Otis Elevator Company 6602 Executive Park Court N #205 Jacksonville, FL 32216 Phone: (904) 296-6847 Mobile: (904) 219-6856 Kyle.stopa@otis.com



August 23, 2022

**Gonzalez Building Renovations** 

Attn: Jodie Dotson

Dear Valued Otis Customer:

Otis proposes to furnish and install One (1) Hydrofit hydraulic elevator for this project for the proposed price of:

Ninety-Seven Thousand Dollars: \$97,000.

Please take note of the following sections of this proposal:

- Scope of Work
- Job Specific Clarifications
- General Clarifications
- Terms and Conditions
- Voluntary Alternates
- Preparatory Work by Others

This quotation is based upon this bid letter only and is valid for thirty (30) days from the date of submission. We appreciate having the opportunity to provide you with our proposal on this project and look forward to working with you and your project team. Please call me at 904-219-6856 with any questions.

## Kyle R. Stopa

**Construction Sales Manager** 

| Customer, Approved by Authorized Representative |
|---|
| Date:   |
| Signed: X                                       |
| Print Name:                                     |
| Title:  |
| Name of Company:                                |

Otis Elevator Company, Approved by Authorized Representative

| Date:       |  |
|-------------|--|
| Signed: X   |  |
| Print Name: |  |
| Title:      |  |

# Scope of Work for: one hydraulic elevator

| Designation & Model         | Otis HydroFit™ Elevator System   |
|-----------------------------|--|
| Capacity & Speed            | 3500 lb Passenger Cab @ 125 fpm  |
| Stops & Floors              | 3 stops with 3 Openings  |
| Rise                        | 18'-8"   |
| Clear Car Inside Dimensions | 6 ft 6 in 3/4 wide 5 ft 6 in 1/8 deep  |
| Clear Hoistway Dimensions   | Hoistway- 8 ft 6 in wide x 6 ft 11 in deep<br>Overhead- 12 ft 10 in Pit depth- 4 ft 0 in   |
| Door Type & Size            | Center Opening 42" wide x 84" high   |
| Control Space               | optional machine Room  |
| Operation                   | Duplex   |
| Power Supply                | 208 volts, three phase AC, 60 hertz  |
| Cab Enclosure               | <ul> <li>93" high, Otis stainless steel Shell cab</li> <li>Stainless steel* stationary swing COP return, header, and car door</li> <li>1 1/2" diameter (38.1 mm) round bar with brushed steel finished handrails shall be provided on the rear wall.</li> <li>Flat brushed steel ceiling with 4 LED lights</li> </ul>    |
| Cab Flooring                | Furnished and installed by others- 1 1/4" recess   |
| Hoistway Entrance Finishes  | Brushed stainless steel frames at: 1, 2, 3<br>Brushed Stainless Steel Doors at: 1, 2, 3  |
| Hoistway Sill Finishes      | Extruded aluminum sills at: 1, 2, 3  |
| Signals                     | Standard swing car operating panel (COP) with flat round vandal proof buttons and a blue<br>LED center<br>Stainless steel* wall mounted hall fixtures with flat round vandal proof buttons and a blue<br>LED center  |
| Constant Features           | Access at top and bottom landing with zoning<br>Firefighter's service, phase I and II<br>Handicapped and Braille markings<br>Optiguard Shield <sup>™</sup> 2D door protection system<br>In car lantern<br>Otis ADA hands free phone<br>Emergency car lighting<br>AccessAlert <sup>™</sup> (hoistway access alarm system) |
| Additional Features         | Independent Service<br>1 set of protective cab wall pads with hooks<br>Stainless steel* hall fixtures at all landings  |
| Code Compliance             | All applicable local, state, and national codes- ANSI A17.1 Florida, local code and A.D.A.<br>No seismic requirements  |
| Maintenance                 | 12 months after acceptance of elevator by owner.<br>Includes emergency callback service during normal working hours.   |

\*Brushed stainless steel full finish #4 \*\*Paints to be selected from manufacturer's catalog of choices.

## Project Specific Clarifications

Due to variations in manufacturer standards, Otis is submitting the following clarifications:

