
1. Machine Room/ Machine Space Door
2. Independent Service key switch
3. Communication Failure Reset key.
    a. FEO-K1 ASME A17.1 National Standard Fire Service Key
4. Service Cabinet Lock in car operating panel
5. In Car light key switch
6. Car and Hall Call Security Lockout key switches

D. Group 3: Emergency Operation keys covers access or operation of equipment by emergency, authorized and elevator personnel in accordance with ASME A17.1 Part 8, including but not limited to the following:
1. Phase 1 / Phase 2 Fire Fighters Operation
    a. FEO-K1 ASME A17.1 National Standard Fire Service Key
2. Emergency Power Operation key
    a. FEO-K1 ASME A17.1 National Standard Fire Service Key

E. Group 4: Access or operation of equipment not classified by Group 1, 2, or 3
1. Not applicable

F. Key Turnover: Contractor shall furnish and turn over to the Owner's Representative the following spare keys.
1. Manufacturer Lock Cylinders
    a. 5-spare keys for each lock cylinder key type provided with elevator fixtures
2. Best Lock Cylinders
    a. 5-Blank keys for each elevator.

1.11 QUALITY ASSURANCE

A. Elevator Manufacturer and Installer Qualifications: Elevator equipment manufacturer and installation Company shall have not less than five (5) years successful experience with providing and installing similar elevators and who is trained and approved for this Project. Qualifications shall be submitted for approval and contain at least 5 comparable installations.

B. Certifications: The Elevator installer shall have the following certifications and provide documentation of the same:
   1. NYS Certificate of Asbestos Awareness Training. (Required for each mechanic and helper working on this project.)
   2. NYS Allied Trades Asbestos Course Training. (Required for each mechanic and helper assisting with the preparation of items that will be abated by other licensed abatement contractors).
   3. Certified Welder Certification. (Required for mechanic performing any welds).

C. Source Limitations: The complete elevator system shall be the product of one manufacturer, or major items may be manufactured by various approved elevator equipment manufacturers whose products may be assembled to constitute a complete elevator system to be installed.
   1. The term “manufacturer” as used in this specification shall apply to a manufacturer that is regularly engaged in the manufacture of elevator systems of its own design but also procures and assembles elevator equipment from reputable, approved elevator equipment manufacturers. The “manufacturer/installer” shall be held responsible for all products used in the assembly of a complete elevator system and therefore shall be responsible for the complete assembled system.

D. Product Manufacturer Qualification: If products by Companies other than those specified in Division 14 are proposed for use, furnish the name, address, and telephone number of at least 5 comparable installations located within a 100-mile radius of the project site, which can prove the proposed products have operated satisfactorily for 3 years.
   1. Elevator control systems shall be supported by a manufacturer’s technical support office staffed with technical field advisors.

E. Company Field Advisor: Secure the services of a Company Field Advisor for the following.
   1. Render advice regarding installation, adjustment, and operation of equipment
   2. Witness tests and certify with an affidavit that the equipment installed is in accordance with contract documents and is operating properly.
   3. Explain available service programs to facility Director Representative for consideration.

F. Material Standards
   1. Materials to be furnished under these specifications shall be new, shall be of the best grade and quality used for the purpose of commercial practice and shall be the latest standard product as advertised in printed catalogues by reputable manufacturers.
      a. Aluminum: Extrusions per ASTM B-221; sheet and plate per ASTM B-209.

b. Nickel-Silver: Copper-Nickel-Zinc extrusions of CDA alloy C77600.
c. Steel: Low carbon, cold rolled to stretcher leveled standard flatness per ASTM A366 for sheet; per ASTM A-36 for structural.
d. Satin Stainless Steel Type 302 or 304 with No. 4 finish on exposed surfaces per ASTM A-167. Grains of belting shall be in the direction of the longest dimension.
e. Mirrored Stainless Steel Type 302 or 304 with No. 10 finish.
f. Plastic Laminate NEMA LD1, Type 1, 1/16" thick.

1.12 PERFORMANCE

A. Car Performance (Door Open & Close Time, Car Speed, etc.) to be in accordance with most recent NEII and ADA Standards including ASME A17.1 Code requirements.
1. After testing is completed and elevator is turned over for facility use, door and dwell times shall be adjusted to meet existing conditions, within code requirements.

1.13 DELIVERY, STORAGE, AND HANDLING

A. Packing and Shipping: Protect equipment and exposed finishes during transportation and erection against damage.

B. Store materials as necessary. Some onsite storage may be available as coordinated with the Director's Representative.
1. Pay for all storage costs.

1.14 COORDINATION

A. Coordinate installation of sleeves, block outs, elevator equipment with integral anchors, and other items that are embedded in concrete or masonry for elevator equipment. Furnish templates, sleeves, elevator equipment with integral anchors, and installation instructions and deliver in time for installation.

B. Coordinate locations and dimensions of other work relating to the elevator including pit ladders, sumps, and floor drains and sump pumps in pits; entrance sill support angles and beams.

1.15 WARRANTY

A. Manufacturer's Standard Warranty: Manufacturer agrees to repair, restore, or replace elevator work that fails in materials or workmanship within specified warranty period.
1. Failures include, but are not limited to, operation or control system failure, including excessive malfunctions; performances below specified ratings; excessive wear; unusual deterioration or aging of materials or finishes; unsafe conditions; need for excessive maintenance; abnormal noise or vibration; and similar unusual, unexpected, and unsatisfactory conditions.

2. This warranty excludes ordinary wear and tear or improper use, vandalism, abuse, misuse, or neglect or any other cause beyond the control of the elevator contractor.
3. Warranty Period: 365 days from date of Final Acceptance of the project.

B. Manufacturer's Special Warranty: Hand-held diagnostic tools shall be warranted for 5 years from date of Final Acceptance of the project. Manufacturer shall also be responsible for any and all software updates to the hand-held diagnostic tool that may be applicable to installed elevator(s) for five (5) years from date of Final Acceptance of the project.

