AT&T Practices
AT&T Procurement Requirements for Power Room Fire-Rated Partition Systems

written in CSI format

Contents

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Purpose

The intent of this document is to set standards for AT&T power room fire rated compartmentation.

About this Document

Overview

This document is organized in 4 sections listed below.

- Section 1 provides guidelines for fire rated wall assemblies.
- Section 2 describes the specifications for fire wall partitions.
- Section 3 provides execution information.
- Section 4 details (attachments).

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1. Part I: General

1.0 General

1.1 This section written in the Construction Specification Institute (CSI) format, provides procurement guidelines for fire-rated wall assemblies including the door and hardware for partition compartmentation of AT&T power rooms, herein known as “the System”. The usage of non-combustible materials within a minimum fire resistance classification of one (1) hour partitions of various types for use within different existing or, new central office layout configurations is intended to limit the spread of building fires. The standards here listed, and as combined with other AT&T practices, are in concurrence with the company’s standardization policy for new and renovation work.

2.0 Summary

2.1 This section includes metal support systems for “full floor-to-floor height” partition assemblies of various designated types, including but not limited to fasteners and related items, gypsum wallboard, drywall finishing, and door and hardware as indicated, specified or required herein, and as noted on the Architect of Record drawings.

2.2 Related Sections: AT&T Practice 760-630-400 “Compartmentation”, AT&T Practice 760-630-401 - “Fire rated Partitions for Power Rooms in Network Equipment Buildings”, and Painting as per the Architect of record specifications. AT&T national seismic construction classification is based on the current Uniformed Building Code (UBC) seismic map.

2.3 Drawings and General Provisions of the Project Contract including General, Supplementary, and Special Conditions, AT&T/Manufacturer Agreement (if in effect), AT&T Practices and Executive Order of compliance, and the Architectural/Engineering (A/E) Consultant's specifications shall all be applicable to this Work.

2.4 For construction terminologies defined or not defined in this section, or in other referenced standards, refer to the appropriate component standard(s). Refer to Part II, “References” for nationally recognized Associations and Societies for design, testing, and installation standards addressing this complete fire rated wall system.

2.5 AT&T's Network Environmental Systems Manager shall be contacted for any resolutions regarding design layout, equipment, space/area uses, and occupancies issues.

3.0 Submittals

3.1 Product Data: Submit technical information, samples and certificates for each component and installation method as required. Clearly mark all data which describes more than one type or item, process, etc., which is proposed for used or as an alternate/substitute meeting the requirements specified herein and in referenced publications.

3.1.1 All components shall be in current production as a standard product of the system or device manufacturer noting that refurbished or reconditioned components are unacceptable when purchasing new materials.

3.2 Substitutions: Substitutions or approved equals are defined as any acceptable manufacturers' specific product, and/or specified method which meets the requirements as herein specified and/or as in occurrence with industry standards. Any and all substitutions shall be an “Approved Equal” agreed to by the AT&T representatives.

3.2.1 Only at AT&T’s discretion, shall recondition material from within company stock be reused, provided that this material was properly removed, stored, and retains all applicable identifying certification. No custom products shall be allowed unless required by this specification. All products shall be supported per the vendor's warranty.

3.3 Shop Drawings: The shop drawing package as prepared on AutoCad® shall include the extent of the system layout, door locations(s), all wall penetrations, heights, seismic and supplemental bracing and strapping, embedded mounting supports for equipment, splices, bridging, component details, quantities, sizes, finishes, test data, etc., and accessories as delineated on the plans, elevations, and section drawings required for evaluation and proper installation showing compliance with requirements.

3.3.1 Where a site survey and/or field measurements cannot be made without delaying the Work, guarantee design dimensions, and proceed with shop drawings preparation. Coordinate installation to ensure actual dimensions correspond to the guaranteed dimensions.

3.4 Method Of Procedure: The vendor shall prepare and submit to AT&T a “MOP” for review approval as noted prior to commencement of any Work. Site conditions may require that all or part of the Work be executed outside of normal working hours which is AT&T's determination. AT&T's on-site representative has full authority to stop all Work which is not specifically detailed in the approved “MOP”, with any expense incurred as a result of such action being borne fully by the vendor.

3.4 Changes: All changes to the “Scope of Work” must include a written and signed “Change Order” inclusive of materials, services and pricing before Work is to proceed.

3.5 Demonstration: If product demonstration is requested prior to installation, erect actual sample mock-up(s) necessary to demonstrate system capabilities to the approval of the AT&T representatives.

4.0 Quality Assurance

4.1 The manufacturer, distributor/dealer, and installer herein refer to as “vendor”, shall provide the “Work” described in this specification which consists of all labor, materials, equipment, and services necessary to install a fully functional and integrated System. Work that may or may not be specifically mentioned herein nor shown in the drawing package but required for proper performance, operation, testing and maintenance shall be furnished and installed. Any extra and/or special equipment, mounting devices, etc., needed to install or perform specific system functions shall be provided without additional cost to AT&T. All materials and equipment used shall be new.

4.2 Errors, omissions, or other defects in the construction document package known to the Bidders shall be addressed to AT&T prior to bid submission. Should any Bidder be in doubt relative to the intention and meaning of the drawings, specifications, and/or a code issue, shall inquire to the Architect/Engineer. Written response will then be mailed/FAXed to all Bidders if the bid package is in error or in need of clarification. AT&T will not be held responsible for any inquiry being addressed and answered verbally. For construction, inspection, and payment schedules refer to the Bid Package and Project Schedule.

