

Healthcare Equipment

Section revised and reissued by Addendum 03

PART 1 - GENERAL

1.1 Summary

- .1 Section includes:
 - .1 Healthcare equipment types as follows (supply and installation by *Contractor*):
 - .1 Vertical headwall; surface-mounted.
 - .2 Patient lift and track system; ceiling-mounted.
- .2 Related sections:
 - .1 Wood blocking - under Section 06 10 53.
 - .2 Metal support systems - under Section 09 22 16.
 - .3 Bed bumpers – under Section 10 26 13.
 - .4 Mechanical – under Divisions 21, 22, and 23.
 - .5 Electrical - under Divisions 26, 27, and 28.

1.2 Administrative Requirements

- .1 Conduct a pre-installation meeting in accordance with Section 01 31 19.

1.3 Submittals

- .1 Submit required submittals in accordance with Section 01 33 00.
- .2 *Product* data sheets:
 - .1 Submit manufacturer's *Product* data sheets for *Products* proposed for use in the work of this section.
 - .2 Submit equipment manufacturer's handling and installation instructions, anchorage information, roughing-in dimensions, service requirements for installation of the work of this section.
- .3 Shop drawings:
 - .1 Submit engineered shop drawings for the following:
 - .1 Patient lift and track systems, and track support framing assemblies, including anchoring and connections for work of this section.
 - .2 Headwall systems, including anchoring and connections for the work of this section.
 - .3 Seismic design, connections and restraint.
 - .2 Clearly indicate, materials, finishes, fabrication details, dimensions, thicknesses, plans, elevations, hardware, fastenings, service connections and installation details.
 - .3 Indicate termination/connection points of services for headwalls.
 - .4 Indicate proposed site connections, fasteners and methods.
- .4 Samples:

Healthcare Equipment

Section revised and reissued by Addendum 03

.1 Submit duplicate samples of each finish specified.

.5 Templates:

.1 Submit templates to *Contractor* for use by installers and fabricators as required for proper location and installation of equipment.

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1.4 Closeout Submittals

.1 Submit closeout submittals in accordance with Section 01 77 00.

.2 Operation and maintenance data:

.1 Submit manufacturer's operation and maintenance instructions for inclusion in the operation and maintenance manuals.

1.5 Quality Assurance

.1 Qualifications:

.1 Installers:

.1 Shall have 10 years' experience, minimum, in the application of the *Products*, systems, and assemblies specified and with approval and training of *Product* manufacturers.

.2 Manufacturer:

.1 Shall have 10 years of continued experience, minimum, having successfully completed other projects of similar or greater magnitude.

.2 Mock-ups:

.1 Mock-up of complete installation of headwall, in location as directed by *Consultant*.

.2 Mock-up of complete installation of ceiling lift and track system, in location as directed by *Consultant*.

1.6 Warranty

.1 Warrant work of this section in accordance with Section 01 78 36.

.2 Extended warranty:

.1 Labour, materials, and workmanship for work of this section.

.2 Duration: 2 years.

PART 2 - PRODUCTS

2.1 Headwalls

.1 Acceptable manufacturers:

.1 Amico Corporation.

.2 Medical Design.

.2 Acceptable *Products*: Amico Corporation 'Serenity Flatwall Surface'.

Healthcare Equipment

Section revised and reissued by Addendum 03

2.2 Vertical Headwall (Surface-Mounted)

.1 Basis-of-design:

.1 Materials and construction:

- .1 Enclosure shall be constructed of extruded, anodized aluminum alloy sections to provide a modular surface mounted unit with integrated accessory rails for equipment management.
- .2 Integrated accessory rails: Provide system with 4 accessory channels integrated into aluminum extrusion assembly, clear etched anodized finish.
- .3 Fascia panels: Removable panels, aluminum strips with high pressure laminate, colour and pattern as selected by *Consultant*.
- .4 Medical gas and vacuum outlets: Shop fabricate headwall with ~~medical gas and vacuum outlets types as indicated on drawings~~ oxygen outlets.
- .5 Medical gas manifold: Medical gas distribution shall be supplied by pipe drops via the service chase ~~or single point termination zone~~ as indicated on the drawing. Medical gas outlets and piping shall be brazed and tested in accordance with CSA Z7396.1-17. Medical gas piping shall be Type L copper pipe. Test outlets, piping and manifolds in accordance with CSA Z7396.1-17.
- .6 Electrical: Comply with requirements of authorities having jurisdiction and with requirements of Divisions 26, 27, and 28.
- .7 Electrical wiring, by Divisions 26, 27, and 28:
 - .1 Wire for standard and critical branch power circuits shall be ~~#10 or #12~~ type THHN stranded copper wire, 600 volt, with heat resistant thermoplastic insulation for hot (black) and neutral (white).
 - .2 Grounds shall be ~~#10~~#12 type R THHN stranded copper wire (green). Ground conductors shall be installed in conduit.
- .8 Grounding and bonding, by Divisions 26, 27, and 28:
 - .1 Ground conductors shall be installed in conduit. Each power receptacle shall have a ground conductor connected to a grounding screw. A grounding bus shall be installed in each device barrier box at rough-in locations, and shall be installed as to insure grounding for complete power system.
- .9 Electrical receptacles:
 - .1 HUBBELL Hospital Grade ~~15 amp or 20 amp~~, 120 volt ~~or 277 volt~~, ULC listed and marked Hospital Grade.
 - .1 Quantity and type as indicated on drawings.
 - .2 Headwall manufacturer shall furnish and install receptacles ~~with required wiring, as indicated on drawings~~ as indicated on drawings by Divisions 26, 27, and 28.
 - .3 Coordinate work of this section with Divisions 26, 27, and 28:
 - .1 Duplex receptacles: NEMA style ~~5-15R or 5-20R~~, Ivory colour, for use on normal power circuits, and Red colour for use on critical branch power circuits.

Healthcare Equipment

Section revised and reissued by Addendum 03

~~.2 Simplex receptacles: NEMA style 5-15R or 5-20R, Ivory colour, for use on normal power circuits, and Red colour for use on critical branch power circuits.~~

~~.3 Safety receptacles: Duplex type, NEMA style 5-15R or 5-20R, Ivory colour for use on normal power circuits, and Red colour for use on critical branch power circuits. Receptacles shall limit proper access to energized circuits and shall accept both 2 wire and 3 wire plugs.~~

.10 Low voltage data provisions:

.1 Connect to device junction box via conduit or raceway. ~~Headwall manufacturer shall include pull cord extending from junction box to service provision~~

.2 Telephone jack, blank faceplates, data port or other low voltage device shall be furnished, installed and wired by low voltage *Subcontractor*.

.11 Switches:

~~.1 HUBBELL Industrial Grade 120 volt or 277 volt, 15 amp or 20 amp. Switch type SPST, 3-way or momentary, as indicated on drawings.~~

.1 LUTRON Pico PX Series.

.2 Low voltage switches shall be 0 - 12 volt, 15 amp unless otherwise indicated. Headwall manufacturer shall furnish, preinstall and wire switches.

.2 Acceptable *Products*:

.1 Amico Corporation 'Serenity Series Flatwall'.

.2 Substitutions: in accordance with Section 01 25 00.

2.3 Patient Lift and Track System (Ceiling-Mounted)

.1 Basis-of-design:

.1 Fixed ceiling lift:

.1 Maximum load capacity: 283.5 kg (625 lb).

.2 Lifting height: up to 2134 mm (84").

.3 2286 mm (7.5') foot strap to allow vertical lift movement from floor.

.4 Vertical lift movement:

.1 Power operation:

.1 Battery powered; rechargeable: 24VDC lift motor.

.2 Batteries: Quick change batteries, 24 VDC (2 x 12 VDC), 5.0 AH as recommended by lift manufacturer.

.3 Audible low battery indicator and visual battery/charge level display.

.4 Digital LCD display indicator: indicates number of lifts, battery levels, and lift status.

.5 Auto shut-off when not in use to conserve battery life.

.6 Emergency stop and emergency power lowering, with emergency manual raising or lowering.

Healthcare Equipment

Section revised and reissued by Addendum 03

- .7 Hand control: Pneumatic hand control with programmable features.
- .5 Traverse lift movement:
 - .1 Manual operation.
- .6 Battery charger; wall-mounted:
 - .1 Input: 120 VAC, 1.0 Amp.
 - .2 Output: 24 VDC, 1.5 Amp.
- .7 Acceptable *Products*:
 - .1 ADL Suite: Handicare Canada, 'Automatic C-625 Fixed Ceiling Lift – Manual X-Y Track'.
 - ~~.2 Suite Exam Rooms: Handicare Canada, 'Automatic C-625 Fixed Ceiling Lift – Manual J Track'.~~
 - ~~.2.3 AllIR Exam Rooms: Handicare Canada 'Automatic C-625 Fixed Ceiling Lift. Straight Track'.~~
- .2 Track system; fixed track: Track system as recommended by patient lift manufacturer.
 - .1 Prefinished extruded aluminum track profile, including extruded aluminum ceiling brackets and white moulded styrene track end caps:
 - .1 Accurately formed, extruded aluminum alloy AA-6063-T6 to ANSI H35.1/H35.1M-2017 minimum, free from defects impairing appearance, strength and durability.
 - .2 Finish: Powder coat finish, white colour.
 - .2 Fastenings and connectors: Types as recommended by ceiling lift manufacturer.
 - .1 Prepainted fasteners, with finish/colour to match prefinished track for exposed locations.
 - .3 *Provide* framing and suspension system components as recommended by ceiling lift manufacturer, for a complete track system installation, compatible with and to suit finished ceiling assemblies.
 - .4 Galvanic/dissimilar metal corrosion inhibitor (isolation coating): in accordance with Section 01 73 00 and written requirements of manufacturers of metals affected.
- .3 Patient sling:
 - .1 Patient sling as supplied by *Owner*.

PART 3- EXECUTION

3.1 Installation - Healthcare Equipment

- .1 Install equipment in accordance with equipment manufacturer's written requirements and in accordance with reviewed shop drawings.

Healthcare Equipment

Section revised and reissued by Addendum 03

- .2 Submit manufacturer's information and templates required for installation of work of this section. Assist or supervise, or both, the setting of anchorage devices, and construction of other work incorporated with *Products* specified in work of this section in order that they function as intended.
- .3 Include reinforcing, anchorage and mounting devices required for the installation of each *Product*.
- .4 Verify locations and mounting heights with *Consultant* before roughing-in.
- .5 *Provide* galvanic/dissimilar metal corrosion inhibitor (isolation coating) in accordance with Section 01 73 00 and written requirements of manufacturers of metals affected.
- .6 Electrical *Subcontractor* shall be responsible for final electrical hook-up at service connection locations, as well as interconnection wiring on multi-sectional units. Coordinate work of this section with work of Divisions 26, 27, and 28.
- .7 Mechanical *Subcontractor* shall be responsible for final mechanical service connections. Coordinate work of this section with work of Divisions 21, 22, and 23.

3.2 Installation - Headwall

- .1 Install equipment in accordance with equipment manufacturer's written requirements and in accordance with reviewed shop drawings.
- .2 Submit manufacturer's information and templates required for installation of work of this section. Assist or supervise, or both, the setting of anchorage devices, and construction of other work incorporated with *Products* specified in work of this section in order that they function as intended.
- .3 Include reinforcing, anchorage and mounting devices required for the installation of each *Product*.
- .4 Verify locations and mounting heights with *Consultant* before roughing-in.
- .5 Electrical *Subcontractor* shall be responsible for final electrical hook-up at service connection locations, as well as interconnection wiring on multi-sectional units and testing, in accordance with authorities having jurisdiction and with requirements of Divisions 26, 27, and 28. Coordinate work of this section with work of Divisions 26, 27, and 28.
- .6 Mechanical *Subcontractor* shall be responsible for final mechanical service connections and testing, in accordance with authorities having jurisdiction and with requirements of Divisions 21, 22, and 23. Coordinate work of this section with work of Divisions 21, 22, and 23.

3.3 Installation - Patient Lift

- .1 Install equipment in accordance with equipment manufacturer's written requirements and in accordance with reviewed shop drawings.
- .2 Submit manufacturer's information and templates required for installation of work of this section. Assist or supervise, or both, the setting of anchorage devices, and construction of other work incorporated with *Products* specified in work of this section in order that they function as intended.
- .3 Include reinforcing, anchorage and mounting devices required for the installation of each *Product*.

Healthcare Equipment

Section revised and reissued by Addendum 03

- .4 Verify locations and mounting heights with *Consultant* before roughing-in.
- .5 Electrical *Subcontractor* shall be responsible for final electrical hook-up at service connection locations. Coordinate work of this section with work of Divisions 26, 27, and 28.

3.4 Field Quality Control

- .1 Conduct quality control in accordance with Section 01 45 00.
- .2 Manufacturer's field review to be in accordance with Section 01 45 00.

3.5 Adjusting and Cleaning

- .1 Upon completion of installation, inspect finishes and materials for damage and faulty installation. Make good or replace damaged finishes and materials as directed by *Consultant* at no cost to *Owner*.
- .2 Verify under work of this section that installed *Products* function properly, and adjust accordingly to ensure satisfactory operation.
- .3 Do not remove protective coatings until final cleaning in accordance with Section 01 77 00, or earlier if directed by *Consultant*.

3.6 Closeout Activities

- .1 Testing:
 - .1 Test and commission equipment in accordance with equipment manufacturer's written requirements.
- .2 Demonstration:
 - .1 Before acceptance of system, arrange for demonstration of equipment with authorized representatives of *Owner*, to be performed by competent representative of equipment manufacturer to assure proper function, operation and explanation. Give *Owner's* representative a minimum of 48 hours advance notice in writing of demonstration date.
 - .2 Conduct comprehensive demonstration for *Owner's* staff on operation and care of equipment.

END OF SECTION