SECTION 14 20 00

ELVORON LU/LA ELEVATOR

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\*\* NOTE TO SPECIFIER \*\* Garaventa Lift; Elvoron LU/LA (Limited Use Limited Application) Elevator.  
 .  
 This section is based on the products of Garaventa Lift, which is located at:  
  
United States   
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Canada  
  
18920 36th Avenue  
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[ [Click Here](http://www.arcat.com/company/32685) ] for additional information.

Garaventa Lift is an international company specializing in the manufacturing of wheelchair lifts and elevators. A world leader in the accessibility industry with a reputation for reliability, safety, and innovation, Garaventa Lift has over 50,000 installations worldwide.  
  
This specification includes the Elvoron LU/LA (Limited Use Limited Application) elevator. The LU/LA elevator is an automatic passenger elevator where the use and application is limited by size, capacity, speed and rise. Check with local code authorities, or your local Garaventa Lift representative to see if this product is an appropriate solution for your project.

1. GENERAL
   1. SECTION INCLUDES
      1. Commercial LULA Elevators.
   2. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 03 30 00 - Cast-in-Place Concrete. Concrete for elevator machine foundation, and pit and required sleeves for service penetrations.
    2. Section 06 10 00 - Rough Carpentry.
    3. Section 05 50 00 - Metal Fabrications: Miscellaneous supports, lintels, etc.
    4. Section 07 72 33 - Roof Hatches: Smoke venting hatch at top of hoistway.
    5. Section 07 10 00 - Waterproofing: Pit waterproofing.
    6. Section 08 31 16 - Access Panels and Frames: Fire rated access doors into hoistway.
    7. Section 09 21 16 - Gypsum Board Assemblies: Gypsum shaft walls.
    8. Section 09 65 13 - Resilient Base and Accessories: Floor finish in cab.
    9. Section 09 68 00 - Carpeting: Floor finish in cab.
    10. Section 28 35 00 - Refrigerant Detection and Alarm: Fire and smoke detectors and interconnecting devices.
    11. Section 22 14 29 - Sump Pumps.
    12. Division 16 - Electrical:
        1. Electrical characteristics and wiring connections.
        2. Electrical service to lockable fused disconnect in elevator machine room.
        3. Electrical service for machine room, machine room convenience outlets, machine room lighting and lighting in elevator pit.
        4. Telephone service.
  1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. ASME A17.1 /CSA B-44 - Section 5.2 Safety Code for Elevators and Escalators, Limited-Use/Limited Application Elevators.
    2. NFPA 70 - National Electric Code.
    3. CSA - Canadian Electric Code.
    4. ADAAG - Americans with Disabilities Act, Architectural Guidelines.
  1. REGULATORY REQUIREMENTS

\*\* NOTE TO SPECIFIER \*\* Verify local regulatory requirements. Delete one of the two following paragraphs as required to suit local requirements. First paragraph is for installations in the United States as applicable. Second paragraph is for installations in Canada as applicable.

* + 1. Provide passenger elevator in compliance with:
       1. ASME A17.1 - Safety Code for Elevators and Escalators, Limited-Use/Limited Application Elevators.
       2. NFPA 70 - National Electric Code.
    2. Provide passenger elevator in compliance with:
       1. CSA B-44 - Safety Code for Elevators and Escalators, Limited-Use/Limited Application Elevators.
       2. CSA - Canadian Electric Code.

\*\* NOTE TO SPECIFIER \*\* Include the following paragraph as required for ADA requirements. Delete if not required.

* + 1. ADA: Provide passenger elevator in accordance with the requirements of Americans with Disabilities Act.
  1. SUBMITTALS
     1. Submit under provisions of Section 01 30 00.
     2. Product Data: Manufacturer's data sheets on elevator, including:
        1. Preparation instructions and recommendations.
        2. Storage and handling requirements and recommendations.
        3. Installation methods.
     3. Shop Drawings:
        1. Show typical details of assembly, erection, and anchorage.
        2. Include wiring diagrams for power, control, and signal systems.
        3. Show complete layout and location of equipment, including required clearances and coordination with hoistway.

\*\* NOTE TO SPECIFIER \*\* Delete selection samples if colors have already been selected.

* + 1. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
    2. Manufacturer's Certificates: Certify products meet or exceed specified requirements.
    3. Closeout Submittals: Provide manufacturer's maintenance instructions that include recommendations for periodic checking and adjustment of cable tension and periodic cleaning and maintenance of all railing and infill components.
  1. PRE-INSTALLATION MEETINGS
     1. Convene minimum two weeks prior to start of work of this section.
     2. Review hoistway, electrical, fire alarm and other requirements with appropriate representatives.
  2. DELIVERY, STORAGE, AND HANDLING
     1. Store products in manufacturer's unopened packaging until ready for installation.
     2. Store components off the ground in a dry covered area, protected from adverse weather conditions.
  3. PROJECT CONDITIONS
     1. Do not use elevator for hoisting materials or personnel during construction period.
  4. WARRANTY

\*\* NOTE TO SPECIFIER \*\* The manufacturer�s basic warranty is a limited 2-year warranty for the replacement at no cost of defective parts but does not include the labor costs required to replace the defective parts. Delete if not required.