C. Control System Software Updates: Control system manufacturer shall notify the Director's Representative of any and safety related control system updates. The manufacture shall be responsible for updating the software or shall provide the software updates for installation by the Facility's elevator maintenance contractor, for as long as the equipment is supported by the original manufacturer. These upgrades shall be at no cost to the state.

PART 2 - PRODUCTS

2.01 ELEVATOR EQUIPMENT

A. Acceptable Manufacturers
1. Gearless Traction Elevators:
   a. Imperial Electric
   b. TorinDrive International
   c. Hollister-Whitney Elevator Corp.
2. Traction Equipment and Accessories:
   a. Alliance Elevator
   b. MEI Total Elevator Solutions
   c. Canton Elevator
   d. Delaware Elevator
   e. EECO Elevator
3. Controller:
   a. GAL
   b. Motion Control Engineering (MCE)
   c. Smartrise Engineering
   d. Elevator Controls Corp. (EC)
4. Motor Drive:
   a. KEB
   b. Magnetek Elevator Drive
   c. Yaskawa Electric America.
5. Roller Guide Rollers:
   a. ELSCO Inc.
6. Hoistway Equipment
   a. ELSCO Inc.
   b. Oleo International
   c. Hollister Whitney
   d. Quality Elevator Products
7. Signal Fixtures:

a. PTL Equipment Co.
b. CE electronics
c. Innovation Industries
d. Monitor Controls
e. Electronic Micro Systems

8. ADA Phone System:
   a. Rath Microtec, Smartview
   b. MAD, Mosaic
9. Door Operator, Hangers, Tracks, Interlocks, Closers, Clutch:
   a. GAL Manufacturing Corp.
10. Door Protection:
    a. Adams Elevator Equipment co.
    b. Janus Elevator Products
    c. Tri-Tronics Co.
11. Cabs and associated Equipment:
    a. Elevator Interiors
    b. Columbia
    c. Gunderland, LTD
    d. SnapCab
    e. AVT Beckett
    f. IDEC Elevator Products
12. Entrance and Door Equipment:
    a. Adams Elevator Equipment Co.
    b. AVT Beckett
    c. Columbia
    d. IDEC Elevator Products
    e. GAL Manufacturing Corp.
    f. Elevator Doors Inc.
    g. Janus Elevator Products
    h. Tri-Tronics Co.
13. Textured Stainless Steel
    a. Rigidized Metals Corp.
    b. Rimex Metals, Inc.

B. Universal Maintainability and Open-source Procurement
   1. Elevator equipment specified herein shall allow for any qualified 3rd-party contractor to universality procure, install service, maintain, test, and inspect the system(s). This shall include the following requirements:
      a. Any elevator company shall be allowed to purchase and install this equipment.
      b. Engineering and technical support for adjusting and troubleshooting.
      c. Systems training to all elevator service providers.
      d. Purchase of replacement and spare parts, at fair market value, by the Director's Representative.
      e. All documentation (manuals, one-line diagrams) shall be available at the time a delivery and for replacement purchase at fair market value.
      f. Software revisions shall be made available to the Director's Representative.

C. Unacceptable Products: Hoist machines utilizing non-circular elastomeric suspension means or aramid fiber ropes are unacceptable.

2.02 IDENTIFICATION SIGNAGE AND DATA PLATES

A. Scope: Provide all signage and data plates, including but not limited to those listed below, in accordance with the requirements of the ASME A17.1 code.

B. Location: Locate all signage and data plates in accordance with the ASME A17.1 code and the ADA.

1. Capacity identification shall be engraved with ½ inch high characters in the car operating panel.
2. "No Smoking" shall be engraved with ½ inch high characters in the car operating panel.
3. Elevator identification shall be engraved with 1-inch-high characters in the car operating panel.
4. Elevator identification shall be stenciled/painted with 2-inch-high characters on the machine, controller, governor, and crosshead.
5. Elevator identification shall be 3-inch-high embossed stainless-steel plate with contrasting colors and located on hoistway entrance at ALL landings
6. ADA directional signage as required by Section 1111 of the New York State Uniform Building Code shall be located near each Building entrance to direct building occupants to the location of the elevators. Signage shall be plastic laminate.
    a. Provide (10) ten total signs and install as coordinated with the Director's Representative.
7. Hoistway door jamb floor numbers and braille on each jamb, at each floor having 2-1/2 inches high characters on embossed steel plates, painted black with contrasting color characters.
8. Hoistway entrance jamb plates indication of Medical Emergency capable elevator.
9. Hoistway floor numbers 4 inches high stenciled/painted to the hoistway side of the doors at each floor.
10. Hoist, governor, and compensating rope tags shall be metal as supplied by the manufacture.
11. Code data plate shall be metal and permanently mounted to the outside of the elevator control cabinet.
12. Counterweight runby data plate shall be 1-inch-high characters on a metal plate and mounted in the vicinity of the counterweight buffer.
13. Door operator data plate including having ¼ inch characters on a metal plate and mounted on or near the door operator.
14. Elevator manufacturers' temperature and humidity range having 1-inch-high characters on a metal plate and installed in the machine room.
15. Buffer marking plate, having ¼ inch high characters on a metal plate and installed on each buffer.
16. Crosshead data plates shall be retained and reused. Update all information as required.
17. Speed governor marking plate having ¼ inch high characters on a manufacturer supplied metal plate and permanently installed on governor.
18. Safety plank data plate shall be retained and updated.
19. Hall pushbutton station pictograph as required by the International Building Code shall be etched into the faceplate at each floor.
20. Phase I firefighter's emergency signage shall be etched or engraved into the faceplate of the fixture. Stickers shall not be provided.

