

**SUBMIT BID TO:**  
**PROCUREMENT SERVICES**  
**UNIVERSITY OF FLORIDA**  
**971 ELMORE DRIVE**  
**GAINESVILLE, FL 32611**

Phone: (352) 392-1331 - FAX: (352) 392-8837  
 Web Address: <https://procurement.ufl.edu/>



# INVITATION TO BID

## Construction Acknowledgment Form

|                         |               |  |  |   |  |
|-------------------------|---------------|--|--|---|--|
| Page 1 of 62 pages      |               | BID WILL BE OPENED: <b>August 30, 2018 at 3:00PM</b> local time and may not be withdrawn within 90 days after such date and time.<br>Mandatory Pre-bid Meeting <b>August 2, 2018 at 8:30AM</b> local time.   |  | BID NO.: <b>ITB19KO-104</b>                   |  |
| DATE: <b>7/20/2018</b>  |               | PROCUREMENT AGENT:<br><b>KO/jh</b>   |  | BID TITLE: <b>JWRU Elevator Modernization</b> |  |
| VENDOR NAME             |               |  |  |   |  |
| VENDOR MAILING ADDRESS  |               | REASON FOR NOT SUBMITTING BID  |  |   |  |
| CITY - STATE - ZIP CODE |               | <b>POSTING OF BID TABULATIONS</b>  |  |   |  |
| AREA CODE               | TELEPHONE NO. | Bid tabulations with intended award(s) will be posted electronically for review by interested parties at <a href="https://procurement.ufl.edu/">https://procurement.ufl.edu/</a> and will remain posted for a period of 72 hours excluding Saturdays, Sundays, or state holidays. Failure to file a protest in accordance with Board of Governors (BOG) Regulation 18.002 or failure to post the bond or other security as required in the BOG regulations 18.002 and 18.003(3), shall constitute a waiver of protest proceedings. |  |   |  |
|                         | FAX NO.       |  |  |   |  |
|                         | WEB ADDRESS   |  |  |   |  |
|                         | EMAIL ADDRESS |  |  |   |  |

*I certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm or person submitting a bid for the same materials, supplies, or equipment and is in all respects fair and without collusion or fraud. I agree to abide by all conditions of this bid and certify that I am authorized to sign this bid for the vendor and that the vendor is in compliance with all the requirements of the Invitation to Bid, including but not limited to, certification requirements. In submitting a bid on behalf of the Board of Trustees, hereinafter known as the University, the vendor offers and agrees that if the bid is accepted the vendor will convey, sell, assign, or transfer to the University all rights, title and interest in and to all causes of action it may now or hereafter acquire under the Anti-trust laws of the United States and the University for price fixing relating to the particular commodities or services purchased or acquired by the University. At the University's discretion, such assignment shall be made and become effective at the time the purchasing agency tenders final payment to the vendor.*

\_\_\_\_\_  
 AUTHORIZED SIGNATURE (MANUAL)

\_\_\_\_\_  
 NAME AND TITLE (TYPED)

### GENERAL CONDITIONS

**SEALED BIDS:** All bid sheets and this form must be executed and submitted in a sealed envelope. (DO NOT INCLUDE MORE THAN ONE BID PER ENVELOPE.) The face of the envelope shall contain, in addition to the above address, the date, and time of the bid opening and the bid number. Bids not submitted on the attached bid form shall be rejected. All bids are subject to the conditions specified herein. Those which do not comply with these conditions are subject to rejection.

1. **EXECUTION OF BID:** Bid must contain an original manual signature of authorized representative in the space provided above. Bid must be typed or printed in ink. Use of erasable ink is not permitted. All corrections to prices made by vendor must be initialed.

2. **NO BID:** If not submitting a bid, respond by returning only this vendor acknowledgment form, marking it "NO BID", and explain the reason in the space provided above. Failure to respond to a procurement solicitation without giving justifiable reason for such failure, nonconformance to contract conditions, or other pertinent factors deemed reasonable and valid shall be cause for removal of the supplier's name from the bid mailing list. NOTE: To qualify as a respondent, vendor must submit a "NO BID", and it must be received no later than the stated bid opening date and hour.

3. **BID OPENING:** Shall be public, on the date, location and the time specified on the bid form. It is the vendor's responsibility to assure that the bid is delivered at the proper time and place of the bid opening. Bids which for any reason are not so delivered will not be considered. A bid may not be altered after opening of the bids. NOTE: Bid tabulations will be posted electronically at <https://procurement.ufl.edu/>. Bid tabulations will not be provided by telephone.

4. **PRICES, TERMS AND PAYMENT:** Firm prices shall be bid and will include all packing, handling, shipping charges, and delivery to the destination shown herein.

(a) **TAXES:** The University does not pay Federal Excise and Sales taxes on direct purchases of tangible personal property or services. The Florida Tax Exempt Number is 11-06-024056-57C. This exemption does not apply to purchases of tangible personal property or services made by vendors who use the tangible personal property or services in the performance of contracts for the improvement of University-owned real property as defined in Chapter 192, F.S.

(b) **DISCOUNTS:** Vendors are encouraged to reflect trade discounts in the unit prices quoted; however, vendors may offer a discount for prompt payment. Prompt payment discounts will not be considered in the bid award. However, every effort will be made to take the discount within the time offered.

(c) **MISTAKES:** Vendors are expected to examine the specifications, delivery schedule, bid prices, extensions, and all instructions pertaining to supplies and services. Failure to do so will be at vendor's risk. In case of a mistake in extensions the unit price will govern.

(d) **INVOICING AND PAYMENT:** Payment will be made by the University of Florida after the items awarded to a vendor have been received, inspected, and found to comply with award specifications, free of damage or defect and properly invoiced. All invoices shall bear the purchase order number. Payment for partial shipments shall not be made unless specified. An original invoice shall be submitted. Failure to follow these instructions may result in delay in processing invoices for payment. Payment shall be made in accordance with Section 215.422 (1) (2) F.S. **VENDOR OMBUDSMAN:** The University's vendor ombudsman, whose duties include acting as an advocate for vendors may be experiencing problems in obtaining payment from the University, may be contacted at 352-392-1241.

(e) **ANNUAL APPROPRIATIONS:** The University's performance and obligation to pay under any contract awarded is contingent upon an annual appropriation by the Legislature.

(f) **CONDITION AND PACKAGING:** It is understood and agreed that any item offered or shipped as a result of this bid shall be a new, current standard production model available at the time of this bid. All containers shall be suitable for storage or shipment, and all prices shall include standard commercial packaging.

(g) **SAFETY STANDARDS:** Unless otherwise stipulated in the bid, all manufactured items and fabricated assemblies shall comply with applicable requirements of Occupational Safety and Health Act and any standards hereunder.

5. **CONFLICT OF INTEREST:** The award hereunder is subject to the provisions of Chapter 112, F.S. All vendors must disclose with their bid the name of any officer, director, or agent who is also an employee of the University of Florida. Further, all vendors must disclose the name of any University employee who owns, directly or indirectly, an interest of five percent (5%) or more in the vendor's firm or any of its branches.

6. **AWARDS:** As the best interest of the University may require, the right is reserved to make award(s) by individual item, group of items, all or none or a combination thereof; to reject any and all bids or waive any minor irregularity or technicality in bids received. When it is determined there is no competition to the lowest responsible vendor, evaluation of other bids are not required. Vendors are cautioned to make no assumptions unless their bid has been evaluated as being responsive.

7. **INTERPRETATIONS/DISPUTES:** Any questions concerning conditions or specifications shall be directed in writing to Procurement Services. Inquiries must reference the date of bid opening and bid number. No interpretations shall be considered binding unless provided in writing by the University in response to requests in full compliance with this provision.

8. **NOTICE OF BID PROTEST BONDING REQUIREMENT:** Any person or entity who files an action protesting a decision or an intended decision pertaining to a competitive solicitation shall at the time of filing the formal protest, post with the University a bond payable to the University in an amount equal to: 10% of the

estimated value of the protestor's bid or proposal; 10% of the estimated expenditure during the contract term; \$10,000.00; or whichever is less. The bond shall be conditioned upon the payment of all costs which may be adjudged against the person or entity filing the protest action. In lieu of a bond, the University may accept a cashier's check, bank official check or money order in the amount of the bond. FAILURE OF THE PROTESTING PERSON OR ENTITY TO FILE THE REQUIRED BOND, CASHIER'S CHECK, BANK OFFICIAL CHECK OR MONEY ORDER AT THE TIME OF THE FILING THE FORMAL PROTEST SHALL RESULT IN DENIAL OF THE PROTEST.

**9. GOVERNMENTAL RESTRICTIONS:** In the event any governmental restrictions may be imposed which would necessitate alteration of the material, quality, workmanship or performance of the items offered in this bid prior to their delivery, it shall be the responsibility of the successful vendor to notify the purchaser at once, indicating in writing the specific regulation which requires an alteration. The University reserves the right to accept any such alteration, including any price adjustments occasioned thereby, or to cancel the contract at no expense to the University.

**10. LEGAL REQUIREMENTS:** Applicable provision of all Federal, State, county and local laws, and of all ordinances, rules and regulations shall govern development, submittal and evaluation of all bids received in response hereto and shall govern any and all claims and disputes which may arise between person(s) submitting a bid response hereto and the University, by and through its officers, employees and authorized representatives, or any other person, natural or otherwise: and lack of knowledge by any vendor shall not constitute a cognizable defense against the legal effect thereof.

**11. LOBBYING:** Vendor is prohibited from using funds provided under any contract or purchase order for the purpose of lobbying the Legislature or any official, officer, commission, board, authority, council, committee, or department of the executive branch or the judicial branch of state government.

**12. ADVERTISING:** In submitting a bid, the vendor agrees not to use the results therefrom as a part of any commercial advertising. Vendor may not use the names, logos, or trademarks of the University, its employees, or affiliates without the prior written consent of the University.

**13. ASSIGNMENT:** Any contract or purchase order issued pursuant to this Invitation to Bid and the monies which may become due hereunder are not assignable except with the prior written approval of the purchaser.

**14. LIABILITY:** The vendor agrees to indemnify and save the University of Florida, the State of Florida and the Florida Board of Governors, their officers, agents, and employees harmless from any and all judgments, orders, awards, costs and expenses, including attorney's fees, and also all claims on account of damages to property, including loss of use thereof, or bodily injury (including death) which may be hereafter sustained by the vendor, its employees, its subcontractors, or the University of Florida, the State of Florida and the Florida Board of Governors, their officers, agents, or employees, or third persons, arising out of or in connection with any contract awarded and which are the result of the vendor's breach of contract or of the negligent acts of the vendor, its officers, agents, and employees. This clause does not apply to contracts between government agencies.

**15. FACILITIES:** The University reserves the right to inspect the vendor's facilities at any time with prior notice.

**16. ADDITIONAL QUANTITIES:** For a period not exceeding ninety (90) days from the date of acceptance of any offer by the University of Florida, the right is reserved to acquire additional quantities up to but not exceeding those shown on bid or the bid level at the prices bid in this invitation. If additional quantities are not acceptable, the bid sheets must be noted "BID IS FOR SPECIFIED QUANTITY ONLY".

**17. SERVICE AND WARRANTY:** Unless otherwise specified, the vendor shall define any warranty service and replacements that will be provided during and subsequent to this contract. Vendors must explain on an attached sheet to what extent warranty and service facilities are provided.

**18. SAMPLES:** Samples of items, when called for, must be furnished free of expense, on or before bid opening time and date, and if not destroyed, may upon request, be returned at the vendor's expense. Each individual sample must be labeled with vendor's name, manufacturer's brand name and number, bid number and item reference. Request for return of samples shall be accompanied by instructions which include shipping authorization and name of carrier and must be received with the bid. If instructions are not received within this time, the commodities shall be disposed of by the University.

**19. INSPECTION, ACCEPTANCE AND TITLE:** Inspection and acceptance will be at destination unless otherwise provided. Title and risk of loss or damage of all items shall be the responsibility of the contract supplier until accepted by the University, unless loss or damage results from negligence by the University. The contract supplier shall be responsible for filing, processing and collecting all damage claims. However, to assist him in the expeditious handling of damage claims, the University will:

- (a) Record any evidence of visible damage on all copies of the delivering carrier's Bill of Lading.
- (b) Report damage (Visible or Concealed) to the carrier and contract supplier confirming such reports in writing within 15 days of delivery, requesting that the carrier inspect the damaged merchandise.

- (c) Retain the item and its shipping container, including inner packing material until inspection is performed by the carrier, and disposition given by the contract supplier.
- (d) Provide the contract supplier with a copy of the carrier's Bill of Lading and damage inspection report.

**20. PATENTS, COPYRIGHTS, TRADEMARKS, ROYALTIES** and other Intellectual Property: The vendor, without exception, shall indemnify and save harmless the University and its employees from liability of any nature or kind, including cost and expenses for or on account of any copyrighted, patented, or unpatented invention, process, or article manufactured or used in the performance of the contract, including its use by the University of Florida. If the vendor uses any design, device, or materials covered by letters, patent or copyright, it is mutually agreed and understood without exception that the bid prices shall include all royalties or costs arising from the use of such design, device, or materials in any way involved in the work.

**21. CONFLICT BETWEEN DOCUMENTS:** If any terms and conditions contained within the documents that are a part of this ITB or resulting contract are in conflict with any other terms and conditions contained therein, then the various documents comprising this ITB or resulting contract, as applicable, shall govern in the following order of precedence: change order, purchase order, addenda, special conditions, general conditions, specifications, departmental description of work, and bid.

**22. MANUFACTURERS' NAMES AND APPROVED EQUIVALENTS:** Any manufacturer's names, trade names, brand names, information and/or catalog numbers listed in a specification are for information and not intended to limit competition. If bids are based on equivalent products, indicate on the bid form the manufacturer's name and number. Vendor shall submit with the bid, cuts, sketches, and descriptive literature, and/or complete specifications. Reference to literature submitted with a previous bid will not satisfy this provision. The vendor shall also explain in detail the reasons why the proposed equivalent will meet the specifications and not be considered an exception thereto. The University of Florida reserves the right to determine acceptance of item(s) as an approved equivalent. Bids which do not comply with these requirements are subject to rejection. Bids lacking any written indication of intent to quote an alternate brand will be received and considered in complete compliance with the specifications as listed on the bid form.

**23. NONCONFORMANCE TO CONTRACT CONDITIONS:** Items may be tested and/or inspected for compliance with specifications by any appropriate testing facilities. Should the items fail, the University may require the vendor to reimburse the University for costs incurred by the University in connection with the examination or testing. The data derived from any tests for compliance with specifications are public records and open to examination thereto in accordance with Chapter 119, F.S. Items delivered not conforming to specifications may be rejected and returned at vendor's expense. These items and items not delivered as per delivery data in bid and/or purchase order may result in vendor being found in default in which event any and all procurement costs may be charged against the defaulting vendor. Any violation of these conditions may also result in the vendor's name being removed from the University of Florida's vendor file.

**24. PUBLIC RECORDS:** Any material submitted in response to this Invitation to Bid will become a public document pursuant to Section 119.07 F.S. This includes material which the responding vendor might consider to be confidential or a trade secret. Any claim of confidentiality is waived upon submission, effective after opening pursuant to Section 119.07 F.S.

**25. DELIVERY:** Unless actual date of delivery is specified (or if specified delivery cannot be met), show number of days required to make delivery after receipt of purchase order in space provided. Delivery time may become a basis for making an award (see Special Conditions). Delivery shall be within the normal working hours of the University of Florida, Monday through Friday, unless otherwise specified.

**26. PUBLIC PRINTING - PREFERENCE GIVEN PRINTING WITHIN THE STATE:** The University of Florida shall give preference to vendors located within the state when awarding contracts to have materials printed, whenever such printing can be done at no greater expense than, and at a level of quality comparable to, that obtainable from a vendor located outside of the state.

(a) **CONTRACTS NOT TO BE SUBLET:** In accordance with Class B Printing Laws and Regulations "Printing shall be awarded only to printing firms. No contract shall be awarded to any broker, agent, or independent contractor offering printing manufactured by other firms or persons."

(b) **DISQUALIFICATION OF VENDOR:** Reasonable grounds for believing that a vendor is involved in more than one bid for the same work will be cause for rejection of all bids in which such vendors are believed to be involved. Any or all bids will be rejected if there is reason to believe that collusion exists between vendors. Bids in which the prices obviously are unbalanced will be subject to rejection.

(c) **TRADE CUSTOMS:** Current trade customs of the printing industry are recognized unless accepted by Special Conditions or Specifications herein.

(d) **COMMUNICATIONS:** It is expected that all materials and proofs will be picked up and delivered by the printer or his representative, unless otherwise specified. Upon request, materials will be forwarded by registered mail.

(e) **RETURN OF MATERIAL:** All copy, photos, artwork, and other materials supplied by the University of Florida must be handled carefully and returned in good condition upon completion of the job. Such return is a condition of the contract and payment will not be made until return is affected.

## END OF SECTION

## PROJECT MANUAL

BID NO.: ITB19KO-104

PROJECT: **JWRU ELEVATOR MODERNIZATION**

BUILDING NUMBER: 686

DATE: JULY 20, 2018

PREPARED BY: VTE Solution, LLC

PREPARED FOR: UNIVERSITY OF FLORIDA  
J. WAYNE REITZ UNION  
PO BOX 118505  
GAINESVILLE, FLORIDA 32611-8505

**SECTION 00002 - PROJECT DIRECTORY**

OWNER: UNIVERSITY OF FLORIDA BOARD OF TRUSTEES

REPRESENTED BY: THE UNIVERSITY OF FLORIDA  
J. WAYNE REITZ UNION  
PO BOX 18505  
GAINESVILLE, FLORIDA 32611-8505

PROJECT MANAGER: MIKE MIRONACK

PROCUREMENT AGENT: KAREN OLITSKY, PROCUREMENT AGENT III  
UNIVERSITY OF FLORIDA  
PROCUREMENT SERVICES  
PO BOX 115250 / 971 ELMORE DR  
GAINESVILLE, FLORIDA 32611  
[kolitsk@ufl.edu](mailto:kolitsk@ufl.edu) / 352-294-1163

**SECTION 00005 - TABLE OF CONTENTS**

**BIDDING AND CONTRACT REQUIREMENTS:**

00002 Project Directory..... 4  
00005 Table of Contents..... 5  
00020 Invitation to Bid..... 6  
00100 Instructions to Bidders ..... 7  
00310 Bid Forms..... 12  
00430 Subcontractor Listing ..... 15  
01010 Summary of the Work ..... 16

**GENERAL TERMS AND CONDITIONS**

General Terms and Conditions (GTC-1 – GTC43): <http://facilities.ufl.edu/forms/contracts/GTC.pdf>

**NON-TECHNICAL SPECIFICATIONS**

Division 0: <http://facilities.ufl.edu/forms/contracts/Div0NonTechSpecs.pdf>

Division 1: <http://facilities.ufl.edu/forms/contracts/Div1 NonTech Specs JULY 2017.pdf>

**TECHNICAL SPECIFICATIONS**

Bid Item #001..... 17  
Bid Item #002..... 30  
Bid Item #003..... 59  
Bid Item #004 ..... 62

**END OF SECTION**

**SECTION 00020 - INVITATION TO BID**

The Invitation to Bid shall be in accordance with the University of Florida Procurement Services "Invitation to Bid Acknowledgement Form" with all relevant information provided therein.

**END OF SECTION**

00020-1

## **SECTION 00100 - INSTRUCTIONS TO BIDDERS**

### **PART 1 - GENERAL**

#### **1.1 RELATED SECTIONS:**

- A. Documents affecting the work of this Section include, but are not necessarily limited to, the General Terms and Conditions, Non-Technical Division 0 and Division 1 Specifications, and other Sections of these Specifications.

#### **1.2 THE WORK:**

PROJECT TITLE: **JWRU Elevator Modernization**

#### **1.3 SECURING DOCUMENTS:**

Copies of the proposed Contract Documents may be obtained from:

University of Florida Procurement Services website.  
<https://procurement.ufl.edu/vendors/schedule-of-bids/>

#### **1.4 BID FORM:**

In order to receive consideration, make bids in strict accordance with the following:

- A. Make bids upon the forms provided, properly signed and with all items completed. Do not change the wording of the bid form and do not otherwise alter or add words to the bid form. Unauthorized conditions, limitations, or provisions attached to the bid may be cause for rejection of the bid.
- B. Include with bid a completed and signed Invitation to Bid Construction Acknowledgment Form, completed and signed Section 00310 Bid Form and addenda acknowledgment (if applicable).
- C. Bids must be submitted no later than **August 30, 2018 at 3:00 PM**, local time. No bids received after the time fixed for receiving them will be considered. Late bids will be returned to the bidder unopened.
- D. Address bids to Karen Olitsky, Procurement Agent III, and deliver to:

University of Florida,  
Procurement Services  
971 Elmore Drive / PO Box 115250  
Gainesville, FL 32611-5250

Submit bid in a sealed envelope that includes the bid number, contractor name and date and time of the bid opening on the outside of the envelope. Submit one (1) original bid and one (1) electronic copy on flash drive or CD/DVD. It is the sole responsibility of the bidder to ensure that bids are received on time. **Faxed and/or emailed bids will not be accepted.**

#### **1.5 PROOF OF COMPETENCY OF BIDDER:**

A bidder may be required to furnish evidence, satisfactory to the Owner, that the bidder and the bidder's proposed subcontractors have sufficient means and experience, in the types of work called for, to assure completion of the Contract in a satisfactory manner.

**1.6 WITHDRAWAL OF BIDS:**

- A. A bidder may withdraw his bid, either personally or by written request, at any time prior to the scheduled time for opening bids.
- B. No bidder may withdraw his bid for a period of forty-five calendar days after the date set for opening thereof, and bids shall be subject to acceptance by the Owner during this period.

**1.7 QUALIFICATION OF BIDDERS:**

- A. A contract will be awarded only to a responsible, properly licensed, bidder, qualified by appropriate experience, with the ability, capacity, skill and financial resources to perform the work specified.
- B. If the bidder has not been pre-qualified with Procurement Services within the fiscal year (July 1 through June 30), the bidder may be required to submit the following evidence of eligibility prior to bid award:
  - 1. Evidence that bidder is licensed by the appropriate government agency to perform the work specified and in good standing at the time of the receipt of bids.
  - 2. Experience record showing bidder's training and experience in similar work.
  - 3. List and briefly describe projects of similar size and/or complexity which have been satisfactorily completed over the last five (5) years, including location, dates of contracts, names of contracts, and names and addresses of owners.
  - 4. References:
    - a. Trade References
    - b. Bank References
    - c. Surety
      - § Name of bonding company
      - § Name and address of agent
      - § Proof that surety and/or its agent is licensed to conduct business in the State of Florida and has a Best Rating of "A" and a financial size of "Class X" or better.
      - § Letter from Surety or its agent licensed to do business in Florida verifying the bidder's capability to provide performance and payment bonds for this project.
      - § Letter stating whether or not, within the past five (5) years, a contract or any portion of the Work connected to a contract was completed by the Owner or the applicant's Surety. If so, attach an explanation providing the name and location of the project, the name and address of the owner's representative and all pertinent details of the matter.



5. Financial Statement which shall include latest balance sheet and income statement showing the following items:
  - a. Current Assets
  - b. Net Fixed Assets
  - c. Other Assets
  - d. Current Liabilities

**1.8 SUBCONTRACTS:**

If the Bidder intends to subcontract any of the Work:

- A. A list of all proposed subcontractors shall be provided with the bid for scopes/packages in excess of \$10,000. See Section 00430.
- B. Each subcontractor performing work in excess of \$10,000 must present evidence of being qualified in and licensed for the applicable trade. Such proof of subcontractor licensure shall be provided by the successful bidder after award, but prior to commencement of Work.

**1.9 PERFORMANCE AND PAYMENT BOND:**

See Article 20, General Terms and Conditions.

**1.10 BID DEPOSIT:**

Not required.

**1.11 AWARD OR REJECTION OF BIDS:**

- A. The Contract, if awarded, will be awarded to the responsible bidder who has proposed the lowest bid for Bid Item 001A and 001B combined, subject to the owner's right to reject any or all bids and to waive informality and irregularity in the bids and in the bidding.
- B. Bid Item 002 is for information only.
- C. Bid Item 003 and 004 may be accepted in any order or not at all. Acceptance or rejection of Bid Item 003 and 004 will be at the owner's sole discretion.

**1.12 MANDATORY PRE-BID CONFERENCE:**

A mandatory Pre-Bid Conference will be held prior to the scheduled bid opening for the purpose of considering questions posed by bidders. The conference will be open to interested bidders, prospective subcontractors, and any other interested parties. This conference will be held **August 2, 2018 at 8:30 AM local time in Room G315, J. Wayne Reitz Union, 655 Reitz Union Drive, Gainesville, Florida.**

**1.13 EXECUTION OF AGREEMENT:**

- A. A Purchase Order (P.O.) will be issued for purposes of fiscal encumbrance and payment. The P.O. itself serves as the form of contract.
- B. Prior to Bid Award, the Contractor is required to submit a list of any subcontractors that will perform a portion of the Work. Once submitted, this list cannot be changed without approval of the Housing

Project Manager. (See also Section 00430, Paragraph 1.2)

- C. Upon notice of Bid Award, the bidder to whom the Contract is awarded shall deliver to UF Procurement Services, Certificates of Insurance and Performance and Payment Bonds as required by the Contract Documents.
- D. Bonds and Certificates of Insurance shall be approved by UF Procurement Services before the successful bidder may proceed with the Work.

**1.14 INTERPRETATION OF CONTRACT DOCUMENTS PRIOR TO BIDDING:**

- A. If any person contemplating submitting a bid for construction of the Work is in doubt as to the true meaning of any part of the Contract Documents, or finds discrepancies in or omissions from any part of the Contract Documents, s/he may submit a written request for interpretation thereof no later than **4PM on August 14, 2018**, to Karen Olitsky, Procurement Agent III, at [kolitsk@ufl.edu](mailto:kolitsk@ufl.edu). The person submitting the request shall be responsible for its prompt delivery.
- B. Interpretations or corrections of proposed Contract Documents will be made only by Addendum and will be available on the Procurement Services "Schedule of Bids" webpage <https://procurement.ufl.edu/vendors/schedule-of-bids/>. The Owner will not be responsible for any other explanations or interpretations of the proposed Contract Documents.

**1.15 TIME OF COMMENCEMENT AND COMPLETION:**

The work to be performed under this Contract shall commence on the date this Contract is executed by the parties hereto and, subject to authorized adjustment, shall be completed no later than the time periods detailed in the project schedule in Section 00310 - Bid Form. Contractor agrees to commence and complete the work with continued diligence as a continuous operation from start through completion in accordance with project schedule.

Contractor's ability to maintain scheduled job progress is conditioned on Contractor being allowed additional time for delays beyond its control as well as the timely furnishing of all necessary approvals.

Under no circumstances shall either party be liable for any loss, damage or delay due to any cause beyond either party's reasonable control, including but not limited to acts of government, strikes, lockouts, labor disputes, fire, explosion, theft, weather damage, flood, earthquake, riot, civil commotion, war mischief or act of God.

**PROJECT SCHEDULE**

Contractor shall provide a schedule for execution of modernization work with time periods necessary to indicate the milestones as listed in Section 00310 - Bid Form.

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 in Section 00310 – Bid Form, 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.

**1.16 MANDATORY SITE VISIT:**

The Contractor by his signature on his proposal, represents that he has visited the site, familiarized himself with the local conditions under which the Work is to be performed, and correlated his observations with the requirements of the Contract Documents. The mandatory site visit will be held during the mandatory pre-bid conference. See paragraph 1.12 for time and location.

**END OF SECTION**

**00310 – BID FORM**

**BID PROPOSAL**

FROM: \_\_\_\_\_  
(Name of Bidder)

TO: UNIVERSITY OF FLORIDA PROCUREMENT SERVICES  
971 Elmore Drive  
P.O. Box 115250  
Gainesville, Florida 32611-5250

The undersigned, hereinafter called "Bidder", having reviewed the Bid Documents for the Project entitled **ITB19KO-104, JWRU Elevator Maintenance** and having visited and thoroughly inspected the site of the proposed Project and familiarized himself/herself with all conditions affecting and governing the construction of said Project, hereby proposes to furnish all labor, materials, equipment and other items, facilities and services for the proper execution and completion of the Project, in strict compliance with the Bid Documents, Addenda, and all other Documents relating thereto on file in Procurement Services, and, if awarded the Contract, to complete the said Work within the time limits called for in the Documents and as stated herein, for the sums as enumerated on this and the following pages:

**BID ITEM 001A – ELEVATOR MODERNIZATION:**

Total price for labor, equipment, transportation, supervision, tools, administrative costs, materials, permits and taxes including any incidental cost necessary to perform all work specified in BID ITEM #001 - ELEVATOR MODERNIZATION SPECIFICATION section of this specification for Two (2) Electric Traction Elevators.

\_\_\_\_\_ Dollars

Figures: \$ \_\_\_\_\_

**BID ITEM 001B – ADDITIONAL ELEVATOR MODERNIZATION:**

Total price for labor, equipment, transportation, supervision, tools, administrative costs, materials, permits and taxes including any incidental cost necessary to perform all work specified in BID ITEM #001 - ELEVATOR MODERNIZATION SPECIFICATION section of this specification for Two (2) Electric Traction Elevators.

The maximum term period during which this option can be exercised will be twelve (12) months after the elevators have been completed under Bid Item 001A Elevator Modernization.

\_\_\_\_\_ Dollars

Figures: \$ \_\_\_\_\_

**BID ITEM 002 – ELEVATOR PREVENTATIVE MAINTENANCE:**

Monthly price for labor, equipment, transportation, supervision, tools, administrative costs, materials and any incidental cost necessary to perform full maintenance service for elevators that are not being covered under the **Modernization Maintenance Period** detailed in Part 1.13 ELEVATOR PREVENTIVE MAINTENANCE.

Price shall be the per elevator cost per month for each elevator that is not receiving monthly maintenance service included in the Modernization Maintenance Period as detailed in Part 1.13 ELEVATOR PREVENTIVE MAINTENANCE.

Maintenance service consisting of a minimum of monthly examinations, adjustments and lubrication of the elevator equipment shall be provided by the Elevator Contractor for all elevators that are not under the Modernization Maintenance Period based on a month to month term until all elevators have concluded their twelve (12) month Modernization Maintenance Period. Maintenance Service will be full service with all trouble call response included at no additional cost with work performed during normal working hours.

\_\_\_\_\_ Dollars

Figures: \$ \_\_\_\_\_

**BID ITEM 003 – OPTION FOR ELEVATOR CAB REFURBISHMENT:**

Total price for labor, equipment, transportation, supervision, tools, administrative costs, materials, permits and taxes including any incidental cost necessary to perform all work specified in BID ITEM #003 - ELEVATOR CAB REFURBISHMENT section of this specification.

The price quoted shall be a per car price with a total of four (4) elevators.

The decision to accept or reject this option will be made at the time of award of the modernization contract. If this option is not exercised prior to the first elevator modernization being completed under the modernization contract, this option will become null and void.

\_\_\_\_\_ Dollars

Figures: \$ \_\_\_\_\_

**BID ITEM 004 – OPTION FOR HOISTWAY ENTRANCE & HOISTWAY DOOR CLADDING:**

Total price for labor, equipment, transportation, supervision, tools, administrative costs, materials, permits and taxes including any incidental cost necessary to perform all work specified in BID ITEM #004 - OPTION FOR HOISTWAY ENTRANCE & HOISTWAY DOOR CLADDING section of this specification.

The price quoted shall be a per hoistway entrance price with a maximum of forty-two (42) entrances.

The decision to accept or reject this option will be made at the time of award of the modernization contract. If this option is not exercised prior to the first elevator modernization being completed under the modernization contract, this option will become null and void.

\_\_\_\_\_ Dollars

Figures: \$ \_\_\_\_\_

**ADDENDA:**

Receipt of the following Addenda to the Bid Documents is acknowledged:

ADDENDUM # \_\_\_\_\_ Dated \_\_\_\_\_

ADDENDUM # \_\_\_\_\_ Dated \_\_\_\_\_

ADDENDUM # \_\_\_\_\_ Dated \_\_\_\_\_

**PROJECT SCHEDULE:**

| <u>Days</u> | <u>Action</u>   |
|-------------|---|
| _____       | Product submittals date                               |
| _____       | Submittal review period                               |
| _____       | Submittal approval date                               |
| _____       | On-site work starts for 1 <sup>st</sup> elevator      |
| _____       | 1 <sup>st</sup> elevator modernization work completes |
| _____       | On-site work starts for 2 <sup>nd</sup> elevator      |
| _____       | 2 <sup>nd</sup> elevator modernization work completes |
| _____       | On-site work starts for 3 <sup>rd</sup> elevator      |
| _____       | 3 <sup>rd</sup> elevator modernization work completes |
| _____       | On-site work starts for 4 <sup>th</sup> elevator      |
| _____       | 4 <sup>th</sup> elevator modernization work completes |
| _____       | All elevator modernization work completed             |

**SIGNATURE:**

I hereby certify that for all statements and amounts herein made on behalf of

\_\_\_\_\_  
(Name of Bidder)

a (Corporation) (Partnership) (Individual) organized and existing under the laws of the State of Florida, I have carefully prepared this Bid Proposal from Contract Documents described herein, I have examined Contract Documents and local conditions affecting execution of Work before submitting this Bid Proposal, I have full authority to make the statements and commitment herein and submit this Bid Proposal in (its) (their) behalf, and all statements are true and correct.

Signed and sealed this \_\_\_\_\_ day of \_\_\_\_\_, 2018.

\_\_\_\_\_  
(Signature of Bidder)

\_\_\_\_\_  
(Print Name/Title)

**WITNESS:**

\_\_\_\_\_  
(Signature of Witness)

\_\_\_\_\_  
(Print Name)

Address: \_\_\_\_\_

\_\_\_\_\_  
(City)

\_\_\_\_\_  
(State)

\_\_\_\_\_  
(Zip Code)

**END OF SECTION**

00310-3

## **SECTION 00430 - SUBCONTRACTOR LISTING**

### **PART 1 - GENERAL**

#### **1.1 RELATED SECTIONS:**

- A. Documents affecting the work of this Section include, but are not necessarily limited to, the General Terms & Conditions, Non-Technical Divisions 0 and Division 1 Specifications, and other Sections of these Specifications.

#### **1.2 SUBCONTRACTOR LISTS:**

- A. Each bidder shall furnish with its bid a list of all subcontractors for subcontracted scopes/packages of work valued at more than \$10,000.
- B. This list shall identify – for each subcontracted package in excess of \$10,000 – the name and address of the proposed subcontractor and the approximate value of the subcontract.
- C. If the bidder does not intend to subcontract portions of the Work in amounts greater than \$10,000, then a statement to that effect shall be furnished with the bid.

**END OF SECTION**

## **SECTION 01010 - SUMMARY OF THE WORK**

### **PART 1 - GENERAL**

#### **1.1 RELATED SECTIONS:**

Documents affecting the work of this Section include, but are not necessarily limited to, the General Terms and Conditions, Non-Technical Division 0 and Division 1 Specifications, and other Sections of these Specifications.

#### **1.2 DESCRIPTION OF WORK INCLUDED:**

J. Wayne Reitz Union, hereinafter referred to as "Owner", requires a trade Elevator Contractor to provide the necessary services to modernize Four (4) Electric Traction Passenger Elevators, located at J. Wayne Reitz Union, Gainesville, FL 32611.

**END OF SECTION**



## **BID ITEM #001**

### **SPECIFICATION FOR MODERNIZATION OF ELEVATOR**

---

#### **ELECTRIC TRACTION PASSENGER ELEVATORS**

---

##### **Part 1 GENERAL**

##### **Part 1.01 SUMMARY**

- A) This section specifies required work to complete the modernization of Four (4) Electric Traction Passenger Elevators.
- B) Elevator work includes:
  - 1) Commercial, standard Electric Traction passenger 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, machines, 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 machine room barricades for safety as required.
- G) Required hoisting, hoisting permits and traffic coordination and/or permits with local jurisdictions and the State of Florida as required.
- H) Required permits and coordination and/or permits with local jurisdictions, Bureau of Elevator Safety and the State of Florida as required.

##### **Part 1.02 DEFINITIONS**

- A) The following definitions shall be used throughout all general conditions, specifications and contract documents except where superseded in those documents.
  - 1) "Owner": J. Wayne Reitz Union.
  - 2) "Consultant": VTE Solution, LLC.
  - 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 Modernization Bid Documents and 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) "Fire Alarm Contractor": Contractor approved to work on Fire Alarm System installed in J. Wayne Reitz Union, Gainesville, FL.
- 8) "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.
- 9) "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.
- 10) "Provide": Provide all materials and labor required to furnish and install and or repair.
- 11) "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.
- 12) "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.

#### **Part 1.03 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 Florida Regulatory Requirements, Building Codes and Elevator Codes at the project site, including but not limited to the following:
  - 1) Florida Statutes 399 and 553
  - 2) Florida Administrative Code 61C-5.
  - 3) Florida Building Code 2017, including all supplements.
  - 4) A17.1-2013 Safety Code for Elevators and Escalators.
  - 5) ASME A17.3-1996 Safety Code for Existing Elevators and Escalators.
  - 6) ASME A17.2-2017 Guide for Inspection of Elevators and Escalators
  - 7) ADAAG, Americans with Disabilities Act Accessibility Guidelines.
  - 8) NFPA 70, National Electrical Code 2014.
  - 9) NFPA 80, Fire Doors and Windows.
  - 10) ANSI/UL 10B, Fire Tests of Door Assemblies.
  - 11) NFPA 72, National Fire Alarm Code
  - 12) NFPA 101 Florida Edition
  - 13) O.S.H.A. Requirements for construction and repairs of existing buildings.
  - 14) Elevator Industry Field Employees' Safety Handbook 2015

- 15) 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.

#### **Part 1.04 RELATED WORK BY OTHERS**

- A) All work, except work detailed in Part 1.05, Work by Elevator Contractor, shall be the responsibility of the Building Owner. All materials and work to be performed under these specifications shall be in compliance with the codes listed in Part 1.03 CODE AND STANDARD REFERENCES or as determined by the authority having jurisdiction.
- B) **Machine Room HVAC:** Machine 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 machine room equipment.
  - 1) Machine 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 machine room.
  - 2) Dedicated HVAC system for machine 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 machine room.
  - 6) Any existing vents in the machine 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.
  - 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 machine 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 machine room in accordance with NFPA 72-2010, 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.
- D) **Emergency Generator:** These elevators are provided with emergency generator power. Emergency generator personnel shall demonstrate system and tests at completion of each elevator for inspection as required by Florida Building Code, Florida Statute 399 and ASME A17.1 Safety Code for Elevators and Escalators.
  - 1) Emergency power in the building is capable for providing only power to one (1) of the elevator cars in the building at a time.
  - 2) Verify the existence of code compliant emergency power supply transfer switch. If existing transfer switch is not code compliant, provide and install emergency power supply transfer switch, wiring and auxiliary contacts as required by Florida Building Code and NFPA 70 National Electrical Code.

- 3) Emergency generator configuration, installation, wiring including conduit to elevator controller; repair, transfer switches including elevator selector options, connections or testing with or standby or emergency power systems shall be coordinated and completed by emergency generator service contractor. Emergency generator personnel shall demonstrate system and tests at completion of each elevator for inspection as required by Florida Building Code, Florida Statute 399, and ASME A17.1 Safety Code for Elevators and Escalators
- 4) An illuminated signal marked "ELEVATOR EMERGENCY POWER" shall be provided in the elevator lobby at the designated level to indicate that the normal power supply has failed and the emergency or standby power is in effect for the elevator. This will be provided with the elevator hall station fixtures for the designated landing.
- 5) Generator contractor shall provide signal in transfer switch to elevator controller that the building is on emergency standby power.
- 6) The operation of elevator cars on emergency power shall be determined through a selector switch capable of automatic or manual selection of the car to be operated by emergency power.
- 7) Elevator Contractor will provide new elevator controllers capable of required emergency power operations as detailed in this section, including sequencing operation for both elevators and conformance with the requirement detailed from the IBC.
- 8) Current IBC Code Chapter 30, Section 3003, Emergency Operations requires the following:
  - a) 3003.1 Standby Power. In buildings and structures where standby power is required or furnished to operate an elevator, the operation shall be in accordance with Sections 3003.1.1 through 3003.1.4.
  - b) 3003.1.1 Manual Transfer. Standby power shall be manually transferable to all elevators in each bank.
  - c) 3003.1.3 Two or More Elevators. Where two or more elevators are controlled by a common operating system, all elevators shall automatically transfer to standby power within 60 seconds after failure of normal power where the standby power source is of sufficient capacity to operate all elevators at the same time.
  - d) Emergency Power has been verified to be capable of operating only one elevator at a time in the building and other building loads concurrently. Key operated sequencing will be required.
  - e) Contractor, or Generator Subcontractor, shall provide signal in transfer switch to elevator controllers that the building is on emergency standby power.

E) **Sprinklers:** Currently there are sprinklers located in the machine room.

- 1) A code compliant shunt trip breaker shall be verified 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 A17.1 Part 8.4;
  - a) Elevator electrical equipment shall be weatherproof (Type 4 as specified in NEMA 250).
  - b) Elevator wiring, except traveling cables, shall be identified for use in wet locations in accordance with the requirements in NFPA 70
- 4) For each sprinkler head(s) located in the machine 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 machine room to include self-closing and self-locking requirements.
  - 2) Verify proper Class ABC Fire Extinguisher in machine 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 machine rooms and hoistways 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 machine rooms and hoistways.
  - 4) All sills must be substantially level to all adjacent finished flooring surfaces.
  - 5) Machine room warning sign “Danger Authorized Personnel Only” shall be provided on the machine room door as required by NFPA 70 NEC.
- G) Each contractor will be required to provide any cutting, patching including painting to match existing finishes of building.
- H) All above work and materials to be performed to meet compliance with Florida 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.
- I) 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.

#### **Part 1.05 WORK BY ELEVATOR CONTRACTOR**

- A) All work, except work detailed in Part 1.04, Related Work by Others, necessary for a complete and useable elevator system, shall be the responsibility of the Elevator Contractor. Specifically, to include non-traditional Contractor work detailed in Part 1.05 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 1.03 CODE AND STANDARD REFERENCES or as determined by the authority having jurisdiction. As work progresses, Contractor shall consult with their Subcontractors, examine the Work installed by Subcontractors, and resolve all conflicts without expense to Owner and/or Consultant.
- B) **Telephone Lines:** A dedicated telephone line is available and required for the elevators.
- 1) Telephone lines and wiring to elevator controllers for telephone system including all wiring in machine room to be installed inside conduit as per NFPA 70 NEC.
  - 2) All emergency telephone devices shall include a minimum of 4 hours emergency backup power including power from emergency generator if supplied.
- C) **Electrical Requirements:** Electrical work required for elevator modernization shall be the responsibility of the Elevator Contractor. Electrical requirements shall include the following:
- 1) All Electrical work must be coordinated and scheduled with, at least 7 days’ notice, with the building owner. Elevators shall be removed from service while electrical trades are working.
  - 2) Electrical requirements for hoistway and machine 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.

- 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 elevators 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.
- 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 elevators 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 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) Car Light Source: A separate branch circuit shall supply the car lights, receptacle(s), auxiliary lighting power source, and ventilation on each elevator car. The overcurrent device protecting the branch circuit shall be located in the elevator machine 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) **Machine Room Lighting and Receptacles:**
  - a) A separate branch circuit shall supply the machine room or control room/machinery space or control space lighting and receptacle(s).
  - b) Minimum lighting in machine room shall be 19 ft-c.
  - c) Required lighting shall not be connected to the load side of a ground-fault circuit interrupter.
- 6) **Pit Lighting and Receptacle(s):**
  - a) Verify that current pit lighting meets minimum 10 ft-c. at all locations in the pit. If pit lighting is below 10 ft-c requirement, provide additional lighting as detailed in this specification.
  - 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 in NEMA 4 devices where placed 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.
- 9) All 125-volt, single-phase, 15- and 20-ampere receptacles installed in machine rooms and machinery spaces shall have ground-fault circuit-interrupter protection for personnel.

- 10) All disconnects shall be labeled according to NFPA 70 National Electrical Code including source of power, State of Florida Elevator Serial Number, Elevator Number and all required warning signs.
  - 11) All disconnects shall be installed with proper clearances in accordance to the applicable provisions of NFPA 70 National Electrical Code.
  - 12) 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.
  - 13) 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 NFPA 70 National Electrical Code, and shall be colored green if less than #6, and have green marking if #6 or larger.
  - 14) Provide new electric wiring from disconnect switches to the terminals of the new elevator controllers in their new locations, inclusive of a normal 120 VAC, 15 AMP supply at each controller.
  - 15) Provide new pit lighting and machine room lighting as per NFPA 70 National Electrical Code with enclosed and protected lamps.
  - 16) All existing and new lighting fixtures in machine rooms, elevator cars and on top of car 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.
  - 17) 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.
  - 18) Telephone lines and wiring to elevator controllers for telephone system including all wiring in machine room to be installed inside conduit as per NFPA 70 NEC. Conduit to be installed under Electrical Requirements.
- D) **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 machine room equal or greater than 2 hours in accordance with Florida 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 machine room equal or greater than 2 hours in accordance with Florida Building Code
  - 3) Patching of all masonry openings and drywall surfaces as required by elevator installation work inside the hoistway and machine room will be the responsibility of the Elevator Contractor.
- E) **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 Florida 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.

#### **Part 1.06 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) 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.
- 3) 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.

### **Part 1.07 ELEVATOR SYSTEM DESCRIPTION**

A) **Elevator Arrangement:** Quantity – Four (4) with Elevator(s) Numbered are numbered as follows:

- 1) Elevator # 1 (SN# 4093)
- 2) Elevator # 2 (SN# 4094)
- 3) Elevator # 3 (SN# 4096)
- 4) Elevator # 4 (SN# 4097)
- 5) Specific requirements for each 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 elevators include minimum requirements of elevators and it shall be the responsibility of the bidder to complete all work to code compliance.

B) **Type:**

- 1) Elevator # 1 (SN# 4093) – Passenger – Electric Traction - Geared Drive Machine
- 2) Elevator # 2 (SN# 4094) – Passenger – Electric Traction - Geared Drive Machine
- 3) Elevator # 3 (SN# 4096) – Passenger – Electric Traction - Geared Drive Machine
- 4) Elevator # 4 (SN# 4097) – Passenger – Electric Traction - Geared Drive Machine

C) **Number of Stops & Openings:**

- 1) Elevator # 1 (SN# 4093): 8 front (labeled LL, G, 1, 2, 3, 4, 5 & 6) / No Rear Openings
- 2) Elevator # 2 (SN# 4094): 8 front (labeled LL, G, 1, 2, 3, 4, 5 & 6) / No Rear Openings
- 3) Elevator # 3 (SN# 4096): 8 front (labeled LL, G, 1, 2, 3, 4, 5 & 6) / No Rear Openings
- 4) Elevator # 4 (SN# 4097): 8 front (labeled LL, G, 1, 2, 3, 4, 5 & 6) / No Rear Openings

D) **Rise:** All existing conditions

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

- 1) Elevator # 1 (SN# 4093)
  - a) Capacity rated at 3000 lbs.
  - b) Speed rated at 300 fpm
- 2) Elevator # 2 (SN# 4094)
  - a) Capacity rated at 3000 lbs.
  - b) Speed rated at 300 fpm
- 3) Elevator # 3 (SN# 4096)
  - a) Capacity rated at 3000 lbs.

- b) Speed rated at 300 fpm
- 4) Elevator # 4 (SN# 4097)
  - a) Capacity rated at 3000 lbs.
  - b) Speed rated at 300 fpm
- F) **Minimum Car Inside:** Maintain existing dimensions
- G) **Inside Cab Height:** Maintain existing clear headroom dimensions inside car.
- H) **Entrance Width & Type:**
  - 1) Elevator # 1 (SN# 4093):
    - a) Front Openings: Center Opening Single Speed 3' 6" x 7'-0
    - b) Rear Openings: N/A
  - 2) Elevator # 2 (SN# 4094):
    - a) Front Openings: Center Opening Single Speed 3' 6" x 7'-0
    - b) Rear Openings: N/A
  - 3) Elevator # 3 (SN# 4096):
    - a) Front Openings: Center Opening Single Speed 3' 6" x 7'-0
    - b) Rear Openings: N/A
  - 4) Elevator # 4 (SN# 4097):
    - a) Front Openings: Center Opening Single Speed 3' 6" x 7'-0
    - b) Rear Openings: N/A
- I) **Main Power Supply:**
  - 1) Elevator # 1 (SN# 4093) - Existing power supply will be retained and reutilized as detailed in this specification. All main line power is with a separate equipment grounding conductor.
  - 2) Elevator # 2 (SN# 4094) - Existing power supply will be retained and reutilized as detailed in this specification. All main line power is with a separate equipment grounding conductor.
  - 3) Elevator # 3 (SN# 4096) - Existing power supply will be retained and reutilized as detailed in this specification. All main line power is with a separate equipment grounding conductor.
  - 4) Elevator # 4 (SN# 4097) - Existing power supply will be retained and reutilized as detailed in this specification. All main line power is with a separate equipment grounding conductor.
- J) **Lighting Power Supply:** 120 Volts, 1 Phase, 15 Amp, 60 Hz.
- K) **Stopping Accuracy:**  $\pm 1/4$ " 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 shall not exceed 7.37 ft-lbf. as required by ASME A17.1 Safety Code for Elevators and Escalators.
- M) **Car Operation:**
  - 1) **Elevators # 1, # 2, # 3 and # 4:** Using a Group Selective Collective for elevators # 1, # 2, # 3 and # 4 microprocessor-based controller, the operation shall be automatic by means of the car and hall buttons.
    - a) Group Supervisory (Dispatch Panel) shall be utilized that automatically controls the operation of all the elevators in the group and will contain all the timers, relays and controls necessary for its operation.
  - 2) Provide microprocessor-based automatic operation control system for all elevators, which utilizes on-board diagnostics for servicing, trouble-shooting, and adjusting without requiring the use of an outside service tool.

## **Part 1.08 SUBMITTALS**

- A) **Product data:** Submit product data for the following:
- 1) Elevator car and hoistway fixtures.
  - 2) Operation, control, and signal systems.
  - 3) Motor & traction driving machine, speed governor and all major components of system including layout for machine room if equipment layout is changed all major components of system.
- B) **Shop drawings:** Provide the following if equipment existing layout is changed.
- 1) Show equipment arrangement in the machine 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) **Certificates:** Inspection and acceptance certificates of elevator system installation.
- D) **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 machine 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 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 machine room and hoistway apparatus.
    - e) Coded diagrams are not acceptable unless fully identified.

## **Part 1.09 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 A17.1 Safety Code for Elevators and Escalators in its entirety, Florida Statutes, Chapter 399, Florida Administrative Code 61C-5, all applicable sections of the Florida 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 Contactor 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 have a valid Certificate of Competency issued by State of Florida Bureau of Elevator Safety. 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 Florida Bureau of Elevator Safety permits as required by Florida Administrative Code 61C-5 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 Florida.
- 1) Owner has designated Vertical Transportation Equipment Solution (VTE Solution) as their consultant on this project. VTE Solution, 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. Elevator consultant must qualify and approve any inspector prior to inspection other than State of Florida Bureau of Elevator Safety employed inspectors.
  - 2) Elevator Contractor shall be solely responsible for the application, securing, maintaining, completion and posting of existing elevator permits as per Florida Statute 399 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 Florida 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, machine rooms and machine 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.

- l) **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 and walls from excessive debris, dirt or damage due to workmen onsite.

#### **Part 1.10 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 machine rooms and placement of the new equipment in the machine 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. Key will be provided for elevator machine room, which is located on Lower Level (LL) of building 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.

#### **Part 1.11 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 1.06 Painting shall be complied with as required.

#### **Part 1.12 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 one (1) year 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 of 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.

### **Part 1.13 BID ITEM #002 ELEVATOR 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) that are the subject of this modernization specification will terminate on the date that the elevator modernization contractor commences on-site work.
- 2) The elevator modernization contractor will assume maintenance on all elevator(s) that are 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 PREVENTIVE MAINTENANCE**.
- 3) Elevators taken out of service for modernization will not be billed for maintenance during any time the elevator is under modernization.
- 4) Monthly maintenance charges for each elevator will be based on Bid Item 002 which is the price per elevator per month for each elevator that is not receiving monthly maintenance service included in the Modernization Maintenance Period as detailed in this section.
- 5) Maintenance service consisting of a minimum of monthly examinations, adjustments and lubrication of the elevator equipment shall be provided by the Elevator Contractor for all elevators that are not under the Modernization Maintenance Period based on a month to month term until all elevators have concluded their twelve (12) month Modernization Maintenance Period.
- 6) Maintenance Service will be full service with all trouble calls response included at no additional cost with work performed during normal working hours at no additional cost.
- 7) After the conclusion of the twelve (12) month Modernization Maintenance Period the cost of the monthly maintenance for the elevator(s) will be based on Bid Item 002 until modernization work is completed on all four (4) elevators. This monthly pricing will continue on a month to month basis until the Owner executes an elevator maintenance service contract for the elevators.

B) **Follow on Maintenance Contract:** The Building Owner reserves the right to initiate a solicitation for any follow-on elevator maintenance contract that would take effect at the end of all warranty maintenance that is included in the modernization contract pricing. All bidders shall quote monthly cost for Preventive Maintenance Service 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 bid price based upon full service maintenance and conditions of BID ITEM #002 - ELEVATOR PREVENTIVE MAINTENANCE, as detailed in Part 1.13 of this specification.

- 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 twelve (12) 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 Florida Elevator Bureau and ASME A17.1 Safety 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.

## **Part 2 PRODUCTS**

### **Part 2.01 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 A17.1 Safety Code for Elevators and Escalators in its entirety, ASME A17.2, Florida Statutes, Chapter 399, Florida Administrative Code 61C-5, all applicable sections of the Florida Building Code in its entirety, and additional requirements specified herein are acceptable. Only Bidders deemed qualified shall be notified by Request for Bid.

### **Part 2.02 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.
- 1) Steel:
    - a) Shapes and bars: ASTM A 36.
    - b) Sheet: ASTM A 366, cold-rolled steel sheet, commercial quality, Class 1, matte finish, stretcher leveled.

- c) Finish: Factory-applied baked or powder coated enamel.
- 2) Stainless Steel:
  - a) Shapes and bars: ASTM A 276, Type 300 (18-8).
  - b) Tubing: ASTM A 269, Type 300 (18-8).

**Part 2.03 EQUIPMENT: MACHINE ROOM/SPACE COMPONENTS**

- A) **Geared Drive Machine:** Elevator Drive Machine Motor shall be replaced with new VVVF AC Motor and Geared Drive Machine shall be retained and reutilized with refurbishment performed as follows:
  - 1) **Hoisting Motor & Drive:** Install new Hoisting Motor and Drive:
    - a) **Hoist Motor:** Standard, open drip proof AC Variable Voltage Variable Frequency (VVVF) motor. Motor armature shall be dynamically balanced and supported by ball bearings of ample capacity. New Hoisting Machine Motor, Imperial or equal, will be provided and will be specifically designed and rated for elevator duty with high starting torque and low starting current. The new motor will be fitted to the drive machine, adjusted, and aligned to run smooth and free of excessive vibration.
    - b) **Drive:** Provide Variable Voltage Variable Frequency (VVVF) type.
      - (1)The flux vector drive shall be capable of producing full torque at zero speed and shall not require DC injection braking in order to control the stopping of the car. The drive shall use a three-phase, full-wave bridge rectifier and capacitor bank to provide a DC voltage bus for the solid-state inverter.
      - (2)The drive shall use power semiconductor devices and pulse width modulation, with a carrier frequency of not less than 2 kHz, to synthesize the three-phase, variable voltage variable frequency output to operate the hoist motor in an essentially synchronous mode. The drive shall have the capability of being adjusted or programmed to achieve the required motor voltage, current and frequency, in order to properly match the characteristics of the AC elevator hoist motor.
      - (3)The drive shall not create excessive audible noise in the elevator motor. The drive shall be a heavy-duty type, capable of delivering sufficient current required to accelerate the elevator to contract speed with rated load. The drive shall provide speed regulation appropriate to the motor type.
      - (4)For non-regenerative drives, a means shall be provided for removing regenerated power from the drive's DC power supply during dynamic braking. This power shall be dissipated in a resistor bank, which is an integral part of the controller. Failure of the system to remove the regenerated power shall cause the drive's output to be removed from the hoist motor.
      - (5)A contactor shall be used to disconnect the hoist motor from the output of the drive unit each time the elevator stops. This contactor shall be monitored, and the elevator shall not start again if the contactor has not returned to the de-energized position when the elevator stops.
      - (6) An electro-mechanical switch shall open all power feed lines to the brake. A single ground, short circuit or solid-state control failure shall not prevent the application of the brake. The controller shall provide step less acceleration and deceleration and provide smooth operation at all speeds. The power control shall be arranged to continuously monitor the performance of the elevator in such a way that if the car speed exceeds 150 fpm during access, inspection or leveling, the car shall shut down immediately, requiring a reset operation.
  - c) Existing coupling and bushing attaching motor to drive machine shall be replaced with a new coupling and bushing assembly.



- B) **Traction Machine:** Existing geared traction machines will be reutilized.
- 1) The existing Hoisting Machines will be retained, repainted and reused in place.
  - 2) The entire Machine Assemblies will be adjusted, thoroughly cleaned and finish painted. Paint will be standard top quality durable enamel.
  - 3) All existing Hoisting Machine gears will be checked with notice to Consultant if any problems are found.
  - 4) All existing Hoisting Machine front and rear bearings shall be replaced.
  - 5) Hoisting Machine seals and gaskets shall be replaced with new seals and gaskets.
  - 6) The Gear Case Oil Reservoirs will be drained, thoroughly flushed to clean all debris from casing and refilled with new, high grade, high quality lubricant.
- C) **Brake Assembly:** Existing brake shall be retained, disassembled, cleaned and inspected with all brake pins being removed, polished and properly lubricated before re-assembling.
- 1) The brake assembly will be rebuilt with new components as necessary to provide a like new condition.
  - 2) Install new brake shoes and properly adjust for smooth and quiet operation.
- D) **Emergency Brake Assembly:** An emergency brake assembly, "RopeGripper" as manufactured by Hollister Whitney shall be installed as per the requirements of ASME A17.1 to provide protection against car overspeed and unintended car movement.
- 1) Modification to existing machine beam, if required, to accommodate installation of RopeGripper shall be verified and the sole responsibility of the Elevator Contractor.
  - 2) The preferred method to mount a rope gripper assembly is to through bolt to the existing bed plate or machine beams.
  - 3) All bolts used in the mounting of the Rope Gripper shall be minimum Grade 5 bolt.
  - 4) Rope gripper assembly shall be located either in machine room. Pump assembly, if provided, shall be located in machine room adjacent to elevator drive machine.
- E) **Counterweight:** With existing counterweights, counterbalance each elevator for smooth and economical operation by cast iron or steel plate weights contained in a structural steel frame. Counterweight shall equal a complete elevator car and approximately 40 percent of the specified load. If additional weights are required, Contractor shall provide and adjust for proper balance as a part of this specification and contract.
- F) **Sheaves and Cable Guards:** Existing primary and secondary drive sheaves shall be retained and reutilized. New cable guards shall be provided as required by ASME A17.1.
- G) **Suspension Ropes:** Existing suspension ropes will be retained and reutilized with work completed for cleaning and lubrication as described in this specification. All required labels shall be affixed after properly filled in with applicable data.
- 1) **Cleaning of Suspension Ropes:** The suspension ropes shall be cleaned prior to rope lubrication being applied to the ropes.
    - a) Solvents shall not be used to clean suspension ropes.
    - b) Suspension ropes shall have a brush type cleaning device installed to allow the elevator car to run for a period of time to ensure that the ropes have been properly cleaned of all debris and build-up on the surfaces of the ropes.
    - c) All shackle rods shall be cleaned of rust and properly protected from rusting.
  - 2) **Lubrication of Suspension Ropes:** Suspension ropes shall be lubricated as detailed below:
    - a) Automatic rope lubricators shall be installed.

- b) Lubricators shall be provided with lubricant compatible with the strand and core lubricants and have good rope penetrating properties as determined by the rope manufacturer.
  - c) Lubricant meeting these requirements is a light viscosity Spindle oil. It should have a Saybolt Seconds Universal (SSU) viscosity of 34 to 38 seconds at 210° F. Spindle oil lubricates and will also assist in keeping the hoist ropes clean. Spindle oil is best applied with a felt pad, wick-type lubricator.
  - d) After installing rope lubricators, the level of lubrication shall be monitored to ensure correct amount of lubrication is applied. To verify correct amount of lubrication, check for a film of lubricant in the drive sheave grooves. With the machine out of service, carefully wipe the groove. If the groove is dry, field lubrication is required.
  - e) The frequency of additional rope cleaning and lubrication shall be determined by the Elevator Maintenance Contractor.
- 3) **Rope Tensioning:** All ropes are to be tensioned equally.
- a) Suspension members are considered to be equally tensioned when the smallest tension measured is within 10% of the highest tension measured. Equal tension shall be maintained between individual suspension members in each set.
  - b) Written results of the measurement of the tension of all suspension members for traction elevator shall be provided and maintained in the elevator machine room as permanent records that are considered the property of the Owner.
- H) **Load Weighing Devices:** Draka Micelect Model # LW-ILC3-MSTD or approved EMCO equal load weighing device for 1:1 roping shall be installed to provide signals to the controller for various load monitoring and dispatching operations.
- I) **Centrifugal Speed Governor & Tension Sheave:**
- 1) **Governor Replacement:** Each governor and tension sheave for #1, #2, #3 & #4 elevators shall be replaced with new governors and tension sheaves as detailed below:
    - a) The centrifugal speed governor and tension sheave shall be replaced with a new speed governor to cut off power to the motor and apply the brake whenever the governor indicates the car has excessive speed.
    - b) Governor that are replaced shall be as manufactured by Hollister Whitney, Type 207, or equal.
- J) **Governor Ropes:** Provide and install new governor rope as follows:
- a) Replace governor ropes with traction steel ropes of size and number to ensure proper wearing qualities, consisting of at least six strands wound around a hemp core center.
  - b) All required labels shall be affixed after installation.
- K) **Elevator Controllers Elevator # 1, # 2, # 3 and # 4:** The elevator control system shall be Motion Control Engineering Controller Model iControl AC Drive or preapproved equal. No substitutions will be allowed. Provide above manufacturer's standard microprocessor operation system for each elevator as required to provide type of operation system indicated.
- 1) The elevator controller shall be microprocessor based and designed specifically for elevator applications. Elevator logic shall be implemented on a single processor to facilitate tight coordination between subsystems and enhance reliability. The implementation shall utilize a real-time, multi-tasking operating system to allow the processor to simultaneously execute elevator control logic, drive control logic, operator interface logic, and communication support.
  - 2) The elevator controller shall have an independent safety system in order to implement safety features required by code. The safety system implementation shall utilize solid state devices. No relays shall be used for safety logic. The safety subsystem shall incorporate a check redundant, dual-processor, dual-path, solid-state, ASME A17.1-2013 compliant implementation that meets CSA and CE standards.

- 3) 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.
- 4) The elevator control logic configuration shall be fully field programmable. Changes in number of floors, I/O configuration, drive 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.
- 5) 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.
- 6) 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 closed, when the door locks are closed, 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.
- 7) The elevator controller shall support an interface for communication and interaction via a separate application program running on a Windows PC. This application shall communicate with the controller and allow the user to access controller configuration parameters, view real-time elevator status information, initiate and facilitate setup and adjustment procedures, and provide advanced troubleshooting capabilities. The PC application shall be designed specifically for elevator applications and shall graphically and dynamically display information from the controller.
- 8) A PC application shall provide facilities to manage elevator controller configuration parameters. The user shall be able to manage and manipulate parameters including:
  - a) Retrieve from the elevator controller and view/edit.
  - b) Retrieve from the elevator controller and save to a file on the PC.
  - c) Retrieve from the PC, view/edit, and download to the elevator controller.
  - d) Manage separate configurations for multiple elevator controllers.
- 9) The user shall be able to select specific groups or subsets of parameters to send or retrieve from the elevator controller.
- 10) A PC application display shall provide motor field (where applicable), armature and brake voltages, armature current, intended and actual car speeds and hoist machine RPM. The PC diagnostics and adjustment display shall include online context-sensitive parameter descriptions and help information for fault troubleshooting.
- 11) The controller shall maintain an event log that records noteworthy events or faults. They shall be displayed in chronological order and time stamped for analysis or review. Data displayed shall include the type of event or fault, the date and time it occurred, and the position of the car and status of various flags at the time of the occurrence. The event log shall be able to be saved and reviewed offline via the PC application.
- 12) Communication between the elevator controller and the PC application shall be via a standard 100 base T TCP/IP network connection. The elevator controller shall be compatible with standard networking equipment (cables, hubs, switches and routers etc.).
- 13) A PC application and elevator controller shall support remote connection via the internet. The elevator controller shall support up to four simultaneous PC connections (remote and/or local). A mechanism shall be provided to prevent the unauthorized alteration of elevator configuration parameters.

- 14) A controller test switch shall be provided. In the test position, this switch shall enable independent operation of the elevator, with the door open function deactivated, for purposes of adjustment and testing. The elevator shall not respond to hall calls and shall not interfere with any other car in a duplex or group installation.
- 15) Switches for controller inspection, enable, and up and down shall be provided to place the elevator on Inspection operation and allow the user to move the car from the machine room. The cartop inspection switch shall render the controller inspection switch inoperative.
- 16) The elevator control and safety functions shall be part of an integrated system designed for ease of use, with diagnostics and parameter adjustments accessible through a common user interface.
- 17) Every field connection input or output shall have a dedicated LED such that no volt meter or other test equipment is required to see when an input or output is active.
- 18) The brake supply shall be capable of providing at least four independently adjustable values of output voltage in order to provide smooth lifting, holding and releveling. These values shall be adjusted via computer parameters. Manual adjustment of resistor values shall not be required.
- 19) The elevator controller shall provide auto-tuning of the brake control values.
- 20) The controller shall provide logic to detect a failure of brake voltage to properly decay and relax a picked brake to hold/cooling position.
- 21) The brake control system shall include circuitry to detect insufficient brake current. This failure shall cause the elevator to be removed from service at the next stop and remain out of service until the condition is corrected.
- 22) The system shall provide adaptive gain parameters for optimum control of elevator speed throughout its travel.
- 23) The system shall use a device to establish car position to an accuracy of 0.1875 inches (4.76 mm) or better, using a quadrature signal operating over the entire length of the hoistway.
- 24) The system shall use an automatic two-way leveling device to control the leveling of the car to within 0.25 inches (6.35 mm) or better above or below the landing sill. Overtravel, undertravel, or rope stretch shall be compensated for and the car brought level to the landing.
- 25) A system for pre-torqueing the hoist motor shall be made available to ensure consistently smooth starts. An electronic load sensor shall be required to implement the pre-torqueing feature.
- 26) Pre-start sequencing shall be provided to safely energize the machine prior to the doors closing on a departing elevator, thus consistently improving floor-to-floor travel times.
- 27) Door pre-opening as the car approaches a landing shall be field adjustable to begin a maximum of six inches from level-at-floor position.
- 28) 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.
- 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) Door pre-opening option is selected for these elevators. This shall allow the doors to start to open when the car is in final leveling, 3 inches (76.2 mm) from the floor. Parameter shall permit the door pre-opening to be changed within the elevator controller program to disable door pre-opening if requested by Owner at a later date.

31) 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 Georgia Chapter 120-3-25 Rules and Regulations for Escalators and Elevators.

32) 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.

33) 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) 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.

37) 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).

38) Load Weighers:

- a) Load weighing devices shall be installed to provide signals to the controller for various load monitoring and dispatching operations.
- b) By identifying the load (light, heavy or overload), the system can activate anti-nuisance car call cancellation, loaded car hall call bypass, or overload

39) Elevator and Drive Logic:

- a) Elevator and drive logic shall be implemented independently of safety functions and shall be ASME A17.1 compliant including all applicable elevator and electrical safety codes to include the following:
- b) All power feed lines to the brake shall be opened by an electro-mechanical switch. A single ground, short circuit or solid-state control failure shall not prevent application of the brake.
- c) The automatic leveling zone shall not extend more than 6 inches (152.4 mm) above or below the landing level, nor shall the doors begin to open until the car is within 6 inches (152.4 mm) of the landing. In addition, the inner leveling zone shall not extend more than 3 inches (76.2 mm) above or below the landing. The car shall not move if it stops outside the inner leveling zone unless the doors are fully closed and locked.

40) 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 IBC, Chapter 11.
- a) 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.
- b) 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.
- c) Car Position Indicators: The controller shall have a position indicator output to drive the required position indicator which shall indicate the corresponding floor numbers as the car passes or stops at a floor. An audible signal shall sound as the position indicator changes floors.
- d) The controller shall have a voice annunciator output to facilitate announcement of car direction and floor number as required by Florida Building Code, Accessibility, Section 407.

41) Environmental Considerations:

- a) The elevator control shall be capable of operating within the following environmental conditions:
  - (1) Ambient temperature: 32°F to 104°F (0°C degrees to 40°C degrees).
  - (2) Humidity: Non-condensing up to 95%.
  - (3) Altitude: Up to 7500 feet (2286 m).

**L) AC Flux Vector Drive:**

- 1) The control system shall utilize a flux vector AC drive.
- 2) The flux vector drive shall be capable of producing full torque at zero speed and shall not require DC injection braking in order to control car deceleration.
- 3) The drive shall be capable of controlling geared and gearless machines, induction and permanent magnet motors. The drive shall also work with different types of encoders such as EnDat, incremental, sine/cosine, and Hiperface.
- 4) The drive shall have built-in motor overload protection. External overload is not required.
- 5) The drive shall have the capability of being adjusted or programmed to achieve the required motor voltage, current, and frequency to properly match the characteristics of the AC elevator hoist motor.
- 6) The drive shall not create excessive audible noise from the elevator motor.
- 7) The drive shall be heavy-duty, capable of delivering sufficient current required to accelerate the elevator to contract speed with rated load. The drive shall provide speed regulation appropriate to

the motor type.

- 8) For non-regenerative drives, means shall be provided to remove regenerated power from the drive DC power supply during dynamic braking. This power shall be dissipated in a resistor bank that is an integral part of the controller. Failure of the system to remove regenerated power shall cause the drive output to be removed from the hoist motor.
- 9) A contactor shall be used to disconnect the hoist motor from the output of the drive unit each time the elevator stops. This contactor shall be monitored, and the elevator shall not start again if the contactor has not returned to the de-energized position when the elevator stops.
- 10) The controller shall provide stepless acceleration and deceleration and provide smooth operation at all speeds.
- 11) For applications where the building power supply has a “Grounded Leg Delta” configuration, an isolation transformer should be used to minimize noise and prevent any damage to the drive during voltage fluctuations.

