**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 LWR Series 19-inch wall-mount 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 LWR Series 19-inch wall-mount 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 side locks for mounting
 section/backbox.

 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 wrinkle powder epoxy finish and sized to suit the equipment to be installed plus 20% spare capacity. Additional requirements are as follows:

 Wall-mount racks are to be welded #16 gauge steel backbox and front mounting section that swings open.

 Front corner edges are to be beveled.

 WALL-MOUNT RACK

 Lowell Manufacturing Co. “LWR” Series wall racks, each complete with

 Mounting Section:

* + - * 1. Attaches to backbox with 2 heavy-duty, spring-loaded and self-seating L-pins which can be attached on either side to alter swing orientation.
				2. Roller closure keeps front closed without mandatory locking.
				3. Front vents.
				4. Side vents.

 Backbox:

* + - * 1. 5.8-inch deep box with keyhole mounting slots on 16-inch centers.
				2. 10-in. x 10-in. rear opening to accommodate a pull box.
				3. Ground connection stud.
				4. Embossed dimples and lacing points on back plane for installation of board mounted accessories.
				5. Top and bottom laser-cut knock-out panels with combination knock-outs and knock-outs for wireless antennae.
				6. Keyed side locks secure front mounting section.

 Adjustable rack rails: #11 gauge black finish steel 10-32 threaded rails on E.I.A. spacing with bi-directional numbered RU increments. 1-pr.

 Hardware: Black pilot point screws with captive washers

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

* + - * 1. Model LWR-719: Height 7U [18.38in./467mm], Depth 19.05in.[484mm], Width 23.06in.[586mm], Load Capacity 125 lbs.[56.6kg].
				2. Model LWR-1019: Height 10U [23.63in./600mm], Depth 19.05in.[484mm], Width 23.06in.[586mm], Load Capacity 150 lbs.[68kg].
				3. Model LWR-1219: Height 12U [27.13in./689mm], Depth 19.05in.[484mm], Width 23.06in.[586mm], Load Capacity 150 lbs.[90.7kg].
				4. Model LWR-1619: Height 16U [34.13in./867mm], Depth 19.05in.[484mm], Width 23.06in.[586mm], Load Capacity 200 lbs.[90.7kg].
				5. Model LWR-1819: Height 18U [37.50in./953mm], Depth 19.05in.[484mm], Width 23.06in.[586mm], Load Capacity 250 lbs.[113.3kg].
				6. Model LWR-2119: Height 21U [42.88in./1089mm], Depth 19.05in.[484mm], Width 23.06in.[586mm], Load Capacity 250 lbs.[113.3kg].
				7. Model LWR-2419: Height 24U [48.13in./1223mm], Depth 19.05in.[484mm], Width 23.06in.[586mm], Load Capacity 300 lbs.[136kg].]
				8. Model LWR-3519: Height 35U [67.38in./1711mm], Depth 19.05in.[484mm], Width 23.06in.[586mm], Load Capacity 300 lbs.[136kg].]
				9. Model LWR-723: Height 7U [18.38in./467mm], Depth 23.05in.[585mm], Width 23.06in.[586mm], Load Capacity 125 lbs.[56.6kg].]
				10. Model LWR-1023: Height 10U [23.63in./600mm], Depth 23.05in.[585mm], Width 23.06in.[586mm], Load Capacity 150 lbs.[68kg].]
				11. Model LWR-1223: Height 12U [27.13in./689mm], Depth 23.05in.[585mm], Width 23.06in.[586mm], Load Capacity 150 lbs.[90.7kg].]
				12. Model LWR-1623: Height 16U [34.13in./867mm], Depth 23.05in.[585mm], Width 23.06in.[586mm], Load Capacity 200 lbs.[90.7kg].]
				13. Model LWR-1823: Height 18U [37.50in./953mm], Depth 23.05in.[585mm], Width 23.06in.[586mm], Load Capacity 250 lbs.[113.3kg].]
				14. Model LWR-2123: Height 21U [42.88in./1089mm], Depth 23.05in.[585mm], Width 23.06in.[586mm], Load Capacity 250 lbs.[113.3kg]. ]
				15. Model LWR-2423: Height 24U [48.13in./1223mm], Depth 23.05in.[585mm], Width 23.06in.[586mm], Load Capacity 300 lbs.[136kg]. ]
				16. Model LWR-3523: Height 35U [67.38in./1711mm], Depth 23.05in.[585mm], Width 23.06in.[586mm], Load Capacity 300 lbs.[136kg].]

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

 Solid steel surface-mount front door with key lock (keyed differently than side locks) Model [LFD-7] [LFD-10] [LFD-12] [LFD-16] [LFD-18] [LFD-21] [LFD-24] [LFD-35]

 Smoked plexiglass surface-mount front door with key lock (keyed differently than side locks) Model [LFD-7P] [LFD-10P] [LFD-12P] [LFD-16P] [LFD-18P] [LFD-21P] [LFD-24P] [LFD-35P]

 Fully-vented surface-mount front door with key lock (keyed differently than side locks) Model [LFD-7FV] [LFD-10FV] [LFD-12FV] [LFD-16FV] [LFD-18FV] [LFD-21FV] [LFD-24FV] [LFD-35FV]

 Additional pair of mounting rails Model [RRD-7] [RRD-10] [RRD-12] [RRD-16] [RRD-18] [RRD-21] [RRD-24] [RRD-35]

 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