4.3 Single-Source Responsibility: All system components shall be the product of the same component manufacturer and/or from a manufacturer acceptable to another manufacturer. All components shall be new, free from defects and labeled with make, model number, device tag number, manufacturing lot number per ISO requirements, and the testing agencies labels (i.e. UL) as applicable. No partial System acceptances shall be granted nor shall any payment be made for any Work which is not one hundred percent (100%) acceptable.

4.4 Ordinances and Regulations: The installed System and components of, shall be in compliance with the latest issue of all applicable building codes and recommended industry standards where governing authorities having jurisdiction may carry out inspections deemed necessary. All products shall be labelled with the appropriate approval markings. Verification of compliance shall rest with the vendor and the AT&T Architectural/Engineering (A/E) consultant.

4.4.1 Nothing herein shall be construed as permitting Work not conforming with the applicable code to be implemented. Should changes be necessary to the drawings, specifications, and/or the Work for code compliance, the vendor shall notify the AT&T representative in writing upon receipt of this proposal.

4.5 Project Conditions: AT&T retains the right to immediately terminate all operations and/or cancel this agreement, under conditions where the vendor is not in compliance with company policies. At end of each work shift or before moving to another area, the vendor shall remove all debris, tools and materials resulting from Work.

4.6 Delivery and Storage: Deliver materials to the job site and store in ventilated dry locations. Storage area shall permit easy access for inspection and handling. If it is necessary to store materials outside, they shall be stacked off the ground, properly supported on a level platform, and fully protected from the weather avoiding the use of nonventing plastic or canvas shelters which would create a humidity chamber. Handle materials carefully to prevent damage. Replace damaged items that cannot be restored to like-new condition.

4.7 Security: The vendor shall not admit person(s) on or into any AT&T property who has not been approved, whether in their employment or not (i.e. sales representative). All vendor employees shall visibly wear a “visitor or contractor” identification badge as issued by the AT&T representative while on company property.

The vendor shall be responsible for all issued badges, potential damages done to company by leaving any security door, gate, or opening unsecured at any time when such an area is not directly attended. Also the vendor shall have proof of not employing minors without the proper work permits and shall perform sufficient research, to preclude the use of illegal aliens for work performed as part of this agreement.

2. Part II: Products

1.0 Manufacturer

1.1 Subject to product compliance as defined herein, provide “the System and/or the components of” from one (1) vendor with or without installation services. Substitutions of equivalent systems as-approved by industry standards using materials, equipment, devices, and methods of installation that perform the same functions as listed herein, are acceptable.

1.2 Available Manufacturers: Subject to compliance with requirements, manufacturers (vendors) offering a product and/or services that may be incorporated into this Work which meets or exceeds independent agency testing, the code authority holding jurisdiction, and AT&T standards including products being manufactured and/or inventoried, and tested within the United States of America, are acceptable.

1.3 All material, equipment, software, devices, accessories, and other facilities and appurtenances herein specified, or as noted in the construction documentation including the approved shop drawings, and installation instructions shall be new, best suited for its intended use, and shall conform to all applicable and recognized standards. All materials and equipment shall be from the vendor's standard cataloged and inventoried product line.

1.3.1 Proposal: The general contractor is herein requested to submit a lump sum price proposal with the added administration and coordination fees itemized to the AT&T Representative.

1.4 Order: For purposes of this document, the term “Ordering Party” shall refer to the entity that places an “AT&T Order” upon the vendor for a particular installation. It may include (1) authorized AT&T employees or (2) non-AT&T personnel such as: General Contractor, Construction Manager, or Architect/Engineer. It is understood that the non-AT&T personnel (agent) are authorized to place “Orders” only when they are working under contract or other legal arrangement with AT&T.

1.4.1 The ordering party shall place said Order with requested progress payment (if any) using these specifications and the attached construction documentation per project. The vendor's representative shall be in compliance with this Order as dated, and shall forward an itemized material pricing schedule directly to the assigned AT&T representative only. Refer to the Architectural/Engineering Consultant's specification package for additional and/or supplemental information or conditions per project.

1.5 Change Orders: Following contract award, any scope of work changes shall be put in writing, and will require AT&T's approval prior to proceeding. All change proposals must include detailed material and labor pricing. Any compliance changes to the System's design or configuration for use in new or facility revisions for up-grading to company standards, shall be approved by AT&T's Network Environmental Systems Manager.

1.6 The complete partition system including doors and hardware, and approved substitutions, shall be of the type tested and approved for use in commercial application as defined herein. All hardware, including mounting accessories, adapters, etc., shall be installed per manufacturer's instructions per the independent testing agency's designated product test number.

2.0 Gypsum Wall Board Systems

2.1 The materials, details and test designations as referenced herein are per the Fire Resistance Design Manual 13th Edition dated April 1992, published by the Gypsum Association (GA) and UL approved. Caution shall be exercised to insure that each component and assembly procedure per the designated test number for" the System" specified, is approved by the code authority holding jurisdiction.

All AT&T standard interior partitions for non-combustible, non-load bearing power room compartmentation shall be constructed from building floor slab to underside of floor slab above in the fire rating required. Refer to the Architectural/Engineering construction documentation of record for partition system locations and types.

2.2 STANDARD PARTITION (1 hour): One layer of 5/8" Type X gypsum wallboard or veneer base, (ASTM C 11 and C 36) applied at right angles or parallel to each side of 3-5/8" minimum 25 gauge metal studs (ASTM C 645 and C 754) at 24" on-center (o.c.). 1" Type S drywall screws (ASTM C 1002) at 8" o.c. to vertical edges and 12" o.c. to top and bottom runners (which are fastened at 24" o.c. max. and 2" from ends) and intermediate studs. Stagger all vertical and horizontal joints at 24" o.c. from each other on opposite sides. The wall thickness is 4-7/8" per GA Test File No. WP 1200 (Figure A, G1, G2, G3), or due to dimensional limitations GA Test File No. WP 1340 (Figure B).

