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

 GENERAL

 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 doors.

 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:

 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 and ordered separately.

 FLOOR MOUNTED GANGABLE RACK

 Lowell Manufacturing Company “LGR” Series gangable open frame racks, each complete with:

 Sides: Open sides with rear vertical arrays of 2-inch diameter holes plus 4 x 1½-inch oblong openings along the bottom.

 Rear: Laser cut knock-out panels above and below the vented recessed rear door with key lock.

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

 Top: Configurable top equipped with riveted 10-32 threaded rails on 19-inch E.I.A. spacing, black closure panels, conduit knock-outs, and a 6-inch rear conduit plane with knock-outs. Knock-outs for wireless antennae.

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

 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:

* + - * 1. Model LGR-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.
				2. Model LGR-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.
				3. Model LGR-2427: Height 24U [48.13in./1222mm], Depth 27in.[686mm], Width 23.06 in.[586mm], Load Capacity 800 lbs.[362.8kg], Configurable Top 7U, Rails 2-pr.
				4. Model LGR-3527: Height 35U [67.38in./1711mm], Depth 27in.[686mm], Width 23.06 in.[586mm], Load Capacity 3150 lbs.[1428.8kg], Configurable Top 7U, Rails 2-pr.
				5. Model LGR-4027: Height 40U [76.13in./1934mm], Depth 27in.[686mm], Width 23.06 in.[586mm], Load Capacity 3150 lbs.[1428.8kg], Configurable Top 7U, Rails 2-pr.
				6. Model LGR-4427: Height 44U [83.13in./2111mm], Depth 27in.[686mm], Width 23.06in.[586mm], Load Capacity 3150 lbs.[1428.8kg] , Configurable Top 7U, Rails 2-pr.
				7. Model LGR-3532: Height 35U [67.38in./1711mm], Depth 32in.[813mm], Width 23.06 in.[586mm], Load Capacity 3150 lbs.[1428.8kg], Configurable Top 10U, Rails 2-pr.
				8. Model LGR-4032: Height 40U [76.13in./1934mm], Depth 32in.[813mm], Width 23.06 in.[586mm], Load Capacity 3150 lbs.[1428.8kg], Configurable Top 10U, Rails 2-pr.
				9. Model LGR-4432: Height 44U [83.13in./2111mm], Depth 32in.[813mm], Width 23.06in.[586mm], Load Capacity 3150 lbs.[1428.8kg], Configurable Top 10U, Rails 2-pr.
				10. Model LGR-4036: Height 40U [76.13in./1934mm], Depth 36in.[914mm], Width 23.06 in.[586mm], Load Capacity 3150 lbs.[1428.8kg], Configurable Top 10U, Rails 2-pr.]
				11. Model LGR-4436: Height 44U [83.13in./2111mm], Depth 36in.[914mm], Width S23.06in.[586mm], Load Capacity 3150 lbs.[1428.8kg], Configurable Top 10U, Rails 2-pr.
				12. Model LGR-4042: Height 40U [76.13in./1934mm], Depth 42in.[1067mm], Width 23.06 in.[586mm], Load Capacity 3150 lbs.[1428.8kg], Configurable Top 17U, Rails 2-pr.
				13. Model LGR-4442: Height 44U [83.13in./2111mm], Depth 42in.[1067mm], Width 23.06in.[586mm], Load Capacity 3150 lbs.[1428.8kg], Configurable Top 17U, Rails 2-pr.

 Optional Accessories:

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

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

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

 Additional pair of mounting rails Model [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

 Set of two solid steel side panels with black wrinkle powder epoxy finish and integral handles Model [SDP-4022] [SDP-4422] [SDP-2427] [SDP-3527] [SDP-4027] [SDP-4427] [SDP-3532] [SDP-4032] [SDP-4432] [SDP-4036] [SDP-4436] [SDP-4042] [SDP-4442]

 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], Grounding and Bonding for Communications Systems.

END OF SECTION