SECTION 117300 - PATIENT CARE EQUIPMENT

Revise this Section by deleting and inserting text to meet Project-specific requirements.

Verify that Section titles referenced in this Section are correct for this Project's Specifications; Section titles may have changed.

1. GENERAL
	* + 1. SUMMARY
				1. Section Includes:

Ceiling-mounted patient-lift systems.

Intravenous (IV) tracks, carriers, and bottle holders.

Patient-bed locators.

Patient-bed service walls.

* + - * 1. Related Requirements:

Retain subparagraphs below to cross-reference requirements Contractor might expect to find in this Section but are specified in other Sections.

Section 055000 "Metal Fabrications" for above-ceiling supplementary framing for support and anchorage of patient-lift systems.

Section 092216 "Non-Structural Metal Framing" for supplementary metal framing and blocking for mounting items requiring anchorage.

Section 102123 "Cubicle Curtains and Tracks" for patient-room cubicles.

Section 102800 "Toilet, Bath, and Laundry Accessories" for specimen pass-through cabinets and boxes and for bedpan and urinal cabinets and boxes.

* + - 1. PREINSTALLATION MEETINGS

Retain "Preinstallation Conference" Paragraph below if Work of this Section is extensive or complex enough to justify a conference.

* + - * 1. Preinstallation Conference: Conduct conference at Project site.
			1. SUBMITTALS
				1. Submittals for this section are subject to the re-evaluation fee identified in Article 4 of the General Conditions.
				2. Manufacturer’s installation instructions shall be provided along with product data.
				3. Submittals shall be provided in the order in which they are specified and tabbed (for combined submittals).
				4. Product Data: For each type of product.
				5. Shop Drawings:

Include plans, elevations, sections, and details.

Include details of components. Indicate location and size of each field connection.

Include diagrams for service connections and power, signal, and control wiring.

Retain "Samples" Paragraph below for single-stage Samples, with a subordinate list if applicable. Retain "Samples for Initial Selection" and "Samples for Verification" paragraphs for two-stage Samples.

* + - * 1. Samples: For each exposed product and for each color and texture specified, 10 inches long in size.
				2. Samples for Initial Selection: For each type of exposed finish.

Include Samples of accessories involving color and finish selection.

* + - * 1. Samples for Verification: For each type of product required, prepared on Samples of size indicated below:

Include Samples of accessories to verify color and finish selection.

Ceiling-Mounted Patient-Lift Systems: Not less than 10-inch- long, track sections.

IV Track Systems:

Track: Not less than 10 inches long.

IV Carrier: Full-size unit.

IV Hanger: Full-size unit.

Patient-Bed Locators: Not less than 10 inches square.

Patient-Bed Service Walls: Not less than 10 inches square for fascia and not less than 10 inches long for trim and rails.

* + - * 1. Product Schedule: For patient care equipment. Use same designations indicated on Drawings.

Retain "Delegated-Design Submittal" Paragraph below if design services have been delegated to Contractor.

* + - * 1. Delegated-Design Submittal: For above-ceiling supplementary framing for support and anchorage of patient-lift systems, signed and sealed by the qualified professional engineer, licensed in the State of New York, responsible for their preparation.

Retain "Coordination Drawings" Paragraph below for ceiling-mounted patient-lift systems and for situations where limited space necessitates maximum use for efficient installation of different components or if coordination is required for installation of products and materials by separate installers. Coordinate paragraph with other Sections specifying products listed below. Preparation of coordination drawings requires the participation of each trade involved in installations within the limited space.

* + - * 1. Coordination Drawings: For ceiling-mounted patient-lift systems, reflected ceiling plan(s), and other details, drawn to scale, on which the following items are shown and coordinated with each other, using input from installers of the items involved:

Suspended ceiling components.

Structural members to which ceiling-mounted patient-lift systems will be attached.

Items penetrating finished ceiling including the following:

Lighting fixtures.

Air outlets and inlets.

Speakers.

Sprinklers.

Access panels.

Perimeter moldings.

* + - * 1. Field quality-control reports.
			1. CLOSEOUT SUBMITTALS
				1. Operation and Maintenance Data: For products to include in operation and maintenance manuals.
			2. QUALITY ASSURANCE
				1. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution.

Build mockup of typical installation of the following as shown on Drawings**[ as part of patient-room mockup]**:

Ceiling-mounted patient-lift system.

IV track, carrier, and bottle holder.

Patient-bed locators.

Patient-bed service walls.

Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Director’s Representative specifically approves such deviations in writing.

1. PRODUCTS

Manufacturers and products listed in SpecAgent and Masterworks Paragraph Builder are neither recommended nor endorsed by the AIA or Deltek. Before inserting names, verify that manufacturers and products listed there comply with requirements retained or revised in descriptions and are both available and suitable for the intended applications.

* + - 1. PERFORMANCE REQUIREMENTS

Retain "Delegated Design" Paragraph below if Contractor is required to assume responsibility for design.

* + - * 1. Delegated Design: Engage a qualified professional engineer, licensed in the State of New York, to design above-ceiling supplementary framing for support and anchorage of patient-lift systems.
			1. CEILING-MOUNTED PATIENT-LIFT SYSTEMS
				1. Ceiling-Mounted Patient Lift: Consisting of a motor-driven lift unit that traverses on a ceiling-mounted track system.

Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

ArjoHuntleigh.

Guldmann Inc.

Hill-Rom.

Approved equivalent.

Indicate specific requirements of ceiling-mounted track systems, such as track sizes and spans, on Drawings or insert in "Ceiling-Mounted Track System" Paragraph below.

* + - * 1. Ceiling-Mounted Track System: High-strength extruded aluminum in manufacturer's standard profile and thickness to support lifting capacity indicated for lift unit. Provide track shapes and accessories as required to provide a complete system in layout indicated on Drawings.
				2. Lift Unit: Steel frame system with separate 24-V dc lifting and horizontal-drive motors secured to chassis.

Lifting Capacity: **[440 lb] [550 lb] [660 lb] [770 lb]**.

Maximum Lift Range: **[96 inches]**.

Safety Features:

Emergency stop.

Emergency lowering device, mechanical and electrical.

Control of lift strap.

Cut-off Angle: 45 degrees along the rail; 10 degrees across the rail.

Electronics:

Control Unit: Walk-along, hand-held control unit.

On/Off Control: Soft start and stop with overload protection.

Typically, one battery is required for 440- and 550-lb capacity units; two batteries are required for units with greater capacities.

Battery Power: 24-V rechargeable nickel-metal hydride batteries in quantity required for lifting capacity indicated. Provide with electric battery charging station that provides maximum charge time of two hours per battery.

Provide **[wall] [ceiling]**-mounted charging station at end of track.**[ Provide supplemental clip-on charging station with indicator lights.]**

Battery Protection: Low-battery light illuminates when battery voltage is below 22 V; hoist disabled when battery voltage is below 20 V.

Typically, one lift and one horizontal-drive motor are required for 440- and 550-lb capacity units; two lift and two horizontal-drive motors are required for units with greater capacities.

Motors: Provide in quantity required by lifting capacity indicated.

Lift Motors: 2.3 inches per second lift speed at maximum capacity load.

Horizontal-Drive Motors: 5.9 inches per second horizontal traverse at maximum capacity load.

* + - * 1. Accessories:

Revise first subparagraph below to describe a specific type of strap and sling assembly.

Threaded nylon straps and polyester/nylon-net sling to support and cradle patient.

Room-to-room carry bar.

Two-point carry bar**[ with locking clips]**.

Four-point carry bar**[ with locking clips]**.

Tandem carry bar.

Bariatric carry bar.

* + - 1. IV TRACKS, CARRIERS, AND BOTTLE HOLDERS
				1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

A. R. Nelson Co.

Automatic Devices Company.

Covoc Corporation.

Approved equivalent.

* + - * 1. IV Tracks: Extruded aluminum, not less than 1-1/4 inches wide by 3/4 inch high

Track Minimum Wall Thickness: Manufacturer's standard.

Radius in "Curved Track" Subparagraph below is standard with manufacturers. Verify availability and insert other radii if required.

Curved Track: Factory-fabricated, 12-inch- radius bends.

Finish: **[Clear anodized] [Satin anodized] [Baked enamel, acrylic, or epoxy]**.

* + - * 1. IV Carriers: Four nylon rollers and **[nylon] [steel] [stainless-steel]** axles with hanger loop fabricated from 1/4-inch- diameter, stainless steel.

Retain subparagraph below if ball-bearing carriers are required.

Provide carriers with ball bearings.

Revise "Stationary IV Bottle Holders" and "Telescoping IV Bottle Holders" paragraphs below if aluminum hanger is required. Stationary IV bottle holders are fixed in height but are free to move on track.

* + - * 1. Stationary IV Bottle Holders: **[24-inch] [30-inch] [36-inch] [42-inch] [48-inch]** fixed height with stainless-steel shaft.

Arms: **[Four] [Eight]** 1/4-inch stainless-steel arms with loops.

Type: **[Folding] [Nonfolding]**.

Retain "Bottom Loop" Subparagraph below if required.

Bottom Loop: Stainless steel.

Top Loop: Stainless steel, **[coated for nonconductivity] [uncoated]**.

* + - * 1. Telescoping IV Bottle Holders: **[28-inch] [39-inch] [45-inch] [51-inch] [57-inch]** overall height with a 3/4-inch stainless-steel main shaft and a 3/8-inch stainless-steel inner shaft, minimum vertical adjustment of 16 inches.

Arms: **[Four] [Eight]** 1/4-inch stainless-steel arms with loops.

Type: **[Folding] [Nonfolding]**.

Retain "Bottom Loop" Subparagraph below if required.

Bottom Loop: Stainless steel.

Top Loop: Stainless steel, [coated for nonconductivity] [uncoated].

Adjustment Control: [Push button] [Release ring].

* + - 1. PATIENT-BED LOCATORS

Copy and re-edit "Patient-Bed Locator" Paragraph below for each product. Insert drawing designation. Use designations on Drawings to identify each product.

* + - * 1. Patient-Bed Locator **<Insert designation>**: Surface-mounted docking station with conduit raceway provisions for eight power-service connections, four on each side, that is UL listed and labeled and complying with NFPA 70, and that ensures proper positioning of patient beds and protects wall surfaces from impact and abrasion damage caused by contact with patient bed.

Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

Amico Corporation.

Hill-Rom.

Hospital Systems, Inc.

Approved equivalent.

Enclosure: Manufacturer's standard high-impact plastic, [one] [two] piece(s).

Color and Pattern: As selected by Director’s Representative from manufacturer's full range.

Height: 22-1/2 inches, nominal.

Width: 50 inches, nominal.

Overall Depth: 4-5/8 inches, nominal.

Indicate locations, details, and types of services and outlets on Drawings or revise "Power Services" Subparagraph below.

Power Services:

Retain applicable power services in first three subparagraphs below to suit Project.

Normal power.

Critical power.

Low-voltage power and communication.

Accessories:

Direct and indirect lighting fixture.

* + - 1. PATIENT-BED SERVICE WALLS

Copy and re-edit "Patient-Bed Service Wall" Paragraph below for each product. Insert drawing designation. Use designations on Drawings to identify each product.

* + - * 1. Patient-Bed Service Wall **<Insert designation>**: Headwall system; UL listed and labeled; complying with NFPA 70 and NFPA 99; with integrated raceways that provide single-area connection for power services and communication wiring and single connection for hard-piped and brazed medical gas piping.

Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

Amico Corporation.

Hill-Rom.

Hospital Systems, Inc.

Approved equivalent.

Type: **[Horizontal] [Vertical] [Panel]**.

Unit Overall Length: **[As indicated on Drawings] <Insert dimension>**.

Unit Overall Width: **[As indicated on Drawings] <Insert dimension>**.

Panel Sizes: **[As indicated on Drawings] <Insert dimension>**.

Fascia Panels: Removable for installation and maintenance of services, **[high-pressure plastic] [high-pressure laminate]**.

Color and Pattern: As selected by Director’s Representative from manufacturer's full range.

Fascia Panel Reveals: **[3/8-inch flush concave] [3/8-inch protruding] [Manufacturer's standard]**.

Reveal Finish: **[Black] [Aluminum]**.

Enclosure/Frame: **[Anodized aluminum] [Galvanized steel]**.

Mounting: **[Surface] [Recessed, single sided] [Recessed, double sided]**.

Retain or revise second option in "Unit Depth" Subparagraph below for surface-mounted units; retain third option for recessed units or revise to suit Project.

Unit Depth: **[As indicated on Drawings] [5 inches, nominal] [As required by wall construction indicated on Drawings]**.

Accessory Rails: **[Two] [Four] [As indicated on Drawings]**.

Indicate locations, details, and types of services, outlets, connections, and switching on Drawings.

Medical Gas Services:

Retain one or both of first two subparagraphs below to suit Project.

Oxygen.

Medical air.

Medical Vacuum Services: ASME B16.22 copper vacuum-service tubes.

Gas Manifold: Machined aluminum block with CGA V-5 diameter, indexed safety system, gas-specific check valves.

Power Services:

Retain applicable power services in first three subparagraphs below to suit Project.

Normal power.

Critical power.

Low-voltage power.

Isolated Power Systems Equipment: UL 1047.

Metallic Outlet Boxes: UL 514A.

Accessories:

Arm light, compact fluorescent.

Bottle slide.

Blood-pressure gage mount.

Charting shelf.

Glove-box mount.

Light, utility track mounted.

Integrated diagnostic system mount.

ISS transfer pole with mount.

IV resuscitator hook, dual.

Ophthalmoscope mount.

Post-type utility mount.

Resuscitator bag holder.

Sharps-container mount.

Shelf, [mayo] [swivel].

Speculum mount.

Universal charting light with mount.

Universal holder.

Universal light mount.

Universal pole holder, C-clamp.

Utility hook.

Utility otoscope mount.

Utility shelf.

Utility slide mount.

1. EXECUTION
	* + 1. EXAMINATION
				1. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
				2. Proceed with installation only after unsatisfactory conditions have been corrected.
			2. CEILING-MOUNTED PATIENT-LIFT SYSTEMS
				1. Install tracks level and plumb, according to manufacturer's written instructions.

Support track directly from **[structure] [overhead supplementary framing]** using manufacturer's standard supports, anchors, and fasteners at intervals required by lifting capacity indicated, but not less than 36 inches o.c.

Brace direct-to-structure track supports where distance between suspended ceiling and anchors is more than 18 inches.

Provide supports at each track end, splice, and tangent point of each corner.

Install track accessories, splices, end caps, connectors, coupling and joining devices, and other accessories as required for a secure and operational installation.

* + - 1. IV TRACKS, CARRIERS, AND BOTTLE HOLDERS
				1. Install tracks level and plumb, according to manufacturer's written instructions.
				2. For tracks up to 20 feet in length, provide track fabricated from single, continuous length.
				3. Surface-Track Mounting: Fasten tracks to ceilings at intervals recommended by manufacturer. Fasten tracks to structure at each splice and tangent point of each corner. Center fasteners in track to ensure unencumbered carrier operation. Attach track to ceiling as follows:

Retain one or more of five subparagraphs below to suit Project.

Mechanically fasten directly to bottom of concrete deck with post-installed anchors.

Mechanically fasten directly to finished ceiling with toggle bolts.

Mechanically fasten to furring through suspended ceiling with screw and tube spacer.

Mechanically fasten to suspended ceiling grid with screws.

Attach track to suspended ceiling grid with manufacturer's proprietary clip.

* + - * 1. Track Accessories: Install splices, end caps, connectors, end stops, coupling and joining sleeves, and other accessories as required for a secure and operational installation.
				2. IV Bottle Holders: Unless otherwise indicated, install one IV hook on each IV track and hang one IV hanger.
			1. PATIENT-BED LOCATORS
				1. Install bed locators level and plumb, according to manufacturer's written instructions.
				2. Accurately fit, align, securely fasten, and install bed locators free from distortion or defects.
			2. PATIENT-BED SERVICE WALLS
				1. Install service walls level and plumb, according to manufacturer's written instructions.
				2. Accurately fit, align, securely fasten, and install service walls free from distortion or defects.
			3. FIELD QUALITY CONTROL

Retain this article if required for patient-bed service walls. Coordinate availability of manufacturer's services with manufacturer.

* + - * 1. Manufacturer's Field Services: For patient-bed service walls, perform periodic installation inspections to ensure that products are installed according to manufacturer's written instructions.

Installation Inspections: Inspect product installations when installation work is **[25, 60, and 100 percent complete]**.

Installation Inspection Reports: Indicate if product installations comply with manufacturer's written instructions and corrective actions required if any.

* + - 1. ADJUSTING
				1. Adjust products for proper function and operation to comply with manufacturer's written instructions.
			2. PROTECTION
				1. Protect installed products from damage for the remainder of the construction period.
				2. Repair damaged products according to manufacturer's written instructions. If damaged products cannot be successfully repaired, as determined by Director’s Representative, remove and replace damaged products.

END OF SECTION 117300