2.3 SHAFT WALL DESCRIPTION (1 hour): This partition configuration can be used where the need to abut a non-rated wall of an adjoining tenant exists. 1" x 24" proprietary Type X gypsum panels inserted between 2 1/2" floor and ceiling J runners with T section of 2 1/2" proprietary C-T metal studs at 24" o.c. between proprietary gypsum panels. 5/8" Type X gypsum wallboard applied vertically to the C side of C-T studs with 1" Type drywall

screws 8" o.c. along edges and 12" o.c. at mid-width. The nominal wall thickness is 3-1/8” per GA Test File No. WP 7000 (Figure C).

2.4 AREA SEPARATION WALL (2 hour): A “Party/Fire Wall” with a fire rating greater than one hour shall be used where multiple Use Groups are required to be separated (i.e., administrative/equipment area) per the code authority holding jurisdiction. GA File No. WP 1711 (Figure D), ASW 1100 (Figure E), and/or ASW 1105 (Figure F).

2.5 ALTERNATE TYPE: This partition configuration may only address component composition of a different material and thickness dimension when used in combination with the above standard partition system (paragraph 2.2), or as a stand alone system with respect to special office conditions. The partition construction height shall remain from floor to underfloor floor slab above. An example of this type would be fire rated glass panels or areas, or masonry. For approval of use, refer to the AT&T Environmental Systems Manager and the local code authority.

2.6 General Partition Notes

2.6.1 Maximum height of 18 feet ( )can be obtained per manufacturers technical publications as reference by ASTM C 754 using a light steel curtain wall framing (20 gauge) on a 24" o.c. layout with an allowable deflection of L/120 at 5 lbf/square foot; where 25 gauge framing can reach a maximum height of 12'-5”. Verify per site conditions.

2.6.2 Applied diagonal seismic bracing at forty-five (45°) degrees shall be verified per local code requirements for non-loadbearing, full height partitions anchored to the floor slab and underside of the floor deck above.

2.6.3 If an increase of rigidity is required, stiffener channels may be placed within the screwed stud cutouts and/or decreasing the studs to a 16" o.c. layout (Figure Q).

2.6.4 Where structural movement may impose direct loads on this partition system, isolation details are required for perimeter relief (Figure H and H1). Continuous steel framing shall not bridge building expansion and control joints. Independently frame both sides of the joints (Figure J), and where long continuous partition runs are employed, control joints must be provided at a maximum of 30 feet (Figure J1).

2.6.5 Corrosion-resistant coating of metal framing for members attached to and within 10 feet of exterior walls shall be G40 hot-dip galvanized coated framing per ASTM A 525.

2.6.6 Mineral fiber or glass fiber insulation of a thickness not greater than the stud depth may be added as an option in the wall cavity for sound proofing (ASTM C 665) though not specified in the test file number.

1. Drywall joint treatment and accessories per GA-214 and ASTM C 475, and C 1047.
2. Approved outlet boxes (metallic or nonmetallic) shall be allowed. Verify type, size and placement, and quantity per square foot area as allowed by the local code.
3. If the partition extends above a non-rated suspended ceiling, all drywall joints extending above need to be taped or covered with gypsum board strips not less than 6" wide.

2.7 For special partition connections to steel support beams and pre-formed concrete floor systems refer to the Architect of record and Figures K and L.

2.8 All partition types shall incorporate smoke barrier details within its construction at all points of penetrations and intersections with other building surfaces (Figures H and H1). For all through-wall penetration construction and other special details refer to the architectural drawings of record, and the local code enforcement authority.

3.0 Metal Framing

3.1 Except where otherwise noted, including the requirements of governing regulations and applicable standards, provide the type, weight grade and finish of materials, and include for each component of “the System” the clips, fasteners, ties, reinforcing, stiffeners, shoes, tracks, hangers, brackets, spacers, anchors, accessories and trim as required and/or recommended by the manufacturer and testing institute for the application indicated.

3.2 Component Design: Calculate structural properties of metal framing per partition as required to verify site conditions have been meet as in accordance with the American Iron and Steel Institute (AISI) “Specification for Design of Cold-Formed Steel Structural Members,” or per the manufacturer's technical literature.

3.2.1 Include in this documentation power-driven fasteners of the type, size and material required to withstand loading conditions imposed on the wall assemblies per type (refer to paragraphs 2.2 - 2.5, this section), without exceeding allowable design stress of runners, fasteners, and/or structural substrates where anchors are embedded.

3.3 Select size and gauge, and spacing of framing members to comply with requirements of ASTM C 754 and the designated Test Number per partition type unless otherwise specifically indicated on the drawings.

3.3.1 Maximum Deflection: L/240 at 5 lbf per square foot or as specified per “the System's” designated Tested Number.

3.3.2 Studs and Tracks: ASTM C 645, steel with protective coating and nominal depths and shapes as indicated per designated Tested Number and the drawings.

3.4 Shaft-Wall: Provide assemblies as delineated on the drawings and construction complying with the requirements per paragraph 2.3, Part II.

4.0 Gypsum Board

4.1 Wallboard: Standard (ASTM C 36), except as otherwise indicated in maximum lengths available for fire-resistant (Type X or equivalent) in the required thicknesses with tapered and featured edges (rounded or beveled), as required for fire-resistant rated assemblies. Screws are self-tapping per manufacturer's recommendation (Type “S or W”.)

4.2 Trim and Accessories: Except as otherwise specifically indicated, provide trim and accessories by manufacturer of gypsum board materials, made of galvanized steel and configured for concealment in joint compound. Include corner beads, edge trim, and other trim units necessary for project conditions. Provide accessories as required in order to achieve details indicated, whether or not specific accessories are shown on the drawings.

4.2.1 Exposed Trim: At locations indicated, provide manufacturer's standard metal trim units designed to be left exposed or semi-exposed.

4.2.2 Control Joints: At locations indicated, provide manufacturer's standard one-piece control joints of zinc alloy or other noncorrosive metal.

4.3 Joint Treatment: Provide products by manufacturer of gypsum boards. Comply with ASTM C 475 and with manufacturer's recommendations for specific project conditions.

4.3.1 Joint Tap: Manufacturer's standard paper tap, or per particular job condition provide open-weave fiberglass tap for joint treatment.

4.3.2 Joint Compound: Vinyl-based, ready-mixed, all-purpose type for interior use for both embedding tap and as topping.

4.3.3 Wall Board Finish: All surfaces are to be made paint ready. Refer to the Architect of record specifications for additional requirements (i.e. Section 09900 Finishes-Painting).

4.4 Verify the need for the following with the Architect of Record drawings:

4.4.1 Acoustical Sealant: As recommended by gypsum board manufacturer for application indicated.

4.4.2 Sound-Attenuation Blankets: Unfaced mineral-fiber blanket insulation produced from fibers of glass or slag with thermosetting resins to comply with ASTM C 665 for type I (blankets without membrane facing).

5.0 Firestopping and Sealants

5.1 This section includes firestopping and sealants for penetrations through fire-resistance-rated partitions including empty openings, openings containing cables, pipes, ducts, conduits, and other penetrating items; and expansion and sealant joints. Special considerations for fire-ratings required for each firestopping application shall be verified by analysis of the required building code requirements. Refer to drawings for manufacturers, materials, and locations.

5.2 The vendor shall prepare and submit a complete schedule of firestopping for approval listing the penetrations to be sealed, indicating location, fire-rating of penetrating assembly, identification of penetration seal to be used, fire-rating of penetration seal, and evidence of acceptable testing. Also to be included are the project Record documents which include as-built drawings showing locations of all fire barriers, the actual penetrations through them, and the manner in which they were sealed; cross-referenced to maintenance detailing instructions for repair and/or modification due to changes in penetrating items.

5.2.1 It is here noted, that it is the vendor's responsibility to verify and determine that the types of penetrations to be sealed and firestopping and joint sealants assemblies indicated or not indicated on the drawings are appropriate.

5.3 Provide firestopping systems that are produced and installed to resist the spread of fire matching the fire rating of the barrier in which they are to be installed according to the requirements indicated on the drawings. Provide through-penetration firestop systems with Flame (F) and Temperature (T) ratings indicated, as determined per ASTM E 814 (UL 1479) with a minimum of one (1) hour classification. Fire test shall be conducted with a minimum positive pressure differential of 0.03" of water column. Materials shall be UL and State/City Fire Marshal approved allowing for normal expansion and contraction movement without failure of the penetration seal.

1. Firestop Mortar: Single component portland cement/fly ash mortar. Requiring no support or anchoring devices to pass water hose stream tests.

2. Firestop Sealant: Asbestos free, intumescent, endothermic sealant, caulk or mastic.
3. Firestop Sleeve: Fabricated sleeve, collar or boot used around plastic pipe and other penetrations in fire-rated walls.

5.3.1 Provide all components for each firestopping system requiring fill materials complying with the system performance requirements stated herein. Use only components specified by the firestopping manufacturer and approved by the qualified testing and inspection agency for the designated fire-resistance-rated systems. Emit no hazardous, combustible or irritating by-product during installation or curring period.

Accessories include permanent forming/damming/backing materials not limited to the following:

- Semi-refractory fiber (mineral wool insulation and/or ceramic fiber).
- Sealants used in combination with other forming/damming materials to prevent leakage of fill materials in liquid state.
- Fire-rated form-board and joint fillers for joint sealants.

Accessories included for temporary forming materials not limited to substrate primers, collars, and steel sleeves.

5.4 Provide joint sealants with fire-resistance ratings referencing “Type, Grade, Class, and Uses”, as indicated on the drawing schedule and as determined per ASTM C 920 and E 119 (UL 263); but not less than that equaling or exceeding the fire-resistance rating of the constructions in which the joint occurs.

5.5 Provide firestopping as indicated on the drawings that is exposed to view, traffic, moisture, and physical damage which will not deteriorate when exposed to these conditions. Example:

- For piping penetrations of plumbing and sprinkler systems, provide moisture-resistant through-penetration firestop systems.
- For penetrations involving insulated piping, provide through-penetration firestop systems not requiring removal of insulation.
- For firestopping exposed to view, provide products with flame-spread values of less than twenty-five (25) and smoke-developed values of less than four-hundred-and-fifty (450), as determined by ASTM E 84.

5.6 The vendor shall provide all certification that the products supplied comply with local regulations controlling the use of volatile organic compounds (VOCs) and are nontoxic to facility personnel. Example: No

detectable asbestos as determined by the method specified in 40 CFR Part 763, Subpart F, Appendix A, Section 1, “Polarized Light Microscopy.”

This documentation shall include all materials, installation methods, and relationships to adjoining construction for each firestop and sealant system indicated. Refer to the Architect and code authority holding jurisdiction for any modification due to project conditions to suit a particular through-penetration firestop condition.

5.6.1 All materials shall allow normal expansion and contraction movement of the penetrating item without failure of the penetration seal. A firestop sleeve, collar or boot shall be used around all plastic pipe, cable and other penetrations.