**M) Landing/Positioning System:**

- 1) Landing system shall be MCE iLand – with Sensors and magnetic encoding to ensure absolute hoistway position. System to be a tapeless, low-maintenance system.

**N) iCentral Independent Dispatcher/Group Control:**

- 1) The group shall have iCentral Independent Dispatching with a status display screen (iCue default display) that provides group and car status. The status display when the system configuration PC is monitoring iCue real-time operating software. When the system configuration PC is connected to the group through iView, configuration-oriented displays including the following are displayed. At a minimum, the display shall provide:
  - a) Group identification:
    - (1) Group mode of operation (Automatic (dynamic mode assignment by Group), Balanced, Lobby Peak, Demand Down Peak, Demand Up Peak.
    - (2) LAN and System network IP address, Subnet mask, and Gateway Connection status for each car in the group.
    - (3) Bus status (connection, voltage, Driver VDC, Node Control, Bus Enabled, High Current) for each of up to four serial bus connections if present.
    - (4) Emergency power status for each of up to two generators.
- 2) The group shall support field configuration or reconfiguration of building-service parameters in the field through iView. Such configurable parameters shall include:
  - a) Floors served per car
  - b) Label assignment per floor up to three characters
  - c) Setting or editing the number of cars in the elevator group
  - d) Label assignment per car up to three characters
  - e) Primary dispatcher designation
  - f) Alternate dispatcher designation
  - g) The group shall provide a screen allowing assignment or editing of special riser hall calls that may be used to recall a car to an enabled floor/opening for service outside group control. Such service may include security, VIP, or other independent control requirements. This screen shall provide:

- (1) Maximum number of cars to operate on selected CFSS mode simultaneously
  - (2) Selection of 1 or multiple hall calls permitted per assigned car
  - (3) Per car designation of enabled (front or rear) riser per building floor
- 3) The group shall provide a screen allowing assignment or editing of conditions that will favor assignment of calls to cars depending upon real time traffic conditions including car operating modes, car readiness, current car assignment, and call coincidence (floor call at registered car call destination)
  - 4) The group shall provide a screen allowing assignment or editing of up to eight different Hall Call Eligibility sets. For each set, this screen shall provide a selection of eligible hall call risers on a per car, per floor, per opening basis. The user shall be able to assign any of the eight sets to any of four Dispatching Configurations. Each Dispatching Configuration shall be capable of manual assignment by the user or of timer-based assignment by the elevator group control. Each Dispatching Configuration shall be additionally capable of controlling Parking sets, Parking Eligibility sets, and Mode of Operation sets.
  - 5) The group shall provide a screen allowing assignment or editing of up to eight different Mode of Operation sets. For each set, this screen shall provide a selection of the Mode of Operation to be used when this set is active (Automatic [dynamic selection by Group according to user-defined conditions], Balanced, Lobby Peak, Demand Up Peak, Demand Down Peak). The user shall be able to assign any of the eight sets to any of four Dispatching Configurations. Each Dispatching Configuration shall be capable of manual assignment by the user or of timer-based assignment by the elevator group control. Each Dispatching Configuration shall be additionally capable of controlling Parking sets, Parking Eligibility sets, and Hall Call Eligibility sets
  - 6) The group shall provide a screen allowing assignment or editing of up to eight different Parking sets. For each set, this screen shall provide, Selection of the Parking Method to be employed (Per Floor, Sector Parking), Parking delay options in seconds for Lobby parking, Lobby shuffle, Non-lobby parking, Non-lobby shuffle, Door behavior per car when parked, and Parking floor priority if multiple parking floors are assigned to a car. The user shall be able to assign any of the eight sets to any of four Dispatching Configurations. Each Dispatching Configuration shall be capable of manual assignment by the user or of timer-based assignment by the elevator group control. Each Dispatching Configuration shall be additionally capable of controlling Hall Call Eligibility, Parking Eligibility sets, and Mode of Operation sets.
  - 7) The group shall provide a screen allowing assignment or editing of up to eight different Parking Eligibility sets. For each set, this screen shall provide parking behavior per car (at a specific floor(s), not at all) and door behavior if allowed to park. The user shall be able to assign any of the eight sets to any of four Dispatching Configurations. Each Dispatching Configuration shall be capable of manual assignment by the user or of timer-based assignment by the elevator group control. Each Dispatching Configuration shall be additionally capable of controlling Parking sets, Hall Call Eligibility sets, and Mode of Operation sets.
  - 8) The group shall provide a screen allowing assignment or editing of up to eight pre-programmed dispatching configurations. Each configuration shall be capable of incorporating and controlling any one of eight pre-programmed Parking Eligibility, Parking, Hall Call Eligibility, or Mode of Operation sets. This screen shall provide the Ability to manually select and manually assign an ad-hoc Configuration incorporating any one of the eight sets previously configured for Parking Eligibility, Parking, Hall Call Eligibility, or Mode of Operation and the ability to enable or disable timer-based assignment of any of up to eight Dispatching Configurations.
  - 9) The group shall provide a screen(s) allowing assignment or editing of timer tables used by the



Group to enable system features on a timed basis. This screen shall provide:

- a) The ability to add, edit, remove, or set the priority of system timers.
  - b) A display of the attributes of any selected timer.
  - c) The ability to enter a logical name for each timer.
  - d) The ability to set a recurrence pattern for each timer.
  - e) The ability to set starting and ending times for each timer.
  - f) The ability to assign Hall Call Eligibility, Parking, Parking Eligibility, Mode of Operating, and Security attributes per timer.
  - g) The ability to assign the status (on/off) of any or all of four shared remote outputs per time.
- 10) The group shall provide a screen(s) allowing assignment or editing of split bank operation (splitting the elevator group into two, separate groups call "banks"). This screen shall provide:
- a) The ability to enable or disable split bank operation.
  - b) The ability to assign hall call risers to each bank.
- 11) The group shall provide screens allowing diagnostic and service related parameters to be defined. These screens shall provide assignment or reassignment of inputs or outputs on the group serial bus (main/auxiliary riser calls, CFSS calls, emergency power, cross-registration, security, security override, remote outputs, user-defined events).
- 12) Viewing of the status of any of the four system busses, inventory and functionality test of all bus devices, system performance graphics per hall call type capable of being printed to a user-provided printer with the following information:
- a) Hourly average wait times for up and down hall calls
  - b) Number of up and down hall calls answered each hour
  - c) Average wait time for up and down hall calls for each hour
  - d) Average wait time for up, down, and all hall calls during last 24 hours
- 13) Artificial Intelligence:
- c) Artificial Intelligence shall be used to implement balanced mode, lobby-peak mode, automatic mode selection, and dynamic parking. In balanced mode, AI shall be used to determine the optimal hall-call assignment for each building configuration. In lobby-peak mode, AI shall be used to automatically determine the number of cars that shall be assigned for lobby-peak only service. In automatic mode, these methods shall be used to determine the optimum mode of operation at any given time. Finally, both methods shall be used to determine the optimum parking at any given time. Artificial intelligence shall be an integral part of the system and shall therefore always be active.
- 14) Monitoring:
- d) The control system at a minimum, shall be capable of providing system status, car location and travel direction, operating mode, door operation indication, dispatching ETAs, and security status.
  - e) The monitoring system shall be capable of remotely registering car and hall calls and of configuring hall call and car call restrictions in support of building security. The system shall be capable of implementing security overrides if required.
  - f) The monitoring system shall be capable of enabling Auto-stop modes of operation on the group control and of acknowledging emergency alarm activity on any car in the group.

- g) The monitoring system shall be capable of selecting group mode of operation including, Balanced, Lobby Peak, Demand Down, Demand Up, and Auto-mode (dynamic mode selection by group controller) when Operating Mode Configuration 1 is active on the group.
  - h) The monitoring system shall be capable of initiating recall of any car in the group to a selected floor and of controlling door operation of that car at the selected floor.
- O) **Emergency Power Indicator Panel:** In the # 3 & # 4 elevator machine there shall be a stand-alone indicator panel that will identify which elevator is operating under emergency power. There shall be a lighted indicator bezel and labeling for Elevator # 1 (SN# 4093), Elevator # 2 (SN# 4094), 3 Elevator # 3 (SN# 4096), Elevator # 4 (SN# 4097) & Service Elevator (SN# 4097).

**Part 2.04 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 entrance side of the platform of each elevator shall be provided with a smooth metal guard plate of not less than 1.5 mm (0.059 in.) thick steel, or material of equivalent strength and stiffness, adequately reinforced and braced to the car platform. The guard plate shall extend not less than the full width of the widest hoistway door opening. The guard plate shall have a straight vertical face, extending below the floor surface of the platform no less than 1 220 mm (48 in.) 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.
- B) **Sling:** Existing steel stiles affixed to a steel crosshead and bolstered with bracing members to remove strain from the car enclosure shall be retained.
- C) **Guide Rails:** Retain and reutilize with no alterations. 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.
- D) **Roller Type Guides:**
  - 1) **Elevator Car:** Roller type guides on top and bottom of cars shall have the existing roller guide wheels replaced with new OEM roller guide wheels. Roller guide assemblies will be required to be disassembled and all shoulder bolts removed and inspected. All shoulder bolts must be cleaned, polished, lubricated and reassembled to provide as new operation of the roller guide assemblies.
  - 2) **Counterweight Assembly:** Counterweight frame assembly shall have the existing roller guide wheels replaced with new OEM roller guide wheels, all pivot points lubricated and properly adjusted provide as new operation of the roller guide assemblies. Roller guide assemblies will be required to be disassembled and all shoulder bolts removed and inspected. All shoulder bolts must be cleaned, polished, lubricated and reassembled to provide as new operation of the roller guide assemblies.
- 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 the perpendicular distance between the edges of the car enclosure top and the adjacent hoistway enclosure exceeds 300 mm (12 in.) horizontal clearance 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.

- F) **Secondary Space Guard Railing:** The safety railing in the secondary space shall have an intermediate rail installed in conformance with A17.1. The intermediate rail or equivalent structural member or solid panel shall be located approximately centered between the top rail and the working surface.
- 1) Railing shall be capable of resisting anywhere along its length the following forces when applied separately, without deflecting more than 75 mm (3 in.) and without permanent deformation when a force of at least 666 N (150 lbf) applied in any lateral or downward vertical direction at any point along the center of the intermediate rail.
- G) **Buffers:** Retain existing buffers. Buffer data plates shall be maintained or replaced for compliance with ASME A17.1 Safety Code for Elevators and Escalators. All buffers shall be cleaned and painted. Verify the spring buffer(s) comply with the stroke and load requirements of the ASME A17.1 Safety Code for Elevators and Escalators. Buffer data plates shall be maintained or replaced for compliance with ASME A17.1 Safety Code for Elevators and Escalators.
- H) **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 terminal landing.
- I) **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.
- J) **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 machine 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.
- K) **Hoistway & Machine Room Wiring:** Provide all new wiring throughout the elevator machine 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 machine 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.
- L) **Pit Stop Switch:** Provide new pit stop switch as required by latest applicable edition of ASME A17.1 code.

- M) **Pit Light:** 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 as detailed in the Electrical Requirements section of this specification.
- N) **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.
- O) **Pit Ladder:** Replace pit ladder with new pit ladder.
- 1) Pit ladder must be positioned so that means to unlock the access door from inside the pit shall be provided and 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.
  - 2) The ladder shall extend not less than 1 200 mm (48 in.) above the sill of the access door or handgrips shall be provided to the same height.
  - 3) The ladder rungs, cleats, or steps shall be a minimum of 400 mm (16 in.) wide. When obstructions are encountered, the width shall be permitted to be decreased to less than 400 mm (16 in.). The reduced width shall be as wide as the available space permits, but not less than 225 mm (9 in.).
  - 4) The ladder rungs, cleats, or steps shall be spaced 300 mm (12 in.) ± 13 mm (± 0.5 in.) on center, shall be provided to not less than the height of access door sill, and shall be designed to minimize slipping (e.g., knurling, dimpling, coating with skid-resistant material, etc.).
  - 5) A clear distance of not less than 115mm (4.5 in.) from the centerline of the rungs, cleats, or steps to the nearest permanent object in back of the ladder shall be provided. If insufficient clearances exist for a stationary pit ladder, then a retractable pit ladder shall be provided from Retractable Ladder model manufactured by Smart Elevator Tech, LLC, (415) 819-5744, [www.smartelevatortech.com](http://www.smartelevatortech.com).
- 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 reutilized. 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:** Existing hoistway shall be retained and reutilized.
    - a) Refurbish as required and replace all parts necessary to deliver doors in as new condition. 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.
    - b) Hoistway doors that cannot be adjusted to maintain the door gaps to less than 3/8 inch shall be replaced with new door panels. Bidders are cautioned to verify the capability of all hoistway doors to be properly adjusted to maintain code required clearances and gaps as no request for any change order will be approved for this purpose. It is the Elevator Contractors responsibility to verify this prior to submission of a bid on this project.
  - 3) **Hoistway Door Sill and Sill Support:** Retain and reutilize existing hoistway sill and sill support. as designated above shall be replaced with new sill and sill support as follows:
  - 4) **Interlocks:** All existing interlocks shall be replaced with new interlocks.
    - a) Equip each hoistway entrance with an approved type interlock (GAL or pre-approved equal) tested as required by code including SF-2 wiring and grounding. Interlock to be GAL Interlock, or pre-approved equal.
    - b) 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.

- 5) **Hoistway Door Components:** Existing door hangers and door tracks shall be retained and reutilized
  - a) Existing Hoistway door sheaves, door closers and door gibs shall be replaced with direct new OEM replacement components for all landings as specified below.
    - (1) Sheaves: Polyurethane tires with ball bearings properly sealed to retain grease.
    - (2) Replace all door gibs including all required primary and secondary door retainers with direct OEM replacement door gibs.
- 6) **Door Astragals:** Provide and install new rubber door edge astragals on all doors that the rubber astragals are damaged to present a like new condition.
- 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 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 top 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) **Painting Inside Hoistway:** All painting on this project must be performed in conformance with Part 1.05 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.

## **Part 2.05 DOOR OPERATION**

- A) **New Door Operator:** Provide each elevator with a new complete door operator assembly. Door operator to be a closed loop motor driven heavy-duty operator GAL MOVFR or pre-approved equal.
  - 1) Door operator shall be a closed loop, microprocessor based system. The door operator will facilitate smooth operation under varying environmental influences such as, temperature, wind,

friction, and component variation. 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 machine room door control equipment.

- 2) Door operation to comply with A17.1 requirements for Restricted Opening of Hoistway or Car doors of passenger elevator.
  - 3) 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.
  - 4) Door noise not to exceed 58 dBA.
  - 5) Door control to open doors automatically when car arrives at a landing in response to a normal hall or car call.
  - 6) Install door operator data plate as per 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.
  - 7) Door operator must be mounted so completely isolated from the car top. Mounting to car stiles by brackets as configured by GAL 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:** Door protection shall be a 3D infrared light screen type with a minimum of 154 light beams. The beams shall project across the car opening detecting the presence of a passenger or object. If door movement is obstructed, the doors shall immediately reopen. A mechanical reopening device shall not be acceptable.
- 1) The light screen is to be totally immune to ambient light, including strobes, fluorescent, and direct sunlight (100,000 lux). Maximum allowable installed misalignment shall be plus or minus 30 degrees @ 3 feet. The receiver and light array cables shall be hi-flex robotic grade, a minimum of 15 feet in length, connector on each end, and interchangeable when connected to the power supply.
  - 2) Light beam and receiver arrays to operate independent of the power supply, allowing the use of any 18 – 25Vdc supply, and provide a continuously short-circuit protected NPN transistor output. The arrays shall incorporate Automatic Dynamic Gain Sensitivity Adjustment to compensate for severe misalignment, condensation, damaged or contaminated lenses, and provide automatic on-the-fly dynamic adjustment as the doors open and close.
  - 3) The power supply shall be dual voltage input (120-240Vac, 50/60Hz), provide LED indicators for power applied and relay operation, simulator test button for beam break, and push-to-test button for manual operation of master control relay. Nudge feature to be field installable in standard power supply with accessory relay to operate in either the delayed nudge mode or redundant mode, switch

selectable. Nudge feature also to incorporate buzzer with enable/disable switch, and delay timer adjustable from 5 to 45 seconds for nudge operation.

- 4) Provide nylon fasteners, which attach to array studs for mounting array to jam of side parting door. Molded tool for attaching fasteners to be included.
  - 5) All configurations shall meet or exceed ADA requirements, be CE certified, and UL/cUL listed. Door protection will be per these specifications and be manufactured by Janus Elevator Products Inc. Model "Panachrome 3D" including green and red illuminating visual warning signals to warn users of door movement. The device shall illuminate GREEN when opening, RED when closing and flash RED a couple of seconds prior to closing. The safety edge shall be capable of projecting light beams across the entire opening and the 3D portion will project beams on a 45 deg angle out into the hoistway. The 3D protection zone should move with the doors, so that if a person or object enters the zone after the doors have begun to close, the doors shall stop, and then reverse to reopen. The doors shall remain open until the expiration of an adjustable time interval (3D Timeout option only) and then close automatically.
- 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 remove.

## **Part 2.06 CAR COMPONENTS**

- A) **Cab Interior:** Existing elevator cab shall be retained and reutilized. J. Wayne Reitz Union may exercise option for cab interior refurbishment as part of this solicitation package.
- 1) All refurbishment identified in this section is the responsibility of the Elevator Contractor to coordinate and complete.
  - 2) Elevator modernization contractor shall coordinate for any cab refurbishment that may be awarded as a bid option under this solicitation.
  - 3) Elevator modernization contractor is responsible to provide schedule that allows for coordination of any cab interior refurbishment. This schedule will have all cab interior work performed prior to elevator modernization contractor making final acceptance inspection and testing of this elevator.
  - 4) Elevator modernization contractor is responsible for all required door adjustments required for cab modernization contractor to complete all cab modernization work; no additional charges will be allowed for any door adjustments.
- B) **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 ASTM A 167, Type 300 Stainless Steel Number 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 Equipment:** 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) Sheaves: 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 manufacturer's design. Bottom slide guides as manufactured by GAL replacement or preapproved equal. Car door guides shall be matched to new car door sill.
  - g) Door Astragals: Provide and install new rubber door edge astragals on all doors.
- 3) **Car Sills:** Remove and replace existing car entrance sills with new sills. Sill must be substantially level to all adjacent finished flooring surfaces.
- a) Sill to be extruded aluminum with a grooved slip resistant surface. Sill to be provided with anchors to fasten to car platform.
- C) **Cab Top Enclosure:** The existing car top enclosure shall be retained and reutilized.
- D) **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.
- E) **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
- F) **Car Top Lighting:** The elevator shall be provided with lighting and a duplex receptacle fixture on the car top. The lighting 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.
- G) **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.
- H) **Cab Fan:** 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.
- I) **Car Operating Panel:** Provide new car operating stations as follows:
- 1) **Main Car Operating Station, General:** The new main car operating panel shall be on the same side as the main floor of egress or main designated floor opening. 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. All engraving shall be on flush mounted hairline faceplates securely mounted to the aluminum backing plate.

- 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) Layout of floor buttons will have the floor buttons centered with two (2) columns of floor buttons stacked above with an even number of floor buttons in each column.
  - d) 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.
  - e) 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.
  - f) 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.
  - g) A capacity plate shall be attached to the aluminum backing plate in the Car Operating Panel
  - h) 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
  - i) 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.
  - j) 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
  - k) Car stations shall be pre-wired by the car station manufacture with terminal strip connection to control wiring.
  - l) 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 Communications System:** Provide a Kings III, Monitor Controls EMS G3, Wurtec S3, or approved equal, emergency communications device mounted in the main 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.
- 5) **Special Accessories in Main Car Station Panel:**
- a) Located in Service Compartment Subpanel w/ Clear Certificate Window, sized 6" x 9"

- (1) Light key switch.
  - (2) Fan 2 speed key switch.
  - (3) Independent Operation Key Switch
  - (4) Access Key Switch
  - (5) Emergency Light Test Button
  - (6) Keyed stop switch
- b) No applied plates
  - c) Braille and engraving to include:
    - (1) Engraved Capacity and Identification Number of elevator.
    - (2) 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) As part of the fire department communication system, a phone jack shall be installed in the firefighters' operation panel below the level of the "FIRE OPERATION" switch.
  - c) 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.
  - d) All buttons and switches shall be readily accessible, located not more than (72 inch) above the floor.
  - e) The front of the cover shall contain the words "FIREFIGHTERS' OPERATION" in red letters at least 0.4 in. high.
  - f) Firemans' Service Key: The designated fire key is Emergency Response Region 3: Nassau, Duval, Clay, St. John, Flagler, Putnam, Bradford, Union, Baker, Levy, Alachua, Gilchrist: Yale Key No. R-80833-2006-3.
- 7) All required Braille for buttons and other switches as required by the IBC shall be securely fastened to the aluminum backing plate or directly engraved.
  - 8) Integral telephone including engraved directly into the car-operating panel 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.
- J) **New Auxiliary Car Operating Station:** The new auxiliary car control 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. All engraving shall be on flush mounted hairline faceplates securely mounted to the aluminum backing plate.

- 1) The lowest section shall contain the "door open," "door close," "alarm" buttons and a keyed "emergency stop" switch.
  - 2) 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.
  - 3) A capacity plate shall be attached to the aluminum backing plate in the Car Operating Panel.
  - 4) Car operating panels shall swing open with the hinged side closest to the sidewall.
  - 5) 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.
  - 6) Car stations shall be pre-wired by the car station manufacture with terminal strip connection to control wiring.
  - 7) Swing of panel shall match car door configuration. Panel shall swing to open only to the open car side.
  - 8) All hall and car push button lamps shall include long life LED type lamps.
- K) **Existing Security Provisions and Controls:** Elevator # 1 (SN# 4093), Elevator # 2 (SN# 4094), Elevator # 3 (SN# 4096) and Elevator # 4 (SN# 4097) have a security card swipe reader mounted on each of the car operating panels in the elevator cabs in addition to lockout key switches for :4", "5" & "6".
- 1) The currently installed swipe card security functions shall be maintained, and the card swipe access shall be retained.
  - 2) Only the 4<sup>th</sup> floor lock out key switch shall be retained and reutilized to permit the ability to lock out only the 4<sup>th</sup> floor in the new car operating panels.
  - 3) Card Swipe Readers shall be retained and reutilized.
  - 4) Floor lock out switches shall be retained and reutilized for the floor identified as "4".
  - 5) Existing Security Control boxes shall be relocated into the elevator machine room with security integrated into group controller.
  - 6) Elevator contractor is responsible to coordinate all security requirements with J. Wayne Reitz Union to ensure capability of required security protections are retained for the J. Wayne Reitz Union elevators.
- L) **Car Riding Lantern:** New tamper 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.
- M) **Car Operating Station & Fixture Approval:** Car Operating Station & fixtures must be approved by consultant prior to contractor ordering fixtures.
- N) **Car Front Cladding:** Car front shall be re-clad as detailed below:
- 1) The existing return panels shall be rigidly secured to accept the installation of the new Car Operating Panel (COP).
  - 2) Car Return Panel: Install stainless steel: ASTM A 167, Type 300 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.

- 3) Car Door Header & Transom Assembly: Install stainless steel: ASTM A 167, Type 300 stainless steel panels, No. 4 satin finish, extend one piece to cover all existing car box openings in car door head jamb & Transom assembly.
- O) **Cab Vents:** Cab enclosure vents shall be repaired to provide proper cab enclosure ventilation. Openings for natural ventilation shall be installed in cove base with appropriate covers. Openings shall be appropriately sized and be guarded to prevent straight through passage in accordance to the applicable requirements of the current A17.1 safety code.
- P) All openings left from removal of current car devices, which are not re-clad, shall be covered with stainless steel: ASTM A 167, Type 300 stainless steel covers, No. 4 satin finish. All edges shall be finished in a manner that presents no sharp edges or corners.

## **Part 2.07 FIRE COMMAND CENTER ELEVATOR PANEL**

- A) High-rise buildings having floors with human occupancy 75 feet or more above the lowest level for fire emergency vehicle access shall meet the requirements of the IBC 2015 Section 911 which includes a fire command center as detailed in Section 911. The remote Elevator Panel of the Fire Command Center will be installed at a location designated by Fire Marshal.
  - 1) Currently the elevator fire panel is located in the fire command room where the fire alarm panels are located. The new Fire Command Center Elevator Panel shall be located in the existing Fire Command Center Room.
  - 2) New Fire Command Center Elevator Panel will include components for the four (4) elevators. Elevator # 1 (SN# 4093), Elevator # 2 (SN# 4094), Elevator # 3 (SN# 4096) & Elevator # 4 (SN# 4097), that are the subject of this specification
  - 3) Additionally, New Fire Command Center Elevator Panel will also be provided to include components for the Service Elevator (SN# 3754) with this elevator tied into the new Fire Command Center Elevator Panel and Emergency Power Sequencing.
  - 4) Emergency power operation shall be in conformance with A17.1 requirements. After all cars have been recalled, moved to a floor, or failed to move after a second opportunity, the Service Elevator (SN# 4097) identified by the manual selection switch shall be selected to remain in operation.
  - 5) The panel will include a Stainless Steel # 4 finished face plate and rough-in box for flush mounting to wall as manufactured by Monitor Controls or Innovation Industries. Additional Features and/or Operations for the Fire Command Center Elevator Panel shall include the following:
    - a) Elevator Master Station Phone, model SHW combined with the EMS5 system as manufactured by Electronic Micro Systems, or approved equal, with a phone line connection for public phone access and off-site communication, shall have direct line communication capability to each elevator car operating panel phone. The panel phone must include display indicating which car operating communication device is connected.
      - (1) Two-way voice communication shall be established without any intentional delay and shall not require intervention by a person within the car. The means shall override communications to outside of the building and comply with the following requirements:
      - (2) Two-way voice communications, once established, shall be disconnected only when emergency personnel outside the car terminates the call.
      - (3) Once the two-way voice communication has been established, the visual indication within the car shall illuminate. The visual indication shall be extinguished when the two-way communication is terminated.
      - (4) Operating instructions shall be incorporated with or adjacent to the two-way voice communication device.

- (5) Cutting and patching as may be required at the location of the communication device is by Elevator Contractor.
  - (6) Conduit, as required, from the machine room or from inside hoistway junction box(es) at the designated floor to Fire Command Center Room as required.
  - (7) Elevator contractor is responsible for all elevator related wiring to the emergency phone located in the Fire Command Center Room.
- b) Digital Position Indicator with 1 inch display numerals including direction of travel indicator for each elevator.
  - c) Elevator emergency or standby power selector switch(es), and emergency generator status indicator for elevators including lighted jewel indicating power status with proper labeling in conformance with A17.1 & IBC.
  - d) Fire Service Phase I Key Switch and Fire Service indicator lighted jewel matching main floor hall operating panel. Reset position shall not be incorporated in switch.
  - e) Plug connection for Fire Department Communications System shall be provided in Fire Command Center Elevator Panel which shall provide communications for Fire Department personnel from the Lobby Panel into each elevator car.
  - f) Engraved labeling for each elevator number and function. No applied plates or labels.
  - g) Car call key switch to lobby/egress floor of each elevator.
  - h) Lobby Park key switch for each elevator.
- 6) **Emergency Power Signal:** This panel will be required to have an illuminated signal(s) marked "ELEVATOR EMERGENCY POWER".
- a) This shall be provided in the panel located in the elevator lobby at the designated level for the group of elevators (Elevators # 1, # 2, # 3 and # 4) and the Service Elevator.
  - b) The signal(s) shall indicate that the normal power supply has failed, and the emergency or standby power is in effect for one or more of the cars in that group of elevators or that single elevator.
  - c) If this panel location is changed, this signal will be required to be provided in the elevator lobby at the designated level for this group of elevators.
  - d) The transfer between the normal and the emergency or standby power system shall be automatic.
- B) **Fire Command Center Approval:** Fire Command Center Elevator Panel must be approved by Consultant prior to Contractor ordering fixtures.

