This guide specification is written according to the Construction Specifications Institute (CSI) formats, including MasterFormat, SectionFormat, and PageFormat.

Carefully review and edit this section to meet the requirements of the project and local building code. Coordinate this section with other specification sections and drawings.

Delete all "Specifier Notes" when done editing this section.

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COMMUNICATIONS CABINETS, RACKS, FRAMES, AND ENCLOSURES

PART 1 - GENERAL

1.1   CONDITIONS AND REQUIREMENTS

A.   The General Conditions, Supplementary Conditions, and Division 01 – General Requirements apply.

1.2   SECTION INCLUDES

Specifier Note: Delete items below that are not included in this section.

A.   Residential multimedia panels (MMP).

B.   [Insert item description.]

1.3   RELATED SECTIONS

Specifier Note: In this article, specify work specified in other sections that is related to work of this section.

A.   Division 26 - Electrical: Electrical systems and components.

B.   Division 27 - Communications: Communications and audio-video systems and components.

C.   Division 28 - Electronic Safety and Security: Security systems and components.

Specifier Note: The following paragraph is a sample that may be used in this article. Add to or delete from the following as appropriate for the specific project.

D.   Section [xx xx xx] – [Section Title]: [Include brief description of work specified in another section that is related to the work of this section.]

1.4   SUBMITTALS

Specifier Note: In this article, specify various types of data to be furnished by the contractor before, during, or after construction. Topics included in this article are: product data, shop drawings, samples, design data, test reports, certificates, manufacturers' instructions, manufacturers' field reports, qualification statements, and closeout submittals.

A.   Submit under provisions of Section [01 33 00] [_____].

B.   Product Data: Submit for residential multimedia panels and components.

C.   Shop Drawings: For the following electrical system components. Include plans, elevations, sections, details, and attachments to other work.
1.   Residential multimedia panels.

D.   Samples: Submit three (3) [_____] with required color and finish. Show standard color ranges available.

1.5   QUALITY ASSURANCE

Specifier Note: In this article, describe qualifications, regulatory requirements, certifications, field samples, mock-ups, and pre-installation meetings.

A.   Manufacturers: Firms regularly engaged in manufacture of residential multimedia panels and components of the types and sizes required, whose products have been in satisfactory use in similar service for not less than 10 years. Provide residential multimedia panels and components produced by a manufacturer listed in this section.

B.   Source Limitations: Obtain each type of residential multimedia panel and components through one (1) source from a single manufacturer.

C.   Residential Multimedia Panels and Components: Comply with requirements of applicable local codes, NEC, UL, ETL, EIA, TIA, and NEMA Standards pertaining to residential multimedia panels and components. UL and/or cUL classified. Comply with NFPA 70.

1.6   DELIVERY, STORAGE AND HANDLING

A.   Deliver residential multimedia panels and components in factory labeled packages.

B.   Store and handle in strict compliance with manufacturer's written instructions and recommendations.

C.   Protect from damage due to weather, excessive temperature, and construction operations.

PART 2 - PRODUCTS

2.1   MANUFACTURERS

A.   Basis-of-Design Product: The design for residential multimedia panels is based on products manufactured by Legrand®, 301 Fulling Mill Rd, Suite G, Middletown, PA 17057; toll-free 800-321-2343; Web Site: http://www.legrand.us/onq.

B.   Substitutions will be considered under provisions of Section 01 25 00.

2.2   RESIDENTIAL MULTIMEDIA PANELS (MMP)

A.   Residential Multimedia Panels, General: On-Q® Residential Multimedia Panels (MMP) provide a central distribution point for home or small office technologies. The enclosures accommodate distribution of voice, data, video, audio, security, and control applications.

B.   Metal Enclosures, General: Fabricated from 20 gauge cold-rolled steel with protective powder coat finish, glossy white color and provided with matching hinged flanged cover with lock.
    1.   Mounting slots on enclosure permit adjustment for different gypsum board thicknesses. Provide 1/2-inch, 5/8-inch, and 3/4-inch depth marks on enclosure for alignment.
    2.   Lance slots within enclosure for hook-and-loop fastener or vinyl cable ties.
    3.   Flush mount cover overlaps 3/4-inch to hide gypsum board cuts around the MMP.