5.6.2 All firestop sealants shall be asbestos free, intumescent, endothermic sealant, caulk or mastic. These products shall emit no hazardous, combustible, or irritating by-products during installation or curing period.

5.7 Refer to Figure G3 for partition intersection with existing interior fire-rated wall, and Figure H2 for partition intersection with exterior wall. All penetrations of fire-rated assemblies shall be sealed with a qualified fire penetration and smoke seal. Refer to AT&T Practice 770-350-100, “Fire Stopping of Penetrations,” and the Architect of Record drawings for manufacturers of material type, locations and conditions for use.

5.7.1 Material herein listed are for suggestion only and need to be cross referenced to the drawings for manufacturer, type, etc., as verified with the applicable code enforcement authority. Firestop information defined herein is based on the building having a Fire Resistive Rating of Type 1 construction.

1. Fire Stopping Sealant: Dow® 3-6548 Silicone RTV foam, install per manufacturer's instructions or 3M® Brand Fire Barrier CP25 caulk.
2. Fire Stopping Insulation Type: USG® Mineral Fiber Firestop; install per manufacturer's installation instructions.
3. Fire Stopping Putty: 3M® Brand Fire Barrier Moldable Putty; MPP-1 pads and MPS-2 moldable putty stix.

5.8 For those products requiring mixing prior to application, comply with firestopping manufacturer's directions for accurate proportioning of materials, water (if required), type of mixing equipment, selection of mixer speeds, mixing containers, mixing time, and other procedures needed to produce firestopping products of uniform quality with optimum performance characteristics for application indicated.

6.0 Door, Frame, and Hardware

6.1 The standard door(s) shall be steel constructed with a fire classification of 1 hour (“C” Label), or 1-1/2 hours (“B” Label) rating as required for the partition type and area in which they are used or separating and/or connecting. Hollow Metal Doors (HMD) and frames shall conform to all applicable SDI, UL, and NFPA Standards.

a. Doors shall be 18 gauge with 16 gauge frames all welded.

b. All doors “flush” fully welded with no seams and/or as types and styles shown on drawings and schedules.

c. 3/16” thick steel plate hinge reinforcement (double 10 gauge) for hinges.

d. Exit doors shall be operable from the inside without the use of key, special effort or knowledge.

e. Manufacturers (optional) standard vision frames and tempered wire glass (maximum 100 square inches).

6.2 Fabrication: Fabricate steel door and frame units to be rigid, neat in appearance and free from defects, warps or buckles. Wherever practical, fit and assemble units in manufacturer's plant. Clearly identify work that cannot be permanently factory-assembled before shipment, to assure proper assembly at project site. Comply with ANSI/SDI-100 requirements. Vendor shall verify prior to shop drawing preparation the method of unit placement of either a full or knocked-down frame assembly. Tolerances shall comply with SDI 117 “Manufacturing Tolerances Standard Steel Doors and Frames.”

6.2.1 Primer: Rust-inhibitive enamel or paint, either air-drying or baking, suitable as a base for specified finish paints complying with ANSI A224.1, “Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames.” If doors and frames are to field painted, refer to the Architect of Record specifications.

6.2.2 Sound-Rated (Acoustical) Assemblies: Where shown or scheduled, provide door and frame assemblies fabricated as sound-reducing type, tested in accordance with ASTM E 90, and classified in accordance ASTM E 413.

6.2.3 Hardware: Prepare doors and frames to receive mortised and concealed hardware in accordance with final Door Hardware Schedule per the Architect of Record drawings, this Section, and templates provided by the hardware supplier. Comply with applicable requirements of ANSI A115 Series Specifications for door and frame hardware preparation.

6.3 Single Interior Door (3'-0" x 7'-0" x 1 3/4"): Hollow Metal Door with Press Steel Frame (HMD/PSF) and a Left Hand Reverse Bevelled (LHRB) setup equals an outward swing (Figure N, O and P) for any fire rated classification.

6.4 The following Hardware Options A, B and C offered, are based on the many agencies, associations and standards requirements which are recognized by the different geographical code enforcement authorities. Note must be taken to verify door hardware with each code enforcement agency and the drawings for which Option has been selected by the vendor.

- Option "A" is by manufacturer's numbers where "or equal" items may be substituted.
- Option "B" is by American National Standards Institute (ANSI) and U. S. Government numbers.
- Option "C" is by ANSI and Builder Hardware and Materials Association (BHMA) numbers.
- Finishes listed for Options "A" and "C" are Builders Hardware and Material Association (BHMA) finish numbers, and finishes for Option "B" are U.S. Government finish symbols.

A. Option "A" (each door to have):

Quantity	Description	Part Number	Finish	Manufacturer
1.5 Pr.	Hinges	FBB179 - 4.5 x 4.5	-652	Stanley (1)
1.0 Ea.	Cylinder	Rim Type (master keyed - 7 pin)	-626	Best (2)
1.0 Ea.	Panic Device	Interchangeable core keyed alike. 98L-F-03	-630	Von Duprin (4)
1.0 Ea.	Closer	CLP8501-BF	-689	Norton (3)
1.0 Ea.	Kick Plate	.050 ga. 8" x 2" LDW. x B3E	-630	Burns (6)
1.0 Ea.	Threshold	2005AS-Pemkote x Dr. width	-Al.	Pemko (5)
1.0 Set	Smoke Seals	S88D x Head and Jambs	-S. R.	Pemko (5)

B. Option “B” (each door to have):

Quantity	Description	Part Number	Finish	Manufacturer
1.5 Pr.	Hinges	T2107 - 4.5 x 4.5	-US26D	(7)
1.0 Ea.	Cylinder	Rim Type (master keyed as required)	-US26D	(7)
1.0 Ea.	Panic Device	ANSI A156.13 Grade 1 Type 1	-US32D	(7)
1.0 Ea.	Closer	Function 08 Lever trim ANSI 156.4 C02021 w/o PT4-DGH	-Alum.	(7)
1.0 Ea.	Kick Plate	ANSI J101 - 8” x 2” LDW.	-US32D	(7)
1.0 Ea.	Threshold	ANSI 36230 x Opening width	-Al.	(7)
1.0 Set	Smoke Seals	S88D x Head and Jambs	-S. R.	Pemko (6)

C. Option “C” (each door to have):

Quantity	Description	Part Number	Finish	Manufacturer
1.5 Pr.	Hinges	A8112 - 4.5 x 4.5	-652	(7)
1.0 Ea.	Cylinder	Rim Type (master keyed as required)	-626	(7)
1.0 Ea.	Panic Device	ANSI A156.13 Grade 1 Type 1	-630	(7)
1.0 Ea.	Closer	Function 08 Lever trim ANSI 156.4 C02021 w/o PT4-DGH	-689	(7)
1.0 Ea.	Kick Plate	ANSI J101 - 8” x 2” LDW.	-630	(7)
1.0 Ea.	Threshold	ANSI 36230 x Opening width	-Al.	(7)
1.0 Set	Smoke Seals	S88D x Head and Jambs	-S. R.	Pemko (6)

6.5 Pair of Interior Doors ([2] 3'-0” x 7'-0” x 1 3/4”): Hollow Metal Door with Press Steel Frame (HMD/PSF) and a Right Hand Reverse Bevelled (RHRB) setup means that on the approach or when entering the room, the right door panel is the active leaf in an outward swing configuration for any fire classification (Figure M, O and P).

6.6 The following Hardware Options D, E, and F offered, are based on the numerous agencies, associations and/or standards requirements that are recognized by the different geographical code enforcement authorities. Note must be taken to verify door hardware with actual placement of the

door, its intended use of, each code enforcement agency requirements, and the drawings for which Option has been selected by the vendor.

- Option “D” is by manufacturer's numbers where “or equal” items may be substituted.
- Option “E” is by American National Standards Institute (ANSI) and U. S. Government numbers.
- Option “F” is by ANSI and Builder Hardware and Materials Association (BHMA) numbers.
- Finishes listed for Options “D” and “F” are Builders Hardware and Material Association (BHMA) finish numbers, and finishes for Option “E” are U.S. Government finish symbols.

D. Option “D” (each pair of doors to have):

Quantity	Description	Part Number	Finish	Manufacturer
3.0 Pr.	Hinges	FBB179 - 4.5 x 4.5	-652	Stanley (1)
1.0 Ea.	Cylinder	Rim Type (master keyed - 7 pin). Interchangeable core keyed alike.	-626	Best (2)
1.0 Ea.	Panic Device	9847L-F-03	-630	Von Duprin (4)
1.0 Ea.	Panic Device	9847EO	-630	Von Duprin (4)
2.0 Ea.	Closer	CLP8501-BF	-689	Norton (3)
2.0 Ea.	Kick Plate	.050 ga. 8” x 1” LDW.	-630	Burns (6)
1.0 Ea.	Threshold	2005AS-Pemkote x Dr. width	-Al.	Pemko (5)
1.0 Set	Smoke Seals	S88D x Head and Jambs	-S. R.	Pemko (5)
2.0 Pcs.	Astragals	305CN x Door Height	-Al.	Pemko (5)

E. Option “E” (each pair of doors to have):

Quantity	Description	Part Number	Finish	Manufacturer
3.0 Pr.	Hinges	T2107 - 4.5 x 4.5	-US26D	(7)
1.0 Ea.	Cylinder	Rim Type (master keyed as required)	-US26D	(7)
1.0 Ea.	Panic Device	ANSI A156.13 Grade 1 Type 8	-US32D	(7)
1.0 Ea.	Panic Device	Function 08, Lever trim. ANSI A156.13, Grade 1, Type 8	-US32D	(7)
2.0 Ea.	Closers	Function 01 ANSI 156.4 C02021 w/o PT4-DGH	-Alum.	(7)
2.0 Ea.	Kick Plates	ANSI J101 - 8” x 1” LDW.	-US32D	(7)
1.0 Ea.	Threshold	ANSI 36230 x Opening width	-Al.	(7)
1.0 Set	Smoke Seals	S88D x Head and Jambs	-S. R.	Pemko (5)
2.0 Pcs.	Astragals	305CN x Door Height	-Al.	Pemko (5)

F. Option “F” (each pair of doors to have):

Quantity	Description	Part Number	Finish	Manufacturer
3.0 Pr.	Hinges	A8112 - 4.5 x 4.5	-652	(7)
1.0 Ea.	Cylinder	Rim Type (master keyed as required)	-626	(7)
1.0 Ea.	Panic Device	ANSI A156.13 Grade 1 Type 8	-630	(7)
1.0 Ea.	Panic Device	Function 08, Lever Trim. ANSI A156.13, Grade 1, Type 8	-630	(7)
2.0 Ea.	Closers	Function 01. ANSI 156.4 C02021 w/o PT4-DGH	-689	(7)
2.0 Ea.	Kick Plates	ANSI J101 - 8” x 1” LDW.	-630	(7)
1.0 Ea.	Threshold	ANSI 36230 x Opening width	-Al.	(7)
1.0 Set	Smoke Seals	S88D x Head and Jambs	-S. R.	Pemko (5)
2.0 Pcs.	Astragals	305CN x Door Height	-Al.	Pemko (5)

6.7 The use of automatic flush bolts, dust proof strike and coordinators shall not be used with panic hardware.

6.8 AT&T Corporate security shall be confided with for interior door alarm procedures and card readers.

6.9

Abbreviations		Finish Symbols		Substitutions	
Code	**Meaning**	**Code**	**Meaning**	**Code**	**Meaning**
BF	Barrier Free	626	Dull Chrome Plated on Brass/Bronze	1	Hager, Stanley, Bommer
LDW	Less than door width	630	Satin Stainless Steel	2	Best, Falcon, Arrow
M.K.	Master Keyed	652	Dull Chrome Plated on Steel	3	Norton, L.C.N., Dorma
S.R.	Silicon Rubber	652	Dull Chrome Plated on Steel	3	Norton, L.C.N., Dorma
Pr.	Pair	689	Sprayed Aluminum paint finish	4	Von Duprin or equal
Ea.	Each	Alum	Sprayed Aluminum paint finish	5	Pemko, Reese, Ultra
Pcs.	Pieces	Al	Anodized Aluminum	6	Burns or equal
		US26D	Dull Chrome Plated Steel/Brass/Bronze	7	As approved
		US32D	Satin Stainless Steel		

6.10 Substitutions of equal manufacturer's products shall be verified on a job basis for acceptability based on code (i.e.: ADA, Barrier Free, Fire, Life Safety, and State and Local), product number, and grade/type, availability, matching existing products, maintenance and warranty requirements.

7.0 References

7.1 For additional product procurement, installation, allowances and warranty issues, etc., refer to the Architect of Record edited specifications as required in Division No. 1, “General Requirements”, and other sections as needed.

7.2 Bellcore Technical Reference Publication TR-NWT-000063 Issue 4, 7/1991, Titled: Network Equipment-Building System (NEBS) for generic equipment compliance requirements, and AT&T 801-900-160 Issue 2, 2/

1994, Titled: AT&T Network Equipment -Development Standards & Requirements (as required.)

7.3 Fire Resistance Design Manual: 13th Edition dated April 1992, published by the Gypsum Association (GA), 810 First Street NE, #510, Washington, D.C. 20002, USA. Phone 202-289-5440, FAX: 202-289-3707.

- GA-214 Recommended Specification: Levels of Gypsum Board Finish for Level 1, one-hour Fire Resistance.
- GA-216 Recommended Specification for the Application and Finishing of Gypsum Board.
- GA-505 Definition of Terms for Gypsum Board Construction.
- Partition Test File Numbers as referenced herein.

7.4 The Gypsum Association documentation is referenced by the U. S. Government, Canada, and:

- BOCA National Building Code, Article 9 Commentary.
- Uniform Building Code, footnote a, Tables No. 43-A, B, C, Appendix Section 3502.
- Standard Building Code, Section 1003.1.2, Appendix E.
- Major United States municipal jurisdictions.
- Underwriters Laboratories, Factory Mutual, Manufacturers, and numerous testing agencies.
- The American Institute of Architects (AIA), CSI and the Technical Studies Committee of Construction Specifications of Canada (CSC).

7.5 American Society for Testing and Materials (ASTM) Standards:

A 525 Specification for General Requirements for Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process.

C 11 Terminology Relating to Gypsum and Related Building Materials and Systems.

C 36 Specification for Gypsum Wallboard.

C 475 Specification for Joint Compound and Joint Tap for Finishing Gypsum Board.

C 645 Specification for Non-Load (Axial) Bearing Steel Studs, Runners (Track), and Rigid Furring Channels for Screw Application of Gypsum Board.

C 665 Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction.

C 719 Standard Test Method for Adhesion and Cohesion of Elastomeric Joint Sealants Under Cyclic Movement.

C 754 Specification for Installation of Steel Framing Members to receive Screw-Attached Gypsum.

C 919 Standard Practice for Use of Sealants in Acoustical Applications.

C 920 Standard Specification for Elastomeric Joint Sealants.

C 1002 Specification for Steel Drill Screws for Application of Gypsum Board or Metal Plaster Bases.

C 1047 Standard Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base.

C 1193 Guide for Use of Joint Sealants.

E 84-91 Test Method for Surface Burning Characteristics of Building Materials.

E 119 Test Methods for Fire Tests of Building Construction and Materials.

E 413 Classification for Rating Sound Insulation.

E 814 Test Methods for Fire Tests of Through-Penetration Fire Stops (UL-1479).

7.6 Studs and runners are channel-type sections, roll-formed, and designed in accordance with the American Iron and Steel Institute (AISI) CFSD-ASD-86 “Specifications for the Design of Cold-Formed Steel Structural Members”, with the 1989 Addendum.

7.7 AT&T Practice 770-350-100 “AT&T Fire Safety - Fire Stopping of Penetrations.”

7.8 Underwriters Laboratories: Building Materials Directory, Fire Resistance Directory, and 10B “Fire Tests of Door Assemblies,” and Warnock Hersey's 1992 “Certification Listings.”

7.9 National Fire and Protection Association (NFPA) Tests:

80 Fire Doors and Windows Standards.

101 Life Safety Code.

105 Smoke-and-Draft-Control Door Assemblies.

220 Standards on Types of Building Construction.

251 Standard Methods of Fire Tests of Building Construction and Materials.

252 Fire Test for Door Assemblies.

7.10 Door, Frame and Hardware Standards:

ANSI/BHMA American National Standards Institute/Builder Hardware and Materials Association Standards.

A156.1 Butts and Hinges.

A156.3 Exit Devices.