- 1.1. Pricing based on Otis products and the standard features, components, finishes, FIXTURES, <u>and</u> <u>dimensions</u> of our products, as noted in the above scope of work.
- 1.2. Pricing based on 12 months maintenance and warranty. We recommend the owner contact Otis prior to the expiration of this to ensure uninterrupted phone monitoring and quality service.
- 1.3. For ALL PROJECTS IN FLORIDA: Pricing is based on ANSI A17.1 Code year 2017, which the state of Florida is currently enforcing. Future code adoption will require changes to our product line which require SIGNIFICANT cost and are NOT INCLUDED in this proposal. Pricing is based on these elevators being permitted under 2017 code.
- 1.4. FOR ALL PROJECTS IN GEORGIA: ANSI A17.1 Code year 2019 has already been adopted. Video monitoring from each cab to a 24/7 monitored location is a Code requirement. Otis to provide hardware for this monitoring in the cab and on the receiving end for the operator to monitor during the free maintenance period. Owner must provide one (1) phone line and one (1) data line per elevator with working internet connect. Further information to be provided during approval process or earlier upon request.
- 1.5. Our bid is based on manufacturing lead-time of 16 weeks after approvals.
- 1.6. This proposal is provided with the understanding that materials will be ordered with sufficient lead time (as outlined in our approvals package) to allow delivery prior to 12/1/22. If Otis is unable to order materials in a timely manner due to delays on behalf of the owner, general contractor and/or agent thereof, or if delivery is requested after 12/1/22, the owner and/or general contractor will be responsible for all cost increases incurred by Otis. An extra charge will be assessed for any double handling or re-transportation of elevator material required by the general contractor/owner or agent thereof. Otis is not able to offer a storage solution for the project.
- 1.7. NOTE: Otis provides guidance on required "work by others" that's associated with the elevator package, but not part of our scope of work. Otis does so with the understanding that we do not take responsibility for this work by others. If desired, Otis can coordinate a third party inspection agency at any point during the project to come out to the site 1 time and confirm what items may be required as "work by others" to confirm that the elevator will pass inspection. The cost for this is \$500.
- 1.8. When requested, Otis will provide input regarding the vertical transportation installation schedule, and Otis will contract for a specific, and mutually agreeable, installation schedule.
- 1.9. We have included the following features with are regarded as "upgrades" in the elevator industry: 1.9.1.Regenerative Drives on traction elevators
  - 1.9.2.Stainless steel buttons.
  - 1.9.3.Metal ceilings with LED lighting.
- 1.10. Pit ladders are by other trades.
- 1.11. A safety/hoisting beam is required at the top of the hoistway and is by other trades. It should be located exactly as per the elevator shop drawings.

## 2. General Clarifications

- 2.1. Tube steel at all floors, and in the overhead, will be provided by contractor. In addition contractor will provide tube steel between elevators running from divider beams to divider beams.
- 2.2. The installation of the elevator equipment may require the use of specialized tools that Otis may rent. The rental cost of these specialized tools is included in this proposal for a period of **2** months per elevator, the period of time we will need to install the elevators. If there are delays to the elevator installation schedule beyond Otis' control, and if those delays necessitate additional rental tool costs, Otis will be reimbursed for all additional rental fees and any associated labor.
- 2.3. We require the use of a Lull provided by others. Lull needed to unload and stage equipment at material delivery.

2.4. This proposal is based on parking being provided on-site at no cost for all Otis workers. This document contains confidential proprietary pricing and other information of Otis Elevator Company and is intended for the recipient only. Any distribution or copying of this information without the consent of Otis Elevator Company is strictly prohibited.

- 2.5. Cutting, patching, sealing, grouting and fire-caulking is not included.
- 2.6. Pricing **EXCLUDES** any costs for the following items: Jessica Lunsford act compliance, background checks, drug testing (all testing is done pre-employment, not before specific projects), OSHA-10, OSHA-30, composite clean up, any contractor specific safety training, site training or field training, weekly meeting attendance by any field personnel (such as foreman's meetings, safety talks, etc.), all contractor-specific JHA forms, daily reports, safety orientations, safety quizzes, fines for safety infractions, or any other items not specifically associated with furnishing, delivering, installing, and inspecting the elevator.
- 2.7. [Gen2 Products Without Separate Machine Room or Control Space] The controller equipment for this configuration must be located at the top landing in the wall of the elevator hoistway and adjacent to the elevator entrance. If service duty (non-AIA) elevators with both front and rear openings, the controller equipment must be located in the wall of the elevator hoistway, and adjacent to the elevator hoistway entrance on the <u>front</u> opening side. The minimum wall depth at the top terminal front elevator opening is 7.5 inches for drywall construction, 7 inches for masonry construction where the elevator frame wraps around the wall, and 8 inches for masonry construction where the elevator frame is recessed in the wall. Note that for drywall, the design of the wall at the top terminal front opening will not accommodate a 2"x4" or a 2"x6" wood or metal stud. Note that for masonry walls where the elevator frame will be recessed, the wall depth must be 1 inch greater than the jamb depth at the top terminal front elevator opening.
- 2.8. We will furnish and install all of the necessary components, circuitry and wiring for a new AccessAlert system, which will operate on the elevator car top and pit. AccessAlert will be installed so the elevator can be controlled in a safe manner when an authorized person accesses the elevator hoistway. The AccessAlert system meets all applicable safety codes.
- 2.9. Contractor will provide one (1) <u>ANALOG</u> dedicated outside telephone line PER ELEVATOR to each elevator controller as described in the "Work by Others" section.
- 2.10. Hall lanterns will be mounted 6" to the side of the jamb on the strike side of the jamb. Hall position indicators will be mounted centered 6" above the jamb.
- 2.11. Fully executed change orders must be received prior to Otis performing any additional work outside the scope of the base contract. Otis will not accept oral or written "directives to proceed" without a fully executed and agreed-upon change order.
- 2.12. Any fees required via participation in a third party billing consolidator will be passed on to Contractor via change order and will handled in the same manner as all other change orders per our clarifications.
- 2.13. Change orders will be stated price (lump sum). In the event a stated price cannot be calculated, hourly rates for Time and Material (T/M) are below.

| Regular time rate: | \$225 per man per hour |
|--------------------|------------------------|
| Overtime rate:     | \$450 per man per hour |

Please note all work is done in 2 man teams with the exception of running the elevator for other trades to do work in the hoistway, which can be done with 1 man.