### **Part 2.08 HALL FIXTURES**

- A) **Hall Stations – General:** New Hall Stations shall be flush 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 two sets of risers, one for each elevator bank.
- 1) Designated level hall station (Floor designation "G") shall be of two (2) piece construction and flush mounted.
    - a) Lower section to have hall station push button(s), in case of fire use stair signs and Phase 1 Firefighter's Service key switch, with instructions.
    - b) Upper section to have devices for emergency power operation and emergency communications monitoring.
  - 2) New hall station s shall be located between each pair of elevators at each landing.

- 3) All other hall stations shall be of one (1) piece construction and contain all required switches and signage as required by this specification.
- 4) All switches, fixtures and pushbuttons shall be by Monitor Controls, Innovation Industries or pre-approved equal.
- 5) All push buttons to be tamper resistant Innovation Industries PB 39, Flush Button with Illuminated Halo and Center Jewel or pre-approved equal.
- 6) All Hall Stations shall be # 4 Brushed Stainless Steel.
- 7) In case of fire use stair signs shall be engraved into the hall station panel with exact signage as per A17.1 Code. No adhesive type applied signage plates will be accepted at this hall station.
- 8) All hall and car push button assemblies shall include long life LED type lamps.
- 9) Each terminal station shall contain one illuminating push button and other applicable accessories, including hoistway access switches as required by this specification.
- 10) Each intermediate station shall consist of two illuminating push buttons, one for the up direction and one for the down position.
- 11) 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 A17.1 Safety Code for Elevators and Escalators shall be engraved in the main floor hall station panel.
- 12) **Local Telephone Line Status Monitoring:** The telephone system for the elevators shall be compliant with the requirements of the A17.1, Requirement 2.27 and will include a verification means as required by the 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.
- 13) **Emergency Power Sequencing Key Switch & Signal:** Emergency key (Regional Fire Key & Switch Required) operated selector switches including lighted jewel indicators shall be provided in the Fire Command Room integrated into the Fire Command Center Elevator Panel.
  - a) An illuminated signal marked "ELEVATOR EMERGENCY POWER" shall be provided in the elevator lobby at the designated level to indicate that the normal power supply has failed, and the emergency or standby power is in effect for one or more of the cars in this group operation.
- 14) **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 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.
  - b) 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.
  - c) The key shall be Group 1 Security.
- B) Hall Position Indicators:** Provide new hall position indicators as follows:
- 1) "G" and "1" Landings: 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 landings designated "G" and "1" with "G" being the main entry floor for the building and Designated Landing for Firefighters' Service. Digital characters to correspond to the floors as listed in the Elevator System Description, Part 1.07 of this specification. The digital display shall be Blue LED
    - a) 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.
    - b) 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.
- C) Directional Indicators:** Provide and install new directional indicators as follows:
- 1) "LL, 2, 3, 4, 5 & 6" Landings: Install all new hall directional lanterns at all landings except at the landings designated as "G" and "1" which will have a combination position indicator and car-directional lanterns installed as detailed above.
  - 2) The lantern when illuminated will indicate the direction of travel. The lantern will illuminate, and a signal will sound once to indicate an up-traveling elevator and twice to indicate a down traveling elevator when the car arrives at a landing.
  - 3) Directional indicator shall have new extruded milk white molded arrows to indicate the direction of travel, car-directional lanterns with left arrow for up direction travel and right arrow for the down direction travel. The up-direction indicator will illuminate in green color and the down-direction indicator will illuminate in red color. The lanterns, 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.
- D) Hall Fixtures Approval:** Hall fixtures listed above must be approved prior to ordering fixtures by Contractor.

### **Part 3 EXECUTION**

#### **Part 3.01 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 machine 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) **Crane Services:** Elevator Contractor shall coordinate crane services, if required, for the removal the existing equipment from the machine rooms and placement of the new equipment in the machine rooms with building owner's representative.
- D) **Scheduling:** Only one (1) elevator at a time will be turned over to the elevator contractor for modernization work. The subsequent elevator(s) will only be turned over for modernization work upon completion of all modernization work on the first elevator, including successful completion of all required inspections and tests.
- E) **Signage:**
- 1) J. Wayne Reitz Union 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 Florida Building Code, 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, machine rooms and machine room doors.
  - 3) All existing signage will be replaced in conformance to the Current edition of the Florida Building Code, 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.
- F) **Installation:**
- 1) Install elevator systems components and coordinate repairs of hoistway wall construction.
  - 2) Competent licensed elevator installation personnel in accordance with Florida Statute 399 and 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, including ropes, as recommended by the manufacturer.



- G) **Data Plates, Tags & Signs:** Elevator Contractor shall be required to install all data plates as required by A17.1 Safety Code for Elevators and Escalators on complete elevator system including alteration and original equipment.
- 1) All data plates shall be manufactured and printed with proper data for each elevator by CodeDataPlate.com or approved equal.
  - 2) No ink-based markers shall be used for any data plates, tags or signs. All data plates, tags & miscellaneous signage shall be stenciled, etched or pre-printed.
- H) **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.
- I) **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 Florida, 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:** J. Wayne Reitz Union has designated VTE Solution, as their consultant on this project.
    - a) The Elevator Contractor shall be responsible, in accordance with A17.1 Safety Code for Elevators and Escalators for all acceptance inspections for this elevator.
    - b) Elevator Installer in accordance with 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 Florida Bureau of Elevator Safety must be approved prior to inspection date by consultant.
    - e) **Alteration Acceptance Inspection Report:** At the conclusion of the alteration inspection of the elevator(s) the inspector shall provide a completed DBPR Form HR 5023-003 with signatures executed on the form.
- J) **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.
- K) **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 A17.1 Safety Code for Elevators and Escalators and ASME A17.2.
  - 3) Elevator Contractor is to return at 30 days, 90 days and 180 days after final installation to examine and readjust rope tension and hoist machine as may be required for optimum performance.
- L) **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.

**M) 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.

**N) 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.

**O) Elevator Consultant's Punch-Out List Items:**

- 1) Complete all of the consultant's punch-out 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 \$175.00 per hour including travel time for any additional return visits, reviews or work of any type.

**END OF MODERINZATION SECTION**

## **BID ITEM #003**

### **OPTION FOR ELEVATOR CAB REFURBISHMENT**

#### **1. ELEVATOR CAB REFURBISHMENT**

**1.1. Scope:** The Elevator Contractor is to furnish all labor, tools, materials, replacement parts, equipment and consumables to provide and refurbish the interior of cabs of as indicated below at J. Wayne Reitz Union, UF Bldg. 686, 655 Reitz Union Drive, Gainesville, FL.

**1.2. Balancing of Elevator Car:** During the alteration of the cabs all materials removed from the elevator car shall be weighed and recorded. All new materials being installed will be required to have the weight recorded also. The overall change in the deadweight of the elevator car cannot exceed 5% increase or decrease. If this increase or decrease exceeds the 5% threshold then the Elevator Contractor will be required to comply with the specific requirements of A17.1, Part 8.7.2.15.2 Increase or Decrease in Deadweight of Car.

**1.2.1** After final alterations have been completed to the elevator including all cab alterations, the car shall be balanced in conformance with Part 2.03 Equipment: Machine Room/Space Components, subpart 6) Counterweight section of this specification.

**1.3. Cab Walls:** Provide new elevator interior finishes as follows.

**1.3.1 Type:** Elevator Interior Wall Horizontal Panel System, Interlocking Panel Type:

**1.3.2 Description:** Interlocking panel system comprised of removable wall panels with interlocking joints, 1/8 inch (3 mm) black shadow lines set into surface, toe kicks, top caps with sight and vent guards, panel binders at exposed panel edges near doors and corner/flat reveals.

**1.3.3 Design Style:** Design Style to be SnapCab: Panel Modern I.

**1.3.4 Wall Panel Core:** Wall Panel Core Type 1, Class B or better fire rated as per ASME E 84 and LEED compliant.

**1.3.5 Wall Panel Face:** Wilsonart Laminate Face: Standard finish, 0.039 inch (0.99 mm) minimum thickness Horizontal Grade Post forming Laminate conforming to NEMA standard HGF, with Class B or better fire rating when laminated to fire-rated particle board as per ASTM E 84.

**1.3.5.a.** It is anticipated that Layers 2, 4, 5 & 6 to be in Wilsonart® Laminate (Tuscan Walnut, fine velvet texture); layer 3 in Wilsonart Laminate (Black, matte). Owner will review Wilsonart laminate samples provided by Elevator Contractor to approve final laminate selections.

**1.3.5.b.** Pattern, color and finish as selected from manufacturer's standard product line.

**1.3.6 Bumpers:** Pre-installed on wall panel to measure 12 inches (305 mm) above finished floor unless indicated otherwise.

**1.3.6.a.** Location: Back and side walls.

**1.3.6.b.** Flat bar with returned ends, 1/4 inch (6 mm) thick.

**1.3.6.c.** Width: 6 inches (152 mm).

**1.3.7 Toe Kick and Toe Kick Binder with Concealed Ventilation Gap for Interlocking Panels:** Satin No. 4 finish 20-gauge stainless steel toe kick with anodized mill finish aluminum binder (standard).

**1.3.8 Top Cap:** Anodized mill finish aluminum top cap with integrated pad hook channel.

**1.3.9 Corner and Flat Reveals:** Stainless steel, 20-gauge, No. 4 satin finish.

**1.3.10 Panel Binders:** Standard at exposed panel edges near door jambs. Anodized mill finish aluminum.

**1.3.11 Handrails:** Pre-installed on wall panel to measure 32 inches (831 mm) above finished floor unless indicated otherwise.

**1.3.11.a.** Location: Back and side walls.

**1.3.11.b.** Type: Flat bar with returned ends, 3/8 inches (9.5 mm) thick.

**1.3.11.c.** Width: 1-1/2 inches (38 mm)

**1.3.11.d.** Material and Finish: Satin stainless steel with No. 4 finish.

**1.3.12 Protective Pads:** Furnish one (1) set of vinyl protective pads and hooks as detailed below for the interior of elevators for cab walls. Protection pads to be provided for side walls, rear wall and front return.

**1.3.12.a.** Type: Pads with pre-attached pad hooks that lock into integrated pad hook channel in the top cap, eliminating the need for pad buttons.

**1.3.12.b.** Quantity: One (1) set of pads shall be provided for the interior of the elevator cabs that can be used in any of the four (4) elevator cabs.

**1.3.12.c.** Additional Hooks: One (1) complete set of additional hooks shall be provided as spare hooks for cab pads.

**1.3.12.d.** Color: Grey.

**1.3.12.e.** Type must be pre-approved by elevator consultant.

**1.3.12.f.** Elevator pads shall be turned over to the Building Owner and stored in the machine room for the elevators.

**1.3.13 Cab Vents:** Base of each wall will be provided with a 6" base of #4 satin finish stainless steel with punched ventilation to align with the existing cab shell vents.

**1.3.13.a.** Cab vent openings for natural ventilation shall be appropriately sized and be guarded to prevent straight through passage in accordance to the applicable requirements of the current A17.1 Safety Code.

**1.3.13.b.** Openings shall be appropriately sized and be guarded to prevent straight through passage in accordance to the applicable requirements of the current A17.1 safety code.

**1.4. Cab Ceiling:** Provide LED Downlight Island Ceiling, six (6) panel style.

**1.4.1** Furnish a new LED downlight ceiling faced with 20ga. satin (#4) stainless steel (Type 304). Ceiling face to be divided into six (6) sections.

**1.4.2** Ceiling with concealed heavy-duty brushed 1.5-inch (38 mm) T aluminum frame, with adjustable mounting legs and divided into six sections, nine for larger cars, with a removable panel for access to the escape hatch. Ceiling Class B or better fire rated as per ASTM E 84 and LEED compliant.

**1.5. Ceiling Lights:** LED Standard Fixtures mounted in ceiling: Each section to contain an individual light fixture. Standard LED downlights, low energy, low voltage, warm white (3000 Kelvin), 4 watt bulbs, 127 degree beam spread, up to 50,000 hours of life; integrated tamperproof metal trim ring. Pre-installed dimmer control included.

**1.5.1** LED light fixtures shall provide a minimum of 5 ft-c at threshold with the door closed and ceiling panels in place for normal operation of the elevator.

**1.5.2** 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 finish.

**1.6. Cab Flooring:** The existing cab flooring will be removed and replaced with new flooring. Elevator Modernization Contractor shall be responsible for the following

**1.6.1** Provide and install new Karndean Vinyl Type Flooring with final color and style selected by Building Representative from standard Karndean Vinyl Type Flooring colors with minimal or no 3D design in flooring. Included is to have installation of new 1/8" sheet aluminum on top of new 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.

## **2. PRICING**

**2.1.** Pricing for Bid Item #003 – Option for Elevator Cab Refurbishment will be the total price to refurbish one (1) elevator cab interior.

**2.2.** The decision to accept or reject this option will be made at the time of award of the modernization contract. If this option is not exercised prior to the first elevator modernization being completed under the modernization contract, this option will become null and void.

**END OF SECTION**

## **BID ITEM #004**

### **OPTION FOR HOISTWAY ENTRANCE CLADDING**

#### **1. HOISTWAY ENTRANCE ASSEMBLY CLADDING**

**1.1. Scope:** The Elevator Contractor is to furnish all labor, tools, materials, replacement parts, equipment and consumables to provide and clad the entrance assembly and hoistway door panels as indicated below at J. Wayne Reitz Union, UF Bldg. 686, 655 Reitz Union Drive, Gainesville, FL.

**1.2. Hoistway Entrance Frame:** The existing hoistway strike jamb, transom and hoistway return jambs shall be re-clad with stainless steel, ASTM A 167, Type 300 stainless steel panels, No. 4 satin finish, extend one piece to cover all existing hoistway entrance strike jamb and return jamb assembly. Existing surface to be cleaned and prepared to accommodate new metal cladding.

**1.3. Hoistway Door Panels:** The existing door panels shall be re-clad with stainless steel, ASTM A 167, Type 300 stainless steel panels, No. 4 satin finish, extend one piece to wrap around ends of doors.

#### **2. PRICING**

**2.1.** Pricing for Bid Item #004 – Option for Hoistway Entrance Assembly Cladding will be the total price to clad the entrance assembly and hoistway door panels for one (1) elevator hoistway entrance assembly.

**2.2.** The decision to accept or reject this option will be made at the time of award of the modernization contract. If this option is not exercised prior to the first elevator modernization being completed under the modernization contract, this option will become null and void.

**END OF SECTION**