INVITATION TO BID

January 29, 2026

KENOSHA UNIFIED SCHOOL DISTRICT
OFFICE OF FACILITIES
Kenosha, Wisconsin

KUSD BID NO. 4907 F

Bradford Elevator Modernization Project

Located at
Bradford High School
3700 Washington Road
Kenosha, WI

The Kenosha Unified School District (KUSD) invites qualified contractors to bid on a summer of 2026 passenger elevator modernization project located at Bradford High School.

Project scope of work includes but is not limited to the removal of existing elevator equipment, installation of a new hydraulic jack, cab modernization and controls. This is a "Turn-Key" project, which includes all of the necessary permits, fees, materials and approvals in the contractor's bid.

A mandatory contractor pre-bid project scope review and site walk-through is scheduled for February 10, 2026 at 10:00 am. The meeting will take place at Bradford High School (address above). Contractors are to gather in the school parking lot on the west side of the building at Door No.1 prior to the meeting.

To submit a sealed bid to the Kenosha Unified School District, bid documents must be delivered to the KUSD Purchasing Office at 3600 52nd St., Room 175, Kenosha WI, 53144 no later than 1:00 pm on February 24, 2026. Please note that the district will not accept bids delivered after the designated cut off time. Following the submission deadline, a public bid opening will be held at 1:05 p.m. in Room 115B at the same address.

The Kenosha Unified School District (KUSD) reserves the right to accept or reject any or all bids/proposals, to waive any informality or technicality in any bid/proposal submitted, and to accept any part of a bid/proposal deemed to be in the best interest of KUSD. KUSD reserves the right to negotiate with any company after the bid opening has occurred.

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January 29, 2026

REQUEST FOR PROPOSAL

Kenosha Unified School District

3600 52nd Street
Kenosha, WI 53144

Bradford Elevator Modernization Project

KUSD Project #4907F

Project Location:
Bradford High School
3700 Washington Road
Kenosha, WI 53144

Prepared For:
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Project Architect
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Prepared By:
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Consultant
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Kenosha Unified
SCHOOL DISTRICT

3600 52ND ST., KENOSHA, WI 53144
P 262-359-6300 • F 262-359-7672

KENOSHA UNIFIED SCHOOL DISTRICT
REQUEST FOR CONSTRUCTION BIDS

Date: **January 29, 2026**

Bid Number: **#4907 F – Bradford Elevator Modernization Project**

Date Due: **February 24, 2026 at 1:00 PM**

CONTRACTOR SIGN AND RETURN ONE ORIGINAL, TWO PAPER COPIES AND ONE ELECTRONIC COPY

INDIVIDUAL SIGNING THIS SECTION ACKNOWLEDGES THAT THEY HAVE READ THE KENOSHA UNIFIED SCHOOL DISTRICT REQUEST FOR PROPOSAL **#4907 F – Bradford Elevator Modernization Project** AND CERTIFIES THAT THE NAMED ORGANIZATION AGREES TO AND IS ABLE TO MEET THE REQUIREMENTS AS LISTED IN THIS RFP. INDIVIDUAL SIGNING THIS RFP ALSO CERTIFIES THAT INFORMATION CONTAINED HEREIN IS TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDGE.

COMPANY NAME: _____

ADDRESS: _____

_____

_____

FAX NUMBER: _____

PHONE NUMBER: _____

WEB ADDRESS: _____

THE UNDERSIGNED AGREES TO FURNISH THE SERVICES DESCRIBED AT THE NET PRICE QUOTED SUBJECT TO THE STATED CONDITIONS:

PRINT NAME: _____

TITLE: _____

SIGNATURE: _____

EMAIL ADDRESS: _____

PHONE NUMBER: _____

DATE: _____

"NO-BID" Response Form

This form is designed to assist the bidder in providing information necessary to confirm a "No-Bid" response. To remain potentially involved in future opportunities, the bidder should state the reasons for declining such an invitation. Please submit to the KUSD Purchasing Department after completion and required signature.

RFP Number: **#4907 F BRADFORD ELEVATOR MODERNIZATION PROJECT**

Company Name: _____

Contact Person: _____

Telephone Number: _____

Fax Number: _____

E-Mail: _____

Please Note:
A no-bid response is a critical factor in remaining on the bidders list, and thus ensures future business opportunities. In addition, a no-bid response demonstrates that, while you are not submitting a bid or you are not interested in bidding for a particular project, you are still interested in competing for future opportunities and want to stay on the prospective bidders list. We, the undersigned have declined to submit a bid for the following reason(s):

____ Specifications are too rigid (explain below.)
____ Unable to meet deadline for responding to above RFP number
____ We do not offer this product or service or are unable to meet specifications (explain below.)
____ Our schedule would not permit us to perform
____ Unable to meet Bond and/or Insurance requirement(s).
____ Specifications unclear (explain below.)
____ Please remove us from your "Bidders List".
____ Other (explain below.)

COMMENTS:

_____

_____

_____

I certify that the above information is true and correct, and that no other data, fact or consideration offered or given has influenced this response.

Submitted By: _____ _____
Name (Printed) Title/Department

_____ _____
Signature Date

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INSTRUCTIONS TO BIDDERS
Revised: 29 Jan 2026

EXAMINATION OF SITE AND CONTRACT DOCUMENTS

Bidders shall carefully examine the Construction Documents and Specifications, visit the site and be fully informed regarding the extent of all existing conditions affecting the work and limitations including the accessibility of the site and all other relevant matters concerning the work to be performed. Submission of a Bid for construction will be conclusive evidence that Bidder has made a thorough examination of the site and has included in the proposal a sum to cover the cost of all items included in this contract. Attendance at the February 10, 2026 pre-bid meeting is mandatory for bidding contractors.

BID SECURITY (Bid Bond)

A 10% bid bond is required on bid opening day.

PERFORMANCE, LABOR AND MATERIAL PAYMENT BOND

The successful Bidders will take out and pay for Performance, Labor and Material Payment Bond in the amount equal to one hundred percent (100%) of the contract. A Bond on the approved form of a recognized surety company must be completely filled out and submitted to the Owner by the successful Bidder before a formal contract will be issued. Use AIA Document A311.

CONSTRUCTION DOCUMENTS & SPECIFICATIONS

The construction specifications are diagrammatic only. If a discrepancy exists between the specifications and actual site conditions, the actual site conditions will prevail. Any reasonable relocation, adjustment or rearrangement necessary for proper installation for completion of contract shall be deemed adequately covered by this contract. Bidders shall request in writing an interpretation from ATIS (consultant) or the District prior to the bid opening if there are questions or discrepancies.

Contractors awarded specific bid packages will be working directly with ATIS Elevator Consultant Jeff Valentine who was responsible for the design and specifications.

LIST OF SUBCONTRACTORS & INSTALLATION SCHEDULE

Each Bidder shall submit a complete list of Subcontractors with their bid proposal form on bid day. The District will not allow changes of Subcontractors without written approval from the Owner. Contractor shall provide a detailed construction schedule that clearly represents the project completion by the date of August 21, 2026, including milestone dates of material orders and delivery, construction duration, and inspections.

STATEMENT OF QUALIFICATION

Each Bidder shall submit a completed Bidders Qualification Statement attached hereto with their bid proposal form on bid day. Failure to provide this document on bid day may be grounds for bid disqualification by the District.

COMBINED BIDS

The Combined Bid, if applicable, is provided as an option to the Bidder, which may be elected or rejected without invalidating the bid. Bidders, who submit a Combined Bid, must also submit prices for all applicable base bids. A total amount of the separate Base Bids need not equal the Combined Bid.

SUBSTITUTIONS

Each Bidder represents that their bid is based upon the material specifications and equipment described in the ATIS bidding documents. Substitution bids, as suggested by the Bidder, may be stated on the Bid Form if listed separately and as a deduction from the Base Bid for the Districts consideration. Substitutions will not be used to determine the low Bidder unless all Bidders have submitted the same substitution, in which case the substitution will be considered as a specified alternate. All substitute bids will be studied and may be considered as a Change Order from the successful low bid Contractor.

Each bidder must specify the elevator manufacturer, make and model number of the equipment being proposed.

"OR EQUAL" CLAUSE

Materials or equipment listed by trade name and/or catalog number are listed to specify level of performance and quality. Bidders may base their bid on equal equipment or materials, but it shall be the responsibility of each Bidder to furnish technical data and engineering information to prove that the materials as bid are equal. If the bid does not specify an "or equal" choice of equipment or materials, the bid shall be presumed to be based on the specific equipment and materials listed in the specifications.

Written approval of as "Equal" by the owner is required for all contractor proposed specification changes prior to bid opening day. No requests will be allow (5) days prior to bid opening day. If materials are installed that are considered to be not as equal, as determined by the owner, the material will be removed and replaced as specified at no cost to the District without extension of contract terms.

RESPONSIBILITY WHEN USING "OR APPROVED EQUAL" MATERIALS

Where any Contractor provides an item or installation not as specified, but as an accepted approved equal, the Contractor will assume responsibility for performance of same and provide for any modifications of architectural, structural or mechanical work as required to accommodate such items at no cost to the District.

INSURANCE

The Contractor shall not commence work under this contract until obtaining all insurance required and such insurance has been approved by the District. The Contractor shall not permit any Subcontractor to commence work on their subcontract until like insurance has been obtained and approved. The Contractor shall obtain, pay for and maintain during the life of this contract, such Worker's Compensation and Employer's Liability, General Public Liability and Automobile Liability to protect the Contractor performing work covered by this Contract from claims for damages for bodily injury including accidental death as well as for claims for property damage which may arise under this contract whether such operation be by them or by any Subcontractor or by anyone directly or indirectly employed by either of them. It shall be the responsibility of the Contractor to have the Owner named as additionally insured on all appropriate insurance policies with Certificates of Insurance issued to all additionally insured parties in minimum amounts as follows:

Automobile - $500,000 Combined Single Limit
General Liability - $1,000,000 Combined Single Limit
Worker's Compensation – Statutory
Excess Liability (Umbrella) - $1,000,000

SUBMISSION OF POST BID INFORMATION

A. A schedule of values and breakdown for each major item of work included in the bid.

B. A designation of work to be performed by the Bidder with their own forces and that of identified subcontractors.

C. A list and/or samples of materials to be used, shop drawings and schedules.

PURPOSE

The purpose of this Request for Proposal (RFP) issued by the Kenosha Unified School District (the District), is to acquire proposals from qualified Elevator Contractors for the installation/construction of one Hydraulic Passenger elevator for KUSD.

The requirements, provisions, and terms and conditions included in the RFP document will apply to any contract or agreement awarded as a result of this RFP.

SCOPE OF WORK

KUSD has contracted with ATIS to handle the bidding and negotiating the contract and site observation and project design and management. Extent of work in this section is to renovate one (1) hydraulic elevator located at Bradford High School 3700 Washington Road Kenosha, WI 53144. All renovation work to be as depicted in the elevator schedule shown in **Section 2** (page 41). The schedule indicates the elevator to be renovated, required performance, control, capacity, features, and finishes for the elevator.

A hydraulic elevator is defined to include a plunger and cylinder unit connected to the elevator platform which will raise and lower the elevator by using a pumping unit using oil as the medium complete with components, controls and devices as indicated as required for safely operating elevator at rated speed and capacity.

The Contractor shall submit for the Owner's approval a written schedule for the project that includes a detailed listing of work tasks and durations for each elevator. The schedule shall include benchmark dates for when related work (electrical, mechanical, etc.) must be performed and completed so that the schedule is not disturbed.

The work also includes specific associated building work to be performed on a design-build basis.

Scope of work that is not included in this RFP but will be contracted separately by KUSD consists of:

- Smoke Detection and Fire Alarm Interface
- Machine Room HVAC
- Emergency Power, Electrical feeders and Disconnects
- Shunt trip breakers
- Sprinkler system modification
- Phone and Network Connections

Elevator contractor will coordinate directly with KUSD subcontractors to ensure timely installation.

GENERAL CONDITIONS FOR CONSTRUCTION SECTION

PROTECTION OF WORK AND PROPERTY

The Contractor shall protect his work and the Owner's property from damage and protect the public from injury or dangerous conditions during the execution of this contract. Contractor will be responsible for all replacement cost of completed work, or damage to District property if the contractor does not secure the work areas for the duration of their involvement in the project.

Upon request, a successful bidder will be required to submit the following:

A. A schedule of values and breakdown for each major item of work included in the bid.

B. A designation of work to be performed by the Bidder with their own forces and that of identified subcontractors.

C. A list and/or samples of materials to be used, shop drawings and schedules.

MATERIAL SELECTION LIST AND INSPECTION

On the material selection lists provided with the proposal form, each Bidder shall provide the name of the material or product the bid is based upon whenever more than one material or product is specified.

No changes in materials selected may be made without written approval of the Director of Facilities Services. The Owner reserves the right to inspect the materials for compliance to specifications. **No asbestos containing material may be used or installed on KUSD property.**

SHOP DRAWINGS, PRODUCT DATA, SAMPLES

Submit electronic copies of all shop drawings in ".pdf" format. Two (2) hard copies of final "As Built" shop drawings shall be provided in addition to samples as deemed necessary by the Owner and upon request. Shop drawings shall be prepared by skilled draftsmen and presented in a clear and thorough manner as follows:

A. Elevator Machine Room Layout Drawing: Drawings shall include dimensional layout drawing for the elevator machine room indicating coordination with building structure and relationships with other construction. Indicate job location, capacity, speed, size, performance, operations, safety features, controls, finishes, weights and locations of machine room components, and similar information on the layout drawings.

B. Fixture Drawings: Submit straight line dimensional drawings showing details of all signal and operational fixtures.

C. Car Enclosure Drawing: Submit job specific plan and detail of the new car enclosure and finishes.

Approval of shop drawings and cuts is for general arrangement only and does not include measurement, which is the contractor's responsibility, or approval of variations from the contract documents. The purpose of the shop drawing submittals by the contractor is to demonstrate to the owner the contractor understands the design concept and demonstrates an understanding of the equipment and materials to be furnished.

The Contractor shall not be relieved of responsibility for any deviation from the requirements of the contract by the Owner's approval of shop drawings, product data or samples unless the Contractor has specifically informed the

Owner, in writing, of such deviation at the time of the submission. Submittal of a substitution is no guarantee of approval or acceptance by the Owner. No portion of the work requiring submission of a shop drawing, product data or samples will be commenced until the submittal has been approved by the Owner. The owner reserves the right to review and return shop drawings to the Contractor for a period on not less than 10 working days after receipt of shop drawing, product data or samples from the contractor. Contract time extensions will not be granted based on the contractor's ability to provide shop drawings in a timely manner.

MATERIAL SAFETY DATA SHEETS (MSDS)

All Contractors shall provide Material Safety Data Sheets to the Owner on all materials that will become part of the permanent installation in accordance with State of Wisconsin's Employees Right to Know Act. All data (e.g., hazardous ingredients, physical data, fire and explosion hazard data, health hazard data, reactivity data, spill or leak procedures, special protection information, special precautions) should be included on prescribed uniform material Safety Data Sheets. (Form OSHA-20)

SAFETY

Contractor shall be cognizant that they are performing work in an occupied school building. Contractor shall take all necessary action to provide safety including, but not limited to, tripping and falling, covering excavations as well as barricades, electrocution, burns and general construction zone segregation, and excessive noise. Owner will have the right to dictate the extent necessary to achieve this level of safety. Prime contractor shall be responsible for informing Subcontractors and vendors of this requirement.

Contractor shall also be responsible for safety and protection of their employees regarding hazardous materials, confined spaces, etc.

HAZARDOUS MATERIALS

Contractor shall protect the Owner's occupants against hazardous materials throughout the project.

CONFINED SPACES

Contractor shall comply with all rules and regulations (OSHA – DILHR) regarding work in confined spaces.

COMPLIANCE WITH PLANS AND SPECIFICATIONS

Contractor shall be required to perform all work in compliance with drawings and specifications and any deviation from these plans and specifications without written approval from the Owner is prohibited. All work is expected to be installed as detailed or Contractor will be required to remove and reinstall as per detail without additional expense to the Owner. Changes to work will be approved only by written Change Order to the Contractor signed by the Owner.

DEMOLITION

Where applicable, Contractor shall be responsible for protection of all surfaces, utilities, floor, partitions, ceilings, equipment, etc. that is not scheduled for demolition, as required to protect them from damage. The Contractor shall be required to repair to Owner's satisfaction any damage due to abuse, abrasion, scarring, denting, structural deflection or collapse.

CLEANING AND CONSTRUCTION TRASH

The Contractor shall keep dust at a minimum. Contractor shall take steps to minimize dispersion of dust due to demolition and will be required to build dust barriers if this cannot be maintained. Any cleanup required by the Owner will be subject to back charge to the Contractor. The Contractor shall be responsible for removal of trash, debris, refuse, packaging material and disposal of these materials in a lawful manner and at appropriate sites. Construction material or refuse may not be placed in any District waste containers at the project site. An area will be reserved for a dumpster provided by the Contractor.

SALVAGE

Contractor shall be responsible for proper removal and disposal of materials under scope of demolition. However, Owner reserves the right to salvage any materials and equipment within the scope.

CODES

All work shall conform to applicable Federal, State and Local codes and ordinances. Electrical and mechanical apparatus, fixtures and equipment shall bear approved device label of Underwriter's laboratories. It is the responsibility of all contractors to inform the District of any known items designed or specified that does not appear to comply with state or local codes. The owner at the expense of the installing contractor will reject any work installed that is not in compliance with current codes.

ASBESTOS IN SCHOOLS

In accordance with rules established by the United States Environmental Protection Agency, known as the Asbestos Hazardous Emergency Response Act, 40 CFR Part 763, Sub-part E, Local Education Agencies (LEAs) are required to notify short-term workers, (Contractors) of the potential for asbestos containing material in school buildings. Pursuant to Part 763.84, General Local Education Agency responsibilities, paragraph D, "Each Local Education Agency shall: insure that short-term workers (e.g., telephone repair workers, utility workers, or exterminators) may come in contact with asbestos in a school are provided information regarding the locations of asbestos containing building materials assumed to be asbestos containing material." Each school has a copy of the inspection and management plans identifying the areas or asbestos containing material for the Contractor or Subcontractors in compliance with EPA rules and regulations. In addition to the above, all Contractors are required to comply with all other regulations in the Asbestos Hazardous Emergency Response Act, 40 CFR Part 763 as amended, and all other State and Local regulations regarding asbestos. No asbestos containing materials shall be used in any component of building materials used in schools.

PERMITS AND OCCUPANY

Contractor is responsible for obtaining all State and/or Local permits required to complete the work. Contractors shall schedule all inspections and approvals prior to stated completion dates set forth by the owner. Bid shall include costs of permits including occupancy permits. Contractor shall provide copies of permits upon request to the Owner for permanent file.

PROJECT MEETINGS

A pre-construction meeting will be scheduled after award of the contract and prior to the beginning of work for the purpose of scheduling, required submittal reviews, and other matters of contract administration. If necessary, intermediate progress meetings may be held, depending on length of contract, at the discretion of the Owner.

DIGGER'S HOTLINE

Contractor is responsible for notifying Digger's Hotline and other utilities for determining the location of all underground services when excavating including private utilities. Contractor shall bear the cost of private location services on behalf of the owner. Contractor shall be responsible for all underground services that become damaged as a result of their work at the site.

SCHEDULE OF WORK

Contractor shall be required to present to the Owner a detailed schedule of work to be performed including project start and finish dates. If work is interrupted, Contractor shall inform Owner when work will resume and be required to submit new schedule if previous schedule is revised in sequence or time. No time extensions will be granted as a result of the Contractor's improper scheduling or for failure to have shop drawings or samples submitted in ample time for review under the agreed upon schedule.

COMMENCEMENT AND COMPLETION OF WORK

Strict adherence to the construction schedule will be insisted upon. Additional costs by the Owner or other contractors due to the Contractor's failure to comply with the schedule will be charged to the responsible Contractor or Contractors as real damage. The project must be completed and operational no later than August 21 2026.

WORK DAY

Work will be performed in conjunction with Owner's workday hours, generally 6:00 a.m. to 4:30 p.m., Monday thru Friday, unless otherwise noted. Contractor will be required to pay custodial overtime if building remains open at Contractor's request beyond regular workday hours unless prior arrangements have been made with the District approximately one (1) week in advance. Contractor is responsible for inquiring about holidays and building availability. Contractors may work extended days upon prior notification and approval at no additional expense to the Owner.

SUPERVISION AND CONSTRUCTION PROCEDURES

Contractor shall supervise and direct the work using the best skill and attention. Contractor shall be solely responsible for all construction means, methods, techniques, sequences and procedures and for coordinating all portions of the work under the contract. The Contractor shall be responsible to the Owner for the acts and omissions of their Employees or Subcontractors. The buildings will be occupied during the construction and contractors will have to maintain a clean and safe working environment in the area of construction at all times.

LABOR

All Contractors and Subcontractors employed upon the work shall be required to conform to the labor laws of the State of which the work is being performed and the various acts, mandatory and supplementary thereto and all other laws, ordinances and legal requirements applicable thereto.

A. All labor shall be performed in the best and most workman like manner by mechanics skilled in their respective trades.

B. It shall be the duty of every Contractor engaged in this work to enforce among all workmen directly or indirectly employed by that firm rules which Owner may lay down for conduct of workmen on the premises.

C. KUSD property is a "Smoke-Free" No smoking is allow on the property.

INSTALLATION

This project is considered a "Turn Key" operation. The Contractor shall include all costs in original bid for all necessary materials, labor, equipment, finishes, trim, etc., so that upon completion the Owner is presented with a complete and operable elevator.

Contractor is responsible for all the work to complete the scope of work as noted on the drawings including all trim, appurtenances and restorations. The Owner is not responsible for any part of the work unless specifically noted. Contractor shall also perform any and all work necessary for a complete finished product.

PAYMENT

1. Partial Payments:

    A. The Owner will make monthly partial payments to the Contractor on the basis of duly certified approved estimates of work performed by the Contract. Use standard AIA Application for Payment form G702 & G703 submitted to the architect.

    B. Ten percent (10%) of the amount of each such estimate will be retained by the owner until completion and acceptance of all work covered by the contract. The monthly payment basis will end on the last day of the month.

    C. WAIVERS OF LIEN shall be submitted in duplicate covering all items for which the application for payment is requested.

    D. The District's invoice payment processing term is a minimum 45-day period.

    E. Upon approval of pay request, payment will be rendered within the close of the following month. If payment applications are not submitted on a timely basis, that payment application may roll to the following month.

2. Final Payment:

    A. Final Payment will be made to the Contractor provided that:

        a. All the work has been completed and contract fully performed, including the punch list.

        b. WAIVERS OF LIEN in full from Subcontractors and suppliers are submitted to the Owner.

        c. All inspections and occupancy permits are received

CUTTING AND PATCHING

The Contractor shall be responsible for all cutting; fitting or patching that may be required to complete the work and will be required to restore areas to its original configuration and appearance. This will include but is not limited to concrete, CMU and drywall openings, ceiling and roof penetrations, floors, carpets and painting. All applicable fire ratings must be reinstated after patching. All new penetrations must be fire caulked.

STORAGE OF EQUIPMENT AND MATERIALS

Owner assumes no responsibility for materials or equipment stored on district owned building sites or building interiors. Each Contractor or Subcontractor shall assume full responsibility for damage, loss or theft to their stored materials and equipment. Contractor is responsible for the secure and safe storage of equipment, tools and material in construction areas and to prevent access to the work area or equipment by individuals not associated with the construction. Upon request and at the discretion of KUSD, space can be made available for the storage of materials within the building. The building does not have a truck or loading dock.

OWNER'S USE OF BUILDINGS

Owner's right to use and maintain building function without interruption shall be maintained. Contractors may be required to perform unique work, such as, loud, noisy, obnoxious fumes, etc. on an after-hours basis. Contractors may be required to provide temporary utility service to maintain Owner's use. Occupation of work areas by Owner will not constitute final acceptance of work performed in this area or any other area.

CHANGE ORDERS

A Change Order is a written order to the Contractor signed by the Owner for changes in work agreed upon by Contractor and Owner prior to the execution of the work. Cost of Change Orders will be determined be reasonable agreement between Contractor and Owner. Work on all Change Orders will not proceed until written approval has been given by the Owner to commence such work. Contractor will be required to detail all direct costs associated with Change Orders. It will be assumed that all small tools and equipment are already incorporated into the project and are not additive. A maximum of ten percent (10%) contractor markup for overhead and profit is allowed on a change orders.

BACK CHARGES

Back charges are used whenever the Kenosha Unified School District accomplishes rework or repair to contracted work or when a contractor uses Kenosha Unified School District labor, equipment, materials or tools to accomplish work. In addition, contractor's work which is deemed deficient in accordance with the plans and specifications and repaired by Kenosha Unified School District forces or other contracted forces will be back chargeable. This back charge work will be enforced only after the applicable vendor/contractor has been noticed and has not complied within the required time of the notification. Cost of this back charge will be deducted from remaining retainage owed to the applicable vendor/Contractor.
Invoicing for back charges will be accomplished by the following manner:

Material – per invoice.
Labor Hours – Labor Costs will be for direct hours at the direct cost for personnel.

Add forty percent (40%) of hourly rate for taxes and fringes.

Add fifteen percent (15%) for overhead and admin. costs associated with back charge

OWNER'S RIGHT TO CARRY OUT THE WORK

If the Contractor defaults or neglects to carry out the work in accordance with contract documents, and fails within seven (7) days after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may immediately after receipt by the Contractor of an additional written notice and without prejudice or any other remedy they may have, make good such deficiencies and with appropriate Change Order shall deduct from the payments due the Contractor the cost of correcting deficiencies.

RESTORATION

The Contractor will be responsible for the restoration of Owner's property to conditions, which existed prior to contract work. Restoration will include Contractor's repair of areas due to access to the work (i.e. asphalt pavement, concrete sidewalk and driveways, lawns, etc.). The work zone shall be swept clean of all loose debris at the end of the project.

CONTRACT CLOSEOUT

The Contractor shall complete the closeout procedures and final submissions required before final payment is made. If applicable, the Contractor will provide operation/maintenance manuals for all equipment and provide operator instruction and training as designated. If applicable, completed equipment and operation systems shall be tested at full operating conditions to insure proper operation and compliance with manufacturer's instructions for operations and compliance with contract documents. Heating systems may be exempt from this requirement until weather conditions allow proper balancing of heating devices.

A final punch list will be prepared and distributed to the Contractor at the point of substantial completion. Items on the punch list shall be completed within five (5) working days of issuance.

Contractor shall provide record drawings for items such as piping, mechanical or electrical installations including those beneath floor slab, beneath exterior paving areas, within walls or otherwise concealed work. Record "As Built" drawings shall show actual locations of installation. Also, if applicable, the point of entrance for each utility and its depth. (2) paper sets of drawings and one set of AutoCAD 2025 files will be required.

Contractor is responsible for providing written guarantees, warranties for equipment and installation, certification or Affidavit stating that Contractor has complied with the State wage rate compliances and to certify to the Owner that all debts and claims against the project have been paid in full or otherwise satisfied and give final evidence of release of all liens against the project and its Owner.

GUARANTEE/WARRANTY

All work and workmanship shall be guaranteed by the Contractor to be free from any defects in material or workmanship for a period of Two (2) year after acceptance of work by the Owner unless otherwise noted in the specifications.

Product warranty information shall be provided by contractor to owner at closeout and prior to final payment application.

END KUSD GENERAL CONDITIONS

GENERAL TERMS AND CONDITIONS

1. General conditions printed on prior page(s) will apply.

2. The Kenosha Unified School District (KUSD) reserves the right to accept or reject any or all bids/proposals, to waive any informality or technicality in any bid/proposal submitted, and to accept any part of a bid/proposal deemed to be in the best interest of KUSD. KUSD reserves the right to negotiate with any company after the bid opening has occurred.

3. Written Bid responses must be submitted in a sealed envelope marked **"#4907 F – BRADFORD ELEVATOR MODERNIZATION PROJECT**". They are to be returned to Kenosha Unified School District, 3600-52nd Street, Kenosha, Wisconsin 53144, Purchasing Department, no later than **FEBRUARY 24, 2026 at 1:00 PM.** Please include the signed cover sheet with an authorized signature, the bid form and all required information as described in the checklist on the bid form. Responses received without the signature of a bidder's authorized agent on the cover sheet will be considered a non-responsive offer and will not be considered. Send one original and two additional copies and one electronic flash drive of your RFP response in the sealed envelope. It is the responsibility of the bidder to ensure that proposals arrive to the specified location by the deadline for proposal submission. Late proposals may be accepted if it can be ascertained beyond a reasonable doubt that the circumstances, which caused the proposal to be late, were beyond the bidder's control and that the proposal was submitted without prior knowledge of the contents of competing proposals. The acceptance of late proposals will be at the discretionary authority of the Purchasing Agent.

4. Bidders shall make all investigations necessary to thoroughly inform themselves regarding the delivery of services as required by the solicitation. No plea of ignorance by the bidder of conditions that exist or that may hereafter exist because of failure to fulfill the requirements of the contract documents will be accepted as the basis for varying from the requirements of the District or the compensation to the bidder. **A mandatory pre-bid project site walk through will be held at the building site on February 10, 2026 at 10:00 AM. Bradford High School is located at 3700 39th Ave., Kenosha, WI. Contractors are to gather outside Door 1 prior to the meeting.**

5. All proposals must be signed to be valid.

6. All proposals must include all the requested information to be valid.

7. Verbal commitments will NOT be honored.

8. Facsimile or email proposal responses will NOT be accepted.

9. No item may be canceled, no price changed, once the proposal is received in our office. Bids resulting from this proposal will be considered binding.

10. Awarded contractors will be contacted by letter via United States postal Service.

11. Invoicing must be done through the United States Postal Service.

12. Unless otherwise noted, the District is exempt from all Taxes and shall not pay or reimburse the successful bidder with respect to any local, state and federal taxes.

I. Contract Agreement

a. Acceptance of a proposal is predicated on the total dollar amount to complete the project and the District's available funds. In the event bids exceed funding, the District will not award a contract.

b. The General Terms and Conditions, The Scope of Services, the bidder's Proposal, written letters, addenda and the Purchase Order are collectively an integral part of the contract between the District and the successful bidder. The successful bidder will be asked to enter into a contract.

c. The standard form of agreement between the District and the contractor will be in the form of a Purchase Order issued by the KUSD.

d. Performance Bond:

A 100% performance bond provided by the contractor will be a requirement of the contract awarded. Include the cost of the bond in this bid proposal per individual bid packages.

e. Indemnification:

The successful bidder(s) shall assume the entire responsibility and liability to indemnify the Kenosha Unified School District, its elected and appointed officials, employees, volunteers and others working on behalf of the District. To the fullest extent permitted by law, the successful bidder agrees to defend, pay on behalf of, indemnify, and hold harmless the District against any and all claims, demands, suits, damages or losses, together with any and all outlay and expense connected therewith, including but not limited to attorneys' fees and court costs, that may be asserted or claimed against, recovered from or suffered by the District by reason of any injury or loss, including, but not limited to, personal injury, including bodily injury or death, property damage, including loss of use thereof, and economic damages arising out of or in any way connected or associated with any work and/or activities performed by the successful bidder pursuant to the provisions of this Agreement. The successful bidder obligation to indemnify the District contained in this Agreement is not limited by the amount or type of damages, compensation or benefits payable under any workers' compensation acts, disability benefit acts, or other employee benefit acts.

The District shall not be liable or in any way responsible for any injury, damage, liability, claim, loss or expense incurred by the successful bidder, its officers, employees, subcontractors, and others affiliated with the successful bidder, arising out of or in any way connected or associated with any work and/or activities performed by the bidder pursuant to the provisions of this Agreement, except for and only to the extent caused by the negligence of the District. The successful bidder expressly assumes full responsibility for any and all damages to the District property arising out of or in any way connected or associated with any work and/or activities performed by the successful bidder pursuant to the provisions of this proposal including, but not limited to, the activities of the bidder, its officers, employees, subcontractors, and others affiliated with the bidder.
The successful bidder shall ensure that its activities on the District premises will be performed and supervised by adequately trained and qualified personnel and the bidder will observe, and cause its officers, employees, subcontractors and others affiliated with the bidder to observe all applicable safety rules.

f. Termination or Cancellation

i. In order to protect the vested interests of the District, and to ensure the efficient utilization of funds, the successful bidder shall comply with all contractual obligations contained in

the General Terms and Conditions, Special Conditions and the Scope of Services. With respect to these obligations, the District will report any non-compliance issues to the successful bidder for corrective action. Continues non-compliance by the successful bidder shall be the District's justification for placing the bidder's contract on probation status or termination.

ii. In the event that the successful bidder defaults on its contract or the contract is terminated for cause due to performance, the District reserves the right to re-procure the products or services from the next choice bidder or from other sources during the remaining term of the terminated/defaulted contract.

iii. In the case of termination, costs shall be prorated to the date of termination and the parties shall execute a settlement agreement to specify the terms. Failure to agree in a settlement may be subject to arbitration

iv. With the mutual agreement of both the contractor and the District, upon receipt and acceptance of not less than thirty days written notice, the contract may be terminated on an agreed date before the end of the contract without penalties to either party.

v. Either party may terminate the contract because of the failure of the other party to carry out the provisions of the contract. In such case, the party terminating the contract shall give thirty days' notice of conditions endangering performance and if after notice the offending party fails to remedy the violation of the terms to the satisfaction of the other party, the contract may be terminated.

vi. In the event of the filling of a Petition in Bankruptcy by or against the successful bidder, the District shall have the right to terminate the contract by providing 15 days' notice of its intentions to terminate.

vii. If funds anticipated for these products or services do not become available for any reason, the District shall have the right to terminate the contract without penalty by giving not less than 20 days written notice documenting the lack of funding.

g. Disclosure of Information:

The laws of Wisconsin dictate that at the conclusion of the selection process the contents of the information packages be placed in the public domain and be open for inspection by interested parties. The District will treat all information submitted by a bidder as public information. Bidders are advised that the District does not wish to receive confidential or proprietary information and bidders are not to supply such information except when it is necessary. Pricing information cannot be considered confidential information. Finally, identification of the entire Bid as confidential will be deemed non-responsive and disqualify the bidder's proposal.

h. Examination and disposition of information

Bidder agrees that any authorized auditor, the Office of Auditor of the State and where federal funds are involved, the Comptroller of the United States or a representative of the United States Government, shall have access to and a right to examine, audit, excerpt, and transcribe any directly pertinent books, documents, papers, and records of the bidder relating to the orders,

invoices, or payment of this contract. Davis-Bacon Act Federal wage rates do not apply to work in this project scope.

All Bids become the property of the District and will not be returned to the bidder at the conclusion of the selection process; the contents of all Bids will be in the public domain and be open to inspection by interested parties

II. Conflicts of Interest

a. It shall be understood and agreed that submitted bid proposals are offered independently of any other proposals

b. Wisconsin Statue 19.59 prohibits a person serving in a public capacity from obtaining anything of value that could reasonably be expected to influence the person's vote, official actions of judgment, or could reasonably be considered as a reward for any official action of inaction on the part of the individual.

III. Economic Adjustments

All conditions of this quote & quoted prices to remain firm until July 1, 2026. There is no limitation on the amount of price decreases that may be made under this clause.

IV. Incurring Costs

Kenosha Unified School District is not liable for any costs incurred in replying to this RFP.

V. Method of Bid

Bids written in pencil will be rejected. Erasures or corrections of mistakes on Request for Proposal must be initialed or signed by bidder. Failure to meet any requirements listed in this bid document may be cause for disqualification of the bid.

Submitted bids must include the completed Statement of Qualification worksheet, signature page, and acknowledgement of addenda **if any**. A legally authorized representative of the bidder will sign the Certification of Bidder signature page in ink.

All responders to this RFP maybe asked to provide sample product(s) included in the response for evaluation and demonstration purposes. Vendors will have 7 days to provide any requested samples from the date of request by the district.

VI. References

Provide a minimum of three references from projects where your firm has completed construction work for a school district specifically with elevator replacement projects. Include a primary client reference and their contact information. Projects should be representative of work in excess of two hundred thousand dollars.

The "Reference Data Sheet" must be returned with the bid. Additional references may be submitted at the contractor's discretion.

VII. Number of Bids Required

Unless otherwise specified, one (1) original, one (2) paper copy and one (1) electronic copy of the entire bid. Please include a flash drive as the electronic copy containing all bid documents in the sealed bid envelope. This is a sealed bid, emailed bids CANNOT be accepted.

VIII. Addressing of Bids

The bid shall be submitted in a sealed envelope marked with the bidder's return address and must be addressed to:

PURCHASING DEPARTMENT Room 175
KENOSHA UNIFIED SCHOOL DISTRICT
3600 52nd Street
Kenosha, WI 53144

The following remarks must be noted on the RFP envelope:

"#4907 F – BRADFORD ELEVATOR MODERIZATION PROJECT - Due: February 24, at 1:00 PM"

IX. Calendar of Events

Issuance Date	1/29/26
Pre-Bid Contractor Meeting / Walk-Thru (Mandatory at the site)	2/10/26 @ 10:00AM
Bid Due Date	2/24/26 @ 1:00PM

Sealed bids will be accepted by the Kenosha Unified School District's Purchasing Department until 1:00 PM on February 24, 2026.

The bid opening will take place at the Educational Support Center. 3600 – 52nd St, Kenosha, where they will then be publicly opened and read aloud shortly thereafter. Bidders or their authorized agents are invited to attend the public bid opening 1:05 PM. No award decisions or evaluation will take place – only an acknowledgement of qualifying receipt.

Late bids and bids received via facsimile will not be accepted and shall remain unopened.

X. Addenda

If it becomes necessary to revise any part of this RFP or TO provide additional information, an addendum will be issued by Kenosha Unified School District's Facilities Department and furnished to all individuals who have received copies of the original RFP. Bidders are required to acknowledge receipt of all addenda by listing such addenda on the Certification of Bidder Signature Page.

XI. Withdrawal of Bids

Bids may be withdrawn by written or facsimile request received from bidder prior to time and date fixed for bid opening. Negligence on the part of the bidder in preparing the bid confers no right for withdrawal of the bid after it has been opened. Withdrawn bids will be retained in the RFP file but remain unopened.

XII. Amendments to Bids

Each bidder will be allowed a period of forty-eight (48) hours after the time and date set for receipt of bids to notify Kenosha Unified School District's Purchasing Department in writing of a material mistake in the bid. Failure of bidder to notify Kenosha Unified School District's Purchasing Department in the manner and within the time limit specified above will constitute a waiver by the bidder of all rights and remedies relative to a material mistake. Formal bid amendments thereto, or requests for withdrawal of bid received by Kenosha Unified School District's Purchasing Department after time specified for opening will not be considered.

XIII. Questions

Questions regarding the preparation of the proposal and due dates or building access should be addressed to:

John Setter, AIA – Director of Facilities / District Architect
Kenosha Unified School District
3600 52nd Street, Kenosha WI 53144
Phone: 262-359-6331 | Email: jsetter@kusd.edu

Corki Roth – Purchasing Specialist
Kenosha Unified School District
3600 52nd Street, Kenosha, WI 53144
Phone: 262-359-6338 | Email: croth@kusd.edu

Questions regarding design intent and specification scope shall be addressed to:

Jeff Valentine
ATIS Elevator Consulting
8383 Greenway Blvd., Suite 600, Middleton, WI 53562
Phone: 608-607-7122

The KUSD Facilities Department will work with authorized agents of the District to respond to all inquiries and will render an official response to the question in writing to all bidders. All bidder questions and answers will be publically posted to the district's website. The District shall not be responsible for interpretations and/or responses issued by individuals who are not authorized agents of the District's Facilities Department.

END OF DOCUMENT

STATEMENT OF QUALIFICATION

The Undersigned certifies that the information provided is true and sufficiently complete so as not to be misleading.

PROJECT: Bid # 4907F - Bradford Elevator Modernization Project

SUBMITTED TO: Kenosha Unified School District

ADDRESS: 3600 52nd Street
Kenosha, WI 53144

SUBMITTED BY:

NAME:

ADDRESS:

PRINCIPAL OFFICE:

- ☐Corporation
- ☐Partnership
- ☐Individual
- ☐Joint Venture
- ☐Other

NAME OF PROJECT: Bradford Elevator Modernization Project

TYPE OF WORK (file separate form for each Classification of Work):

- ☐General Construction
- ☐HVAC
- ☐Electrical
- ☐Plumbing
- ☐Other (please specify)

ORGANIZIATION

1. How many years has your organization been in business as a Performance Contractor?

2. How many years has your organization been in business under its present business name?

3. Under what other or former names has your organization operated?

4. If your organization is a corporation, answer the following:

   Date of incorporation:

   State of incorporation:

   President's name:

   Vice-president's name(s)

   Secretary's name:

   Treasurer's name:

5. If your organization is a partnership, answer the following:

   Date of organization:

   Type of partnership (if applicable):

   Names(s) of general partners(s):

6. If your organization is individually owned, answer the following:

   Date of organization:

   Name of owner:

7. If the form of your organization is other than those listed above, describe it and name the principals:

LICENSING

1. List jurisdictions and trade categories in which your organization is legally qualified to do business, and indicate registration or license numbers, if applicable.

2. List jurisdictions in which your organization's partnership or trade name is filed.

EXPERIENCE

1. List categories of work that your organization normally performs with its own forces.

2. Claims and Suits (If the answer to any of the questions below is yes, please attach details.)

3. Has your organization ever failed to complete any work awarded to it?

4. Are there any judgments, claims, arbitration proceedings or suits pending or outstanding against your organization or its officers?

5. Has your organization filed any law suits or requested arbitration with regard to construction contracts within the last five years?

6. Within the last five years, has any officer or principal of our organization ever been an officer or principal of another organization when it failed to complete a contract? (If the answer is yes, please attach details.)

7. State total worth of work in progress and under contract:

REFERENCES

Bank References:

Surety:

Name of bonding company:

Name and address of agent:

FINANCING

1. Attach a financial statement, preferably audited, including your organization's latest balance sheet and income statement showing the following items:
   - Current Assets (e.g., cash, joint venture accounts, accounts receivable, notes receivable, accrued income, deposits, materials inventory and prepaid expenses):
   - Net Fixed Assets:
   - Other Assets:
   - Current Liabilities (e.g., accounts payable, notes payable, accrued expenses, provision for income taxes, advances, accrued salaries and accrued payroll taxes);

- Other Liabilities (e.g., capital , capital stock, authorized and outstanding shares par values, earned surplus and retained earnings).
    - Name and address of firm preparing attached financial statement, and date thereof:
    - Is the attached financial statement for the identical organization named on page one?
    - If not, explain the relationship and financial responsibility of the organization whose financial statement is provided (e.g., parent-subsidiary).

2. Will the organization whose financial statement is attached act as guarantor of the contract for construction?

SIGNATURE

Dated at this_____ day of_____ 2026

Name of Organization:

By:

Title:

Being duly sworn deposes and says that the information provided herein is true and sufficiently complete so as not to be misleading.

Subscribed and sworn before me this_____ day of_____ 2026

Notary Public:

My Commission Expires:

REFERENCE DATA SHEET

(TO BE COMPLETED AND SUBMITTED WITH BID)

Firms shall have the capability and capacity in all respects to fulfill the contractual requirements to the satisfaction of the Kenosha Unified School District.

Provide a minimum of three (3) references that substantiate elevator replacement / installation projects with a public school districts.

1. School: _____
   Address: _____
   _____
   Primary Contact:_____
   Phone: _____
   E-mail: _____
   Contract Amount: _____

2. School: _____
   Address: _____
   _____
   Primary Contact:_____
   Phone: _____
   E-mail: _____
   Contract Amount: _____

3. School: _____
   Address: _____
   _____
   Primary Contact:_____
   Phone: _____
   E-mail: _____
   Contract Amount: _____

BID FORM

Bid #4907-F – Bradford Elevator Modernization Project

Company Name of Bidding Contractor: _____

We as contractor having completely familiarized ourselves with the proposed Construction Documents, hereby agree to provide all materials, labor and delivery necessary too properly complete the specified work as outlined in the construction documents and specifications provided, including any Addenda issued hereto. It is **not** the intention of KUSD to breakdown individual bid packages between multiple contractors.

Base Bid No. 1 – Bradford Elevator: Lump Sum Amount:

_____($_____)
Written Numeric

Add Alternate No. 1 - Redrilling the well hole Lump Sum Amount:
Unknown underground conditions: Should the well hole collapse during extraction of the existing cylinder or the hole not be of the proper size, depth or plumpness to install the replacement cylinder with PVC casing or any other unknown conditions which would require the setting up a drill rig and re-drilling the well hole, the contractor shall complete the drilling of the well hole, and installation of any additional steel casing at a "not to exceed" additional cost as stipulated on the bid form. The Contractor shall notify the Owner's representative immediately should these conditions be found and shall not proceed further until authorized to do so by the owners representative.

_____($_____)
Written Numeric

Receipt of and inclusion in Bid Proposal of the following Addenda is hereby acknowledged:

Addendum No. _____, Dated _____

Addendum No. _____, Dated _____

Indicate responses below:

Attended the Mandatory Pre-Bid meeting No. _____, Yes _____

Bid Bond attached No. _____, Yes _____

Subcontractor List attached No. _____, Yes _____

KUSD Contractor Statement of Qualification attached No. _____, Yes _____

Reference List attached No. _____, Yes _____

Have any substitutions been provided? No. _____, Yes _____

Contractors Detailed Construction Schedule attached No. _____, Yes _____

Authorized Signature:

Name: Title:

Printed Name: Date:

Elevator Manufacturer Company Name: Model:

Supplemental Work Pricing:

Work performed over and above that specified in the service requirements may be performed at the option of Owner as follows (rates shall meet minimum prevailing wage rates):

	* Full Billing Rates			
	1.0	1.5	1.7	2.0
Firm Fixed Price Mechanic	$	$	$	$
Firm Fixed Price Apprentice	$	$	$	$

**Only the straight-time portion of labor shall have burden applied. No burden shall be applied to overtime, double-time, or any other premium rates.*

END OF BID FORM

PROJECT SCHEDULE

Contractor shall provide a schedule for execution of modernization work with time periods necessary to indicate the milestones as listed below. It is anticipated that this contract will be awarded within 30 days of bid submission with the work start date to be as detailed in the Project Schedule identified below.

This modernization will impact building occupants and school operations during the elevator modernization period, including temporary access limitations for mobility-impaired users. Coordination with the Owner shall be required to minimize disruption to educational activities.

The start of on-site modernization must initiate on the date provided by the Elevator Contractor with completion finished in accordance with the schedule submitted by the Elevator Contractor and approved by the Owner for the elevator modernization. All open time periods are to be calculated after a date of award for this contract. The schedule below, when completed, will constitute the final schedule for this project.

All time periods are to be calculated after a date of award for this contract with the actual start date as listed below. Once the elevator is turned over to the Elevator Contractor for modernization, the Elevator Contractor shall provide all material and labor to ensure that the approved schedule is achieved to complete all modernization work on the elevator.

Elevator 1	Mobilization / Start Date (Calendar Dates)	Completion / Turn Over Date (Calendar Dates)	Duration (Days / Weeks)
Product Submittals Provided			
Product Submittal Review			
Submittal Approval Date			
*Equipment Lead Time			
Installation			
Substantial Completion			
Final Completion			
Total Duration			

**Equipment lead time will include transit*

1 GENERAL

1.1 SUMMARY

A) This section specifies required work to complete the modernization of One (1) Hydraulic Elevator.

B) Elevator work includes:

1) Commercial, standard hydraulic elevators.
2) Elevator car and hoistway signal equipment.
3) Operation and control systems.
4) Patching, painting etc. as indicated.
5) Accessibility provisions for physically disabled persons.

C) Engineering, equipment, labor, power unit, control systems, devices and accessories as required for safely operating the specified elevators at rated speed with rated capacities.

D) Delivery, staging, and hoisting of new equipment. Hoisting, dismantling, removal and disposal of existing equipment. Repair, cleaning, and painting of reusable equipment.

E) Materials and accessories as required for completing the elevator modernization.

F) Hoistway, pit and control room barricades for safety as required.

G) Required hoisting, hoisting permits and traffic coordination and/or permits with local jurisdictions as required.

H) Required permits and coordination and/or permits with local jurisdictions.

1.2 DEFINITIONS

A) The following definitions shall be used throughout all general conditions, specifications and contract documents except where superseded in those documents.

1) "Owner": Kenosha Unified School District (KUSD)
2) "Consultant": ATIS.
3) "Contractor": The Elevator Contractor unless stated differently.
4) "Contract": The Contract for the elevator modernization and other related work shall be deemed to be the Elevator Specifications provided to Contractor prior to execution.
5) "Contract Documents": The Contract for the elevator modernization and other related work to the elevator of the building, the Elevator Specifications (the "Specifications") and any Addendum shall comprise the Contract Documents. Additional Contract Documents may be created and incorporated upon written agreement by Owner and Contractor. Notwithstanding, any documents not furnished hereunder shall not be binding upon Contractor until such time Contractor is furnished with same and specifically accepts in writing.
6) "Contract Sum": The amount set forth in the Contract as priced by the "Contractor" for Bid Items, for Contractor's performance of the Work.
7) Direct Labor Costs": Wages or salaries, which can be properly identified with and charged to one specific product or service. Direct labor cost shall include all direct labor employee benefit costs and burdens. Employee benefits shall include the employer's cost contributions for health and welfare, injury compensation, Federal and State Unemployment and Social Security taxes. It shall also include a burden factor to recover the cost of paid absence due to Federal Holidays, vacation, and election days required by the Department of Labor Wage Determinations. Other benefit costs including retirement contributions and paid sick leave may be included where identifiable and payable by the Contractor.
8) "Direct Labor Hours": Those hours actually expended in the accomplishment of direct labor costed work.

9) "Direct Materials Cost: The actual vendor invoice charges for materials used for performance of work under this contract. Direct material costs shall include transportation charges when such charges are included on the invoice by the vendor, as well as any discounts allowed for prompt payment and discounts or rebates for core value of salvage value that accrue to the Contractor. When questions arise concerning the cost of materials, material costs will be based on the lowest of quotes provided by the Contractor from at least three different commercial vendors.
10) "Code": All applicable laws and codes, including but not limited to the electrical, fire, building, and Safety Codes for Elevators and Escalators codes designated by any authority having jurisdiction as detailed in the codes and standards reference section of this specification.
11) "Jurisdictional Authority": The authority having jurisdiction, the organization, office, or individual responsible for enforcement of the associated Elevator Code(s). Where compliance with these Codes has been mandated by legislation or regulation, the "Jurisdictional Authority" is the regulatory authority.
12) "Component" or "Component Part": Any part of any item or system that is detachable or removable from the main body or main assembly of the item or system.
13) Where "as shown", "as indicated", "as detailed", or words of similar import are used, it shall be understood that reference is made to this specification and the drawings accompanying this specification unless stated otherwise.
14) Where "as directed", "as required", "as permitted", "approval", "acceptance", or other words of similar import are used, it shall be understood that direction, requirement, permission, approval, or acceptance of the Owner is intended unless stated otherwise.
15) "Work": The services to be completed by Contractor are as specified in the Contract Documents. This Work includes all Services necessary; material and labor required to provide and install and/or repair equipment as specified under this specification. Schedules and completion dates shall be agreed to in writing by both parties before becoming effective.
16) "Provide": Provide all materials and labor required to furnish and install and or repair.
17) "Services": Services shall include, but shall not necessarily be limited to, all labor, transportation, supplies, materials, parts, tools, scaffolding, machinery, hoists, employee safety equipment, equipment, lubricants; supervision, applicable taxes, and all other work and materials expressly required under this Contract or reasonably inferred whether or not expressly stated herein necessary to maintain all equipment covered under this specification.
18) "Fire Alarm Contractor": Contractor approved to work on Fire Alarm System installed in the Bradford High School, Kenosha, WI.
19) "Subcontractor": A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work and Services at the site. All Subcontractors must be licensed and insured and must provide proof of adequate insurance in the amounts specified herein prior to the commencement of any portion of the Work.

1.3 CODE AND STANDARD REFERENCES

A) All codes and standards referenced in this specification will be to the edition of the references as detailed in this section. All materials and Work and Services to be performed under these specifications shall be in compliance with the Codes listed in this section or as determined by the authority having jurisdiction.
B) Comply with applicable State of Wisconsin Regulatory Requirements, Building Codes and Elevator Codes at the project site, including but not limited to the following:
   1) ASME A17.1-2016 Safety Code for Elevators and Escalators
   2) ADAAG, Americans with Disabilities Act Accessibility Guidelines
   3) NFPA 13-2019 Standard for the Installation of Sprinkler Systems

4) NFPA 70-2020 National Electrical Code
5) NFPA 80, Fire Doors and Windows
6) ANSI/UL 10B, Fire Tests of Door Assemblies
7) NFPA 72-2019 National Fire Alarm Code
8) NFPA 101 Life Safety Code
9) O.S.H.A. Requirements for construction and repairs of existing buildings
10) Elevator Industry Field Employees' Safety Handbook 2020
11) Any and all onsite workmen and receiving of products to site are required to follow security and safety procedures as per policies due to facility regulations.

1.4 WORK BY OTHERS

A) Work by "Others" or "Building Work" will be the responsibility of the Owner. Specifically, to include non-traditional Contractor work detailed in Part 1.4 in addition to traditional Contractor work as detailed in all other sections of this specification. All materials and work to be performed under these specifications shall be in compliance with the codes listed in Part 1.3 CODE AND STANDARD REFERENCES or as determined by the authority having jurisdiction. As work progresses, Contractor shall consult with the Owner and its Subcontractors, examine the Work installed by any Subcontractors, and resolve all conflicts without expense to Owner and/or Consultant. All Division 14 work, with all associated work requirements, will be provided by the Elevator Contractor unless specifically stated. All work necessary for a complete and useable elevator system, shall be the responsibility of the Elevator Contractor.

B) **Control Room HVAC:** Control room HVAC is required, to maintain temperature and humidity to between 55 deg F and 90 deg F with relative humidity of not more than 85% non-condensing. The Elevator Contractor shall provide actual calculations for total anticipated heat loads generated by all elevator control room equipment.

1) Control room HVAC must be positioned as approved by the Elevator Contractor and consultant. There shall be no drain lines or condensation allowing water in the control room.
2) Dedicated HVAC system for control room is required to have an electrical disconnect lockable in the off position with proper labels identifying source of power and purpose.
3) HVAC Contractor shall provide HVAC receptacle or disconnect switch as required for the installation of HVAC system by HVAC Contractor.
4) HVAC Contractor is responsible for providing electrical power and code compliant disconnect switch for installation of HVAC equipment.
5) Remote systems shall have a proper thermostat inside the control room.
6) Any existing vents in the control room will be properly covered and protected.

C) **Fire Alarm:** Fire alarm including heat and smoke sensing devices as per NFPA 70 National Electrical Code and NFPA 72 National Fire Alarm. Provide documentation to the Owner of compliance of the complete system.

1) Verify that proper connections exist for fire recall devices to the elevator controllers. If required, provide connection from new or existing fire recall devices to the elevator controllers in control room. For each elevator within the building, a minimum of three separate elevator control circuits shall be terminated at the designated elevator controller within each elevator control room in accordance with NFPA 72, section 21.3. Operation of the elevator shall be in accordance with Section 2.27 of ASME A17.1 Safety Code for Elevators and Escalators. The smoke detectors or other automatic fire detection as permitted by NFPA 72, shall actuate the elevator control circuits as detailed in NFPA 72.
2) Fire alarm contractor shall demonstrate at time of elevator inspection, compliance and testing of all alarm initiating devices as required by ASME A17.1 Safety Code for Elevators and Escalators, ASME A17.2 and NFPA 72 National Fire Alarm Code.

3) Installation of alarm system and devices shall conform to ASME A17.1 Safety Code for Elevators and Escalators, and NFPA 72 including NFPA 70 NEC.
4) All conduit and wiring requirements for Fire Alarm System work is the responsibility of the Fire Alarm Contractor.
5) Provisions shall be made to access all hoistway fire alarm initiating devices from outside the hoistway in accordance with the local AHJ.

D) **Emergency Generator:** The elevator shall be connected to the existing emergency generator system to provide Phase I Fire Service Recall operation, emergency cab lighting, and emergency communication power during normal power failure. Full passenger operation on generator power is not required unless directed by the Authority Having Jurisdiction (AHJ). Elevator Contractor shall coordinate final interface requirements with Owner and Electrical Contractor.

E) **Sprinklers:**
1) If sprinklers are required by local Fire Officials a code compliant shunt trip breaker would need to be installed and located for disconnecting power to the elevator in conformance with applicable codes.
2) Where elevator equipment is located or its enclosure is configured such that application of water from sprinklers could cause unsafe elevator operation, means shall be provided to automatically disconnect the main line power supply to the affected elevator and any other power supplies used to move the elevator upon or prior to the application of water.
3) When sprinklers are installed not more than 600 mm (24 in.) above the pit floor, the following shall apply to elevator electrical equipment and wiring in the hoistway located less than 1 200 mm (48 in.) above the pit floor, except earthquake protective devices conforming as required to ASME A17.1 Part 8.4); and on the exterior of the car at the point where the car platform sill and the lowest landing hoistway door sill are in vertical alignment.
   a) Elevator wiring, except traveling cables, shall be identified for use in wet locations in accordance with the requirements in NFPA 70
4) If sprinkler head(s) are located in the control room or hoistway, it will be required to install a heat detector within 24" of each sprinkler in order to automatically disconnect the main line power supply to the affected elevator(s) upon or prior to the application of water, in accordance with ASME A17 Safety Code for Elevators and Escalators, and NFPA 72 National Fire Alarm Code.

F) **Building General Construction:** Building general construction conditions will include work detailed in this section, including cleaning and painting of miscellaneous surfaces. The Elevator Contractor shall not be responsible for all work as detailed in this section. All construction, cleaning and painting other than equipment directly supplied by the Elevator Contractor shall be performed by Work by Others.
1) Verify proper installation of 1 ½ hour "B-Label" door to control room to include self-closing and self-locking requirements.
2) Verify proper Class ABC Fire Extinguisher in control room permanently mounted and conveniently located to the access door as required by ASME A17.1 Safety Code for Elevators and Escalators.
3) Verify that all non-elevator-related pipes, wiring, conduit have been removed and openings in the control room and hoistway to include a 2-hour fire rating. All foreign pipes, wiring or conduit not in use or directly related to the elevator system shall be removed from control room and hoistway.
4) All sills must be substantially level to all adjacent finished flooring surfaces.
5) Control room warning sign "Danger Authorized Personnel Only" shall be provided on the control room door as required by NFPA 70 NEC.
6) Each contractor will be required to provide any cutting, patching including painting to match existing finishes of building.

7) All above work and materials to be performed to meet compliance with applicable Building Code, ASME A17.1 Safety Code for Elevators and Escalators, NFPA 70 National Electrical Code, NFPA 13 National Sprinkler Code and NFPA 72 Fire Alarm Code or as determined by the authority having jurisdiction.

8) Failure by above associated contractors to perform required testing at time of scheduled elevator acceptance testing and inspection will require full advance payment by contractor at fault for all expenses relating to re-inspection, permit and scheduling fees to building management.

G) **Telephone Lines and/or Internet Connections**: Two-way voice/audio communication is required to meet the ASME A17.1 2016 requirements. The two-way voice audio may utilize a phone line or may also use the internet/ cellular connection. Internet connectivity in the elevator control room will need to be added.

1) All wiring to elevator controller for communication system including all wiring in control room to be installed inside conduit as per NFPA 70 NEC.

2) Emergency communication device shall include a minimum of 4 hours emergency backup power including power from emergency generator.

H) **Electrical Requirements:** Electrical work required for elevator modernization shall be the responsibility of the Owner. Electrical requirements shall include the following:

1) All Electrical work must be coordinated and scheduled with, at least 7 days' notice, with the building Elevator Contractor. Elevator shall be removed from service while electrical trades are working.

2) Electrical requirements for hoistway and control room HVAC, GFCI receptacles and disconnects, as required by NFPA 70, NEC and ASME A17.1 Safety Code for Elevators and Escalators. Additionally, Electrical Contractor shall provide and install conduits and wiring required for communication devices as detailed in this section. Where existing clearance or workspaces lack compliance with NFPA 70, these clearance and workspace issues shall be corrected with the replacement/modernization work.

3) **Main Line Disconnect:** Main line disconnect is to be verified by Elevator Contractor as appropriate size and type for power requirements of new elevator equipment prior to installation. Main line disconnect for the elevator shall not be used for other conductors to pass thru disconnect switch boxes.

a) If existing disconnect is not satisfactory, Electrical Contractor shall provide new disconnect for elevator main line power in accordance with NFPA 70, NEC. The disconnecting means shall be an enclosed externally operable fused motor circuit switch capable of being locked in the open position. The provision for locking or adding a lock to the disconnecting means shall be installed on or at the switch used as the disconnecting means and shall remain in place with or without the lock installed. Portable means for adding a lock to the switch or circuit breaker shall not be permitted as the means required to be installed at and remain with the equipment.

b) When sprinklers are being retained in elevator areas, provide for shunt trip style disconnects as discussed above in the "Sprinkler" section.

4) **Cab Lighting Disconnect:** Cab Lighting disconnect is to be verified by Electrical Contractor as appropriate size and type for power requirements. Cab Lighting disconnect for the elevator shall not be used for other conductors to pass thru disconnect switch boxes. Electrical Contractor shall provide new disconnect(s) for elevator cab lighting in accordance with NFPA 70, NEC.

a) The disconnecting means shall be an enclosed externally operable fused to not more than 15A, motor circuit switch capable of being locked in the open position. The provision for locking or adding a lock to the disconnecting means shall be installed on or at the switch used as the disconnecting means and shall remain in place with or without the lock installed. Portable means for adding a lock to the switch or circuit breaker shall not be permitted as the means required to be installed at and remain with the equipment.

b) A separate branch circuit shall supply the car lights, receptacle(s), accessory equipment (alarm devices, alarm bells, monitoring devices not part of the control system), auxiliary lighting power source, and ventilation on each elevator car. The overcurrent device protecting the branch circuit shall be

located in the elevator control room or control room/machinery space or control space. Required lighting shall not be connected to the load side of a ground-fault circuit interrupter.

5) **Control Room Lighting and Receptacles:**
   a) A separate branch circuit shall supply the control room/machinery space or control space lighting and GFCI receptacle(s).
   b) All receptacles in the control room shall be GFCI rated.
   c) Minimum lighting in control room shall be 19 ft-c throughout the control room floor.
   d) Required lighting shall not be connected to the load side of a ground-fault circuit interrupter.
6) **Pit Lighting and Receptacle(s):**
   a) Provide pit lighting sufficient to maintain a minimum illumination level of 10 foot-candles at any point on the pit floor in accordance with ASME A17.1 requirements..
   b) Verify that a separate branch circuit is installed to supply the hoistway pit lighting and receptacle(s).
   c) Required lighting shall not be connected to the load side of a ground-fault circuit interrupter.
   d) The lighting switch shall be so located as to be readily accessible from the pit access door.
   e) Duplex Receptacle. At least one 125-volt, single phase, 15 or 20 ampere duplex receptacle shall be provided in the hoistway pit.
7) **Pit Receptacles:** Pit receptacles, with GFCI protection shall be installed within 4'-0" of pit floor. Care must be taken not to place equipment in line with elevator equipment.
8) Each 125-volt, single-phase, 15 and 20 ampere receptacle installed in pits, in hoistways and on elevator car tops shall be of the ground fault circuit-interrupter type for protection of personnel.
9) All disconnects shall be labeled according to NFPA 70 National Electrical Code including source of power, Jurisdictional Identification (Serial Number) and all required warning signs.
10) All disconnects shall be installed with proper clearances in accordance to the applicable provisions of NFPA 70 National Electrical Code.
11) All conduit and wiring in the hoistway must be checked for proper installation and properly mounted in accordance with applicable provisions of NFPA 70 National Electrical Code.
12) Equipment grounding and bonding shall be provided in accordance with the requirements of NFPA 70 National Electrical Code. The equipment grounding conductor will be run with the circuit conductors and shall be a copper conductor. Ground all conductors, supports, controller enclosure, and other non-current conducting metal enclosures for electrical equipment in accordance with NFPA 70 National Electrical Code. The ground wires shall be solid or stranded; insulated, covered, or bare copper, sized as required by NEC, and shall be colored green if #6 AWG or smaller, and have green tape or adhesive marking if #4 AWG or larger.
13) Provide new electric wiring from disconnect switches to the terminals of the new elevator controllers in its new location, inclusive of a normal 120 VAC, 15 AMP supply at the controller.
14) Provide new pit lighting and control room lighting as per NFPA 70 National Electrical Code with enclosed and protected lamps.
15) All existing and new lighting fixtures in control rooms, elevator cars and on tops of cars are to be suitably guarded in accordance with ASME A17.1 Safety Code for Elevators and Escalators clearance requirements and NFPA 70 National Electrical Code requirements for guarding.
16) Pit lighting switches and emergency stop switches shall be installed approximately 18" above first floor landing adjacent to opening and operable from side of pit access where pit ladder is installed.
17) Telephone lines and wiring to elevator controllers for telephone system including all wiring in control room to be installed inside conduit as per NFPA 70 NEC. Conduit to be installed under Electrical Requirements.

I) **Patching**: Patching of all masonry openings and drywall surfaces as required by elevator installation work as detailed below will be the responsibility of the Elevator Contractor and shall be completed with fire rating of hoistway or control room equal or greater than 2 hours in accordance with local Building Code.

1) All openings left from the removal of any surface mounted devices will be patched appropriately and surface restoration performed by the Elevator Contractor. Included in this will be the removal of old position indicators and directional indicators.

2) Patching of all surfaces at elevator landings will be the responsibility of the Elevator Contractor. Masonry, drywall, patching, and finishes including painting for repair of all openings as required by elevator installation work and shall be completed with fire rating of hoistway or control room equal or greater than 2 hours in accordance with applicable Building Code.

3) Patching of all masonry openings and drywall surfaces as required by elevator installation work inside the hoistway and control room will be the responsibility of the Elevator Contractor.

J) **Coordination of Work:**

1) Elevator Contractor shall coordinate as required with other contractors to ensure that schedules are met and all work being performed in association with the elevator modernization project is acceptable.

2) Before proceeding with any Work, the Contractor shall carefully check and verify all pertinent dimensions and sizes, and assume full responsibility for fitting the equipment and materials to the structure. Where the apparatus and equipment have been indicated on the drawings, the dimensions have been taken from typical equipment of the type specified in these specifications. The Contractor shall carefully check the drawings to verify that the equipment that will be actually provided will fit into the spaces available. Should the equipment not fit the specific structure shown on the drawings, all additional sub-framing members required to accommodate the equipment installation shall be provided and paid for by Contractor as part of the Work of this section. The Contractor shall submit all structural shop drawings and engineering calculations for the Consultant's review and written approval.

3) Contractor shall familiarize himself with the specifications, drawings, installation procedures and construction schedules for those phases of Work performed by his subcontractors. The Contractor shall also familiarize himself with the Owner's security and safety requirements and shall abide by and conform to such established regulations at all times. If the Contractor's Work or the Work of any of his subcontractors depends upon the execution of the Work of another subcontractor or upon his own Work, he shall so coordinate all phases of Work so as to avoid conflicts in installation procedures and construction schedules.

4) As work progresses, Contractor shall consult with his subcontractors, examine the Work installed by them, and resolve all conflicts without expense to Owner and/or Consultant.

5) Progress meetings shall be held at the job site, as and when requested by Owner or Consultant. The Contractor shall be represented at these meetings by persons familiar with the details of the scope of Work and authorized to conclude matters relative to Work progress, as may be necessary to expedite completion of Work.

6) All above work and materials to be performed to meet compliance with applicable Building Code, ASME A17.1 Safety Code for Elevators and Escalators, NFPA 70 National Electrical Code, NFPA 13 National Sprinkler Code and NFPA 72 Fire Alarm Code or as determined by the authority having jurisdiction.

7) Failure by above associated contractors to perform required testing at time of scheduled elevator acceptance testing and inspection will require full advance payment by contractor at fault for all expenses relating to re-inspection, permit, and scheduling fees to building management.

1.5 PAINTING

A) **Cleaning and Painting of Miscellaneous Surfaces**: The Contractor shall be responsible for all miscellaneous painting as detailed in this specification. The procedures proposed for the accomplishment of the work shall provide for safe conduct of the work, careful removal and disposition of materials specified to be salvaged, protection of

property, which is to remain undisturbed, and coordination with other work in progress. The work plan shall include a Safety and Health Plan describing procedures for handling monitoring, and disposition of Volatile Organic Compounds "VOCs" and other hazardous and toxic materials. The procedures shall include a detailed description of the methods and equipment to be used for each operation, and the sequence of operations.

B) **Painting Provisions:** For all painting performed, the following provisions shall apply:

1) Provide all ferrous metals installed in the hoistway shop primed with a rust inhibitive primer.

2) Refinish the hoistway door panels and frames at each entrance. Provide two (2) coats of Diamond Vogel enamel paint, color as selected by the Owner.

3) All cleaning or painting work that produces any vapors or fumes shall not be performed during normal business work hours. All cleaning or painting work that produces any vapors or fumes shall be performed with sufficient ventilation to prevent the vapors or fumes from permeating into the building. Work of this nature must be scheduled and coordinated with the Owner three (3) days prior to execution of work.

a) The procedures proposed for the accomplishment of the Work shall provide for safe conduct of the Work, careful removal and disposition of materials specified to be salvaged, protection of property, which is to remain undisturbed, and coordination with other work in progress. The Work Plan shall include a Safety and Health plan describing procedures for handling monitoring, and disposition of Volatile Organic Compounds "VOCs" and other hazardous and toxic materials. The procedures shall include a detailed description of the methods and equipment to be used for each operation, and the sequence of operations.

b) All paint products and application method must be pre-approved prior to application by Owner or Owner's agent. Paint products and application methods are to be equal or better than existing product applicable with matching color as approved by Owner.

c) All products of paint, thinners or cleaning agents must be pre-approved prior to use for VOC's or any additional health concerns.

4) Interior work zones having a volume of 1,000 cubic feet or less shall be ventilated at a minimum of 2 air exchanges per hour. Ventilation in larger work zones shall be maintained by means of mechanical exhaust. Solvent vapors shall be exhausted outdoors, away from air intakes, building occupants and workers. Building air conditioning return air inlets in the work zone shall be temporarily sealed before start of work until the prepared surfaces have dried and are free of odor. Operators and personnel in the vicinity of paint removal processes involving chemicals or mechanical action (sanding or blasting) shall wear respirators.

1.6 ELEVATOR SYSTEM DESCRIPTION

A) **Elevator Arrangement:** Specific requirements for the elevator or component shall be designated as such. It shall be the bidding Contractor's responsibility to review and verify as required for proper installation. Specifications for the elevator includes the minimum requirements shall be the responsibility of the bidder to complete all work to code compliance. Elevator shall be numbered as follows: Elevator # 1

B) **Type:** Hydraulic Passenger Elevator (Dover)

C) **Number of Stops & Openings:** 3 Front (B, ★, 2) / No Rear Openings

D) **Rise:** All existing conditions

E) **Rated Capacity/Speed:** Maintain existing conditions.

a) Capacity rated at 2000 lbs.

b) Speed rated at 140 fpm

F) **Minimum Car Inside:** Maintain existing dimensions.

G) **Inside Cab Height:** Maintain existing clear headroom dimensions inside car.

H) **Entrance Width & Type:** 42" x 84" - Two Speed Side Slide

I) **Main Power Supply:** Existing 208 VAC + or - 5% of normal, 3 Phase, 60 Cycle

J) **Lighting Power Supply:** 120 Volts, 1 Phase, 15 Amp, 60 Hz.

K) **Stopping Accuracy:** ±1/4" under any loading condition or direction of travel.

L) **Door Operating Equipment:** Door operating equipment shall be labeled with maximum door speed and Kinetic Energy as required by ASME A17.1 Safety Code for Elevators and Escalators.

M) **Car Operation:** Using a Selective Collective microprocessor-based controller, the operation shall be automatic by means of the car and hall buttons.

1.7 SUBMITTALS

A) **Product data**: Submit product data for the following:

1) Elevator car and hoistway fixtures.
2) Operation, control, and signal systems.
3) Power Unit and Controller and all major components of system including layout for control room.
4) Elevator cab interior materials and finishes.

B) **Shop drawings**: Provide the following if equipment existing layout is changed.

1) Show equipment arrangement in the control room, pit and hoistway plans, elevations, sections and details of assembly, erection, anchorage, and equipment location as required.
2) Indicate elevator system capacities, sizes, performances, safety features, finishes and other pertinent information.
3) Show floors served, existing travel distances, maximum loads imposed on the building structure at points of support and all similar considerations of the elevator work.
4) Indicate electrical power requirements and branch circuit protection device recommendations and locations.

C) **Submittals at Project Close-Out:**

1) **Operation and Maintenance Data:** Include the following:
   a) Product User Manuals and maintenance guides.
   b) Parts list, with recommended parts inventory.
   a) Furnish two (2) copies of bound Product User Manuals and maintenance guides for elevators. Furnish one (1) electronic copy of all project close-out submittals to Owner.
2) **Wiring Diagrams:** Provide complete as-built wiring diagrams with all electrical connections of elevator systems.
   a) Provide one set of as-built wiring diagrams in the elevator control room.
   b) Provide one (1) additional hard copy and 1 electronic copy on separate USB Flash Drive, in PDF format to Elevator Consultant for review and delivery to Owner.
   c) Provide legible schematic wiring diagrams of installed electrical equipment, including control equipment, and any changes and/or in field modifications.
   d) Provide legible copy of field pull sheets and wiring notes. Pull sheets to include wire numbers and colors. List symbols corresponding to identity or markings on control room and hoistway apparatus.
   e) Coded diagrams are not acceptable unless fully identified.

D) **Certificates**: Inspection and acceptance certificates of elevator system installation.

1.8 QUALITY ASSURANCE

A) **Contractor Qualifications**: Elevator Contractor shall provide pre-engineered elevator system components by manufacturer(s) regularly engaged in the manufacture of elevator systems and that complies with ASME A17.1Safety Code for Elevators and Escalators (2016) in its entirety, Jurisdictional Statutes, Rules &

requirements, all applicable sections of the applicable Building Code as referenced above in its entirety, and additional requirements specified herein.

B) **Quality Assurance Program**: The Contractor shall have a documented, on-going quality assurance program.

C) **Installer Qualifications**: The Elevator Contractor must have not less than ten years of satisfactory experience installing elevators equal in character and performance to the project elevator. All mechanics employed to work onsite must be certified and/or licensed by appropriate federal and/or state regulatory agencies to meet federal and/or local certification requirements in maintenance, repair, alteration, and construction of elevators. There shall not be allowed onsite more than one helper or assistant unlicensed per onsite licensed mechanic.

D) **Permits and Inspections**: The Contractor shall be responsible to obtain all permits, licenses and other fees that are necessary for proper completion and execution of the Work, which are specifically included in the Contract Sum, but not limited to required Jurisdictional Authority permits as required by Jurisdictional Statutes, Rules & requirements for Alteration Permits, and local jurisdiction permits. Elevator Contractor is responsible for proper posting of all required licenses, permits and safety documentation.

E) **Inspection and testing**: Elevator Installer shall obtain and pay for all required tests, permits and fees for elevator installation as required by the State of Wisconsin.

1) Owner has designated ATIS as their consultant on this project. ATIS, in accordance with ASME A17.1 Safety Code for Elevators and Escalators, Inspection and Test Requirements, may be present for and review all acceptance inspections for this elevator. Elevator Installer in accordance with ASME A17.1 Safety Code for Elevators and Escalators, Inspection and Test Requirements will schedule and coordinate all acceptance tests and arrange for inspection for this elevator. Elevator Contractor must notify building owner and elevator consultant 5 days prior to inspection advising of the date and time of all inspections and tests. ATIS, acting as Owner's consultant and licensed elevator inspector, may observe and witness acceptance inspections conducted by the Authority Having Jurisdiction (AHJ) or authorized third-party inspectors. Final acceptance authority remains with the (AHJ).

2) Elevator Contractor shall be solely responsible for the application, securing, maintaining, completion and posting of existing elevator permits as per Jurisdictional Statutes, Rules & requirements, and delivery to the Owner upon completion and acceptance of elevator work, the certificate of operation.

3) Failures by Contractor to successfully perform required testing and pass alteration acceptance inspection, at time of scheduled elevator acceptance testing, will require a re-inspection. All costs for re-inspection required due to Contractor fault will be paid by Contractor.

F) **Signage:** All signage as required by the applicable Building Code, ASME A17.1 Safety Code for Elevators and Escalators, NFPA 70 National Electrical Code and NFPA 72 Fire Alarm Code to be posted in elevator lobbies, fire alarm panels, disconnects, control rooms and control room doors.

G) **Non-Proprietary Controls:** Letter of guarantee that any and all equipment installed shall be completely non-proprietary and shall not require the need for specialized testing or programming tools currently or in the future. Future information for trouble shooting or adjusting shall be available to any licensed elevator maintenance contractor by the supplier of the control system at a reasonable cost comparable to cost of competitive parts within marketplace. Contractor shall provide complete schematics and wiring diagrams for control systems including information for change of program, on board diagnostics or mnemonics, or other on-board switches or settings.

1) Any equipment that is provided for installation which would require any specialized tool, laptop computer, devices, manuals, source codes, access codes, objects, passwords and/or software to input parameters, make adjustments, troubleshoot, perform diagnostics, perform testing functions or required for any other type of maintenance or repair function shall be included with the modernization cost of this contract and will become the property of the Owner. At the time of bid submission, this shall be identified as such on the bid.

2) Any controller by a manufacturer other than specified must be pre-approved prior to bid. Letter stating agreement to the above compliance shall be signed by an officer of Contractor and shall be notarized.

H) **Contractor's Safety and Health Plan:** The contractor shall have in place a safety and health plan that, at a minimum, addresses OSHA requirements. The safety and health plan shall comply with the requirements of the Elevator Industry Field Employees' Safety Handbook. The program shall include job site cleanliness, hard hats, safety glasses, safety shoes, hearing protection, fall protection, proper use of ladders, barriers around hazards and proper scaffolding.

I) **Protection of Spaces:** Contractor is responsible for all protection both inside and outside of hoistway to all personnel inside or outside of hoistway areas. This includes providing and maintaining of protective barricades at hall entrances, screening of each hoistway during work and protection from trip hazards due to storage or use of materials or drop cords.

1) Contractor is to provide due care to protect building flooring, walls and other surfaces from excessive debris, dirt or damage due to workmen onsite.

1.9 DELIVERY, STORAGE AND HANDLING

A) Deliver elevator materials, components, and equipment in manufacturer's protective packaging.

B) Elevator equipment disassembled for replacement shall be neatly stored prior to removal from site and disposal, which is responsibility of Elevator Contractor.

C) Store materials in a dry protected area if designated by owner. Protect and handle materials in accordance with manufacturer's recommendations to prevent damage, soiling, or deterioration.

D) Elevator Contractor shall be responsible for the material handling of all elevator equipment to site storage area. Elevator Contractor will be responsible for keeping all stored materials inside storage area with lock and key.

E) Elevator Contractor's sole responsibility and liability shall be limited to the extent Elevator Contractor is at fault; and shall not be responsible for material once material arrives at jobsite.

F) Elevator Contractor shall be responsible for the removal the existing equipment from the control rooms and placement of the new equipment in the control rooms.

G) Owner shall afford the Contractor and separate contractors' reasonable opportunity for storage of materials and performance of their activities on the property and shall cooperate in coordinating operations with such other activities.

H) Locked and protected storage for Elevator Contractor's tools or materials at site is contractor's responsibility. Keys will be provided for elevator control space, and two parking spaces will be coordinated for storage, and can be utilized for storage or securing of tools and equipment. This is the only area available on site for storage of any elevator materials, equipment, or tools.

I) Elevator Contractor will be provided a single location for either a storage trailer or POD. The cost of the storage container/trailer is the responsibility of the Elevator Contractor.

J) Authorized elevator personnel only are responsible for temporary installed barrier panels as may be required during construction to protect the openings at elevator at each floor. Panels may be removed only while the authorized elevator personnel are to perform work in the immediate area of the unprotected opening. Authorized elevator personnel shall re-install all barriers as required to maintain the original solid and safe protection to the opening prior to leaving immediate work area of the opening.

1.10 PROJECT CONDITIONS

A) **Prohibited Use:** Elevator that is turned over to the Contractor for modernization work shall not be used for any purpose during the construction period before Substantial Completion. The elevator will only be turned over to the Owner upon completion of all modernization work, including successful completion of all required inspections and tests including acceptance by Consultant.

B) **Painting:**

1) Only paint metal work provided by Contractor or impacted by Work performed under this specification by Contractor unless specifically required in other sections of this specification.

2) For all painting performed the requirements of Part 1.6 Painting shall be complied with as required.

1.11 WARRANTY

A) **Warranty:** The Contractor's acceptance is conditional on the understanding that their warranty covers defective material and workmanship.

1) The guarantee period shall extend to two (2) years from the date of completion or acceptance thereof by beneficial use; whichever is earlier, of each elevator.

2) The guarantee excludes ordinary wear and tear or improper use, vandalism, abuse, misuse, or neglect or any other causes beyond the control of the 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.

3) Any defective condition or workmanship not mutually agreeable as satisfactory to building Owner and Contractor shall be determined by the independent elevator Consultant as final for the replacement, repair or continued use or product or part in question.

4) In addition to Contractor's above-mentioned warranties, Contractor shall, for the benefit of the Owner, obtain and assign to Owner if necessary, warranties from the manufacturers, producers and suppliers whose products are incorporated into or used in the work performed hereunder. All work and materials provided pursuant to the warranties hereunder shall be performed at no charge to the Owner.

B) **Warranty Response Time:** Contractor shall respond to warranty calls within one hour and be on site within 2 hours.

1.12 CONTRACT PREVENTIVE MAINTENANCE

A) **Existing Elevator Maintenance Agreement:** In the event that a bidder is currently the provider of preventive maintenance services on the elevators that are the subject of this modernization specification, this bidder acknowledges and fully agrees that their present agreement shall terminate upon submission of a bid from their company and Award of Contract to their company, or to another Elevator Contractor bidder, for the work called for in this specification for modernization.

1) The existing maintenance agreement for all elevator(s) will terminate on the date that the elevator modernization contractor commences on-site work.

2) The elevator modernization contractor will assume maintenance on the elevator that is the subject of this modernization specification once on-site modernization work commences on the first elevator. Monthly maintenance pricing will be the pricing submitted under BID ITEM 002 - ELEVATOR MAINTENANCE.

3) Elevators taken out of service for modernization will not be billed for maintenance during any time the elevator is under modernization.

B) **Follow on Maintenance Contract:** All bidders shall quote monthly cost for Preventive Maintenance Agreement for all elevators that are the subject of this modernization commencing upon completion of the warranty period specified in at the end of the modernization specification but a part of this document. Submit quote based upon terms and conditions of BID ITEM 002 - ELEVATOR MAINTENANCE, as detailed in the Elevator Maintenance Specification section of this solicitation.

C) **Modernization Maintenance Period:** Maintenance service consisting of a minimum of monthly examinations, adjustments and lubrication of the elevator equipment shall be provided by the Elevator Contractor for a period of twenty four (24) 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 at no additional charge. 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.

1) Elevator Contractor shall provide a service manual for each elevator describing monthly, quarterly, and annual maintenance tasks. Each task shall include an area for signature by a Certified Elevator Technician upon completion of task. Service manual shall also include page/s for documenting all required inspections and tests. Service manual shall contain a section to record all related maintenance, repair, and replacement information in accordance with ASME A17.1 Safety Code for Elevators and Escalators, Part 8.6 and remain on site.
2) Elevator Contractor shall provide documentation and shall perform monthly testing of fire service recall operation as per ASME A17.1 Safety Code for Elevators and Escalators and ASME A17.2.
3) Submit parts catalog and show evidence of local parts inventory with complete list of recommended spare parts. Manufacturer of original equipment shall produce parts.
4) Elevator Contractor shall have a service office and full-time service personnel within 50-mile radius of the project site.
5) Maintenance service shall include all required tests for inspection services as required by Jurisdictional Authority and ASME A17.1Safety Code for Elevators and Escalators.
6) Elevator taken out of service for modernization will not be billed for maintenance during any time the elevator is under modernization. Maintenance charges will be equally divided by the number of elevators and number of weeks of each month for an equivalent percentage deduction of the number of elevators removed from service. Time not under maintenance charges is from the time of the elevator being removed from service until the time of certificate for public use.

END OF SECTION 1

2 DESIGN BUILD REQUIRMENTS

2.1 ACCEPTABLE MANUFACTURER

A) Only products and components produced or provided by manufacturer(s) regularly engaged in the manufacture of elevator products, and that complies with ASME A17.1Safety Code for Elevators and Escalators in its entirety, ASME A17.2, Jurisdictional Statutes, Rules & requirements, all applicable sections of the applicable Building Code in its entirety, and additional requirements specified herein are acceptable. Only Bidders deemed qualified shall be notified by Request for Bid.

2.2 MATERIALS, GENERAL

A) **Colors, Patterns, and Finishes:** As selected by the Owner or Owner's Representative from manufacturer's full range of standard colors, patterns, and finishes.

2.3 EQUIPMENT: CONTROL ROOM/SPACE COMPONENTS

A) **Hydraulic Pump Unit -** The existing pump units shall be replaced with new pump unit of integral design that shall include an electric motor connected to a pump, a hydraulic control system, storage tank, necessary piping connections, and a controller, all compactly designed as a self-contained unit. The new pump unit shall be located in the elevator control room and the controller shall be mounted either on the wall of the control room or on the front of the power unit, whichever is necessary to meet Code-required working clearances. The hydraulic pump units shall be securely fastened to the control room floor to prevent the tank from being overturned or displaced. The pump unit shall rest on properly sized isolation pads to eliminate/substantially reduce transmission of vibrations and noise through the building. Elevator contractor shall verify location and dimensions in general layout of control room. The Contractor shall be mindful of control room conditions and select new equipment that will adequately fit inside the room and allow for proper air flow around the equipment. The base bid shall include retaining the existing speed of 140 fpm.

1) The hydraulic control system shall be a compact design suitable for operation under the required pressures and it shall be mounted in the storage tank. The control valve will be a manifold type with up, down and check valve sections. A control section including solenoid valves will direct the main valve and control up and down starting, transition from full speed to leveling speed, up and down stops, pressure relief and manual lowering. Down speed and up and down leveling shall be controlled at the main valve sections. All of these functions shall be fully adjustable for maximum smoothness and to meet contract conditions. All control systems shall be pre-adjusted at the factory. A manual lowering feature shall be provided to permit lowering the elevator at slow speed in the event of power failure or for adjusting purposes.
2) The pump shall be a positive displacement screw type to give smooth operation and shall be especially designed and manufactured for elevator service.
3) The motor shall be of the submersible type with alternating current, poly-phase squirrel cage induction type with solid-state, reduced starting current and shall be of a design especially adapted to electro-hydraulic requirements.
4) It is expected that the submersible motor will not exceed 40 horsepower (the size of the existing motor is 25 horsepower). When a larger sized motor is to be used to maintain contract speed, this shall be conveyed to the Owner's electrician so that electrical supply can be modified as necessary.
5) The storage/reservoir tank shall be constructed of steel and shall be provided with a removable cover and a means to gauge the proper level of the oil. The pump and submersible motor shall be mounted on a special reinforced isolation mount in the bottom of the tank. The control valve shall be mounted in the discharge line above the oil level and easily accessible from the top of the tank. The old used oil shall be properly disposed of at no additional cost to the owner. The tank shall be supplied with the proper levels of new oil sufficient for proper operation.

6) Provide a muffler in the discharge oil line near the pump unit designed to dampen and absorb pulsation and noise in the flow of hydraulic fluid.
7) Provide a manual shut off valve in the supply line adjacent to or inside the pump unit.
8) A second (spare) jack packing will be left on site. Mark packing packaging with the date of manufacture.
9) Replace all hydraulic oil supply piping, utilize new piping of adequate size and thickness, properly supported, per code requirements. All new piping shall be installed above ground.
10) Provide a new cut-off valve in both the control room and pit.

B) **Cylinder & Plunger (Jack Unit):** The existing jack unit shall be removed and replaced with new. The new jack unit shall be single-stage and the cylinder shall be constructed of steel pipe of sufficient thickness and suitable for the operating pressure per the Elevator Code. The top of the cylinder shall be equipped with a cylinder head with drip ring to collect any oil seepage as well as an internal guide ring and self-adjusting packing.

1) The plunger shall be constructed of selected steel tubing or pipe of proper diameter machined true and smooth with a fine polished finish. The plunger shall be provided with a stop ring electrically welded to it to prevent the plunger from leaving the cylinder. The plunger and cylinder shall be installed plumb and must operate freely with minimum friction. The plunger shall be securely mounted to the car frame and be isolated from the frame to eliminate any vibration from the jack unit to the car frame.
2) New pipe of adequate size and thickness shall be installed between the pumping unit and the cylinder head. Provide all new pipe mounts.
3) Well For Cylinder:
   a) The base bid shall assume the well hole does not substantially collapse with the removal of the old cylinder, all materials are able to be removed by an industrial vacuum truck, and that the hole is substantially plumb with enough space for the installation of the new cylinder with PVC protection.
      I. Remove all debris, standing water, and oil from the elevator pit.
      II. Demolition required area of pit floor and remove existing cylinder from well hole.
      III. Extract all loose materials and substantial oil spoils from well hole and project site.
      IV. Water blast bottom of well hole to achieve any minor additional depth required for the additional PVC protective casing.
      V. Install new cylinder. Cylinder shall be additionally cased in capped, water-tight, PVC pipe, approximately 1 inch larger in diameter than cylinder. Construct a PVC flange to create a water-tight seal between the PVC casing and the cylinder flange in the pit. Provide a means of testing the bottom seal and a means of evacuating any material that may enter the containment. The access risers should be capped to prevent water from entering the cavity should flooding occur in the pit.
      VI. Upon completion of the installation of the cylinder, the area between the steel casing (or hole structure) and the PVC casing shall be back filled with clean, washed sand. The void space created by the demolished area of the pit floor shall be filled with concrete up to the wall of the PVC casing.
   b) ***Alternate No. 1*** *- Unknown Underground Conditions: Should the well hole collapse during extraction of the existing cylinder, or the hole not be of the proper size, depth or plumbness to install the replacement cylinder with PVC casing, or any other unknown conditions which would require setting up a drill rig and re-drilling the well hole, the contractor shall complete the drilling of the well hole, and installation of any additional steel casing at a "not to exceed" additional cost as stipulated on the bid form. The Contractor shall notify the Owner's representative immediately should these conditions be found and shall not proceed further until authorized to do so by the Owner's representative.*

C) **Elevator Controller:** The existing controller shall be disconnected and removed from the building. A new controller shall be installed in the control room, as specified below

1) A microprocessor computer-based control system shall be provided for the elevators to perform all of the

functions of safe elevator motion and elevator door control and shall be one of the following control systems or approved equal:

a) MCE 2000 (with On-Board Diagnostic Buttons and Display)

b) Smartrise Hydraulic Controller

c) Vertitron Midwest

2) The controller shall include all the hardware required to connect, transfer, and interrupt power and protect car operation. A soft starter with a three-phase overload device shall be provided to protect the motor against overloading.

3) Identify each device, module, and fuse (with ampere rating) by name, letter, or standard symbol, in an indelible and legible manner on the device or panel. Coordinate identification markings with identical markings on wiring diagrams. Use light emitting diodes (LED) for visual monitoring of individual modules. Components shall have interlocking circuits to assure fail-safe operation and to prevent unwarranted elevator movement should any component fail to function properly. Modules shall be of the type that plug into pre-wired mounting racks. Field wiring or alteration shall not be necessary in order to replace defective modules.

4) The elevators shall be provided with an automatic leveling device that will bring the car to a stop within ¼ inch of the landing level regardless of load or direction of travel. Landing level will be maintained within the leveling zone irrespective of the hoistway doors being open or closed.

5) A protective circuit shall be provided which will stop the motor and the pump and return the car to its lowest landing in the event that the car while traveling up, does not reach its designated landing within a predetermined time interval. This circuit shall permit a normal exit from the car but prevent further operation of the elevator until the trouble has been corrected.

6) Solid-state, reduced current starting shall be furnished which shall limit both the initial starting current and peak current drawn by the motor.

7) The hydraulic power unit enclosure shall be mechanically fastened to the control room floor.

8) Design the system so that it will start properly when power is restored in the event of a power failure. Provide system memory so that data is retained in the event of power failure or disturbance.

9) Provide manufacturer's standard pre-engineered microprocessor system, which shall control car movements as simplex operation.

10) A car control station shall be furnished and shall contain a bank of buttons numbered to correspond to the landing served. At each terminal landing a single push button fixture shall be provided containing the appropriate up or down push button.

11) When a call is registered by momentary pressure on a car or landing button, that button shall become illuminated and remain illuminated until the call is answered. Illuminated buttons serve as a visual indication that a call has been registered and that the car will stop at that landing.

12) Operation shall be automatic by means of the car and landing buttons. Stops registered by the momentary actuating of the car and landing buttons shall be made in the order in which the landings are reached in each direction of travel after the buttons have been actuated. All stops shall be subject to the respective car or landing button being actuated sufficiently in advance of the arrival of the car at the landing to enable the stop to be made. The direction of travel for an idle car shall be established by the first car or landing button actuated.

a) "UP" landing calls shall be answered while the car is traveling in the up direction and "DOWN" landing calls shall be answered while the car is traveling in the down direction. The car shall reverse after the uppermost or lowermost car or landing call has been answered and proceed to answer car calls and

landing calls registered in the opposite direction of travel.

b) When the car, without registered calls arrives at a floor where both the "UP" and "DOWN" calls are registered, it shall initially respond to the hall call in the direction that the car was traveling. When no car call or hall call is registered for further travel in that direction, the car shall close its doors and immediately reopen them in response to the hall call in the opposite direction. The hall lantern shall indicate the changed direction when the doors reopen.

13) A diagnostic testing device, or maintenance terminal, suitable for all troubleshooting and testing procedures related to the specific type of microprocessor control, shall be installed on this project and provided at the final acceptance. This diagnostic testing device, or maintenance terminal, shall conform to the operating procedures under the testing section of these specifications.

a) After successful testing of the diagnostic device, in conjunction with the microprocessor control, the testing device shall become the property of the Owner. The diagnostic testing device shall not become inoperative after a period of time requiring factory rehabilitation. The contractor shall provide written certification that repair, and support of the diagnostic tool components is readily available to the Owner in the future.

b) When repairs or replacement to the testing device become necessary prior to the final acceptance, the repairs, or replacement, shall be provided at no cost to the Owner.

14) Additional special operations shall be included with the elevator control system:

a) Independent Service: A key switch shall be provided in the car control station of each elevator which, when actuated, shall disconnect the elevator from the hall buttons and permit operation from the car buttons only. Close doors by constant pressure on desired destination floor button. Open doors automatically upon arrival at selected floor.

b) Top of Car Inspection Operation: Provide an operating fixture on top of the car containing continuous pressure "Up" and "Down" buttons for operating the elevator, an emergency stop button, a light and duplex GFCI receptacle, and a toggle switch that will make the top of car operating device operative.

c) Fireman's Emergency Service: Furnish emergency operation to return the elevator to the main fire access floor ★1 and return to the alternate floor 2 when emergency is at main fire access floor. Furnish "in car" control of the elevator during emergency operation by means of a key switch in the car.

I. The appropriate signals from the fire alarm control system, as required to work in conjunction with the fireman's phase I recall operation, shall be provided in the control room as part of the Project. Final connections from the signals to the elevator controller shall be provided by the contractor in this section. Contractor to coordinate the connection of the fire alarm signals with the Owners fire alarm subcontractor.

d) Hoistway Access Key Switch Operation: Key operated switches shall be provided in the car and at the top and bottom landings for selecting hoistway access operation. When the inspection switch in the car is turned to the "ON" position, the car is put on inspection operation and can only be run by use of the switch at the top and bottom landings.

I. The car parks with the doors open and the closing circuit rendered inoperative. The car will then run at low speed with the doors open by constant operation of the switch located in the elevator lobby.

II. The car can be run down from the top floor to gain access to the top of the car or run up from the bottom floor to gain access to the pit. The movement of the car initiated and maintained by the upper access switch shall be limited in the down direction to a travel not greater than the height of the car above the car platform and the distance the platform guard extends below the car platform.

III. The car can be run up from the bottom landing to gain access to the pit. Travel is limited in the up direction by hoistway limit switches so that the maximum travel is the point where the bottom of the platform guard is even with the hoistway entrance header.

e) Communication System Verification Operation: Provide a means within each elevator car that shall verify operability of the telephone line (or equivalent means). Verification of the telephone line (or equivalent means) operability must be automatically performed at least on a daily basis and shall not require activation of the two-way communications links. If the verification means determines that the telephone line (or equivalent means) is not functional, an audible and illuminated signal shall be activated. The visual signal shall be labeled "ELEVATOR COMMUNICATIONS FAILURE". The means to silence the audible signal shall be accessible only to authorized personnel. The audible signal shall be 10 dBA above ambient noise, but shall not exceed 80 dBA, as measured from the phase I recall key switch location. The audible alarm shall sound until authorized personnel silence it or until the telephone line is made functional. The means to silence the alarm shall be accessible only to authorized personnel. This system shall meet Elevator Code requirements.

f) Door Hold Operation: Provide a "Door Hold" button on the car control station panel such that when the button is activated it shall illuminate and the door dwell time shall increase to 30 seconds for the movement of carts on and off the elevator. The timing devices shall be adjustable to increase or decrease the additional door dwell time from zero to one hundred twenty seconds. The increased door time shall be canceled upon initiation of any car button. After increased door dwell time has expired the doors shall close and the elevator shall return to normal operation.

15) Hoistway Equipment Minimization:

a) The control system shall allow slowdown, emergency terminal, and hoistway access limit switches to be eliminated. These switches shall exist as virtual switches in system software.

b) The control system shall allow leveling magnets and/or vanes to be eliminated.

16) Programmable Logic:

a) All available programming options or parameters shall be field programmable, without need for any external device or knowledge of any programming languages. Programmable options and parameters shall be stored in nonvolatile memory. At a minimum, there shall be a 32-character alphanumeric display used for programming and diagnostics. Programmable parameters and options shall include, but are not limited to, the following:

I. Number of Stops/Openings Served
II. Selective Collective
III. Programmable Fire Code Options/Fire Floors (Main, Alternates)
IV. Floor Encoding (Absolute PI)
V. Digital Position Indicators/Single Wire Position Indicators
VI. Programmable CE Microcom floor labels
VII. Programmable Door Times
VIII. Programmable Motor Limit Timer
IX. Programmable Car Fan and Light Timer
X. Door Nudging, Automatic and Fire Operation
XI. Emergency Power
XII. Parking Floor
XIII. Lobby Floor

XIV. Hall or Car Gong Selection
XV. Standard Security
XVI. Anti-nuisance - Photo Eye
XVII. High Speed Inspection Enable
XVIII. Door behavior selections
XIX. Door type selection
XX. Fault Bypass – Inspection Operation
XXI. Fault Bypass – Automatic Operation

17) ADA Requirements:
    a) The elevator shall comply with ICC/ANSI A117.1, the American National Standard for Accessible and Usable Buildings and Facilities and the applicable Building Code, Chapter 11.
    b) Leveling Accuracy: The controller shall have a self-leveling feature that shall automatically bring the car to floor landings within a tolerance of 0.25 inches (6.35 mm) or better under all loading conditions up to the rated load.
    c) Hall Lanterns: The controller shall have outputs to drive the visible and audible signals that are required at each hoistway entrance to indicate which elevator car is answering a call. Audible signals shall sound once for up, twice for down. (In-car lanterns located in cars, visible from the vicinity of hall call buttons, and conforming to the above requirements, shall be acceptable.
    d) Car Position Indicators: The controller shall have a position indicator output to drive the required position indicator capable of indicating the corresponding floor numbers as the car passes or stops at a floor.
    e) The controller shall have an output capable of indicating car direction and floor number.
18) Environmental Considerations:
    a) The elevator control shall be capable of operating within the following environmental conditions:
        I. Ambient temperature: 32°F to 104°F (0°C degrees to 40°C degrees).
        II. Humidity: Non-condensing up to 95%
        III. Altitude: Up to 7,500 feet (2286 m)
19) Building and System Configuration:
    a) The elevator controller shall be microprocessor based and designed specifically for elevator applications. Elevator and drive logic shall be implemented independently of safety functions.
    b) Elevator logic shall be implemented to facilitate tight coordination between subsystems and enhance reliability. The implementation shall utilize a real-time, multi-tasking operating system to allow the processors to simultaneously execute elevator control logic, drive control logic, operator interface logic, and communication support.
    c) The elevator controller shall have an independent safety system in order to implement safety features required by ASME A17.1 code. The safety system shall incorporate check redundant, multi-processor, multi-path, solid-state, ASME compliant implementation that meets CSA and CE standards.
    d) The elevator controller shall be configured and packaged in such a way that external “jumpers” cannot be used (intentionally or unintentionally) while the elevator is running in any passenger mode of operation. Non-passenger modes of operation shall be provided, along with means to bypass safety functionality, to allow inspection testing and other setup and/or troubleshooting operations.
    e) The elevator control logic configuration shall be fully field programmable. Changes in number of floors, configuration, starter setup, eligibility etc. shall not require the replacement/reprogramming of

EEPROMs or other storage devices. Further, changes in the controller configuration shall be user adjustable in the field.

20) Diagnostics:
    a) The control system shall provide comprehensive means of accessing the computer memory for elevator diagnostic purposes. It shall have permanent indicators for important elevator status conditions as an integral part of the controller.
    b) The microprocessor boards shall be equipped with on-board diagnostics for ease of troubleshooting and field programmability of specific control variables. Field changes shall be stored permanently, using nonvolatile memory. The microprocessor board shall provide the features listed below:
        I. On-board diagnostic switches and an alphanumeric display to provide user friendly interaction between the mechanic and the controller.
        II. An on-board event log shall store and display time-stamped events for diagnostic purposes. (Viewable only with monitoring software.)
        III. An on-board real-time clock shall display the time and date and be adjustable by means of on-board switches.
        IV. Field programmability of specific timer values (i.e., door times, etc.) may be viewed and/or altered through on-board switches and pushbuttons.
        V. The elevator controller shall have extensive diagnostic capability. A built-in LCD display or equivalent shall allow access to major user functions and diagnostic features. The display shall be a multi-character, multi-line type with associated keypad to allow users to enter information. The display shall show data and menus in readily understood character format. No numeric, hexadecimal, or binary codes are acceptable.
        VI. Dedicated indicators shall be provided in a conspicuous location on the elevator controller to indicate important system statuses, such as when the safety string is made, when the door locks are made, when the elevator is on Inspection/Access, etc. In addition, other special or error conditions detected by the main processor or safety subsystem shall be displayed.
21) CAN Bus Connectivity:
    a) Circuit boards within the controller shall communicate through CAN Bus connections for reliable performance and simplified board replacement. Power for individual circuit boards shall also be distributed through the CAN Bus connection. Communication and power connection shall radiate from a central, multi-connection point such that single-point board failure shall not affect operation of other boards.
22) Universal I/O:
    a) Field I/O boards shall be universal in that 24V to 120V AC or DC connections shall be accepted without requirement for unique circuit boards for each. I/O boards shall provide built-in current limiting protection.
23) Intended Operation of Critical Components:
    a) Failure of any single magnetically operated switch, contactor, or relay to release in the intended manner; the failure of any static control device, speed measuring circuit, or speed pattern generating circuit to operate as intended; the occurrence of a single accidental ground or short circuit shall not permit the car to start or run if any hoistway door or gate interlock is unlocked or if any hoistway door or car door or gate contact is not in the made position. Furthermore, while on car top inspection or hoistway access operation, failure of any single magnetically operated switch, contactor or relay to release in the intended manner, failure of any static control device to operate as intended or the occurrence of a single accidental ground, shall not permit the car to move even with the hoistway door

locks and car door contacts in the closed or made position.

24) Status Indicators:
    a) Dedicated permanent status indicators shall be provided on the controller to indicate when the safety string is made, when the door locks are made, when the elevator is operating at high speed, when the elevator is on independent service, when the elevator is on Inspection or Access, when the elevator is on fire service, when the elevator out of service timer has elapsed, and when the elevator has failed to successfully complete its intended movement. A means shall be provided to display other special, or error conditions detected by the microprocessor.
    b) Every field connection input or output shall have a dedicated LED such that no voltmeter or other test equipment is required to see when and input or output is active.
25) Parking Floor Function:
    a) Parking Floor: Elevator car shall be capable of parking on a designated floor after a predetermined time period. Any landing may be the parking floor. The car will go to the parking floor when it is free of call demand. A Parking Delay Timer will cause a free car to wait for a short time before parking. The timer shall be adjustable, with a value between 0.0 minutes (no delay) and 6.0 minutes.
    b) Secondary Parking Floor: Duplex only. Any landing may be the secondary parking floor. A car will go to this floor when it is free of call demand, and the other car is already parked at the first parking floor. It is acceptable to make the secondary parking floor the same as the first parking floor if both cars are to park at the same floor.
26) Out of Service Timer
    a) An out-of-service timer (T. O. S.) shall be provided to take the car out of service if the car is delayed in leaving the landing while calls exist in the system.
27) Programmable Car Fan and Light Timer:
    a) Controls shall be provided that will de-energize ventilation fans and lighting systems when the elevator is stopped, unoccupied and with its doors closed for over 15 minutes.
28) High or Low Speed Inspection
    a) A selection shall be provided on the controller to select high or low speed during access or inspection operation as long as contract speed does not exceed 150 feet per minute.
29) Door Operation
    a) Door protection timers shall be provided for both opening and closing directions to protect the door motor and help prevent the car from getting stuck at a landing. The door open protection timer shall cease attempting to open the door after a predetermined time if the doors are prevented from reaching the open position. In the event that the door closing attempt fails to make up the door locks after a predetermined time, the door close protection timer shall reopen the doors for a short time. If, after a predetermined number of attempts, the doors cannot successfully be closed, the doors shall be opened, and the car removed from service.
    b) A minimum of four different door standing open times shall be provided. A car call time value shall predominate when only a car call is canceled. A hall call time value shall predominate whenever a hall call is canceled. In the event of a door reopen caused by the safety edge, photo eye, etc., a separate short door time value shall predominate. A separate door standing open time shall be available for lobby return.
    c) If the doors are prevented from closing for longer than a predetermined time, door nudging operation shall cause the doors to move at slow speed in the closed direction. A buzzer shall sound during nudging operation.

30) Door Pre-opening
    a) When selected, this option shall start to open the doors when the car is in final leveling, 3" (76.2 mm) from the floor. If pre-opening is not selected, the doors shall remain closed until the car is at the floor, at which time the doors shall commence opening.
31) Car and Hall Call Registration
    a) Car and hall call registration and lamp acknowledgment shall be by means of a single wire per call, in addition to the ground and the power bus. Systems that register the call with one wire and light the call acknowledgment lamp with a separate wire can be accommodated.
    b) The user shall be able to register car calls via the on-board LCD display and keypad.
32) Emergency Power Operation
    a) Emergency power in the building shall be sized to power the elevator and supporting equipment.
33) Fire Service Operation
    a) Fire Phase I emergency recall operation, alternate level Phase I emergency recall operation and Phase II emergency in-car operation shall be provided according to latest applicable edition of ASME A17.1 and current Jurisdictional Statutes, Rules & requirements.
34) Independent Service
    a) Independent service operation shall be provided in such a way that actuation of a key switch in the car operating panel will cancel any existing car calls, and hold the doors open at the landing. The car will then respond only to car calls. Car and hoistway doors will only close with constant pressure on a car call pushbutton or door close button. While on independent service, hall arrival lanterns or jamb mounted arrival lanterns shall be inoperative.
35) Leveling
    a) The car shall be equipped with two-way leveling to automatically bring the car level at any landing, within the required range of leveling accuracy, with any load up to full load.
36) Test Switch
    a) A controller test switch shall be provided. In the test position, this switch shall allow independent operation of the elevator with the door open function deactivated for purposes of adjusting or testing the elevator. The elevator shall not respond to hall calls and shall not interfere with any other car in a duplex or group installation.
37) Inspection
    a) To enhance safety, an inspection switch, enable switch, and an up/down toggle switch shall be provided in the controller and on the car top to place the elevator on inspection operation and allow the user to move the car. Activation of the car top inspection switch shall render the controller inspection switch inoperative.
38) Uncanceled Call Bypass
    a) A timer shall be provided to limit the amount of time a car is held at a floor due to a defective hall call or car call, including stuck pushbuttons. Call demand at another floor shall cause the car, after a predetermined time, to ignore the defective call and continue to provide service in the building.
39) Anti-nuisance (Photo Eye)
    a) The controller shall cancel all remaining car calls, if a user-determined number of car calls are answered without the computer detecting a change in the photo eye input (indicating that no one is passing through the car door).

40) Absolute Floor Encoding
    a) The controller shall include absolute floor encoding, which upon power up, shall move the car to the closest floor to identify the position of the elevator.
41) Landing/Positioning System Information
    a) The landing/positioning system shall use a Gray code, magnetically permanent encoded tape and two, independent sensor heads in a single housing for absolute position control under all powered conditions. The tape shall provide a unique code for every 1mm of travel. A third, independent system shall provide speed feedback directly from the hoist motor. The system shall continuously compare inputs from the three independent systems to assure accuracy and safety.
42) Service Enhancements
    a) The manufacturer shall make software updates for controller and/or group control available via Internet download, email attachment, or physical EEPROM shipment. Internet downloads and email attachment deliveries require an optional, hand-held user interface to facilitate software transfer from the user's PC to the elevator.
43) Pit Float Switch Operation:
    a) Once the pit float switch is activated, the elevator will return to landing 2 (floor label 2), cycle the doors open and shutdown the car. Normal operation will be restored once the pit float switch is deactivated.
    b) Pit Float Switch Operation cannot impede Emergency Firefighters Service Operation.
    c) Pit Float Switch Operation shall be Primary to Fire Service to protect passengers from being dispatched to a flooded landing upon activation of Phase I Emergency Operation as well as protect operation of Phase II Emergency Operation.
44) Hand-held User Interface
    a) A hand-held user interface with all the functionality of the on-board LCD display and keypad shall be available. The hand-held interface shall allow the user system access via any system CAN Bus connection in the controller, from the car top, or in the car (if a CAN connection has been made available here).
    b) The hand-held interface shall connect to a standard PC, allowing system software updates to be delivered to the PC via Internet download or email attachment, transferred to the hand-held and uploaded to the elevator or group controller.

2.4 EQUIPMENT: HOISTWAY

A) **Platform:** Existing frame shall be retained. Underside of the platform shall be verified and maintained structurally sound and fireproof by the Contractor.
    1) Existing platform guards (aprons) shall be removed.
    2) New Platform Guards (Aprons) shall be installed. The existing platform toe guard under the entrances of the car shall be replaced or modified to extend a minimum of (610mm) 24 inches below the car sill before the bend with the lower portion of the guard bent back at an angle of not less than 60 degrees nor more than 75 degrees from the horizontal. Upon completion, paint the guard with two (2) coats of a rust preventive paint, color to be black.

B) **Guide Rails**: Retain and reutilize with no alterations. Elevators with slide guides shall have the guide rails thoroughly cleaned and re-lubricated with equipment manufacturer's recommended lubricating material. Elevators with roller guides shall have the guide rails thoroughly cleaned and retained dry without lubrication. Existing car guide rails shall be verified as properly fastened to the building with steel brackets verified in alignment, secure to wall and brackets with surface planed smooth. Existing car guide rails shall be cleaned and aligned as necessary

for the proper performance of the elevators. Rails shall be aligned. All rails and brackets shall have two coats of paint.

C) **Slide Type Guides:** Provide all new slide guides and properly adjusted for smooth operation.

D) **Hoistway Lighting:** Provide 4' LED light fixtures to ensure a minimum of 10 fc throughout. The hoistway shall be provided with lighting sources permanently connected to provide an illumination level of not less than 100 lx (10 fc) measured at the point of any elevator part or equipment, where maintenance or inspection is to be performed from the car top. All lighting shall be equipped with guards. The 3 way light switch shall be accessible from the terminal landings when accessing the car top or pit.

E) **Car Top Guard Railing:** A standard railing conforming to ASME A17.1 shall be provided on the outside perimeter of the car enclosure top on all sides where a 300 mm (12 in.) ball can pass between the edges of the car enclosure top and the adjacent hoistway enclosure and on sides where there is no hoistway enclosure.

1) If clearances require the standard railing to be located more than 100 mm (4 in.) from the edge of the outside perimeter of the car enclosure top, the top of the car enclosure outside of the railing shall be clearly marked.
2) The marking shall consist of alternating 100 mm (4 in.) diagonal red and white stripes. The forces specified in ASME A17.1 shall not deflect the railing beyond the perimeter of the car top.
3) There shall be a minimum of 100 mm (4 in.) horizontal clearance between the top rail and intermediate rail of the standard railing and fixed equipment passed or approached by the standard railing as the car moves throughout the hoistway to ensure protection from shearing hazards.

F) **Buffers**: Provide new spring buffers to retard movement of the cars at the bottom limits of travel. Solid buffers or polyurethane buffers are not acceptable. Buffer data plates shall be maintained or replaced for compliance with ASME A17.1 Safety Code for Elevators and Escalators

G) **Automatic Terminal Limits:** Replace Automatic slow down and final limit switches. Place electric limit switches in the hoistway near the terminal landings. Limit switches shall be designed to cut off the electric current, slow down and stop the car if it runs beyond either of the terminal landings.

H) **Automatic Self-Leveling:** Provide elevator car with a self-leveling feature to automatically bring the car to the floor landings and correct for over-travel or under-travel. Self-leveling shall, within its zone, be automatic and independent of the operating device. The car shall be maintained level to less than ¼ inch with the landing irrespective of its load.

I) **Traveling Cable:** Existing traveling cable shall be removed and replaced with new traveling cable.

1) Traveling cable shall terminate at numbered terminal blocks in car and control room.
2) Traveling cable shall be provided with a separate shielded circuit for communication system and hang to obtain proper size of loop. Traveling cable outer covering will be of fire resistant and meet UL standard testing.
3) Traveling cable will be hung free of all contact from hoistway or car equipment and shall be provided with 10 percent spare conductors for each car.

J) **Hoistway & Control Room Wiring:** Provide all new watertight wiring throughout the elevator control room and hoistway, adequately sized and constructed for the proper operation of the equipment.

1) Multi-conductor type wiring for light and signal circuits shall be used in the elevator hoistway. All conductors will be copper and the minimum size of conductors, excluding those which form an integral part of control devices, shall be No. 14 for lighting circuits and No. 18 for operating, control, and signal circuits. All wiring will be installed in accordance with applicable NEC and latest applicable edition of ASME A17.1 codes. Hoistway door interlock wiring will be replaced with new SF-2 high heat resistance wiring and shall include a grounding conductor. All other new wiring will have flame retarding and moisture resistant outer covering.
2) Equipment grounding shall be provided. The equipment grounding conductor shall be run with the circuit conductors and shall be a copper conductor. Ground all conductors, supports, controller enclosure, and other non-current conducting metal enclosures for electrical equipment in accordance with NEC. The

ground wires shall be solid or stranded; insulated, covered, or bare copper, sized as required by NEC, and shall be colored green if #6 AWG or smaller, and have green tape or adhesive marking if #4 AWG or larger.

3) Retain and reutilize to the maximum extent possible all ducts and conduit in control room and hoistway. Install new ducts and conduit as required.

4) Hoistway travel cable and associated wiring shall be coordinated with controller manufacture for wiring configuration requirements to match all controller wiring color coded and numbered diagrams for installation.

K) **Pit Stop Switch:** Provide new pit stop switch as required by latest applicable edition of ASME A17.1 code.

1) Stop switch(es) shall be of the manually opened and closed type, have red operating buttons of the push-to-stop configuration, be conspicuously and permanently marked “STOP,” and shall indicate the “STOP” and “RUN” positions.

L) **Pit Light:** Provide pit lighting sufficient to maintain a minimum illumination level of 10 foot-candles at any point on the pit floor in accordance with ASME A17.1 requirements. The light switch shall be located adjacent to the pit ladder and accessible from the landing. Coordinate exact location of the light fixtures with elevator installer to avoid interference of elevator equipment. Pit lighting to be verified by Electrical Contractor as meeting minimum 10 ft-c requirement or additional pit lighting will be installed by Electrical Contractor.

M) **Pit & Hoistway Cleanup:** The hoistway surfaces and pit area shall be thoroughly cleaned to remove all excessive dust and debris from hoistway surfaces and pit area with proper disposal from property of all waste products from work under this specification.

N) **Pit Ladder**: Verify that pit ladder is compliant with current edition of ASME A17.1 Safety Code for Elevators and Escalators. If compliant, retain and reutilize existing pit ladder. If pit ladder is not in compliance with current ASME A17.1 code, provide new pit ladder as required by latest applicable edition of ASME A17.1 code.

1) Pit ladder shall be positioned so that means to unlock the access door from inside the pit shall be located not more than 1 825 mm (72 in.) vertically above a rung, cleat, or step. The minimum distance from the top rung, cleat, or step to the top of the pit ladder or handhold shall not be less than 1 200 mm (48 in.). With the door in the closed position, in a plane not more than 1 000 mm (39 in.) horizontally from a rung, cleat, or step of the pit ladder.

O) **Pit Float Switch:**

1) Pit float switch shall prevent the elevator from descending below Base Flood Elevation (BFE) during flood conditions.

2) Once the pit float switch is activated, the elevator will return to landing above the BFE, cycle the doors and shutdown the car. Normal operation will be restored once the pit float switch is deactivated.

3) Pit Float Switch Operation cannot impede Emergency Firefighters Service Operation.

4) Pit Float Switch Operation shall be Primary to Fire Service to protect passengers from being dispatched to a flooded landing upon activation of Phase I Emergency Operation as well as protect operation of Phase II Emergency Operation.

P) **Hoistway Door Equipment:**

1) **Hoistway Entrances:** Existing hoistway entrance assembly consisting of the elevator entrance frame, head jamb & strike jamb and door sills shall be retained and refurbished. Verify and adjust as required to maintain all door gaps less than 3/8 inch in accordance with latest applicable edition of ASME A17.1 code.

2) **Hoistway Doors:** Replace existing Hoistway Doors with new Hoistway Doors as detailed below:

a) Provide and install new hall doors on new sheave type hangers with polyurethane rollers that roll on a new polished steel track and are guided at the bottom by new non-metallic shoes sliding in existing threshold groove. Provide new hoistway door and tracks and hanger roller assembly.

b) Door to be manufactured of "Commercial Level Grade" galvanized carbon steel of 16-gauge minimum thickness and fabricated to enclose sound absorbing material of 1.25" minimum thickness. Top and

bottom of door panels shall have continuous stiffener channels welded in place. Doors are to be rated for 1-1/2 hour fire resistance and UL labeled accordingly and clad with stainless steel #4 finish. Fasten sight guard of 14-gauge stainless steel, extending full height of panel, to leading edge of each panel of as required. All door shall have two coats of enamel paint under stainless cladding.

c) Doors shall be manufactured by Columbia Elevator Products Co, Inc, Gunderlin LTD or pre-approved equal by consultant.

d) Bottom Door Slide Guides including primary and secondary retainers shall be installed on all hall doors. New slide guides shall be installed with fire tabs installed as per manufactures design. Bottom slide guides as manufactured by original manufacture, Nylube or equal.

e) Verify and adjust as required to maintain all door gaps less than 3/8 inch in accordance with latest applicable edition of ASME A17.1 code.

f) Provide hoistway door pick-up assemblies to properly align with new car door clutch.

3) **Door Header Assembly:** Retain existing hoistway door header assemblies.

4) **Hoistway Door Sill and Sill Support:** Existing hoistway sill and sill support as designated above shall be retained.

5) **Interlocks:** All existing interlocks shall be replaced with new interlocks.

a) Interlock shall be designed to prevent operation of the car away from the landing until the doors are locked in the closed position as defined by code and shall prevent opening the doors at any landing from the corridor side unless the car is at rest at that landing or is in the leveling zone and stopping at that landing.

6) **Hoistway Door Components:** Existing Door Hangers, Sheaves, and Tracks shall be replaced with all new components. Door hangers, sheaves, interlocks, and tracks shall be manufactured by GAL, OEM replacement or preapproved equal. Provide sheave type two-point galvanized suspension hangers and galvanized tracks for each hoistway sliding door, as detailed below:

a) Rollers: Polyurethane rollers with ball bearings properly sealed to retain grease.

b) Hangers: Provide an adjustable slide to accommodate the up thrust of the doors.

c) Tracks: Drawn steel shapes, smooth surface and shaped to conform to the hanger sheaves.

d) All hoistway door closers shall be replaced with new closers.

e) Replace all door gibs including all required primary and secondary door retainers on all replacement doors.

