SECTION 10 22 00

PARTITION SYSTEMS

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\*\* NOTE TO SPECIFIER \*\* Hufcor, Inc.; operable partitions, accordion partitions, glass partitions and panels.
This section is based on the products of Hufcor, Inc., which is located at:
2101 Kennedy Rd. P. O. Box 5591
Janesville, WI 53547
Toll Free Tel: 800-542-2371
Tel: 608-756-1241
Fax: 608-758-8253
Email: [request info (hmarketing@hufcor.com)](https://admin.arcat.com/users.pl?action=UserEmail&company=Hufcor,+Inc.&coid=33145&rep=&fax=608-758-8253&message=RE:%20Spec%20Question%20(10600huf):%20%20&mf=)
Web: <https://www.hufcoramericas.com>
 [ [Click Here](https://www.arcat.com/arcatcos/cos33/arc33145.html) ] for additional information.
Hufcor is U.S. owned and operated and is the world's leading manufacturer of operable partitions, accordion folding doors and glass wall partitions. Also referred to as "airwalls," Hufcor Moveable wall systems and room dividers deliver unlimited space division and acoustical separation.
The Hufcor history of quality, reliability, innovation and service to the industry is the reason architects, contractors and engineers routinely specify Hufcor operable partitions.
Hufcor has licensees and distributors located throughout the world. Due to differences in the availability of various components, not every product is made exactly the same in every country nor is every product available in each country. However, each product is manufactured to Hufcor's exacting quality standards. Projects requiring partitions that exceed a licensee's capabilities are manufactured and shipped from the U.S.

1. GENERAL
	1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project.

* + 1. Top supported panel partitions. (600 series)
		2. Vertical lift panel partitions. (645V series)
		3. Accordion folding partitions. (3100-4100)
		4. Pocket doors.
		5. Safety system.
		6. Structural truss support system. (U900/U901)
	1. RELATED SECTIONS

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

* + 1. Section 05 12 13 - Architecturally-Exposed Structural Steel Framing.
		2. Section 06 10 00 - Rough Carpentry.
	1. RELATED WORK BY OTHERS
		1. Preparation of opening. Any deviation of site conditions contrary to approved shop drawings shall be called to the attention of the Architect.
		2. Header, blocking, support structures, jambs, track enclosures, surrounding insulation, and sound baffles.
		3. Pre-punching of support structure in accordance with approved shop drawings.
		4. Paint or otherwise finishing all trim and other materials adjoining head and jamb of operable partitions.
	2. REFERENCES

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

* + 1. ASTM International (ASTM):
			1. ASTM C423 - Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method.
			2. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
			3. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
			4. ASTM E336 - Standard Test Method for Measurement of Airborne Sound Attenuation between Rooms in Buildings.
			5. ASTM E557 - Standard Practice for Architectural Application and Installation of Operable Partitions
		2. Underwriter's laboratory (UL) 10B - Standard for Fire Tests of Door Assemblies.
	1. SUBMITTALS
		1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
		2. Product Data: Manufacturer's data sheets on each product to be used, including:
			1. Preparation instructions and recommendations.
			2. Storage and handling requirements and recommendations.
			3. Installation methods.
		3. Shop Drawings: Complete shop drawings are to be provided prior to fabrication indicating construction and installation details.
	2. QUALITY ASSURANCE
		1. Manufacturer Qualifications: Minimum 5 year experience manufacturing similar products.
			1. The manufacturer shall have a quality system that is registered to the ISO 9001 standards.
		2. Installer Qualifications: Minimum 2 year experience installing similar products.
		3. Product Qualifications:
			1. Preparation of the opening shall conform to the criteria set forth per ASTM E557 Standard Practice for Architectural Application and Installation of Operable Partitions.
			2. The partition STC (Sound Transmission Classification) shall be achieved per the standard test methods ASTM E90.
			3. Noise isolation classifications shall be achieved per the standard test methods ASTM E336 and ASTM E413.
			4. Noise Reduction Coefficient (NRC) ratings shall be per ASTM C423.

\*\* NOTE TO SPECIFIER \*\* Delete if vertical lift panel system not required.

* + - 1. Operable partition shall withstand the effects of earthquake motions determined according to SEI/ASCI. Withstand means, "the panels will remain in place without separation of any parts from the system when subjected to the seismic forces specified".
			2. The manufacturer shall have a quality system that is registered to the ISO 9001 standards.
	1. PRE-INSTALLATION MEETINGS
		1. Convene minimum two weeks prior to starting work of this section.
	2. DELIVERY, STORAGE, AND HANDLING
		1. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.
		2. Handling: Handle materials to avoid damage.
	3. PROJECT CONDITIONS
		1. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.
	4. SEQUENCING
		1. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.
	5. WARRANTY

\*\* NOTE TO SPECIFIER \*\* Consult your Hufcor Distributor for more information. Delete if not required.

* + 1. Manufacturer shall warrant partition system for a period of two years against defects in material and workmanship, excluding abuse.

\*\* NOTE TO SPECIFIER \*\* Consult your Hufcor Distributor for more information. Delete if not required.

* + 1. Manufacturer shall warrant partition system for a period of one year against defects in material and workmanship, excluding abuse.
1. PRODUCTS
	1. MANUFACTURERS
		1. Acceptable Manufacturer: Hufcor, Inc., which is located at: 2101 Kennedy Rd. P. O. Box 5591; Janesville, WI 53547; Toll Free Tel: 800-542-2371; Tel: 608-756-1241; Fax: 608-758-8253; Email: [request info (hmarketing@hufcor.com)](https://admin.arcat.com/users.pl?action=UserEmail&company=Hufcor,+Inc.&coid=33145&rep=&fax=608-758-8253&message=RE:%20Spec%20Question%20(10600huf):%20%20&mf=); Web: <https://www.hufcoramericas.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 - Product Requirements.

\*\* NOTE TO SPECIFIER \*\* Delete article of not required or delete products not required.

* 1. TOP SUPPORTED PANEL PARTITIONS
		1. Acoustical Performance

\*\* NOTE TO SPECIFIER \*\* select as required. 43, 47, 49, 52, 54, 55, 56 STC ratings are dependent upon substrate, seals type and finish materials.

* + - 1. Acoustical performance shall be tested at a laboratory accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) and in accordance with ASTM E90 Test Standards.
			2. Complete, unaltered written test report is to be made available upon request.
		1. Product: Series 641 Manual Individual Omni-Directional Panels as manufactured by Hufcor Inc.
			1. Panels shall be nominally 4 inches (102 mm) thick and to 48 inches (1219 mm) in width and hinged.
			2. Panel faces shall be laminated to appropriate substrate to meet the STC requirement.

\*\* NOTE TO SPECIFIER \*\* Not all substrates are available for all STC ratings. Consult your Hufcor Distributor for more information.

* + - * 1. Substrate Material: Steel.
				2. Substrate Material: Non-steel.
				3. Substrate Material: Medium Density Fiberboard.

\*\* NOTE TO SPECIFIER \*\* Horizontal Splice: Heights over 16 feet 3 inches (4953 mm) with non-steel faces require a structural splice placed at approximately 12 feet 3 inches (3734 mm) from the floor.

* + - 1. Frames shall be of 16 gauge (1.42 mm) painted steel.
			2. Face finish shall wrap around the vertical panel edges with no vertical face trim.

\*\* NOTE TO SPECIFIER \*\* Optional: Delete above or below.

* + - 1. Face finish with integral factory applied aluminum vertical edge and face protection.
			2. Vertical sound seals shall be of tongue and groove configuration, ensure panel-to-panel alignment and prevent sound leaks between panels.
			3. Horizontal top seals shall be retractable, provide 1 inch (25 mm) nominal operating clearance, and exert upward force when extended. All panels, including pass door panels and lever closure panels shall have retractable top and bottom seals.

\*\* NOTE TO SPECIFIER \*\* Optional: Delete above standard or below option.

* + - 1. Horizontal top seals shall be fixed continuous contact dual 4-finger vinyl.
			2. Horizontal bottom seals shall be retractable, provide up to 2 inches (51 mm) nominal operating clearance, and exert 100 lbs. (45 kg) of downward force when fully extended.

\*\* NOTE TO SPECIFIER \*\* Optional: Delete above standard or below options.

* + - 1. Horizontal bottom seals shall be retractable, provide 4 inches (101 mm) nominal operating clearance, and exert 100 lbs. (45 kg) of downward force when fully extended.
			2. Horizontal bottom seals shall be fixed continuous contact dual 4-finger vinyl.
			3. Horizontal trim shall be of aluminum.

\*\* NOTE TO SPECIFIER \*\* 641 Only: Delete if not required.

* + - 1. Weight of the panels shall be 7.8 to 13.6 lbs. per sq. ft. (38.1 to 66.4kg/sq.m) based on options selected.

\*\* NOTE TO SPECIFIER \*\* Select STC rating. Delete STC not required.

* + - * 1. STC: 43.
				2. STC: 47.
				3. STC: 49.
				4. STC: 52.
				5. STC: 54.
				6. STC: 55.
				7. STC: 56.
		1. Product: Series 642 Manual Paired Panels as manufactured by Hufcor Inc.
			1. Panels shall be nominally 4 inches (102 mm) thick and to 48 inches (1219 mm) in width and hinged.
			2. Panel faces shall be laminated to appropriate substrate to meet the STC requirement.

\*\* NOTE TO SPECIFIER \*\* Not all substrates are available for all STC ratings. Consult your Hufcor Distributor for more information.

* + - * 1. Substrate Material: Steel.
				2. Substrate Material: Non-steel.
				3. Substrate Material: Medium Density Fiberboard.

\*\* NOTE TO SPECIFIER \*\* Horizontal Splice: Heights over 16 feet 3 inches (4953 mm) with non-steel faces require a structural splice placed at approximately 12 feet 3 inches (3734 mm) from the floor.

* + - 1. Frames shall be of 16 gauge (1.42 mm) painted steel.

\*\* NOTE TO SPECIFIER \*\* 642 construction only. Delete if not required.

* + - 1. Face finish shall wrap around the vertical panel edges with no vertical face trim.

\*\* NOTE TO SPECIFIER \*\* Optional: Delete above or below.

* + - 1. Face finish with integral factory applied aluminum vertical edge and face protection.
			2. Vertical sound seals shall be of tongue and groove configuration, ensure panel-to-panel alignment and prevent sound leaks between panels.
			3. Horizontal top seals shall be retractable, provide 1 inch (25 mm) nominal operating clearance, and exert upward force when extended. All panels, including pass door panels and lever closure panels shall have retractable top and bottom seals.

\*\* NOTE TO SPECIFIER \*\* Optional: Delete above standard or below option.

* + - 1. Horizontal top seals shall be fixed continuous contact dual 4-finger vinyl.
			2. Horizontal bottom seals shall be retractable, provide up to 2 inches (51 mm) nominal operating clearance, and exert 40 lbs. (18 kg) of downward force when fully extended.

\*\* NOTE TO SPECIFIER \*\* Optional: Delete above standard or below options.

* + - 1. Horizontal bottom seals shall be retractable, provide 4 inches (101 mm) nominal operating clearance, and exert 40 lbs. (18 kg) of downward force when fully extended.
			2. Horizontal bottom seals shall be fixed continuous contact dual 4-finger vinyl.
			3. Horizontal trim shall be of aluminum.
			4. Low profile hinges on standard panels shall be of steel and project no more than 1/4 inch (6 mm) beyond panel faces. Each pair of panels to have a minimum of three hinges.

\*\* NOTE TO SPECIFIER \*\* 642 only: Delete if not required.

* + - 1. Weight of the panels shall be 7.8 to 13.6 lbs./sq. ft. (38.1 to 66.4 kg/sq.m) based on options selected.

\*\* NOTE TO SPECIFIER \*\* Select STC rating. Delete STC not required.