* + 1. Standard Warranty: Provide a two-year limited warranty covering replacement of defective parts and excluding labor. Preventive maintenance agreement required.
    2. Extended Warranty: Provide an additional five-year limited warranty covering replacement of defective parts and excluding labor for a total of seven years. Preventive maintenance agreement required.

\*\* NOTE TO SPECIFIER \*\* Include the following paragraph if required and delete if not required. Adjust to match extended warranty period above.

* 1. MAINTENANCE SERVICE
     1. Furnish service and maintenance for elevator system and components for the following period from Date of Substantial Completion.
        1. One year.
        2. Two years.
        3. Three years.
        4. Four years.
        5. Five years.
        6. Six years.
        7. Seven years.
     2. Include systematic examination, adjustment, and lubrication of elevator equipment. Repair or replace parts whenever required. Use parts produced by manufacturer of original equipment. Replace wire ropes when necessary to maintain required factor of safety.
     3. Provide emergency call back service for this maintenance period.
     4. Perform maintenance work using competent and qualified personnel approved by elevator manufacturer or original installer.

1. PRODUCTS
   1. MANUFACTURERS
      1. Acceptable Manufacturer: Garaventa Lift; United States - P.O. Box 1769, Blaine, WA 98231-1769. Canada - 18920 - 36th Ave., Surrey, BC V3ZA 0P6. Toll Free Phone: 800-663-6556 Email: productinfo@garaventalift.com. Web www.garaventalift.com.

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
    2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00.
  1. COMMERCIAL PASSENGER ELEVATOR
     1. Limited Use Limited Application Elevator:
        1. Model: Elvoron LULA
        2. Capacity: 1,400 pounds (635 kg)
        3. Car Size: Maximum of 18 SF (1.67 sm).

\*\* NOTE TO SPECIFIER \*\* Delete the style options not required.

* + - * 1. Style 1L: 48 x 54 inches (1220 x 1372 mm) with one side right sliding doors.
        2. Style 1L: 42 x 54 inches (1067 x 1372 mm) with one side right sliding doors.
        3. Style 1L: 42 x 60 inches (1067 x 1524 mm) with one side right sliding doors.
        4. Style 1R: 48 x 54 inches (1220 x1372 mm) with one side left sliding door.
        5. Style 1R: 42 x 54 inches (1067 x 1372 mm) with one side left sliding doors.
        6. Style 1R: 42 x 60 inches (1067 x 1524 mm) with one side left sliding doors.
        7. Style 2: 48 x 54 inches (1220 x 1372 mm) with sliding doors at each end.
        8. Style 2: 42 x 54 inches (1067 x 1372 mm) with sliding doors at each end.
        9. Style 2: 42 x 60 inches (1067 x 1524 mm) with sliding doors at each end.
        10. Style 3: 51 x 51 inches (1295 x 1295 mm) with sliding doors on two sides.
        11. Style 4: 51 x 51 inches (1295 x 1295 mm) with sliding doors on two sides.

\*\* NOTE TO SPECIFIER \*\* Delete the travel paragraph not required. Enter total travel in feet as required. This series has a standard travel of 25 feet (7.6 m) and an optional maximum travel of 50 feet (15.2 m) contact Garaventa for additional information.

* + - 1. Travel: 25 ft (7.6 m)
      2. Travel: \_\_\_\_\_\_\_\_\_ inches.
      3. Travel: As indicated on the Drawings.

\*\* NOTE TO SPECIFIER \*\* Select one of the following stop paragraphs and delete the those not required. This series has a maximum of 6 stops with automatic operation.

* + - 1. Stops: 2 stops.
      2. Stops: 3 stops.
      3. Stops: 4 stops.
      4. Stops: 5 stops.
      5. Stops: 6 stops.
      6. Stops: As indicated on the Drawings.
      7. Speed: Nominal 30 feet per minute (0.15 m/sec).

\*\* NOTE TO SPECIFIER \*\* Delete pit depth option not required.

* + - 1. Pit Depth: Hydraulic Drive: Minimum 14 inches (355 mm) required.
      2. Pit Depth: Electric Drive: Minimum 17 inches (432 mm) required.
      3. Overhead Drive Clearance:

\*\* NOTE TO SPECIFIER \*\* Delete the overhead drive clearance option not required.

* + - * 1. Hydraulic Drive: Total overhead clearance (Refuge Space) 135 inches (3429 mm) above the finished upper landing floor. This space allowance can be reduced to 108 inches (2743 mm) with the use of a car top prop.
        2. Electric Drive: Total overhead clearance (Refuge Space) 138 inches (3505 mm) above the finished upper landing floor. This space allowance can be reduced to 111 inches (2819 mm) with the use of a car top prop.

\*\* NOTE TO SPECIFIER \*\* Delete the drive system not required.

* + - 1. Drive System: Hydraulic (1:2 Rope)
         1. Suspension Means: Aircraft cable 2 x 3/8 inch (10 mm) diameter
         2. Guide Rails and Brackets: 8 lbs per foot steel T-rails installed on adjustable rail brackets.
         3. Type A safeties brake system.
         4. Overspeed pipe rupture valve.
         5. Low oil protection timer function.
         6. Quiet submersed pump and motor.
         7. Control Valve: Factory pre-set and tested 2-speed valve for smooth starts and stops.

\*\* NOTE TO SPECIFIER \*\* Delete motor and pump option not required.

* + - * 1. Motor and Pump: 5 HP, 240 V 1 Phase.
        2. Motor and Pump: 5 HP, 208 V 3 Phase.
        3. Control location: separate machine room.
        4. Duty Cycle: normal 30 trips per day, heavy 75 trips per day, excessive 100 trips per day with a maximum of 15 starts per hour.
      1. Drive system: Electric Drive (1:1 Counterweighted traction drive system with direct drive gearbox)
         1. Suspension Means: elevator traction cable 3 x 3/8 inch (10 mm) diameter.
         2. Guide Rail System: Steel 8 lbs per ft guide rails shall be used for guide rails and counterweight rails. Roller guide shall be used on the cab sling and guide shoes on the counterweight to further reduce noise.
         3. Bi-directional type A safeties brake system.
         4. Overspeed governor protection.
         5. Runtime protection timer function.
         6. Unintended car movement protection.

\*\* NOTE TO SPECIFIER \*\* Delete the control location option not required.

* + - * 1. Control Location: Located in door buck.
        2. Control Location: Located in machine room.
        3. Motor: 6 pole 3 phase motor coupled to a product specific gearbox for noise reduction.
        4. A Safe Working Load (SWL) Beam must be provided in the overhead. Lifting beam must be temporary when overhead, less than 138 inches (3505mm).
        5. Smooth starts and stops at each landing.
        6. Emergency lowering by battery power.
        7. Duty Cycle: normal 200 trips per day, heavy 300 trips per day, excessive 450 trips per day with a maximum of 45 starts per hour.
      1. Power Requirements:
         1. Per manufacturer�s shop drawings.
         2. A Separate 115-Volt, 15 Amp Circuit is required for car lighting.
      2. Controls:
         1. Garaventa-Design PLC Controller with integrated self-diagnostics.
         2. Fully automatic push button at car and landings with Braille markings.
         3. Automatic car light control upon entry.
         4. Digital floor indicator in car.
      3. Standard Features:
         1. Car direction lantern comes with audio and visual signals.
         2. Full height photo-electric door sensors.
         3. Automatic home park feature (can be disengaged during installation if desired).
         4. Car arrival lanterns on car door jamb.
         5. Arrival gong.
      4. Additional Safety Features:
         1. Emergency back-up power with a manual lowering device.
         2. Car operator with integral gate switch.
         3. Automatic bi-directional floor leveling.
         4. Emergency alarm button in car, Emergency keyed stop switch in car.
         5. Terminal stopping device.
         6. Final stopping device.
      5. Options:

\*\*\* NOTE TO SPECIFIER \*\* Delete the options not required.

* + - * 1. Fireman service (Phase 1).
        2. 3D landing door monitoring (2019).
        3. Integrated ADA compliant hands-free telephone.
        4. Emergency video communication (2019).

\*\* NOTE TO SPECIFIER \*\* The following paragraph is required where overhead clearance is less than 135 inches (3429 mm) for Hydraulic Drive and less than 138 inches (3505 mm) for Electric Drive. Delete option if not required.

* + - * 1. Hoistway overhead refuge device.
        2. Buffer springs; increases your pit depth.
        3. Keyed hoistway access.
        4. Independence service.
  1. ELEVATOR CAB DESIGN

\*\* NOTE TO SPECIFIER \*\* Edit the following cab design paragraphs as required. Delete those not required. Floors are wood construction, provided unfinished with finishes provided by others.

* + 1. Cab Design:
       1. Interior Walls: Laminate panel sections.

\*\* NOTE TO SPECIFIER \*\* Select one of the following color paragraphs and delete the ones not required.

* + - * 1. Color: Designer White.
        2. Color: Dove Gray.
        3. Color: Cloud Nebula.
        4. Color: Kensington Maple.
        5. Color: New Age Oak.
        6. Color: Empire Mahogany.
        7. Color: Custom laminate as selected by the Architect.

\*\* NOTE TO SPECIFIER \*\* Select one of the following finish paragraphs and delete the ones not required.

* + - 1. Cab Frame: Mild steel powder coated black.
      2. Cab Frame: Mild steel powder coated white.
      3. Cab Frame: Stainless steel.
      4. Cab Frame: Mild steel powder coated in a custom color as selected by the Architect.

\*\* NOTE TO SPECIFIER \*\* Delete ceiling finish options not required.

* + - 1. Ceiling Finish: White.
      2. Ceiling Finish: Stainless Steel brushed finish.
      3. Ceiling Finish: Mild steel powder coated in a custom color as selected by the Architect.
      4. Handrail Finish: Stainless Steel brushed.
      5. Car Operating Panel Finish: Stainless Steel brushed.
      6. Floor: Unfinished plywood.
      7. Lighting: Four recessed L.E.D. down lights.

\*\* NOTE TO SPECIFIER \*\* Delete car light trim finish options not required.

* + - * 1. Car Light Trim Finish: White.
        2. Car Light Trim Finish: Black.
        3. Car Light Trim Finish: Chrome.
      1. Car Direction Lantern: Car direction lantern complete with auto and visual signaling device indicating direction of travel and arrival at selected floor.
      2. Car Doors: When open the doors provide a 36 inch (915 mm) by 80 inch (2032 mm) clear opening.
         1. Two Speed Horizontal Sliding equipped with full height photo-electric door sensors; color as follows:

\*\* NOTE TO SPECIFIER \*\* Delete finish option not required.

Finish: Matching cab wall.

Finish: Stainless steel brushed.

* 1. HOISTWAY ENTRANCES
     1. Hoistway Entrances: When open the doors provide a 36 inch (915 mm) by 80 inch (2032 mm) clear opening. Door type to be Two-Speed Horizontal Side Sliding Doors with finishes:

\*\* NOTE TO SPECIFIER \*\* Delete finish option not required.

* + - 1. Finish: Primed painted.
      2. Finish: Stainless Steel brushed finish.
    1. Hall Call Stations:

\*\* NOTE TO SPECIFIER \*\* Delete hall station type not required.

* + - 1. Hall Station Type: Keyless Push Button.
      2. Hall Station Type: Keyed Push Button.
      3. Finish: Stainless Steel brushed finish.

1. EXECUTION
   1. EXAMINATION
      1. Do not begin installation until preliminary work including hoistway, landings and machine space has been properly prepared.
      2. Verify hoistway is constructed in accordance with ASME17.1 /CSA B-44 and all local codes.
      3. Verify hoistway and machine room environment is designed to have maintainable temperatures between 50 degrees F (15 degrees C) and 90 degrees F (32 degrees C) and humidity between 5 percent and 90 percent non-condensing.
      4. Verify machine room if required provided with lighting, light switch and convenience outlet and conforms to NFPA/CEC and clear space requirements and local codes.
      5. Verify hoistway shaft and openings are of correct size and within tolerance.
      6. Verify electrical power is available and of correct characteristics.
      7. If preliminary work is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
   2. PREPARATION
      1. Clean surfaces thoroughly prior to installation.
      2. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
   3. INSTALLATION
      1. Install elevator in accordance with applicable regulatory requirements including ASME A 17.1 /CSA B-44 and the manufacturer's instructions.
      2. Install system components and connect to building utilities.
      3. Accommodate equipment in space indicated.
      4. Startup equipment in accordance with manufacturer's instructions.
      5. Adjust for smooth operation.
   4. FIELD QUALITY CONTROL
      1. Perform tests in compliance with ASME A 17.1 /CSA B-44 and as required by authorities having jurisdiction.
      2. Schedule tests with agencies and Architect, Owner, and Contractor present.
   5. FIELD SERVICES
      1. Obtain required permits to perform tests. Perform tests required by regulatory agencies.
      2. Schedule tests with agencies and Architect and Contractor present.
      3. Submit test and approval certificates issued by jurisdictional authorities.
   6. ADJUSTING
      1. Adjust for smooth acceleration and deceleration of car so not to cause passenger discomfort.
      2. Adjust automatic floor leveling feature at each floor to provide stopping zone of 1/4 inch (6 mm).
   7. CLEANING
      1. Remove protective coverings from finished surfaces.
      2. Clean surfaces and components ready for inspection.
   8. PROTECTION
      1. Protect installed products until completion of project.
      2. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION