

# MARSHALL COUNTY COMMISSION

CHAIRMAN  
JAMES HUTCHESON

COUNTY ADMINISTRATOR  
ASHLEIGH BUBBETT

COUNTY ENGINEER  
MICHAEL D. KNOP



DISTRICT 1  
RONNY SHUMATE

DISTRICT 2  
JAMES R. WATSON

DISTRICT 3  
LEE SIMS

DISTRICT 4  
JOEY BAKER

September 11, 2024

**TO:** ALL CONTRACTORS, PRODUCERS, RETAILERS, AND ETC.

**FROM:** JAMES HUTCHESON, CHAIRMAN

**SUBJECT:** INVITATION FOR BIDS

You are invited to bid on the enclosed specifications. **All items listed must be bid.**

Any substitutes must be submitted in detail on separate sheet(s) with the cost(s) of the substitution(s) listed to note addition or deletion from the price shown on the enclosed specifications. These prices shall also be shown in writing. The separate sheet(s) must also state the reason for substitution(s) in detail and advantage(s) to the Marshall County Commission for accepting it.

If a substitution is submitted, the separate sheet(s) shall contain a statement showing that the item will be furnished and all other specifications will be met. This statement shall bear the signature of the authorized representative of the vendor. If there are any discrepancies, this portion of the bid will be rejected.

The Marshall County Commission reserves the right to accept and/or reject any and/or all bids.

A handwritten signature in black ink, appearing to read "James Hutcheson", is written over a horizontal line.

**JAMES HUTCHESON, CHAIRMAN  
MARSHALL COUNTY COMMISSION**

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## MEMORANDUM

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**Date:** September 11, 2024

**To:** All Vendors, Contractors, etc.

**From:** Michael D. Knop, P.E.  
Marshall County Engineer

**Subject:** Submittal of Bid and/or Performance Bonds for the Enclosed Specifications

In order to fulfill the requirements for the submittal of bid and/or performance bonds in the enclosed specifications, **any** of the following will suffice:

- ❖ Standard Bonds from a Surety Company
- ❖ Bank's Official Check
- ❖ Bank's Cashier's Check

Please be advised that cash, personal checks, company checks, and letters stating your company's line of credit from a bank **are not** acceptable.

The intent of bid and performance bonds is to assure that Marshall County is provided with a firm commitment that assures us of all liquidated damages in an amount to protect the County.

Should you have any questions concerning this or any of the bid specifications, please do not hesitate to contact our office.

**Return Bid To:**  
**MARSHALL COUNTY ENGINEERING**  
**424 BLOUNT AVENUE SUITE 305**  
**GUNTERSVILLE, AL 35976**  
**(256) 571-7712**

**BID NO: 59 - 23**

**BID OPENING DATE & TIME: MONDAY,**  
**October 8, 2024 - 2:00 P.M.**

**LOCATION: ROOM A319 - COMMISSION**  
**CHAMBERS - 3RD FLOOR - MARSHALL**  
**COUNTY COURTHOUSE - GUNTERSVILLE, AL**

**INVITATION FOR BIDS**  
**FOR**  
**TURNKEY MODERNIZATION OF THE ELEVATOR**  
**AT THE MARSHALL COUNTY COURTHOUSE**  
**LOCATED AT 200 WEST MAIN STREET, ALBERTVILLE, AL 35950**

**VENDOR'S RESPONSE:**

**VENDOR'S NAME:** \_\_\_\_\_

**VENDOR'S ADDRESS:** \_\_\_\_\_

**TELEPHONE NO.** \_\_\_\_\_

**FAX NO.** \_\_\_\_\_

**CONTRACTOR LICENSE NO.** \_\_\_\_\_

**TOTAL BID PRICE (from page 18)**

**\$** \_\_\_\_\_

**VENDOR'S RESPONSE:**

I hereby agree to furnish the above-named items on or by the dates requested and hereby certify that all specifications set above will be met.

\_\_\_\_\_  
Authorized Representative

\_\_\_\_\_  
Typed or Written Name

## Scope of Work and Specifications

Turnkey Modernization of the existing elevator in the Marshall County Courthouse in Albertville, Alabama shall include all labor, materials, equipment, and incidentals necessary for the following to be performed:

<p style="text-align: center;"><b><u>Controller</u></b></p> <p>TAC 32 Controller (Includes Options listed below)</p> <ul style="list-style-type: none"> <li>• THY Board</li> <li>• 24 VDC Signal Voltage</li> <li>• Auto Light and Fan Feature</li> <li>• Car Independent Service</li> <li>• Car Traveling Lantern Circuitry</li> <li>• Door Bypass Operation</li> <li>• Electronic Door Detector Interface</li> <li>• Hoistway Access and Enable</li> <li>• eMax Monitoring Device Provisions</li> <li>• Solid State Starters (6 or 12 leads) 208 VAC</li> <li>• Battery Lowering in Controller</li> <li>• Tenant Security 3-1 (Card Reader)</li> <li>• Tenant Security Option</li> </ul> <p style="text-align: center;"><b><u>Pit</u></b></p> <ul style="list-style-type: none"> <li>• Pit Switch Stop</li> <li>• Spring Buffer Model 6M (Pair) (Max Gross Load 6000 lbs)</li> </ul> <p style="text-align: center;"><b><u>Door Equipment</u></b></p> <ul style="list-style-type: none"> <li>• Hoistway Doors with Sight Guards,</li> <li>• Gibs, and Escutcheons as needed (SSSS, #4 S/S (441)) Front</li> <li>• Headers (Front)</li> <li>• Hoistway Door Equipment Complete (SSSS) Front <ul style="list-style-type: none"> <li>• Includes Tracks and Hangers, Interlocks and Pickups, and Reel Closers</li> </ul> </li> <li>• Micro Light 3D 2019 (Front)</li> <li>• 3D Cabsafe Components Package (Front)</li> </ul> <p style="text-align: center;"><b><u>Hall Fixtures</u></b></p> <ul style="list-style-type: none"> <li>• Serial Boards for Hoistway Access</li> <li>• Car Identification Plate (Pair)</li> <li>• Hoistway Jamb Braille (Pair of</li> </ul>	<p style="text-align: center;"><b><u>Power Unit</u></b></p> <ul style="list-style-type: none"> <li>• EP-60 Power Unit (submersible)</li> <li>• 2" Shutoff Valve Kit (Pump)</li> </ul> <p style="text-align: center;"><b><u>Jack</u></b></p> <ul style="list-style-type: none"> <li>• Pipe Strands</li> </ul> <p style="text-align: center;"><b><u>Car</u></b></p> <ul style="list-style-type: none"> <li>• Fan: Two Speed</li> <li>• Car Top Exit Switch</li> <li>• Cab Wiring Material (200MK1)</li> </ul> <p style="text-align: center;"><b><u>Hoistway</u></b></p> <ul style="list-style-type: none"> <li>• HN Boxes (per each 2 cars, grouped)</li> <li>• TAC 32 Field Friendly Wiring Package: <ul style="list-style-type: none"> <li>• Includes Single Traveling Cable</li> <li>• Hoistway Wiring</li> <li>• Interlock Wiring</li> <li>• Interlock Connectors</li> <li>• Serial Wiring</li> </ul> </li> <li>• Steel Tape with Mounting Hardware, Selector and Magnets (Terminal Limits Included)</li> </ul> <p style="text-align: center;"><b><u>Cab</u></b></p> <ul style="list-style-type: none"> <li>• Car Door (SSSS, #4 S/S (441))</li> </ul> <p style="text-align: center;"><b><u>Car Fixtures</u></b></p> <p>Main Car Station Includes Options Below:</p> <ul style="list-style-type: none"> <li>• Applied Panel</li> <li>• Vandal Resistant Floor Buttons</li> <li>• Debranded Car Station (No Logo)</li> <li>• Cast Braille Plates for Car Features</li> <li>• Standard Key Switch Package <ul style="list-style-type: none"> <li>• Fan</li> <li>• Light</li> <li>• Independent</li> <li>• Stop</li> <li>• Inspection/Hoistway Enable</li> </ul> </li> <li>• Emergency Light Mounted in COP</li> </ul>
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<p>Standard) (# of Floors)</p> <ul style="list-style-type: none"> <li>• Terminal Hall Stations (Surface Mounted) with Appendix O (Polycarbonate Insert Flame) and Fusion (#4 SIS (304))</li> </ul>	<ul style="list-style-type: none"> <li>• 2004 and Later Fire Service Phase II Features (Includes Instruction and Signage)</li> <li>• Handicap Signal (Passing Signal)</li> <li>• Position Indicator (2" CE Segmented)</li> <li>• ADA Phone System Integral with COP (Rath)</li> <li>• Speaker Pattern for Intercom System/ADA Phone</li> <li>• Locked Service Cabinet</li> <li>• Certificate Window</li> <li>• Default Engravings</li> <li>• GFI Outlet</li> <li>• #4 Stainless Steel Finish (441)</li> <li>• Emergency Light Test Button/Key Switch</li> <li>• Voice Annunciator (Mounted in COP)</li> <li>• TAC Series Boards (Main)</li> <li>• Car Riding Lantern (Vandal Resistant) #4 SIS (441)</li> </ul>
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**SECTION 14 24 00  
HYDRAULIC PASSENGER ELEVATORS**

**PART 1 GENERAL**

**1.01 SUMMARY**

A. Section includes: Hydraulic passenger elevators as shown and specified. Elevator work includes:

1. Standard hydraulic passenger elevators.
2. Elevator car enclosures, hoistway entrances and signal equipment.
3. Operation and control systems.
4. Jack(s).
5. Accessibility provisions for physically disabled persons.
6. Equipment, machines, controls, systems and devices as required for safely operating the specified elevators at their rated speed and capacity.
7. Materials and accessories as required to complete the elevator installation.