* + - * 1. STC: 43.
				2. STC: 47.
				3. STC: 49.
				4. STC: 52.
				5. STC: 54.
				6. STC: 55.
				7. STC: 56.
		1. Product: Series 643E Electrically Operated Continuously Hinged Panels as manufactured by Hufcor Inc.
			1. Panels shall be nominally 4 inches (101 mm) thick, to 48-1/2 inches (1232 mm) in width and continuously hinged.
			2. Panel faces shall be laminated to appropriate substrate to meet the STC requirement.

\*\* NOTE TO SPECIFIER \*\* (Not all substrates are available for all STC ratings. Consult your Hufcor Distributor for more information):

* + - 1. Substrate Material: Steel.
			2. Substrate Material: Non-steel.
			3. Substrate Material: Medium Density Fiberboard.

\*\* NOTE TO SPECIFIER \*\* Horizontal Splice: Heights over 16 feet 3 inches (4953 mm) with non-steel faces require a structural splice placed at approximately 12 feet 3 inches (3734 mm) from the floor.

* + - 1. Frames shall be of 16 gauge (1.42 mm) painted steel.
			2. Face finish shall wrap around the vertical panel edges with no vertical face trim.

\*\* NOTE TO SPECIFIER \*\* Optional: Delete above standard or below option.

* + - 1. Face finish with integral factory applied aluminum vertical edge and face protection.
			2. Vertical sound seals shall be of tongue and groove configuration, ensure panel-to-panel alignment and prevent sound leaks between panels.
			3. Horizontal top seals shall be fixed continuous contact dual 4-finger vinyl.
			4. All standard panels shall have bottom retractable seals which provide a minimum of 2 inches (51 mm) floor clearance during movement of the partition, including all panels adjacent to pass door(s). Retractable bottom floor seal to exert downward seal force when activated. Floating or rigid seals that maintain contact with the floor during partition movement will not be acceptable.

\*\* NOTE TO SPECIFIER \*\* Optional Seals. Consult your Hufcor Distributor for more information. Delete standard above or option below.

* + - 1. Horizontal bottom seals shall be fixed continuous contact dual 4-finger vinyl.
			2. Motor shall automatically extend/retract the bottom seals.
			3. No floor mounted seal activators are allowed.
			4. Panels shall provide wall-to-wall contact for tight acoustical seal. Operable wall systems that do not extend to the back of storage pocket are not acceptable.
			5. Weight of the panels shall be 7.8 to 10.9 lbs. per sq. ft. (37.8 to 53.2 kg/sq m) based on options selected.

\*\* NOTE TO SPECIFIER \*\* Select STC rating. Delete STC not required.

* + - * 1. STC: 43.
				2. STC: 47.
				3. STC: 49.
				4. STC: 52.
				5. STC: 54.

\*\* NOTE TO SPECIFIER \*\* The Hufgard option is to be used only with Hufcor electrically operated operable partitions 643E. Delete if not required. Retain Hufgard safety system description in last article of Part 2.

* + - 1. Provide Hufgard Safety System as manufactured by Hufcor Inc.

\*\* NOTE TO SPECIFIER \*\* Typical suspension system.

* + 1. Suspension System:
			1. Track shall be of clear anodized architectural grade extruded aluminum alloy 6063-T6. Track design shall provide precise alignment at the trolley running surfaces and provide integral support for adjoining ceiling, soffit, or plenum sound barrier. Track shall be connected to the structural support by pairs of minimum 3/8 inch (10 mm) diameter threaded steel hanger rods.

\*\* NOTE TO SPECIFIER \*\* Option (available for select layouts-consult your Hufcor Distributor). Delete if not required.

* + - * 1. The panels shall be supported by the Unispan pre-engineered truss and post system fabricated of steel and aluminum. Unispan is attached to the building structure for lateral support only. The load of the truss and partition is supported by end columns. The columns are connected to floor plates that distribute the load of the system at the floor.

\*\* NOTE TO SPECIFIER \*\* 641 series. Delete if not required. Optional tracks may be used providing the height and weight limits are within manufacturers guidelines. Contact Hufcor representative.

* + 1. Suspension System:
			1. For panels to 1000 lbs. (455 kg) or 22 feet 2 inches (6.75m): Track shall be of clear anodized architectural grade extruded aluminum alloy 6063-T6. Track design shall provide precise alignment at the trolley running surfaces and provide integral support for adjoining ceiling, soffit, or plenum sound barrier. Track shall be connected to the structural support by pairs of minimum 3/8 inch (10 mm) dia. threaded steel hanger rods. Pairs of rods are directly attached to the track, no single point attachment allowed. L, T, or X intersections shall be factory assembled and welded.
				1. Each panel shall be supported by two 2-wheeled counter-rotating horizontal carriers. Wheels to be of precision ground steel ball bearings with heat treated and hardened races encased with molded polymer tires.
			2. For panels 1000-1500 lbs. (455-680 kg): Track shall be of clear anodized architectural grade extruded aluminum alloy 6063-T6. Track design shall provide precise alignment at the trolley running surfaces and provide integral support for adjoining ceiling, soffit, or plenum sound barrier. Track shall be connected to the structural support by pairs of minimum 1/2 inch (13 mm) dia. threaded steel hanger rods. Pairs of rods are directly attached to the track, no single point attachment allowed. L, T, or X intersections shall be factory assembled and welded.
				1. Each panel shall be supported by two 2-wheeled counter-rotating horizontal carriers. Wheels to be of precision ground steel ball bearings with heat treated and hardened races encased with molded polymer tires, steel banded and reinforced.
			3. For panels 1000-1400 lbs. (455-635 kg): Track shall be of 3/16 inch (4.8 mm) extruded steel, black painted, connected to the structural support by pairs of minimum 1/2 inch (13 mm) threaded steel hanger rods. Track trim shall be clear anodized aluminum. Carriers to have four steel wheels with precision ground radial bearings. Bearings are inserted into a steel tire. The steel tire rim fully captures the bearing. Carriers may be programmed for self-directing and sorting.
			4. For panels 1400-3000 lbs. (635-1364 kg): Track shall be of 1/4 inch (6 mm) extruded steel, black painted, connected to the structural support by pairs of minimum 1/2 inch (13 mm) threaded steel hanger rods. Track trim shall be clear anodized aluminum. Carriers to have four steel wheels with precision ground radial bearings. Bearings are inserted into a steel tire. The steel tire rim fully captures the bearing. Carriers may be programmed for self-directing and sorting.
			5. Plenum Closure: Design of plenum closure shall permit lifting out of header panels to adjust track height. Plenum closure required for optimum sound control of partition.