4. Enclosure ships with cardboard insert to prevent debris or paint over-spray from entering the MMP during rough-in stage of installation.
5. Provide mounting hooks on cover to align screw holes for ease of installation.
6. Multiple knockouts on enclosure support conduit up to two (2) inches in diameter and facilitate cable routing and entry.
7. Holds 1/4, 1/2 and full-width expansion modules with ability to mount most modules either vertically or horizontally.
8. Provide for bonding and grounding to meet TIA/EIA 606 Standards.
9. Conformance with Standards: Comply with TIA/EIA 568-A and TIA/EIA 570-A requirements and meet FCC Part 68.
10. Enclosure to be UL listed in accordance with ANSI/UL 985, ANSI/UL 1023, CAN/CSA-C22.2 No. 182.4-1990, ULC-S545, and CSA-C22.2 No. 144.1 (2006).

Specifier Note: Enclosure size, data module, voice module, and video module selection will depend on application variables, such as fiber or copper, Cat 5e, Cat 6, or Cat 6a, size of residence, etc. Retain as many of the following five (5) enclosures as required for a specific project and delete the others.

Specifier Note: The enclosures in the five (5) paragraphs can accommodate a variety of modules. Select desired modules from Article 2.3 below.

Specifier Note: The 14"-42" metal enclosures the five (5) paragraphs below are also available with screw on doors (ENXX00), enclosure only (ENXX80), hinged cover only (ENXX60), screw on cover only (ENXX20), and an enclosure with knockouts (ENXX85). Revise the catalog number and description accordingly to reflect the type of enclosure desired.

C. Metal Enclosures:

1. 42" Enclosure: Catalog No. EN4250 enclosure with hinged cover and lock; minimum dimensions shall be 42" H x 14.25" W x 3.6" D.
2. 28" Enclosure: Catalog No. EN2850 enclosure with hinged cover and lock; minimum dimensions shall be 28" H x 14.25" W x 3.6" D.
3. 20" Enclosure: Catalog No. EN2050 enclosure with hinged cover and lock; minimum dimensions shall be 20" H x 14.25" W x 3.6" D.
4. 14" Enclosure: Catalog No. EN1450 enclosure with hinged cover and lock; minimum dimensions shall be 14" H x 14.25" W x 3.6" D.

D. Plastic Enclosures for General Structured Wiring, General: Fabricated from UL-rated ABS plastic, paintable white color and provided with matching hinged flanged cover. Enclosure accommodates both wired structured wiring systems and wireless networking equipment. Complies with UL60950-1 and CAN/CSA C22.2 No. 60950-01-07. RoHS Compliant.

1. Plastic enclosure allows wireless devices such as access points to secure in cabinet without degrading network performance.
2. Enclosure can be surface or flush mounted. Staggered tabs allow side-by-side installation of multiple enclosures.
3. Meets or exceeds requirements of UL Standard 2416. For use in non-fire-rated walls.
4. Universal mounting grid compatible with distribution modules from multiple manufacturers.

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5. Extensive enclosure venting provides heat dispersion for powered devices mounted in enclosure.

6. Protruded door adds 1.2" [30mm] of enclosure depth for compatibility with more third party devices such as uninterruptable power supplies (UPS).

7. Extended door circumference conceals cutout in gypsum board.

8. Layered latch holds door shut and flush to wall without need of a lock. Locking can be accomplished by means of the provided screw holes or a padlock hole.

Specifier Note: The 30" plastic enclosure in the paragraph below is also available as an enclosure only (ENP3080) or hinged cover only (ENP3060). Revise the catalog number and description accordingly to reflect the parts desired.

E. Plastic Enclosures for General Structured Wiring:

    1. 30" Enclosure: Catalog No. ENP3050 enclosure with hinged cover; minimum dimensions shall be 30.08" H x 17.1" W x 4.09" D. Minimum cover dimensions shall be 31.75" H x 15.97" W x 1.678" D.

F. Plastic Enclosures for Simple Video, Voice and Data Distribution:

    1. 8" Enclosure: Catalog No. EN0802 MDU Enclosure Kit; includes Catalog No. EN0800 enclosure and cover; one (1) Catalog No. TM0106 6-Port phone module and one (1) Catalog No. VM0204 4-Port coax splitter installed. Minimum dimensions shall be 8" H x 14.25" W x 3.74" D. Enclosure and cover made of plastic.

2.3 COMPONENTS

Specifier Note: In the following three (3) paragraphs select a combination module or individual modules for video and phone distribution.

A. Combo Modules: Catalog No. [CO1045 10x8 Combo Module RJ45 with RJ31X; capable of distributing up to four (4) incoming telephone lines to 10 locations and 1 GHz digital video to eight (8) locations from a cable company approved Antronix splitter] [CO1110 10x8 Combo Module IDC with RJ31X; capable of distributing up to four (4) incoming telephone lines (110 IDC Punchdown) to 10 locations and 1 GHz digital video to eight (8) locations] [CO2110-V1 10x8 Phone & Video Combo Module IDC with RJ31X; capable of distributing up to four (4) line incoming telephone lines (110 IDC Punchdown) to 10 locations and 1.675 GHz digital video to eight (8) locations; optimized for MoCA for multi-room DVR]. UL listed and includes a RJ31X line seizure port for home security configuration. Nickel-plated housing provides corrosion resistance. Accepts Cat 5e, Cat 6, and Coaxial cables. Surge protected to withstand 6 kV ring wave surge in accordance with IEEE C62.41 Category A3.

B. Video Distribution Modules: Catalog No. [VM1002; 8-Port, 1GHz] [VM1000; 4-Port, 1GHz] Enhanced Cable Video Module consisting of a bracket and a plate; nickel-plated zinc housing with powder coated finish; for use with digital cable TV or antenna; uses standard F type connectors; handles up to [eight (8) outputs and one (1) input] [four (4) outputs and one (1) input]; 1 GHz bandwidth.

C. Phone Distribution Modules: Catalog No. [TM1045; 10-Port RJ45 Telephone Module with RJ31X port; distributes up to four (4) incoming telephone lines to 10 locations] [TM1110; 10-Port 110 IDC Telephone Module with punchdown style blocks and RJ31X port; distributes up to four (4) incoming telephone lines to 10 locations] [1267062-01-

V1; 6-Port 110 IDC Basic Telecom Module with punchdown style blocks and RJ31X port; distributes up to six (6) telephone outlets, each with up to four (4) lines; directly interfaces to most security systems]; includes mounting bracket and RJ31X line seizure port for security installations; UL listed.

Specifier Note: In the following four (4) paragraphs select one (1) patch panel option and delete the other as required for the specific project.

D. Network Interface Modules: Catalog No. [AC1014; 12-Port Cat 5e] [AC1015; 12-Port Cat 6] Network Interface Module consisting of a bracket and a plate with two (2) blocks of six (6) [Category 5e] [Category 6] rated connections. Cables from room locations punch down onto the appropriate 110 style connections on the rear of the [Cat 5e] [Cat 6] block in accordance with T568A recommendations.

E. Network Interface Modules: Catalog No. [AC1012; 6-Port Cat 5e] [AC1013; 6-Port Cat 6] Network Interface Module consisting of a bracket and a plate with two (2) keystone openings and a block of six (6) [Category 5e] [Category 6] rated connections. Cables from room locations punch down onto the appropriate 110 style connections on the rear of the [Cat 5e] [Cat 6] block in accordance with T568A recommendations.

F. Network Interface Modules: Catalog No. AC1000; 6-Port Network Interface Module consisting of a plate which supports punchdown termination of up to six (6) Cat 5e cable runs for interface within a home network; provided with RJ45 jacks which permits simple line reconfiguration; mounting hardware included; exceed EIA/TIA 568A/B Cat 5e performance specifications; gray powder coat finish; CSA Listing: CAN/CSA-C22.2 No. 182.4-1990; UL Listing No. ANSI/UL 1863; flammability rating in accordance with UL 94V-0; humidity 93 percent maximum non-condensing.

G. Network Interface Modules: Catalog No. 363486-01; 8-Port Cat 5e Rated Network Interface Module; supports termination of up to eight (8) On-Q Cat 5e cables for interconnection to a local area network (LAN) using 110 style punchdown connections on the front of the module to RJ45 modular jacks in accordance with T568A recommendations; UL Listing No. ANSI/UL 1863.

