**SECTION 27 11 16 – Communications Cabinets, Racks, Frames, and Enclosures**

[SPECIFIER NOTE: This guide specification section has been prepared by Lowell Manufacturing Co. for use in the preparation of a project specification section covering Lowell LER Series 19-inch equipment racks. It should be reviewed by the project Architect or Engineer to ensure it meets all requirements, and national and local codes, and should be coordinated with other project specification sections. Text requiring a selection by the user is enclosed within brackets and shown in red text. For assistance in the use of products in this section contact Lowell Manufacturing Company. Remove specifier notes when editing.]

 GENERAL

 SUMMARY

* + 1. Section includes Lowell LER Series 19-inch equipment racks
	1. DEFINITIONS

		1. ANSI: American National Standards Institute.
		2. EIA: Electronic Industries Alliance.
		3. TIA: Telecommunications Industry Association.
		4. UL: Underwriters Laboratories.

 SUBMITTALS

 Action Submittals:

 Product Data: Manufacturer’s descriptive and dimensional data and product attributes.

 Closeout Submittals:

 Operation and Maintenance Data.

 A minimum of 2 identified keys for the keyed alike lockable rack rear doors.

 Some rack options are lockable and keyed alike/different and may require additional
 keys.

 QUALITY ASSURANCE

 Regulatory Requirements:

 UL 2416, Audio/Visual Information and Communications Technology Equipment Cabinets, Enclosures and Rack Systems

 EIA/ECA-310-E, Cabinets, Racks, Panels and Associated Equipment

 ANSI/TIA 607-D, Generic Telecommunication Bonding and Grounding (Earthing) for Customer Premises

 PRODUCTS

 EQUIPMENT RACKS

 Contract documents are based on Lowell Manufacturing Company. Phone (636) 257-3400. Website [www.lowellmfg.com](http://www.lowellmfg.com/). E-mail sales@lowellmfg.com

 Substitutions: [Refer to Division 01.] [Not permitted.]

 GENERAL RE: RACK CONSTRUCTION

 Racks are to be UL listed, constructed from certified U.S. steel with a factory applied black textured powder coat finish and sized to suit the equipment to be installed plus 20% spare capacity. Additional requirements are as follows:

 Floor mount racks are to be welded #16 gauge frames with #14 gauge bottom panels reinforced at load-bearing junctions

 Front and rear corner edges are to be beveled

 All rack rear doors are to be left or right swing with keyed alike locks. Front doors shall
 be optional (ordered separately) and have locks keyed differently than rear doors.

 FLOOR MOUNTED STAND-ALONE RACK

 Lowell Manufacturing Co. “LER” Series free-standing racks, each complete with:

 Front: Open front with frame featuring upper and lower vents and frame inserts for an optional left or right swing surface-mount door

 Rear: Laser cut conduit knock-outs and knock-out panels in the frame above and below the vented recessed door with key lock

 Sides: Welded panels with upper and lower vents

 Bottom: Open access with corner grounding stud and holes for securement in place on the floor

 Top: Dependent on model selected, top will be either solid steel with vents, or configurable with 7U or 12U open space. Configurable tops shall include solid closure panels which can be replaced with optional 19-inch fan or vent panels to suit rack equipment requirements, and knock-outs for wireless antennae.

 Adjustable rack rails: #11 gauge black finish steel 10-32 threaded rails on E.I.A. spacing with bi-directional numbered RU increments

 Hardware: Black pilot point screws with captive washers

 Rack Model Number: [Retain desired model number and delete remaining options.]