21. Phase II firefighter's emergency signage shall be engraved on the inside face of the Firefighters Operation panel cover. Functions of controls installed on the inside of the fire service cabinet shall be engraved. Stickers shall not be provided.
22. Emergency power indicator identification having ¼ inch high red characters engraved into faceplate of the designated floor hall pushbutton fixture.
23. Communications Failure indicator identification having ¼ inch high red-letter characters engraved into faceplate of designated floor pushbutton fixture.
24. Machine Room Signage listing manufacturer's recommended temperature and humidity requirements for the elevator equipment. Lettering height shall be not less than 1".

2.03 PAINTING

A. Prepare and paint all required elevator equipment as recommended by the manufacturers' recommendations or per specification 099101 "Construction Painting."

B. Apply semi-gloss black paint to all non-prefinished elevator steel including door headers, strut angles, dust covers, toe-guards, fascia, guide rails (except machined surfaces), fish plates, brackets, clips, fasteners, support steel, sheaves, buffers, counterweight frames, filler weights, counterweight guards, pit steel, platforms, car frames, wire mesh and solid partitions and all additional elevator steel not listed.

C. Prepare and paint elevator pit floors with epoxy paint system.

2.04 FASTENERS

A. Vandal Resistant Fasteners:
1. Where specified, vandal resistant fasteners shall be provided. Provide for all elevator fixture cover plates.

PART 3 - EXECUTION

3.01 VERIFICATION OF CONDITIONS

A. Field Measurements:
1. Field verify all field measurements and inform the Director's Representative of any discrepancies with the contract documents.
2. Field verify all conditions effecting the work including, but not limited to, rated car capacity, rated speed, and empty car weight.
3. Verify all building system voltages

B. Existing Control System Wiring Diagrams.
1. Obtain the necessary wiring diagrams to proceed with the installation of the new control system.

C. Removals:

1. Remove all items superseded by the Work including, but not limited to, the machines, sheaves, controllers, selectors, tracks, hangers, interlocks, hall pushbuttons, hall lanterns, direction indicators, car enclosures, hardware. and buffers. Remove all related hoistway and machine room wiring. Remove all unused conduit, raceway, clips, wire supports, brackets and miscellaneous items from hoistway, 9th floor mechanical space and machine room walls. Existing raceways and junction boxes located in hoistway may be reused if suitable for use with new equipment. Patch and finish all voids resulting from removals. Firestop all penetrations through fire rated assemblies.

3.02 PREPARATION

A. Protection: Protect exposed equipment, cabs, operators, roller guides, interlocks, and limit switches from foreign material during course of construction.

3.03 FIELD QUALITY CONTROL

A. Acceptance Tests: In addition to the tests outlined below, perform all tests required in accordance with Part 8.10 of the ASME A17.1 Safety Code for Elevators and Escalators. All tests must be witnessed by a qualified elevator inspector (QEI).
   1. Normal Operation Test: Run car, in both up and down direction, by normal operation devices, with full load, stopping at each floor served, in both directions of travel.
   2. Speed Test:
      a. Determine actual speed of elevator car in both directions of travel with full load and no load in car.
      b. Determine speed of car by use of tachometer.
      c. Perform speed tests before and after normal operation tests.
   3. Limit Switches: Test limit switches. (Car should not move).
   4. Static Balance Test (Car): Perform a balance test to determine that car is properly balanced on frame. Add or remove weights to underside of platform to reestablish correct balance relationship.
   5. Governor and full load safety test
   6. Test all items of elevator to assure entire elevator system is operating properly.
   7. Complete and submit Field Test and Data Report (Exhibit A) to Director's representative prior to QEI Inspection.

B. Perform tests in presence of Director's Representative and QEI Inspector.
   1. Pay for all expenses associated with testing, final acceptance, and commissioning of elevators.
   2. A Qualified Elevator Inspector (QEI) will be provided by the state for the witnessing of all testing.
   3. Upon satisfactory completion of tests, provide Director's Representative and Architect a copy of QEI's report stating that the elevator has passed all ASME A17.1 Code required safety tests and is ready for public use.

C. Endurance Tests Performed Prior to Acceptance for Public Use by Director's Representative: In addition to Normal Operating Tests, perform the following:

1. Test each elevator for a period of 3-days continuous run-on wild car operation (random call generation), with rated load in the car. Elevator car shall be restricted from public use. Following any shutdown or failure corrective repairs or adjustments shall be performed, and Endurance testing repeated. During the rest run, stop the car at each floor in both directions of travel for a standing period of no more than 30 seconds per run. The requirements for Leveling, and Motor Current Draw testing specified herein shall be met throughout the duration of the Endurance Test.
    a. Leveling Test: Test elevator car leveling devices for landing accuracy of plus or minus ¼ inch at each floor with no-load and with rated load in both directions of travel.
    b. Motor Current Test: Measure and record motor amperage at the beginning and end of Endurance Test.
        1) Motor current shall not exceed nameplate current.

3.04 TECHNICAL SEMINAR/MAINTENANCE TRAINING

A. Upon completion of the project, arrange with the Director's Representative to provide on the job training and seminar, a complete review of the documentation, operation and maintenance of the equipment and demonstration of any special features.
    1. A minimum of three 2-hour seminar.

3.05 TEMPORARY SIGNAGE

A. Hang signs reading; "Elevator Out of Service."
    1. Provide minimum 8" wide x 10" high 4mm coro-plastic sign panel or equal around each elevator entrance once the elevator has been removed from service.
    2. Lettering height shall be not less than 1/2".
    3. Responsible for replacement of any damaged or missing signs.

3.06 CLEANING

A. Clean elevator work of dust, dirt, grease, and foreign materials.

B. Remove articles of tools and material from shaft and machine area not necessary for maintenance and operation of elevator.

END OF SECTION

EXHIBIT A (FIELD TEST AND DATA REPORT)

PART 1 GENERAL

1.01 INSTRUCTIONS

A. Field Test and data Report to be completed by elevator installation contractor and submitted to Owner Representative for review prior to scheduling QEI inspection.