\*\* NOTE TO SPECIFIER \*\* 642 and 643E series only. Delete if not required.

* + 1. Suspension System:
			1. For panels to 900 lbs. (408 kg): Track shall be of clear anodized architectural grade extruded aluminum alloy 6063-T6. Track design shall provide precise alignment at the trolley running surfaces and provide integral support for adjoining ceiling, soffit, or plenum sound barrier. Track shall be connected to the structural support by minimum 3/8 inch (10 mm) dia. threaded steel hanger rods. Track trim shall be of steel.

\*\* NOTE TO SPECIFIER \*\* 642 only. Delete if not required.

* + - * 1. Each panel shall be supported by one 4-wheeled carrier. Wheels to be of hardened steel ball bearings encased with molded polymer tires.

\*\* NOTE TO SPECIFIER \*\* 643E only. Delete if not required.

* + - * 1. Each panel shall be supported by one 4-wheeled carrier in the track and one internal 4-wheeled carrier. Wheels to be of hardened steel ball bearings encased with molded polymer tires.
			1. For panel weights over 900 lbs. (408 kg): Track shall be of 1/4 inch (6 mm) extruded steel, painted black. Track trim shall be clear anodized aluminum. Track shall be connected to the structural support by pairs of min. 1/2 inch (13 mm) dia. threaded steel hanger rods.

\*\* NOTE TO SPECIFIER \*\* 642 only. Delete if not required.

* + - * 1. Each panel shall be supported by one 4-wheeled carrier. Wheels to be of steel with precision ground radial bearings. Bearings are inserted into a steel tire. Tire rim fully captures the bearing.

\*\* NOTE TO SPECIFIER \*\* 643E only. Delete if not required.

* + - * 1. Each panel shall be supported by one 4-wheeled carrier in the track and one internal 4-wheeled carrier. Wheels on track carrier to be of hardened steel ball bearings. Wheels on internal carrier shall be of hardened steel ball bearings encased with molded polymer tires.

\*\* NOTE TO SPECIFIER \*\* 643E panel system power unit only. Delete if not required.

* + 1. Power Unit:
			1. Factory assembled power unit shall be UL listed and include motor, electronic torque limiter, two control stations wired in series, emergency release, and all necessary equipment for electric operation. Roller chain drive shall attach to carrier of lead panel. Limit switches shall be provided to prevent over-travel. Motor shall be able to operate 50-60 Hz, and 200-240 volts, single phase, with adequate horsepower to operate partition effectively.
				1. Low profile hinges shall be of steel and project no more than 1/4 inch (6 mm) beyond panel faces. Panels shall have a minimum of three hinges.
				2. Each panel shall be supported by a single carrier allowing the panels to stack freely without the use of rub rails near the pocket.
				3. Partition shall be operated by two control stations wired in series and located on opposite sides and ends of the partition. The control stations require human contact to be activated ensuring supervised operation of the partition system.

\*\* NOTE TO SPECIFIER \*\* Option. Delete if not required.

* + - * 1. Provide Hufgard safety system which automatically stops the partition's forward movement when an object or person contacts the lead edge of the partition during movement.
		1. Finishes:

\*\* NOTE TO SPECIFIER \*\* Select as required: Delete face finish not required.

* + - 1. Face finish shall be factory applied reinforced vinyl fabric with woven backing, weighing not less than 20 oz. per lineal yard. Color shall be selected from manufacturer's standard color selectors.

\*\* NOTE TO SPECIFIER \*\* Standard upgrade fabrics (color shall be selected from manufacturer's standard color selector):

* + - 1. Face finish shall be factory applied vertical ribbed carpet (N.R.C. .20).
			2. Face finish shall be factory applied stain resistant fabric

\*\* NOTE TO SPECIFIER \*\* Optional. Customer selected finish option requires factory approval for manufacturing compatibility.

* + - 1. Face finish shall be customer selected.
			2. Face finish shall be unfinished for field decoration.
			3. Face finish shall be wood veneer (factory installed on trimmed models).
			4. Face finish shall be high pressure laminate (factory installed on trimmed models).

\*\* NOTE TO SPECIFIER \*\* Delete exposed metal trim finish not required.

* + - 1. Exposed metal trim and seal color shall be Gray.
			2. Exposed metal trim and seal color shall be Putty.
			3. Exposed metal trim and seal color shall be Sky White Textured.
			4. Exposed metal trim and seal color shall be Black Textured.

\*\* NOTE TO SPECIFIER \*\* Optional upgrade for metal trim. Delete if not required.

* + - 1. Exposed metal trim and seal color shall be custom powder coated paint finish.

\*\* NOTE TO SPECIFIER \*\* Delete aluminum track finish not required.

* + - 1. Aluminum track shall be clear anodized.

\*\* NOTE TO SPECIFIER \*\* Optional upgrade: Select standard above or from options below. Delete aluminum track finish not required.

* + - 1. Aluminum track shall be custom powder coated paint finish.
		1. Accessories:

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + - 1. ADA compliant pass door of the same thickness and construction as the basic panels. Pass door panel legs adjacent to the door require bottom seals that provide downward force to maintain stability during door operation. Pass door has perimeter trim to protect face finish and to provide visual identification as required by International Building Code. Pass door incorporates a self-adjusting retractable bottom seal providing sound control when door is closed.

\*\* NOTE TO SPECIFIER \*\* Delete optional pass door options.

* + - * 1. Provide panic bar.
				2. Provide automatic door closer.
				3. Provide door lock.
				4. Provide self-illuminated exit sign.
				5. Provide photo-luminescent exit sign.
				6. Provide provision for window.
				7. Provide peep hole.

\*\* NOTE TO SPECIFIER \*\* Delete accessories not required.

* + - 1. Provide inset chalk/writing/projection surfaces.
			2. Provide inset tack boards.
			3. Provide inset eraser pocket.
			4. Provide segmented faces.
			5. Provide finished end cover.
			6. Provide pocket doors.

\*\* NOTE TO SPECIFIER \*\* Consult your local Hufcor Distributor.

* + - 1. Provide custom design options as indicated on Drawings.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Manual Operation:
			1. Panels shall allow manual relocation from the storage area, positioning in the opening, and setting of seals.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + - 1. Retractable Horizontal Seals:
				1. Retractable horizontal seals shall be activated by a removable quick-set operating handle located approximately 42 inches (1067 mm) from the floor in the panel edge. Seal activation requires approximately 15 lbs. (6.8 kg) of force per panel and approximately a 190 degree turn of the removable handle.
				2. Top and bottom retractable seals on each panel or hinged panel pair shall be operated simultaneously.
			2. Final Partition Closure:

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + - * 1. Lever closure panel with expanding jamb which compensates for minor wall irregularities and provides a minimum of 250 lbs. (113.4 kg) seal force against the adjacent wall for optimum sound control. The jamb activator shall be located approximately 45 inches (1143 mm) from the floor in the panel face and be accessed from either side of the panel. The jamb is equipped with a mechanical rack and pinion gear drive mechanism and shall extend 4 inches-6 inches (100-152 mm) by turning the removable operating handle.

\*\* NOTE TO SPECIFIER \*\* Optional for Series 641, 642, heights to 12 feet 3 inches (3734 mm) and a maximum of 10 panels. Delete if not required.

* + - * 1. Pivot panel pivots next to the wall and permits access between adjacent rooms. Pivot panel is of the same construction as basic panels but with continuous contact multi-ply vinyl top and bottom seals. The lead end of the panel has full height finger pull and vertical seal of multi-ply vinyl.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + - 1. Stack/Store Panels
				1. Retract seals and move to storage area.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + - * 1. Panels may be stored at either or both ends of the track or in a pocket.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + 1. Motorized Operation:
			1. Partitions shall be controlled by touch pad or key switch control stations, requiring constant contact to activate the motor. As a safety precaution, two control stations are required to activate the partition. Control stations to be mounted on both sides of partition to provide operators a clear view of the partition path to prevent injury.
			2. Motor drive shall automatically seal the partition in the opening. For models with retractable bottom seals, the motor automatically sets the bottom seals.
			3. Stack/Store Panels: Panels are retracted and stored by activating the two control station controls.

\*\* NOTE TO SPECIFIER \*\* Delete article if not required.

* 1. VERTICAL LIFT PANEL SYSTEMS
		1. Product: Summit Series 645V electrically operated, vertical lift panels as manufactured by Hufcor Inc.
			1. Panels shall be nominally 4 inches (102 mm) thick and 30 inches (762 mm) in height.
			2. Panel faces shall be steel laminated to appropriate substrate to meet the STC performance requirement.
			3. Frames shall be of minimum 16 gauge (1.42mm) painted steel.
			4. Sound seals shall be of tongue and groove configuration, ensure panel-to-panel alignment and prevent sound leakage between panels.
			5. Horizontal panel edges shall be of a minimal groove appearance.
			6. The first panel in the opening shall have a bottom retractable safety sensor seal providing a minimum of 2 inches (51 mm) floor adjustability to accommodate out-of-level floors.
			7. Motor and drive shall automatically extend/retract the panels into the opening.
			8. Guide rails shall be nominally 6 inches (152 mm) wide and 6 inches (152 mm) deep and shall be architectural grade precision extruded aluminum to provide stability and constant acoustical contact with partition panels during operation.
				1. Guide rails shall be adjustable up to 1/4 inch (6 mm) to compensate for out-of-plumb walls.
				2. Guide rails shall provide constant power to safety limit switches
			9. Each panel shall have two guide rollers that are sealed hardened ball bearing steel for smooth operation. Each guide roller shall provide adjustments to ensure panels can compensate for building movements over time. Each guide roller shall contain a minimum 1 inch dia. (25 mm) carrier bolt to withstand panel load.
			10. Weight of the panels shall be 10.9 lbs. per sq. ft. (53.2 kg/sq m), not including the lifting equipment.
		2. Suspension System:
			1. Drive Box:
				1. Panels shall stack on steel drive box and be lowered into opening via gravity feed operation.
				2. Each panel shall be laterally supported by two hardened ball bearing steel pick up rollers.
				3. System shall contain drive box stack made from hardened steel and capable of supporting the weight of all panels in the stacked position.
			2. Power unit and controls shall be UL listed.

\*\* NOTE TO SPECIFIER \*\* Delete motor size not required.

* + - 1. Motor shall be 60 Hz and 200-240 volt single phase for 2 HP motor.
			2. Motor shall be 60 Hz and 200-240 volt 3 phase for 5HP motor.
			3. Drive system shall include drive shafts, couplers, torque limiter, key pressure actuation control station wired in series, dual drive emergency operation and all necessary equipment for electric operation.
			4. Chain drive shall attach to dual direction lead panel.
		1. Safety Requirements:
			1. System shall have primary and secondary safety systems in the event a single safety system would fail.
			2. System shall contain a certified load arrestor to stop a free fall occurrence. Motor brakes that simply reduce the downward fall speed are unacceptable.
			3. System shall contain an entrapment backup system on the lead edge of the panel that automatically reverses downward movement when lead edge contacts an obstruction within the path of the system.
			4. System shall contain certified Type B2 safety monitoring relay switches that can sense any failures between each limit switch and the control box as the partition is operated during every cycle. The safety monitor switches shall automatically shut off power to the motor drives if a failure occurs.
			5. System shall contain a constant contact finger switch as the lead panel operates within the guide rail and immediately shut off the motor drive power in the event of a free fall detection or an obstruction on the lead edge.
			6. Touchpad back-lit LCD station with continuous pressure actuation.

\*\* NOTE TO SPECIFIER \*\* Option. Delete if not required.

* + - 1. Additional push button switch located at opposite end of the partition for full view of the opening on both sides during operation.

\*\* NOTE TO SPECIFIER \*\* Option. Delete if not required.

* + - 1. Non-contact optical beams shall be installed to detect objects that may inadvertently move under the partition during operation.

\*\* NOTE TO SPECIFIER \*\* IMPORTANT NOTE ABOUT FACE FINISH DIRECTION: Finishes will be applied to the 645V IN A HORIZONTAL DIRECTION. The finishes provided on most selectors or samples are shown in a vertical position and may look different when applied horizontally.

* + 1. Finishes:

\*\* NOTE TO SPECIFIER \*\* Select as required. Delete face finish not required.

* + - 1. Face finish shall be factory applied reinforced vinyl fabric with woven backing, weighing not less than 20 oz. per lineal yard. Color shall be selected from manufacturer's standard color selectors.

\*\* NOTE TO SPECIFIER \*\* Standard upgrade fabrics (color shall be selected from manufacturer's standard color selector):

* + - 1. Face finish shall be factory applied vertical ribbed carpet (N.R.C. .20).
			2. Face finish shall be factory applied stain resistant fabric

\*\* NOTE TO SPECIFIER \*\* Optional. Customer selected finish option requires factory approval for manufacturing compatibility.

* + - 1. Face finish shall be customer selected. Requires factory approval for manufacturing compatibility.

\*\* NOTE TO SPECIFIER \*\* Optional.

* + - 1. Face finish shall be unfinished for field decoration.
			2. Face finish shall be marker board full height and width.

\*\* NOTE TO SPECIFIER \*\* Delete exposed metal trim finish not required.

* + - 1. Exposed metal trim and seal color shall be Gray.
			2. Exposed metal trim and seal color shall be Putty.
			3. Exposed metal trim and seal color shall be Sky White Textured.
			4. Exposed metal trim and seal color shall be Black Textured.

\*\* NOTE TO SPECIFIER \*\* Optional upgrade for metal trim. Delete if not required.

* + - 1. Exposed metal trim shall be clear anodized. Exposed vinyl seals shall be gray color.
			2. Exposed metal trim shall be custom powder coated paint finish, subject to factory approval.
		1. Operation:
			1. Partition shall be controlled by a back-lit LCD touchpad and push button, requiring constant contact to activate the motor.
			2. Motor drive shall automatically seal the partition in the opening.
			3. The panels shall open and close at a constant nominal speed of approximately 5 to 10 vertical feet per minute (1.5 to 3 meters per minute).
			4. Stack/Store Panels:
				1. Panels are retracted above the ceiling and stored by activating the touchpad and push button controls.
			5. Extend Partition:
				1. When the operable wall is being lowered (closed), the panels shall stop and retract if the leading (bottom) edge contacts any object between the panel and the floor. The operation of the wall may resume once the key switch has been reset and the obstruction cleared.
		2. Acoustical Performance:
			1. The partition shall be tested at a laboratory accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) in accordance with ASTM E90 Test Standards and has certified a minimum STC rating of 51.

\*\* NOTE TO SPECIFIER \*\* Delete article if not required

* 1. ACCORDION FOLDING PARTITIONS
		1. Top supported, manually operated accordion folding partition.

\*\* NOTE TO SPECIFIER \*\* Delete series not required.

* + - 1. Provide Series 3100 accordion partition as manufactured by Hufcor Inc.
				1. Standard panel construction shall have obtained an STC rating of 31.
			2. Provide Series 4100 accordion partition as manufactured by Hufcor Inc.
				1. Standard panel construction shall have obtained an STC rating of 41.
		1. Panel Construction:
			1. Covers will be semi-rigid laminated construction with manufacturer's standard vinyl fabric providing wrinkle-free impact resistant surfaces.

\*\* NOTE TO SPECIFIER \*\* Series 4100 only. Delete if not required.

* + - 1. Covers shall have steel strips laminated within each fold for acoustical purposes.
			2. Covers shall be removable and replaceable in the field.
			3. Covers shall have multi-ply sweep strips top and bottom both sides of the partition for acoustical seal. The top sweep strips shall be 1/2 inch (13 mm).
			4. Partition shall have an internal framing of 14 ga. (2 mm) half hard steel riveted to form "X" construction pantographs. Pantographs shall provide even extension and contraction without binding on straight runs of track or on curves as shown on the plans. Pantographs shall have built-in stops to prevent over-extending. Partition shall have pantographs located at top and bottom, plus intermediate pantographs located no more than 4 feet (1219 mm) on center for heights over 8 feet (2.438m).
			5. The bottom sweep strips shall be 1-1/2 inches (38 mm).

\*\* NOTE TO SPECIFIER \*\* Optional upgrades. Delete if not required.

* + - 1. The bottom sweep strips shall be 2 inches (51 mm) to compensate for out-of-level floor conditions.

\*\* NOTE TO SPECIFIER \*\* Optional upgrades. Delete if not required.

* + - 1. The bottom sweep strips shall be 3 inches (76 mm) to compensate for out-of-level floor conditions.
			2. Vertical posts of steel channel shall support the pantographs at each end of the partition.
			3. The lead post shall be trimmed with clear anodized aluminum and include mechanical latching.

\*\* NOTE TO SPECIFIER \*\* Series 3100. Delete if not required.

* + - 1. Weight of the door shall be no less than 2.7 lbs. per sq. ft. (13.5 kg)

\*\* NOTE TO SPECIFIER \*\* Series 4100. Delete if not required.

