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Protest Decision

Matter of: Schindler Elevator Corporation
File No.: 2024-140
Posting Date: June 6, 2024
Contracting Entity: Clemson University
Solicitation No.: 173605289-1
Description: Elevator Maintenance Services Contract

DIGEST

The Chief Procurement Officer (CPO) denies the protest of Schindler Elevator Corporation (Schindler) challenging Clemson University's (Clemson) intent to award a contract to ThyssenKrupp Elevator (ThyssenKrupp). Schindler's protest is attached as Exhibit A.

AUTHORITY

The CPO conducted an administrative review pursuant to S.C. Code Ann. §11-35-4210. This decision is based on materials in the procurement file and applicable law and precedents.

BACKGROUND

The facts pertinent to this decision are:

- On January 29, 2024, Clemson issued a solicitation for proposals to provide elevator maintenance services on its campus. [Exhibit B]
- By the deadline for receipt of bids, Clemson received four proposals. [Exhibit C]

- Clemson's selection committee evaluated proposals and ranked the proposal of ThyssenKrupp as the proposal most advantageous to the university. [Id.]
- On April 4, 2024, Clemson posted a notice of Intent to Award a contract to ThyssenKrupp. [Exhibit D]
- Schindler timely filed a notice of intent to protest and, on April 18, 2024, perfected its protest.
- On April 24, 2024, five days after the April 19, 2024, deadline for doing so, Schindler filed a supplemental protest.

DISCUSSION

Schindler's Supplemental Protest

The CPO addresses Schindler's supplemental protest first. The Procurement Code states:

Any actual bidder, offeror, contractor, or subcontractor who is aggrieved in connection with the intended award or award of a contract shall notify the appropriate chief procurement officer in writing of its intent to protest within seven business days of the date that award or notification of intent to award, whichever is earlier, is posted and sent in accordance with this code. Any actual bidder, offeror, contractor, or subcontractor who is aggrieved in connection with the intended award or award of a contract and has timely notified the appropriate chief procurement officer of its intent to protest, **may protest** to the appropriate chief procurement officer in the manner stated in subsection (2) **within fifteen days of the date award or notification of intent to award, whichever is earlier, is posted** and sent in accordance with this code; except that a matter that could have been raised pursuant to subitem (a) as a protest of the solicitation may not be raised as a protest of the award or intended award of a contract.

[emphasis supplied]

Clemson posted the Notice of Intent to Award on April 4, 2024. The fifteenth day after this date was April 19, 2024. Schindler filed its supplemental protest on April 24, 2024, five days after the deadline for doing so. Per Section 11-35-4210, the CPO is without jurisdiction to consider

untimely grounds of protests.¹ This is so even if the protestant learned of the new grounds after reviewing documents produced pursuant to the Freedom of Information Act and Section 11-35-410 just before the deadline for protesting.² *Appeal by Transp. Mgmt. Serv., Inc.*, Panel Case No. 2000-2.

Schindler's Protest

Schindler sets forth three grounds of protest: 1) that ThyssenKrupp lacks the required office personnel in the Upstate area and is, therefore, neither a responsive nor responsible offeror; 2) ThyssenKrupp lacks the required number of technicians within a 70 mile radius of Clemson and is, therefore, not responsible; and 3) by choosing ThyssenKrupp, Clemson overlooked ThyssenKrupp's shortcomings set forth in the first two grounds of protest and, therefore, must have relied on unstated criteria to find ThyssenKrupp to be the highest ranked offeror.

1. Allegation that ThyssenKrupp is Neither Responsive nor Responsible for Failure to Comply with Mandatory Minimums

Schindler basis its first ground of protest on the allegation that ThyssenKrupp fails to meet the mandatory minimum qualifications in the solicitation. Part II of the solicitation, Instructions to Offerors states:

QUALIFICATIONS - MANDATORY MINIMUM (JAN 2006): (a) In order to be qualified to receive award, Offerors must meet the following mandatory minimum qualifications:

¹ In addition to being untimely, Schindler supplemental protest seeks to challenge the ranking of OTIS Elevator Company (OTIS). There are two rights of protest under Section 11-35-4210, a right to protest the solicitation and a right to protest an award or intended award. Schindler's protest is the latter. However, OTIS was not an intended awardee and a protest regarding OTIS fails to state a claim for which relief may be granted.

² Schindler's Notice of Intent to Protest sent to the Materials Management Office (MMO) included a Freedom of Information Act request. However, MMO did not conduct this procurement and did not have any documents in its possession responsive to the request. Schindler did not copy Clemson with its Notice of Intent to Protest, and the CPO does not know if and when Schindler submitted a FOIA request to Clemson. However, the CPO did send Clemson a copy of the Notice of Intent to Protest on the day of receipt, April 10, 2024. On April 18, 2024, the law firm of Cozen O'Conner (Cozen) notified the CPO that it represented Schindler. On April 19, 2024, Cozen notified the CPO that Schindler received the documents on April 18, 2024.

a) Offeror shall already have a established and local office facility in the Upstate area staffed with at least the following personnel **or their equivalent**:

- 1) Branch Manager
- 2) Account Manager
- 3) Office Manager
- 4) Service/Repair Manager
- 5) Support Personnel

b) The local office shall have been operating consecutively for at least eight (8) years specializing in the work as described herein.

c) (b) [sic] **The Procurement Officer may, in their discretion, consider (1) the experience** of a predecessor firm or **of a firm's key personnel**, which was obtained prior to the date offeror was established, and/or (2) any subcontractor proposed by the offeror. (c) Provide a detailed, narrative statement providing adequate information to establish that the Offerors meet all the requirements stated in subparagraph (a) above. Include all appropriate documentation.³

[emphasis supplied]

Although this clause is stated in mandatory terms, the requirements are not performance obligations but rather go to the offeror's ability to perform the contract. *Appeal by 3M Co.*, Panel Case No. 2022-3. As such, this is not an issue of responsiveness but of responsibility.

Unlike responsiveness determinations, responsibility determinations are a matter of discretion. Procurement officers are given broad discretion with responsibility determinations, which are matters of business judgment, because agencies "must bear the brunt of difficulties experienced in obtaining the required performance." *Appeal by SGA Narmour Wright Design*, Panel Case No.

³ Although the clause is stated in mandatory terms, this is not a special standard of responsibility. A special standard of responsibility must be specific, objective, and mandatory. R.19-445.2125F. By giving the procurement officer discretion to consider equivalents and to consider the experience of the predecessor firm and key personnel, the requirement introduces subjective judgment and is not objective. *Appeal of CollegeSource*, Panel Case No. 2008-4 (finding requests for references involving "projects of similar size and scope" not objective and not a special standard of responsibility).

2022-2.⁴ Responsibility determinations will not be overturned unless clearly erroneous, arbitrary, or contrary to law. S.C. Code Ann. § 11-35-2410.

In this case, in addition to the discretion inherent in a responsibility determination, the qualifications clause gave Clemson discretion to determine whether certain personnel were “equivalent” to the five listed positions. Although Schindler complains that ThyssenKrupp’s personnel did not meet the requirements, Clemson has broad discretion to determine ThyssenKrupp’s responsibility and whether its personnel were the “equivalent” of the minimum qualifications. ThyssenKrupp’s proposal was evaluated and scored by the evaluators, who deemed ThyssenKrupp’s qualifications sufficient, and Clemson “will have to live with the consequences of its business decision.” *Appeal by 3M Co.*, Panel Case No. 2022-3 (denying appeal and finding that, although the RFP stated in mandatory terms that the project manager must have a minimum of 5 years’ experience, the State in its business judgment ultimately found 4+ years of experience sufficient).

2. Allegation that ThyssenKrupp is Not Responsible Because It does not have Seven Employees Within a 70 Mile Radius of Clemson

Schindler’s second protest ground argues that Schindler’s second protest ground argues that ThyssenKrupp lacks the seven certified elevator mechanics employed within a 70-mile radius of Clemson. This allegation, however, is speculative.

Part II of the solicitation, Instructions to Offerors states:

2. Personnel

- 1) Offerors shall provide two technicians with experience serving universities or colleges to work on campus in Clemson, SC, as described herein. These designees must maintain a very close working relationship with Clemson University. Describe the offeror’s methodology for meeting this criterion.
- 2) The Offeror shall confirm the number of certified elevator mechanics and provide a minimum of seven (7) employed within the defined 70-mile radius,

⁴ Because a determination that an offeror is responsible is largely a matter of subjective business judgment, federal law generally does not entertain protests disputing that an offeror is responsible. *Matter of: The Mary Collins Trust*, B-261019.2 (Comp. Gen., Sept. 29, 1995).

using Clemson University, SC, as the center point. Include details about the number of schools these technicians are currently responsible for serving and the number of machines serviced in the upstate South Carolina area.

ThyssenKrupp's proposal states that its team includes two resident mechanics and eight additional mechanics working out of its Greenville office. [Exhibit E]. Further, ThyssenKrupp signed the proposal and agreed to be bound by its terms. Accordingly, this protest ground is denied.

3. Allegation that Clemson's Evaluation of ThyssenKrupp was Based on Unstated Criteria

Schindler alleges that Clemson chose "ThyssenKrupp (in spite of its significant recent staffing downsizing and relocation in the Upstate of South Carolina area) apparently based off of the work it did on the same scope of work" and that such reliance on past performance constitutes improper reliance on unstated criteria. This is simply an attempt to restate the two previous grounds of protest in a different manner and must fail for the reasons stated above. Moreover, consideration of ThyssenKrupp's past performance is squarely within the scope of the award criteria.

Part IV of the solicitation states:

AWARD CRITERIA: Offers will be evaluated using only the factors stated below. Evaluation factors are stated in relative order of importance, with the first factor being the most important.

- a) **Experience to include Company & Technicians and Higher Education**
- b) Cost
- c) **Support History**
- d) Automated Maintenance Management System
- e) Ability to provide an ASME A17.1-2019 Elevator Camera/Text-Based Monitoring System Solution

[emphasis supplied]

ThyssenKrupp's performance on work at Clemson is necessarily relevant to its "Experience to include Company & Technicians and Higher Education" and "Support History. To the extent Clemson considered this experience, such consideration was not reliance on unstated criteria."⁵

DECISION

For the foregoing reasons, the CPO denies the protest of Schindler.



John St. C. White
Chief Procurement Officer

Columbia, South Carolina

⁵ In its supplemental protest, Schindler claims that two of the evaluators used unstated criteria when evaluating its proposal. Schindler claims that though the solicitation only required a minimum of seven technicians within a 70-mile radius of Clemson, it provided eight, but two evaluators questioned their overall capacity on their evaluation sheets. For instance, Evaluator 1 commented "8 techs within 70 miles, with 2 taking residence here, that may strain their service without additional hiring." Evaluator 2 commented "Technicians with adequate experience noted no backups listed (8 technicians total?)." [misspellings in the original] While seven technicians were the minimum, this does not mean that Clemson evaluators could not consider Schindler's overall capacity vis-à-vis other offerors and evaluate accordingly. Indeed, the solicitation also required each offeror to "submit a complete organizational chart naming all management, sales, account management, and support staff assigned to the local office, district, and regional operation; technical and repair; and any other personnel that would contribute to the local organization's success." ThyssenKrupp's proposal identifies ten full-time certified elevator mechanics and one repair helper working from the Greenville, SC Branch. It also identifies support available from either the Charlotte or Atlanta Branch Offices.

STATEMENT OF RIGHT TO FURTHER ADMINISTRATIVE REVIEW

Protest Appeal Notice (Revised July 2023)

The South Carolina Procurement Code, in Section 11-35-4210, subsection 6, states:

(6) Finality of Decision. A decision pursuant to subsection (4) is final and conclusive, unless fraudulent or unless a person adversely affected by the decision requests a further administrative review by the Procurement Review Panel pursuant to Section 11-35-4410(1) within ten days of posting of the decision in accordance with subsection (5). The request for review must be directed to the appropriate chief procurement officer, who shall forward the request to the panel or to the Procurement Review Panel, and must be in writing, setting forth the reasons for disagreement with the decision of the appropriate chief procurement officer. The person also may request a hearing before the Procurement Review Panel. The appropriate chief procurement officer and an affected governmental body shall have the opportunity to participate fully in a later review or appeal, administrative or judicial.

Copies of the Panel's decisions and other additional information regarding the protest process is available on the internet at the following web site: <http://procurement.sc.gov>

FILING FEE: Pursuant to Proviso 111.1 of the 2023 General Appropriations Act, "[r]equests for administrative review before the South Carolina Procurement Review Panel shall be accompanied by a filing fee of two hundred and fifty dollars (\$250.00), payable to the SC Procurement Review Panel. The panel is authorized to charge the party requesting an administrative review under the South Carolina Code Sections 11-35-4210(6), 11-35-4220(5), 11-35-4230(6) and/or 11-35-4410...Withdrawal of an appeal will result in the filing fee being forfeited to the panel. If a party desiring to file an appeal is unable to pay the filing fee because of financial hardship, the party shall submit a completed Request for Filing Fee Waiver form at the same time the request for review is filed. *[The Request for Filing Fee Waiver form is attached to this Decision.]* If the filing fee is not waived, the party must pay the filing fee within fifteen days of the date of receipt of the order denying waiver of the filing fee. Requests for administrative review will not be accepted unless accompanied by the filing fee or a completed Request for Filing Fee Waiver form at the time of filing." PLEASE MAKE YOUR CHECK PAYABLE TO THE "SC PROCUREMENT REVIEW PANEL."

LEGAL REPRESENTATION: In order to prosecute an appeal before the Panel, business entities organized and registered as corporations, limited liability companies, and limited partnerships must be represented by a lawyer. Failure to obtain counsel will result in dismissal of your appeal. *Protest of Lighting Services*, Case No. 2002-10 (Proc. Rev. Panel Nov. 6, 2002) and *Protest of The Kardon Corporation*, Case No. 2002-13 (Proc. Rev. Panel Jan. 31, 2003); and *Protest of PC&C Enterprises, LLC*, Case No. 2012-1 (Proc. Rev. Panel April 2, 2012). However, individuals and those operating as an individual doing business under a trade name may proceed without counsel, if desired.

**South Carolina Procurement Review Panel
Request for Filing Fee Waiver
1205 Pendleton Street, Suite 367, Columbia, SC 29201**

Name of Requestor

Address

City

State

Zip

Business Phone

-
1. What is your/your company's monthly income? _____
 2. What are your/your company's monthly expenses? _____
 3. List any other circumstances which you think affect your/your company's ability to pay the filing fee:

To the best of my knowledge, the information above is true and accurate. I have made no attempt to misrepresent my/my company's financial condition. I hereby request that the filing fee for requesting administrative review be waived.

Sworn to before me this
_____ day of _____, 20_____

Notary Public of South Carolina

Requestor/Appellant

My Commission expires: _____

For official use only: _____ Fee Waived _____ Waiver Denied

Chairman or Vice Chairman, SC Procurement Review Panel

This _____ day of _____, 20_____
Columbia, South Carolina

NOTE: If your filing fee request is denied, you will be expected to pay the filing fee within fifteen (15) days of the date of receipt of the order denying the waiver.



April 18, 2024

**VIA E-MAIL (PROTEST-MMO@MMO.SC.GOV)
AND FEDEX**

Zachary Renegar

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ZRenegar@cozen.com

Chief Procurement Officer
Materials Management Office
1201 Main Street, Suite 600
Columbia, SC 29201

**Re: Solicitation: 173605289-1, Elevator Maintenance Services Contract
Agency: Clemson University
Protestor: Schindler Elevator Corporation**

**Schindler Elevator Corporation's Protest of the Proposed Award of a Contract in
Connection with Solicitation 173605289-1 to ThyssenKrupp Elevator**

Dear Sir or Madam:

The undersigned and the law firm of Cozen O'Connor ("Cozen") are legal counsel to, and represent, Schindler Elevator Corporation ("Schindler") in the above-referenced protest. Schindler hereby timely submits its formal post-award bid protest ("Protest") of Clemson University's announced award of a Contract (the "Contract") to ThyssenKrupp Elevator ("ThyssenKrupp") in connection with Solicitation No. 173605289-1 (the "Solicitation"). This Protest comes in follow-up to Schindler's timely submission of its April 9, 2024 Notice of Intent to Protest, which has been acknowledged by the Agency in its Notice of Suspension of Notice of Intent to Award, received by Schindler on April 10th, 2024.

I. Interested Party Status and Jurisdiction

This Protest is proper and timely because the Intent to Award dictates that a formal bid protest may be submitted within the fifteen-day limit and in accordance with Section 11-35-4210(1)(b) of the South Carolina Consolidated Procurement Code. SC Code Section 11-35-4210(1)(b) states: "Any actual bidder, offeror, contractor, or subcontractor who is aggrieved in connection with the intended award or award of a contract and has timely notified the appropriate chief procurement officer of its intent to protest, may protest to the appropriate chief procurement officer...." In the instant case, Schindler is an actual bidder as it timely submitted a fully responsive proposal/bid on the Solicitation ("Schindler's Bid") on February 13, 2024. Furthermore, Schindler was aggrieved by the posting of the Intent to Award the Solicitation (the "Intent to Award") on April 4, 2024, to ThyssenKrupp rather than Schindler, given the bases of protest contained herein. That posted Intent to Award constitutes adverse agency action for which a protest is proper.

Schindler, as an disappointed actual bidder/offeror on this procurement, has had its direct economic interests prejudiced. This is due to, among other things, Clemson's: (a) making a flawed, irrational and unsupported rejection of Schindler's Bid as the lowest responsible and responsive bidder, particularly where, as here, ThyssenKrupp is not a responsible bidder because it does not

have the required mechanics and office personnel within the proximity of Clemson as required under the Solicitation; and (b) improperly choosing ThyssenKrupp over Schindler given that ThyssenKrupp either (i) misrepresented its local staffing by providing an inaccurate, seemingly responsive bid, or by its (ii) providing an accurate bid that was non-responsive under the Solicitation's requirements as to ThyssenKrupp's local staffing because, again, it is not a responsible bidder. Accordingly, but for Clemson's irrational and unreasonable errors, Schindler would have represented (and in fact was) the best overall value; the lowest responsive and responsible bidder/offeror, and should have been awarded the Contract.

The Chief Procurement Officer, Materials Management Office, has jurisdiction over this Protest in accordance with the Protests clause of the Solicitation, the Intent to Award, and SC Code Section 11-35-4210(1)(b).

II. Timeliness of Notice of Intent to Protest

Schindler timely filed its Notice of Intent to Protest on April 9, 2024.¹ The Intent to Award, posted on April 4, 2024, dictated that an aggrieved bidder needed to "submit notice of [its] intent to protest within seven business days of the date of award or notification of intent to award is posted, whichever is earlier." As such, Schindler had until April 11, 2024, to submit its Notice of Intent to Protest, and its submission well before that date was therefore timely.

III. Suspension of Award

In recognition of the timeliness and completeness of Schindler's Notice of Intent to Protest, on April 10, 2024, Clemson published a Notice Regarding Award which contained a suspension notice (the "Suspension Notice"), stating that "THE NOTIFICATION OF AWARD BELOW IS HEREBY SUSPENDED PENDING THE ADMINISTRATIVE REVIEW IN RESPONSE TO A PROTEST." This protest follows.

IV. Timeliness of Protest and Request for Stay

The Intent to Award was posted on April 4, 2024. Schindler's Protest submitted on April 18, 2024, is timely filed in line with the stated fifteen-day filing deadline outlined in the Intent to Award and Solicitation. Schindler recognizes that the Suspension Notice suspended the award pending review by the Chief Procurement Officer, but Schindler further seeks to stay the award of the Contract in accordance with the time parameters required by SC Code § 11-35-4210(7):

In the event of a timely protest..., the State **shall not proceed further** with the solicitation or award of the contract **until ten days after** a decision is posted by the appropriate chief procurement officer, or, in the event of timely appeal to the Procurement Review Panel, until a decision is rendered by the panel except that solicitation or award of a protested contract is not stayed if the appropriate chief

¹ In its Notice of Intent to Protest, Schindler also sought certain relevant documents relating to the evaluation and award decision. None of the evaluation or scoring data for ThyssenKrupp, Schindler, or the other bidders has been provided (and was not included in the Notice of Intent to Award) to date, even though Schindler requested this information in its Notice of Intent to Protest pursuant the State of South Carolina Freedom of Information Act, South Carolina Code Section 30-4-10 *et seq.* As such, Schindler must reserve its rights to file a supplemental bid protest once those materials are received and any new basis of protest becomes known, if any.

procurement officer, after consultation with the head of the using agency, makes a written determination that the solicitation or award of the contract without further delay is necessary to protect the interest of the State. [Emphasis added].

V. Factual Background

A. Schindler Elevator Corporation – An Introduction:

Schindler Elevator Corporation is a leading global manufacturer of escalators, elevators, and moving walks. Schindler has over 160 locations in North America and employs over 6,000 people. It has received multiple awards for its products and services, including the LEED Green Excellence Award, Manufacturer of the Year Award, and Building Magazine’s Top Money-Saving Product. Schindler has a well-established track record of providing high quality goods and services and providing excellent value to its customers. Additionally, it has significant experience in and expertise in the area relevant to the Solicitation as it maintains over 100,000 elevators/escalators. Schindler also performs work and has the requisite offices, staffing and equipment in place to perform work across South Carolina, inclusive of being fully responsive to the Solicitation’s requirements.