1.02 PROJECT/BUILDING DATA

Date

Building name and address

Company performing testing

ASME A17.1 code edition

Elevator

ID#
Controller Manufacturer & Wire Diagram #

Elevator type (Traction / Hydraulic) (Passenger / Service / Freight)

Capacity (lbs.)
Contract Speed (ft/min)
Rise (ft)
Stops
Openings

1.03 EQUIPMENT DESCIPTION AND POWER DATA

Power confirmation

Building AC (Volts)
Controller secondary voltages verified (Yes, No, N/A)

No Load Speed

Up (ft/min.)	Down (ft/min)

Full Load Speed

Up (ft/min.)	Down (ft/min)

Hoistway Runby

Bottom landing (Inches)
Top landing (Inches)

Hoistway Final Limits

Bottom limit opens (Inches, N/A)
Top limit opens (Inches, N/A)

Data & Signage

Elevator Data Tags, Test Tags, Seals and Signage Verified (Yes/No)

Condition	Weight in Car (LBS)	Motor Current			Motor Volts
		Start	Run	Stopping	
No load up					
No load down					
Bal load up					
Bal load down					
Full load up					
Full load down					

1.04 GENERAL EQUIPMENT & OPERATIONAL PERFORMANCE

Emergency Communication

Type (audio only, text & visual)
Operational (Yes, No, N/A)
Communication failure test operational (Yes, No, N/A)

Fire Service Phase 1 & 2 Operational

Key switch operation (Yes, No, N/A)
Smoke Device Recall (Yes, No, N/A)

Operational Features

Shunt Trip Operational (Yes, No, N/A)
Security Operation (Yes, No, N/A)
ALL EPD Safety Switches Operational (Yes, No, N/A)
Hoistway Door Lock and Gate Switch Operational (Yes, No, N/A)
Emergency Lighting Operational (Yes, No, N/A)
Emergency Power Operational (Yes, No, N/A)
Battery Lowering Operational (Yes, No, N/A)
Seismic Operational (Yes, No, N/A)
Hoistway Access Operational (Yes, No, N/A)
Inspection Operational (Yes, No, N/A)
Buffer Test (Yes, No, N/A)
Maintenance Control Program Provided (Yes, No, N/A)
Top of Car Handrail Compliant (Yes, No, N/A)

1.05 DOOR PERFORMANCE

Front Door Type and size

SS, 2-spd, CO
Opening width, height (Inches)

Front Door Speed & Torque

Open time (Sec)
Close time (Sec)
Nudge time (Sec)
Closing torque normal (N)
Closing torque nudge (N)
Door operator data tag completed (Yes/No)

Rear Door Type and Size

SS, 2-spd, CO
Opening width, height

Rear Door Speed & Torque

Open time (Sec)
Close time (Sec)
Nudge time (Sec)
Closing torque normal (N)
Closing torque nudge (N)
Door operator data tag completed (Yes/No)

Door Reopening Devices Test

Completed successfully (Yes, No, N/A)

Freight Door Operational Testing

Completed (Yes, No, N/A)

1.05TRACTION ELEVATOR DATA (IF APPLICABLE)

Machine Location

(Overhead, Basement MRL)

Suspension Means (Cable, Belt)

Number of cables/belts: Size:

Governor

Overspeed switch (FT/Min)
Tripping speed (FT/Min)
Pull through (lbs.)

Safeties

Pull out (lbs.)

Safety Test

Completed successfully (Yes, No)
Car safety slide (Inches)
Counterweight safety slide (Inches, N/A)

Brake Tests

Completed successfully (Yes, No)

Secondary Braking Type

Rope gripper/Machine brake

ACO & UCM Test

Completed successfully (Yes, No)

NTSD Test

Completed successfully (Yes, No)

ETSD Test

Completed successfully (Yes, No)

1.06 HYDRAULIC ELEVATOR DATE (IF APPLICABLE)

Cylinder/Piston

Piston Type (Holed, Holeless)
Piston Diameter (Inches)
PVC Liner (Yes, No, N/A)
Oil Loss Monitoring System Verified (Yes, No, N/A)
Low Pressure Switch Verified (Yes, No, N/A)
Low Oil Test Completed Successfully (Yes, No, N/A)
Standing Test Completed Successfully (Yes, No, N/A)

Rupture Valve Overspeed Test

Completed Successfully (Yes, No, N/A)
Load on car (lbs.)

Operational Pressures

No Load Pressure (PSI)
Working Pressure (PSI)
Relief Pressure (PSI)

Oil Level

Measured from top edge of tank to oil with elevator located at bottom landing (Inches)

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION

3.01 FIELD TEST AND DATA REPORT TO BE COMPLETED BY ELEVATOR INSTALLATION CONTRACTOR AND SUBMITTED TO OWNER REPRESENTATIVE FOR REVIEW PRIOR TO SCHEDULING QEI INSPECTION

END OF SECTION

SECTION 142820

ELEVATOR HOISTWAY EQUIPMENT

PART 1 - GENERAL

1.01 DEFINITIONS

A. Elevator Hoistway Equipment: Equipment such as guide rails, buffers, limit switches, counterweights, used in conjunction with the operation of the elevator installed in the hoistway enclosure.

PART 2 - PRODUCTS (Provide)

2.01 TERMINAL STOPPING DEVICES -

A. Normal Terminal Stopping Devices:
   1. Final Terminal Stopping Device: Type: Enclosed.
   2. Operating Cams: Metal.
   3. Contacts: Directly opened mechanically.
   4. TLS as manufactured by MCE.

B. Emergency Terminal Stopping Device:
   1. Type: Enclosed.
   2. Operating Cams: Metal.
   3. Contacts: Directly opened mechanically.