* + - 1. Weight of the door shall be no less than 4.3 lbs. per sq. ft. (21.5 kg)
		1. Suspension System:
			1. Track shall be of clear anodized architectural grade extruded aluminum alloy 6063-T6 and be as specified by manufacturer for best performance as governed by overall size and weight of the partition.
			2. Partition shall be supported by a 4-wheeled carrier at the lead post. Wheels shall be of nylon-tired steel ball bearings. The lead carrier shall be adjustable to maintain proper alignment of the lead post to the jamb.
			3. Intermediate carriers shall be spaced 18 inches (457 mm) on center and have two wheels of nylon-tired steel ball bearings.
		2. Finishes:

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

* + - 1. Face finish shall be factory applied reinforced vinyl fabric with woven backing, weighing not less than 20 oz. per lin. yard. Color shall be selected from manufacturer's standard color selector.

\*\* NOTE TO SPECIFIER \*\* Optional. Delete if not required.

* + - 1. Face finish shall be customer selected. Requires factory approval for manufacturing compatibility.
		1. Accessories:

\*\* NOTE TO SPECIFIER \*\* Delete accessories not required.

* + - 1. Provide locks - one side.
			2. Provide locks - both sides.
			3. Provide Hufcor standard key lock.
			4. Provide customer supplied, master keyed to building system.
			5. Provide X, T, & L track intersection configurations as required:
			6. Provide posts for attaching multiple doors.
			7. Provide sliding jamb board.
			8. Provide pendant pulls.
		1. Operation:
			1. Accordion door shall be manually moved from the storage area, pulled across the opening, and latched into the full height jamb with the latching handle.
			2. Stack/Store Panels
				1. The handle is manually unlatched, and the door is moved into the stacked position.

\*\* NOTE TO SPECIFIER \*\* Pocket Doors are an option for operable partitions. Delete article if not required.

* 1. POCKET DOORS
		1. Product shall be Pocket Door.

\*\* NOTE TO SPECIFIER \*\* Delete pocket door type not required.

* + - 1. Provide Type 1 as manufactured by Hufcor Inc.
			2. Provide Type 2 as manufactured by Hufcor Inc.
			3. Provide Type 3 as manufactured by Hufcor Inc.
			4. Provide Type 4 as manufactured by Hufcor Inc.
		1. Construction:
			1. Panels shall be nominally 4 inches (102 mm) thick.
			2. Panel faces shall be laminated to appropriate substrate to meet the STC requirement.

\*\* NOTE TO SPECIFIER \*\* Not all substrates are available for all STC ratings. Consult your Hufcor Distributor for more information.

* + - 1. Substrate Material: Steel.
			2. Substrate Material: Non-steel.
			3. Substrate Material: Medium Density Fiberboard.

\*\* NOTE TO SPECIFIER \*\* Horizontal Splice: Heights over 16 feet 3 inches (4953 mm) with non-steel faces require a structural splice placed at approximately 12 feet 3 inches (3734 mm) from the floor.

* + - 1. Frames shall be of 16 gauge (1.42 mm) painted steel.
			2. Face finish shall wrap around the vertical panel edges and provide no protective vertical face trim.

\*\* NOTE TO SPECIFIER \*\* Optional: Delete above standard or below option. This option is only available with steel faces.

* + - 1. Face finish with integral factory applied aluminum vertical edge and face protection.
			2. Pocket doors at heights of 16 feet 3 inches (4953 mm) and over, without face steel, will have horizontal splice rails. Location and quantity of splice rails is dependent upon height of door.
			3. Horizontal top and bottom seals shall be of continuous contact multi-ply vinyl sweep strips. When the pocket doors are in the closed position, the seals shall contact an aluminum head member which extends across the pocket from the track to the pocket walls.
			4. Pocket doors shall be secured in the closed position by the face-activated internal mechanism.
				1. The operating mechanism to be located approximately 46 inches (1168 mm) from the floor in the door face.
				2. The top mechanism extends from the top rail of the pocket door and latches in the horizontal header.
				3. A jamb plate shall be attached to the floor to capture the bottom mechanism.
			5. Hinges shall be of steel and project no more than 1/4 inch (6 mm) beyond panel faces. Each pocket door "leaf" to have a minimum of four hinges.
			6. Jambs shall be of 6063-T6 aluminum and be adjustable + or - 3/8 inch (9.5 mm).
			7. Weight of the pocket doors shall be 5.7-8.9 lbs. per sq. ft. (27.8-43.5 kg/sq.m) based on sound rating of the partition selected.
		1. Finishes:

\*\* NOTE TO SPECIFIER \*\* Select as required. Delete face finish not required.

* + - 1. Face finish shall be factory applied reinforced vinyl fabric with woven backing, weighing not less than 20 oz. per lineal yard. Color shall be selected from manufacturer's standard color selectors.

\*\* NOTE TO SPECIFIER \*\* Standard upgrade fabrics. Color shall be selected from manufacturer's standard color selector.

* + - 1. Face finish shall be factory applied vertical ribbed carpet (N.R.C. .20).
			2. Face finish shall be factory applied stain resistant fabric.

\*\* NOTE TO SPECIFIER \*\* Customer selected finish option requires factory approval for manufacturing compatibility.

* + - 1. Face finish shall be customer selected. Requires factory approval for manufacturing compatibility.
			2. Face finish shall be unfinished for field decoration.
			3. Face finish shall be wood veneer (factory installed on trimmed models).
			4. Face finish shall be high pressure laminate (factory installed on trimmed models).

\*\* NOTE TO SPECIFIER \*\* Delete exposed metal trim finish not required.

* + - 1. Exposed metal trim and seal color shall be Gray.
			2. Exposed metal trim and seal color shall be Putty.
			3. Exposed metal trim color shall be Sky White textured, black seals.
			4. Exposed metal trim and seal color shall be Black textured.

\*\* NOTE TO SPECIFIER \*\* Optional upgrade for metal trim. Delete if not required.

* + - 1. Exposed metal trim color shall be custom powder coated paint finish, subject to factory approval.
		1. Operation:
			1. Pocket doors shall be manually opened and closed.
			2. Pocket doors shall be secured in the closed position by the face-activated expanding internal mechanism.
			3. Pocket doors used with electrically operated partitions are to be equipped with limit switches which prevent the partition from operating until the pocket doors are completely open.