B. The Solicitation:

The Solicitation was issued on January 29, 2024 as what is, effectively, a “Best Value” award per the award criteria below. The date by which offers were to be submitted was February 13, 2024. Through the Solicitation, Clemson sought “to establish a contract for Elevator Maintenance Services...includ[ing] all services for providing complete elevator maintenance on approximately 150 elevators located throughout the campus of Clemson University.” In other words, this was a solicitation for the maintenance of a number of elevators and escalators at Clemson’s campus and other locations.

The Solicitation identified the following evaluation criteria and requirements to be included in Proposals for the Contract:

1. A Technical Proposal, including:
 - a. A description of the company overview and experience, including:
 - i. Elevator maintenance and repair experience in the market area within a 70 miles radius surrounding Clemson University Campus. List at least the top ten (10) largest clients located within the area, including the names of the clients’ elevator maintenance contract administrators, location addresses, phone numbers, email addresses, numbers of elevators at the clients’ locations, types of elevator equipment, age of equipment, and type of facility in which the elevators are located. Also, these clients shall have at least a five (5) year elevator maintenance history with the Offeror.
 - ii. A complete organizational chart naming all management, sales, account management, and support staff assigned to the local office, district, and regional operation; technical and repair; and any other personnel that would contribute to the local organization’s success.

- iii. A statement of whether the company is publicly traded or privately owned.
 - iv. A brief list of specific projects that have recently experienced a large changeout of equipment, including improvements and enhancements to the elevator/lift and environment provided at the offeror's own expense.
 - v. A listing of all higher education accounts that have been lost in the last three years. For each location, provide the name of the institution, a contact name and telephone number, and reason for the loss.
 - vi. The number of consecutive years it has maintained a staffed office to serve the local market area.
 - vii. A description of what the offeror considers to be the most critical factor in choosing a successful offeror for this solicitation.
- b. A description of the personnel, including:
- i. Two technicians with experience serving universities or colleges to work on campus in Clemson, South Carolina, as described. These designees must maintain a very close working relationship with Clemson University. A description of the offeror's methodology for meeting the criterion.
 - ii. A confirmation the number of certified elevator mechanics and provide a minimum of seven (7) employed within the defined 70-mile radius, using Clemson University as the center point. A description of the number of schools these technicians are currently responsible for serving and the number of machines serviced in the upstate South Carolina area.
 - iii. A description of experience with Clemson University and/or other higher education institutions.
 - iv. An account executive must supervise installations, monitor the ongoing services, solicit feedback to improve service, and ensure that the University's needs are met. Describe the offeror's methodology for meeting this criterion.
 - v. A brief narrative elaborating on the operation of its local office, business objectives, important considerations, and client-serving benefits related to the offeror's staff being capable of providing first-class elevator service/maintenance/repairs to the University. Provide detailed information about the offeror's staff, highlighting their exceptional experience levels, comprehensive training, and valuable expertise that would contribute to delivering unparalleled service to the university and its staff members.
 - vi. A description of the offeror's capacity to electronically monitor response times, maintenance procedures, and other pertinent technological advancements.
 - vii. A description of the elevator maintenance and repair mechanics directly employed by the firm: current employee count, educational background, and ongoing training programs.

- viii. A description of the offeror's ability to meet the following requirements: The offeror shall employ or have access to a staff of certified elevator industry engineers who can be consulted when complex operational problems are incurred in the elevator systems, regardless of the brand of equipment and design of elevators. Does the firm directly employ or have access to highly skilled engineering personnel who can be dispatched to the site to evaluate complex problems, and where are these engineers typically geographically situated?
 - ix. A description of the offeror's ability to provide only technical personnel with solid communication skills.
- c. A description of the automated maintenance management system, including:
- i. A description of the offeror's method of controlling each elevator system's monthly evaluations, consistent with the Scope of Work/Specification requirements.
 - ii. A description of the offeror's ability including preventative maintenance program, detailed effectiveness, and verification process of its maintenance system.
 - iii. An explanation of University access to maintenance history reports, overtime (call-back) status, extent of repair work performed, response times, dates/times of performance of all work, and percentages of time elevators are in operation.
 - iv. A description of proposed complete service/maintenance procedure and communication system. List all aspects of service that are deemed important for a successful University operation and provide a clear explanation for each element.
 - v. Examples of monthly service reports sent to Higher Education customers.
 - vi. A description of any automated maintenance programs or services the offeror provides. This includes, but is not limited to, software integration requirements and user interface screenshots.
- d. A description of support history, including:
- i. Three project summaries similar in size, scale, and scope to Clemson and the work described, including:
 - 1. Institution name, primary contact, title and contact information.
 - 2. The nature of the service provided.
 - 3. Any extraordinary or refined proficiencies or aid delivered throughout the project's timeframe, covering a range of topics including, but not confined to:
 - a. Examples of excellent customer service
 - b. Examples of well-trained and experienced technicians/staff

- c. Records of prompt response time during both working hours and after hours
 - d. Examples of general communication solutions, including specialized apps and web-based solutions.
 - e. Records of emergency repair situation management
 - f. Examples of supply chain delay solutions
 - g. Examples of experience and assistance in meeting changing code requirements specifically for SC elevator/escalator/amusement rides. Elevator installation and/or modernization examples with “passed” inspection documentation from previous year, including average turn-over time for both new installation and modernization projects.
 - h. Letters of recommendation from similar institutions, if available.
- ii. A description of the company’s ability to maintain the elevator work schedule and deadlines as described in the Elevator Work Schedule.
- e. A description of the company’s ability to provide non-proprietary ASME A17.1-2019 Elevator Camera/Text Based Monitoring Systems and to provide a solution to support MosaicONE cameras and text-based monitoring systems, including:
 - i. A description of how the proposed solution will be accessible and usable by any supplier awarded this contract over the next 10-15 years.
 - ii. A description of the pros and cons of the company’s proposed solution.
 - iii. A description of the advantages of the company’s proposed solution over other common solutions.
 - iv. A description why in-house or third-party monitoring services would be most advantageous to Clemson.
 - v. A description of the offeror’s solution to provide 24-hour camera/text-based monitoring assistance in the form of a call center or similar process.
 - f. Standardized work practices in the maintenance of elevators and lifts.
 - g. A description of monthly preventative maintenance practices and a schedule of activities performed to execute the resulting contract.
 - h. A description of elevator inspection procedures.
 - i. A description of the company’s full maintenance program in accordance with ANSI standards and guides.
 - j. A description of the current local inventory of spare parts, supplies, materials, tools, and more which can be examined at Clemson’s request.

- k. A description of the quantity of spare parts, components, assemblies, tools, materials, supplies, and other related requirements made available within the designated market area.
 - l. A confirmation and description of the requirement to meet all service requirements in terms of performance, overtime (call-backs), repairs, tests, routinely scheduled preventative maintenance work, and recording of work performance, including record keeping and the like.
2. A Cost Proposal, in consideration of the following items:
- a. The Bidding Schedule
 - b. Elevator Inspection Reports
 - c. Elevator Camera/Text Based Monitoring System rates
 - d. Pricing for lodging, travel, materials, labor, costs and fees, and other expenses.
3. A detailed, narrative statement providing adequate information to establish that the offeror meets qualifications-related requirements, including:
- a. An established local office facility in the Upstate area staffed with at least the following personnel or their equivalent: (1) Branch Manager, (2) Account Manager, (3) Office Manager, (4) Service/Repair Manager, and (5) Support Personnel.
 - b. The local office shall have been operated consecutively for at least eight (8) years specializing in the work as described.
 - c. Information to allow the Procurement Officer to consider, in their discretion, (1) the experience of a predecessor firm or of a firm's key personnel, which was obtained prior to the date the offeror was established; and/or (2) any subcontractor proposed by the offeror.

Solicitation at 1-6. Complying with each and every one of these requirements and being responsive was a mandatory prerequisite to being considered for, and receiving, the Contract award. Accordingly, personnel and geographic requirements were central and material to the Solicitation. The Solicitation required the offeror to meet certain personnel requirements, including the awardee having “two technicians with experience serving universities or colleges,” and “a minimum of seven (7) [mechanics] employed within the defined 70-mile radius, using Clemson University, SC as the center point.” Solicitation, Part II(F)(2). The Solicitation also required the offeror (and resulting awardee) to meet certain geographic requirements. Personnel have to be geographically close to Clemson’s campus-- some personnel were required to be on campus during regular working hours throughout the duration of the contract, and at least two mechanics must live no more than 90 minutes from the University Campus to respond to emergencies. *See id.* at Part III(F)(1)(n)(9). The offeror must have an established and local office facility staffed with *at least* the following personnel or their equivalent: (1) Branch Manager, (2) Account Manager, (3) Office Manager, (4) Service/Repair Manager, and (5) Support Personnel. *Id.* at Part II(F)(4). In addition, the offeror must keep certain major parts, minor parts supplies, and tools inventory in a local maintenance facility within a 70-mile for the purpose of conducting

normal maintenance and service on the elevators. *See id.* at Part III(V), V(B)(1). Evaluation Criteria and Evaluation Methodology:

Section IV of the Solicitation, “Terms and Conditions - Special,” includes “Award Criteria.” The following criteria are to govern the choice of offeror:

Offers will be evaluated using ***only the factors stated below***. Evaluation factors are stated in relative order of importance, with the first factor being the most important.

- a) Experience to include Company & Technicians and Higher Education
- b) Cost
- c) Support History
- d) Automated Maintenance Management System
- e) Ability to provide an ASME A17.1-2019 Elevator Camera/Text-Based Monitoring System Solution.

C. Schindler’s Bid/Proposal:

Schindler’s Proposal was timely submitted on February 13, 2024. It included all required documentation as outlined in the Solicitation, including (a) a Technical Proposal with a description of (1) the company overview and experience; (2) personnel; (3) the automated maintenance management system; (4) support history; and (5) ability to provide non-proprietary ASME A17.1-2019 Elevator Camera/Text Based Monitoring Systems and to provide a solution to support MosaicONE cameras; (b) a Cost Proposal; and (c) a narrative statement establishing other qualification-related requirements. This submission was fully responsive. Importantly, it included all of the documentation related to, and legitimately establishing, its local office capabilities, including the required personnel, demonstrating that Schindler has significant experience in performing similar work in the relevant region and has the personnel to carry out the Contract work. Schindler is fully responsible for this award.

D. The Notice of Award:

Schindler first received notice of the award when the Intent to Award was posted on April 4, 2024, which noted that the Contract was (to be) awarded to ThyssenKrupp. It also stated that the Estimated Contract Amount was not to exceed \$3,000,000; that the initial Contract period was from April 16, 2024 to April 15, 2025, with a potential maximum Contract period from April 16, 2024 to April 15, 2029. No rankings or ratings of the awardee, Schindler or others were provided or indicated as having even been made. Importantly, the Intent to Award also laid out the process for an aggrieved party to protest the award, and the grounds of Schindler’s Protest are discussed below.

VI. Grounds of Protest

A. Standard of Review:

A Protest standard of review is that award determination for a best value bid under SC Code § 11-35-1528(8) is “final and conclusive, unless clearly erroneous, arbitrary, capricious, or contrary to law.” SC § Code 11-35-2410(A). One of the underlying policies of the South Carolina Consolidated Procurement Code is “to ensure the fair and equitable treatment of all persons who

deal with the procurement system which will promote increased public confidence in the procedures followed in public procurement.” SC Code § 11-35-20(2)(f). Upon information and belief of ThyssenKrupp’s widely known lacking local presence near Clemson University reveals that awarding it this contract was arbitrary and capricious because it is not a responsible bidder.

B. ThyssenKrupp is Neither a Responsible Nor Responsive Bidder Because it Does Not Have the Required Office Personnel in the Upstate Area and Could Not Have Represented Otherwise Absent Lying to the Contracting Officer:

The Solicitation mandates the following:

4. QUALIFICATIONS – MANDATORY MINIMUM (JAN 2006): (a) In order to be qualified to receive aware, Offerors must meet the following mandatory minimum qualifications:
 - a) Offeror shall already have a established and local office facility in the Upstate area staffed with at least the following personnel or their equivalent: (1) Branch Manager, (2) Account Manager, (3) Office Manager, (4) Service/Repair Manager, and (5) Support Personnel.

Solicitation, Part II(F)(4)(emphasis added). There are but a few elevator contractors in the “world of vertical transportation” (e.g., elevators and escalators). Competitors know much about each other and there is a regular exchange of personnel between these firms. Schindler is no exception. As such, Schindler is keenly aware of its competitors in South Carolina, including the location of offices and personnel working at those offices. Schindler has direct, firsthand knowledge of ThyssenKrupp’s current Upstate personnel and capabilities. This is due, in part, to a restructuring of ThyssenKrupp in the region, which just took place in 2023. This restructuring *removed and relocated* the Branch Manager position from ThyssenKrupp’s Upstate South Carolina office to the Charlotte, North Carolina office (not located in Upstate and over 70 miles away), and the Office Manager in the Upstate South Carolina office retired prior to bid. Based upon Schindler’s direct present knowledge, this position has been listed as, and remains, “open,” going back to a time prior to proposal submission and as of the date of award. As such, Schindler understands that at the time of bidding, and up to the present day, ThyssenKrupp only has two current field office employees in its Upstate of South Carolina office: an Account Manager and a Service/Repair Manager. These individuals’ names are Derek Luis and Jeff McKenzie, respectively.

Equally and notably absent from this list are the following, which are required under the Solicitation to sit in the bidder’s Upstate South Carolina office: 1) a Branch Manager; 2) Office Manager; 3) Support Personnel. *See* Solicitation, Part II(F)(4). This is because ThyssenKrupp simply does not have the required personnel under the Solicitation. There are no other qualified Upstate personnel in ThyssenKrupp’s Upstate offices, rendering the proposal and TK non-responsive and non-responsible.

South Carolina procurement case law defines a responsible bidder as: “A person who has the capability in all respects to perform fully the contract requirements and the integrity and reliability which will assure good faith performance which may be substantiated by past performance.” *See Protest of Calypso Caribbean Grill*, Case 2016-123, at *2-3 (SFAA Division of Procurement Services, Feb. 3, 2016) (citing S.C. Code § 11-35-1410(6)) (finding that the protesting party was not responsible because it did not submit the appropriate references or have the experience required under the solicitation at issue); *see also Protest of VSC Fire & Security*,

Case No. 2015-106, at *2-3 (SFAA Division of Procurement Services, Sept. 11, 2014) (finding the awarded bidder not responsible because it lacked the required license to perform sprinkler and suppression work). ThyssenKrupp is not a responsible bidder for the Solicitation, and it should be removed from consideration for award.

Assuming that ThyssenKrupp was forthcoming in its bid regarding the absence of certain office personnel, its bid was also non-responsive, and its award should be revoked. For example, the Solicitation requires an organizational chart for all office personnel. While Schindler has yet to obtain the bid documentation of ThyssenKrupp, if ThyssenKrupp accurately depicted the employees who are staffed at the Upstate South Carolina office, then its bid should have been deemed non-responsive. South Carolina procurement case law dictates that a bid is non-responsive if it does not conform in all material aspects to the invitation for bids or requests for proposals. *See C&W Facility Services, Inc.*, Case No. 2024-124, at *7 (SFAA Division of Procurement Services, March 25, 2024) (citing S.C. Code § 11-35-1410(9)). *See also HUB International Midwest Ltd.*, Case No. 2023-129, at *5-6 (SFAA Division of Procurement Services, June 12, 2023) (finding a bid non-responsive for failing to provide a firm fixed price for each potential term of the contract, as required by the Solicitation); *Doron Precision Systems, Inc.*, Case No. 2023-127, at *3 (SFAA Division of Procurement Services, Apr. 24, 2023) (finding a bid non-responsive because the manufacturer and product could not meet the scope of the work and specifications in the Request for Proposals); *ForeverLawn Charleston*, Case No. 2023-115, at *3 (SFAA Division of Procurement Services, Dec. 22, 2022) (finding a bid non-responsive because the bidder did not include the requirement that the turf be made of nylon monofilament yarn); *Eagle Fire, Inc.*, Case No. 2022-118, at *2 (SFAA Division of Procurement Services, Dec. 15, 2021) (finding a bid non-responsive because it failed to include three-year and five-year inspection costs in its bid price, as required by the Invitation for Bids). Not having the mandatory personnel and the requisite personnel within the proper radius renders the proposal non-responsive (*see* following argument).

C. ThyssenKrupp is Also Not a Responsible Bidder Because It Lacks the Required Number of Elevator Technicians Within 70 Miles of Clemson University:

The Solicitation required offerors to meet certain personnel requirements with respect to technicians, including “two technicians with experience serving universities or colleges,” and “a minimum of seven (7) [mechanics] employed within the defined 70-mile radius, using Clemson University, SC as the center point.” *See* Solicitation, Part II(F)(2). In light of recent known turnover of ThyssenKrupp service technicians in South Carolina, Schindler asserts that ThyssenKrupp is not a responsible or responsive bidder with respect to Solicitation, Part II(F)(2)’s ‘seven elevator technicians within a 70-mile radius’ requirement.

ThyssenKrupp had two South Carolina service technicians leave the company during the September-October 2023 timeframe. Schindler is aware of this change because one of these technicians, Scott Banks, was hired by Schindler, and the other technician, Paul Stockard, was hired by Otis Elevator Company. To the extent that either of these individuals were included in ThyssenKrupp’s bid to count toward its seven technicians within 70 miles of Clemson University, the bid should be deemed non-responsive and the award to ThyssenKrupp should be revoked. While Schindler does not have the same degree of knowledge with respect to whether ThyssenKrupp is a responsible/responsive bidder with respect to this qualification as it does regarding the Solicitation, Part II(F)(4) local office personnel requirement, the significant turnover

experienced by ThyssenKrupp raises sufficient eyebrows with respect to whether it also fails to meet Part II(F)(2).

D. The Evaluation of Schindler's Bid Must be Reasonable and Consistent with the Stated Terms of the Solicitation and Cannot be Based on Unstated Criteria:

Schindler is aware of prior work performed by ThyssenKrupp to do essentially the same scope of work as that outlined in the Solicitation. Despite multiple red flags with regard to ThyssenKrupp's staffing in the state that would impact its responsibility and responsiveness with respect to the Solicitation, ThyssenKrupp was still chosen. Stated differently, ThyssenKrupp was the incumbent on this Contract, and choosing ThyssenKrupp (in spite of its significant recent staffing downsizing and relocation in the Upstate of South Carolina area) apparently based off of the work it did on the same scope of work constitutes reliance on unstated criteria or an improper relaxation of evaluation criteria, which are violations of South Carolina law. "Bids shall be evaluated by using only the criteria and weightings stated in the invitation for best value bids." SC Code § 11-35-1528(7). Importantly, "[a] contract issued in violation of public competitive bidding statutes is void and of no effect." *United Waste Services, Inc., d/b/a Waste Tire Management v. Florence County, South Carolina*, No. 4-96-0979-23, at *9 (D.S.C. Oct. 11, 1996) (citing *Funderburg Builders, Inc. v. Abbeville County Memorial Hospital*, 467 F. Supp. 821 823 (D.S.C. 1979)).

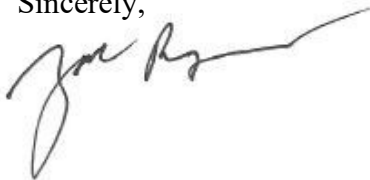
VII. Conclusion and Relief Requested.

There is no scenario, particularly given the stated evaluation criteria, where ThyssenKrupp should have been awarded this Contract because ThyssenKrupp does not maintain a local office with the required personnel under Part II, Section F, Subpart 4. This means that ThyssenKrupp is not responsive, and by extension, not responsible. In contrast, Schindler is responsible, and its bid fully responsive; its experience and qualifications are better than those of ThyssenKrupp. As such, Schindler seeks the following relief from the Chief Procurement Officer:

1. A stay of the award of the Contract to ThyssenKrupp pending resolution of this Protest as required by South Carolina law;
2. Rescission of the award of the Contract to ThyssenKrupp;
3. Award of the Contract to Schindler;
4. Grant such other relief as may be just and appropriate.

A formal decision on the merits is requested in this Protest. Submitted with a full reservation of all rights and without waiver.