* + - * 1. Model LER-1822: Height 18U [37.63in./803mm], Depth 22in.[559mm], Width 23.06in.[586mm], Load Capacity 500 lbs.[226.7kg], Solid Top, Rails 1-pr.
				2. Model LER-2122: Height 21U [42.88in./1089mm], Depth 22in.[559mm], Width 23.06in.[586mm], Load Capacity 500 lbs.[226.7kg], Solid Top, Rails 1-pr.
				3. Model LER-2422: Height 24U [48.13in./1222mm], Depth 22in.[559mm], Width 23.06 in.[586mm], Load Capacity 800 lbs.[362.8kg], Solid Top, Rails 1-pr.
				4. Model LER-3522: Height 35U [67.38in./1711mm], Depth 22in.[559mm], Width 23.06 in.[586mm], Load Capacity 3150 lbs.[1428.8kg], Configurable Top 7U, Rails 1-pr.
				5. Model LER-4022: Height 40U [76.13in./1934mm], Depth 22in.[559mm], Width 23.06 in.[586mm], Load Capacity 3150 lbs.[1428.8kg], Configurable Top 7U, Rails 1-pr.
				6. Model LER-4422: Height 44U [83.13in./2111mm], Depth 22in.[559mm], Width 23.06in.[586mm], Load Capacity 3150 lbs.[1428.8kg] , Configurable Top 7U, Rails 1-pr.
				7. Model LER-1827: Height 18U [37.63in./803mm], Depth 27in.[686mm], Width 23.06in.[586mm], Load Capacity 500 lbs.[226.7kg], Solid Top, Rails 1-pr.
				8. Model LER-2127: Height 21U [42.88in./1089mm], Depth 27in.[686mm], Width 23.06in.[586mm], Load Capacity 500 lbs.[226.7kg], Solid Top, Rails 1-pr.
				9. Model LER-2427: Height 24U [48.13in./1222mm], Depth 27in.[686mm], Width 23.06 in.[586mm], Load Capacity 800 lbs.[362.8kg], Solid Top, Rails 1-pr.
				10. Model LER-3527: Height 35U [67.38in./1711mm], Depth 27in.[686mm], Width 23.06 in.[586mm], Load Capacity 3150 lbs.[1428.8kg], Configurable Top 12U, Rails 1-pr.
				11. Model LER-4027: Height 40U [76.13in./1934mm], Depth 27in.[686mm], Width 23.06 in.[586mm], Load Capacity 3150 lbs.[1428.8kg], Configurable Top 12U, Rails 1-pr.
				12. Model LER-4427: Height 44U [83.13in./2111mm], Depth 27in.[686mm], Width 23.06in.[586mm], Load Capacity 3150 lbs.[1428.8kg] , Configurable Top 12U, Rails 1-pr.
				13. Model LER-2432: Height 24U [48.13in./1222mm], Depth 32in.[813mm], Width 23.06 in.[586mm], Load Capacity 800 lbs.[362.8kg], Configurable Top 12U, Rails 2-pr.
				14. Model LER-3532: Height 35U [67.38in./1711mm], Depth 32in.[813mm], Width 23.06 in.[586mm], Load Capacity 3150 lbs.[1428.8kg], Configurable Top 12U, Rails 2-pr.
				15. Model LER-4032: Height 40U [76.13in./1934mm], Depth 32in.[813mm], Width 23.06 in.[586mm], Load Capacity 3150 lbs.[1428.8kg], Configurable Top 12U, Rails 2-pr.
				16. Model LER-4432: Height 44U [83.13in./2111mm], Depth 32in.[813mm], Width 23.06in.[586mm], Load Capacity 3150 lbs.[1428.8kg], Configurable Top 12U, Rails 2-pr.

 Optional Accessories: [Retain desired accessory model number and delete remaining
 options.]

 Solid steel surface-mount front door with key lock Model [LFD-18] [LFD-21] [LFD-24] [LFD-35] [LFD-40] [LFD-44]

 Smoked plexiglass surface-mount front door with key lock Model [LFD-18P] [LFD-21P] [LFD-24P] [LFD-35P] [LFD-40P] [LFD-44P]

 Fully-vented surface-mount front door with key lock Model [LFD-18FV] [LFD-21FV] [LFD-24FV] [LFD-35FV] [LFD-40FV] [LFD-44FV]

 Additional pair of mounting rails Model [RRD-18] [RRD-21] [RRD-24] [RRD-35] [RRD-40] [RRD-44]

 Set of four standard leg levelers Model LL

 Set of four isolation leg levelers Model ISO-LL

 Copper grounding bar Model [GBB-36] [GBB-72]

 19-inch fan panel with whisper fans [FW2-3] [FW3-3] [FW4-7]

 19-inch fan panel with turbo fan [FT1-7] [FT1-7T]

 EXECUTION

 INSTALLATION OF EQUIPMENT RACKS

 Provide equipment racks as shown/required with exact quantity and sizes to suit system equipment and the required spare capacity. Confirm exact locations prior to roughing-in.

 Install in accordance with the manufacturer’s published instructions.

 Ensure that rack locations permit full opening of doors.

 Ground and bond all racks in accordance with requirements of [Section 27 05 26] [Verify grounding and bonding requirements], Grounding and Bonding for Communications Systems.

END OF SECTION