C. Final Terminal Stopping Device:
   1. Type: Enclosed
   2. Operating Cam: Metal
   3. Contacts: Directly opened mechanically

2.02 CAR AND COUNTERWEIGHT GUIDE RAILS

A. Existing guide rails shall be refurbished.

2.03 DEFLECTOR SHEAVES

A. Deflector Sheave: Replace and align with new machine drive sheave. The assembly shall be engineered by the machine manufacture.
   1. Sheave: Metal with finished grooves to accommodate suspension cables.
   2. Factor of Safety: 8 - for steel, 10 - cast iron.
   3. Bearings: Roller type

2.04 COUNTERWEIGHT

A. Remove existing hanging buffer on counterweight and refurbish counterweight. Counterweight shall be equal to the weight of complete elevator car, plus approximately 45-50 percent of the specified load. Verify counterweight overbalance percentages with controller and machine manufacturers.
   1. Counterweight frame and weights:
      a. Prepare and paint safety yellow.

B. Guiding Members: Equip frame with upper and lower guiding members.
   1. Roller Guides: Provide assemblies per manufacturer's recommendations Basis of Design: ELSCO.
   2. Furnish new ½" thick, steel adaptor plates if required.

C. Counterweight Guard: Provide counterweight guard as required by A17.1, fabricated of minimum 18-gauge steel.
   1. Prepare and paint safety yellow.

2.05 SUSPENSION ROPES OR CABLES

A. Material: Traction steel wire ropes having commercial classification "Elevator Wire Rope".

B. Rope Diameter: Shall be provided to match machine and deflector sheaves. Verify application per traction machine engineered system design

C. Rope Sockets: Wedge rope socket type.
   1. Installation shall meet manufacturer and code requirements.
      a. Shackle length may be staggered to provide proper clearances.
      b. Provide springs, washers, and associated hardware.
         1) Both car and counterweight connect points

D. Cable Guarding: Provide full height guarding in secondary mechanical space fabricated of minimum 18-gauge steel.
   1. Prepare and paint safety yellow.

2.06 COMPENSATION

A. Material: Rubber encapsulated chain "Whisper-flex" by Republic Wire and Cable Corp.

B. Size and Number: As required to counterbalance weight of hoist and travel cable.

C. Accessories: Anti-sway control including support assemblies.
   1. Type: Rail mounted bracket to include Super Swayless dampening device consisting of four, free-turning nylon rollers.
   2. Dampening device shall be manufactured by Draka Elevator Products.

2.07 GOVERNOR ROPE, TENSION SHEAVE

A. Rope Material: Flexible steel or iron rope, with strands wound over a hemp core, specifically designed for elevator governor rope.

B. Tension Sheave and Frame: Weighted, designed to operate in steel guides permitting free vertical movement while maintaining uniform predetermined governor rope tension.

2.08 BUFFERS

A. Elevators #1-#4 only:
   1. Provide oil buffers for car and counterweight.
   2. Mount buffers on existing continuous structural steel channels.
      a. Provide new car and counterweight buffer support.
   3. Provide each buffer with a marking plate showing its maximum and minimum load rating, maximum striking speed, stroke, permissible viscosity index, and manufacturer's name along with certification marking.
      a. Plates shall be marked in a permanent manner.
   4. Provide extensions if required by project conditions.
   5. Provide permanent signage securely attached to pit wall near counterweight buffer indicating the maximum designed counterweight run-by. The plate shall conform to A17.1, section 2.4.5 except letters shall be not less than 1" in height.

B. Elevator #5 only:
   1. Refurbish existing spring buffers and structural channels.
   2. Prepare and paint with rust inhibiting enamel paint.
      a. Color: Safety Yellow.

2.09 PIT STOP SWITCH

A. Location:
   1. Pit Stop Switch: Adjacent to the pit ladder and pit access doors.

B. Pit Stop Switch:
   1. Function: Removes car from service during inspection and maintenance procedures. (Car cannot be operated).
   2. Design: Metal enclosure, housing red button (positively open mechanically, opening not solely dependent on springs). Permanently mark button, indicating Stop and Run positions.
   3. Ladder Pit Access:
      a. Locate Stop switch approximately 18 inches above floor level of lowest landing adjacent the pit ladder.
      b. Provide additional stop switch located 47 inches above the pit floor adjacent to the pit ladder.

2.10 ELEVATOR PIT LADDER

A. Ladder type shall provide all required code clearances and dimensions. Ladder type shall be based on field verified pit conditions.
   1. Stationary Pit Ladders:
      a. Basis of Design: Adjusta Ladder by Smart Elevator Tech, LLC.
      b. Stationary elevator pit ladder conforming to the requirements of ASME A17.1.

1) Construction: Steel members with welded joints and adjustable brackets.
2) Ladder Width: 16"
3) Rung-to-Wall: 4.5" minimum.
4) Finish: Prepare and paint safety yellow.
5) Options and Accessories:
6) Slip-resistant rungs.
7) Location: Refer to drawings.

c. Fastening: Ladder shall be fastened to the wall with epoxy embedment anchors and extend 18" from its mounting position on the wall.

2. Collapsible Ladders:
   a. Basis of Design: Quality Elevator Custom retractable
   b. Retractable elevator pit ladder conforming to the requirements of ASME A17.1.
      1) Construction: Steel members with welded joints and adjustable brackets.
      2) Ladder Width: 16"
      3) Rung-to-Wall: 4.5" minimum.
      4) Finish: Prepare and paint safety yellow.
      5) Options and Accessories:
      6) Slip-resistant rungs.
      7) Safety Switch to prevent elevator operation.
      8) Spring assist to retract the ladder.
      9) Location: Refer to drawings.
   c. Fastening: Ladder shall be fastened to the wall with epoxy embedment anchors and extend 18" from its mounting position on the wall.

PART 3 - EXECUTION

3.01 TEAROUT

A. Remove all superseded equipment and dispose in a safe, legal manner.

B. Equipment identified to be removed including, but not limited to:
   1. Double wrapped deflector sheaves.
   2. Hoist and governor ropes, and shackles.
   3. Compensating chains and hanging accessories.
   4. Governors and tension weight frames.
   5. Car buffers.
   6. Hanging counterweight buffers and pit buffer stops.
   7. Car and counterweight buffer support steel.
   8. Conduit, electrical duct and traveling cables.
      a. Duct and conduit may be reused if in good condition and seized correctly.