Sincerely,



Zachary Renegar

CC: Matthew Schultz, VP & General Counsel, Commercial, Litigation & FQE, Schindler
Elevator Corporation
Lawrence M. Prosen, Esq., Cozen O'Connor
Brian E. Doll, Jr., Esq., Cozen O'Connor

South Carolina Business Opportunities

Published by Division of Procurement Services - Delbert H. Singleton, Jr., Division Director

Ad Category: Services

Ad Start Date: January 29, 2024

Title: Elevator Maintenance Services Contract

Purchasing Agent/Entity: Clemson University

Bid/Submittal Due Date: February 13, 2024 - 2:00pm

Description:

Elevator Maintenance Services Contract

Solicitation #: 173605289-1

Direct Inquiries To: April Pitts

Buyer Phone#:

Buyer Email: apitts@clemson.edu

Pre-Bid Information:

n/a

Full Details / Download: <https://clemson.ionwave.net/CurrentSourcingEvents.aspx>

South Carolina Business Opportunities • SCBO Team • 1201 Main Street, Suite 600 • Columbia, SC 29201
803-737-0600 • scbo@mmo.sc.gov • <https://scbo.sc.gov> • <https://procurement.sc.gov>



Scope of Work

- | | |
|--|---|
| I. Scope of Solicitation | IV. Terms & Conditions - Special |
| II. Instructions to Offerors | V. Appendices to Scope |
| III. Scope of Work/Specifications | |

I. SCOPE OF SOLICITATION

- A. Clemson University seeks to establish a contract for Elevator Maintenance Services. The specifications herein and Offeror requirements include all services for providing complete elevator maintenance on approximately 150 elevators located throughout the campus of Clemson University (which may be referenced herein as Clemson or University).
- B. An Award will be made to one (1) Offeror.
- C. The initial term of this agreement shall be one (1) year from the effective date as stated on the award document. At the end of the initial term, and at the end of each renewal term, this contract will automatically renew for a period of one year, unless the contractor receives notice that Clemson University elects not to renew the contract at least thirty (30) days prior to the date of renewal. Renewals may be less than, but will not exceed four (4) additional one (1) year period. The maximum expiration date for this contract will be no later than five (5) years from the initial start date as shown on the original statement of award.
- D. Clemson University's remote locations throughout the State of South Carolina are not obligated to use services under this contract, although they may choose to do so if agreed upon by Offeror and the remote locations.

II. INSTRUCTIONS TO OFFERORS

- A. Regardless of specific requirements below or in this document, Offerors are required to submit their proposal electronically through the Clemson University online bidding system. To do so Offerors must login (registering first) at <https://clemson.ionwave.net/Login.aspx> and follow specific instructions for this solicitation. Offerors should register several days in advance of the solicitation closing date so Offerors can be approved and login in time to submit a response.
- B. **INFORMATION FOR OFFERORS TO SUBMIT** – Clemson University intends to acquire the best base solution possible. For the purpose of evaluation, it is crucial that offerors thoroughly and accurately communicate all the information requested in this document. **Offerors are highly encouraged to structure their proposals to align with the Technical Proposal outline below to facilitate an efficient evaluation process.**
- C. For proposals to be deemed responsive, offerors must address each criterion specified below.
- D. Proposals should be prepared simply, in a straightforward, concise manner, and should not exceed 150 pages.
- E. The offeror is instructed not to include any pricing or cost information in their technical proposal.
- F. In addition to all the information requested elsewhere, throughout these documents, Offerors shall submit the following information:

1. Technical Proposal**1. Company Overview & Experience**

- 1) Provide a brief company overview.
- 2) The Offeror shall submit elevator maintenance and repair experience in the market area within a 70 miles radius surrounding Clemson University Campus, South Carolina. List at

least the top ten (10) largest clients located within the area, including the names of the clients' elevator maintenance contract administrators, location addresses, phone numbers, email addresses, numbers of elevators at the clients' locations, types of elevator equipment, age of equipment, and type of facility in which the elevators are located. Also, these clients shall each have at least a five (5) year elevator maintenance history with the Offeror.

- 3) The Offeror shall submit a complete organizational chart naming all management, sales, account management, and support staff assigned to the local office, district, and regional operation; technical and repair; and any other personnel that would contribute to the local organization's success.
 - i. The organizational chart or attachment to the chart shall also list:
 - (a) Job titles and responsibilities.
 - (b) Technical training in specific types, designs, and brands of the elevator & lift industry.
 - (c) Specific types of technical training aside from elevator & lift systems.
 - (d) The geographical territory covered by each person.
 - (e) Reporting structure.
 - (f) any significant achievements, awards, training or talents of all personnel.
 - (g) Any personnel who already have experience working on the elevator & lift equipment located on the University campus.
 - (h) Indicate which individuals or positions would have knowledge of this resulting solicitation agreement, the degree to which each person would be responsible for Clemson University's account, and their decision-making authority level. etc.
 - (i) Certification, employment history in the elevator industry, business phone numbers, and business addresses.
 - (j) List all personnel who would be assigned to the University campus.
- 4) Is the company publicly traded or privately owned?
- 5) Provide a brief list of specific projects that have recently experienced a large changeout of equipment, including improvements and enhancements to the elevator/lift and environment provided at the offeror's own expense.
- 6) Provide a listing of all higher education accounts that have been lost in the last three years. For each location, provide the name of the institution, a contact name and telephone number, and reason for the loss.
- 7) The Offeror shall submit the number of consecutive years it has maintained a staffed office to serve the local market area.
- 8) Describe what the offeror considers to be the most critical factor in choosing a successful offeror for this solicitation.

2. Personnel

- 1) Offerors shall provide two technicians with experience serving universities or colleges to work on campus in Clemson, SC, as described herein. These designees must maintain a very close working relationship with Clemson University. Describe the offeror's methodology for meeting this criterion.
- 2) The Offeror shall confirm the number of certified elevator mechanics and provide a minimum of seven (7) employed within the defined 70-mile radius, using Clemson University, SC, as the center point. Include details about the number of schools these technicians are currently responsible for serving and the number of machines serviced in the upstate South Carolina area.
- 3) Elaborate on experience with Clemson University and/or other higher education institutions.
- 4) An account executive must supervise installations, monitor the ongoing services, solicit

feedback to improve service, and ensure that the University's needs are met. Describe the offeror's methodology for meeting this criterion.

- 5) The Offeror shall provide a brief narrative elaborating on the operation of its local office, business objectives, important considerations, and client-serving benefits related to the Offeror's staff being capable of providing first-class elevator service/maintenance/repairs to the University. Provide detailed information about the offeror's staff, highlighting their exceptional experience levels, comprehensive training, and valuable expertise that would contribute to delivering unparalleled service to the University and its staff members.
- 6) The Offeror must detail its capacity to electronically monitor response times, maintenance procedures, and other pertinent technological advancements.
- 7) The Offeror is required to furnish the following details concerning the elevator maintenance and repair mechanics directly employed by the firm: current employee count, educational background, and ongoing training programs.
- 8) Offeror shall elaborate on the firm's ability to meet the following requirements: The firm shall employ or have access to a staff of certified elevator industry engineers who can be consulted when complex operational problems are incurred on the elevator systems, regardless of the brand of equipment and design of elevators.
 - a) Does the firm directly employ or have access to highly skilled engineering personnel who can be dispatched to the site to evaluate complex problems, and where are these engineers typically geographically situated?
- 9) The Offeror shall elaborate on the firm's ability to provide only technical personnel with solid communication skills.

3. Automated Maintenance Management System:

- 1) The Offeror shall describe its method of controlling each elevator system's monthly evaluations, consistent with the Scope of Work/Specification requirements.
- 2) The Offeror shall submit abilities including preventive maintenance program, detailed effectiveness, and verification process of its maintenance system.
- 3) The Offeror Shall submit an explanation of University access to maintenance history reports, overtime (call-back) status, extent of repair work performed, response times, dates/times of performance of all work, and percentages of time elevators are in operation.
- 4) Offerors shall describe their proposed complete service/maintenance procedure and communication system. List all aspects of service that are deemed important for a successful University operation and provide a clear explanation for each element.
- 5) Offerors shall provide examples of monthly service reports sent to Higher Education customers.
- 6) Offerors shall describe any automated maintenance programs or services they provide. This includes, but is not limited to, software integration requirements and user interface screenshots.

4. Support History

- 1) Offerors should provide three project summaries similar in size, scale and scope to Clemson University and the work described herein.
 - i. Include institution name, primary contact, title and contact information.
 - ii. Describe the nature of the service provided.
 - iii. Detail any extraordinary or refined proficiencies or aid delivered throughout the project's timeframe, covering a range of topics including, though not confined to:
 - (a) Provide examples of excellent customer service.
 - (b) Provide examples of well-trained and experienced technicians/staff.

- (c) Provide records of prompt response time during both working hours and after hours.
 - (d) Provide examples of general communication solutions, including specialized apps and web-based solutions.
 - (e) Provide records of emergency repair situation management.
 - (f) Provide examples of supply chain delay solutions.
 - (g) Provide examples of experience and assistance in meeting changing code requirements specifically for SC elevator/escalator/amusement rides. Elevator installation and/or modernization examples with “passed” inspection documentation from previous year, including average turn-over time for both new installation and modernization projects.
 - (h) Provide letters of recommendation from similar institutions may be included if available.
- 2) Offeror shall describe its ability to maintain the elevator work schedule and its deadlines as described in Elevator Work Schedule.pdf. This document is located in the online bidding system under the Attachments tab.

5. ASME A17.1-2019 Elevator Camera/Text-Based Monitoring Systems

- 1) Offerors must provide their best industry-standard base solution, including camera equipment and monitoring system. Offerors will elaborate on the company's ability to provide non-proprietary ASME A17.1-2019 Elevator Camera/Text-Based Monitoring Systems and provide a solution to support MosaicONE cameras and text-based monitoring systems.
 - 2) Describe how the proposed solution will be accessible and usable by any supplier awarded this contract over the next 10 -15 years.
 - 3) Describe the pros and cons of the company’s proposed solution.
 - 4) Describe the advantages of the company’s proposed solution over other common solutions.
 - 5) Offerors should detail why in-house or 3rd party monitoring services would be most advantageous to Clemson.
 - 6) Offerors must describe in detail their solution to provide 24-hour camera/text-based monitoring assistance in the form of a call center or similar process.
6. The Offeror shall submit standardized work practices in the maintenance of the elevators and lifts.
7. The Offeror shall submit a description of monthly preventive maintenance practices and schedule of activities performed to execute the resulting contract.
8. The Offeror shall submit Elevator Inspection procedures.
9. The proposal shall describe its full maintenance program in accordance with ANSI standards and guides.
10. Confirm the extent of the current local inventory of spare parts, supplies, materials, tools and the like, as required. Provide a general list of such items, which could be examined should Clemson or its designee choose to visit a local office.
11. Elaborate on the quantity of spare parts, components, assemblies, tools, materials, supplies, and other such related requirements the Offeror has available & located within the previously designated market area, as described herein.
12. Offeror shall confirm and elaborate on the requirement to meet all service requirements in terms of performance, overtime (call-backs), repairs, tests, routinely scheduled preventive maintenance work, and recording of work performance, including record keeping and the like. This includes all required documentation associated with scheduled maintenance control programs, maintenance and repair performance record availability, elevator periodic tests,

elevator parts replacements and adjustments, and all other expressed requirements of the University.

2. Cost Proposal:

- a) Offerors are required to complete and include the **Bidding Schedule (Bidding Schedule – 173605289-1.xlsx)** with their proposal submission. Failure to do so may result in the rejection of the offer. This document is located in the online bidding system under the Attachments tab. This completed document will minimally serve as the offeror's cost proposal. These prices should NOT include monitoring services.
 - b) Inspection reports may be found in the online bidding system under the Attachments tab labeled **Elevator Inspection Reports – 173605289-1.pdf**. Offerors should construct their proposals based on the assumption that no repairs are required.
 - c) Elevator Camera/Text-Based Monitoring Systems – Offerors are required to provide separate rates for monitoring. These rates will not be evaluated as Clemson University may or may not utilize these services. Rates should be thoroughly explained and itemized as much as possible in the cost proposal. Offerors should address how rates will be affected when monitoring for specific locations are added or removed.
 - d) Pricing submitted in the Bidding Schedule shall be all-inclusive to include, but not limited to, lodging, travel, materials, labor, all costs and fees, and other such expenses. Clemson University shall not be responsible for any additional expenses or costs, including, but not limited to; shipping, consultants, travel, storage, and delivery.
 - e) Pricing must be entered into the online bidding system as described in the instructions of the **Bidding Schedule (Bidding Schedule – 173605289-1.xlsx)**. A separate cost proposal may go into more detail regarding pricing breakdown, options, etc, but it must also clearly indicate the pricing entered into the Bidding Schedule and the online system. If there are conflicts in the price proposed or Clemson cannot clearly determine a total proposal price, the offer may be deemed non-responsive.
 - f) In the event of discrepancies between the completed bidding schedule file and the amounts entered online, the completed Bidding Schedule will take precedence.
 - g) Offerors may offer “options” in their proposals. Options must not be included in the base pricing. All Options must be clearly identified as options in the financial proposal. **Options and option pricing will not be evaluated** but may be added at the discretion of Clemson University.
 - 1) **ASME A17.1-2019 Elevator Camera/Text-Based Monitoring System Solution** - Offerors must submit their best base-solution pricing to provide 24-hour camera/text-based monitoring assistance in the form of a call center or similar process.
 - 2) Costs should be all-inclusive and itemized. These costs should be clearly labeled as “Optional” in their proposal. Clemson may or may not include these services in the final contract.
 - 3) Contractor must provide costs associated with a Camera/Text-Based monitoring program for newly installed and modernized elevators. This information should include options for a University-provided network and a supplier-provided network. These costs should be separate and should be clearly identified in the offeror’s cost proposal.
3. Be sure to see Event Activities in the online bidding system for details on deadlines for questions and/or pre-bid meetings.
1. **Deadline for Questions -** Questions shall be submitted in the online bidding system under the Questions tab by the date and time listed herein. Answers will be posted as an Addendum to this solicitation following the deadline date. All offerors are charged with a duty to inquire. Offerors are expected to examine the Solicitation thoroughly and should request an explanation of any ambiguities, discrepancies, errors, omissions, or conflicting statements in

the Solicitation. Failure to do so will be at the offeror's risk. Submitting an offer represents that the offeror has read and understands the Solicitation and that the offer complies with the Solicitation.

4. QUALIFICATIONS - MANDATORY MINIMUM (JAN 2006): (a) In order to be qualified to receive award, Offerors must meet the following mandatory minimum qualifications:
- a) Offeror shall already have a established and local office facility in the Upstate area staffed with at least the following personnel or their equivalent:
 - 1) Branch Manager
 - 2) Account Manager
 - 3) Office Manager
 - 4) Service/Repair Manager
 - 5) Support Personnel
 - b) The local office shall have been operating consecutively for at least eight (8) years specializing in the work as described herein.
 - c) (b) The Procurement Officer may, in their discretion, consider (1) the experience of a predecessor firm or of a firm's key personnel, which was obtained prior to the date offeror was established, and/or (2) any subcontractor proposed by the offeror. (c) Provide a detailed, narrative statement providing adequate information to establish that the Offerors meet all the requirements stated in subparagraph (a) above. Include all appropriate documentation.

III. SCOPE OF WORK / SPECIFICATIONS

- A. The elevator maintenance and preventive maintenance specifications (**See Section V. Appendices to the Scope of Work, Appendix B., Description of Current Contract Maintenance Work**) included herein and Offeror requirements include all services for providing complete elevator maintenance on approximately 150 elevators located throughout the campus of Clemson University.
- B. These specifications shall be the working model for day-to-day performance and include the requirements for furnishing all supplies, materials, maintenance service vehicles, communication needs, labor, labor supervision, tools, test equipment, special equipment, lubricants, and coatings, engineering and trouble-shooting solutions, and all other such requirements.
- C. These requirements are designed to facilitate an all-inclusive, first-class outcome, comprehensive elevator preventive maintenance service program, including but not limited to elevator inspections, elevator examinations, elevator equipment lubrication and protective coatings, testing, cleaning, adjustments, major and minor parts replacements, major and minor repairs and regular reporting on work performed, and recommendations for improvements. Clemson has had approximately four major repairs over the past 12 months.
- D. The equipment included herein is classified as the following:
 1. Passenger Elevators
 2. Freight Elevators
 3. Handicapped Lifts
 4. Mechanical Lifts
- E. A current list of elevator & lift systems to be serviced shall be included in the **Bidding Schedule (Bidding Schedule – 173605289-1.xlsx)**. Current and/or additional equipment may be added or removed throughout the contract as agreed upon by the University and the Successful Offeror throughout the contract.
- F. **General Requirements:**
 1. The Contractor shall furnish the following services:

- a) All required supplies.
- b) All required materials.
- c) All required parts and assemblies.
- d) All maintenance service vehicles and Clemson campus parking passes.
- e) Complete communication needs and requirements.
- f) All labor as described hereinafter.
- g) All labor supervision.
- h) All required hand tools and heavy-duty craftsmanship aids/tool needs.
- i) All specialized test equipment.
- j) All required specialized equipment.
- k) All specialized lubricants, paints, and coatings.
- l) All related testing and adjusting related components and devices.
- m) Availability of additional highly skilled technical support personnel and engineers, when needed, for complex elevator problems and unscheduled events impacting campus elevator systems.
- n) On-site services and maintenance shall include but are not limited to, the following aspects described in the elevator maintenance contract specifications. In general, the requirements include the following:
 - 1) Elevator inspections.
 - 2) Elevator examinations.
 - 3) Elevator lubrication.
 - 4) Elevator testing.
 - 5) Elevator cleaning and adjusting.
 - 6) Elevator repairs, all types.
 - 7) Elevator parts replacements, including all major and minor parts, as described herein.
 - 8) Elevator overtime (call-back) for all emergency repairs, as required hereinafter.
 - 9) The contractor must ensure the presence of a minimum of two (2) fully trained and experienced elevator maintenance mechanics on the campus during regular working hours (8:00 AM to 4:30 PM) throughout the duration of this contract and as needed thereafter. These campus-assigned individuals will be required to establish and maintain a closely collaborative working relationship with Clemson University.
- 10) Availability of additional skilled local mechanics, when needed, to supplement elevator work requirements on the campus:
 - i) The contractor will provide up to two standby mechanics to be present at all home football games if requested. The mechanics shall arrive two hours before kickoff and stay at the stadium for two hours after the game has ended. This labor will be billed at a fixed rate as priced in the Bidding Schedule (**Bidding Schedule – 173605289-1.xlsx**).
 - ii) The contractor will provide an additional mechanic or helper for student move-in and move-out days. Scheduling of these days will be coordinated with the University contract administrator. This labor will be billed at the rates submitted in the (**Bidding Schedule – 173605289-1.xlsx**).
- o) Frequent elevator evaluations are appropriately aimed at improving the existing elevator equipment's reliability, performance, and life.
- p) The contractor shall conduct elevator assessments upon request, with the goal of enhancing the performance of older elevator systems through refurbishment or replacement. Clemson University retains the discretion to use these assessments entirely, partially, or not at all, based on the determination of Clemson University.
- q) Contractor shall ensure that they are aware that at least two (2) full-time certified elevator maintenance mechanics are required to be assigned to work on the campus. At certain times, additional personnel will most likely be required to handle the work requirements when such added

needs arise. Minor or major repairs will require the availability of added skilled staffing to supplement the regularly assigned workforce.

- r) Contractor shall provide at least two (2) certified elevator maintenance mechanics, as referenced above, who are, or will be, living no more than 90 minutes from the University campus. These mechanics shall be located so they can promptly and efficiently respond to all overtime calls on the campus within the established time frame. Clemson has had approximately 12 overtime calls within the past 12 months.
- s) Contractor shall employ a staff of certified elevator industry engineers who can be consulted when complex operational problems are incurred on the elevator systems, regardless of the brand of equipment and design of elevators.
- t) Contractor must maintain a current local inventory of spare parts, supplies, materials, tools, and the like, as required. Should a spare part be considered obsolete and unavailable, the contractor will identify suitable alternatives, widely accepted industry solutions, retrofits, and custom components whenever possible. If no solution is available, Clemson and the Contractor will resolve the issue as is mutually agreeable on a case-by-case basis.
- u) Contractor shall ensure all elevator technical personnel have strong communication skills to properly communicate with the University staff associated with the elevators.
- v) Contractor shall ensure that the elevator maintenance/mechanics assigned to provide routine maintenance on the campus shall be provided with firm-owned or leased vehicles for carrying out their duties regularly. These vehicles shall bear the company's identification, vehicle number, and telephone number. The contractor is responsible for all appropriate parking passes.
- w) The Contractor's performance of the work shall comply with applicable federal, state, and local laws, rules and regulations. The Contractor shall give required notices, shall procure necessary governmental licenses and inspections, and shall pay without burden to Clemson University, all fees and charges in connection therewith unless specifically provided otherwise. In the event of violation, the Contractor shall pay all fees and penalties, including attorney's fees and other defense costs and expenses in connection herewith.
- x) The preventive maintenance program, as specified hereinafter, shall consist of an all-inclusive service approach, including, but not limited to, elevator inspections, elevator examinations, elevator lubrication, testing, extensive cleaning, adjusting, all minor and major parts of equipment, all major and minor repairs of equipment, as defined hereinafter.
- y) All elevators and lift equipment under this shall be maintained in a first-class operating condition, and must comply with all requirements of the current applicable standards listed herein, all other applicable laws, regulations, ordinances, codes, etc., and the American National Standards Institute (ANSI) Code shall be used as a guide to establish that the elevators and lifts are operating safely.
- z) The Contractor shall ensure use of an automated maintenance management system, including a preventive maintenance program designed to deliver service tailored to the specific building needs. Equipment type, component life, equipment usage and building environment shall be taken into account by the automated scheduling system. This professionally designed program shall be used to plan preventive maintenance activities in advance.
- aa) Existing elevator & lift installations were installed according to the Code requirements applicable in the State of South Carolina at the installation time.
- bb) Clemson University will provide all normal utilities such as electricity, lights, water, etc..
- cc) The Contractor shall ensure good housekeeping maintenance practices on all elevators and lift equipment, elevator pit areas, elevator machinery rooms and spaces, and penthouse spaces clean and free of scrap materials, oily rags, combustible materials, waste petroleum fluids & greases, and accumulation of debris.

G. Ownership:

1. Any part of the elevator and lift equipment remains the property of the University.

H. Protection of Persons & Property:

1. The Contractor shall initiate, maintain and supervise all safety precautions and programs. The Contractor shall take all reasonable precautions for the safety of and shall provide all reasonable protection to prevent damage, injury, or loss to (1) all employees performing the work and others who may be affected thereby, (2) all the work and all the materials and equipment to be incorporated therein, and (3) other property at the site or adjacent thereto.

I. Acceptance of Elevators & Lifts – Pre-Maintenance Repair Work:

1. Within the first 30 days of contract award, the Contractor will conduct an inspection of all elevators and lifts to document their condition. Any items in need of urgent repair or those the Contractor deems should have been previously attended to will be formally documented in writing. These documented issues and proposed pricing for the necessary repairs will be presented to Clemson. Clemson University and the Contractor will mutually agree on resolving the repairs.
2. Based on this same inspection of the elevator equipment, the Contractor shall prepare and submit a formal, five-year capital investment plan within 120 days of award. This capital investment plan shall include any work necessary to improve or renovate the elevator system(s) to perform first-class and provide a long and reliable service life for the equipment designated as required improvements.

J. Work Excluded:

1. Refer to Elevator Equipment or Work Not Included in Contract and Additional Exclusions herein.

K. Inspections & Tests:

1. The Contractor shall provide inspections and test requirements as required per all applicable federal, state, and local laws, rules, and regulations or as described herein or as requested or required by Clemson University.
2. The Contractor shall pay the costs of labor and tools associated with performing all periodic tests and the costs of labor to accompany the 3rd party Special Inspector approved by State of South Carolina. University shall pay actual elevator inspection fees to a 3rd party elevator inspector and for annual State of South Carolina operating licenses for elevators and lifts.
3. All required reports shall be provided to University and State of South Carolina. Additionally, posting of test results shall be provided on a placard attached to or located near the controller of each elevator in each machinery room or controller space by the Special Inspector. The Contractor shall be responsible for communicating all inspection reports and related documents to the University; promptly clearing or correcting any related deficiencies recorded by the Special Inspector, and any delays caused by failing to correct deficiencies as required by the State of South Carolina.

L. Routine Service Calls & Inspection (Examination) Records:

1. An automated preventive maintenance program is required to plan and record the maintenance and repair procedure's completion. The University shall be able to access records that reflect all such repairs, maintenance, complete service, and service call history for each unit by using the internet. Maintenance, repairs, and emergency service work will be cross-referenced to the University's computerized maintenance management work order tracking number and provided to the Contractor's dispatching center.

M. Emergency Overtime (call-back) Service and Response Times:

1. Contractor Overtime (call-back) coverage is required twenty-four hours per day, seven (7) days per week, with emergency dispatch service at no additional cost. Contractor Response time shall be:
 - a) Regular time hours (during normal University work days) are within 30 minutes.

- b) Overtime hours – 90 minutes.
- c) Emergency calls with elevator passenger entrapment at any time, response time to be within 60 minutes.
- d) In order to facilitate expedient responses to overtime-related call-backs, campus-assigned qualified elevator maintenance mechanics shall live within 90 minutes of the University Campus. Overtime call-backs shall be responded to as quickly as possible when the Overtime (call-back) is reported, and the mechanic shall arrive on the building site in no more than 90 minutes from when the initial call was placed.

N. Failure to Perform:

1. The University reserves the right to engage the services of a Professional Elevator Consultant at any time during the life of this Contract for purposes of evaluating the services received from the Contractor. The Consultant's decision as to Contractor's responsibility in fulfilling the Contract obligation shall be final, with the approval from the University. However, the Consultant shall not require any additional work to be added to the elevator(s) at the Contractor's cost unless the work is needed due to negligence or lack of performance of the Contractor. No work is to be required beyond the condition when the Contract commenced.

O. Addition or Deletion of Units to be Maintained:

1. The elevators and lifts to be serviced and maintained are specified in the **Bidding Schedule (Bidding Schedule – 173605289-1.xlsx)**. Any unit added or deducted by the University from said list will result in an equitable adjustment in the contract price. If added, the parties will agree upon the price or the unit(s). If the unit(s) are deducted, the price then in effect on said unit(s) shall be deducted from the monthly total invoice for the remainder of the contract period.

P. Other Contractor Requirements

1. The importance of maintaining the elevator and lift equipment for Clemson University in line with the original equipment design (or subsequent renovated design) and in safe operating condition requires the service to be performed by a highly experienced and competent Contractor who has satisfactorily maintained elevators of this type, design, brand, complexity and to the degree required by these specifications and other requirements. The Contractor is universally responsible for following all State and Federal laws, licensing, guidelines, etc. Should the Contractor fail in the obligation, it will be at no expense to Clemson University.
 - a) The following conditions shall apply to contractors' employees and work requirements while on the university campus.
 - 1) Uniforms shall bear the firm's emblem or logo and the employee's name.
 - 2) All mechanic uniforms shall be standard model, maintained in serviceable condition, neat in appearance, and clean condition at all times.
 - 3) Employees shall carry a picture identification with the employee's name, company name, company address, company phone number, employee's payroll number, immediate supervisor's name and title, and any other pertinent information.
 - 4) Employees shall be provided with and instructed to abide by any and all rules and regulations established by the University.
 - 5) The Contractor and its employees must refrain from participating in undue or excessive interactions with University staff, guests, invitees, or students.
 - 6) Contractor and its employees are prohibited from taking any item, irrespective of its value or whether any University personnel have granted permission, off the campus premises. This prohibition extends to items discovered in the trash, left behind, or in similar situations. However, this rule does not pertain to spare materials, goods, scrap parts, or similar items belonging to Contractor.

- 7) It is the responsibility of the Contractor to ensure that none of its personnel conduct any work on the University campus, in any capacity, if they have a felony conviction for drug, alcohol, weapons, sexual offense, or any other violent crime.
- 8) In the event that the University determines that the contractor or its employees have been remiss in his/her responsibility concerning requests, safety standards, offensive behavior, rules, and regulations set forth by the University and/or the Contractor (both written or verbal) the University shall instruct the Contractor to remove the employee from the University and the Contractor will comply. Employees so removed may not be reassigned to University service without prior written approval from the University.

Q. Contractor Representative:

1. The Contractor shall, within five (5) days after award, submit a written identification and notification to Clemson University Procurement & Business Services of the name, address, and telephone number of the one (1) person or individual duly authorized for all written communication or correspondence, official notices, and requests for various types of information.
2. The Contractor shall have the right to change or substitute the name of another individual on a permanent or temporary basis, so long as the University is notified immediately, in writing, on company letterhead.

R. End of Contract Period Maintenance:

1. The Contractor must perform all necessary maintenance and repairs by the end of the contract period.
2. The Contractor shall perform an end-of-contract walk-thru with Clemson University to identify any and all outstanding repairs, issues, incomplete jobs, etc. All repairs, jobs, etc, must be completed prior to the contract end date.

S. Number of Man Hours Labor to be Furnished:

1. The number of elevators on the campus makes it necessary for at least two (2) full-time mechanics to provide scheduled preventive maintenance, extensive cleaning, professional adjustments, minor repairs, examinations, and inspections. In addition to the foregoing, Contractor shall provide at least the required labor hours as provided in the **Bidding Schedule** to keep the equipment operating in a safe, reliable, and first-class condition. The required times do not include time for regular time or overtime call-backs or for scheduled or unscheduled necessary repairs outside the normal monthly maintenance management protocols.
2. The amount of overall labor required is subject to the needs of the elevator systems, the amount of repair work necessary, periodic testing requirements, and periodic elevator inspections. The Contractor is not permitted to charge the University for additional labor requirements, except in the cases where the work is not included and is pre-approved by Clemson University.
3. Normal working hours for full-time licensed mechanics shall typically be between the hours of 8:00am to 4:30pm, on scheduled University business days. The University workdays may include days which are listed as holidays (<https://www.clemson.edu/human-resources/benefits/leave-and-holidays/holiday.html>) for the elevator mechanics; however, the Contractor shall provide licensed mechanics during those days and include the cost of the same in the contract price.

T. Environmental Protection Requirements:

1. The Contractor shall endeavor to reduce the generation of waste materials and to minimize risks to the environment, customers, the general public, and its employees, and to comply with all federal and state environmental laws and regulations. Material Safety Data Sheet (MSDS) manuals are available for review upon request.

2. Hazardous fluids, such as hydraulic oil, worm gear oil, and similar materials, shall be safely collected and disposed of offsite. Further, no waste cleaning materials such as wiping cloths, oily rags, fluid absorbent pads, and the like shall be allowed to accumulate on the campus of the University and will be disposed of offsite.

U. **Storage Cabinets and Elevator Wiring Diagrams:**

1. The successful Offeror shall store spare-wearing parts in a locked storage cabinet in each of the machinery rooms. These parts include but are not limited to, small parts, clean wiping rags, wiring diagrams, and the like. The cabinet and parts will be supplied by the University. Machinery rooms shall be kept clean, orderly, and accessible by the University for inspection upon request. In addition to wearing parts and tools, this space can be used for various files and records, plus a suitable computer system which is needed by the Contractor. University shall provide a suitably safe and reliable internet connection for use by the Contractor.
2. The Contractor shall maintain and store the Elevator electrical wiring diagrams for each elevator in a safe manner, in the elevator equipment area, in a way that protects the wiring diagrams from excessive damage or misuse; however, the drawings shall not be stored inside the elevator controller cabinets. The Contractor shall be responsible for safe storage and for the cost of obtaining the necessary wiring diagrams or drawings required for any of the elevators where drawings are not currently available. Wiring diagrams shall be the property of the University. In the event efforts are required from the University to obtain drawings from elevator equipment manufacturers, the University shall fully cooperate with the Contractor in obtaining any needed electrical drawings for the elevator.
3. Any oily or greasy wiping cloths temporarily stored in a machinery room or space shall be kept in a metal can with a metal top. The University does not permit long-term storage of soiled wiping cloths. All such soiled rags, cloths, and other cleaning materials must be disposed of offsite.

V. **Major Parts, Minor Parts Supplies, and Tools Inventory in Local Maintenance Facility:**

1. The following parts, materials, and tools, in addition to all other normal maintenance components, parts, supplies, special equipment lubricants, and tools will be used in servicing elevators under this contract, must be stocked within the 70-mile area:
 - a) At least two (2) sets of major and minor electronic boards, except for elevator-specific "mother board" configurations, which will properly fit each type of elevator electronic type controller system, including any and all elevator controller parts which may be needed to restore any elevator, to reliable service. Mother board configurations, if not stocked locally, shall be available from other stocking locations, obtainable within 48 hours of the need being established.
 - b) At least one (1) set of all electronic or conventional controller components, electrical motor drive and motor starter assemblies, motor brushes of all types of motors used on this equipment, and the like shall be available from the local stock or obtainable within 48 hours after the need is established.
 - c) At least (2) sets of all relays, coils, resistors, rectifiers, terminal strips, timers, dashpots, transformers, and other elevator controller operating devices for any and all elevators.
 - d) A sufficient number and type of all electrical parts, switches, board edge connectors, fuses, fuse blocks, and electronic type components.
 - e) At least two (2) door operator motors for each type of elevator.
 - f) Complete sets, and miscellaneous components, devices, electrical cables, and such for the electronic door detectors.
 - g) At least one (1) each of the alternating current elevator drive motors for all types, sizes, and voltages for dry and submersible motor-type pumping units on oil-hydraulic elevators.
 - h) At least one (1) set of all brands and types of oil control valves, valve internal components, hydraulic system gaskets and seals, drive belts, hydraulic fluid pumps, and all such components for

- the various types of oil hydraulic pumping units.
- i) Two (2) sets of all types of hydraulic elevator cylinder packing seals and gaskets for all types and brands of hydraulic elevators.
 - j) At least twenty-four (24) rollers for car doors and hoist way doors, including all associated devices and hardware.
 - k) At least three (3) types of interlocks, interlock releases, and related equipment or hardware.
 - l) At least ten (10) door closers and associated parts.
 - m) At least two (2) sets of door operator components, belts, control boards, switches, bearings, gate switches, car door clutches, and the like.
 - n) At least six (6) roller guide wheels of all types.
 - o) At least twelve (12) car doors and twenty (20) hoist way door panel guides of all. These components shall accommodate different widths of door threshold groove widths, as needed.
 - p) Sufficient number of signal fixture components, including a wide selection of contact assemblies, contact blocks, mounting screws, pushbuttons, lamps, devices, key switches and all other components available to promptly repair all equipment on all.
 - q) Sufficient number of elevator capacity plates, hoist way entrance marking plates and the like, to replace any plates removed by elevator passengers.
 - r) Sufficient number of emergency lighting batteries, fixture lamps, operating devices, chargers, emergency bells, and the like to restore proper operation
 - s) Sufficient number of emergency telephone devices will make it possible to restore elevator safety as soon as possible.
 - t) Selection of cab lighting lamps of all types and replacement fixtures for safe elevator cab illumination.
 - u) Sufficient number of electric geared and gearless traction machine minor parts, seals, brake parts, and the like for expeditious elevator repairs.
 - v) Sufficient number of traction and hydraulic elevator hoist way switches for travel limitation, leveling, landing, and car positioning purposes.
 - w) Sufficient number of heavy-duty tools such as high capacity chain-falls, hydraulic cable cutters, hydraulic elevator piping tools, tools for replacing hydraulic cylinder packings, and other such tools for purposes of promptly restoring elevators to service.
 - x) Dollies for moving heavy objects and equipment.
 - y) Adequate number and amount of elevator capacity test weights for testing elevators, where needed.
 - z) Adequate number of high-capacity hydraulic fluid filtering systems (at least two {2}). Also, an adequate number of filters for the systems.
 - aa) Adequate number of blowers, vacuum cleaners, step ladders, oil transfer pumps, hoist rope tension gauges, door closing pressure spring type gauges, governor jaw/rope tension gauges, stop watches, voltage/resistance meters, amp. meters, fully programmed lap-top computers, software archives, all applicable adjustment and trouble-shooting manuals, all applicable parts manuals, and other such tools and maintenance aids. Each mechanic shall be issued a stop watch and door closing tension gauge.
 - bb) Elevator mechanics shall be equipped with “electronic/digital tablets” or similar devices, with which they can obtain wiring diagrams, parts information, and adjusting information, as well as communicate with all appropriate support personnel and University representatives.
 - cc) Various types of painting supplies, coatings, lubricants, “Corrosion Block” protective coating, and all appropriate types of hydraulic fluids. Environmentally approved cleaning solvents and supplies must be on hand and available to the maintenance/repair mechanics.
 - dd) Wiping cloths and other cleaning media.
 - ee) Various other equipment, components, supplies, tools, and the like are suitable for a highly efficient elevator maintenance and repair operation.

- ff) Adequate number of five-gallon buckets, with lids, for collection of waste oil on hydraulic elevators.
- gg) Adequate number of metal cans with lids for temporary disposal of oily rags and the like.
- hh) Sufficient supply of miscellaneous bolts, nuts, washers, and screws. Important stainless screws of all types, and related fastening devices, including all of those associated with signal fixtures, operating devices, indicators, and the like.
- ii) Elevator maintenance mechanics assigned to provide maintenance and repairs shall be issued the following special tools for use in the conduct of their regular maintenance and repair duties:
 - jj) Maxton Brand SafeTach, or an equal device, is used for checking elevator speeds and the like.
 - kk) Use a spring-type door pressure gauge to check the door closing pressure on all elevator doors.
 - ll) Stop watch to check the door opening and closing speeds.
- mm) A digital/electronic tablet device is for use in communicating all technical information relating to elevator maintenance work, maintenance records, maintenance requirements, emails, client communication, etc.
- nn) The University's Representative and/or the University's Elevator Consultant may reserve the option to visit the local office where the parts are stored to verify the existence of the parts and tool inventory.
- oo) Should there be a supplier change upon the re-solicitation of this contract, Clemson University reserves the option to purchase spare parts, as described above, at market price or as mutually agreeable with both parties.

W. Maintenance Records

1. The Contractor shall provide detailed, legible, and complete records of all work performed on the elevator equipment covered by this Contract at the end of **each visit** when work is performed. The written record must be signed by the maintenance mechanic (elevator mechanic) and by an authorized representative of the University. The signature of the University's representative is not considered a confirmation that the work was performed or performed correctly but signifies that the repair person was at the building(s) on the specific date shown on the time report.
2. Electronics Records shall be provided in the manner required by the University, and they shall be kept in the University database on each elevator on the campus.
3. These written records must be in addition to those created by the Personal Digital Assistant "PDA" -type electronic devices and shall include the following information:
 - a) Date (month, day, and year) of the work performed.
 - b) Exact time period during which the work was performed, including starting and ending times at the building.
 - c) Complete description of all work performed on the elevator(s). Simply stating "PM" maintenance is not an acceptable description of the work.
 - d) List of parts, supplies, or equipment being replaced or installed on the elevator equipment.
 - e) All work time will be broken down on a per-elevator basis rather than a generalization of tasks. Time tickets apply to each elevator individually, not as a group.
 - f) Mechanics and mechanic's helpers must sign a log when reporting to each building and sign a log when leaving the building unless the building does not have a University representative available in the building at the time. In this case, an email shall be sent to the university location designee to establish entry and exit times. The log must be maintained at each location designated by the University.
 - g) All records of elevator maintenance, repairs, overtime (call-back), tests, and other work are recorded on paper documents located in each elevator machine room.
 - h) Fully comply with the elevator maintenance and repair reporting, record keeping, and related requirements as described herein.
 - i) All records, either electronic or written on paper documents, shall be based on individual

units. Elevator systems with multiple elevators must be separated for record-keeping purposes.

X. Semi-Annual Meeting Between Contractor, University, and Elevator Consultant:

1. The Contractor shall schedule, at least semi-annually, a meeting with the University representative(s) and/or University's Elevator Consultant to discuss the performance of the Contractor, the overall condition of the elevator equipment, emergency call-backs, repair-work, general operation of the elevators, periodic tests and maintenance records, recommendations, any areas needing improvement, and any other issues or concerns related to the elevator equipment. This meeting shall be scheduled at least twenty-one (21) days in advance of the meeting date and shall be at the location designated by the University.

Y. Annual Training Meeting Between Contractor and University Employees:

1. On a regular basis, the parties shall discuss and verify procedures relating to University responsibilities in terms of elevator equipment maintenance requirements and other important issues. During this discussion, Clemson University Maintenance Staff trainings will be identified. The contractor will be responsible for providing training to Clemson University Maintenance Staff as requested by Clemson University. These training requirements shall include, but not be limited to, the following subjects:
 - a) Cleaning elevator cabs, including walls, ceilings, lighting, and other components.
 - b) Cleaning elevator entrances, including doors and frames.
 - c) Cleaning elevator cab thresholds and hoist way entrance thresholds.
 - d) Cleaning the signal fixtures, buttons, and other devices.
 - e) Cleaning of all stainless or other similar surfaces in a proper manner to prevent damage.
 - f) Replacing filters in air conditioning equipment cooling machine rooms. Cleaning excessive debris from elevator pit areas. Removal of normal amounts of debris shall be by Contractor.
 - g) Operation of specific keyed operation control features in elevator car panels and landing stations.
 - h) Maintaining unobstructed access to machine rooms and machinery spaces.
 - i) Cleaning of elevator floors and flooring areas outside the elevator entrances.
 - j) Emergency Evacuation from Elevators.
 - k) Any other features, procedures, safety issues, recommendations for improvements, elevator equipment replacements, up-grades, and the like, which need to be discussed.
 - l) Contractor shall place suitable, professionally designed, reusable signs on all elevator entrances anytime an elevator is removed from service for maintenance or repairs and when the maintenance mechanic arrives at the building in response to an emergency Overtime (call-back). Install the signs immediately upon arrival and remove the signs when the elevator repair is completed.

V. Response Time to Return Elevators to Service:

1. Unless otherwise provided for in the Scope of Work, Contractor shall promptly provide all staffing, technical manpower, supervision, materials, parts inventory, supplies, and needed tools to make necessary repairs to elevators in need of repairs due to overtime (call-backs), scheduled elevator repairs or unscheduled elevator repairs, all as follows:
 - a) When only minor parts are required, repair of elevators should take four (4) hours (calendar hours) or less by the Contractor, from when the emergency Overtime (call-back) is reported to the Contractor. Repairs in this category would include the following work: relays of all types, starter contacts, interlock and interlock release mechanisms, hoistway and car door rollers, pushbutton components, door guides, renewable shoes, limit switch contacts, timers, resistors, rectifiers, electrical connections, electronic door protective devices, door operator motors, door operator drive belts, car

- door clutches, position indicators, guide shoes and rollers, small printed circuit boards, fuses, other small parts, similar components and the like.
- b) When major parts or repairs are needed (except driving machine motors, rotating elements, worms and gears, drive sheaves, and similar major components), repairs should take **fifty-six (56)** (calendar hours) or less by the contractor from reporting an emergency overtime (call-back) to Contractor, where extensive repairs are required. Repairs under this category would include the following: traveling cables, unscheduled replacement of jack packing and seals, hydraulic elevator oil control valves complete, “mother” type printed circuit boards, driving machine bearings, motor bearings, complete machine brake assembly, major machine oil seals (not worm shaft seals), governor jaw assemblies, deflector sheave bearings, governor tail sheave assembly, governor cable, hydraulic elevator drive motors & pumps, and other similar work. Traction elevator hoist ropes, on a scheduled basis, should be accomplished in no more than 56 hours.
 - c) Work to replace hoisting cables or belts, on an unscheduled basis, should not require more than **eighty-five (85)** (calendar hours) hours by the Contractor from the determination of such required work until the elevator is returned to service.
 - d) Major scheduled repairs or major parts replacement such as traction or drum machine elevator driving machine motors, driving machine worms and gears, drive sheave assembly, and similar major components should not exceed **one hundred-twenty (120)** (calendar hours) hours maximum by the Contractor from the time the major repairs are determined to be necessary until the Contractor restores the elevator to service.
 - e) In the event the Contractor fails to comply with the requirements of a, b, c & d above, the University shall have the sole right to deduct the sum of fifty (50) percent of the next monthly maintenance invoice for the single elevator involved when the Contractor fails to rectify within these maximum allotted time requirements.
 - f) In the event the Contractor appears to have been noticeably negligent, or not proactive, in returning any elevator to service after the equipment being out of service due to failing components, lack of parts availability, lack of suitable preventive maintenance program, or the like, the Contractor shall be penalized by a charge of **\$150.00** per elevator, per event, for failing to return the elevator(s) to serviceable condition as promptly as possible. This is in addition to item e. shown above.
 - g) The number of hours listed in items a, b, c & d above are repair times that occur during the regular work week and do not include overtime, weekends, and holidays.
 - h) Clemson University will work with the contractor on custom component repair times for repairs where parts are deemed obsolete.

W. Group Control System Tests:

1. Where group-type elevator systems exist, the Contractor shall verify the proper operation of the multi-car systems at least annually to determine that the equipment is functioning as a group operation. Copies of any system performance reports generated shall be presented at the semi-annual meetings with the University representative.

X. Equipment Performance, Parts Replacement, Maintenance Tests, and Condition Requirements:

1. The mechanical, electrical, and safety-related equipment associated with the elevators must be kept in “first class” condition by the Contractor regarding operation, performance, and appearance. All suitable, appropriate, and necessary adjustments, repairs, replacements, and renewals of the equipment is required to be performed when needed to maintain the original design or the renovated equipment design performance, as such conditions apply, including the following: car riding characteristics in all directions; floor-to-floor times; door operation smoothness and speeds, door opening and closing times, as shown herein; door closing pressure, as shown herein; reliability, dependability, “as new” performance condition; car speed; noise levels; passenger traffic handling capabilities; floor leveling accuracy; car safety of operation; system free of vibrations, squeaks, and rattles; elimination of oil leaks of any type in

the packings, seals, oil pressure lines and fittings (except for the buried portion of oil pressure lines or oil-hydraulic cylinders); cleanliness and housekeeping appearance; operational items such as signal fixtures and operating buttons; corrosion control; painting as required for appearance and corrosion protection.

2. The Contractor shall replace all needed parts of type with genuine original elevator equipment manufacturer's parts unless the original equipment manufacturer can no longer provide a genuine replacement part or assembly.
3. The Contractor shall ensure that all incandescent operating fixture lamps are replaced with LED-type lamps when a fixture requires any type of lamp replacement based on the availability of LED-designed lamps to fit the lamp receptacles in the signal devices and fixtures.
4. The Contractor will be responsible for elevator inspections and identifying potentially obsolete components. Whenever possible, the contractor will identify suitable alternatives, widely accepted industry solutions, retrofits, and custom components. If no solution is available, Clemson and the Contractor will resolve the issue as is mutually agreeable on a case-by-case basis. Except in modernization projects, the Contractor will be responsible for the cost of retrofit or upgraded parts. In general, the University will not accept claims made by the Contractor relating to any parts' obsolescence unless the replacement is needed on elevators over 38 years of age and is unavailable from any known source or the original manufacturer is no longer in existence. When materials or newly designed part assemblies are necessary to return the elevator to operation, the maximum cost of the item to the University shall be the actual cost of the materials: 15% for overhead, supervision, and handling expenses combined and 10% for profit. The contractor shall be responsible for all associated installation labor costs.
5. At their sole expense, the Contractor shall be responsible for replacing any parts or assemblies that may become obsolete. The University shall require that the entire assembly be replaced with a new assembly of equal or greater quality if repair or replacement parts are no longer available for any existing assembly.
6. The contractor shall ensure the following items are measured at regular intervals to ensure compliance with the following performance characteristics. Elevator mechanics shall continually have in their possession the necessary tools and equipment to accurately determine and test the operations of the elevator equipment:

Y. Schedule of Door Opening and Closing Times for All Passenger Elevators:

1. **Door Opening Times:** Single-speed and two-speed doors = 2.0 seconds; center-opening = 1.7 seconds; all times measured from door fully closed position to door fully open-door position.
2. **Door Closing Times:** Single-speed and two-speed doors, for 3'-6" wide doors = 4.0 seconds; for 3'-0" wide doors or less = 3.5 seconds; for 3'-6" wide center-opening doors = 2.2 seconds; all times measured from door fully open position to door fully-closed position.
3. Elevator Maintenance Contractor shall check the door opening and closing speeds **at least quarterly**, and make any required adjustments at the time the door speeds are checked. Note the testing and adjusting results in maintenance documents. Mechanics shall be issued stopwatches for evaluation of door operation.

Z. Schedule for Door Closing Pressure Measurements:

1. **To be measured at approximately 1/3 to 2/3 closed, door closing pressure** shall be set at a maximum of **18-20** pounds of door torque for all sliding-type power-operated doors.
2. Door closing pressure shall be checked **at least quarterly**, using a spring pressure type gauge, and adjustments shall be made to the door operator machinery as soon as the noticeable variation from the requirements is detected. Note the testing and adjustment results in maintenance documents. Mechanics shall be issued a spring gauge-type pressure measuring tool to conduct this test.
3. Door-closing pressure gauges shall be checked periodically for accuracy and replaced when they are no longer accurate.

AA. Schedule for Checking Elevator Floor Leveling Accuracy:

1. Floor leveling accuracy shall be set and maintained at a variation of no more than **3/16"** from exact floor level at all floors, regardless of the direction of travel and load on the elevator car platform.
2. Floor leveling accuracy shall be checked at all floors, on a **monthly** basis, during regularly scheduled maintenance examinations. Any variation found shall be corrected immediately and noted in the maintenance records.

BB. Schedule for Door Stand Open Time Evaluation:

1. The initial **door stand open time** shall be set at 5.5 seconds for each elevator unless the University's Representative requests that the time be lengthened. If the door time is lengthened, the time period should be noted on the machine room records and on the report of work performed at the time of readjustment. Records should reflect the name of the person authorizing the change in door open time adjustment.
2. The door stands open time should be checked **quarterly** by the Contractor and adjusted as may be required to maintain the time setting requested by the University. Note door stands open time in maintenance records.

CC. Schedule for Elevator Travel Speeds & Performance:

1. Traction or Drum Type Elevators:

- a) The high-speed operation of all elevators shall be within 3% of the system's original design speed, or the renovated equipment design speed, in both directions, with or without a load on the elevator. Speeds shall be checked **by the Contractor every three (3) months**, with a digital tachometer, such as Maxton brand SafeTach device, and adjustments made when a discrepancy is detected.
- b) The rate of acceleration and deceleration is to be set at 3.0 feet per second.
- c) The car shall commence movement from the floor approximately one (1) second after all door locks or safety switches are closed.
- d) Ride Quality: Car rides on all elevators shall be smooth, quiet, and free from objectionable noises, scrapes, rattling sounds, vibrations, lateral car movement, or harshness in acceleration and deceleration control. The Contractor shall check monthly and make all required adjustments to attain the operational quality listed herein.

2. Hydraulic Elevators:

- a) The Contractor shall ensure the high-speed operation of the elevators shall be within 5% of the original system or the renovated elevator equipment design speed, whichever is the latest design criterion. The down direction speed, without a load on the elevator, shall be set within 8% percent of the up speed of the elevator. The down speed shall be checked **every three (3) months** using a digital tachometer (such as Maxton brand SafeTach), and corrections made, where necessary. Note any needed speed changes in the maintenance records.
- b) The rate of acceleration and deceleration shall be maintained to operate the elevator equipment in a smooth and efficient manner, approximately 1.75-2.0 feet per second, free from jerky, abrupt and uncomfortable operation. The rates of acceleration and deceleration, including the leveling operation, shall be the maximum achievable to the best service possible provided for the building. This operation shall also be checked by the Contractor every **three (3) months**, and make all required adjustments to keep the equipment operating as required herein. Note needed changes in the maintenance records.
- c) The Contractor shall ensure the car commences movement in the upward direction as quickly as possible once the door locks and switches are closed, and the motor commences operating at full speed in the upward direction. Movement in the downward direction shall commence as soon as the door interlock and gate contacts are closed.

- d) Ride Quality: The elevator car ride shall be smooth, quiet and free from objectionable noises, scrapes, rattles, vibrations, lateral car movement, or harshness in all positions throughout the travel of the elevator car. Any discrepancies found shall be corrected immediately. The Contractor shall check the elevator ride quality monthly, and all needed adjustments shall be made when variations are found.

3. Elevator Performance Subject to Evaluation by Elevator Consultant:

- a) The overall work performance of the Contractor, and the elevator equipment are subject to periodic evaluation by the University's Independent Elevator Consultant. Any items identified by the Independent Elevator Consultant as requiring improvement or correction, elevator industry standards, elevator performance requirements, or the latest edition of ASME A17.1 Safety Code for Elevators and Escalators, and State of South Carolina Elevator Code, Title 41, shall be corrected within 45 days maximum, by the Contractor.
- b) Any changes in the government's requirements, which involve additional costs on the part of the Contractor, shall be paid for by the University.

4. Schedules for Routine Maintenance Provisions, Adjustments, Repairs, and Cleaning:

- a) The Contractor shall perform all of the following work at no additional charge. All of the listed information shall be incorporated into the electronically generated monthly maintenance management requirements based on the frequencies listed below:

1) Elevator Cars – All Elevators:

- i. The Contractor shall check the condition of all components and systems and provide all needed repairs or adjustments to the elevator car and car top equipment; clean all car tops, cross-head support members, car door operator machine, car door hanger equipment, car threshold, roller and slide guides on cars, other tops of car related equipment, car door switches, electronic safety screens or door edges, car door clutch(s) and related equipment at least **every two (2) months**, to maintain a professional appearance, function and operation. Adjustments and/or repairs of guide shoes, roller guides, door operator machines, car door hangers and tracks, door hanger up-thrusts, and related equipment must be made when such work is diagnosed as being required or needed. Replace any defective cab ceiling lighting lamps, fixtures, and the like during normal maintenance examinations or whenever notified that the University requires such work.

2) Elevator Driving Machines – Traction Elevators:

a) Geared Driving Machines:

- i. Contractor shall replace the worm gear oil in each geared traction or drum-type driving machine at least **bi-annually (every two years)**. This work includes draining used oil and thoroughly flushing the gear case of all oil, sludge, and metal particles before refilling the gear case or reservoir with fresh oil of the proper grade and weight using only the highest grade *synthetic* type worm gear oil of the type, viscosity, and quality recommended by the driving machine manufacturer. The contractor shall maintain a permanent tag securely attached to the driving machine gear case, identifying the lubricant installed in the driving machine and the dates the oil has been replaced. Also, list the work in the maintenance documents as to when the worm gear oil is replaced or added to the gearbox, and the brand/type that was installed. The Contractor shall provide metal or plastic tags.
- ii. The Contractor shall properly lubricate all other lubrication points on the elevator driving machines, using the machine manufacturer's recommended lubricants and procedures, and at the proper frequency. This includes drive sheave support bearings, brake pivot

points, brake magnet cores and sleeves, drive motors, couplings, and any other locations where lubrication is required. Follow the equipment manufacturer's recommendations in all cases.

- iii. The Contractor shall ensure that the elevator driving machine worm gear lubrication must be kept at the proper level. The Contractor shall ensure that Waste oil is not allowed to accumulate on the machine room floor, on machines, on machine bases, or under the driving machine. The Contractor shall ensure that all leaking seals are repaired or replaced as quickly as they are discovered as leaking. The use of absorbent pads around or under driving machines is not an acceptable substitute for replacing seals or gaskets on driving machines and will not be accepted. Minor worm gear oil leakage shall be wiped off the driving machine each month during the maintenance examination work.
- iv. Each month, verify that the drive motor bearings, machine thrust bearings, machine worm shaft bearings, machine drive sheave bearings, and the like are in good condition. Any deteriorated bearings shall be scheduled for immediate replacement.
- v. The Contractor shall examine geared-type driving machine sound and vibration absorbing pads quarterly, and any damaged or deteriorated pads or mountings shall be replaced before they become totally ineffective. The Contractor shall provide all proper materials and tools necessary to replace the pads by following the equipment manufacturer's recommendations.

5. Gearless Driving Machines:

- a) The Contractor shall ensure that the gearless driving machines on any elevators where such design occurs are kept clean and properly maintained. The brake assemblies shall be examined by the Contractor **quarterly** for proper operation, noise level, overheating, and functionality. The Contractor shall perform any required and recommended type of brake maintenance specific to the type of equipment installed on the elevator. The Contractor shall verify the performance and wearing characteristics based on the manufacturer's recommendations and maintenance instructions. The Contractor shall check the security of mounting and noise levels of the driving machinery during the quarterly examination.
- b) The Contractor shall ensure that the machinery brake assemblies are adjusted and maintained to keep the operating noise level as low as possible. The Contractor shall make notations in the maintenance records related to any brake assembly repairs or adjustments.

6. Elevator Driving Machines (Pumping Units) – Hydraulic Elevators:

- a) Contractor shall filter the hydraulic fluid in the reservoir of each hydraulic elevator at least every three (3) years, using a high-capacity type portable filtering system and clean filter cartridges (use new filters for each elevator), to operate for a period of at least five (5) days while the elevator system remains in operation. The Contractor shall clean the reservoir of any dirt and debris that may have collected on the bottom of the tank or reservoir before filtering the oil supply.
- b) On dry-mounted motor and pump assemblies, The Contractor shall clean the pump, drive motor, oil control valve, and oil collection pan under the unit at least **every two (2) months** to alleviate the accumulation of dirt, debris, and waste oil. The belt tension and condition should also be checked by the Contractor at least **every two (2) months**, and belt replacements or adjustments where required. The Contractor shall clean the exterior of units at least **one (1) time per month**. To prevent failure, the contractor should replace belts that are badly worn or cracked as soon as possible. The Contractor shall ensure that waste oil is never returned to the oil reservoir. The Contractor shall check the oil level in the tank monthly after installing a magnet inside the tank to verify the proper fluid level when the elevator is positioned at the bottom floor level.
- c) On dry or wet-mounted types of hydraulic pumping units, the Contractor shall check the condition

of the electrical wiring, tank, or reservoir for leakage, the correct oil level in the tank, and noise levels of the pumps and motors each month. The Contractor shall clean the exterior of all pumping units at least **one (1) time monthly**. The Contractor shall replace any spin-off oil filters mounted on oil cooler systems, as frequently as necessary, to maintain efficient operation of the oil cooling systems.

- d) The Contractor shall regularly check the condition of all oil supply hoses, sound and vibration couplings, silencers, and other such assemblies with rubber components and replace them in the event of leakage. The rubber pads inside oil-hydraulic silencer units with such pads shall be replaced every three (3) years by the Contractor so that the silencer units can continue operating as designed. After replacing such pads, note the silencer maintenance work in the elevator maintenance records.

7. Elevator Driving Machine Motors – Geared & Gearless Traction Elevators:

- a) The Contractor shall completely check the operating condition of all the alternating and direct current motors and related components at least once per month. Exterior of the driving machine motors and related electrical gear must be cleaned at least **monthly** by the Contractor to maintain a professional appearance and operation. The Contractor shall check the condition of the motor bearings at least **one (1) time per month**. The Contractor shall ensure motor bearing lubrication, if required, is completed as recommended by the motor manufacturer.
- b) The Contractor shall verify the motor alignment is satisfactory on all geared traction drive motors. If the alignment is not within .001", alignment shall be corrected as soon as possible.

8. Elevator Driving Machines –Geared Traction Elevators:

- a) The Contractor shall ensure check of operation, adjustment, and repair are completed. If necessary, the Contractor shall clean all worm-gear traction-type elevator driving machines, drive sheaves, brake pulleys, brake assemblies, gearboxes, and all other related components or equipment on a regular basis, **at least monthly**, to maintain a professional appearance and operation. Adjustments to the driving machine brake assemblies shall be made when necessary and in accordance with ASME A17.1 safety Code for Elevators and Escalators. Machine brakes must perform smoothly and quietly. All geared traction machine brake assemblies shall be dismantled, examined, cleaned, repaired as necessary, lubricated, reassembled, and tested on an **annual basis** by the Contractor. All vibrations, noises, or other unfavorable operational problems of any type must be corrected by the Contractor when detected.
- b) The Contractor shall replace, when appropriate, and before elevator performance deteriorates, machine drive sheaves, brake shoes, worms and gears, coupling bushings, machine and motor bearings, machine isolation pads, gaskets, seals, and other wearing parts. The Contractor shall perform the work when any worn or damaged condition is first detected.

9. Hydraulic Cylinders, Piping and Related Conditions, and Hydraulic Cylinder Maintenance– Oil-hydraulic Elevators:

- a) The Contractor shall regularly check, repair, and adjust the equipment conditions at the top of each hydraulic cylinder while examining the conditions involving leakage, damage to the packing gland, or other conditions that may impact the safety of operation. If the packing or seals leak as much as **½ gallon** per month, the seals or packing shall be scheduled for immediate replacement using the highest silicone-enhanced, high-quality seals and gaskets. The tops of the cylinders must be cleaned **monthly** by the Contractor to prevent dirt and debris from being dragged into the hydraulic system. The Contractor shall check and repair all of the piping, valves, and fittings in the machine room and pit area where necessary at least **one (1) time every two (2) months**.

- b) **Five (5) gallon metal or plastic containers with enclosed tops must be used by the Contractor to collect leaking hydraulic fluid. The Contractor shall properly dispose of any oil leakage; and never return the waste oil to the power unit reservoir. Waste oil should be lawfully discarded by a recycling firm by the Contractor.**
- c) Contractor shall not allow the pit area to become contaminated with waste hydraulic fluid and shall thoroughly clean the area with an electrically powered pressure washer to remove the oil residue if such conditions occur. The pit areas must be kept clean of any oil residue, so the floor can be painted periodically to enhance cleaning and alleviate waste oil's strong odors.
- d) **Special Note:** The buried portion of hydraulic cylinders and any buried hydraulic pressure piping cannot be maintained; therefore, this equipment is excluded from this Contractor's responsibility. When an underground leak is discovered, the Contractor shall immediately remove the elevator from service. The Contractor shall immediately notify the University that the condition must be corrected before returning the elevator to service. Contractor shall initiate a discussion on the alternatives for repairing the system.

10. Hoistway Door Equipment – All Elevators:

- a) The Contractor shall examine, adjust, repair, and clean **all** hoistway door tracks and hanger equipment, interlocks and interlock release mechanisms, door guide shoe assemblies, door closers, relating cables and hardware, thresholds in the hoistway, and the related door operating equipment, completely, at least **every four (4) months**, to maintain professional appearance, function, and operation. The Contractor shall ensure that all damaged or worn components are adjusted, replaced, or repaired when first determined that corrective work or replacement is necessary or suitable for continued high-quality, safe, and reliable system operation. Delaying parts replacement until they fail completely is not an acceptable practice.

11. Hoistway Equipment – All Elevators:

- a) The Contractor shall thoroughly examine, adjust, and clean **all** of the hoistway equipment, guide rails and brackets, roller or slide guide assemblies on cars (including on the bottom of all cars, and on counterweight assemblies of traction elevators), separator beams, side, and lower car frame, hoist cables (traction elevators), sheaves of all types, governor cables (traction elevators), entire under-car safety devices (traction elevators), traveling cables, compensating cables or chains (where used on traction elevators), the exterior of elevator cab walls, edges and bottom of car platforms, and all other related equipment at least **one (1) time per year**. The Contractor shall clean, adjust, and repair more often, if needed, to maintain professional appearance, function, and operation. The Contractor shall ensure that all worn or damaged elevator equipment items are replaced, repaired, or adjusted when the condition is first determined or as necessary to maintain reliable elevator operation. The Contractor shall list the cleaning and maintenance activities in the maintenance records.

12. Elevator Machinery Rooms or Spaces – All Elevators:

- a) The Contractor shall ensure that all the equipment in the elevator machinery room areas or similar workspaces, including over-speed governors (traction elevators), driving machines, power units and oil coolers (hydraulic elevators), driving sheaves and deflector sheaves (traction elevators), the exterior of elevator electrical controllers, isolation transformers, disconnect switches and all other electrical equipment, piping, ductwork, and devices shall be kept clean at **all times**, including the machinery room area floors. These requirements must be addressed during each monthly visit to the machinery rooms or spaces.

- b) Painting Requirements: The Contractor shall ensure that the machinery room and pit floors are freshly painted on a regular basis, at least **every four (4) years**, to provide a professional appearance at all times.

13. Elevator Electrical Controller Equipment in each machinery room or machinery area-related space shall be examined during each maintenance interval, and other work shall occur during the other intervals listed below. The following operations apply to the controller equipment:

- a) The Contractor shall clean the exterior of the controller cabinets on a monthly basis.
- b) The Contractor shall thoroughly clean the interior of the controller equipment cabinet and equipment on a semi-annual basis.
- c) The Contractor shall retighten the main power supply conductor connections on the starters and drive systems at least annually.
- d) The Contractor shall keep the door(s) closed on controllers when not performing maintenance on the equipment if they are equipped with doors or panel covers.
- e) The Contractor shall not store miscellaneous items, including wiring diagrams, inside the controller panels.
- f) The Contractor shall listen for unusual noises or sounds which can indicate potential problems with the equipment.
- g) The Contractor shall not touch sensitive components on circuit boards with bare hands. Use approved techniques when handling or examining electronic equipment.
- h) The Contractor shall examine terminal strip connections periodically to see that connections are securely fastened and have no apparent corrosion.

14. Pit Equipment and Pit Area – All Elevators:

- a) The Contractor shall thoroughly examine, repair, lubricate (where appropriate), and wipe clean the various components in the pit areas and pit-mounted elevator equipment, including buffers and buffer supports, compensation equipment (traction elevators only, if applicable), governor tail sheave and weight assemblies (traction elevators), counterweight guards (traction elevators), hydraulic cylinders (hydraulic elevators only) limit switches, pit mounted ladders, light fixtures, electrical conduit and electrical ductwork, various protective guards or screens, and all other equipment or devices, at least one (1) time **every two (2) months**.
- b) The Contractor shall ensure that the pit floor is swept clean at **least every two months**, or more often if needed to maintain the area free of accumulation of dirt, dust, and debris. The Contractor shall ensure that the pit floors are painted periodically to maintain a professional appearance and ease of cleaning. Pit floors that accumulate water should not be painted; however, such leakage should be reported to the University in writing as often as necessary. Water standing in elevator pits is a violation of the elevator code and is considered to be a safety hazard.

15. Miscellaneous Areas and Items – All Elevators:

- a) Depending on building conditions and usage, the Contractor may require more frequent cleaning to maintain professional quality housekeeping standards. The Contractor shall take all necessary steps to keep the equipment in a first-class, professional-looking condition and to perform all necessary minor painting for appearance and control of rust or corrosion.
- b) The Contractor shall examine hoist cables or belts and equalize the rope/belt tension on hoist ropes & belts (on traction elevators only) **at least two times per year**. The Contractor shall shorten hoist ropes or belts as required so that the counterweight does not strike the pit buffers on traction elevators when the elevator is at the top landing. Shorten governor cables, as needed, to prevent the governor tail sheave assembly from dropping below the normal operating

- position, which is normal for the support arm to be in a horizontal position.
- c) On all elevators, the Contractor shall replace all door guide assemblies or replaceable shoes according to the following maintenance or repair schedule:
 - 1) **Car door** guide shoe assemblies shall be replaced **at least one time per year** or more often if needed.
 - 2) **Main floor**, hoistway door panels, and door guide shoe assemblies shall be completely replaced **every two (2) years**, or more often, if needed.
 - 3) Door panels for all other hoistway doors shall have guide shoes replaced at least **every five (5) years**, or more often, if needed.
 - 4) These requirements are mandatory and are intended to avoid damage to doors, thresholds, and door equipment.
 - 5) Note the replacement of door guide shoe assemblies in the maintenance records.
 - d) On a monthly basis, the Contractor shall examine the security of handrails on elevators, and tighten if they become loose: The Contractor shall tighten all other cabs, cab doors, cabinets, and signal fixtures fasteners when required to prevent loose fasteners, noises, rattles, squeaks and alignment problems; and replace all broken or damaged signal fixture components, screws or devices when damage is first recognized.
 - e) The Contractor shall clean the thresholds and spaces behind the front return panel(s) every **three (3) months** to avoid debris accumulation that can interfere with car door operation. The Contractor shall notify the University of any cab-related repairs, damaged components, or issues which are not included in the elevator maintenance contract and provide a proposal for making the appropriate repairs or replacements.
 - f) All elevator equipment components or systems requiring lubrication for proper, reliable, safe operation shall be lubricated by the Contractor at regular intervals to ensure that the equipment operates in a suitable manner. The Contractor shall follow directions and recommendations recommended by the original equipment manufacturer.

16. Corrosion Control on All Elevator Equipment – All Elevators:

- a) The Contractor shall prevent minor rusting and corrosion on the elevator equipment. Suitable steps shall be taken to keep rust and corrosion from impacting the elevator systems. Equipment shall be examined periodically by the Contractor to determine if additional work is required.
- b) Special Note: Painting to correct or prevent major or abnormal corrosion-related issues is not included.**
- c) **Special Note:** In the event of building flooding, exposure to exterior environmental conditions, plumbing leaks or overflows, roof leaks and similar conditions, vandalism or sabotage, civil unrest or other such conditions, that can cause damage to the elevator equipment, the Contractor shall provide an expedient, comprehensive, written report, explicit photographs, recommendations for correction and appropriate pricing for total correction of the damage which has occurred, beyond the normal environmental conditions. The University shall be responsible for the cost repairs or reconditioning of any unusual conditions.

17. Resetting of Elevator Control Systems:

- a) From time to time, elevators may not function due to control systems needing to be reset because of a variety of conditions or causes, including but not limited to power outages, power fluctuations, doors being held open too long, or for any other reason. The Contractor shall reset the elevator control systems regardless of the nature of the failure or cause without additional billing to the University, unless the Contractor can verify that the conditions were caused by conditions over which the University or University's invited guests, students or other such persons had control on a repetitive basis.
- b) In the event frequent failures or conditions not associated with the elevator system continue to

cause elevator shut-downs, these conditions should prompt a meeting of the Contractor with the University Representatives to discuss a resolution to the problems. The need to reset the control systems should not be a reason to require the Contractor to be fully responsible for all such nuisance-related issues that should be eliminated by or accepted by the University.

18. Minor Repairs Not Directly Associated with Elevator Equipment Failures:

- a) Occasionally, an elevator will fail due to firemen's service recall operation, trash in the elevator thresholds, damaged pushbuttons, or similar circumstances. So long as the repair for such events does not take more than 1.0 hour while working on the site, the Contractor shall restore the elevator to service without charge to the University.

19. University Will Provide Proper Building Maintenance:

- a) The University will make every reasonable effort to provide proper maintenance and repairs to the following items, equipment, and building areas, including removal of water, and Contractor shall advise the need, in writing, when corrective work is required of the University:
 - 1) Proper and safe access to the elevator equipment and machinery areas or locations, including the access doors (must be self-closing, self-locking, requiring a restricted key to enter the rooms.) Access to machine rooms and machinery/controller spaces or areas must be properly illuminated for safety purposes. Unauthorized personnel should be prevented from entering the elevator machinery areas without proper supervision, except to replace lighting equipment or lamps, air conditioning filters, and the like located inside the machinery areas.
 - 2) Machinery rooms must be well-lighted, with at least 19-foot candles of illumination in all areas in the rooms, measured at floor level, in the darkest spot in the room. No dark areas or major shadows are allowed. Provide a light switch on the strike jamb of the access door, just inside the rooms or machinery spaces.
 - 3) Machinery rooms or spaces may require adequate air conditioning. If required, air conditioning should be functional 24/7 if the elevators are functional on that basis. Cooling and heating equipment must be capable of keeping the machinery room spaces between 72-78 degrees F at all times the elevator system is in operation. University shall maintain this equipment on a consistent basis and make repairs or replacements as needed to keep the equipment functional and reliable. All necessary steps shall be taken to prevent the air conditioning equipment condensate from dripping onto the machinery room floor, onto elevator equipment or on electrical equipment of any type, and routine air conditioner filters shall be replaced.
 - 4) All fire and emergency alarm systems, cameras, emergency building lighting, elevator-related firemen's recall system, wiring, and the like, and all smoke detectors, heat detectors, building sprinkler systems, and the like, as needed.
 - 5) Maintain wall electrical outlets in the elevator machinery rooms, elevator control spaces, and pit areas. These outlets should be GFCI-protected for added safety. Single non-GFCI-protected outlets should be used where sump pumps are installed.
 - 6) Keep all water from leaking into the machinery room areas, hoistway areas, and pit areas. It is an elevator code violation for water to be present in any of these areas.
 - 7) Electrical equipment (lighting, receptacles, lighting switches, electrical conduit and the like) located in the elevator pit areas shall be kept in highly serviceable and operable condition at all times. In the interest of safety, the Contractor shall physically replace the lamps in the pit areas, using high out-put, high quality LED lamps, furnished to them by the University.
 - 8) For work safety purposes, lighting level in elevator pits is currently required by elevator code to be at least 10 foot candles, measured at the pit floor. No shadows are permitted. Generally, it will require at least two (2) lighting fixtures, per elevator, to provide the required lighting in each elevator pit. Installation of any new lighting may be required, and should

meet the location requirements of the Contractor. Costs for new lighting systems shall be borne by the University.

- 9) Cleaning and minor maintenance of elevator cab walls and interior components; cleaning cab door surfaces; cleaning cab operating fixtures; cleaning cab lighting fixtures and ceiling components; cleaning landing operating fixtures; cleaning of landing doors and frames; cleaning of door safety device, and all other cleaning of surfaces exposed to the public. Building maintenance and cleaning personnel should be properly trained by the Contractor so that they do not create conditions that cause elevator failures and reliability problems nor damage the architectural finishes or related equipment.
- 10) Regular vacuuming, at least daily, of the hoistway and car door threshold grooves, which are exposed to public view. Accumulation of dirt and debris in the grooves can cause elevator shut-downs, damage to the doors, and other reliability problems. Periodic thorough cleaning and polishing of all exposed thresholds is recommended to improve their appearance and remove any substances that may cause accidents or hamper elevator operation.
- 11) Frequent cleaning of elevator cab flooring and removal of any water or slippery substances from the floor covering, in the interest of safety. This work should be performed at least daily.
- 12) Frequent cleaning and removal of water and debris from floor landing surfaces, in front of the elevator doors at each landing.
- 13) Routinely check of ceiling lighting in front of the elevator systems. Make required repairs immediately.
- 14) Routinely riding each elevator by a representative of the University, and checking for basic safety-related items, including the following: floor leveling, door operation, door safety detector operation, alarm bell function, proper car lighting, emergency telephone device operation; unusual noises during car movement, unusual vibrations during car movement and the like. Immediately advise Contractor of any noticeable defects. University should keep daily records of this physical check of the elevator systems for liability and safety purposes.
- 15) Periodically (at least annually) check the elevator's main power wiring, fused disconnects, and circuit breaker panels, which feed the elevator systems. Contractor is not responsible to check the power supplies and disconnect means.
- 16) Arrange and pay for the required annual elevator safety inspections conducted by a Certified elevator inspector fully qualified by State of South Carolina. University shall coordinate the elevator inspections with the Contractor. Contractor shall work with the inspection firm to suitably perform the work as efficiently as possible.

20. ELEVATOR EQUIPMENT COVERAGE AND MAINTENANCE FREQUENCY

a) Equipment Included:

The Contractor shall ensure the systems are relatively free from major accumulated wear or deterioration whatsoever which would detract from the elevator equipment's appearance, performance, functionality, safety, and reliability. The elevator and lifts must be maintained to the highest elevator industry standards, including providing the following:

- 1) Geared and gearless type traction hoisting machines complete, including applicable gearboxes, worm, gears, seals, gaskets, drive sheaves, cable drums, sheave shafts, gear spiders, bearings, bearing supports and mountings of all types, brake assemblies complete, brake coils, brake switches, brake shoes and linings, couplings and bushings, brake pivot pins and bearings, oil seal retainer flanges, alternating or direct current drive motors complete, motor housings, drive motor bearings, drive motor rotors and armatures, drive motor stators, encoders, motor brushes and brush rigging; drive motor cooling fans, tachometers, machine isolation pads and mountings, synthetic type lubricants for all suitable locations, and all other driving machine components, what so ever.

- 2) Oil-hydraulic pumping units, including reservoirs, pumps, motor components and motor bearings, motors complete, belts, sheaves, oil control valves, couplings, piping, sound and vibration isolation couplings, shut-off valves of all types, thermostats, oil cooler assemblies complete, hydraulic silencers with renewable interior and exterior components, isolation pads under pumping units, noise control products of all types, electrical conduits & fittings, pressure piping & fittings, wiring of all types, connectors, grommets and all other components of the pump and pressure systems, whatsoever.
- 3) Hydraulic cylinder plungers and plunger couplings, platen plates, platen plate isolation devices, hydraulic packing and seals of all types, hydraulic cylinder guide bearings, hydraulic cylinder packing glands and other components, pressure lines and fittings, piping supports, pressure line shut-off valves, pipe rupture valves, cylinder gas venting fittings, and all other pressure line system components, what so ever. Include five (5) gallon oil leakage collection containers and collection tubes for all hydraulic cylinders. **Special Note:** Replacement of buried cylinders and buried hydraulic pressure lines is not a requirement; however, the Contractor shall promptly remove any such elevator from operation and notify the University in writing when there is an underground leakage in any hydraulic system. The elevator shall not be returned to operation until the elevator system has been fully repaired to stop the leakage and the work is accomplished and inspected in accordance with the latest edition of AMSE A17.1 Safety Code for Elevators. Any hydraulic fluid added to any system at any time shall be accounted for by the Contractor and listed in the Maintenance records for the appropriate elevator system.
- 4) Car movement and logic controller equipment complete, including dispatching equipment, relays, timers, rectifiers, batteries, transformers of all types, isolation transformers, wiring, power conversion devices, fuse holders, electronic boards or connection devices of all types, printed circuit boards of all types, software programs, contactors, capacitors, resistors, terminal strips, computers, leads, fuses, amp-traps, encoders, tachometers, electrical panels, electronic starters, and motor drive units and components; floor selector systems complete, selector components and devices, vanes, tapes; switches of all types, cams of all types, and all other components in the elevator control systems(s), whether or not listed herein.
- 5) Traction elevator hoist ropes and traction belts, and governor ropes, including fastenings and shackles, isolators and springs, and other devices.
- 6) Car and counterweight guide shoe assemblies, complete with rollers or slide-type assemblies, mountings, springs, pivots, bolts, or other devices. Car roller guide wheels shall also be replaced when the rubber tires become inflexible, which will detract from car ride comfort.
- 7) Elevator car platforms, car frames, sub-flooring, load-weighting devices of all types, under-car or car top safety devices, platform isolation devices, cab steadying devices, fastenings or attachments, and all car-related hardware. **Special Note:** Equipment or platform components severely damaged by frequent contact with water or damaged by misuse and abuse will not be covered.
- 8) Car and/or counterweight buffers, buffer supports, and buffer switches and wiring, where applicable.
- 9) Traction elevator counterweight fillers, weights, tie rods, weight fastening assemblies, frames, hitches, and other counterweight components, including all types of guiding devices.
- 10) Car and hall (landing) signal devices, key switches, pushbuttons, button caps, position indicators, lanterns of all types, indicators of all types, mounting screws, gongs, chimes, indicators of all types, light emitting diodes, incandescent or fluorescent signal lamps of all types, displays, lobby panels, elevator mounted camera and monitor wiring or cables, all other electrical cables and wiring, and all related equipment. All incandescent lamps in operating fixtures of all types shall be replaced with LED-type lamps when lamps have failed due to burnout if suitable LED lamps are available.
- 11) Hoistway door hangers, door hanger tracks, door rollers, door relating cables and sheaves, interlocks, interlock release mechanisms of all types, door closers of all types, door guide shoe assemblies, and any replaceable shoes or slides, door security flanges, up-thrusts or eccentrics,

hoistway door bumpers, markings for handicapped personnel on door frames, and all other door related hardware.

- 12) Door operating systems, including entire car door operator machines, machine motors, motor or system encoders, drive belts, car door clutches, contacts, switches, door hangers, door hanger tracks, door rollers, electronic safety screens or edges complete, drive arms, wiring and cables, car door opening restrictor devices of all types, car door hanger up-thrusts or eccentrics, car door guide assemblies and replaceable shoes, door bumpers for car and hoistway doors, and all other car door related components.
- 13) Traction elevator speed governors, rope deflector sheaves, encoders, tension sheaves, overspeed switches, contacts, over-speed jaws and weights, and all other related equipment.
- 14) Traction elevator secondary sheaves and mountings, 2:1 sheaves and mountings, deflector and overhead sheaves and mountings, all sheave beams and supports, all such bearings, bearing seals, guards, shafts, sheave mountings, bolts, and fasteners, and all other such related equipment.
- 15) Limit switches of all types, directional and emergency switches of all types, all related cams, brackets, and miscellaneous hardware.
- 16) Lubricators must be installed on all traction elevator hoist ropes that do not already have lubricators, including the use of recommended rope lubricants. Installation of new lubricators approved by Clemson shall be Draka brand Acculube assemblies, designed on all geared or gearless traction using metal hoist ropes for cleaning and lubricating the ropes. Adjust the lubricator for a proper amount of lubricant. Required new lubricators shall all be installed within six (6) months of the award.
- 17) Emergency communication equipment, including all types of telephones, intercommunication equipment, and other such related devices, including all batteries and battery chargers, and related equipment and wiring, except for any telephone equipment in the elevators, which is specially provided by the University. **Special Note:** Wiring of all types, from outside buildings to elevator controller panels, is the responsibility of the university. Contractor shall advise the University when operable phone equipment is not functioning due to phone line failure.
- 18) Cab ventilating fans or blowers of all types and designs, including blower motors, housings, safety screens, louvers, switches, wiring and related equipment. If individual components are not available, the entire blower assembly must be replaced with a suitable product or assembly of equal capacity and size.
- 19) Cab lighting tubes, bulbs, lamps, fixtures, starters, transformers, lighting system components, relays, timers, wiring, and switches, as well as any related equipment for normal cab lighting systems. LED-type lighting systems, and all such related components, are also the responsibility of the Contractor. Lay-in ceilings, ceiling frames, and the like are not included.
- 20) All elevator electrical wiring, including traveling cables, wiring troughs, ducts, conduit, electrical fittings, conductors of all types, fuses, lamp holders, connectors and all related electrical equipment.
- 21) Traction elevator ascending car safety devices for hoist ropes, including all related components in the emergency braking system, both on the braking device and on the elevator controller system.
- 22) Emergency car lighting system, including chargers, batteries, inverters, lenses, fixtures, lamps, LED bulbs, wiring, switches, and the like.
- 23) All wheelchair lifts, dumbwaiters and like equipment, wiring, and apparatus, driving machinery and motor assemblies, driving machinery brakes and gearbox assemblies complete, cables, rollers of all types, guides of all types, electrical controllers and switches of all types, signal fixtures of all types, door interlocks and gate contract assemblies of all types, car lighting and light switches, and all other specialty type lifting equipment components.
- 24) All required specialized lubricants for elevator equipment, including minor fills of the hydraulic fluid in the event of leakage due to need for cylinder seal replacement or system repairs. The University is responsible for the cost of replacing the hydraulic fluid in an elevator system.

Hydraulic fluid does require complete replacement from time to time, at intervals of approximately 13-15 years, in most cases, which is an additional cost to the University. Any complete system fluid replacements should be based on highest quality, biodegradable type, hydraulic fluid, entirely equal to ThyssenKrupp brand "Enviromax"™ product.

- 25) Safe and effective cleaning solvent products that are approved for the application for which they are used. These products must also be environmentally safe.
- 26) Various supplies (wiping rags and similar materials), mops, brooms, oil absorbing mats, tapes, 5-gallon buckets, low VOC paint of all types, paint brushes and painting supplies and a large variety of miscellaneous items necessary for proper elevator maintenance procedures.

b.) Lower Usage Level Elevators & Lifts: (Located in E & G Facilities and the like)

- 1) The Contractor shall provide scheduled routine preventive maintenance on all **lower usage level** elevators and lifts, at least **one (1) time per month**, with at least the amount of time shown to be spent on each elevator or lift, each month. This time shown is based on the time spent in the building in the process of providing scheduled preventive maintenance work, but not including travel time, time required to obtain parts and supplies, tests aside from normal routine maintenance tests, or other such time.
 - (i) Contractor Scheduled Preventive Maintenance Work for elevators on **lower usage level**, is required as follows:
 - (a) All oil-hydraulic elevators serving 2-3 stops shall receive at least 1.25 hours of scheduled preventive maintenance work per month, measured as time on the job.
 - (b) All oil-hydraulic elevators serving 4 or more stops shall receive at least 1.50 hours of scheduled preventive maintenance work each month, measured as time on the job.
 - (c) All traction and drum elevators serving up to 5 stops shall receive at least 2.00 hours of scheduled preventive maintenance work per month, measured as time on the job.
 - (d) All traction elevators serving 6 or more stops shall receive at least 2.5 hours of scheduled preventive maintenance work each month, measured as time on the job.
 - (e) Wheelchair lifts or other types of lifts shall receive at least .50 hour of scheduled preventive maintenance work per month, measured as time on the job.

21. Heavy Usage Elevators & Lifts: (Located in Housing Facilities and the like)

- a) The Contractor shall provide scheduled routine preventive maintenance on all **heavy usage level** elevators and lifts at least **one (1) time per month**, with a least the amount of time shown to be spent on each elevator or lift, per month. This time is based on the time to be spent in the building in the process of providing scheduled preventive maintenance work, but not including travel time required to search for parts and supplies, performing tests aside from normal routine maintenance tests, or other time required in connection with this contract.
- b) Contractor Scheduled Preventive Maintenance Work for University's elevators which are operating on a **Heavy Usage Level**, up to 24-hours per day basis, is required as follows:
 - i. All oil-hydraulic elevators serving 2-3 stops shall receive at least 1.50 hours of scheduled preventive maintenance work per month, measured as time on the job.
 - ii. All oil-hydraulic elevators serving more 4 floors or more shall receive at least 1.75 hours of scheduled preventive maintenance work per month, measured as time on the job.
 - iii. All traction elevators serving up to 5 floors shall receive at least 2.50 hours per month of scheduled preventive maintenance work per month, measured as time on the job.
 - iv. All traction elevators serving over 5 floors shall receive at least 2.75 hours per month of scheduled preventive maintenance work per month, measured as time on the job.
 - v. All wheelchair lifts shall receive at least .50 hour of scheduled preventive maintenance work per month, measured as time on the job.

- c) **SPECIAL NOTE:** In the event the Contractor fails to perform the scheduled monthly preventive maintenance work, the University shall have the right to deduct the total cost of the monthly maintenance, plus 15% penalty for failure to perform, for any elevator or lift unit that is not properly serviced or maintained during any month, in the sole opinion of the University. The deduct amount shall not be prorated, and is on a per incident basis.
- d) In the event additional preventive maintenance or repair time is required to keep the elevator equipment operating in a professional, trouble-free, first-class manner, the Contractor is required to provide the necessary maintenance required to accomplish the work without additional cost to the University.

22. Periodic Tests on Elevators and Lifts:

- a) The Contractor must perform any and all of the required elevator annual safety code tests on all elevators and lifts, as well as the required periodic pipe rupture valve tests on hydraulic
- b) elevators, and five (5) year safety and buffer tests on traction elevators, all at the Contractor's sole expense; also provide documentation that the tests have been performed as required by **ASME A17.1-2016**, or later, Safety Code for Elevators and Escalators, **ASME A7.2-2017** Elevator Inspectors Manual, and the requirements of the **State of South Carolina, Title 41**, for any periodic elevator and lift tests required. University representative shall have the option of witnessing all periodic elevator tests, and shall be given at least a five (5) day advanced notice of when tests will be performed.
- c) Evidence of such tests being successfully performed must be provided to the University, and to the State of South Carolina, as applicable by State Law. Costs of performing the tests, except for the cost of any required Elevator Inspector Fees and State of South Carolina annual elevator operating licenses, shall be at the expense of the Contractor. University shall pay for elevator inspection fees directly to the elevator inspection firm, and purchase the elevator operating licenses, as required by State of South Carolina. Additional Inspection fees shall be paid by the Contractor, if they fail to keep all the elevator related equipment in first-class, code compliant, condition.
- d) The Contractor shall perform periodic tests of the firemen's emergency recall system and the elevator telephone or communication systems on all elevators with such provisions, on **monthly basis**, and maintain written logs of having performed the tests. The log forms shall be provided by the Contractor. Record all test dates in the elevator machinery room or elevator machinery control spaces. Notify the University, in writing, of any elevator equipment that did not function properly during fire recall test, when it involves University supplied equipment. If any test fails due to elevator equipment malfunction, the Contractor shall immediately locate faults and correct the elevator controller malfunctions. These test requirements shall also be included in the monthly maintenance management program.
- e) Evidence of all testing shall be posted in elevator machine room or elevator control spaces, for all periodic tests, car emergency phone tests and fire service tests. Suitable metal or code approved test tags shall be placed on or near the elevator controllers indicating the most recent testing date and items tested. The emergency telephone and fire service testing can be logged on a separate form, displayed in the machinery room or elevator controller space.
- f) All elevators or lifts shall have a car number and State of South Carolina number permanently displayed on the equipment, in the locations required, including hoisting machine, pumping unit, controller, car crosshead, electrical disconnect and buffers, all as required by Elevator Code.

23. Additional Performance Requirements:

- a) The Contractor is expected to perform the preventive maintenance work in a manner that will
- b) keep the elevator overtime (call-backs) and outages to a minimum. The following number of overtime (call-backs) or outages due to equipment failure should not exceed the following listed number, otherwise the Elevator Contractor shall be considered failing to maintain the elevator equipment in a suitable manner:

- c) Five (5) overtime (call-backs), per year, per elevator, maximum. This is not to be interpreted to be an average of units, but a maximum number based on any individual unit. The intent of this Contract is to keep the number of failures below this number, by using a highly structured, professionally skilled, preventive maintenance program.
- d) In the event the emergency overtime (call-backs) on any elevator exceed five (5) in one year, the Contractor shall
- e) promptly initiate a meeting with the University to discuss solutions to the problems which may be causing the number of overtime (call-backs) to be excessive.
- f) The number of overtime (call-backs) or equipment outages shown does not include conditions related to power failure, excessive vandalism or abuse, failure of the University to provide proper maintenance and care of the University responsibility items, or other conditions over which the Contractor has no control.
- g) Quarterly, a list of all overtime (call-backs) per elevator or lift shall be presented to the University by the Contractor during a prearranged meeting. Solutions shall be presented to University, aimed at reducing equipment-related problems.

24. Elevator Equipment or Work Not Included:

- a) The University shall be responsible for the following items, equipment and conditions:
 - i. Finished flooring materials on elevator car platforms.
 - ii. Wear and tear on car and hoistway entrance thresholds or sills. Except when the wear or damage is the result of failure by the Contractor to maintain or replace the door guide shoe assemblies, or replaceable guide shoe inserts, when appropriate, to avoid excessive damage to door panels and thresholds.
 - iii. Cab or car enclosure walls and car tops, light diffusers, handrails (except for the regular tightening of the rails and rail supports), hung ceilings, translucent plastic ceiling panels, exposed ceiling fixtures or lighting globes, car door panels, protection pads and buttons, certificate frames, car operating panels, compartment covers or doors, switches, base moldings and other cab related materials or devices. Tightening or alignment of various cab components to improve the appearance, elimination of squeaks or rattles and the like on cab walls or components.
 - iv. Machine room power supplies, all machine room power disconnects, conduits and wire troughs, feeders, and main line power fuses. If failure of elevator equipment causes the fuses to be blown, the Contractor shall replace the fuses at his cost. As a precautionary measure, University should arrange for the disconnect switches, feeder connections and related equipment to be checked annually, and corrective action type repairs made where suitable.
 - v. Hoist way door panels, unless the panels are damaged by failure of the Contractor to maintain the door guide shoes or replaceable guide shoe inserts and balance/alignment of door hanger equipment.
 - vi. All elevator equipment replacement necessary due to major misuse or abuse, water intrusion, fire, wind, civil disturbance and the like shall be replaced at the expense of the University. During regularly scheduled maintenance visits, the elevator mechanic shall look for any such damaging conditions, and immediately notify the University of any such events. If appropriate, photographs of such damaged conditions shall be provided to the Client if pictures will help to clarify the information provided.
 - vii. Hoist way enclosure, machinery room area or spaces, access to the machinery room areas or spaces, machinery room area or space air conditioning equipment and performance, lighting for machinery room areas or machinery room spaces, machinery room area electrical outlets, emergency elevator power supplies and electrical gear associated with an emergency generator system, and all other electrical energy systems that were not installed by the Contractor.
 - viii. Elevator car emergency telephone or communication system wiring from source to the elevator controller panel in each elevator machinery room or controller space.
 - ix. Elevator car emergency telephone or communication systems wiring from source to elevator

- electrical controller panel in each elevator machinery area.
- x. Pit lighting circuits and convenience outlets, disconnects or fuses, conduit and wiring. Contractor shall be responsible for replacing pit lighting bulbs in the interest of work safety. Lamps shall be provided by the University.
 - xi. Elevator pits free from water or other fluids, except for hydraulic fluid. Leaking pits must be corrected.
 - xii. Car lighting and alarm circuit disconnects in machine room areas or elevator controller spaces (including wiring to disconnects), as well as fuses or circuit breakers.
 - xiii. Fire detection and suppression systems complete, including smoke and/or heat detectors, shunt-trip systems, sprinklers, wiring, alarms, signage, sirens and similar equipment.
- b) The Contractor does not assume control of the elevator. The University shall immediately notify the Contractor of any known operational defects which may occur during regular maintenance visits, and post any appropriate signage warning passengers not to ride on or use the elevator equipment in the event of elevator related malfunctions. Further, University shall remove any elevator equipment from service that is judged to be unsafe for passenger use.

25. Insurance Coverage:

- a) The Contractor shall continuously provide the following insurance, in addition to the insurance required by the University's Terms and Conditions:
- 1) **Commercial General Liability Insurance** - \$5,000,000.00 per occurrence limit for property damage and bodily injury. The Contractor shall indicate in its proposal whether the coverage is provided on a claims-made, or preferably on an occurrence basis. The insurance shall include coverage for the following:
 - i. Premises/Operations
 - ii. Products/Completed Operations
 - iii. Personal Injury
 - iv. Explosion, Collapse and Underground Property Damage coverage, where applicable.
 - v. Contractual Liability
 - vi. Independent Contractors
 - vii. Broad Form Property Damage

26. Additional Labor:

- a) Contactor shall enter pricing for special events that occur during normal hours and overtime labor rates, for all classes of work, including work that is included in and excluded from the Scope of Work, as follows hereinafter, included as **Bidding Schedule**.
- 1) Maintenance work labor rates (for overtime work, where the work time is only beyond the hours listed in contract terms)
 - 2) Repair work labor rates (, but the overtime portion of the hourly rate is not included in contract terms, beyond the three hours per such event.)
 - 3) Repair work team hour labor rates for regular time only.
 - 4) Repair work team hour labor rates for overtime only.
 - 5) Elevator renovation or modernization work (where no such materials or labor rates are established in the contract).
 - 6) For "Standby" for move-in/move-out and sporting events, during overtime time only, labor rates.
 - 7) Any other applicable labor rates or mark-ups on materials where no such materials or labor rates are established in the contract.
 - 8) Other pricing information, as requested. Contractors shall provide all pricing as appropriate for any condition that may occur.

27. Suspension Terms; Billing Credits During Major Repairs, Equipment Shut-Down or Buildings Removed from Use:

- a) The Contractor shall suspend the monthly billing, or provide billing credits for maintenance on one or more elevators during any time period that an elevator is removed from service for an extended period of time of over fourteen (14) days during any single occurrence when the elevator equipment has been removed from regular service. These conditions can be the result of a number of events such as building renovation, fire damage, storms, other catastrophic events, major repair work, or other occasions during which the University is not beneficially using the elevator equipment.
- b) Additionally, the University is permitted to permanently remove specific units if the event a building is: destroyed due to unavoidable causes, sold, closed, torn down, or if the elevator equipment is permanently removed from service. The respective price for maintenance of any elevator(s) impacted by such events shall be deducted from the contract price based on the price listed.

28. Addition of Elevators to Monthly Price:

- a) The University shall have the right to include additional elevators to the Contract Agreement. The maintenance pricing structure for elevators to be added shall be on the basis of similar elevators already included, or on a "fair price" basis as determined by University and University's Elevator Consultant.
- b) Additionally, the University shall have the right to eliminate elevators or lifts.

29. ASME A17.1-2019 Code Changes

- a) On July 1, 2023 the State elevator code ASME A17.1-2019 was adopted by South Carolina LLR. This new code requires a Camera/Text-Based monitoring system to be installed on all newly installed and modernized elevators. The alternative to allowing them would be to monitor in-house, this option would be significantly more expensive at this time and far more difficult to put into place.
- b) While it is undecided if Clemson will manage these changes in-house or by the Contractor of this solicitation, Clemson would like to gather market research in the course of this solicitation. Clemson University reserves the right to include these services or remove them from the requirements of this contract based on costs received and budgetary restrictions.

30. Elevator Camera/Text Based Monitoring Systems

- a) The Contractor must provide Camera/Text-Based equipment, monitoring systems, and monitoring service and is responsible to comply with ASME A17.1-2019, on all newly installed and or modernized elevators.
- b) Contractor must have the ability to provide 24-hour Camera/Text-based monitoring assistance in the form of a call center or similar process. This should include a detailed description of the call fielding process, scrip or other pre-determined call center response, and protocols to be followed in emergency's as related specifically to elevators. This would only be required on elevators installed/modernized after July-1- 2023 per new code requirements: Per ASME A17.1-2019. No elevators are currently equipped with this technology.
- c) Clemson is currently working on a five year modernization plan:

LOCATION	REPAIR DESCRIPTION/ SCOPE	COMMENTS/EXPLANATION	EXTRA DESCRIPTION	2	2	2
UFAC #1	Full Modernization	1 Otis unit - End of life cycle/Due to replace	TBD	4	5	6
				0	0	0
				2	2	2
				X		

UFAC #2	Full Modernization	1 Otis unit - End of life cycle/Due to replace	TBD	X
RUST/CETL	Full Modernization	1 Dover unit- End of life cycle/Due to replace	TBD	X
RICH	Full Modernization	1 Dover unit- End of life cycle/Due to replace	TBD	X
HARDIN	Full Modernization	DMC Controllers- Now obsolete limited availability on Boards	Scheduled for MAY-6-2024	X
Lee Hall	Jack Assembly Replacement	Existing jack head is an aluminum head and needs to be replaced	Scheduled for: March 18-29	X
BIOSYSTEMS (BRC)	Full Modernization	2 Units - Otis - End of life cycle - limited availability on boards	Scheduled for JUNE-3-AUG 15 (two elevators)	X
SIRRINE HALL	Full Modernization	1 Dover unit- End of life cycle/Due to replace	Scheduled for May-6-2024	X
Cooper Library Duplex	Full Modernization	TAC50 Controllers (2 Units)	Scheduled for Summer of 25 (two elevators)	X
SIKES	Full Modernization	TAC50 Controller (1 Unit)	TO BE DONE WHEN BUILDING IS UNOCCUPIED	X

- d) Successful offerors must have the ability to, but may not be required to, monitor camera/text-based systems installed by alternative contractors and/or suppliers. Contingent on hardware and software provided by alternative contractors or suppliers during construction. Contractor must provide recommendations for acceptable hardware/software when necessary.

IV. TERMS AND CONDITIONS – SPECIAL

1. **AWARD CRITERIA:** Offers will be evaluated using only the factors stated below. Evaluation factors are stated in relative order of importance, with the first factor being the most important.
 - a) Experience to include Company & Technicians and Higher Education
 - b) Cost
 - c) Support History
 - d) Automated Maintenance Management System
 - e) Ability to provide an ASME A17.1-2019 Elevator Camera/Text-Based Monitoring System Solution

V. APPENDICES TO SCOPE

- A. **Bidding Schedule – 173605289-1.xlsx** . This document is located in the online bidding system under the Attachments tab. It must be completed and submitted with the offeror’s proposal. Failure to do so may result in the rejection of the offer.
- B. **Basic Maintenance Work Requirements:** The following information is provided for reference only. This information describes basic maintenance work requirements as it is currently provided.
 1. **Major Parts, Minor Parts Supplies and Tools Inventory in Local Maintenance Facility:**
The following parts, materials and tools, in addition to all other normal maintenance components, parts, supplies, special equipment lubricants, and tools, to be used in servicing elevators under this contract, must be stocked within the 70 mile area:
 - a) At least two (2) sets of major and minor electronic boards, except for elevator specific “mother board” configurations, which will properly fit each type of elevator electronic type controller systems, including any and all elevator controller parts which may be needed to restore any elevator, to

- reliable service. Mother board configurations, if not stocked locally, shall be available from other stocking locations, obtainable within 48 hours of the need being established.
- b) At least one (1) set of all electronic or conventional controller components, electrical motor drive and motor starter assemblies, motor brushes of all types of motors used on this equipment, and the like, shall be available from the local stock, or obtainable within 48 hours after the need is established.
 - c) At least (2) sets of all relays, coils, resistors, rectifiers, terminal strips, timers, dashpots, transformers and other elevator controller operating devices, for any and all elevators.
 - d) A sufficient number and type of all electrical parts, switches, board edge connectors, fuses, fuse blocks, and electronic type components.
 - e) At least two (2) door operator motors for each type of elevator.
 - f) Complete sets, and miscellaneous components, devices, electrical cables and such for the electronic door detectors.
 - g) At least one (1) each of the alternating current elevator drive motors for all types, sizes, and voltages for dry and submersible motor type pumping units on oil-hydraulic elevators .
 - h) At least one (1) set of all brands and types of oil control valves, valve internal components, hydraulic system gaskets and seals, drive belts, hydraulic fluid pumps and all such components for the various types of oil hydraulic pumping units.
 - i) Two (2) sets of all types of hydraulic elevator cylinder packing seals and gaskets, for all types and brands of hydraulic elevators.
 - j) At least twenty-four (24) rollers, for car doors and hoist way doors, including all associated devices and hardware.
 - k) At least three (3) types of interlocks, interlock releases and related equipment or hardware.
 - l) At least ten (10) door closers and associated parts.
 - m) At least two (2) sets of door operator components, belts, control boards, switches, bearings, gate switches, car door clutches and the like.
 - n) At least six (6) roller guide wheels, of all types.
 - o) At least twelve (12) car door and twenty (20) hoist way door panel guides of all. These components shall accommodate different widths of door threshold groove widths, as needed.
 - p) Sufficient number of signal fixture components, including a wide selection of contact assemblies, contact blocks, mounting screws, pushbuttons, lamps, devices, key switches and all other components available to promptly repair all equipment on all.
 - q) Sufficient number of elevator capacity plates, hoist way entrance marking plates and the like, to replace any plates removed by elevator passengers.
 - r) Sufficient number of emergency lighting batteries, fixture lamps, operating devices, chargers, emergency bells, and the like to restore proper operation
 - s) Sufficient number of emergency telephone devices that will make it possible to restore elevator safety as soon as possible.
 - t) Selection of cab lighting lamps of all types, and replacement fixtures for safe elevator cab illumination.
 - u) Sufficient number of electric geared and gearless traction machine minor parts, seals, brake parts and the like, for expeditious elevator repairs.
 - v) Sufficient number of traction and hydraulic elevator hoist way switches for travel limitation, leveling, landing and car positioning purposes.
 - w) Sufficient number of heavy duty tools such as high capacity chain-falls, hydraulic cable cutters, hydraulic elevator piping tools, tools for replacing hydraulic cylinder packings, and other such tools for purposes of promptly restoring elevators to service.
 - x) Dollies for moving heavy objects and equipment.
 - y) Adequate number and amount of elevator capacity test weights for testing elevators, where needed.
 - z) Adequate number of high capacity hydraulic fluid filtering systems (at least two {2}). Also, an adequate number of filters for the systems.

- aa) Adequate number of blowers, vacuum cleaners, step ladders, oil transfer pumps, hoist rope tension gauges, door closing pressure spring type gauges, governor jaw/rope tension gauges, stop watches, voltage/resistance meters, amp. meters, fully programmed lap-top computers, software archives, all applicable adjustment and trouble-shooting manuals, all applicable parts manuals, and other such tools and maintenance aids. Each mechanic shall be issued a stop watch and door closing tension gauge.
- bb) Elevator mechanics shall be equipped with “electronic/digital tablets” or similar devices, with which they can obtain wiring diagrams, parts information and adjusting information, as well as communicate with all appropriate support personnel and University representatives.
- cc) Various types of painting supplies, coatings, lubricants, “Corrosion Block” protective coating, and all appropriate types of hydraulic fluids. Environmentally approved cleaning solvents and supplies must be on hand and available to the maintenance/repair mechanics.
- dd) Wiping cloths and other cleaning media.
- ee) Various other equipment, components, supplies, tools and the like, suitable for a highly efficient elevator maintenance and repair operation.
- ff) Adequate number of five-gallon buckets, with lids, for collection of waste oil on hydraulic elevators.
- gg) Adequate number of metal cans with lids, for temporary disposal of oily rags and the like.
- hh) Sufficient supply of miscellaneous bolt, nuts, washers and screws. Important stainless screws of all types, and related fastening devices, including all of those associated with signal fixtures, operating devices, indicators and the like.
- ii) Elevator maintenance mechanics assigned to provide maintenance and repairs shall be issued the following special tools for use in the conduct of their regular maintenance and repair duties:
 - 1) Maxton Brand SafeTach or equal device, for checking elevator speeds and the like.
 - 2) Spring type door pressure gauge to check the door closing pressure on all elevator doors.
 - 3) Stop watch to check the door opening and closing speeds.
 - 4) Digital/electronic tablet device for use in communicating all technical information relating to elevator maintenance work, maintenance records, maintenance requirements, emails, client communication, etc.

2. Elevator Equipment or Work Not Included:

- a) The University shall be responsible for the following items, equipment and conditions:
 - 1) Finished flooring materials on elevator car platforms.
 - 2) Wear and tear on car and hoistway entrance thresholds or sills. Except when the wear or damage is the result of failure by the Contractor to maintain or replace the door guide shoe assemblies, or replaceable guide shoe inserts, when appropriate, to avoid excessive damage to door panels and thresholds.
 - 3) Cab or car enclosure walls and car tops, light diffusers, handrails (except for the regular tightening of the rails and rail supports), hung ceilings, translucent plastic ceiling panels, exposed ceiling fixtures or lighting globes, car door panels, protection pads and buttons, certificate frames, car operating panels, compartment covers or doors, switches, base moldings and other cab related materials or devices. Tightening or alignment of various cab components to improve the appearance, elimination of squeaks or rattles and the like on cab walls or components.
 - 4) Machine room power supplies, all machine room power disconnects, conduits and wire troughs, feeders, and main line power fuses. If failure of elevator equipment causes the fuses to be blown, the Contractor shall replace the fuses at his cost. As a precautionary measure, University should arrange for the disconnect switches, feeder connections and related equipment to be checked annually, and corrective action type repairs made where suitable.
 - 5) Hoist way door panels, unless the panels are damaged by failure of the Contractor to maintain the door guide shoes or replaceable guide shoe inserts and balance/alignment of door hanger equipment.

- 6) All elevator equipment replacement necessary due to major misuse or abuse, water intrusion, fire, wind, civil disturbance and the like shall be replaced at the expense of the University. During regularly scheduled maintenance visits, the elevator mechanic shall look for any such damaging conditions, and immediately notify the University of any such events. If appropriate, photographs of such damaged conditions shall be provided to the Client if pictures will help to clarify the information provided.
- 7) Hoist way enclosure, machinery room area or spaces, access to the machinery room areas or spaces, machinery room area or space air conditioning equipment and performance, lighting for machinery room areas or machinery room spaces, machinery room area electrical outlets, emergency elevator power supplies and electrical gear associated with an emergency generator system, and all other electrical energy systems that were not installed by the Contractor.
- 8) Elevator car emergency telephone or communication system wiring from source to the elevator controller panel in each elevator machinery room or controller space.
- 9) Elevator car emergency telephone or communication systems wiring from source to elevator electrical controller panel in each elevator machinery area.
- 10) Pit lighting circuits and convenience outlets, disconnects or fuses, conduit and wiring. Contractor shall be responsible for replacing pit lighting bulbs in the interest of work safety. Lamps shall be provided by the University.
- 11) Elevator pits free from water or other fluids, except for hydraulic fluid. Leaking pits must be corrected.
- 12) Car lighting and alarm circuit disconnects in machine room areas or elevator controller spaces (including wiring to disconnects), as well as fuses or circuit breakers.
- 13) Fire detection and suppression systems complete, including smoke and/or heat detectors, shunt-trip systems, sprinklers, wiring, alarms, signage, sirens and similar equipment.

C. Elevator Inspection Report – This document is located in the online bidding system under the Attachments tab.

D. Elevator Work Schedule - This document is located in the online bidding system under the Attachments tab.

E. Five Year Modification Plan - This information is located in Section III Scope of Work/Specifications and in the online bidding system under the Attachments tab.

DETERMINATIONS AND FINDINGS REQUEST FOR PROPOSAL

Upon the basis of the following findings and determinations, the proposed competitive sealed proposal award is authorized pursuant to Section 11-35-1530 (9) of the 1976 South Carolina Code of Laws.

FINDINGS

Considering the evaluation factors set forth in the Request for Proposal and the negotiated price, the evaluation panel members have determined that the proposal submitted by ThyssenKrupp is the most advantageous to Clemson University and has met all the Request for Proposal requirements.

Clemson requires a contract for Elevator Maintenance Services from a company whose experience and technician experience are critical to the success of this contract. Cost and support history are also factors that significantly impact the ability of Clemson University to function at its peak performance.

Clemson requires a contract for elevator maintenance services from a dependable, experienced company equipped with proficient and seasoned technicians. These requirements safeguard our vertical transportation infrastructure's integrity, efficiency, and safety while ensuring meticulous attention to maintenance, modification, and repair.

The RFP #173605289 was issued on September 15th, 2023, and closed on September 22nd, 2023. This bid was canceled and rebid due to an error in the bidding schedule. The primary contract manager was on emergency leave, and the Procurement Department reviewed the solicitation results. It was determined that tab two of the Bidding Schedule, titled "Additional Labor & Material" had not been included in the evaluation process. This was an error resulting in a rebid. The Notice of Bid Cancellation was posted to the canceled bid event on January 22, 2024.

The rebid #173605289-1 was issued on January 29th, 2024. The deadline for questions ended on February 2nd, 2024. Five questions were received, and the addendum containing the questions and answers was posted on February 5th, 2024. This was the only addendum.

The solicitation closed on February 13th, 2024, and Clemson received four proposals, all deemed acceptable. Upon my initial responsiveness and responsibility inspection of the proposals



submitted, one clarification was required. Elevated Facilities Service Group included the word confidential in their proposal. I reached out to them and asked them to send a redacted copy, but they declined and said to use the documents submitted should we receive a FOIA request.

The Charge meeting took place on March 1st, 2024. All the evaluators were present at the Charge meeting. There were three evaluators on the evaluation team, and no issues were identified during the charge meeting that prevented any evaluator from evaluating the proposals.

The evaluation and scoring meeting was held on March 5th, 2024. All evaluators were present. The team discussed the pros and cons of each offeror's proposal. For the most part, the group was in agreement on several points. On the whole, they felt Otis and ThyssenKrupp had robust staffs they believed could service Clemson's needs. There was concern that Otis did not have much experience with entities of similar size and scope to Clemson, but the experience provided with regard to modification history and experience was also a concern. It was also noted that Otis indicated they had two technicians with experience on ThyssenKrupp equipment. This was a concern as it could impact the service to campus.

The group felt Elevated Facilities Services Group and Schindler were probably capable of the work but were concerned the scope of work for Clemson may strain their resources. The team noted Elevated & Schindler's past projects weren't similar to Clemson's needs, and their higher education clients were not comparable to CU with the exception of UGA. Elevated did not offer to provide the requested software, and it would be problematic to change over systems that are vetted and/or already in place to support MosaicONE. A concern with ThyssenKrupp was their engineers seemed to be no closer than Charlotte and Atlanta at any given time.

ThyssenKrupp has many Higher Ed clients, multiple large accounts in the Upstate, and extensive experience in modifications. The evaluators noted ThyssenKrupp listed 13 modification projects, and of those, there were many major modification projects. ThyssenKrupp and the service technicians identified in the proposal have multiple years of higher education experience. They have ten mechanics, one full-time repair team, and eight modernization teams located in Greenville, which would benefit Clemson. The use of the MAX system was positive in that it can provide alerts in real-time. ThyssenKrupp's ability to provide monthly evaluation methods, PM scheduling, and access to University maintenance history were all very positive. In the end, the general consensus of the evaluation team, after scoring discussions, was that ThyssenKrupp had a better proposal because of their years of experience, experience with other Higher Ed clients, knowledge of Clemson's campus, experience with modifications and a history of excellent customer service with Clemson University.

Following the evaluation meeting, the team was able to finalize their scoring. While each evaluator had slightly different scores, the scoring was mostly consistent, with no extreme scores that caused concern.



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Elevator Maintenance Contract Bid #173605289					
Elevated Facilities Services Group				# of Evaluators	3
CRITERIA	001	002	003	EVALUATORS Avg	
Experience to include Company & Technicians and Higher Education	20	30	29	26	
Cost	n/a	n/a	n/a	n/a	
Support History	6	9	10	8	
Automated Maintenance Management System	6	3	5	5	
Ability to provide an ASME A17.1-2019 Elevator Camera/Text-Based Monitoring System	1	1	3	2	
TOTAL	33	43	47	41	
ThyssenKrupp Elevator					
CRITERIA	001	002	003	EVALUATORS Avg	
Experience to include Company & Technicians and Higher Education	36	38	38	37	
Cost	n/a	n/a	n/a	n/a	
Support History	11	13	15	13	
Automated Maintenance Management System	10	10	9	10	
Ability to provide an ASME A17.1-2019 Elevator Camera/Text-Based Monitoring System	5	4	5	5	
TOTAL	62	65	67	65	
Schindler Elevator					
CRITERIA	001	002	003	EVALUATORS Avg	
Experience to include Company & Technicians and Higher Education	30	34	32	32	
Cost	n/a	n/a	n/a	n/a	
Support History	4	10	10	8	
Automated Maintenance Management System	9	6	10	8	
Ability to provide an ASME A17.1-2019 Elevator Camera/Text-Based Monitoring System	5	4	5	5	
TOTAL	48	54	57	53	
Otis Elevator Company					
CRITERIA	001	002	003	EVALUATORS Avg	
Experience to include Company & Technicians and Higher Education	33	33	35	34	
Cost	n/a	n/a	n/a	n/a	
Support History	8	11	12	10	
Automated Maintenance Management System	10	6	8	8	
Ability to provide an ASME A17.1-2019 Elevator Camera/Text-Based Monitoring System	4	3	5	4	
TOTAL	55	53	60	56	

After adding up the technical scores, scoring was reasonably consistent between the four vendors, with no outlying scores that caused concern. ThyssenKrupp ranked highest, followed by Otis, Schindler, and Elevated Facilities Group. After adding in the financial criteria scores, the following table summarizes the scoring:

Request for Proposals Elevator Maintenance Contract				
EVALUATION CRITERIA	Elevated Facilities Services Group	ThyssenKrupp Elevator	Schindler Elevator	Otis Elevator Company
Experience to include Company & Technicians and Higher Education	26	37	32	34
Cost	n/a	n/a	n/a	n/a
Support History	8	13	8	10
Automated Maintenance Management System	5	10	8	8
Ability to provide an ASME A17.1-2019 Elevator Camera/Text-Based Monitoring System	2	5	5	4
EVALUATOR'S TOTALS BY VENDOR	41	65	53	56
COST (VENDOR'S ACTUAL)	\$ 592,864	\$ 802,100	\$ 817,188	\$ 1,005,200
COST ASSIGNED EVALUATION POINTS	20.00	20.00	20.00	20.00
CALCULATED COST EVALUATION POINTS	20.00	14.78	14.51	11.80
TOTAL EVAL. POINTS PER VENDOR	61.00	79.45	67.51	67.80
Points Assigned for Cost	20			
Lowest Evaluated Cost	592,864			

ThyssenKrupp maintained its first-place ranking based on the final scores after calculating the cost in the equation. ThyssenKrupp submitted more aggressive pricing than Otis Elevator, the



second-highest-ranked supplier. Otis’s price was the highest among all submissions, negatively affecting their score but not so much that they lost a second-place ranking.

After presenting and discussing the results with the evaluators, the evaluators were not concerned with the outcome. They all felt ThyssenKrupp could provide exceptional service and pricing to the University. All evaluators agreed that ThyssenKrupp be engaged in negotiations. The Procurement Manager then proceeded to begin negotiations before issuing the award. Final negotiations are as follows:

Additional labor rates will be reduced by 10% from the contract start date through June 30th, 2025. Beginning July 1st, 2025 the rates will resume to the labor rates identified in TK’s cost proposal for RFP #173605289-1.

Discounted Additional Labor Rates (valid upon award through June 30, 2025):

Work Hours	Description	Estimated Hours per Year	Price per Hour	Extended Price per Hour
8:00am - 4:30pm	Mechanic	80	\$292.50	\$23,400.00
8:00am - 4:30pm	Helper	80	\$234.00	\$18,720.00
Overtime working hours	Mechanic	100	\$497.70	\$49,770.00
Overtime working hours	Helper	100	\$397.80	\$39,780.00

Additional Labor Rates (effective as of July 1, 2025):

Work Hours	Description	Estimated Hours per Year	Price per Hour	Extended Price per Hour
8:00am - 4:30pm	Mechanic	80	\$325.00	\$26,000.00
8:00am - 4:30pm	Helper	80	\$260.00	\$20,800.00
Overtime working hours	Mechanic	100	\$553.00	\$55,300.00
Overtime working hours	Helper	100	\$442.00	\$44,200.00

Maintenance Service Interruption Plan

For Elevators that cannot receive maintenance services for eight weeks or 56 calendar days, ThyssenKrupp will reduce the maintenance rate for affected elevators by 75% starting on day 57, and this discount will be effective until the elevator(s) are back in service.

Addition or Removal of Elevators from Service

TK Elevator / Clemson University (Add or Remove Units During Contract)									
STATE	CITY	Conventional Hydraulic 2-3 openings eff. 4-1-24 Mo. \$\$	Twin Post Hydraulic 2-3 openings eff. 4-1-24 Mo. \$\$	Gearless Traction 2-10 openings eff. 04-1-24 Mo. \$\$	MRL's Traction 2-10 openings eff. 4-1-24 Mo. \$\$	Gearless Traction 2-10 openings eff. 4-1-24 Mo. \$\$	Each extra opening add 10% Hydraulic add 2% Grd./Grls./Mrl.	Each Rear opening add	Non TKE / Dover Controller OEM add
South Carolina	Clemson	\$ 100.00	\$ 200.00	\$ 275.00	\$ 500.00	\$ 500.00	10% hydro / 2% other	15%	10%
NOTES									
1. Prices are base prices per month per unit assuming equipment is in servicable condition and code compliant.									
2. TKE would survey equipment and either accept or offer pre-maintenance work necessary in order to add to contract									
3. Based on maintaining (2) resident technicians on campus and mutually agreeable scope of work									

Changes and Projections

Union #1 (\$3000) and Union #2 (\$1200) elevators will be removed from service effective immediately and will reduce the yearly maintenance fee from \$655,800 to \$651,600.



The total value of this contract will not exceed Clemson University's Agency Certification, which is currently three million dollars. It is anticipated that yearly maintenance costs will average \$655,800, modifications will average \$200,000 per modification with three modifications per year, and special events are expected to cost approximately \$16,800 per year, totaling \$872,600 per year.

Price adjustments will be as described in Clemson University's Purchase Terms and Conditions Rev F effective November 15th, 2020.

DETERMINATION

Based upon the above findings, it is determined that the competitive sealed proposal award be made to ThyssenKrupp as a responsive Offeror whose proposal is the most advantageous to Clemson University, price and other factors considered.

4-1-2024 _____
DATE

April Pitts _____
NAME

**Intent to Award**

Posting Date: 4/4/2024

This is a statement of intent to award a contract and becomes the official statement of award effective April 16, 2024, unless otherwise suspended or canceled. Vendors are cautioned not to begin work on the contract or incur any costs associated with the contract prior to the effective date of the contract. Clemson University assumes no liability for the expenses incurred by vendors prior to the effective date of the contract.

Award inquiries should be addressed to the Contracting Officer at apitts@clemson.edu. Bidder's right to protest as listed in section 11-35-4210(1)(b) in the South Carolina Consolidated Procurement Code applies to this award. Any actual bidder, offeror, contractor, or subcontractor who is aggrieved in connection with the intended award or award of a contract shall protest to the appropriate chief procurement officer in the manner stated in subsection (2). To protest an award, you must (i) submit notice of your intent to protest within seven business days of the date of award or notification of intent to award is posted, whichever is earlier; and (ii) submit your actual protest within fifteen days of the date of award or notification of intent to award is posted, whichever is earlier. A matter that could have been raised pursuant to 11-35-4210 (1) (a) as a protest of the solicitation may not be raised as a protest of the award or intended award of a contract.

Protest to be filed with:

Chief Procurement Officer
Materials Management Office
1201 Main Street, Suite 600
Columbia, SC 29201
Facsimile: 803-737-0639
E-mail: protest-mmo@mmo.state.sc.us

Solicitation #: 173605289-1

Issue Date: 1/29/2024

Closing Date: 2/13/2024

Description: Elevator Maintenance Services Contract

Awarded To: ThyssenKrupp Elevator
161 Johns Road, Suite E
Greer, SC 29650



Office of
**PROCUREMENT AND
BUSINESS SERVICES**

Estimated Contract Amount: Not to exceed \$3,000,000

Initial Contract Period: 4/16/2024 – 4/15/2025

Maximum Contract Period: 4/16/2024 – 4/15/2029

A handwritten signature in black ink, appearing to read 'Michael Nebesky', is written over a thin horizontal line.

Michael Nebesky
Director, Procurement and Business Services

Exhibit E - Redacted
Proposal Extracts

TK Elevator Proposal To Provide Elevator Maintenance Services



RFP: 173605289-1
Addendum 1

Respectfully Submitted By:
Derek Luis



Our core principles



Clemson University
ATTN: April Pitts – Procurement Manager
91 College Ave, Suite 203
Clemson, SC 29634

RE: 173605289-1 Elevator Maintenance Services Contract

Ms. Pitts:

TK Elevator Corporation would like to thank you for the opportunity to bid on the elevator maintenance service contract for Clemson University. We are fully capable and prepared to fulfill the services listed in this solicitation and continue our long-standing relationship with Clemson University.

For more than 35 years, TK Elevator (Dover Elevator/ThyssenKrupp Elevator) has maintained a local branch in the Greenville area. We have provided installation, modernization and service throughout the area and our team prides ourselves on providing our customers a local team with the best customer service. Currently, we service well over 1000 elevators in the Upstate area of South Carolina.

TK Elevator has partnered with Clemson University for over 25 years providing installation, modernization and service to elevators around campus. Our team includes two full time, resident mechanics, Jeff and Matt, that have worked on Clemson's campus together for more than 2 years and have more than 40 years combined elevator experience. We also have an additional eight (8) mechanics that work out of our Greenville Branch with experience at Clemson and on other university campuses. Our team understands the need to keep the equipment operating at its top performance and the daily communication expectations with the campus facilities team and the end customer at each building.

TK Elevator would like to acknowledge and accept the maintenance schedule listed in III. Scope of Work/Specifications on pages 6-37 of the RFP, that will be adhered to and completed as recommended.

Our team is looking forward to this opportunity to continue our partnership and providing the highest level of service Clemson is accustomed to.

If you have any questions, please contact Derek Luis at (864) 283-2242 or at derek.luis@tkelevator.com.

Kind Regards,



Derek Luis – Senior Account Manager

Company Overview & Experience

1.1.6-8 page 2

- In the last three years, TK Elevator's excellent service has allowed us to continually serve our higher education accounts in the area. We have not lost any higher education service customers. (1.1.6)
- Greenville Branch of TK Elevator (TK Elevator / Dover elevator) has been a successful operation providing elevator installation, modernization, maintenance and repair services to the Upstate for over 35 years. (1.1.7)
- Critical factors to consider when choosing a successful offeror for Clemson University include: (1.1.8)
 - Has a team with successful experience communicating with key personnel on campus to keep informed of activity, issues and budget planning.
 - Has 2 technicians with experience as dedicated resident mechanics on campus.
 - Has at least 2 technicians with experience & relationships with campus employees and campus customers/building personnel at Clemson.
 - Has a team with familiarity with equipment (location/activity/key personnel).
 - Has a team with a full understanding of campus' day-to-day activities.
 - Has a team with knowledge of equipment's recent history of maintenance activity, repairs, service requests and safety testing.
 - Has a team large enough to support Clemson University with 10 mechanics and a local branch located less than 44 miles from campus.
 - Skilled and trained technicians on all types and ages of equipment.
 - Is the OEM of most of the equipment on campus allowing for superior knowledge, experience, tools and support on the equipment.
 - Has availability to major and minor parts that are conveniently located on or near campus.
 - Has accessibility to additional support from local branches (Charlotte, Columbia, Atlanta) and engineering department (located at TKE HQ in Atlanta).

- TK Elevator (thyssenkrupp / Dover elevator) is the OEM of more than 60% of the elevators on the Clemson University campus. Our technicians are fully trained on all the equipment on campus and have all the necessary tools for daily task and more complex troubleshooting.
- TK Elevator's team of resident mechanics are experienced in the day-to-day management of the elevators on campus and provide the highest quality of communication to all necessary campus and office personnel.
- The local Greenville Branch of TK Elevator is located at 161 Johns Road, Suite E, Greer, SC 29650.
- The Greenville Branch of TK Elevator (thyssenkrupp / Dover elevator) has been a successful operation providing service to the Upstate area for over 35 years.
- The Greenville Branch currently services over 1500 elevators and maintains all major brands of elevators (OTIS, KONE, Schindler, Dover, U.S., MCE, Virginia Controls, Westinghouse, Southern, and others).
- All Technicians are required to complete the full 4 years of I.U.E.C. training before becoming a fully licensed technician. In addition, TK Elevator provides numerous onsite continuing education training programs on various product lines utilizing our field engineers as instructors.
- All required Elevator code books, standards, and guides are presently residing in the Greenville Branch and are available to all technical and management personnel.
- The Greenville Branch currently employs (10) Full Time Certified Elevator Mechanics and (1) Repair Helper, all working out of the Greenville Branch. The (10) Technicians are designated to (9) dedicated service routes and (1) Full Time Repair Team. Additionally, there are New Install Teams, Modernization Teams, Dedicated New Install Superintendents, and Dedicated Modernization Superintendents in the Upstate Area to assist.
- Additionally, the TKE Charlotte Branch has (22) Route Technicians, (2) Repair Teams, and (1) Full Time Field Engineer. The TKE Atlanta Branch has (67) Route Technicians, (8) Repair Teams, and (5) full time Field Engineers including OTIS, Schindler, Kone and Fujitec Specialists.

Redacted