H. AC Power Kits: Catalog No. F7526; Power Kit including a metal electrical box, white duplex NEMA 5-15R receptacle, and white faceplate; rated 120 VAC, 15 Amps; accepts 12-14 AWG wire; mounting hardware included.

I. Surge Protected Power Kits: Catalog No. 364569-02-V1; kit includes metal electrical box, white duplex NEMA 5-15R surge suppressing receptacle, and white faceplate; rated 120 VAC, 15 Amps; accepts 12-14 AWG wire; mounting hardware included.

J. Enclosure Power Strip Modules, Half-Width: Catalog No. AC1031; high-density 110V power strip designed to power up to six (6) devices. Three (3) top outlets designed for PW Series power supplies; three (3) side outlets designed for most low voltage transformers. Power switch controls all outlets with overcurrent protection. Rated 15A/UL Rated; includes three (3) IEC adapters. Accepts NEMA 5-15R male input plugs, IEC C14.

Specifier Note: In the following XX paragraphs the "XX" at the end of the catalog number refers to the two letter color code. Determine the desired color of each item and insert the applicable two-letter code after the catalog number of each item. Colors available: WH = white, LA = light almond, IV = ivory, BE = blue, RE = red, YE = yellow, GN = green, GY = gray, OR = orange, BK = black, BR = brown, SS = stainless steel.

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K. Cat 5e Quick Connect RJ45 Keystone Inserts: Catalog No. WP3475-XX; manufactured from high impact plastic; used to terminate four (4) pairs using the manufacturer's punch tool [Catalog No. AC3400]; RJ45 inserts can be terminated with any 110 punchdown tool; exceeds EIA/TIA 568A/B Cat 5e performance specifications; available in black, brown, white, light almond, gray, blue, orange, ivory, yellow, green, and red. CSA Listing: CAN/CSA-C22.2 No. 182.4-1990; UL Listing No. ANSI/UL 1863. Flammability Rating in accordance with UL 94V-0. Humidity - 93 percent maximum non-condensing.

L. Cat 6 Quick Connect RJ45 Keystone Inserts: Catalog No. WP3476-XX; manufactured from high impact plastic; used to terminate four (4) pairs using the manufacturer's punch tool [Catalog No. AC3400]; RJ45 inserts can be terminated with any 110 punchdown tool; exceeds EIA/TIA 568A/B Cat 6 performance specifications; available in black, brown, white, light almond, gray, blue, orange, ivory, and red. CSA Listing: CAN/CSA-C22.2 No. 182.4-1990; UL Listing No. ANSI/UL 1863. Flammability Rating in accordance with UL 94V-0. Humidity - 93 percent maximum non-condensing.

M. Cat 6a Quick Connect RJ45 Keystone Inserts: Catalog No. WP346A-XX; manufactured from high impact plastic; used to terminate four (4) pairs using the manufacturer's punch tool [Catalog No. AC3400]; RJ45 inserts can be terminated with any 110 punchdown tool; exceeds EIA/TIA 568A/B Cat 6a performance specifications; available in black, brown, white, light almond, gray, blue, orange, ivory, yellow, green, and red. CSA Listing: CAN/CSA-C22.2 No. 182.4-1990; UL Listing No. ANSI/UL 1863. Flammability Rating in accordance with UL 94V-0. Humidity - 93 percent maximum non-condensing.

N. Recessed Gold F-Connectors: Catalog No. WP3480-XX; for use in keystone wall plates; recessed hex nut does not allow for jack rotation; manufactured from gold-plated brass and high impact flame retardant plastic; frequency from 5 MHz to 3000 MHz. Available in white, black, brown, light almond, and ivory.

O. Recessed F-Connectors: Catalog No. WP3481-XX; for use in keystone wall plates; recessed hex nut does not allow for jack rotation; frequency from 5 MHz to 3000 MHz. Available in white, black brown, light almond, and ivory.

P. Recessed Self Terminating F-Connectors: Catalog No. WP3481-XX; for use in keystone wall plates; recessed hex nut does not allow for jack rotation; prevents RF leakage when not connected; frequency from 5 MHz to 1000 MHz. Available in white, black brown, light almond, and ivory.

Q. F-Connectors: Catalog No. WP3479-XX; for use in keystone wall plates; recessed hex nut does not allow for jack rotation; frequency from 5 MHz to 3000 MHz. Available in white, black brown, light almond, and ivory.

Specifier Note: Retain as many of the following four (4) paragraphs as required for the specific project and delete the others.

R. 1-Gang, 1-Port Wall Plate: Catalog No. WP3401-XX single port keystone wall plate fabricated from high impact flame retardant plastic with blank keystone cutout. UL Listing No. ANSI/UL 1863. Available in white, black, brown, light almond, stainless steel, and ivory. Mounts in installation brackets from manufacturer of wall plate or low voltage mud rings.

S. 1-Gang, 2-Port Wall Plate: Catalog No. WP3402-XX two-port keystone wall plate fabricated from high impact flame retardant plastic with blank keystone cutouts. UL Listing No. ANSI/UL 1863. Available in white, black, brown, light almond, stainless steel and ivory. Mounts in installation brackets from manufacturer of wall plate or low voltage mud rings.

T. 1-Gang, 3-Port Wall Plate: Catalog No. WP3403-XX three-port keystone wall plate fabricated from high impact flame retardant plastic with blank keystone cutouts. UL Listing No. ANSI/UL 1863. Available in white, black, brown, light almond, stainless steel, and ivory. Mounts in installation brackets from manufacturer of wall plate or low voltage mud rings.

U. 1-Gang, 4-Port Wall Plate: Catalog No. WP3404-XX four-port keystone wall plate fabricated from high impact flame retardant plastic with blank keystone cutouts. UL Listing No. ANSI/UL 1863. Available in white, black, brown, light almond, and ivory. Mounts in installation brackets from manufacturer of wall plate or low voltage mud rings.

V. 1-Gang, 6-Port Wall Plate: Catalog No. WP3604-XX six-port keystone wall plate fabricated from high impact flame retardant plastic with blank keystone cutouts. UL Listing No. ANSI/UL 1863. Available in white, black, brown, light almond, and ivory. Mounts in installation brackets from manufacturer of wall plate or low voltage mud rings.

W. 2-Gang, 12-Port Wall Plate: Catalog No. WP3212-XX 12-port keystone wall plate fabricated from high impact flame retardant plastic with blank keystone cutouts. UL Listing No. ANSI/UL 1863. Available in white, black, brown, light almond, and ivory. Mounts in installation brackets from manufacturer of wall plate or low voltage mud rings.

PART 3 - EXECUTION

3.1 EXAMINATION

Specifier Note: Select either option in the following paragraph and delete the other one.

A. Examine conditions under which residential multimedia panels and components are to be installed. Notify the [Architect/Engineer] [Construction Manager] in writing of conditions detrimental to proper completion of the work. Do not proceed with work until unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Strictly comply with manufacturer's installation instructions and recommendations. Coordinate installation with adjacent work to ensure proper clearances and to prevent electrical hazards.

B. Locate panels where indicated on Drawings or directed by Architect/Engineer.

C. Enclosure: For surface mounting, install enclosure on plywood backboard. Use designated holes in rear of enclosure for permanent mounting using wood screws. For recessed mounting of enclosure install between studs located at 16 inches o.c. Bend side tabs out for 1/2-inch gypsum board and secure to studs with appropriate screws. If a different thickness of gypsum board is used, position enclosure to required depth using embossed depth marks and screw to studs from inside enclosure.

D.   Where panel modules require AC or DC power to operate, run AC power to the enclosure. Remove knock-out in bottom of enclosure. Install a single-gang metal outlet box. Run a length of non-metallic power cable to the enclosure for connection of a standard 15A, 120VAC power receptacle. Rout the ground cable from the ground screw located inside the enclosure to the electrical ground.

E.   Rough-in telephone, coaxial and other cabling, and security and control wiring from the enclosure to remote devices.

F.   Install enclosure hinged cover in accordance with manufacturer's written installation instructions.

G.   Install combo modules, network interface modules, AC power kits, power strip modules, wall plates, and keystone inserts in quantities specified in accordance with manufacturer's written installation instructions.

3.3   CLEANING AND PROTECTION

A.   Clean exposed surfaces using non-abrasive materials and methods recommended by manufacturer.

B.   Protect residential multimedia panels and components until acceptance.

END OF SECTION