B. Related Sections:

1. Division 1 General Requirements: Meet or exceed all referenced sustainability requirements.

2. Division 3 Concrete: Installing inserts, sleeves and anchors in concrete.
3. Division 4 Masonry: Installing inserts, sleeves and anchors in masonry.
4. Division 5 Metals:
  - a. Providing hoist beams, pit ladders, steel framing, auxiliary support steel and divider beams for supporting guide-rail brackets.
  - b. Providing steel angle sill supports and grouting hoistway entrance sills and frames.
5. Division 9 Finishes: Providing elevator car finish flooring and field painting unfinished and shop primed ferrous materials.
6. Division 16 Sections:
  - a. Providing electrical service to elevators, including fused disconnect switches.
  - b. Emergency power supply, transfer switch and auxiliary contacts.
  - c. Heat and smoke sensing devices.
  - d. Convenience outlets and illumination in control room, hoistway and pit.
7. Division 22 Plumbing
  - a. Sump pit and oil interceptor.
8. Division 23 Heating, Ventilation and Air Conditioning
  - a. Heating and ventilating hoistways and/or control room.

C. Other Building Work Included: Elevator Contractor shall provide the following in accordance with the requirements of the Model Building Code and ANSI A17.1 Code. For specific rules, refer to ANSI A17.1, Part 3 for hydraulic elevators. State or local requirements must be used if more stringent. The cost of this work is not included in the Thyssenkrupp Elevator's proposal, since it is a part of the building construction.

1. Supply in ample time for installation by other trades, inserts, anchors, bearing plates, brackets, supports, and bracing including all setting templates and diagrams for placement.
2. Hatch walls require a minimum two hours of fire rating. Hoistway should be clear and plumb with variations not to exceed 1/2" at any point.
3. Elevator hoistways shall have barricades, as required, when working at open landings.
4. Install bevel guards at 75° on all recesses, projections or setbacks over 2" (4" for A17.1 2000 areas) except for loading or unloading.
5. Pit floor shall be level and free of debris. Provide sump grating level with pit floor.
6. Machine room to be enclosed and protected.
7. Machine Room temperature must be maintained between 55° and 90° F.
8. Access to the machinery space and machine room must be in accordance with the governing authority or code.

9. Maintain machine room fire rating. Replace/install new ceiling tiles and fire caulking as needed.
10. When heat, smoke or combustion sensing devices are required, connect to elevator control cabinet terminals. Contacts on the sensors should be sided for 12 volt D.C.
11. Where sheet rock or drywall construction is used for front walls, it shall be of sufficient strength to maintain the doors in true lateral alignment. Drywall contractor to coordinate with elevator contractor.
12. To maintain legal fire rating (masonry construction), door frames are to be anchored to walls and properly grouted in place. Replace machine room door and frame if needed for fire rating.
13. The elevator wall shall interface with the hoistway entrance assembly and be in strict compliance with the elevator contractor's requirements.
14. Locate LED light fixtures (200 lx / 19 fc) and GFCI convenience outlet in pit with switch located adjacent to the access door.
15. A light switch and fused disconnect switch for each elevator should be located inside the machine room adjacent to the door, where practical, per the National Electrical Code (NFPA No. 70).
16. For signal systems and power operated door: provide ground and branch wiring circuits, including main line switch.
17. For car light and fan: provide a feeder and branch wiring circuits, including fused disconnect.
18. For communications system: provide circuit and fused disconnect.
19. Provide shunt trip for main line power outside equipment room.
20. Provide sump pump and adequate non-ferrous and non-combustible discharge piping.
21. Wall thickness may increase when fixtures are mounted in drywall. These requirements must be coordinated between the general contractor and the elevator contractor.
22. Provide supports, patching and recesses to accommodate hall button boxes, signal fixtures, etc.
23. Locate telephone and convenience outlet on control panel.

## 1.02 SUBMITTALS

- A. Product data: When requested, the elevator contractor shall provide standard cab, entrance and signal fixture data to describe product for approval.
- B. Shop drawings:
  1. Indicate elevator system capacities, sizes, performances, safety features, finishes and other pertinent information.

2. Indicate electrical power requirements and branch circuit protection device recommendations.
- C. Powder Coat paint selection: Submit manufacturer's standard selection charts for exposed finishes and materials.
  - D. Plastic laminate selection: Submit manufacturer's standard selection charts for exposed finishes and materials.
  - E. Metal Finishes: Upon request, standard metal samples provided.

Operation and maintenance data. Include the following:

1. Owner's manuals and wiring diagrams.
2. Parts list, with recommended parts inventory.

### 1.03 QUALITY ASSURANCE

- A. Manufacturer Qualifications: An approved manufacturer with minimum 15 years of experience in manufacturing, installing, and servicing elevators of the type required for the project.
  1. The manufacturer of machines, controllers, signal fixtures, door operators cabs, entrances, and all other major parts of elevator operating equipment.
    - a. The major parts of the elevator equipment shall be manufactured by the installing company, and not be an assembled system.
  2. The manufacturer shall have a documented, on-going quality assurance program.
  3. Elevator contractor shall have certified board repair facility.
  4. ISO-9001:2000 Manufacturer Certified
  5. ISO-14001:2004 Environmental Management System Certified
  6. LEED Gold certified elevator manufacturing facility.
- B. Installer Qualifications: The manufacturer or an authorized agent of the manufacturer with not less than 15 years of satisfactory experience installing elevators equal in character and performance to the project elevators.
- C. Regulatory Requirements:
  1. ASME A17.1 Safety Code for Elevators and Escalators, latest edition or as required by the local building code.
  2. Building Code: National.
  3. NFPA 70 National Electrical Code.
  4. NFPA 80 Fire Doors and Windows.



5. Americans with Disabilities Act - Accessibility Guidelines (ADAAG)
  6. Section 407 in ICC A117.1, when required by local authorities
  7. CAN/CSA C22.1 Canadian Electrical Code
  8. CAN/CSA B44 Safety Code for Elevators and Escalators.
  9. California Department of Public Health Standard Method V1.1–2010, CA Section 01350
- D. Fire-rated entrance assemblies: Opening protective assemblies including frames, hardware, and operation shall comply with ASTM E2074, CAN4-S104 (ULC-S104), UL10(b), and NFPA Standard 80. Provide entrance assembly units bearing Class B or 1 1/2 hour label by a Nationally Recognized Testing Laboratory (2 hour label in Canada).
- E. Inspection and testing:
1. Elevator Installer shall obtain and pay for all required inspections, tests, permits and fees for elevator installation.
  2. Arrange for inspections and make required tests.
  3. Deliver to the Owner upon completion and acceptance of elevator work.
- F. Sustainable Product Qualifications:
1. Environmental Product Declaration:
    - a. GOOD: If Product Category Rules (PCR) are not available, produce a publicly available, critically reviewed life-cycle assessment conforming to ISO 14044 that has at least a cradle to gate scope.
    - b. BEST: If Product Category Rules (PCR) are available, produce and publish an Environmental Product Declaration (EPD) based on a critically reviewed life-cycle assessment conforming to ISO 14044, with external verification recognized by the EPD program operator.
  2. Material Transparency:
    - a. GOOD: Provide Health Product Declaration at any level
    - b. BETTER: Provide Health Product Declaration (HPD v2 or later). Complete, published declaration with full disclosure of known hazards, prepared using the Health Product Declaration Collaborative's "HPD builder" on-line tool.
    - c. BEST: Cradle to Cradle Material Health Certificate v3, Bronze level or higher.
  3. LEED v4 – Provide documentation for all Building Product Disclosure AND Optimization credits in LEED v4 for product specified.
  4. Living Building Challenge Projects: Provide Declare label for products specified.

#### 1.04 DELIVERY, STORAGE AND HANDLING

- A. Manufacturing shall deliver elevator materials, components and equipment and the contractor is responsible to provide secure and safe storage on job site.

## 1.05 PROJECT CONDITIONS

- A. Temporary Use: Elevators shall not be used for temporary service or for any other purpose during the construction period before Substantial Completion and acceptance by the purchaser unless agreed upon by Elevator Contractor and General Contractor with signed temporary agreement.

## 1.06 WARRANTY

- A. Warranty: Submit elevator manufacturer's standard written warranty agreeing to repair, restore or replace defects in elevator work materials and workmanship not due to ordinary wear and tear or improper use or care for 12 months after final acceptance.

## 1.07 MAINTENANCE

- A. Furnish maintenance and call back service for a period of 12 months for each elevator after completion of installation or acceptance thereof by beneficial use, whichever is earlier, during normal working hours excluding callbacks.
  - 1. Service shall consist of periodic examination of the equipment, adjustment, lubrication, cleaning, supplies and parts to keep the elevators in proper operation. Maintenance work, including emergency call back repair service, shall be performed by trained employees of the elevator contractor during regular working hours.
  - 2. Submit parts catalog and show evidence of local parts inventory with complete list of recommended spare parts. Parts shall be produced by manufacturer of original equipment.
  - 3. Manufacturer shall have service office and full-time service personnel within a 100-mile radius of the project site.

## **PART 2 PRODUCTS**

### 2.01 MANUFACTURERS

- A. Manufacturer: Design based around existing elevator car sling and jack.

### 2.02 MATERIALS, GENERAL

- A. All Elevator Cab materials including frame, buttons, lighting, wall and ceiling assembly, laminates and carpet shall have an EPD and an HPD, and shall meet the California Department of Public Health Standard Method V1.1–2010, CA Section 01350 as mentioned in 1.03.9 of this specification.

- B. Colors, patterns, and finishes: As selected by the Owner from manufacturer's full range of standard colors, patterns, and finishes.
- C. Steel:
  - 1. Shapes and bars: Carbon.
  - 2. Sheet: Cold-rolled steel sheet, commercial quality, Class 1, matte finish.
  - 3. Finish: Factory-applied baked enamel for structural parts, powder coat for architectural parts. Color selection must be based on elevator manufacture's standard selections.
- D. Plastic laminate: Decorative high-pressure type, complying with NEMA LD3, Type GP-50 General Purpose Grade, nominal 0.050" thickness. Laminate selection must be based on elevator manufacture's standard selections.
- E. Existing flooring to remain.

## 2.03 HOISTWAY EQUIPMENT

- A. Platform: Retain existing.
- B. Sling: Retain existing. Paint any rust.
- C. Guide Rails: Retain. Ensure all fasteners are tight and rails are plumb.
- D. Guides: Slide guides shall be mounted on top and bottom of the car.
- E. Buffers: Retain and paint with rust resistant paint.
- F. Jack: Retain. Evacuate all existing oil from piping. Replace packing seal.
- G. Automatic Self-Leveling: Provide each elevator car with a self-leveling feature to automatically bring the car to the floor landings and correct for over travel or under travel. Self-leveling shall, within its zone, be automatic and independent of the operating device. The car shall be maintained approximately level with the landing irrespective of its load.
- H. Wiring, Piping, and Oil: Provide all necessary hoistway wiring in accordance with the National Electrical Code. All necessary code compliant pipe and fittings shall be

provided to connect the power unit to the jack unit. Retain existing piping. Install shut off valve in pit or machine room. Provide new hydraulic fluid.

## 2.04 POWER UNIT

- A. Power Unit (Oil Pumping and Control Mechanism): A self-contained unit consisting of the following items:
1. An oil reservoir with tank cover.
  2. An oil hydraulic pump.
  3. An electric motor.
  4. An oil control valve with the following components built into single housing; high pressure relief valve, check valve, automatic unloading up start valve, lowering and leveling valve, and electro-magnetic controlling solenoids.
  5. Muffler/Silencer
- B. Pump: Positive displacement type pump specifically manufactured for oil-hydraulic elevator service. Pump shall be designed for steady discharge with minimum pulsation to give smooth and quiet operation. Output of pump shall not vary more than 10 percent between no load and full load on the elevator car.
- C. Motor: Standard manufacture motor specifically designed for oil-hydraulic elevator service. Duty rating shall be selected for specified speed and load.
- D. Oil Control Unit: The following components shall be built into a single housing. Welded manifolds with separate valves to accomplish each function are not acceptable. Adjustments shall be accessible and be made without removing the assembly from the oil line.
1. Relief valve shall be adjustable and be capable of bypassing the total oil flow without increasing back pressure more than 10 percent above that required to barely open the valve.
  2. Up start and stop valve shall be adjustable and designed to bypass oil flow during start and stop of motor pump assembly. Valve shall close slowly, gradually diverting oil to or from the jack unit, ensuring smooth up starts and up stops.
  3. Check valve shall be designed to close quietly without permitting any perceptible reverse flow.
  4. Lowering valve and leveling valve shall be adjustable for down start speed, lowering speed, leveling speed, and stopping speed to ensure smooth "down" starts and stops. The leveling valve shall be designed to level the car to the floor in the direction the car is traveling after slowdown is initiated.

5. Provided with constant speed regulation in both up and down direction. Feature to compensate for load changes, oil temperature, and viscosity changes.
6. Solid State Starting: Provide an electronic starter featuring adjustable starting currents.
7. Oil Type: USDA certified biobased product, ultra-low toxicity, readily biodegradable, energy efficient, high performing fluid made from canola oil with antioxidant, anticorrosive, antifoaming, and metal-passivating additives. Especially formulated for operating in environmentally sensitive areas. USDA certified biobased product, >90% bio-based content, per ASTM D6866 Oil Hydraulic Silencer: Install oil hydraulic silencer (muffler device) at the power unit location. The silencer shall contain pulsation absorbing material inserted in a blowout proof housing.

## 2.05 HOISTWAY ENTRANCES

- A. Doors and Frames: Retain frames. Install new hoistway doors at both levels.
  1. Manufacturer's standard entrance design consisting of hangers, doors, hanger supports, hanger covers, fascia plates (where required), sight guards, and necessary hardware.
  2. Main landing door & frame finish: Stainless steel panels, no. 4 brushed finish.
  3. Typical door & frame finish: Stainless steel panels, No. 4 brushed finish.
  4. Doors to be 42" single speed configuration.
- B. Interlocks: Equip each hoistway entrance with an approved type interlock tested as required by code. Provide door restriction devices as required by code.
- C. Door Hanger and Tracks: Provide sheave type two-point suspension hangers and tracks for each hoistway horizontal sliding door.
  1. Sheaves: Polyurethane tires with ball bearings properly sealed to retain grease.
  2. Hangers: Provide an adjustable device beneath the track to limit the up-thrust of the doors during operation.
  3. Tracks: Drawn steel shapes, smooth surface and shaped to conform to the hanger sheaves.
  4. Provide new headers as necessary.
- D. Hoistway Sills: Retain existing.

## 2.06 PASSENGER ELEVATOR CAR ENCLOSURE

- A. Car Enclosure: Retain enclosure. Provide cab interior alternate per below.
1. Walls: Provide applied panel interior wall panels. The applied panels design, shall be arranged vertically on wood core panels covered on both sides with high pressure plastic laminate. Applied panels shall be removable.
  2. Reveals and frieze: Stainless steel, No. 4 brushed finish
  3. Canopy: Retain.
  4. Ceiling: Suspended type, LED lighting with translucent diffuser mounted in a metal frame. Framework shall be finished with a factory applied powder coat finish.
  5. Cab Fronts, Return, Transom, Soffit and Strike: Provide panels faced with No. 4 brushed stainless steel
  6. Doors: Horizontal sliding car doors reinforced with steel for panel rigidity. Hang doors on sheave type hangers with polyurethane tires that roll on a polished steel track and are guided at the bottom by non-metallic sliding guides.
    - a. Door Finish: Stainless steel panels: No. 4 brushed finish.
    - b. Cab Sills: Retain existing.
  7. Handrail: Provide 2" flat metal bar on side and rear walls. Handrails shall have a stainless steel, No. 4 brushed finish.
  8. Ventilation: Manufacturer's standard exhaust fan, mounted on the car top.
  9. Protection pads and buttons: Provide one set of vinyl protection pads with metal grommets for the project. Provide pad buttons on cab front(s) and walls.
- B. Car Top Inspection: Provide a car top inspection station with an "Auto-Inspection" switch, an "emergency stop" switch, and constant pressure "up and down" direction and safety buttons to make the normal operating devices inoperative. The station shall give the inspector complete control of the elevator. The car top inspection station shall be mounted in the door operator assembly.

## 2.07 DOOR OPERATION

- A. Door Operation: Provide a direct or alternating current motor driven heavy duty **Linear** operator designed to operate the car and hoistway doors simultaneously. The door control system shall be digital closed loop and the closed loop circuit shall give constant feedback on the position and velocity of the elevator door. The motor torque shall be constantly adjusted to maintain the correct door speed based on its position and load. All adjustments and setup shall be through the computer-based service tool. Door movements shall follow a field programmable speed pattern with smooth acceleration and deceleration at the ends of travel. The mechanical door operating mechanism shall be arranged for manual operation in event of power failure. Doors

shall automatically open when the car arrives at the landing and automatically close after an adjustable time interval or when the car is dispatched to another landing. AC controlled units with oil checks, or other deviations are not acceptable.

1. No Un-Necessary Door Operation: The car door shall open only if the car is stopping for a car or hall call, answering a car or hall call at the present position or selected as a dispatch car.
  2. Door Open Time Saver: If a car is stopping in response to a car call assignment only (no coincident hall call), the current door hold open time is changed to a shorter field programmable time when the electronic door protection device is activated.
  3. Double Door Operation: When a car stops at a landing with concurrent up and down hall calls, no car calls, and no other hall call assignments, the car door opens to answer the hall call in the direction of the car's current travel. If an onward car call is not registered before the door closes to within 6 inches of fully closed, the travel shall reverse and the door shall reopen to answer the other call.
  4. Nudging Operation: The doors shall remain open as long as the electronic detector senses the presence of a passenger or object in the door opening. If door closing is prevented for a field programmable time, a buzzer shall sound. When the obstruction is removed, the door shall begin to close at reduced speed. If the infra-red door protection system detects a person or object while closing on nudging, the doors shall stop and resume closing only after the obstruction has been removed.
  5. Door Reversal: If the doors are closing and the infra-red beam(s) is interrupted, the doors shall reverse and reopen. After the obstruction is cleared, the doors shall begin to close.
  6. Door Open Watchdog: If the doors are opening, but do not fully open after a field adjustable time, the doors shall recycle closed then attempt to open six times to try and correct the fault.
  7. Door Close Watchdog: If the doors are closing, but do not fully close after a field adjustable time, the doors shall recycle open then attempt to close six times to try and correct the fault.
  8. Door Close Assist: When the doors have failed to fully close and are in the recycle mode, the door drive motor shall have increased torque applied to possibly overcome mechanical resistance or differential air pressure and allow the door to close.
- B. Door Protection Device: Provide a door protection system using microprocessor controlled infra-redlight beams. The beams shall project across the car opening

detecting the presence of a passenger or object. If door movement is obstructed, the doors shall immediately reopen.

## 2.08 CAR OPERATING STATION

- A. Car Operating Station, General: The main car control in each car shall contain the devices required for specific operation mounted in an integral swing return panel requiring no applied faceplate. Wrap return shall have a No. 4 brushed stainless-steel finish. The main car operating panel shall be mounted in the return and comply with handicap requirements. Pushbuttons that illuminate using long lasting LEDs shall be included for each floor served, and emergency buttons and switches shall be provided per code. Switches for car light and accessories shall be provided.
- B. Emergency Communications System: Integral phone system provided. Provide 2019 two-way communications system and car camera for use by authorized personnel.
- C. Auxiliary Operating Panel: Not Required
- D. Column Mounted Car Riding Lantern: A vandal resistant style car riding lantern shall be installed in the elevator cab and located in the entrance. The lantern, when illuminated, will indicate the intended direction of travel. The lantern will illuminate and a signal will sound when the car arrives at a floor where it will stop. The lantern shall remain illuminated until the door(s) begin to close.
- E. Special Equipment: Not Applicable

## 2.09 CONTROL SYSTEMS

- A. Controller: The elevator control system shall be microprocessor based and software oriented. Control of the elevator shall be automatic in operation by means of push buttons in the car numbered to correspond to floors served, for registering car stops, and by "up-down" push buttons at each intermediate landing and "call" push buttons at terminal landings. Controller shall have an integrated user interface with LCD screen. User interface shall be capable of displaying fault codes and making adjustments.
- B. Automatic Light and Fan shut down: The control system shall evaluate the system activity and automatically turn off the cab lighting and ventilation fan during periods of inactivity. The settings shall be field programmable.



- C. Emergency Power Operation: (Battery Lowering 10-DOC) When the loss of normal power is detected, a battery lowering feature is to be activated. The elevator will lower to a predetermined level and open the doors. After passengers have exited the car, the doors will close and the car will shut down. When normal power becomes available, the elevator will automatically resume operation. The battery lowering feature is included in the elevator contract and does not utilize a building-supplied standby power source. Battery lowering will require the installation of a set of dry contacts in the main disconnect in the machine room.
- D. Special Operation: Not Applicable

## 2.10 HALL STATIONS

- A. Hall Stations, General: Vandal resistant stainless-steel buttons with illuminated halos to indicate that a call has been registered at that floor for the indicated direction. Each button shall be provided with an internal automatic stop to prevent damage of switches that register the call. Provide 1 set of pushbutton risers. All fixtures shall be vandal resistant type.
  - 1. Provide one pushbutton riser with faceplates having a No. 4 brushed stainless-steel finish.
    - a. Phase 1 firefighter's service key switch, with instructions, shall be incorporated into the hall station at the designated level.
- B. Floor Identification Pads: Provide door jamb pads at each floor. Jamb pads shall comply with Americans with Disabilities Act (ADA) requirements.
- C. Hall Position Indicator: Not Applicable
- D. Hall lanterns: Not Applicable
- E. Special Equipment: Not Applicable

## 2.11 MISCELLANEOUS ELEVATOR COMPONENTS

- A. **Provide Cellular communications device designed for use with elevator emergency phone as well as multimedia communications for 2019 code.**

## PART 3 EXECUTION

### 3.01 EXAMINATION

- A. Before starting elevator installation, inspect hoistway, hoistway openings, pits and/or control room, as constructed, verify all critical dimensions, and examine supporting

structures and all other conditions under which elevator work is to be installed. Do not proceed with elevator installation until unsatisfactory conditions have been corrected in a manner acceptable to the installer.

- B. Installation constitutes acceptance of existing conditions and responsibility for satisfactory performance.

### 3.02 INSTALLATION

- A. Install elevator systems components and coordinate installation of hoistway wall construction.
  - 1. Work shall be performed by competent elevator installation personnel in accordance with ASME A17.1, manufacturer's installation instructions and approved shop drawings.
  - 2. Comply with the National Electrical Code for electrical work required during installation.
- B. Perform work with competent, skilled workmen under the direct control and supervision of the elevator manufacturer's experienced foreman.
- C. Supply in ample time for installation by other trades, inserts, anchors, bearing plates, brackets, supports, and bracing including all setting templates and diagrams for placement.
- D. Welded construction: Provide welded connections for installation of elevator work where bolted connections are not required for subsequent removal or for normal operation, adjustment, inspection, maintenance, and replacement of worn parts. Comply with AWS standards for workmanship and for qualification of welding operators.
- E. Coordination: Coordinate elevator work with the work of other trades, for proper time and sequence to avoid construction delays. Use benchmarks, lines, and levels designated by the Contractor, to ensure dimensional coordination of the work.
- F. Install machinery, guides, controls, car and all equipment and accessories to provide a quiet, smoothly operating installation, free from side sway, oscillation, or vibration.
- G. Alignment: Coordinate installation of hoistway entrances with installation of elevator guide rails for accurate alignment of entrances with cars. Where possible, delay final adjustment of sills and doors until car is operable in shaft. Reduce clearances to minimum safe, workable dimensions at each landing.

- H. Erect hoistway sills, headers, and frames before erection of rough walls and doors; erect fascia and toe guards after rough walls finished. Set sill units accurately aligned and slightly above finish floor at landings.
- I. Lubricate operating parts of system, where recommended by manufacturer.

### 3.03 FIELD QUALITY CONTROL

- A. Acceptance testing: Upon completion of the elevator installation and before permitting use of elevator, perform acceptance tests as required and recommended by Code and governing regulations or agencies. Perform other tests, if any, as required by governing regulations or agencies.
- B. Advise Owner, Contractor, and governing authorities in advance of dates and times tests are to be performed on the elevator.

### 3.04 ADJUSTING

- A. Make necessary adjustments of operating devices and equipment to ensure elevator operates smoothly and accurately.

### 3.05 CLEANING

- A. Before final acceptance, remove protection from finished surfaces and clean and polish surfaces in accordance with manufacturer's recommendations for type of material and finish provided. Stainless steel shall be cleaned with soap and water and dried with a non-abrasive surface; it shall not be cleaned with bleach-based cleansers.
- B. At completion of elevator work, remove tools, equipment, and surplus materials from site. Clean equipment rooms and hoistway. Remove trash and debris.
  - 1. Use environmentally preferable and low VOC emitting cleaners for each application type. Cleaners that contain solvents, pine and/or citrus oils are not permitted.

### 3.06 PROTECTION

- A. At time of Substantial Completion of elevator work, or portion thereof, provide suitable protective coverings, barriers, devices, signs, or other such methods or procedures to protect elevator work from damage or deterioration. Maintain protective measures throughout remainder of construction period.

### 3.07 DEMONSTRATION

- A. Instruct Owner's personnel in proper use, operations, and daily maintenance of elevators. Review emergency provisions, including emergency access and procedures to be followed at time of failure in operation and other building emergencies. Train Owner's personnel in normal procedures to be followed in checking for sources of operational failures or malfunctions.

Make a final check of each elevator operation, with Owner's personnel present, immediately before date of substantial completion. Determine that control systems and operating devices are functioning properly.

### 3.08 ELEVATOR SCHEDULE

#### A. Elevator Qty. 1

1. Elevator Model: Below-Ground Conventional Jack Hydraulic
2. Elevator Type: Hydraulic Passenger
3. Rated Capacity: 2500 lbs.
4. Rated Speed: 100 ft./min.
5. Operation System: Microprocessor
6. Travel: 10' +/-
7. Landings: 2 total
8. Openings:
  - a. Front: 2
  - b. Rear: 0
9. Clear Car Inside:
10. Cab Height: 8'-0" standard
11. Hoistway Entrance Size: 3' - 6" wide x 7'-0" high
12. Door Type: Single Speed
13. Power Characteristics: 208 volts, 3 Phase, 60 Hz.
14. Seismic Requirements: Zone 0
15. Hoistway Dimensions:
16. Pit Depth: 3' - 6"
17. Button & Fixture Style: Vandal Resistant Signal Fixtures
18. Special Operations: None

**END OF SECTION**

**Total Bid Price \$ \_\_\_\_\_**

**SPECIAL INSTRUCTIONS TO BIDDERS:**

- (1) The contractor shall fill in all required blanks on the bid pricing form included herein. Any questions regarding the bid scope of work, please contact Brad Kilpatrick at (256) 264-3668.
- (2) A bid bond in the amount of 5% of the total bid cost shall be included with each bid submitted, but not to exceed \$10,000.00. Cashier's check drawn on an Alabama bank or a bid bond executed by a surety in the State of Alabama are both acceptable.
- (3) A performance bond and payment bond both in the amount of 100% of the total bid price will be required within fifteen (15) days of the notice of award.
- (4) Contractor shall submit with bid a copy of a certificate of insurance (\$1.0 million minimum) and workman's compensation.
- (5) The successful bidder shall begin work at least 15 calendar days after date of notice to proceed.
- (6) Work is to be completed within 90 calendar days after date of notice to proceed. Should the contractor fail to complete the work within the time stipulated, a liquidated damage of \$500.00 per calendar day shall be deducted from any monies due the contractor.
- (7) The Contractor shall include in his/her bid price the cost for all materials, labor, equipment, and incidentals necessary for the work to be completed in-place.
- (8) Payment will be made on a monthly basis for work completed. There will be retained five (5) percent of the amount of the work done and will be held until completion of all work and final acceptance by the Marshall County Commission. No further retainage will be held after 50 percent of work completed.

Upon completion of all work, the contractor must give notice of completion of the project by advertising in a local newspaper.

Advertisement must run for a period of four (4) consecutive weeks and provide the County with proof of advertising (affidavit) from the paper.

Upon completion and acceptance of all work, final payment will be made in accordance with Ala. Code 39-2-12(g).

(9) The Contractor shall indemnify and save harmless Marshall County, Marshall County Commission, the officers and employees from all suits, actions, or claims of any character brought because of any injuries or damages received by any person, persons, or property on account of the said Contractor, or through use of unacceptable materials in constructing the work; or because of any claims or amounts arising or recovered under the "Workman's Compensation Act" or any other law, ordinance, order or decree.

(10) It shall be the bidder's responsibility to possess all proper City, County, State, and Federal licenses and shall familiarize himself with and shall comply with all Federal, State, and local laws, ordinances, and regulations.

(11) By signing this contract the contracting parties affirm, for the duration of the agreement that

they will not violate federal immigration law or knowingly employ, hire for employment, or continue to employ an unauthorized alien within the State of Alabama. Furthermore, a contracting party found to be in violation of this provision shall be deemed in breach of the agreement and shall be responsible for all damages resulting therefrom.

**Each bidder is required to submit with the bid a certificate of E-Verify.**

(12) Bids may be submitted either by mail or in person, however, Marshall County will not be responsible for the security of mailed bids. (Also, if mailing bid, please be advised that we do not receive mail before 10:00 A.M. daily, therefore mail early to ensure prompt arrival).

(13) By signing and submitting of this bid, the vendor certifies that he/she is an equal opportunity employer.

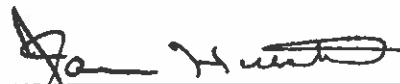
(14) Bidders are required to use this "Invitation For Bids". Bidders shall bid all items, sign, and return all sheets in the "Invitation For Bids" to **Marshall County Engineering, 424 Blount Ave., Suite 305, Guntersville, AL 35976**. Failure to do so will be cause for rejection of bid.

(15) Each individual bid must be submitted in a sealed envelope with the word "BID" and name of item marked on outside of envelope, along with the contractor's license number.

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You are invited to bid on the above specifications. Any substitutes offered, other than the items specified, must include information showing that the substitute is of equal or better quality and equally or better suited for the purported use than the item specified. The right to reject any items or materials not of quality or under any provisions of this act is reserved.

**THE MARSHALL COUNTY COMMISSION RESERVES THE RIGHT TO ACCEPT AND/OR REJECT ANY AND/OR ALL BIDS.**



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**JAMES HUTCHESON, CHAIRMAN  
MARSHALL COUNTY COMMISSION**