- 2.14. Contractor will communicate to Otis supervision who the signatories and/or titles, roles and positions are which are authorized to sign time tickets on-site that will be used as support documentation for T/M change orders. Work cannot commence or continue until a designated signatory signs the document.
- 2.15. Contractor will be responsible for providing suitable and secure on-site storage as described in the "Work By Others" section of this proposal.
- 2.16. If contractor is not ready to accept delivery of the material on the requested/notified delivery date, contractor will give us sufficient notice of a local point where contractor will accept delivery, and be responsible for all monthly storage fees. An extra charge will be assessed for any double handling, re-transportation or inefficiencies created by non-adjacent storage conditions.
- 2.17. We require suitable tractor trailer access to the building for unloading of material. In addition, we need roll-able access from unloading point to storage and storage to hoistway area.
- 2.18. If Otis is requested to operate the elevator for others, or perform labor outside of the scope of this work, that work will be performed in accordance with our normal hourly labor rates.
- 2.19. Contractor agrees to pursue and schedule the work by other trades in a timely manner so as to not interrupt our work. Should our crew(s) have to de-mobilize from the job due to delays in work by others not in our contract, we shall be entitled to a re-mobilization charge of three thousand (\$3,000) dollars. We will also extend This document contains confidential proprietary pricing and other information of Otis Elevator Company and is intended for the recipient only. Any distribution or copying of this information without the consent of Otis Elevator Company is strictly prohibited.

the stated schedule to the extent that we are delayed.

- 2.20. Should any elevator be required for temporary use before final acceptance of the elevator and substantial completion, others will provide without expense to Otis Elevator Company, if required, temporary car enclosures, requisite guards or other protection for elevator hoistway openings, mainline switch with wiring, necessary power, signaling devices, lights in car and elevator operators together with any other special labor or equipment needed to permit this temporary usage. Otis Elevator Company will be reimbursed thirty five hundred (\$3,500.00) dollars to cover expenses associated with the additional inspection fee and the required clean-up. Otis will also be reimbursed at the rate of two thousand dollars (\$2,000) per month or portion of a month for the normal elevator maintenance. Neither the thirty five hundred dollar (\$3,500.00) "clean-up and additional inspection" fee or the two thousand dollars (\$2,000) per month charge will cover elevator equipment damage that may occur during the temporary service period. Otis' temporary acceptance form will be executed before any elevator is placed in temporary use, and the cost of equipment rehabilitation will be paid for by contractor.
- 2.21. When an elevator is used for temporary service, the completion date may, as a result of the temporary service, be extended by Otis Elevator Company. Otis Elevator Company shall provide notice of the extension at the time the elevator is made available for the temporary service.
- 2.22. This proposal includes a one-time final inspection fee. Should re-inspection be required because of work that is not the responsibility of Otis, contractor will be responsible for the cost of re-inspection and remobilization for Otis personnel. A minimum change order of three thousand dollars (\$3,000) dollars per elevator will be executed prior to rescheduling a follow-up inspection.
- 2.23. The following close-out documents will be provided: our standard owner's information manual, our standard final layout/installation drawings, and our standard warranty letter. Unless otherwise specified, they will be emailed only.

## 3. Terms and Conditions

Non-Otis contract language: In the event contractor does not accept Otis Standard Commercial Terms and the Otis Acknowledgement Letter, the contract price may be altered.

- 4. For all tax exempt / Owner Direct Purchase Projects, the following shall apply: To the extent the performance of the Agreement will take place in the State of Florida, the parties hereby agree that title and risk of loss to the materials provided hereunder will pass to the Customer upon delivery of such materials to the applicable site. Upon such delivery and transfer of title, such transaction will meet the definition of "Retail sale plus installation contract" as described in Florida Tax Regulation 12A-1.051(3)(d).
- Otis shall not be liable for any loss, damage or delay nor be found to be in default or breach due to any cause beyond 5. it's reasonable control including, but not limited to, acts of God or nature; fire; explosion; theft; floods; water; weather; traffic conditions; epidemic, pandemic, guarantine or other local, state, or federal government action in response thereto; sabotage; national emergency; act of terrorism; earthquake; riot; civil commotion; war; vandalism; national or local labor strikes, lockouts, other labor disputes; misuse, abuse, neglect, mischief, or work by others (collectively "Causes Beyond Otis' Reasonable Control"). Otis shall be allowed a reasonable amount of additional time for the performance of the Work due to Causes Beyond Otis' Reasonable Control. Under no conditions, shall either party be liable for special, indirect, liquidated, or consequential damages in contract, tort, including negligence, warranty or otherwise, notwithstanding any indemnity provisions to the contrary. Notwithstanding any provision in any contract document to the contrary, our acceptance is conditioned on being allowed additional time for the performance of the Work due to delays beyond our reasonable control. Otis will provide union labor and will make reasonable efforts to ensure that they will work in harmony with others. To effect this, Otis agrees to provide sufficient workers, equipment and materials for prompt and diligent prosecution of the work. Notwithstanding any language to the contrary contained in the contract documents, a work stoppage, whether caused by strikes, lockouts or other labor disputes, shall not constitute a breach of contract or an event of default. Otis' ability to maintain scheduled job progress is conditioned upon us being allowed additional time for delays beyond our control as well as the timely furnishing to us of completed and code compliant hoistway(s) (wellways) and machine rooms, necessary approvals and power of proper characteristics, all for our uninterrupted use.
  - 5.1. It is agreed that Otis will not be responsible for any Liquidated Damages. Should the contract documents require provisions for Liquidated Damages, our bid is contingent upon review of the schedule to assure Otis can achieve the desired date with our standard lead times. Security for elevator material delivered to the jobsite is the responsibility of the Contractor. The Contractor is responsible for all costs to replace any damaged, stolen or missing elevator equipment. Otis will not be responsible for deductibles on Builder's Risk insurance policies. Otis

will provide a change order, police report, and affidavits as needed to substantiate the claim. Otis will not procure replacement equipment until a signed change order is received.