\*\* NOTE TO SPECIFIER \*\* Optional Hufgard Safety System is to be used only with Hufcor electrically operated operable partitions 643E. Delete article if not required.

* 1. SAFETY SYSTEM
		1. Safety System: Product shall be Hufgard Safety System as manufactured by Hufcor, Inc.
			1. The pressure sensitive leading edge shall be mounted to the first panel. It covers the full height of the panel edge to within 2 inches (51 mm) of the floor.
			2. Pressure sensitive mats are located on both sides of the track in the stack area. Mats are to be recessed in the floor. The mat edges are covered and secured to the floor with a metal edge trim. The mats are fused to protect the components. They are 12 volt AC and connected to the Hufgard system with hard wiring.
			3. The system is hard wired panel-to-panel with 16 gauge three conductor SJO cord. The conductor cord exits at the top of the stack panel and is connected to the control box.
			4. The Hufgard control box is mounted above the ceiling near the operable partition motor unit.
			5. No remote controls or batteries are required.
			6. The faces of the pressure sensitive edge assembly shall be finished with the same material as the operable partition surfaces.
			7. The mats will be black and the metal mat trim will be silver in color.
		2. Operation:
			1. Hufgard is activated when the operators extend or stack the partition. No separate mechanism is required.
			2. The Hufgard safety system shall stop the forward motion of an electrically operated partition with a force of 9 lbs. (4.08 kg) applied to the leading edge.
				1. The pressure sensitive edge shall extend a nominal 7 inches (178 mm) from the lead panel edge and provide 5 inches (127 mm) of travel to cushion impact and absorb the forward motion of the partition during stopping. The pressure sensitive edge is active only during partition extension (when the partition is closing the opening).

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + - * 1. The floor mats in the stack area shall stop the stacking and extending motion of the partition with 5 lbs. per sq. inch (.0035 kg per sq. mm) of force applied to the mat.
			1. When the partition stops due to an obstruction, it cannot be restarted until the obstruction is removed. Once the area has been cleared, Hufgard reset is accomplished by turning the key off or reversing the key. To protect the drive system, there shall be a 1-1/2 second delay before the partition will reverse or start.
		1. Installation:
			1. Install in accordance with manufacturer's instructions. Installation to be by an authorized factory-trained installer.

\*\* NOTE TO SPECIFIER \*\* Delete article if not required.

* 1. STRUCTURAL TRUSS SUPPORT SYSTEM
		1. Independent Structural Support Truss:

\*\* NOTE TO SPECIFIER \*\* Operable partitions. Delete if not required.

* + - 1. Provide U900 Unispan as manufactured by Hufcor Inc.
				1. Operable partitions installed in the Unispan system shall be manually operated.
				2. Unispan shall be designed to be disassembled and relocated to an alternate location as needed.

\*\* NOTE TO SPECIFIER \*\* Accordion partitions. Delete if not required.

* + - 1. Provide U901 Unispan as manufactured by Hufcor Inc.
				1. Accordion partitions installed in the Unispan system shall be center stacked, and manually operated.
				2. Unispan shall be designed to be disassembled and relocated to an alternate location as needed.
			2. The Unispan system shall be validated by calculations performed by a licensed Professional Engineer.
				1. The horizontal truss shall weigh 10-12 lbs. per lineal foot of width.
				2. The support columns shall weigh 3.5 lbs. per foot of height each.
				3. The floor shall be verified to support a maximum of 360 psi at each post.
			3. The supporting truss shall be factory fabricated of steel and aluminum. Unispan is attached to the building structure for lateral support only. The load of the truss and partition is supported by the Unispan column posts. Bolt together truss has anodized aluminum top and bottom cords with integral anodized aluminum track and steel web-members.
			4. Posts. End columns shall be 2-1/2 inches x 5 inches (63.5 x 127 mm) clear anodized aluminum posts. Posts shall be attached to the truss with steel brackets and bolts. Posts shall be anchored to the floor with concealed fasteners. Posts shall be located approximately 1-1/2 inches (38 mm) from adjacent wall surfaces. The space between the post and the adjacent wall shall be fitted with a vinyl gasket to inhibit sound.
			5. Ceiling anchors provide lateral support and shall be set at intervals across the span of the beam. Blocking for ceiling anchors to be provided by others in accordance with the plans.
			6. Exposed trim and track shall be of clear anodized architectural grade extruded aluminum alloy 6063-T6.
			7. Posts shall be of clear anodized architectural grade extruded aluminum alloy 6063-T6.

\*\* NOTE TO SPECIFIER \*\* Finish required to cover sides of truss when exposed below the ceiling. Delete if not required.

* + - 1. Medium Density Fiberboard Header Side Panels:

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

* + - * 1. Vinyl Covered: Color to be selected from partition manufacturer's standard line.
				2. Carpet Covered: Color to be selected from partition manufacturer's standard line.
				3. Fabric Covered: Color to be selected from partition manufacturer's standard line.
				4. Unfinished for field finishing

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + - * 1. Provide mineral wool insulation for sound retardation.

\*\* NOTE TO SPECIFIER \*\* Delete if not required.

* + - 1. Ship truss in sections to be assembled on site. Confirm size of sections for use in areas with limited access.
1. EXECUTION
	1. EXAMINATION
		1. Do not begin installation until substrates have been properly prepared.
		2. If substrate preparation 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 in accordance with manufacturer's instructions.
		2. The complete installation of the operable wall system shall be by an authorized factory-trained installer and be in strict accordance with the approved shop drawings and manufacturer's standard printed specifications, instructions, and recommendations.
		3. Perform field sound test to confirm installation acoustical performance.
	4. CLEANING
		1. All track and panel surfaces shall be wiped clean and free of handprints, grease, and soil.
		2. Packaging and other installation debris shall be removed to onsite waste collection area, provided by others.
	5. PROTECTION AND TRAINING
		1. Installer shall demonstrate proper operation and maintenance procedures to Owner's Representative.
		2. Operating handle and Owner's manuals shall be provided to Owner's representative.
		3. Protect installed products until completion of project.
		4. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION