Specification Addendums: Replace the existing in their entirety with the following sections as highlighted below:

George Allen Courts Building

Elevators 1-6

**Page 18, paragraph 2.10 A**: Pushbuttons. Retain existing with the exception of the 1st floor. Provide a satin stainless steel surface mounted hall station. Include approved engraved message and pictorial representation prohibiting use of elevator during fire or other emergency situation as part of faceplate. Pushbutton design shall match car operating panel pushbuttons. Provide communication failure indicator and verbiage.

**APPENDIX 3**

**SECTION 14 31 00**

Escalators

Escalators Bid item no. 2: Provide new escalators as base bid. See new specifications below.

Alternate Pricing: Provide modernization as specified.

**ESCALATOR**

**PART 1 GENERAL**

1.1 SUMMARY

- A. Section Includes: Escalators
- B. Industry and government standards
  1. ANSI/NFPA 70, National Electrical Code.

1.2 DESCRIPTION OF ESCALATOR

- A. Quantity: 2
- B. Arrangement: Parallel
- C. Unit Identification: C-23671
- D. Vertical Rise: 15' 6"'
- E. Speed: Nominal speed of 100 feet/minute (0.5 M/sec.) ascending and descending
- F. Nominal Step Width: 24"
- G. Horizontal Steps: 2
- H. Transition Radii (upper/lower) (meters): 1.0m / 1.0m

Replace and Or Add
I. Power Supply: 3 x 460V 60 Hz
J. Operation Mode: Continuous operation

1.3 PERFORMANCE REQUIREMENTS

1.4 SUBMITTALS

A. Product Data: Submit manufacturer’s product literature for each proposed system.
   1. Layout, finishes, and accessories and available options
   2. System capacity and performance
   3. Controls, signals and operating system

B. Shop Drawings:
   1. Maximum loads imposed on the building structure at all support points
   2. Rise of escalator and required clearances
   3. Dimensions of escalator and related systems
   4. Electrical characteristics and connection requirements

C. Samples:
   1. Balustrade
   2. Skirts
   3. Decking
   4. Handrails

D. Closeout Submittals:
   1. Manufacturer’s operation and maintenance manuals.
   2. Inspection Certificates and Permits

1.5 QUALITY ASSURANCE

A. Manufacturer: Shall have a minimum of 10 years experience in the fabrication, installation and service of escalators. Manufacturer shall be ISO 9001 and 14001 certified, and have a documented quality assurance program.

B. Installer: Manufacturer shall install Escalators or a manufacturer recommended installer with a minimum 5 years’ experience in the installation and service of escalators.

C. Inspection and Testing: In accordance with requirements of local jurisdiction, obtain required permits, inspections and tests.
1.6 DELIVERY, STORAGE AND HANDLING

A. Coordinate delivery of escalator material.

B. Store escalator materials in protected environment in accordance with manufacturer recommendations.

1.7 WARRANTY

A. Provide Manufacturer warranty for a period of one year. Warranty period to begin upon escalator final acceptance. Warranty covers defects in materials and workmanship. Damage due to ordinary use, vandalism, improper or insufficient maintenance, misuse, or neglect do not constitute defective material or workmanship.

1.8 MAINTENANCE SERVICE

A. Provide maintenance service consisting of examinations for a period of 12 Months after date of escalator final acceptance.

B. Escalator manufacturer recommended service personnel shall provide maintenance service. Manufacturer recommended parts and supplies shall be used in maintenance service as in the original manufacture and installation.

C. Maintenance service shall be conducted during regular working hours of regular working days and shall include regular time call back service. Maintenance service shall not include adjustments, repairs, or replacement of parts due to negligence, misuse, abuse, or accidents.

PART 2 PRODUCTS

2.1 MANUFACTURER

1. Provide escalator(s) subject to compliance with the design and performance requirements of this specification. Additional manufacturers may include but are not limited to the following:

   1. KONE
   2. Schindler
   3. Otis
   4. ThyssenKrupp

2.2 LOAD CRITERIA

A. Load Profile:

1. Provide commercial load profile per the following:

   a. Overall load profile – 42%
   b. 12 hours / day, 7 days / week
   c. 2% time at 100% load
   d. 35% time at 50% loads
   e. 63% time at 25% load

2. Step Load:

   a. 122 lbs. / step (24” / 600mm step width)
2.3 COMPONENTS

A. Truss:

1. **Without intermediate support**

   a. The escalator trusses shall be designed to accommodate the loadings and factors referred to in the latest edition of ASME A17.1. The trusses shall not deflect greater than 1:1000 of the distance between supports under a Structure Loading Factor = 270 kg/m\(^2\). The truss shall be designed to accommodate the load with intermediate (center) supports.

b. The trusses shall be constructed of rolled steel sections, continuously welded where appropriate, and treated with an approved rust inhibitor.

c. The trusses shall include all the frames, supports and reinforcements necessary for the support and fastening of the mechanical parts of the escalators.

d. The soffit plate shall be 4 mm minimum thickness and welded and sealed to ensure it is oil tight.

e. All the necessary steelwork, trimming angles and bearing plates to support the escalators from the building structure are to be provided and fitted by the building contractor.

2. **Side cladding – by Contractor:** Truss side cladding shall be provided and installed by the Contractor.

3. **Soffit cladding – by Contractor:** Truss soffit cladding shall be provided and installed by the Contractor.

B. Isolation Mounting: Upper and lower end supports shall be isolated from building structure using a fabricated assembly of rubber and steel.

1. **Standard support type:** The truss supports at each end shall be provided with isolation (anti-vibration) pads, which dampen vibration and prevent structure-borne noise being transmitted to the building structure.

C. Escalator Drive:

1. Worm Gear: The drive unit is located outside the step band, at the upper end of the escalator. The chain sprockets of the step band and the handrail driving wheels are driven via a duplex chain by a compact worm gear with an electric motor, flange-mounted at the gearbox. The main driving shaft supports the chain sprockets for the step band. The main driving shaft supports the handrail driving shaft via handrail chain and handrail wheels. The drive system assures that the handrails are moved synchronously with the step band.

2. Upper Reversing Station: Precision-machined step chain, sprocket mounted on the machine output shaft and rotating on bearings.

Replace and Or Add
3. Lower Reversing Station: Machined floating track system designed to maintain proper tension on the step chain by use of springs.

D. Drive Motor

1. The drive motor shall be continuously rated and of adequate size for the duty concerned in both directions of travel. The drive shall be positive and quiet. The tenderer shall include details of the motor within the tender.

2. The tenderer shall include within the tender a list of protection provided, which shall preferably be by means of temperature sensitive devices in the motor windings with a magnetically operated overload device to cater for stall conditions. The motor shall be provided with class F insulation and a minimum ingress protection class of IP55 (NEMA 4). The motor shall be provided with IE3 level eco-efficiency.

E. Brake

1. The escalator shall have a “fail-safe” operational braking system, with electric release, which shall be capable of bringing an unloaded and loaded escalator to rest within the stopping distances given in the latest edition of ASME A17.1 and maintaining it in a stationary position. The system shall control the brake torque to maintain constant deceleration independent of load.

2. The brake shall be released by application of electric power and magnetically applied via permanent magnet upon removal of electric power. Provision shall be available for temporary release of the brake by means requiring a continuously applied manual release force.

3. The escalator shall stop automatically in the event of the operation of any safety device or electrical power failure.

4. Each escalator shall have the facility to lock the step band in position to enable work to be carried out safely within the step band.

F. Handrail Drive

1. C Handrail: To ensure the handrail runs synchronously with the step band, within a speed tolerance of 0% to 2%, a chain from the main drive shaft to the handrail shaft shall be used. A positive drive and proper tensioning of the handrail shall be achieved at all times. At the newel ends there shall be adequate sized rollers to guide the handrail around the newels. Each roller shall be fitted with sealed ball bearings and be grease lubricated.

G. Handrails

1. C Handrail: The endless rubber handrails shall be pre-stretched and provided with a nylon lining on the running faces and suitably reinforced with steel or cord tension members to enhance service life. The minimum breaking strength of the handrails shall be 25 kN. The color of the handrail shall be black.

H. Step Chains

1. Lubrication-free Chain: The step chains shall be specifically designed for escalator applications and be of the roller type with heat-treated links to satisfy the requirements of
ASME A17.1

In the interests of the environment and fire prevention, the step chains shall be of the sealed-for-life, lubrication-free type which require no external oil lubrication. The links, pins and bushes shall be suitably treated to prevent corrosion (e.g. zinc plated).

I. Step Chain Tension Carriage

1. A step chain tension device shall be provided in an easily accessible position in the lower machine pit. The tension carriage assembly shall be mounted on rollers with adequate lateral guidance to prevent skewing and shall be fitted with adjustable pressure springs to ensure uniform tensioning of the step chains.

J. Steps

1. Silver Aluminium: The silver painted steps shall be of an interchangeable design of rigid high tensile die cast aluminium, incorporating grooved tread plates and risers, and shall be capable of being removed and replaced without removing the skirtings or inside balustrade. Multi-piece step assemblies are not acceptable.

The step rollers shall have sealed ball bearings which are permanently grease lubricated. The steps are of distortion-resistant design, made of high tensile, die-cast aluminium. The tread plates have narrow grooves. The inner width between the cleats is 5.7 mm (average). Similar to the tread plate, the step riser is grooved vertically. Each step is provided with two step rollers of 75 mm diameter with encased, sealed-for-life ball bearings.

K. Step Demarcation

1. Yellow plastic inserts: Provide step demarcation inserts at sides and rear of each step. Inserts to be fabricated from reinforced structural plastic, and easily replaced. Attach inserts to step with concealed fasteners. Demarcation inserts shall be yellow.

L. Step Comb

1. Comb segment material – aluminium: Step combs shall be manufactured from aluminium and be easily replaceable. The escalator must incorporate step guides of wear-resistant material to ensure precise lateral entrance of the step into the comb. Safety contacts shall be fitted to the comb plate, acting both vertically and horizontally, to stop the escalator in the event of an object becoming entrapped between the steps and the combs.

M. Skirts

1. Sheet steel with black anti-friction coating: Rigid sheet steel skirting panels, minimum 3mm, shall be provided adjacent to the steps. They shall be coated with a black long-wearing friction reduction compound and adequately supported to prevent bending or deflection. Flexible skirting panels with micro-switches shall not be accepted.

N. Brush Guards

1. Black anodized aluminium with single brush: Single brush guards shall be provided to protect the step/skirting gap. They shall follow the nose line of the steps, running continuously throughout the length of the moving step band and terminating 50 mm
before the comb plates at both ends. At each end of the brush guard there shall be a smooth tapered aluminium leading piece to ensure that there are no sharp edges, which may be a hazard to passengers. The holder/basis shall be made of black anodized aluminium.

O. Floor Cover Plates

1. Natural ribbed aluminium: Single panel covers of aluminium shall be provided at the escalator entrances, covered with ribbed aluminium flooring. The covers shall be removable for maintenance purposes.

P. Balustrades

1. Solid inclined balustrade: The balustrades shall be of stainless steel resistant type. Their minimum thickness shall be 2 mm and the panels shall be self-supporting without the need for mullions. The panels shall be separated into standard lengths with the joints arranged at right-angles to the handrails. The vertical height of the balustrade, both on the incline and the ends, shall be max. 40”.

Q. Balustrade Front Plates

1. Black plastic front plates: Black plastic front plates shall be provided at upper and lower ends, designed to include the handrail inlet device.

R. Deck

1. Brushed stainless steel: The inner/outer decking and the handrail profile shall be of brushed stainless steel. The joints of all sections shall be of the flush butted type.

2. Center decking: Parallel arranged escalators shall have a common center deck.

S. Control Cabinet

1. Position of the controller cabinet – Inside truss: The controller for the escalators shall be in a sheet metal cabinet located within the top machine compartment and shall be removable for maintenance purposes. The controller shall incorporate all devices for controlling the direction of travel of the escalator and all overload and safety devices. The controller cabinet shall be protected with the following class IP54 (NEMA 4) (Controller cabinet protection class).

2. Building Management System: An interface to the building management system shall be provided and connected to the escalator controller. The building management system and necessary wiring shall be provided by the customer.

T. Operational Mode

1. Continuous: The escalator shall be started by a key switch and shall run continuously in the selected direction until stopped by a key switch or by an emergency stop.

U. Safety Devices

The escalators shall be equipped with the following safety devices/features:
1. Reversal Stop Device: Provide controller sensitive device to automatically stop the escalator should its direction reverse while operating in the ascending direction.

2. Broken Step Chain Device: Provide device on each chain as a component of the lower reversing station assembly a device to bring escalator to controlled stop when activated.

3. Step Up Thrust Device: Provide device each side of the lower curve track on the lower end of each escalator, that should a step be displace against the upthrust track, will cause the escalator to come to a controlled stop.

4. Comb-step Impact Device: Provide device at the upper and lower comb plates, impact between comb segments and step will cause the escalator to come to a controlled stop.

5. Skirt Obstruction Device: Provide devices on each side of the balustrade at upper and lower ends within the skirt panels. Device shall activate should an obstruction occur between the step and skirt panel. Switches shall be of the plunger, self-resetting type, adjustable to maintain the required position and clearance from the skirts.

6. Missing Step Device: Provide device to detect missing step or steps at the upper and lower ends of the escalator. Upon activation, the escalator will come to a controlled stop.

7. Step Demarcation Lights: Provide demarcation lights at top and bottom of each escalator. Light shall be mounted below the track system where the step leaves or enters the comb plate, light shall be visible between the steps and the step/comb segment. Provide two independent green LED lights, capable of lighting the entire width of the step.

8. Handrail Entry Device: Provide device at the handrail inlet in the newel. The escalator will come to a controlled stop should an object enter the handrail inlet area.

9. Handrail Speed Monitoring Device: Provide magnetic sensor to sound an alarm, when the speed of the handrail deviates from that of the step band by a minimum fifteen percent. If the deviation lasts for more than two seconds, device will cause the escalator to come to a controlled stop.

10. Emergency Stop Buttons: Provide buttons to cut electrical power supply to the motor upon activation.
   a. Locate emergency stop button at each landing in the newel upper radius quadrant, 45 degrees above horizontal. The stop button shall be red in color.
   b. The button shall be housed under a clear, high impact resistant plastic, self-closing cover. Instructions for operating shall be imprinted on the cover in accordance with ASME/ANSI A17.1. When the cover is lifted, an audible alarm shall sound until returned to its closed position.

11. Safety Signs: In accordance with ASME/ANSI A17.1 provide pictorial sign at upper and lower landings.

12. Stop Switch in the machinery spaces: Provide stop switch in the upper and lower pits, upon activation of either switch escalator will come to a controlled stop.

13. Step Level Devices: Provide step level devices at upper and lower ends of escalator. Devices shall detect downward displacement of the step prior to reaching the comb
plates. Upon activation the escalator will come to a controlled stop.

14. Step Guards: Provide guards in the upper and lower pit to protect maintenance personnel from step band.

15. Step Band lock: A locking device, with mechanical and electrical protection, to lock the step band in position for when it is necessary to work within the step band.

16. Access Cover Device: Provide device at the upper and lower ends of the escalator under the access cover plate. Device shall detect lifting or removal of the access cover. Upon activation, the escalator shall come to a controller stop.

V. Wiring

1. This includes the laying of all cables and conductors from the main circuit breaker in the control cubicle to the individual controls, lighting, and safety devices inside the escalator. All the electrical installation material must be suitable for humid conditions. The cables, switching elements and electrical devices must be in accordance with NEII requirements.

W. Control Switches

1. The control switch shall be mounted at the upper and lower end of the escalator and shall be key operated.

X. Bearings

1. All bearings of rotating shafts are to be of a high quality, high precision and self aligning, and ball or roller type as appropriate. All bearings are to be selected to give, under an appropriate load profile for applications, a minimum calculated design life of 100,000 hours (L10h) based on the ISO definition of life rating.

Y. Lubrications

1. The tenderer shall define the method of lubrication and state by what means oil and other debris are removed from the escalators at periodic intervals. Where a drive chain is used to couple the drive unit to the main drive shaft, an automatic lubrication system shall be provided with sufficient oil capacity for at least one month's operation.

Z. Notices/Signs

1. A caution sign shall be located at the top and bottom landing of each escalator, readily visible to the boarding passengers. The sign shall include the following wording:
   a. Caution
   b. Passengers only
   c. Hold handrail
   d. Attend children
   e. Avoid sides

AA. Electrical Supplies

1. Included in Both: 3 phase, 460V 60 Hz supply shall be provided by other parties. This supply shall be terminated in a junction box, adjacent to the control cabinet, and be used for the main motor power required. The tenderer shall detail the load requirements of each supply and the preferred locations of the incoming cables at the time of tender.
2.4 FACILITY SERVICES REQUIREMENTS REQUIRED BY CONTRACTOR

A. Provide for connection to 3 x 460V 60 Hz electrical power, including a fused disconnect switch and equipment-grounding conductor. Switch and grounding conductor shall terminate at the escalator controller terminal block.

B. Provide for connection to single (1) phase, 120 volt, 60 hertz, 15 amps electrical power supply including a grounding conductor terminating receptacle. Receptacle to be located within the machine space. Single-phase receptacles within wellways shall have ground-fault circuit-interrupter protection.

C. Provide for connection to dedicated phone line, located at upper end pit area at the escalator controller.

1.5 FABRICATION

A. Escalators shall be partially pre-assembled prior to delivery to the job site.

PART 3 EXECUTION

3.1 EXAMINATION

A. Field measure and examine substrates, supports, and other conditions under which escalator work is to be performed. Conditions may include, but are not limited to:

1. Installation of required permanent enclosures including railings and smoke baffles for the well ways.

2. Well ways are clear of conduit, piping, ducts, sprinkler systems and any other utilities.

B. Do not proceed with work until unsatisfactory conditions are corrected

3.2 PREPARATION

A. Protect floor openings adjacent to and in the general area of escalator installation.

B. Install barricades a minimum of 48" high (1219 mm), for the duration of the escalator erection period.

3.3 INSTALLATION

A. Properly locate truss and required intermediate supports at locations in accordance with manufacturer’s recommendations and approved shop drawings. Anchor to building structure.

B. Install escalator components in strict accordance with manufacturer installation methods.

C. Glass Balustrade shall be installed without the use of mullions

3.4 ADJUSTING

A. Properly locate truss and required intermediate supports at locations in accordance with manufacturer’s recommendations and approved shop drawings. Anchor to building structure
3.5 DEMONSTRATION

A. Prior to final escalator acceptance, make a final check of each escalator operation with the owner or owner’s representative present. Manufacturer representative shall be present to determine that control systems and operating devices are functioning properly.

3.6 PROTECTION

A. Escalator shall be protected from damage throughout the remainder of the construction period. Contractor shall not put escalator into service until final escalator acceptance.

ALTERNATE #1 - MODERNIZATION

George Allen Courts Building

DESCRIPTION OF ESCALATORS BEING MODERNIZED

Quantity and Type: 2 Montgomery, HR 5000

Unit Nos.: 15A (B-1) and 16A (1-B)

Rise: Approximately 15 Ft. 6 In.

SCOPE OF WORK

The existing escalators as described below will be modernized in accordance with the specification provided herein. This is a turnkey project. The contactor is responsible to subcontract all work needed to meet the specifications herein. Where existing equipment and/or systems are not mentioned, the intent of this specification is to reuse said items "as is".

EXISTING ESCALATOR DESCRIPTION

Quantity: 2

Unit Identification: 1-B and B-1

Floors Served: 1st Floor to Basement, Basement to 1st Floor

Speed: Ascend and descend at a nominal speed of 100 feet/minute

Vertical Rise: 15 Ft. 6 In. (Field verify)

Balustrade Width: 32 inches

Nominal Step Width: 24 inches

Power Supply: 460 VAC / 3 Phase/60 Hertz

ESCALATOR PRODUCTS DESCRIPTION

All new escalator equipment described in this section shall be of the same design as the equipment provided by the escalator modernization contractor in new installation applications.
A. Truss: The existing truss shall be reused. The following work shall be performed:

1. Upper and Lower End:
   a. Removal of track and support brackets.
   b. Removal of access cover support plates.
   c. Removal of selected truss cross members.
   d. Removal of handrail support return brackets.

2. Incline:
   a. Removal of top and return track
   b. Removal of handrail return brackets.
   c. Modification to truss cross members.

3. Clean down of the existing truss removing all remnants of oil, grease, lint, dirt and debris from the unit. Apply one coat of machinery enamel.

4. Inspect the existing welds, rivets and overall structure and make any necessary repairs.

B. Isolation Mounting: Existing isolation mounting shall be reused.

C. Upper, Lower, and Incline Modules: Upper, lower, and incline modules shall be designed and fabricated for installation into the existing truss.

1. The upper end module shall include the drive machine, track sub-assemblies, and truss interface components. The track sub-assemblies shall be welded steel plate construction. The left and right hand plates shall be connected by structural steel tube cross members. The following components shall be directly mounted to the upper end module: Top and return curve track; Step guidance system; Handrail guidance system; Skirts and support brackets; Access cover and combplate support angles; Safety devices and associated mounting brackets, including skirt switches, missing step detector, step out of level detector, and handrail speed sensors.

   a. Drive Machine: A totally enclosed, planetary geared machine specially designed for this service shall be furnished. It shall include a drive motor and electro-magnetic brake. The machine shall be mounted in the upper end module to truss interface brackets and integrally attached to the track sub-assembly plates, and be connected by direct drive to the step drive sprocket. An output shaft shall be provided to directly drive the handrail. The drive machine
shall be designed to substantially match speeds of the step band and handrails. Lubrication of the gears and bearings shall be by synthetic based oil bath.

b. The escalator(s) shall be equipped with a motor designed for escalator service. The motor shall be of TEFC design, ball bearing type, integrally and horizontally mounted to the drive machine. The motor shall be flange mounted to the main drive gear case and torsionally connected to the gearbox. Driving motor and motor switchgear shall be designed to provide a smooth start, which shall prevent undue strain on drive components. The motor shall be of sufficient size to operate the escalator at a minimum of Code-rated load, ascending without exceeding the rated horsepower.

Each escalator shall be provided with a permanent magnet ceramic brake, located on the high speed shaft which, when activated, shall stop the escalator as required by Code, upon activation of a stop button, safety device, or loss of power.

c. Permanent Magnet Ceramic Brake: A load compensating brake system shall be installed. The brake shall be capable of automatically stopping the escalator quickly but gradually, and shall hold the escalator stationary under full load whenever the power is interrupted. The brake shall be “fail safe” and electrically released. The system shall continually adjust brake torque to maintain a relatively constant deceleration independent of the load. The brake shall not cause the escalator to come to an abrupt stop. It shall be designed to meet ASME A17.1-2000 Code deceleration requirements without adjustment.

d. Upper Reversing Station: The Upper Reversing Station and drive shall include a precision-machined step chain sprocket mounted on the machine output shaft and rotating on bearings.

2. The lower end module shall include the reversing station, track sub-assemblies, and truss interface components. The track sub-assemblies shall be welded steel plate construction. The left and right hand plates shall be connected by structural steel tube cross members. The following components shall be directly mounted to the lower end module: Top and return curve track; Step guidance system; Handrail guidance system; Skirts and support brackets; Access cover and combplate support angles; Safety devices and associated mounting brackets, including skirt switches, missing step detector, step out of level detector, and step upthrust device.

a. Lower Reversing Station: The Lower Reversing Station shall consist of a machined floating track system designed to maintain proper tension on the step chain by use of springs. It shall be designed to maintain uniform chain tension, and shall detect movement of the carriage through the activation of a safety switch.

3. Incline Modules: Modular multi-purpose stanchion assemblies shall be installed on the incline of the existing truss. These incline support stanchions shall be fabricated of steel and mounted to the existing truss. They shall be designed to support all incline track sections and handrail guide components as part of the complete step band. These stanchions shall be pre-assembled and
fixture to set track spacing, as well as step and handrail guidance components, prior to installation into the existing truss.

D. Step Band

1. Step Guidance: A step guidance system shall be provided to control the movement of the steps both horizontally and vertically. Each step shall be provided with horizontal guide pads, which shall guide the steps throughout their travel, in combination with a continuous guide profile installed in the area of the escalators open to passengers. A17.1-2000 Code Step/Skirt Performance Index requirements shall be met without the need for skirt deflector brushes.

2. Step Chain: The step band shall consist of consecutively running steps powered and spaced with a chain designed for long life and quiet operation. The step chain shall properly mesh with the main drive sprockets and lower reversing station castings. The chain shall be an engineering class roller chain, manufactured to close tolerances, from high quality material with heat-treated bushings, pins, and link plates.

   Lubrication-free chain: The escalators shall be designed using Lubrication-free chain. The chain shall be designed to reduce oil use and life cycle costs.

3. Steps: The steps shall be formed from one-piece die cast aluminum with closely spaced tread and riser cleats. Step rollers shall rotate on sealed ball bearings. The step shall be connected to the chain by a pin and bushing. Vertical curved step risers shall be furnished with vertical cleats arranged to pass between the cleats of the tread on the adjacent step to form an inter-meshing unit with minimum clearances. Step color shall be silver aluminum.

   a. The number of level steps at each end of the escalator shall be two.

   b. Step demarcation inserts shall be provided on the sides and rear of each step. The inserts shall be fabricated from reinforced structural plastic, shall be easily replaced and shall be approximately 1.5 inches (38mm) wide at the sides and approximately 1.5 inches (38 mm) wide at the rear. Inserts shall be attached to the step without the use of visible fasteners. The color of the demarcation inserts shall be yellow per ASME A17.1.

4. Tracks: New tracks shall be designed and fabricated to support and retain the steps and running gear at the rated load and at the highest speed specified. Tracks shall be assembled and secured together for easy removal and replacement of sections. The system shall be adjustable, with no welding of the track sections at the joints. Tracks shall be properly supported on stanchions to provide correct alignment and smooth transition to return stations. The rolling surface of the incline track shall be a minimum thickness of 3 mm. The transition track shall be a minimum thickness of 10mm. The guiding surface of the wheels shall be galvanized steel profiles.
with smooth and even running surfaces. Joints shall be cut diagonally to the running direction. A second, continuous step guiding profile shall be provided above the step chain rollers.

E. Combplates and Access Covers

1. Comb Plates: Adjustable comb plates shall be located at the top and bottom landings. The comb plates shall support injection molded, reinforced structural plastic comb segments which shall be designed to be removable and to mesh with the cleats on the step treads. The skid resistant comb plates shall be designed to sense both horizontal and vertical movement of the comb segments. Comb segments shall be yellow.

2. Access Covers: Lightweight aluminum access covers shall be provided. The design of these skid resistant access covers shall allow for ease of maintenance. These covers shall be provided at both upper and lower landings, and match the pattern of the new combplates.

F. Decks/Balustrades/Floorplates/Skirts/Interior Trim

1. New Decks: The escalator decks shall be constructed such that there shall be an inner deck and an outer deck. The inner and outer decks shall be fabricated from heavy gauge metal. Deck panels shall be installed without overlapping joints or requiring trim pieces to cover where two deck panels meet. Both inner and outer decks shall be finished in stainless steel #4 satin finish 14 gauge material.

   a. Newel Ends: Both the upper and lower newel ends shall be designed to allow the return of the handrail without undue stress. The newel ends shall support the handrail around the newel through the use of a multi-roller bearing system to minimize drag and maximize handrail life.

   b. Antislide Knobs: Provide high outer deck configuration of immediately adjacent units with antislide knobs. Finish of knobs to match deck finish.

   c. Deck Guards: Escalator units in this specification are required to have deck guards per ASME 17.1 Code. The deck guards are required at the upper and lower end.

2. Stainless Steel Balustrades: ¼" Solid Stainless Steel Sandwich Panels shall be provided between the escalator decks and the handrails.

3. Frontplates: Frontplates shall be provided at upper and lower ends designed to include the handrail inlet device and key actuated direction-starting switch. The handrail inlet device shall be a four-piece door/gate assembly. The frontplate material shall be stainless steel #4 satin finish.
4. Control Station: At both the upper and lower landings, located near the handrail inlet, a station shall be provided which shall include a key actuated direction starting switch. The escalator will not restart automatically. It must be restarted with the key after it has shut down.

5. Skirts: The skirts shall be constructed from a heavy gauge material reinforced with steel channels. Skirts shall be fastened to the truss modules with hidden fastenings in the incline and transition areas. Skirt panels shall be installed without overlapping joints or requiring trim pieces to cover where two skirt panels meet. The skirt panels will be finished in Black Teflon coated 11 gauge cold rolled steel.

G. Handrails: Escalator handrails, properly constructed and reinforced, shall be provided. Handrails shall be endless with a smoothly vulcanized splice and shall operate with the moving steps. The handrails shall move on specially formed guides and traction sheaves. These sheaves shall be an integral part of the drive machine. Close fitting guards shall be provided by the handrail openings in the newel base. The handrail color shall be black.

H. Controls and Wiring

1. Controller: The controller shall be of the microprocessor type. The controller shall monitor the condition of each safety device, brake, and motor operation, and shall cause the escalator to come to a stop upon activation of any safety device, brake problem, or motor overload. Should a power failure occur, the controller shall automatically remove power from the motor, and brake, and bring the escalator to a controlled stop. The controller shall include phase and overload protection.

2. Wiring: A pre-assembled wiring harness shall be installed, complete with modular assemblies for the upper end, incline section, and lower end of the truss. The upper and lower end assemblies shall be constant and consistent from unit to unit. The incline assembly shall be variable by length only. Both upper and lower harnesses shall have terminal boxes for easy access and troubleshooting capabilities. In conjunction with the low voltage/low power circuitry, S.O. cord shall be installed between terminal boxes and individual safety switches.

I. Safety Devices:

1. Reversal Stop Device: Each escalator shall be provided with a reversal stop device or function that is controller sensitive to stop the escalator automatically should the escalator attempt to reverse its direction while operating in the ascending direction.

2. Broken Step Chain Device: A broken step chain device, a part of the lower reversing station assembly, shall be provided for each chain. When these devices are activated, the escalator will come to a controlled stop.
3. Step Upthrust Device: A step upthrust device shall be located on each side of the lower curve track on the lower end of each escalator. The escalator will come to a controlled stop should a step be displaced against the up thrust track.

4. Comb-Step Impact Device: A comb-step impact device shall be provided at the upper and lower comb plates. The escalator will come to a controlled stop should an impact occur between the comb segments and steps.

5. Skirt Obstruction Device: Skirt obstruction devices shall be provided, at both upper and lower ends, within the skirt panels. The escalator will come to a controlled stop should an obstruction occur between the step and skirt panel. Switches shall be of the plunger, self-resetting type, adjustable to maintain the required position and clearance from the skirts.

6. Missing Step Device: Missing step devices shall be provided. The missing step devices are designed to detect a missing step or steps at the upper and lower ends of the escalator. When these devices are activated, the escalator will come to a controlled stop.

7. Step Demarcation Lights: Step demarcation lights shall be furnished at the top and bottom of each escalator. They shall consist of a light fixture installed just below the track system where the step leaves or enters the comb plate. This fixture shall be furnished with two independent green fluorescent lamps and shall be capable of lighting the entire width of the step. The light, which shall be visible between the steps and the step and comb segment, shall provide a reference point for entering or exiting the escalator.

8. Handrail Entry Device: A handrail entry device shall be provided at the handrail inlet in the newel. The escalator will come to a controlled stop should an object enter the handrail inlet area.

9. Handrail Speed Monitoring Device: A magnetic sensor shall be provided to sound the alarm when the handrail deviates from the step speed by 15% or more. If the deviation lasts for more than 2-6 seconds, the escalator will come to a controlled stop.

10. Emergency Stop Buttons: Emergency stop buttons shall be provided, designed so that the momentary pressure of either button shall cut off the electrical power supply to the motor and bring the escalator to rest.

   a) One emergency stop button shall be located at each landing. Location shall be in the existing newel upper radius quadrant, 45 degrees above horizontal, in order to provide easy access. The stop button shall be red in color.
b) The button shall be housed under a clear, high impact resistant plastic cover, which shall be self-closing. Instructions for operating the stop button shall be imprinted on the cover in half-inch high letters. When the cover is lifted, an audible alarm shall sound until the cover is returned to its closed position.

11. Safety Signs: A pictorial sign meeting the requirements of the ASME A17.1 Code shall be provided at both the upper and lower landings. The safety signs will be provided in English.

12. Stop Switch in Machinery Spaces: Each escalator shall be provided with stop switches in the upper and lower pits. When these switches are activated, the escalator will come to a controlled stop.

13. Step Level Devices: Step level devices shall be provided at the upper and lower ends of the escalator to detect downward displacement of the step prior to it reaching the combplates. When these devices are activated, the escalator will come to a controlled stop.

14. Step Guards: Escalators in this specification are required to have step guards. Step guards will be provided in the upper and lower pit. The step guard will protect a mechanic from the step band.

WORK TIMES

A. All work will be performed during normal working hours- 6:00 AM to 6:00 PM, Monday – Friday
B. Exceptions:
   a. The delivery and staging of upper, lower and incline modules will be performed during overtime hours.
   b. Painting of truss.

DELIVERY, STORAGE, AND HANDLING

A. Deliver material in Contractors original unopened protective packaging.

B. Store material in original protective packaging. Prevent physical damage or moisture damage.

1.01 APPLICABLE CODES

A. Compliance with Regulatory Authorities: Comply with all applicable provisions of following Codes, laws, and/or Authorities, including revisions and changes in effect on the date of these specifications;
   1. Safety Code for Elevators and Escalators, ASME A17.1
   2. Elevator and Escalator Electrical Equipment, ASME A17.5

Replace and Or Add
3. National Electrical Code, NFPA 70
4. Local Fire Authority
5. Requirements of UBC, SBC, IBC and all other Codes, Ordinances and Laws applicable within the governing jurisdiction

1.02 DOCUMENT AND SITE VERIFICATION

A. Submission of a bid will be considered evidence that the bidder has made themselves fully aware of the Contract requirements; scope of work, building access, related work required by other trades, existing equipment, as well as any requirements of the local authority, manpower requirements and has made proper allowance for all contingencies.

B. Any discrepancies, omissions or items requiring clarification found by bidders in the Contract Documents shall be submitted in writing directly to the Owner for clarification. All bidders will be notified of clarifications in writing.

C. Contractor shall be responsible for verifying all dimensions, data and site conditions.

1.03 PERMIT, TEST AND INSPECTION

A. Obtain and pay for any permit, license, and inspection fees necessary to complete the work specified herein.

B. Perform final acceptance test required by Governing Authority. Acceptance test is required to be witnessed by a third party inspection firm; Contractor shall be responsible for any costs associated.

1. PURCHASER’S INFORMATION

A. Provide three sets of neatly bound written information necessary for proper maintenance and adjustment of equipment within 30 days following final acceptance. Final retention will be withheld until data is received by Purchaser and reviewed by Consultant. Include the following as minimums:

1. Straight-line wiring diagrams of “as-installed” escalator circuits with index of location and function of components. Provide one set reproducible master. Mount one set wiring diagrams on panels, racked, or similarly protected, in escalator machine room space.

2. Provide remaining set rolled and in a protective drawing tube. Maintain all drawing sets with addition of all subsequent changes. These diagrams are Purchaser’s property.

3. Written Maintenance Control Program (MCP) specifically designed for the equipment included under this contract. Include any unique or product specific procedures or methods required to inspect or test the equipment. In addition, identify weekly, bi-weekly, monthly, quarterly, and annual maintenance procedures, including statutory and other required equipment tests.

4. Lubrication instructions, including recommended grade of lubricants.

5. Parts catalogs for all replaceable parts including ordering forms and instructions.

6. Four sets of keys for all switches and control features properly tagged and marked.

7. Diagnostic equipment complete with access codes, adjusters manuals and set-up manuals for adjustment, diagnosis and troubleshooting of escalator system, and performance of routine safety tests.

Replace and Or Add
WARRANTY

A. Manufacturer agrees to repair, restore, or replace escalator work that fails in materials or workmanship within specified warranty period.
B. Failures include, but are not limited to: operation or control system failure, including excessive malfunctions; performances below specified ratings; excessive wear; unusual deterioration or aging of materials or finishes; unsafe conditions; need for excessive maintenance; abnormal noise or vibration; and similar unusual, unexpected, and unsatisfactory conditions.
C. Warranty Period: One year (1) year from date of Substantial Completion.

MAINTENANCE

B. Interim Maintenance:
1. Furnish preventive maintenance service on elevators described herein for a period from notice to proceed, verbal or written, until each unit is removed from building service for modernization. In addition, furnish interim preventive maintenance on completed units until the modernization of each group of elevators is complete and one-year warranty maintenance, defined in Item 1.11, B below, is commenced. Cost of interim maintenance shall not be included as part of modernization quotation. Indicate costs on a per-unit basis for interim maintenance as requested on bid form. Costs for interim maintenance shall be paid by Purchaser separately and monthly based upon the number of units in service.
2. Perform interim maintenance based upon terms and conditions of Section 14325. Use competent personnel, acceptable to the Purchaser, employed and supervised by the Provider.

C. Warranty Maintenance:
1. Provide preventive maintenance and 24-hour emergency callback service for one year commencing on date of final acceptance by Purchaser. Systematically examine, adjust, clean, and lubricate all equipment. Repair or replace defective parts using parts produced by the Provider of installed equipment. Maintain elevator machine room, hoistway, and pit in clean condition. Use competent personnel, acceptable to the Purchaser, supervised and employed by Provider.
2. Purchaser retains the option to delete cost of warranty maintenance from new equipment contract and remit twelve (12) equal installments directly to Provider during period in which maintenance is being performed.

BARRICADES

A. Contractor will furnish, install, maintain and remove (at Project completion) necessary barricades. The determination of need, the description, the location and the quantity of such barricades will be at the Contractors sole responsibility.

WASTE DISPOSAL

A. The contractor will be responsible for refuse containers and prompt disposal for equipment / materials which will be removed from the existing truss.
RELATED WORK BY CONTRACTOR

The following work is the responsibility of the Contractor, and will be performed or furnished by contractors other than the escalator subcontractor, according to governing Codes:

A. GENERAL: A clear entry and exit safety zone at the top and bottom of the escalator.

B. LIGHT WITH GUARD AND GFICI CONVENIENCE OUTLET IN EACH PIT AND MACHINE ROOM SPACE.

C. THREE PHASE MAINLINE COPPER POWER Feeder TO TERMINALS OF EACH ESCALATOR CONTROLLER IN THE MACHINE ROOM SPACE WITH PROTECTED, LOCKABLE "OPEN", DISCONNECT SWITCH.

D. Single phase copper power feeder to each lower end intermediate location, lockable "open", disconnect switch located in machine room space.

E. Cutting and patching of walls and floors.

F. WORK AND STORAGE AREAS: The Contractor will be provided a staging / storage area throughout the project in the basement level parking area near the building entrance equivalent to approximately 6 adjacent parking spaces. The **Contractor** will provide lockable barricade around this space.

END OF SECTION
Lew Sterrett Jail “B”
Elevators B1 – B4

Page 13, paragraph 2.04 B: Geared Traction Hoist Machine:

3. Provide new single worm geared traction type with AC induction or P.M.S.M. ACV$^3$F motor, brake, gear, drive shaft, deflector sheave, and gear case mounted in proper alignment on an isolated bedplate. Provide new deflector sheave at machine room level.
5. Provide new hoist ropes.

D. Acceptable hoist machines:
1. Hollister-Whitney
2. Titan Machine

Page 16, paragraph 2.06 E: Sills - Retain existing.

Page 16, paragraph 2.07: CAR EQUIPMENT

A. Frame: Retain Existing. Check and tighten all fastenings.
B. Safety Device: Retain existing. Check and tighten all fastenings.
C. Platform: Retain existing. Reinforce if required. Check and tighten all fastenings.
E. Guide Shoes: Retain existing. Check and tighten all fastenings. Replace worn rollers.
F. Finish Floor Covering:
G. Sills: One piece extrusion with extruded extension between car entrance columns to face of car front return. Extruded extension to match finish of sill.
   1. Cars B1 - B4: nickel silver
H. Doors: 16-gauge steel, formed construction without binder angles. Provide leading edges of center-opening doors with rubber astragals. Provide a minimum of two gibs per panel, one at leading and one at trailing edge with gibs in the sill groove entire length of door travel. Construct door panels with interlocking, stiffening ribs. No. 4 stainless steel metal cladding shall wrap around leading and trailing edge of panel and return a minimum of 1/2 in. on rear side of leading edge of panel.
I. Door Hangers: New roller or complete hanger assembly as required.
J. Door Track: Provide new bar or formed, cold-drawn removable steel tracks with smooth roller contact.

K. Door Header: Provide new.

L. Door Electrical Contact: Prohibit car operation unless car door is closed.

M. Door Clutch: Heavy-duty clutch, linkage arms, drive blocks and pickup rollers or cams to provide positive, smooth, quiet door operation. Design clutch so car doors can be closed, while hoistway doors remain open.

N. Door Operator: Medium speed, heavy-duty door operator capable of opening doors at no less than 1-1/2 f.p.s. Accomplish reversal in no more than 2-1/2" of door movement. Provide solid-state door control with closed loop circuitry to constantly monitor and automatically adjust door operation based upon velocity, position, and motor current. Maintain consistent, smooth and quiet door operation at all floors, regardless of door weight or varying air pressure.

Acceptable closed-loop door operators:
1. KONE Renova 1.5
2. Otis i Motion II
3. Schindler 14 Medium Duty
4. ThyssenKrupp HD91 StarTrac
5. G.A.L. MOVFR
6. Fujitec APEX
7. Mitsubishi KV4K

O. Door Control Device:
1. Infrared Reopening Device: Black, fully enclosed device with full screen infrared matrix or multiple beams extending vertically along leading edge of each door panel to minimum height of 7'-0" above finished floor. Device shall prevent doors from closing and reverse doors at normal opening speed if beams are obstructed while doors are closing, except during nudging operation. In event of device failure, provide for automatic shutdown of car at floor level with doors open
   a. Acceptable Infrared Reopening Device:
      1) Cegard/MAX-154 by CEDES
      2) Gatekeeper by Adams
      3) Lambda II by Otis
      4) Magic Edge by Tri-Tronics
      5) Microlite by ThyssenKrupp
      6) Microscan E by T.L. Jones
      7) Pana40 Plus by Janus

2. Nudging Operation: After beams of door control device are obstructed for a predetermined time interval (minimum 20.0 - 25.0 seconds), warning signal shall sound and doors shall attempt to close with a maximum of 2.5 foot pounds kinetic energy. Activation of the door open button shall override nudging operation and reopen doors.
3. Interrupted Beam Time: When beams are interrupted during initial door opening, hold door open a minimum of 3.0 seconds. When beams are interrupted after the initial 3.0 second hold open time, reduce time doors remain open to an adjustable time of approximately 1.0 - 1.5 seconds after beams are reestablished.
4. Differential Door Time: Provide separately adjustable timers to vary time that doors remain open after stopping in response to calls.
   a. Car Call: Hold open time adjustable between 3.0 and 5.0 seconds.
   b. Hall Call: Hold open time adjustable between 5.0 and 8.0 seconds. Use hall call time when car responds to coincidental calls.
P. Car Operating Panel:
1. One car operating panel with faceplate, consisting of a metal box containing vandal resistant operating fixtures, mounted behind the car stationary front return panels. Faceplates shall be hinged and constructed of stainless steel, satin finish.
2. Suitably identify floor buttons, alarm button, door open button, door close button and emergency push-to-call button with SCS cast tactile symbols recessed flush mounted. Configure plates per local building code accessibility standards including Braille. Locate operating controls no higher than 48" above the car floor; no lower than 35" for emergency push-to-call button and alarm button.
3. Provide minimum 3/4" diameter raised floor pushbuttons which illuminate to indicate call registration.
4. Provide alarm button to ring bell located on car, and sound distress signal at control panel. Illuminate button when actuated.
5. Provide keyed stop switch at bottom of car operating panel in locked car service compartment. Mark device to indicate "run" and "stop" positions.
6. Provide "door open" button to stop and reopen doors or hold doors in open position.
7. Extended Door Hold Open Button: Provide button to extend normal door hold open period up to 30 seconds. Cancel extended time by registration of car call or actuation of door close button.
8. Provide “door close” button to activate door close cycle. Cycle shall not begin until normal door dwell time for a car or hall call has expired, except firefighters’ operation.
9. Provide firefighters’ Phase II key switch with engraved instructions filled red. Include light jewel, buzzer, and call cancel button.
10. Install firefighters’ telephone jack with approved mounting bezel matching adjacent controls.
11. Provide lockable service compartment with recessed flush door. Door material and finish shall match car return panel or car operating panel faceplate.
12. Include the following controls in lockable service cabinet with function and operating positions identified by permanent signage or engraved legend:
   a. Access switch.
   b. Light switch.
   c. Three-position exhaust blower switch.
   d. Independent service switch.
   e. Constant pressure test button for battery pack emergency lighting.
   f. 120-volt, AC, GFCI protected electrical convenience outlet.
   g. Stop switch.
13. Provide black paint filled (except as noted), engraved or approved etched signage as follows with approved size and font:
   a. Phase II firefighters’ operating instructions on main operating panel above corresponding keyswitch filled red.
   b. Car number on main car operating panel.
   c. “Certificate of Inspection on File in Building Office” on main car operating panel.
   d. “No Smoking” on main car operating panel.
   e. Car capacity in pounds on main car operating panel

Q. Car Top Control Station: Retain existing. Check and tighten all fastenings.

R. Work Light and Duplex Plug Receptacle: Retain existing. Check and tighten all fastenings.

S. Communication System:
1. Two-way communication instrument in car with automatic dialing, tracking and recall features with shielded wiring to car controller in machine room. Provide dialer with automatic rollover capability with minimum two numbers. Provide consolidator to allow multiple phones connected to one (1) line.
a. “HELP” button adjacent light jewel shall illuminate and flash when call is acknowledged. Button shall match car operating panel pushbutton design. Provide uppercase "WHEN FLASHING HELP ON THE WAY" engraved signage adjacent to light jewel.

b. Provide “HELP” button tactile symbol, engraved signage, and Braille adjacent to button mounted integral with car front return panel.

2. Firefighters' telephone jack in car and firefighters’ panel, with four shielded wires to machine room junction box. Jack bezel shall match adjacent controls.

3. Install remote speakers behind front return panel with drilled speaker pattern, with shielded wiring to machine room junction box.

4. Provide two-way communication between car and machine room.

PAGE 19, PARAGRAPH 2.08 CAR ENCLOSURE

A. Car Enclosure Passenger Elevators: Provide complete as specified herein. Provide the following features.

1. Shell: Reinforced 14 gauge textured stainless steel formed panels as specified in Item 2.02. Apply sound deadening mastic to exterior.

2. Canopy: Reinforced 12 gauge furniture steel formed panels with lockable hinged emergency exit. Interior finish white reflective baked enamel.

3. Provide labor to assist in installation of CCTV cameras.

4. Front Return Panels: Reinforced 14 gauge stainless steel, textured finish as specified in Item 2.02.

5. Entrance Columns and Transom: Reinforced 14 gauge, stainless steel, satin finish.

6. Car Door Panels: Reinforced minimum 16 gauge stainless steel textured finish as specified in Item 2.02. Same construction as hoistway door panels. No. 4 stainless steel metal cladding shall wrap around leading and trailing edge of panel and return a minimum of 1/2" on rear side of leading edge of panels.

7. Ventilation: Two-speed exhaust blower mounted to car canopy on isolating rubber grommets. Provide with a diffusor and grille. Exhaust blower shall meet requirements of Item 2.03, H.

8. Lighting: Two (2) 48' LED fixtures flush mounted in ceiling with protective diffusor and steel guard over fixtures on car top.

9. Handrails/Guardrails: Two lines. Top handrail line minimum 1-1/4" diameter stainless steel tubular grab bar. Lower guardrail line 4" x 3/8" solid stainless steel flatstock bars mounted on both sides and rear of the car. Locate bottom guardrail line at 8" above car floor and handrail line at 32" above the car floor. Bolt rails through car walls from back and mount on 1-1/2" deep solid round stainless steel standoff spacers no more than 18" O.C. Return handrail/guardrail ends to car walls.

B. Cab Dimensions:

B1: 64"w x 92"d x 118"h

B2: 92"w x 64"d x 95" h

B3: 92"w x 64"d x 95" h

B4: 93"w x 64"d x 96"h
Bidder acknowledges receipt of the following addenda:

- Addendum_________ Dated_________
- Addendum_________ Dated_________
- Addendum_________ Dated_________

Dallas County reserves the right to accept or reject in part or in whole the bid items and alternates listed below as submitted by the Bidder and to make award in the best interest of Dallas County.

### DALLAS COUNTY George Allen Courts Building
600 Commerce Street, Dallas, Texas

<table>
<thead>
<tr>
<th>1.0 BID ITEM NO. 1.0 - UNITS 1-6</th>
<th>BASE BID</th>
</tr>
</thead>
<tbody>
<tr>
<td>For performance of work, inclusive of labor, materials and overhead as described in the specifications for a <strong>turn-key modernization of six gearless elevators (Unit Nos. 1-6)</strong> Work should be accomplished between the hours of 6:00 a.m. and 6:00 p.m. Monday – Friday.</td>
<td></td>
</tr>
<tr>
<td>Material to be incorporated into the project</td>
<td>$____________</td>
</tr>
<tr>
<td>Labor, Overhead and Profit</td>
<td>$____________</td>
</tr>
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<td><strong>TOTAL BASE BID ITEM NO.1.0:</strong></td>
<td>$____________</td>
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(Written)

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<tr>
<th>1.1 BID ITEM NO. 1.0 - UNITS 1-6</th>
<th>BASE BID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acknowledge only one unit will be down for modernization at a time.</td>
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<tr>
<td>Check Box</td>
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### DALLAS COUNTY GEORGE ALLEN COURTS BUILDING
600 Commerce Street, Dallas, Texas

<table>
<thead>
<tr>
<th>2.0 BID ITEM NO. 2.0 - UNITS 15A &amp; 16A</th>
<th>BASE BID</th>
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</thead>
<tbody>
<tr>
<td>For performance of work, inclusive of labor, materials and overhead as described in the specifications for a <strong>turn-key</strong> to furnish and install new escalators. (Unit Nos. 15A &amp;16A)</td>
<td></td>
</tr>
<tr>
<td>Material to be incorporated into the project</td>
<td>$____________</td>
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<tr>
<td>Labor, Overhead and Profit</td>
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<tr>
<td><strong>TOTAL BID ITEM NO. 2.0</strong></td>
<td>$____________</td>
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</tbody>
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(Written)
2.1 **BID ITEM NO. 2.1 - UNITS 15A & 16A**  
**ALTERNATE NO. 1**

For performance of work, inclusive of labor, materials and overhead as described in the specifications for a **turn-key modernization in lieu of new escalators (Unit Nos. 15A &16A)**

**ADD or DEDUCT FROM BASE BID 2.0:**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
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<tbody>
<tr>
<td>Material to be incorporated into the project</td>
<td>$________________</td>
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<tr>
<td>Labor, Overhead and Profit</td>
<td>$________________</td>
</tr>
<tr>
<td><strong>TOTAL Add or Deduct to BID ITEM NO. 2.1</strong></td>
<td>$________________</td>
</tr>
</tbody>
</table>

2.2 **BID ITEM NO. 2.2 - UNITS 15A & 16A**  
**ALTERNATE NO. 2 – EXPEDITE SCHEDULE**

Provide additional pricing to expedite the **NEW INSTALLATION** schedule for **Unit Nos.15A & 16A** based on working a twelve (12)-hour per day, 5 days per week.

**ALTERNATE NO. 2: ADD TO BASE BID 2.0:**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price to expedite schedule, 12-hours/day/5 days/week</td>
<td>$___________ per unit</td>
</tr>
</tbody>
</table>

2.3 **BID ITEM NO. 2.0 - UNITS 15A & 16A**  
**BASE BID**

Acknowledge working hours 6:00 AM to 6:00 PM, Monday – Friday

<table>
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<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material to be incorporated into the project</td>
<td>$________________</td>
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<tr>
<td>Labor, Overhead and Profit</td>
<td>$________________</td>
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<tr>
<td><strong>TOTAL BASE BID ITEM NO.3.0:</strong></td>
<td>$________________</td>
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**LEW STERRETT JAIL “A” BUILDING**  
**UNITS 71 & 72, 73 & 74**

111 Commerce Street, Dallas, Texas

3.0 **BID ITEM NO. 3.0 - UNITS 71 & 72**  
**BASE BID**

For performance of work, inclusive of labor, materials and overhead as described in the specifications for a **turn-key modernization of two (2) geared traction elevators (Unit Nos. 71 & 72)**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material to be incorporated into the project</td>
<td>$________________</td>
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<tr>
<td>Labor, Overhead and Profit</td>
<td>$________________</td>
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<tr>
<td><strong>TOTAL BASE BID ITEM NO.3.0:</strong></td>
<td>$________________</td>
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</tbody>
</table>

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Replace and or Add  
July 1, 2018
3.1 BID ITEM NO. 3.1 - UNITS 73 & 74  BASE BID
For performance of work, inclusive of labor, materials and overhead as described in the specifications for a **turn-key modernization** of two (2) geared traction elevators (Unit Nos. 73 & 74)

Material to be incorporated into the project  $______________
Labor, Overhead and Profit  $______________

**TOTAL BASE BID ITEM NO.3.1:**  $______________

3.2 BID ITEM NO. 3.1 – UNITS 71, 72, 73 & 74  BASE BID

Acknowledge working hours 9:00 PM to 6:00 AM, Monday - Sunday  
☐ Check Box

Acknowledge only one unit can be down for modernization at a time.  
☐ Check Box

---

**LEW STERRETT JAIL “B” BUILDING**

**UNITS 75-79**

111 Commerce Street, Dallas, Texas

4.0 BID ITEM NO. 4.0 - UNITS 75 - 78  BASE BID

For performance of work, inclusive of labor, materials and overhead as described in the specifications for a **turn-key modernization** of four (4) geared traction elevators for Unit Nos. 75-78.

Material to be incorporated into the project  $______________
Labor, Overhead and Profit  $______________

**TOTAL BID ITEM NO. 4.0:**  $______________

---

4.1 BID ITEM 4.1 – UNITS 75 - 78  **ALTERNATE No. 3 – EXPEDITE SCHEDULE**

Provide additional pricing to expedite the modernization schedule for Unit Nos. 75-78 based on working a twelve (12)-hour per day, 5 days per week.

**ALTERNATE NO. 3: TOTAL ADD TO BASE BID 4.0:**

Price to expedite schedule, 12-hours/day/5 days/week  
Labor, Overhead and Profit  $___________ per unit

---

Replace and or Add

---

July 1, 2018
4.2 BID ITEM NO. 4.2 - UNIT 79 BASE BID
For performance of work, inclusive of labor, materials and overhead as described in the specifications for a turn-key modernization of one (1) geared traction elevators for Unit Nos. 79. Work should be accomplished between the hours of 6:00 a.m. and 6:00 p.m. Monday-Sunday

Material to be incorporated into the project $________________
Labor, Overhead and Profit $________________

TOTAL BID ITEM NO. 4.2: $________________

4.3 BID ITEM NO. 4.0, 4.2 - UNITS 75 – 78, 79 BASE BID

Acknowledgment working hours 6:00 AM to 6:00 PM, Monday - Sunday

Acknowledgment only one unit can be down for modernization at a time.

5.0 BID ITEM 5.0 – NORTH DALLAS GOVERNMENT CENTER BASE BID

For performance of work, inclusive of labor, materials and overhead as described in the specifications for a turn-key modernization of two (2) geared traction elevators for Unit Nos. 1 - 2.

Material to be incorporated into the project $________________
Labor, Overhead and Profit $________________

TOTAL BID ITEM NO. 5.0: $________________

5.1 BID ITEM 5.0 – Units 1 & 2 BASE BID

Acknowledgment working hours 6:00 AM to 6:00 PM, Monday – Friday

Acknowledgment only one unit can be down for modernization at a time.
## 2019 ELEVATOR AND ESCALATOR MODERNIZATION

### BID ITEM NO. 6 - INTERIM MAINTENANCE

<table>
<thead>
<tr>
<th>UNIT</th>
<th>LOCATION</th>
<th>TYPE</th>
<th>PER UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNIT 1</td>
<td>George Allen Courts Bldg.</td>
<td>GEARLESS TRACTION</td>
<td>PER MONTH/PER UNIT</td>
</tr>
<tr>
<td>UNIT 2</td>
<td>George Allen Courts Bldg.</td>
<td>GEARLESS TRACTION</td>
<td>PER MONTH/PER UNIT</td>
</tr>
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<td>PER MONTH/PER UNIT</td>
</tr>
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<td>George Allen Courts Bldg.</td>
<td>GEARLESS TRACTION</td>
<td>PER MONTH/PER UNIT</td>
</tr>
<tr>
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<td>GEARLESS TRACTION</td>
<td>PER MONTH/PER UNIT</td>
</tr>
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<td>UNIT 15A</td>
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<td>ESCALATOR</td>
<td>PER MONTH/PER UNIT</td>
</tr>
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<td>UNIT 16A</td>
<td>George Allen Courts Bldg.</td>
<td>ESCALATOR</td>
<td>PER MONTH/PER UNIT</td>
</tr>
<tr>
<td>UNIT 71</td>
<td>Lew Sterrett Jail A</td>
<td>GEARED TRACTION</td>
<td>PER MONTH/PER UNIT</td>
</tr>
<tr>
<td>UNIT 72</td>
<td>Lew Sterrett Jail A</td>
<td>GEARED TRACTION</td>
<td>PER MONTH/PER UNIT</td>
</tr>
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<td>UNIT 73</td>
<td>Lew Sterrett Jail A</td>
<td>GEARED TRACTION</td>
<td>PER MONTH/PER UNIT</td>
</tr>
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<td>UNIT 74</td>
<td>Lew Sterrett Jail A</td>
<td>GEARED TRACTION</td>
<td>PER MONTH/PER UNIT</td>
</tr>
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<td>UNIT 75</td>
<td>Lew Sterrett Jail B</td>
<td>GEARED TRACTION</td>
<td>PER MONTH/PER UNIT</td>
</tr>
<tr>
<td>UNIT 76</td>
<td>Lew Sterrett Jail B</td>
<td>GEARED TRACTION</td>
<td>PER MONTH/PER UNIT</td>
</tr>
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<td>UNIT 77</td>
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<td>UNIT 79</td>
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<td>UNIT 1</td>
<td>North Dallas Gov't Center</td>
<td>GEARED TRACTION</td>
<td>PER MONTH/PER UNIT</td>
</tr>
<tr>
<td>UNIT 2</td>
<td>North Dallas Gov't Center</td>
<td>GEARED TRACTION</td>
<td>PER MONTH/PER UNIT</td>
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</tbody>
</table>
7.0 **BID ITEM NO. 7- CONTRACTOR'S HOURLY RATES**

In the event supplemental services or improvements are requested by Dallas County Engineering & Project Management, which are outside the scope of the contract, Contractor shall provide such services at the rates listed below throughout the term of the contract (modernization, interim maintenance, and warranty maintenance).

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Mechanic Rate</th>
<th>Team Rate</th>
<th>Differential Rate*</th>
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<tbody>
<tr>
<td>Normal</td>
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<tr>
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<tr>
<td>1.7</td>
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<td>$ /HR</td>
</tr>
<tr>
<td>Sunday/Holiday</td>
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<td>$ /HR</td>
<td>$ /HR</td>
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</table>

* Differential Rate: If overtime work is required, Owner will pay only the difference between normal and overtime labor.

8.0 **BID ITEM NO. 8 SCHEDULE**

<table>
<thead>
<tr>
<th>Device</th>
<th>Contractors Installation Time - Weeks</th>
<th>Dallas County Anticipated Duration Time - Weeks</th>
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<tbody>
<tr>
<td>GACB Elev. 1</td>
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<td>GACB Elev. 2</td>
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<tr>
<td>GACB Elev. 3</td>
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<tr>
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<tr>
<td>GACB Elev. 5</td>
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<td>GACB Esc. 15A (new)</td>
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<td>12</td>
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<tr>
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<td></td>
</tr>
<tr>
<td>Description</td>
<td>Quantity</td>
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<tr>
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