- 5.2. Otis will provide surety bond(s) in the form provided by Otis' Surety at no cost. This is in lieu of participation in any type of surety wrap-up or Subguard program.
- 5.3. If payment and performance bonds are requested of us, please add \$10.00 per \$1000 of resulting contract amount.
- 5.4. Please note OSHA does not classify elevator pits as confined space, nor does Otis. Should you or the owner or any other entity require Otis to consider the elevator pits as confined space, we the right at any time, even after contract signing, to adjust our price accordingly based on the time and special materials required to comply with your specific confined space requirements.
- 5.5. OTIS agrees to provide evidence of insurance coverage but cannot name others as additional insured or waive our rights of subrogation. All insurance coverage afforded to you or others shall terminate upon final acceptance of the work. If "Owners and Contractors Protective Insurance" is required in addition to our standard Certificate of insurance add (\$8.00 per \$1000).
- 5.6. This proposal does not include any provision for an "Owner or Contractor Controlled Insurance Program" (OCIP/CCIP/Wrap Up). Otis will not enroll under any circumstances and we will provide our standard insurance in lieu of participation. The option to enroll is not available without a cost ADD and some additional contract language that we will require.
- 5.7. Our proposal is based the following payment terms:
  - 5.7.1.Our quoted price is based on the "Initial Payment" equaling fifty percent (50%) of contract award. This amount, plus a fully executed subcontract must be received prior to releasing equipment for manufacturing.
  - 5.7.2. Otis will mobilize after the "Material Delivery Payment" is received. See "Schedule of Values" below.
  - 5.7.3.Monthly "Progress Payments" will be calculated as the proportionate value of work performed relative to the remaining balance due on this sub-contract (i.e. balance due after the "Material Delivery Payment" is received). This includes any materials stored on or offsite. Also, contractor agrees to make progress payments to Otis for any work performed prior to final execution of the contract and/or the submission of any required documents other than those required for payment applications.
  - 5.7.4. Final payment (retainage) will be due thirty (30) days after final acceptance of the elevator installation, otherwise all warranties and New Installation Service (NIS) will be suspended.
  - 5.7.5.Otis must be paid ninety-five percent (95%) of the final contract price prior to scheduling the state inspection and turnover of the elevator equipment.
  - 5.7.6.All change orders must be executed and paid prior to scheduling final inspection.
  - 5.7.7.Otis does not accept credit cards as a form of payment.
  - 5.7.8.Otis will not agree to any language referencing or implying "pay when paid". This contract is between Otis Elevator and referenced Contractor. The attached payment schedule ("Schedule of Values") is not contingent upon Contractor's ability to be paid by others or any other factor or event not described above.
  - 5.7.9.

Schedule of Values:

| Description  | Percent of Total Contract Value / Billing Cycle  |  |
|--|--|--|
| Design, Engineering,<br>Material procurement,<br>Superintendent's initial site<br>visit, and Layouts | 50% Billed upon award. Due in 30 days or prior to release of factory orders whichever occurs first.  |  |
| Factory Materials  | 35% Billed the month before shipment occurs. Due the month material is delivered. Installation will not commence until the material is paid for. |  |

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| Installation Labor | 15% Billed each month as work progresses.  |
|--------------------|--|
|                    | General milestones for reference purposes.<br>Additional invoices may occur between these<br>milestones. |
|                    | Unloading Materials10%   |
|                    | Entrances Installed40%   |
|                    | Ready to Adjust & Test:45%   |
|                    | Adjust & Test5%  |

- 5.9 Our proposal includes our Remote Elevator Monitoring (REM<sup>®</sup>) feature. This feature will be installed during the original installation for the duration of the warranty/maintenance period. Upon expiration of this service period, if the owner elects not to continue maintenance with Otis, it is understood that this REM unit will be removed by Otis from the jobsite and remain in our possession.
- 5.10 All software supplied with the elevator is licensed to you or your successors but only for use with, and for operation of this elevator.
- 5.11 Otis will not supply information such as internal Otis manuals, manufacturing drawings or source code. Any counters, meters, tools, remote monitoring devices, communication devices, or other such equipment that we may use or install to deliver service under this proposal and any resulting contract remains our property, solely for the use of our employees. Such equipment is not considered as part of the elevator. If the contract or subsequent maintenance service is terminated for any reason, we will be given access to the premises to remove such equipment, including the resident software, at our expense.
- 5.12 In the event the transactions contemplated hereunder are restricted by U.S. Government or other applicable laws and regulations, including but not limited to those designating certain parties as "denied", "restricted" or similarly ineligible to do business with U.S. entities, this agreement will be deemed void and Customer shall pay Otis all sums owed for the goods and services that may have been provided up to such time according to the rates contained in this agreement.
- 5.13 Otis equipment installations comply with all applicable local, state and national elevator codes. Compliance with all other building code requirements is solely the responsibility of the contractor.
- 5.14 Warranty: Twelve (12) months after acceptance of elevator. The elevator contractor's acceptance is conditional on the understanding that their warranty covers defective material and workmanship. The guarantee period shall not extend longer than one (1) year from the date of completion or acceptance thereof by beneficial use, whichever is earlier, of each elevator. The guarantee excludes ordinary wear and tear or improper use, vandalism, abuse, misuse, or neglect or any other causes beyond the control of the elevator contractor and this express warranty is in lieu of all other warranties, express or implied, including any warranty of merchantability or fitness for a particular purpose. This express warranty is in lieu of all other warranty or merchantability or fitness for a particular purpose.