3.02 INSTALLATION

A. Install elevator equipment in hoistway in accordance with manufacturer and elevator industry standards.

B. Terminal Stopping Devices:
   1. Normal Terminal Stopping Devices:
      a. Install normal terminal stopping devices at or near top and bottom terminal landings.
      b. Locate stopping switches on car, in the shaft or in machine room.
      c. Locate actuating arms or cams at or near top and bottom terminal landings. Securely fasten to guide rails or building structure.
      d. Adjust for correct clearances and operation.
      e. Operation:
         1) In normal operation the normal stopping means slow and stop car. If normal stopping means malfunction, then normal terminal stopping devices operate.
         2) Arrange upper and lower normal terminal stopping devices to slow down and stop car automatically with any load and from any speed, at or near top or bottom terminal landings.
         3) Normal terminal stopping devices function independently of the operation of the normal stopping means.

   2. Emergency Terminal Stopping Device:
      a. Install emergency terminal stopping device in the hoistway, at top and bottom of hoistway, activated by cams on the car.
      b. Set emergency terminal stopping device between normal and final terminal stopping devices.
      c. Operation:
         1) In normal operation, emergency terminal stopping device will not operate when the car is stopped by the normal stopping means or the normal terminal stopping device.
         2) Arrange upper and lower terminal stopping devices to automatically open power circuit to drive motor and brake after car has passed top and bottom terminal landing.

   3. Final Terminal stopping Device:
      a. Install final terminal stopping devices in the hoistway, at top and bottom of hoistway, activated by cams on car.
      b. Set final terminal stopping devices per manufacturer requirements. Shall not interfere with operation of normal terminal stopping devices.
      c. Operation:
         1) In normal operation, final terminal stopping device will not operate when the car is stopped by the normal stopping means or the normal terminal stopping devices.
         2) Arrange upper and lower final terminal stopping devices to automatically open power circuit to drive motor and brake after car has passed top or bottom terminal landing.
      d. Final terminal stopping device shall be through bolted after the conclusion of the final acceptance tests.

3.03 CAR AND COUNTERWEIGHT GUIDE RAILS

A. Thoroughly clean. Completely wipe down guide rails of all dust, dirt, grease, lint, concrete, and rust. Tighten all bolted connections of rail sections, rail joints, fishplates, clips and fasteners. Realign rails to a tolerance of ¼" for total travel.

B. Paint pit channels, rails, and rail brackets from pit to first landing sill elevation.

3.04 GUARDS FOR ADJACENT PITS

A. Existing wire mesh guard and existing metal guardrail shall be cleaned and painted Safety Yellow.

3.05 OVERHEAD DEFLECTOR SHEAVES

A. Remove existing overhead deflector sheaves
   1. Align sheaves with sheave on machine.
   2. Align with car and counterweight sheave.

3.06 SUSPENSION ROPES

A. Install cables, with ends of cables fastened to car and counterweight with wedge sockets.

B. Unwind wire ropes from reel in such a manner so that in no instance, it becomes twisted, untwisted, or kinked, taking care not to pull cables over abrasive surfaces.
   1. Keep area used for laying out cables, clean and free from abrasive material.
   2. When the rope has been seated in the wedge socket by the load on the rope, the wedge shall be visible. At least two wire rope retaining clips shall be provided to secure the termination side of the rope to the load carrying side.
   3. The first clip shall be placed a maximum of four times the rope diameter above the socket.
   4. The second clip shall be located within eight times the rope diameter above the first clip.

C. Identification: Attach rope data tag to one wire rope. Include the following data (height of figures not less than 1/16 inch):
   1. Diameter in inches.
   2. Manufacturers rated breaking strength.
   3. Grade of material.
   4. Date installed.
   5. Non-preformed or preformed.
   6. Manufacturer.
   7. Installer.
   8. Construction classification.
   9. Lubrication information

D. Install cable anti-rotation device as required by ASME A17.1 code.

3.07 COMPENSATION

A. Install rubber encapsulated chain “Whisper-flex” to the underside of car and counterweight.

B. Install dampening device in the pit or off the counterweight guide rails to maintain smooth operation and reduced sway of the encapsulated compensating chain.

3.08 GOVERNOR ROPE

A. Install governor rope between car governor and safety on car, and between counterweight governor and safety on counterweight running through governor tension sheave, located at bottom of shaft.

B. Adjust governor rope for correct tension.

C. Accessory: Tension Sheaves and Frames.
   1. Install tension sheave frame to guide rail. Ensure that steel guides permitting smooth vertical movement while maintaining uniform predetermined governor rope tension.

3.09 COUNTERWEIGHT

A. Thoroughly clean and wipe down counterweight frame and sub-weights. Sub-weights to be painted assembled. Paint front, back, sides, top of upper weight and bottom of lowest weight.
   1. Remove existing hanging buffer attached to counterweight assembly.
   2. Rebuild existing counterweight assembly, rebalancing to maintain machine and controller manufacturer’s overbalance rating.
   3. Provide buffer strike plates at bottom of counterweight frame.

B. Tighten all bolted connections.

C. Install new spring loaded roller guide assemblies. Assembly shall be furnished with polyurethane tire rollers and dust covers.
   1. Provide new ½” thick, steel adaptor plates if required.

D. Verify that sub-weights in the counterweight frame are secured with tie rods passing through upper and lower holes in the frame. Verify that tie rods are provided with locknuts and cotter pin at each end.

E. Install new counterweight guard extending from the lowest part of the counterweight assembly when the counterweight is resting on the fully compressed buffer to a point not less than 83 inches and not more than 96 inches above the pit floor.

3.10 BUFFERS

A. Install car and counterweight buffers on buffer support steel as needed to provide proper runby.

B. Insure that required buffer data plate is permanently attached to the buffer. Data plate shall be permanent type.

3.11 LUBRICATING DEVICES

A. Flush out all lubricating devices and fill with manufacturer's recommended lubricant.

3.12 HOISTWAY CLEANING

A. Thoroughly vacuum down hoistway to remove dirt, dust and cobwebs from all walls, sills, door pockets, headers, fascia and hanger covers.

3.13 LEDGES

A. Provide metal fascia to cover ledges over 4 inches. Bevel fascia in accordance with ASME A17.1 requirements.

END OF SECTION

SECTION 142861

ELEVATOR LANDING SIGNAL EQUIPMENT

PART 1 - GENERAL

1.01 DEFINITIONS

A. Landing Signal Equipment: Buttons, lanterns, indicators or other devices located at landings, operating in conjunction with elevator control equipment to call elevator to that floor and indicate the stopping and direction of elevator travel.

PART 2 - PRODUCTS

2.01 POWER SUPPLY

A. Transformers or rectifiers to suit signal equipment electrical parameters.
   1. Signal voltage shall be 24V AC/DC

2.02 LANDING FIXTURES: ELEVATORS #1 - #4

A. Hall Stations: First Floor – Designated Recall Level
   1. Design: Vandal resistant "Centurion Series" by PTL Equipment Co.
      a. Style: Surface mounted.
      b. Faceplate: Stainless Steel, #4 Brushed Finish, 11-gauge minimum.
         1) Fasten faceplate using vandal resistant spanner head screws of finish to match faceplate.
      c. Equip upper portion of faceplate with engraved/etched, red epoxy filled hall station pictograph, in accordance with A17.1 code.
      d. Locations: Refer to drawings for locations. Faceplate shall be sized to cover the voids from the removed existing pushbutton fixture.
      e. Provide the following functions and refer to drawings for locations of devices in each riser:
         1) Phase I Fire Recall key operated switch with engraved/etched instructions and illuminated visual signal integral with hall pushbutton station.
         2) Communication Failure indicator and reset switch including engraved/etched instructions integral with hall pushbutton station.
         3) Emergency Power Jewel
   2. Button Construction Type: VR2-FHS with VR2 surround tag, vandal resistant as manufactured by PTL Equipment Company.
      a. Buttons shall be round (minimum 1-inch diameter).
      b. Provide single push button at each terminal landing and direction buttons at all intermediate landings.

c. Tag shall include text with “UP” or ‘DN” as applicable.

3. Call Register Light:
   a. Style: Call register light shall be integral with push button so that halo around button is illuminated when call is registered and extinguishes on arrival at the selected floor.
   b. Illumination is to be provided by LED type lamps.
4. Hall Button Risers
   a. Dual riser with cross registration/cancelation shall be provided at all landings
   b. Main hall button riser located between Elevators #1 and #2
      1) Provide emergency communication failure at Designated Recall Landing
   c. Alternate hall button riser located between Elevators #3 and #4

B. Hall Stations at All Other Floors:

C. Other Floors:
1. Design: Vandal resistant “Centurion Series” by PTL Equipment Co.
   a. Style: Surface mounted.
   b. Faceplate: Stainless Steel, #4 Brushed Finish, 11-gauge minimum.
      1) Fasten faceplate using vandal resistant spanner head screws of finish to match faceplate.
   c. Equip upper portion of faceplate with engraved/etched, red epoxy filled hall station pictograph, in accordance with A17.1 code.
   d. Locations: Refer to drawings for locations. Faceplate shall be sized to cover the voids from the removed existing pushbutton fixture.
   e. Provide the following functions and refer to drawings for locations of devices in each riser:
2. Button Construction Type: VR2-FHS with VR2 bronze surround tag, vandal resistant as manufactured by PTL Equipment Company or approved equal.
   a. Buttons shall be round (minimum 1-inch diameter).
   b. Provide single push button at each terminal landing and direction buttons at all intermediate landings.
   c. Tag shall include text with “UP” or ‘DN” as applicable.
3. Call Register Light:
   a. Style: Call register light shall be integral with push button so that halo around button is illuminated when call is registered and extinguishes on arrival at the selected floor.
   b. Illumination is to be provided by LED type lamps.

D. Combination Hall Directional Lantern and Traveling Lantern and Position Indicator:
1. Type: Digital position indicator with 2.2-inch-high characters. Fixture shall also have LED 2.5-inch arrows.
   a. Basis of Design: PTL Equipment Company.
   b. Style: Flush Mounted
2. Location: All Landings adjacent to entrance in place of existing/removed fixture.
   a. Orientation: Vertical.
   b. Faceplate: Stainless Steel, #4 Brushed Finish, 11-gauge minimum.
      1) Fasten faceplate using vandal resistant spanner head screws of finish to match faceplate.
3. Operation: As car passes through hoistway.

a. Position Indicator displays elevator location by the illumination of the segmented numeral corresponding to the landing at which the car is stopped or passing.
b. Traveling Lantern displays the direction of travel while elevator is in motion.
c. Directional lantern displays the next direction of travel the when the elevator is stopped at landing.

4. Chimes: As car arrives at floor, an audible chime shall sound corresponding with appropriate arrow illumination indicating direction of travel. Chime shall sound once in “up” direction of travel and twice in “down” direction of travel.

E. Hoistway Access:
1. Style: Flush mounted.
2. Faceplate: Stainless #4 Brushed Finish, 11-gauge minimum.
a. Fasten faceplate using vandal resistant spanner head screws of finish to match faceplate.
3. Type: Continuous pressure spring return cylinder type lock with key removable only in the “off” position.
4. Location: Refer to drawings.
5. Operation: Access switch permits and maintains movement of the elevator with the hoistway and car door at access landing unlocked or not in the closed position.
6. Engrave switch function and positions in fixture.
7. Key shall be Group 1 Restricted Access to be used by elevator personnel only.

F. Elevator Lobby Panel:
1. Faceplate: Stainless Stell, #4 Brushed Finish, 11-gauge minimum.
a. Hinged Panel
2. Engrave/etch faceplate with keyswitch description.
3. Backbox: Provide 16-gauge minimum, cold rolled steel.
4. Location: Refer to drawings for location.
5. Faceplate fasteners finish to match faceplate.
6. Refer to drawings for functions and features.