7) **Entrance Markings:** Replace all hoistway entrance markings and door jamb plates at each floor.

a) Jamb Braille: All elevator hoistway entrances shall have raised and Braille floor designations provided on both jambs. The centerline of the characters shall be 60 in (1525 mm) above finish floor. Entrance jambs shall be marked with new 4” x 4” stainless steel plates having raised floor markings with Braille adjacent. Such characters shall be 2 in (50 mm) high and shall comply with ICC/ANSI A117.1.

b) Main Entry Level: A raised star shall be provided on both jambs at the main entry level.

c) Car Identification: In conformance with ASME A17.1 Part 2.29, in buildings with more than one elevator, each elevator in the building shall be assigned a unique alphabetical or numerical identification. The elevator identification alphanumeric designation shall be a minimum of 75 mm (3 in.) in height, painted on, engraved, or securely attached to the to or on every elevator entrance at the designated level.

Q) **Hoistway Floor Numbers**: After painting has been completed, the hoistways shall have floor numbers, not less than 100 mm (4 in.) in height, painted on the hoistway side of the enclosure or hoistway doors.

R) **Floor Designations**: Floor designations shall be as listed in Elevator System Description, Number of Stops and Openings section of this specification.

S) **Sight Guards**: Sight guards, if required, to reduce the opening between the leading edge of the hoistway door and the car door to maintain code required clearances, will be finished to match door panels. All existing sight guards will be inspected to ensure structural integrity, proper contour, and secure attachment to the hoistway door panels.

T) **Escutcheon Tubes**: Hoistway doors that do not have escutcheon tubes installed shall have escutcheon holes fitted with new escutcheon tubes to match existing OEM escutcheon tubes.

U) **Door Bumpers**: Provide and install new rubber door bumpers on all hoistway door jambs and on car door jamb. Bumpers shall be installed at top and bottom of door jambs.

V) **Painting Inside Hoistway**: All painting on this project must be performed in conformance with Part 1.5 of this specification.

1) After removal of all old hardware and components for the hoistway as detailed above all existing components shall have all rust thoroughly removed and treated as detailed below.
2) Remove rust, clean, degrease and paint any existing parts or components for a like new condition, including but not limited to the door panel surfaces, door track assemblies and door frame surfaces inside the hoistway.
3) After painting has been completed, the hoistways shall have floor numbers, not less than 100 mm (4 inch) in height, painted on the hoistway side of the enclosure or hoistway doors.

2.5 DOOR OPERATION

A) **Door Operator**: Provide a closed loop VVVF motor driven encoder-less heavy-duty operator GAL MOVFR II Door Operator or pre-approved equal.

1) Door operator shall be a heavy duty closed loop; microprocessor-based system designed for heavy doors. The door operator will facilitate smooth operation. The processor will monitor the door's actual position and velocity compared to its desired position and velocity. If variations are detected in the profile the command will be automatically corrected. The Closed Loop Door Operator control system shall not require control room door control equipment.
2) Door Motor shall be ½ HP Washdown duty AC Motor.
3) Door Operator shall be provided with accommodation for plugging infrared door curtains directly into the operator with no separate power supply necessary.
4) Door Operator shall be provided with adjustable parameters, at a minimum, for the following:
   a) Adjustable Parameters in the closing cycle for high speed, final speed, nudging speed, acceleration, deceleration, and slow speed torque.
   b) Adjustable parameter for stall reversal – automatic reversal if the door meets an obstruction.
   c) Adjustable parameter for door reversal – to accomplish a quick but smooth reversal.
5) Provide handheld unit for parameter adjustment that stores 4 complete sets of parameters, and can download these settings from one operator and upload them to another operator including:
   a) Factory Settings
   b) Job Specific Settings.
   c) Heavy Door Settings.
   d) Spare set of settings.
6) Door operation to comply with ASME A17.1 requirements for Restricted Opening of Hoistway or Car doors of passenger elevator.
7) Door noise not to exceed 58 dBA.

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

9) Install door operator data plate as per ASME A17.1 Safety Code for Elevators and Escalators and provide all door closing speed times to ensure code conformance to Kinetic Energy limitations of latest applicable edition of ASME A17.1 code.

10) Door operator must be mounted so completely isolated from the car top. Mounting to car stiles by brackets will be accepted for isolation.

B) **Door Zone Lock:** Install new door zone lock system with door operation to comply with the latest applicable edition of ASME A17.1 requirements for restricted opening of car doors of passenger elevator.

1) Door zone lock system shall be GAL LWZ-2 clutch and combination zone locking system, OEM or pre-approved equal.

2) When the car is outside the unlocking zone, the car doors shall be so arranged that when in the closed position they shall be restricted from opening more than 100 mm (4 inch) from inside the car.

3) Car doors shall be openable from outside the car without the use of a special tool(s).

4) Car doors shall be openable from within the car when the car is within the unlocking zone.

C) **New Door Protection Device:** A new door protection shall be a combination 2D & 3D detection means system. The elevator door protection system shall consist of a Light Curtain, an Approaching Object Detection Means and a Controller. The system shall be designed to detect persons and objects that are in the path of the elevator cab doors or approaching the elevator cab door entrance in accordance with ASME A17.1. The system shall also be designed to ignore stationary persons or objects that are not entering the elevator. The beams shall project across the car opening detecting the presence of a passenger or object. If door movement is obstructed or objects are detected in the approach zone , the doors shall immediately reopen. A mechanical reopening device shall not be acceptable.

1) If an object has been detected in accordance with ASME A17.1 Detection of Approaching Objects or Detection of Objects in the Door Path when the doors are fully open, the hoistway door and car door shall not close or, when the doors are closing, the car door and hoistway door at the landing shall initiate a reversal without intentional delay beyond system response time, and shall fully reopen or reopen a minimum of 915 mm (36 in.). If the doors fail to fully close within 10 seconds in addition to the door close data plate value, the doors shall fully reopen.

2) The reopening device(s) shall be permitted to be rendered inoperative when the closing kinetic energy is reduced in conformance with ASME A17.1 requirements for detection of approaching objects within 450 mm (18 in.) of the point at which the leading edge of the leading door panel contacts the door jamb or opposing door panel. Additionally, when 20 seconds have transpired after the detection means of approaching objects first detects an object when an object is detected in the path of the doors, the 20 seconds duration shall reset. When objects are detected within 20 mm (0.75 in.) of the point at which the leading edge of the leading door panel contacts the door jamb or opposing door panel the reopening device(s) are permitted to be rendered inoperative.

3) When the reopening device(s) has been rendered inoperative as detailed above, a continuously sounding audible signal shall be provided with a sound level of 10 dBA minimum above ambient and shall not exceed 80 dBA. The sound level shall be measured 1 m (40 in.) above the landing floor, 500 mm (20 in.) from the door face, along the centerline of the entrance opening, with the doors open. The signal shall sound during door closing until the doors are fully closed. In no case shall the sound level exceed 85 dBA inside the cab and within 300 mm (12 in.) from the centerline of the entrance and 1 m (40 in.) above the floor.

4) Detection of Approaching Objects: The reopening device(s) shall be designed to detect a cylindrical target(s) approaching the entrance opening of the landing-side doors as required ASME A17.1. The approaching object detection means shall be effective until the leading edge of the doors is within 450 mm (18 in.) of the fully closed position and shall be permitted to be effective up to the fully closed position.

5) Detection of Objects in the Door Path. The reopening device(s) shall be designed to detect rectangular prisms positioned as required by ASME A17.1. The device(s) shall be designed to detect prisms positioned anywhere within the opening width of the entrance on the floor and oriented with the 80 mm (3.15 in.) dimension parallel to the floor, the 150 mm (6 in.) dimension perpendicular to the door, and the 50 mm (2 in.) dimension perpendicular to the floor either wholly located between the vertical planes established by the landing-side face of the hoistway door and the car-side face of the car door or centered between the two planes if the distance between the two planes is less than 150 mm (6 in.).

6) Self-Monitoring of Detection Means. The system shall be designed to be self-monitoring. After the door has reached its fully opened position and before door closing is initiated, the detection means shall be self-checked to verify the detection means is operational. If the self-check outcome is unsuccessful, power closing of the door(s) shall be at reduced kinetic energy conforming to ASME A17.1.

D) **Nudging Operation:** The doors shall remain open as long as the electronic detector senses the presence of a passenger or object in the door opening. If door movement is obstructed for a field programmable time, a buzzer will sound, and the doors will close at reduced speed. If the infra-red door protection system detects a person or object while closing, the doors will stop and resume closing after the obstruction has been removed.

2.6 CAR COMPONENTS

A) **Car Front Cladding**: Car front shall be re-clad as detailed below:

1) Car Return Panel: Install stainless steel panels, No. 4 satin finish, extend one piece to cover all existing car box openings in return panel and wrap around car return panel.

2) Car Door Header & Transom Assembly: Install stainless steel panels, No. 4 satin finish, extend one piece to cover all existing car box openings in car door head jamb & Transom assembly.

3) Car Strike Jamb: Install stainless steel panels, No. 4 satin finish, extend one piece to cover all existing openings in car door strike jamb assembly.

B) **Cab Interior Painting:** Elevator Modernization Contractor shall be responsible for the following rust remediation prior to new cab interior finishes being installed:

1) The exposed metal surfaces on the inside of the cab interior shall be mechanically cleaned, primed and painted in conformance with the requirements detailed in the Painting subsection 1.5 of the Project Conditions section of this specification. This will include all metal surfaces but not limited to cove base and ceiling areas of the cab.

C) **Cab Walls:** Re-clad with plastic laminate. Refurbish car enclosure with new Standard Grade Plastic Laminate wall cladding, trim and accessories. Elevator Owner shall select laminate from Standard Grade Plastic Laminate samples provided by Elevator Contractor.

1) Furnish and install new Standard Grade Plastic Laminate surface applied to new core and flat onto each Side and Rear Wall. Laminate wall panels to be with stainless steel or black reveals as selected by customer with a total of 6 reveals for a 7-panel style of wall configuration. Maximum gaps at rear corners and against car font are 1/16” to be filled with color matching caulk.

D) **Cab Enclosure Vents:** Cab enclosure vents shall be repaired to provide proper cab enclosure ventilation.

1) Base of each wall will be provided with a 6” cove base of #4 satin finish stainless steel with punched ventilation to align with the existing cab shell vents.

2) Cove base shall include 18 gauge brushed #4 finish stainless steel base with ventilation slots aligning with existing ventilation openings.

3) Cab enclosure vents shall be repaired as necessary to provide proper cab enclosure ventilation. Openings shall be appropriately sized and be guarded to prevent straight through passage in accordance to the applicable requirements of the current ASME A17.1 safety code.

E) **Floor Finish:** Provide and install new cab flooring as detailed below:

1) Vinyl Type Flooring: Furnish and install Karndean Vinyl Type Flooring **with final color and style selected by Building Representative** from standard Karndean Vinyl Type Flooring colors.
2) Rubber Type Flooring: Furnish and install new commercial rubber flooring tiles Norament Rubberized style flooring manufactured by nora systems, Inc. **with final color and style selected by Building Representative** from standard Norament Rubberized style and color selection, including installation of new underlayment.
3) Work to include removal of existing flooring.
4) Included is to have installation of new 1/8" sheet aluminum on top of car subflooring. The cost of remedying any other conditions for the installation of the new flooring shall be included in the work and no change order will be approved. It will be the Elevator Contractor's responsibility to resolve all issues for a complete and finished floor. All material to be treated to meet Flame Spread and Smoke Density code requirements.
5) Flooring is to be installed in accordance with manufacturers' recommended adhesive and bonded to the underlayment.

F) **LED Car Lighting & Ceiling:** Furnish a new LED downlight ceiling faced with 20ga. satin (#4) stainless steel (Type 304).

1) Ceiling face to be divided into a minimum of six (6) sections separated by ¼" wide black painted reveals. Each section to contain an individual light fixture. Each fixture to be 2¾" diameter with a black trim bezel and three (3) LED bulbs (Tri-Fecta Fixtures) to comply with lighting requirements of ASME A17.1 code or pre-approved equal. Heat range should be close to 2700 Kelvin.
2) For the luminaires in each elevator cab, not including signals and displays, the sum of the lumens divided by the sum of the watts shall not be less than 35 lumens per watt.
3) Edge to be painted black to match ceiling reveals. Included is a low voltage driver unit to be mounted on car top. Emergency escape hatch shall be incorporated into ceiling based on existing location of escape hatch in elevator canopy and shall have hairline joints in ceiling.

G) **Handrails:** Elevator car interior must have a support rail on back wall.

1) All support rails must be new 3/8" x 2" Flat bar Satin Finish Stainless Steel handrail, smooth and have no sharp edges, with Standoffs with threaded set pins on underside and Returned Ends. Handrail to stop prior to rear wall vertical flanking panels.
2) Support rails must be continuous and a minimum length of 42 inches (1067 mm) overall.
3) The inside surface of support rails must be 1½ inches (38 mm) clear of the car wall.
4) The distance from the top of the support rail to the finished car floor must be at least 31 inches (787 mm) and not more than 33 inches (838 mm).
5) Padded or tufted material or decorative materials such as wallpaper, vinyl, cloth or the like may not be used on support rails.

H) **Cab Interior Pads:** Furnish set of pads and hooks for interior of each elevator.

1) One (1) set of pads and hooks shall be provided for the interior of each elevator and the hooks installed in the elevator cab.
2) Type must be pre-approved by elevator consultant as manufactured by W.E. Palmer, or equal. Color to be selected from standard color selection provided to Owner by Elevator Contractor.
3) Elevator pads shall be turned over to the Building Owner and stored in the control room of the elevator.

I) All openings left from removal of current car devices, which are not re-clad, shall be covered with stainless steel No. 4 satin finish. All edges shall be finished in a manner that presents no sharp edges or corners.

J) **Car Entrances:**

1) **Cab Doors:** Replace & hang new cab door panels.

a) Provide new fire rated cab door panels mounted on existing car door hangers with new rubber door astragals.

b) New car door close contact switch shall be installed.

c) Finish for car door shall be Stainless Steel No. 4 finish. Door shall be manufactured to include all mounting hardware requirements of the GAL door operating equipment. Door shall be manufactured by Gunderlin LTD or pre-approved equal by consultant.

d) Refurbish associated components as detailed below and replace all parts necessary to deliver doors in as new condition. Verify and adjust as required to maintain all door gaps in accordance with latest applicable edition of ASME A17.1 code.

2) **Car Door Hangers, Sheaves, and Tracks:** Existing door hangers, sheaves, tracks, door gibs including all required retainers shall be replaced with new components as detailed below:

a) Provide sheave type two-point galvanized suspension hangers and galvanized track for car sliding door, product GAL, or preapproved equal.

b) New components for all components shall be GAL or preapproved equal.

c) Rollers: Polyurethane tires with ball bearings properly sealed to retain grease.

d) Hangers: Provide an adjustable slide to accommodate the up thrust of the doors.

e) Tracks: Drawn steel shapes, smooth surface and shaped to conform to the hanger sheaves.

f) Car Door Guides: New car door slide guides shall be installed with tabs installed per manufacture's design. Bottom slide guides as manufactured by GAL replacement or preapproved equal. Car door guides shall be matched to existing car door sill.

K) **Cab Top Enclosure:** The existing car top enclosure shall be retained and reutilized.

L) **Car Steady Plates:** Existing car steady plates shall be rebuilt and adjusted to like new condition. All rubber spacers that are deteriorated will be replaced with new rubber components to hold the car steady and plumb.

M) **Car Top Exit Switch:** Car top escape panels shall have switch assemblies including all wiring to install proper safety circuit as required by ASME A17.1. The top emergency exit cover shall open outward and shall be hinged or securely attached with a chain when in both the open and closed positions. If a chain is used, it shall be not more than 300 mm (12 inch) in length. The exit cover shall only open from the top of the car, where it shall open without the use of special tools.

N) **Car Top Lighting**: The elevator shall be provided with lighting and a duplex receptacle fixture on the car top. The lighting shall consist of two (2) separate light sources. The lighting sources shall be permanently connected, fixed, or portable, or a combination thereof, to provide an illumination level of not less than 100 lx (10 fc) measured at the point of any elevator part or equipment, where maintenance or inspection is to be performed from the car top. All lighting shall be equipped with guards. The light switch shall be accessible from the landing when accessing the car top.

O) **Car Top Inspection Station**: Provide a new car top inspection station with an "emergency stop" switch and constant pressure "up-down" direction buttons to make the normal operating devices inoperative and give the inspector complete control of the elevator. Car top Inspection unit manufactured by Vator Accessories, Inc., (630) 876-8370, Nylube Products Company, LLC. (248) 852-6500, Monitor Controls, or equal. Mount the car top inspection station as required by ASME A17.1 Safety Code for Elevators and Escalators.

1) When the elevator is on inspection operation or when the hoistway access switch has been enabled, a continuous audible signal, audible at the location where the operation is activated shall sound when the "FIRE RECALL" switch is in the "ON" position or when the fire alarm initiating device is activated to alert the operator of an emergency.

2) Car Top Inspection Station must be approved by Consultant prior to Contractor ordering fixtures.

P) **Cab Fan:**

1) Provide and install new 2 speed quiet run fan manufactured by Nylube securely mounted in ceiling. Fan shall be protected from access through cab ceiling and galvanized.

2) Ventilation fans in elevators that do not have their own air-conditioning system shall not consume more than 0.33 watts/cfm at the maximum speed of the fan.

3) Controls shall be provided that will de-energize ventilation fans and lighting systems when the elevator is stopped, unoccupied and with its doors closed for over 15 minutes.

Q) **Car Operating Panel:** Provide new car operating station as follows:

1) **Car Operating Station**: The car control station shall contain the devices required for specific operation mounted directly to an aluminum backing plate with a Stainless Steel # 4 brush finish applied faceplate. The panel shall consist of a series of modules, key switches or approved buttons for optimum viewing and accessibility.

a) The lowest section shall contain the "DOOR OPEN," "DOOR CLOSE," and car emergency signaling devices.

b) Intermediate section shall contain floor buttons, which illuminate when a call is registered and remain illuminated until the call is answered. Raised floor indications and handicap symbols shall be located immediately adjacent to the floor buttons.

c) Car control station(s) shall not include any applied signage.

I. All engraving shall be on flush mounted hairline faceplates securely mounted to the aluminum backing plate.

d) Car Control stations shall not include any plastic or polycarbonate components, labels or frames.

e) Layout of floor buttons will have the floor buttons centered with two columns of floor buttons stacked vertically.

I. Car operating panel(s) shall include wayfinding labeling adjacent to each floor button. This may be accomplished in one of the following ways

i. Utilizing oversized “bar buttons” with Braille plates noting the floor identification(s) and wayfinding information noted on the bar buttons.

ii. Provide engraved wayfinding information directly on the stainless steel swing panel adjacent to each floor button

iii. Provide a replaceable inset plate with wayfinding information for each floor; this plate could be located above the buttons. The plate shall be mechanically fastened to the panel (this would require replacement of the swing panel).

f) Provide a lockable service compartment with recessed flush door. Door material and finish to match car station face plate or car return panel. Inside surface of door shall contain an integral flush window for displaying the elevator operating permit. Service cabinet shall contain all required and accessory key switches including independent service, fan switch, key stop switch, hoistway access and an emergency light test button in service cabinet.

g) The top section shall contain fire service features inside a locked cabinet in accordance with currently adopted edition of ASME A17.1, including operating instructions.

h) When provided in the building, plug connection for Fire Department Communications System shall be provided in the car operating panel which shall provide communications for Fire Department personnel from the Lobby Panel into each elevator car.

i) Swing of panel shall match car door configuration. Car operating panels shall swing open with the hinged side closest to the sidewall. Panel shall swing to open only to the open car side.

j) All car and hall fixtures by Innovation Industries, or equal. All pushbuttons to be tamper resistant, Innovation Industries PB 39, Flush Button with Illuminated Halo and Center Jewel or pre-approved equal. Halo to be Blue LED light source.

k) Car operating panels by Innovation Industries "Prestige Series" Stainless Steel # 4 brushed finish, or pre-approved equal. No adhesive type applied plates will be accepted at either car or hall stations. All fixtures shall have a Blue LED lighting source.

l) Car stations shall be pre-wired by the car station manufacture with terminal strip connection to control wiring.

m) All hall and car push button lamps shall include long life LED type lamps.