#### 6. Preparatory Work By Others

The following items must be performed or provided at no cost to Otis Elevator Company ("Otis") by the Owner or General Contractor or their agents in accordance with governing codes. The price and installation schedule of Otis is based on these job-site conditions existing at the beginning and during the installation of the elevator equipment.

All work must be performed per the applicable national and or local codes.

#### 6.1. General Prep/Work

- 6.1.1. Provide on-site storage area for elevator equipment as follows: dry and enclosed, provides roll-able access to the elevator hoistway at the ground level, located within 100 feet (30.5 meters) of the hoistway and is larger than 25 x 20 feet (7620 mm X 6096 mm) per elevator. Any warranties provided by Otis for elevator equipment are null and void if equipment is stored in a manner other than a dry enclosed building structure.
- 6.1.2. Provide sufficient on-site refuse containers for the proper disposal of elevator packaging material. Should sufficient refuse containers not be provided, disposal of packaging material shall become the responsibility of the owner. Otis will maintain its work area clean of all debris or trash that results from its work and will practice good housekeeping. Participation (labor or monies) in composite clean-up crews is not included.

- 6.1.3. Provide any cutouts to accommodate elevator equipment (conduit, troughing, venting, and hall fixtures), along with the fire-safing/patching/painting of walls, floors, or partitions together with finish painting of entrance doors and frames, if required.
- 6.1.4. Jobsite meetings: Otis to attend periodic (daily, weekly or otherwise) jobsite meetings only when previously notified that elevator issues will be discussed. Payment of penalty fees due to non attendance is not included.
- 6.1.5. Please be advised that our plan for installation is to deliver materials and start installation on the date requested (as provided in the signed approval package). Should Otis be unable to start installation upon delivery, a remobilization charge shall be assessed for the inefficiency involved, not less than \$1,000 depending on job site proximity to the Otis office. Further, should installation be delayed after the time of delivery by more than 30 days, additional charges or possibly overtime installation may be required to meet general contractor's schedule, for an additional cost.

#### 6.2. Hoistway & Pit Prep/Work

- 6.2.1. Provide and install a steel, I-beam shaped safety beam with a maximum flange width of 8 11/16"(220mm), from side wall to side wall at the top of the hoistway, capable of withstanding a maximum net live load of 7500 lb (3402 kg) per elevator. Reference Otis Layout for location. A 4" minimum clearance is required from top of beam to top of hoistway.
- 6.2.2. Provide a clear plumb hoistway with variations from the size shown on the Otis layout not to exceed -0"/+1" (25mm) for the entire length of the hoistway and not less than the clear dimensions shown on the Otis approved layouts.
- 6.2.3. Disconnecting means in overhead to cut off power to elevator hoisting machine. 1 required per elevator. Per local code requirements.
- 6.2.4. Provide adequate rail bracket supports, bracket spacing as required by governing code, from pit floor to top of hoistway. For steel or wood frame construction, adequate support for the top rail bracket to be installed not less than indicated by rail force and bracket spacing detail table on Otis layout. Separator beams where required. Rail-bracket attachment supports must be exposed and flush with the clear hoistway line.

If the floor-to-floor height exceeds the maximum bracket spacing allowed by the elevator code, Otis requires some form of steel support to properly attach our guide rail brackets. The maximum allowed bracket spacing is indicated in the rail force and bracket detail table on the Otis layout. Any rail bracket mounting surfaces that are not in line with the finished hoistway dimension (i.e. the clear hoistway line) may need to be extended to meet the required distance. Otis agrees to provide guidance on this matter at the appropriate time.

If rail bracket embedded plates or inserts are provided by Otis they shall be installed by others in accordance with Otis documentation and instructions.

If vertical tube steel is utilized as rail support, (2) vertical tubes spaced at 20.4" (518mm) on center are required for car rail brackets with "A" dimension  $\geq$  5.76" (146mm).

- 6.2.5. Provide adequate support at all fastening points of each entrance. Provide plumb vertical surfaces for entrances and sill supports, one above the other, and square with the hoistway. Finish floor and grout, if required, between doorframes to sill line. A horizontal support is to be provided 1 foot (305 mm) above the clear opening at the top landing to support the doorframe assembly. If floor heights exceed 12'-0" (3657), a horizontal support is to be provided 1 foot (305 mm) above the clear opening. If transoms are required then the support would be 1'-0" (305mm) above the transom height.
- 6.2.6. Prior to the start of installation, provide a dry, clean, properly framed, enclosed and vented hoistway in accordance with all applicable codes.
- 6.2.7. Pipes or ducts conveying gas, vapors, liquids, or any electrical device which are not used in conjunction with the operation of the elevators are not permitted in hoistways or control rooms.
- 6.2.8. In the event a counterweight of one elevator is running next to the cab of another elevator, then screening must be provided the full height of the hoistway in accordance with ANSI A17.1 code, section 2.3.2.3. This shall be furnished and installed by other trades, not Otis.
- 6.2.9. Protection from Falls:

As required by the Occupational Safety and Health Administration (**OSHA**) **1926.502 B**) (**1-3**) a freestanding removable barricade at each hoistway opening at each floor. Barricades shall be 42" (1067mm) high, with mid-rail and kick board, and withstand 200 lbs. of vertical and horizontal pressure.

6.2.10. Protection from Falling Objects:

As required by the Occupational Safety and Health Administration (OSHA) 1926.502(j) hoistway protection from falling debris and other trades materials by either:

- 1.) Full entrance screening/mesh in front of all elevator entrances
- 2.) Secured/controlled access to all elevator lobbies (lock and key) with posted Notice "only elevator personnel beyond this protection."

Notes:

- The previous two requirements (Protection from Falls and Protection from Falling Objects) can be integrated systems.
- Hoistway barricades and screening shall be constructed, maintained and removed by others.
- 6.2.11. Provide a pit floor designed to sustain vertical forces on car and counterweight rails and impact loads on car and counterweight buffers as shown in the pit plan view of the Otis layout. The pit must be dry and clean. The elevator pit must have a floor drain or sump pump to prevent the accumulation of water. Location to be coordinated with Otis to

avoid all elevator components and access areas. In areas requiring Firefighter's Emergency Operation, a sump pump/drain shall be provided that shall have the capacity to remove a minimum of 11.4 m<sup>3</sup>/h (3,000 gal/h) per elevator (2.2.2.5, ASME A17.1-2007/CSA B44-07.) Otis recommends that the owner verify the drain or sump pump system is in compliance with all applicable codes and laws.

6.2.12. The front entrance wall at the main and top landing, is not to be constructed until after all elevator equipment is installed in the hoistway (the entire front wall – CLEAR HOISTWAY WIDTH – must be open for installation of platform). Remaining front entrance walls are not to be constructed until after door frames and sills are in place.

When the front walls are poured concrete (bearing walls), rough openings are to be provided to accept entrance frames at each landing above the main landing. The area around the entrance frame must be filled in after the frames are set. The rough opening size per approved Otis layouts for the main landing must be equal to the clear hoistway width to accommodate installation of the elevator platform. Prior to the completion and turn over of the elevator(s), all entrance walls must be installed and rough openings filled in complete to maintain fire rated hoistway requirements.

- 6.2.13. Provide and install a fixed vertical iron ladder in each pit as required by governing code and located per Otis layouts or as coordinated with Otis personnel. Ladder width and projection from wall per local code. If pit depth is greater than 9' 10" (3000mm) [13' 9" (4191mm) with no floor below bottom landing], a pit access door is required.
- 6.2.14. Install permanent light fixtures in each elevator pit with illumination of not less than 100 lx (10 fc) as measured at the pit floor. The light bulb(s) shall be externally guarded to prevent contact and accidental breakage. The light switch shall be so located as to be accessible from the pit ladder or access door.
- 6.2.15. If pit depth is greater than 7'-10" (2388mm) a platform for accessing the equipment on the underside of the car is required. The platform shall:
  - 6.2.15.1. Be coordinated with Otis personnel to interface with Otis' elevator equipment.
  - 6.2.15.2. Maintain clearances and refuge spaces as defined in all applicable codes.
  - 6.2.15.3. Be equipped with OSHA compliant guardrails when a fall hazard exists.
  - 6.2.15.4. In seismic risk zone, comply with all applicable building code requirements to restrain it due to ground acceleration during an earthquake
  - 6.2.15.5. Be designed and installed to support without permanent deformation on the following loads: Minimum of 80 lb./ft2 (390kg/390kg/m2) evenly distributed over the entire servicing platform area, minimum of 225 lb. (100kg) concentrated load on any 3 in.2 (2000 mm2) area.
- 6.2.16. Provide and install guarding of counterweights in a multiple-elevator hoistway as required, when a counterweight is located between elevators, the counterweight runway shall be guarded on the side next to the adjacent elevator. The guarding must meet or exceed the requirements of ASME A17.1-2007, section 2.3.2.3.
- 6.2.17. Glass used in hoistway construction must block 98% or more of incident full-spectrum ultraviolet radiation for the full height of the hoistway.
- 6.2.18. If an emergency door in a blind hoistway is required, provide an outward swinging single section type door with door closer and a self closing barrier per ASME A17.1-2007, section 2.11.1.2. Contact your local Otis personnel for a detailed drawing (AAA26900D\_FMI), showing Otis specific requirements.

#### 6.3. Hydraulic

- 6.3.1. Provide any cutting, including cutouts, as well as fire safing and patching to accommodate machine-room piping.
- 6.4. Control Room/Space and Machine Space Prep/Work
  - 6.4.1. Provide a suitable control room/space(s) with access and ventilation in accordance with all applicable codes and regulations. The control room/space(s) shall be maintained at a temperature between 32°F (0°C) and 104°F (40°C) to be measured 6 feet (1830 mm) above the floor and 1 foot (305 mm) out from the front center of the car controller(s). Relative humidity is not to exceed 95% non-condensing. Provide ventilation to suit Otis heat release amounts as shown on the Otis Confirmation of Power Supply form. Local codes may require tighter temperature ranges and higher ventilation levels, please check with your local code authority for the exact requirements in your area. If your control room/space(s) temperatures exceed these requirements, contact your local Otis sales representative for assistance.
  - 6.4.2. Provide illumination of control room/space(s) of not less than 200 LUX (19 FC) as measured at floor level. Light switch is to be located within 18" (157 mm) to the lock-jamb side of the access door to the control room/space(s).
  - 6.4.3. Install a permanent light fixture at the top of the hoistway (machine space) of not less than 200 LUX (19 FC) as measured at the level of the standing surface on the car when the elevator is at the top landing. Light switch is to be located in the hoistway per the Otis layout.
  - 6.4.4. Provide control room/space(s) with self-closing and self-locking doors with a group 2 locking device. In addition, ensure that all air gaps around the doors are sealed (i.e. threshold, weather stripping, etc.)
  - 6.4.5. Maintain the temperature at the top of the hoistway (machine space) between 32° F (0° C) and 113° F (45° C). Relative humidity not to exceed 95% non-condensing. Provide ventilation to suit Otis heat release amounts as shown on the Otis Confirmation of Power Supply form. If your machine space temperatures exceed these requirements, contact your local Otis sales representative for assistance.
  - 6.4.6. Provide an "ABC" fire extinguisher, minimum 10 lbs in control room.
  - 6.4.7. If controller room is located remotely from the elevator hoistway, provide two (2) 4" conduits per elevator, as well as any cutting, including cutouts, as well as fire safing and patching to accommodate such.
  - 6.4.8. For all high-rise buildings or buildings with fire command rooms, a 1 ¼" conduit shall be run from each bank of elevators to the fire control room by others, not Otis. Pull stations for wiring should be provided no more than every 75'.

#### 6.5. Fire Prevention Prep/Work

- 6.5.1. Provide hoistway walls designed and constructed in accordance with the required fire rating (including those places where elevator fixture boxes, rail bracket fastenings, and any other penetration into the hoistway walls).
- 6.5.2. In the United States provide smoke detectors, located as required, with wiring from the sensing devices to the controller(s) designated by Otis.
  - 6.5.2.1. For each group of elevators, provide a normally closed contact representing the smoke detector at the designated return landing.
  - 6.5.2.2. For each group of elevators, provide a normally closed contact representing all smoke detectors located in lobbies, hoistways, or control room/space(s), but not the smoke detector at the designated return landing (see above) or the smoke detectors as described in the two items below:
    - 6.5.2.2.1. If a smoke detector is located in the hoistway at or below the lower of the two recall landings, it shall be wired to activate the same normally closed contact as the smoke detector located in the lobby at the lower of the two recall landings.
  - 6.5.2.3. If the control room/space(s) are locate at the designated return landing, the smoke detectors located therein shall be wired to activate the same normally closed contact as the smoke detector at the designated landing. Requirements for intermittently illuminating the fire hat visual signal in the car operating panel, either of the following two apply:
    - 6.5.2.3.1. i. For a single unit or for a group of elevators having one common control room/space(s) and one common hoistway, provide one additional normally closed contact representing the control room/space(s) and hoistway smoke detectors.
    - 6.5.2.3.2. ii. If the group contains more than one hoistway and hoistway smoke detectors are installed, or if the group has more than one control room/space(s), provide one normally closed contact for each elevator. The contact is to represent the smoke detector in the control room/space(s) for that particular elevator, and any smoke detectors in the hoistway containing that particular elevator.
- 6.5.3. Provide code compliant sprinkler system, as required, in the hoistway, pit and machine room. If sprinklers are installed in the hoistway(s), control room/space(s), or machine space(s), a means to automatically disconnect the main line power supply of the affected elevator prior to the application of water is required (unless prohibited by local code). In addition, when the Automatic Recovery Operation (ARO) is specified, the means provided to automatically disconnect power to the elevator shall be equipped with an additional auxiliary contact that is positively opened when power is removed from the elevator system. This automatically controlled mainline disconnect must be provided with all associated wiring and conduit to the controller.
- 6.5.4. Provide control room/space(s) and door to code compliant fire-resistive construction.

#### 6.6. Electrical Requirements

- 6.6.1. If a (3) phase arrangement is to be ordered, prior to the start of installation provide a permanent three (3) phase electrical-feeder system with a separate equipment-grounding conductor terminating in the control room/space(s). located per Otis layout. Feeder conductors and grounding conductor sized according to elevator current characteristics as shown on the Otis Confirmation of Power Supply form. Feeder conductors and grounding conductor must be copper. A fused disconnect switch or circuit breaker capable of being locked in the open position, for each elevator per the National Electrical Code (ANSI/NFPA 70) or Canadian Electrical Code (C22.1) with feeder or branch wiring to controller [NEC 620-51, 620-61(D), and 620-62/CEC Rule 38-013(2)(a)]. The disconnecting means required by the National Electrical Code/ CEC [Rule 38-051] shall be provided with all associated wiring and conduit to the controller. Size of main contacts to suit elevator power characteristics. Fuses are to be current limiting class RK1 or equivalent. Circuit breakers are to have current limiting characteristics equivalent to class RK1 fuses. Fuses or circuit breakers are to be time delay to cover the full load up accelerating current. Accelerating current typically is the peak as indicated on the Otis Confirmation of Power Supply Form, and lasts for duration not to exceed 7 seconds. Feeder conductors and associated wiring to the controller to be sized to limit wiring voltage drop to 5% maximum when delivering elevator full load up accelerating current. The building power system used to operate the elevator(s) shall be capable of supplying non linear loads and be capable of absorbing the regenerated power listed on the Otis Confirmation of Power Supply form. In addition, when the Automatic Recovery Operation (ARO) is specified, the mainline fused disconnect switch or circuit breaker shall be equipped with two auxiliary contacts that are positively opened when the mainline disconnect is in the OFF position. For Hydraulic elevators, 3 phase power must be provided at the start of installation.
- 6.6.2. If three (3) phase power is not available at the start of installation, a temporary single phase 220V, 55 ampere power supply with fused disconnect or circuit breaker for each elevator and available in the control room/space(s) can be provided. Authorization from the Otis construction superintendent is required to install using temporary power.
- 6.6.3. Provide a dedicated 125-volt, 15-ampere single-phase branch circuit; with a fused disconnect switch or circuit breaker. This disconnect or breaker shall be capable of being locked in the open position and located per the Otis layout. This branch circuit supplies the car lights, car top receptacle, auxiliary lighting power source, and ventilation on each car in compliance with the National Electrical Code [NEC 620-53] or Canadian Electrical Code [CEC Rule 38-053].
- 6.6.4. Provide a dedicated 125 volt, 15 ampere single-phase power supply with a fused SPST disconnect switch or circuit breaker, per group of elevators, for remote monitoring. This disconnect or breaker shall be capable of being locked in the open position and located per the Otis layout, CEC [Rule 38-053].

- 6.6.5. All 125 volt, 15 or 20 ampere single-phase receptacles installed in pit(s), machine space(s), control room/space(s) shall be of the ground-fault circuit-interrupter type. A dedicated single-phase receptacle supplying a permanently installed pit sump pump shall not require GFCI protection.
- 6.6.6. Provide electric power for lights, tools, welding, hoisting, etc. during installation with sufficient power for starting, testing and adjusting the elevator. Provide a 220 volt, 30 ampere, 4 wire single phase circuit for temporary platform operation. Access to the circuit must be near a hoistway opening in the lower half of the building and must be available to start the installation.
- 6.6.7. Provide one (1) dedicated outside telephone line, per group, to the elevator control room/space(s), and terminated at the controller designated by the Otis construction superintendent. Please check with your local code authority for the exact requirements in your area, one dedicated telephone line per elevator may be required.
- 6.6.8. In areas under the jurisdiction of AMSE A17.1-2004/CSA B44 or later where the elevator travel is greater than or equal to 60 feet /18 meters, provide two-way voice communications means that shall enable emergency personnel within the building to establish communications to each car individually without intervention by a person within the car. The communication means shall override communications to the outside of the building and once established shall only be terminated by emergency personnel outside the car. Refer to ASME A17.1-2004 CSA B44 or later, section 2.27.1.1.4 for exact requirements.
- 6.6.9. For elevators having an intra building intercom, provide a separate 120 volt, 15 ampere, single phase power supply with fused SPST disconnect switch or circuit breaker, located as required for inter-communicating system power supply. Circuit to be arranged for feeding from the building emergency lighting supply if provided. Conduit and wiring for remotely located inter-communicating stations.
- 6.6.10. For installations having Lobby Panels, Fire Control Room Panels, Elevator Monitoring Systems or Remote Controller Rooms provide required conduit (size and number as specified by Otis) with adequate pull boxes from the elevator hoistway(s) to the location or locations required. Leave a measured pull tape in the conduit. Otis to furnish and pull required conductors.
- 6.6.11. For installations having emergency (standby) power, provide the emergency (standby) power unit and means for starting it. The emergency (standby) power unit shall deliver to the elevator via disconnect switches in the control room/space(s), sufficient power to operate one or more elevators at a time at full rated speed, and rated load. The Emergency (standby) Power source shall be sized to handle the regenerated power from the elevator control drive system(s) as listed in the Otis Confirmation of Power Supply Form. All conduit and wiring from generator to each Otis controller to be by others, not Otis.

An automatic Power Transfer Switch for each power feeder to monitor both normal and emergency (standby) power conditions and to perform the transfer from one to the other. Switch to have two sets of normally closed dry contacts, one to be open when the switch is in the emergency (standby) power position; the other to open upon initiation of power transfer and to close when transfer is complete. Switch to have an inhibit function which will delay transfer to normal and/or emergency (standby) power by an adjustable period of 0 - 300 seconds. Switch shall have a phase monitor feature, which prohibits the transfer of power between "live" sources unless the sources are in phase with each other. If a shunt trip device is provided, an additional normally closed contact, with all associated wiring and conduit to the controller, is required from the emergency (standby) power source. The emergency (standby) power unit must be capable of absorbing regenerative power per elevator in accordance with ANSI/NFPA 70 requirement 620.91.

Emergency (standby) power system shall be connected to 125-volt power circuit as noted in note A.2. of the Power Confirmation for the branch circuit supplying the car lights, car top receptacle, auxiliary car lighting power source and car ventilation.

You agree to indemnify and save Otis harmless against any and all liability and costs arising out of your failure to carry out any of the foregoing requirements.