G. Emergency Communication Panel:
1. Refer to Specification Section 149300

2.03 LANDING FIXTURES: ELEVATOR #5

A. Hall Stations: First Floor – Designated Level
1. Design: Vandal resistant "Centurion Series" by PTL Equipment Co.
a. Style: Surface mounted.
b. Faceplate: Stainless Steel, #4 Brushed Finish, 11-gauge minimum.
1) Fasten faceplate using vandal resistant spanner head screws of finish to match faceplate.
c. Equip upper portion of faceplate with engraved/etched, red epoxy filled hall station pictograph, in accordance with A17.1 code. Faceplate shall be sized to cover the voids from the removed existing pushbutton fixture.
d. Locations: Refer to drawings for locations.

e. Provide the following functions and refer to drawings for locations of devices in each riser:
1) Phase I Fire Recall key operated switch with chrome finish and engraved/etched instructions and illuminated visual signal integral with hall pushbutton station.
2) Communication Failure indicator and reset switch including engraved/etched instructions integral with hall pushbutton station.
3) Emergency Power visual indicator to signal that normal power has failed and emergency power is in effect.

2. Button Construction Type: VR2-FHS with VR2 surround tag, vandal resistant as manufactured by PTL Equipment Company or approved equal.
a. Buttons shall be round (minimum 1-inch diameter).
b. Provide single push button at each terminal landing and direction buttons at all intermediate landings.
c. Tag shall include text with “UP” or ‘DN” as applicable.

3. Call Register Light:
a. Style: Call register light shall be integral with push button so that halo around button is illuminated when call is registered and extinguishes on arrival at the selected floor.
b. Illumination is to be provided by LED type lamps.

B. Hall Stations at All Other Floors:
1. Design: Vandal resistant "Centurion Series" by PTL Equipment Co.
a. Style: Surface mounted.
b. Faceplate: Stainless Steel, #4 Brushed Finish, 11-gauge minimum.
1) Fasten faceplate using vandal resistant spanner head screws of finish to match faceplate.
c. Equip upper portion of faceplate with engraved/etched, red epoxy filled hall station pictograph, in accordance with A17.1 code. Faceplate shall be sized to cover the voids from the removed existing pushbutton fixture.
d. Locations: Refer to drawings for locations.
e. Fasten faceplate using vandal resistant spanner head screws of finish to match faceplate.

2. Button Construction Type: VR2-FHS with VR2 surround tag, vandal resistant as manufactured by PTL Equipment Company.
a. Buttons shall be round (minimum 1-inch diameter).
b. Provide single push button at each terminal landing and direction buttons at all intermediate landings.
c. Tag shall include text with “UP” or ‘DN” as applicable.

3. Call Register Light:
a. Style: Call register light shall be integral with push button so that halo around button is illuminated when call is registered and extinguishes on arrival at the selected floor.
b. Illumination is to be provided by LED type lamps.

4. Provide single push button at each terminal landing and direction buttons at all intermediate landings.

5. Second Floor Rear Landing: Provide space for installation and mounting of car reader by Facility in the future.

C. Combination Hall Directional Lantern and Traveling Lantern and Position Indicator:

1. Type: Digital position indicator for each elevator with 1-inch-high characters
2. Style: Flush mounted
3. . Fixture shall also have LED 1-inch arrows.
    a. Basis of Design: PTL Equipment Company.
4. Location: Refer to drawings.
5. Operation: As car passes through hoistway.
    a. Position Indicator displays elevator location by the illumination of the segmented numeral corresponding to the landing at which the car is stopped or passing.
    b. Directional lantern displays the next direction of travel the when the elevator is stopped at landing.

D. Hoistway Access:
1. Style: Flush mounted.
2. Faceplate: Stainless Steel, #4 Brushed Finish, 11-gauge minimum.
    a. Fasten faceplate using vandal resistant spanner head screws of finish to match faceplate.
3. Type: Continuous pressure spring return cylinder type lock with key removable only in the "off" position.
4. Location: Refer to drawings.
5. Operation: Access switch permits and maintains movement of the elevator with the hoistway and car door at access landing unlocked or not in the closed position.
6. Engrave switch function and positions in fixture.
7. Key shall be Group 1 Restricted Access to be used by elevator personnel only.

PART 3 - EXECUTION

3.01 REMOVAL

A. Remove existing hall pushbutton stations.

B. Remove existing hall lanterns and Position Indicators

C. Remove existing lobby panel.

3.02 INSTALLATION

A. General:
1. Elevators #1 - #4
    a. Install two (2) hall station risers and integrate with elevator control equipment for required operation.
    b. Install Lobby Panel and integrate with elevator control equipment for required operation.
2. Elevator #5
    a. Install one (1) hall station riser and integrate with elevator control equipment for required operation.

B. Power Supply for Signal Equipment: Install in elevator machine room.

C. Landing Fixtures: (Refer to drawings for locations)
   1. Hall Buttons: Surface mount hall buttons at each landing served by the elevators.
      a. Locate hall button, with center line of buttons 42 inches above finished floor.
      b. Install single buttons at terminal landings. Install “Up” and “Down” buttons at intermediate landings.
   2. Combination Hall Direction Lantern, Hall Traveling Lantern and Hall Position Indicator:
      a. Surface mount combination indicator above each elevator entrance.
   3. Combination Hall Direction Lantern and Hall Position Indicator:
      a. Surface mount combination indicator adjacent to each elevator entrance.
      b. Locate hall button, with center line of buttons 42 inches above finished floor.

D. Lobby Panel: (Refer to drawings for location)
   1. Provide panel, wire and conduit pathway as required for operation.

E. Emeregncy Communication Panel (Refer to drawings for location
   1. Provide panel, wire and conduit pathway as required for operation

END OF SECTION