2) **Position Indicators**: Each car operating panel to include a 2-inch electronic segmented digital position indicator mounted in the control panel for optimum viewing. As the car travels, its position in the hoistway shall be indicated by the illumination of the alpha/numeric character corresponding to the landing which the elevator is stopped or passing. On one side of digital numeric indicator in the car panel will also be a matching indicator with direction of travel. Position Indicator shall have a Blue LED lighting source.

3) **Emergency Light**: Emergency lighting shall be incorporated into the car operating panel. Emergency light shall illuminate automatically upon loss of the building's normal power supply as required by latest edition of ASME A17.1.

4) **Emergency In-Car Signaling Devices:** Provide a Kings III, RATH® SmartView Two-Way Elevator Visual Communication System, or approved equal, emergency communications device mounted in the car station panel. Emergency communications device shall comply with Americans with Disabilities Act (ADA) and with the currently adopted edition of ASME A17.1 Safety Code for Elevators and Escalators requirements. Emergency In-Car Signaling Devices for two-way communications shall, at a minimum, conform to the following:

a) A push button to actuate the communications means shall be provided in or adjacent to a car operating panel. The push button shall be visible and permanently identified with the phone symbol in conformance with ASME A17.1. The identification shall be on or adjacent to the phone push button. The communications means shall be initiated when the push button is actuated.

b) On the same panel as the phone push button, a message shall be displayed that is activated by authorized personnel to acknowledge that communications are established. The message shall be permitted to be extinguished where necessary to display a new message or when the communications are terminated.

c) On the same panel as the phone push button, messages shall be displayed that permit authorized personnel to communicate with and obtain responses from a trapped passenger(s), including a passenger(s) who cannot verbally communicate or hear.

d) On the same panel as the phone push button, a message shall be displayed that is activated by the authorized personnel to indicate when help is on the way. The message shall continue to be displayed until a new message is displayed or the communications are terminated.

e) The communications means shall provide on demand to authorized personnel information that identifies the building location and elevator number.

f) The communications, once established, shall be disconnected only when authorized personnel terminate the call or a timed termination occurs. A timed termination by the communications means in the elevator, with the ability to extend the call by authorized personnel, is permitted if voice notification is sent by the communications means to authorized personnel a minimum of 3 min after communication has been established. Upon notification, authorized personnel shall have the ability to extend the call; automatic disconnection shall be permitted if the means to extend are not enacted within 20 s of the voice notification.

g) The communications means shall not use a handset in the car.

h) The communications shall not be transmitted to an automated answering system. The call shall be answered by authorized personnel.

i) Operating instructions shall be incorporated with or adjacent to the phone push button.

j) A means to display video to observe passengers at any location on the car floor, to authorized personnel for entrapment assessment, shall be provided.

5) **Special Accessories in Car Station Panel**:

a) Located in Service Compartment Subpanel w/ Clear Certificate Window, sized 6" x 9":

I. Light key switch.

II. Fan 2 speed key switch.

III. Independent Operation Key Switch.

IV. Access Key Switch.

V. Emergency Light Test Button.

VI. Keyed stop switch.

b) No applied plates.

c) Braille and engraving to include:

I. Engraved Capacity and Identification Number of elevator.

II. No Smoking sign shall be engraved on flush mounted hairline faceplate.

d) All push buttons and key switches as required for fire service operation.

6) **Fire Service Features**: Fire Fighters Service Key switch as required by the IBC including operations required by the currently adopted edition of ASME A17.1 Safety Code for Elevators and Escalators shall be engraved on a flush mounted hairline faceplate.

a) The "FIRE OPERATION" switch, the "CALL CANCEL" button, the "STOP" switch, the door open button(s), the door close button(s), the additional visual signal, and the operating instructions shall be grouped together at the top of the main car operating panel behind a locked cover.

b) The firefighters' operation panel cover shall be openable by the same key that operates the "FIRE OPERATION" switch. The cover shall be permitted to open automatically when the car is on Phase I Emergency Recall Operation and at the recall level. When the key is in the "FIRE OPERATION" switch, the cover shall not be capable of being closed. When closed, the cover shall be self-locking.

c) All buttons and switches shall be readily accessible, located not more than (72 inch) above the floor.

d) The front of the cover shall contain the words "FIREFIGHTERS' OPERATION" in red letters at least 0.4 in. high.

e) Firemans' Service Key: The fire key shall be of a tubular, 7 pin, style 137 construction and shall have a bitting code of 6143521 starting at the tab sequenced clockwise as viewed from the barrel end of the key. The key shall be coded "FEO-K1".

7) All required Braille for buttons and other switches as required by the FBC & ASME A17.1 shall be securely fastened to the aluminum backing plate or directly engraved.

8) Integral Emergency In-Car Signaling Device (telephone), including engraving directly into the car-operating panel all ADA required telephone instructions.

9) There shall be NO ADHESIVE APPLIED PLATES, SIGNS or PANELS affixed to the car-operating panel or other locations inside or outside the elevator cab.

10) Phone Response Location shall be designated by Owner.

R) **Car Riding Lantern:** New tamper and water resistant, arrows thru engraved, clear epoxy filled, car-riding lanterns shall be installed in the elevator cab and located in the entrance jambs to replace the existing car riding lanterns.

1) The lantern bars, when illuminated, will indicate the intended direction of travel. The lanterns will illuminate, and a signal will sound when the car arrives at a floor where it will stop. The lanterns shall remain illuminated until the door(s) begin to close.

S) **Car Operating Station & Fixture Approval:** Car Operating Station & fixtures must be approved by consultant prior to contractor ordering fixtures.

2.7 HALL FIXTURES

A) **Hall Stations – General:** New Hall Stations shall be surface mounted. Buttons shall illuminate to indicate call has been registered at that floor for the indicated direction. Faceplates shall be # 4 Brushed Stainless-Steel finish. Provide one set of risers.

1) **Landing:** The lobby floor landing hall stations shall be of one (1) piece construction, surface mounted and contain all required switches and signage as required by this specification.
2) **Other Landings:** All Hall Stations shall be #4 brushed Stainless Steel.
3) All switches, fixtures and pushbuttons shall be by Monitor Controls, Innovation Industries or pre-approved equal.
4) All push buttons to be tamper resistant Innovation Industries PB 46, Flush Button with Illuminated Center Jewel or pre-approved equal.
5) **Environmental Conditions:** Due to the environmental conditions the fixtures may be exposed to, additional actions to make the fixtures and components weather resistant to withstand the elements to which this equipment will be exposed are required. This may include but not be limited to the following:
   a) Sealing around the back of the various components.
   b) Application of Conformal Coating on all circuit boards.
   c) Sealing around the back of the position indicator to prevent moisture intrusion.
6) Hall stations shall be of one-piece construction, surface mounted.
7) All other hall stations shall be of one (1) piece construction and contain all required switches and signage as required by this specification.
8) All switches, fixtures and pushbuttons shall be by Monitor Controls, Innovation Industries or pre-approved equal.
9) All push buttons to be tamper resistant Innovation Industries PB 39, Flush Button with Illuminated Halo and Center Jewel or pre-approved equal.
10) All Hall Stations shall be # 4 Brushed Stainless Steel.
11) In case of fire use stair signs shall be engraved into the hall station panel with exact signage as per ASME A17.1 Code. No adhesive type applied signage plates will be accepted at this hall station.
12) All hall and car push button assemblies shall include long life LED type lamps.
13) Each terminal station shall contain one illuminating push button and other applicable accessories, including hoistway access switches as required by this specification.
14) Each intermediate station shall consist of two illuminating push buttons, one for the up direction and one for the down position.
15) Phase 1 Firefighter's Service key switch, with instructions, shall be incorporated into the hall station at the designated level. Fire Service instructions as per ASME A17.1 Safety Code for Elevators and Escalators shall be engraved in the main floor hall station panel.
16) Local Telephone Line Status Monitoring: The telephone system for the elevators shall be compliant with the requirements of the ASME A17.1, Requirement 2.27 and will include a verification means as required by the ASME A17.1 code. If the verification means determines that the telephone line or equivalent means is not

functional, an audible and illuminated visual signal shall be activated. A minimum of one visual and one audible signal shall be provided for each group of elevators controlled by a "FIRE RECALL" switch.

a) A minimum of one visual and one audible signal shall be provided for each group of elevators controlled by a "FIRE RECALL" switch.

b) Verification of the telephone line operability shall be automatically performed at least on a daily basis and shall not require activation of the two-way communications link(s).

c) The visual signal shall be located at the designated landing in the vicinity of the “FIRE RECALL” switch, be visible to elevator user(s), be labeled “ELEVATOR COMMUNICATIONS FAILURE” in red letters a minimum of 5 mm (0.25 inch) high, illuminate intermittently and continue to illuminate intermittently until the telephone line or equivalent means is functional.

d) The audible signal shall be 10 dBA minimum above ambient but shall not exceed 80 dBA measured at the designated landing “FIRE RECALL” switch, sound at least once every 30 s with a minimum duration of half a second and continue to sound until silenced by authorized personnel or the telephone line or equivalent means is functional.

e) The means to silence the audible signal shall be accessible only to authorized personnel. The signal when silenced shall remain silent unless activated by the next verification.

17) **Hoistway Access Switches:** New Hoistway Access Switches shall be provided and installed adjacent to the hoistway landing with which it is associated.

a) The switch shall be installed a minimum of 1 200 mm (48 in.) and a maximum of 1 825 mm (72 in.) above the floor measured to the centerline of the switch, adjacent to or part of the hoistway entrance at the landing with which it is identified and shall be located on the wall outside of the hoistway within 300mm (12 in.) of the entrance frame or on the hoistway entrance frame or jamb.

b) The switch shall be labeled “ACCESS” and shall be a three-position switch, labeled “UP,” “OFF,” and “DOWN” (in that order), with the “OFF” position as the center position. The switch shall be rotated clockwise to go from the “UP” to “OFF” to “DOWN” positions.

c) The switch shall be of the continuous pressure spring-return type and shall be operated by a cylinder-type lock having not less than a five-pin or five disk combination, with the key removable only when the switch is in the “OFF” position.

d) The key shall be Group 1 Security.

B) **Hall Position Indicators**: Provide new hall position indicators as follows:

1) New 2-inch electronic segmented digital position indicators shall be provided and mounted in a module for optimum viewing above each elevator at the existing location at the landing designated “1”, or lobby as directed by the building management which is the main entry floor for the building. The position indicator shall be provided at the first-floor landing above the door with a faceplate mounted at a 20-degree angle for viewing. Digital characters to correspond to the floors as listed in the Elevator System Description, Part 1.7 of this specification. The digital display shall be Blue LED.

2) As the car travels, its position in the hoistway shall be indicated by the illumination of the alpha/numeric character corresponding to the landing which the elevator is stopped or passing.

3) Position indicator shall have new tamper resistant, arrows thru engraved, clear epoxy filled, car-directional lanterns located on both sides of the position indicator with one for up direction travel and a second for the down direction travel. The up-direction indicator will illuminate in green, and the down indicator will illuminate in red color. The lantern bars, when illuminated, will indicate the intended direction of travel. The lantern will illuminate, and a signal will sound when the car arrives at a floor where it will stop. The lantern shall remain illuminated until the door(s) begin to close.

4) Hall Position Indicator: New 2-inch electronic segmented digital position indicator shall be provided and mounted in the hall station at each landing. Digital characters to correspond to the floors as listed in the Elevator System Description, Part 1.7 of this specification. The digital display shall be Blue LED.

C) **Hall Fixtures Approval**: Hall fixtures listed above must be approved prior to ordering fixtures by Contractor.

END OF SECTION 2

3 EXECUTION

3.1 CONTRACTOR RESPONSIBILITY

A) **Contractor Responsibility:** The Contractor shall be responsible to the Owner for the acts, omissions and negligence of the Contractor's employees, Subcontractors and their agents or employees, and other persons or entities performing portions of the Work for or on behalf of the Contractor or any of its Subcontractors. In no event shall Contractor be liable for consequential damages.

B) **Examinations:**

1) Before starting elevator modernization, inspect hoistway, hoistway openings, pits and control room, as constructed, verify all critical dimensions, and examine supporting structures and all other conditions under which elevator work is to be installed. Do not proceed with elevator modernization until unsatisfactory conditions have been corrected in a manner acceptable to the installer.

2) Modernization constitutes acceptance of existing conditions and responsibility for satisfactory performance.

C) **Signage:**

1) PROPERTY NAME Representative and the Board, in accordance with the General Materials section of this specification, will approve all signage in order to maintain consistent appearance for entire elevator installation.

2) All signage as required by current edition of the applicable Building Code, ASME A17.1 Safety Code for Elevators and Escalators, NFPA 70 National Electrical Code and NFPA 72 Fire Alarm Code to be posted in elevator lobbies, fire alarm panels, disconnects, control rooms and control room doors.

3) All existing signage will be replaced in conformance to the Current edition of the applicable Building Code, ASME A17.1 Safety Code for Elevators and Escalators, NFPA 70 National Electrical Code and NFPA 72 Fire Alarm Code requirements as a part of this specification.

D) **Installation:**

1) Install elevator systems components and coordinate repairs of hoistway wall construction.

2) Competent licensed elevator installation personnel in accordance with Jurisdictional Statutes, Rules & requirements and ASME A17.1 Safety Code for Elevators and Escalators, manufacturer’s installation instructions and approved shop drawings shall perform work.

3) Comply with the NFPA 70 National Electrical Code for electrical work required during installation.

4) Perform work with competent, skilled workmen under the direct control and supervision of the Elevator Contractor's experienced foreman.

5) Supply in ample time for installation by other trades, inserts, anchors, bearing plates, brackets, supports, and bracing including all setting templates and diagrams for placement.

6) Welded construction: Provide welded connections for installation of elevator work where bolted connections are not required for subsequent removal or for normal operation, adjustment, inspection, maintenance, and replacement of worn Parts. Comply with AWS B2.1 Standard Welding Procedure and Performance Qualification.

7) Coordination: Coordinate elevator work with the work of other trades, for proper time and sequence to avoid construction delays. Use benchmarks, lines, and levels designated by the Contractor, to ensure dimensional coordination of the work.

8) Install machinery, guides, controls, car and all equipment and accessories to provide a quiet, smoothly operating installation, free from side sway, oscillation, or vibration.

9) Sound isolation: Mount rotating and vibrating elevator equipment and components on vibration-absorption mounts, designed to effectively prevent the transmission of vibrations to the structure, and eliminate sources of structure-borne noise from the elevator system.

10) Lubricate operating parts of system.

E) **Data Plates, Tags & Signs:** Elevator Contractor shall be required to install all data plates as required by ASME A17.1 Safety Code for Elevators and Escalators on complete elevator system including alteration and original equipment.

1) All existing alteration code data plates must have the associated information retained with new alteration data plates being provided including the applicable information about the alteration code reference requirements and alteration code edition.

2) All data plates shall be manufactured and printed with proper data for each elevator by CodeDataPlate.com or approved equal.

3) No ink-based markers shall be used for any data plates, tags, or signs. All data plates, tags & miscellaneous signage shall be of such material and construction that the letters and figures stamped, etched, cast, or otherwise applied to the face shall remain permanently and readily legible.

F) **Field Quality Control:** The Elevator Contractor shall perform pre-testing of all required acceptance tests of the elevator system(s) prior to the scheduled Alteration Acceptance Testing and Inspection. The Elevator Contractor shall ensure the installation conforms to all applicable safety codes and contract requirements.

G) **Acceptance Testing & Inspection:**

1) **Acceptance Testing:** Upon completion of the elevator modernization perform and satisfactorily complete all acceptance tests as required by the State of PROPERTY STATE, AHJ (Authority Having Jurisdiction) and required by all applicable codes and governing regulations. Perform other tests, if any, as required by governing regulations or agencies.

2) Advise Owner, Elevator Consultant, and governing authorities in advance as required of dates and times tests are to be performed on the elevator.

3) **Acceptance Inspection:** Marriott's Frenchman's Cove has designated ATIS, as their consultant on this project.

a) The Elevator Contractor shall be responsible, in accordance with ASME A17.1 Safety Code for Elevators and Escalators for all acceptance inspections for this elevator.

b) Elevator Installer in accordance with ASME A17.1 Safety Code for Elevators and Escalators, Inspection and Test Requirements will perform all acceptance tests for this elevator.

c) Elevator Contractor must notify building owner and elevator consultant 5 days prior to inspection advising of the date and time of all inspections and tests.

d) Elevator inspector other than Jurisdictional Authority inspectors must be approved prior to inspection date by consultant.

H) **Keys for Elevator Key Switches:** Provide a minimum of two (2) keys per cylinder used on all key switches for a single elevator. If there is more than one elevator, two (2) additional keys per cylinder will be required for each additional elevator. Each numbered set of keys shall be identified with their function on a labeled plastic tag with a split ring for each numbered set.

I) **Performance Criteria:**

1) Hydraulic elevator door operator shall meet nominal operating speed of approximately 1.5 feet per second, adjusted to comply with ASME A17.1 door force and reopening protection requirements.

2) Hydraulic elevator performance shall be evaluated using hydraulic performance criteria tables and timing standards.

3) Pre-opening operation shall not be used to artificially reduce acceptance performance timing measurements.

J) **Adjusting:**

1) Make necessary adjustments of operating devices and equipment to ensure elevator operates smoothly and accurately.
2) The Elevator Contractor shall be required to perform and pass all required testing of all equipment as per ASME A17.1 Safety Code for Elevators and Escalators and ASME A17.2.

K) **Cleaning:**

1) Contractor shall keep the premises and surrounding areas free from accumulation of waste materials or rubbish caused by its operations. Upon completion of the Work, the Contractor shall remove all waste materials and Contractor's equipment and surplus materials. Contractor shall police the work area daily and any common area used by the Contractor each day and shall remove trash and debris from the work area and common area. Any trash that is stored on the common area shall be protected from wind so as to prevent trash being blown around the common area.
2) Contractor shall ensure that no hazardous conditions exist as a result of any Work, including the removal of nails in the parking area and walkway.
3) Contractor shall store all materials, supplies and equipment in a neat and orderly manner and dispersed to minimize fire hazards. The unloading of materials, supplies, or equipment in the roadways or landscaped areas by vehicles, cranes or forklifts shall be coordinated at least 24 hours in advance with the Owner.
4) Before final acceptance, remove protection from finished surfaces and clean and polish surfaces in accordance with manufacturer's recommendations for type of material and finish provided.
5) For duration and/or completion of elevator work, remove tools, equipment, and surplus materials from site daily.
6) Clean equipment rooms and hoistway.
7) Remove trash and debris daily from premises.

L) **Protection:**

1) During all elevator work, or portion thereof, provide suitable protective coverings, barriers, devices, signs, or other such methods or procedures to protect elevator work from damage or deterioration. Protect all areas of work from public access or dangers including tripping or fall hazards. Maintain protective measures throughout remainder of construction period.

M) **Demonstration:**

1) The Elevator Contractor shall make a final check of each elevator operation with the Owner or Owner's representative present prior to turning each elevator over for use. The Elevator Contractor shall demonstrate that control systems and operating devices are functioning properly.
2) Instruct Owner's personnel in proper use, operations, and daily care or operation of elevator. Review emergency provisions, including emergency access and procedures to be followed at time of failure in operation and other building emergencies.
3) Train Owner's personnel in normal procedures to be followed in checking for sources of operational failures or malfunctions.
4) Make a final check of each elevator operation, with Owner's personnel present, immediately before date of substantial completion.
5) Demonstrate that control systems and operating devices are functioning properly.
6) Final Electrical Schematics and Drawings
7) Maintenance Requirements.

N) **Elevator Consultant's Punch-List Items**:

1) Complete all of the consultant's punch-list items as may be required. The elevator consultant shall provide a review and written punch list of deficiencies. The elevator consultant shall verify one time that the items from the punch list are completed after notice by the Elevator Contractor. If the work is not complete and the consultant is required to make return visits, the Elevator Contractor shall be charged for consultant at a rate of $250.00 per hour including travel time for any additional return visits, reviews or work of any type.