A156.4	Door Controls (Closers).
A156.13	Locks and Latches, Mortise.
A156.15	Closer Holder Release Devices.
A156.16	Auxiliary Hardware.
A156.17	Hinges and Self-Closing.
A156.18	Hardware - Materials and Finishes.
A156.21	Thresholds.
A115 (ANSI)	Steel Door Preparation Standards.
DHI	Door and Hardware Institute Publication on “Hardware for Labeled Fire Doors,” and ANSI/DHI A115 series which covers the preparation of doors and frames for bolts, closers, latches, locks, pivots, and strikes.
NAAMM	National Association of Architectural Metal Manufacturers.
SDI	Steel Door Institute Fact Files (ANSI/SDI).
100	Steel Doors and Frames.
119	Steel Door Frames and Frame Anchors, Performance Test Procedures.
A123.1	Nomenclature for Steel Doors and Steel Door Frames.
A151.1	Physical Endurance for Steel Doors and Hardware Reinforcing, Test Procedure and Acceptance Criteria.

3. Part III: Execution

1.0 Examination

1.1 The vendor (installer) shall review and comply with Part I documentation of this specification, and shall not begin installation until all site conditions are met, and all approved plans have been received. Note that AT&T reserves the right to relocate any component of the System within a radius of ten (10) feet at no additional expense before rough-in work is started.

1.2 The general contractor and vendor shall review all drawings/specifications in order to ensure completeness of the Work. This review shall include all supplementary items normal to manufacturer's requirements and trade practices that are necessary to complete the Work, although not explicitly shown nor specified.

1.2.1 Dimensions, specifications, and actual placement of all interfacing conditions (example: walls, columns, raised floor, HVAC, ceiling, etc...) shall be compared for verification with Contract Document's “Scope-of-Work”, and the approved shop drawings prior to commencing Work.

1.3 The general contractor shall be responsible for site preparation plus any special conditions needed to allow for the complete System installation to ensure the Facility's property safety.

1.4 If any conditions exist which are detrimental to the proper and expeditious installation of the Work, the vendor shall notify the AT&T representative(s) in writing. Failure of written notification and commencing with the Work on the part of the vendor means: “Acceptance of the contract with all site conditions as is or as existing”.

1.5 Maintaining the System's integrity shall be coordinated and scheduled with the general contractor on a trade basis.

2.0 Preparation

2.1 The vendor shall submit a site specific “Method of Procedure (MOP)” prior to commencement of Work to the AT&T representative(s) for review and approval with execution as noted. The vendor shall verify that the general contractor has provided protection for all facility and telecommunication equipment elements within the work area from damage, dust pollution, or disfigurement prior to commencement of Work. If general contractor is not

required to do so, the vendor shall provide complete protection to AT&T's equipment.

2.1.1 Any violation of this practice will result in an unacceptable product and it will be the responsibility of the vendor to dismantle and re-install the system at no expense or scheduling delay to AT&T.

2.2 Actual arrival time for material on-site staging shall be coordinated with the AT&T representative(s). All materials shall be delivered in original labelled factory packaging, where upon the vendor shall notify the manufacturer of damages to the system that requires repair or replacement, prior to final test and acceptance date.

2.3 All Work performed under this section shall be done by a company specializing in this installation or similar work.

3.0 Installation

3.1 The systems' installation shall be per the approved MOP, and the approved shop drawings and calculations. For coordination notes refer to AT&T Building Engineer/On-Site Representative, central office drawings, and AT&T's consultant's construction package for all telecommunication equipment layout, attachment details, cable penetration locations, physical design hardware, seismic access floor (SAFloor) layout, underfloor cable layout, special underfloor conditions, lighting systems, suspended ceiling layout, electrical grounding details/plans, mechanical equipment layout and design, for any or all additional conditions, specifications and construction documentation.

3.1.1 Mounting or attachment to telecommunication equipment, cable trays, movable walls or other equipment or frames is strictly unacceptable. Installation of this system accompanied with CONTINUAL equipment protection shall be in accordance with AT&T company policies as verified with the AT&T on-site manager.

3.1.2 Perform cutting, trimming, and other dirt or debris producing operations at an area separate from telecommunication equipment space in a manner to prevent contamination to the telecommunication network. Dust and debris shall not be permitted to fall into or on any telecommunication equipment, cable racks, or allowed to drift throughout the area. A vacuum cleaner equipped with a High Efficiency Particulate Air (HEPA) filter shall be used for collection immediately upon generation at the point of origination.

3.1.3 If sprayed-on fireproofing has been applied, remove only as much fireproofing as needed to complete installation of wall assemblies without reducing thickness of fireproofing below that required to maintain fire-

resistive rating indicated. Protect remaining fireproofing from damage. All penetrations of fire rated floors, ceilings and walls, shall be sealed per local building code requirements except that no silicone containing materials may be used.

3.2 Metal Framing: Comply with provisions of ASTM C 754 and C 840 except where exceeded by other requirements.

3.2.1 Steel Studs: Install runners (tracks) at floor, ceiling, and structural walls and columns where gypsum wall board assemblies abut other construction. The complete framing system shall be installed in accordance with the manufacturer's recommendations per the designated GA Test Number for each partition type. Refer to drawings.

Install framing members in sizes and at spacing indicated but not less than that required by the referenced steel framing standard to comply with maximum deflection and minimum loading requirements specified. Position studs so that flanges point in the same direction and that leading edges or ends of each gypsum board can be attached to open (unsupported) edges of stud flanges first.

3.2.2 Door Openings: Comply with recommendations of the United States Gypsum Company"s (USG) "Gypsum Construction Handbook," reinforcing openings as required for size weight of doors.

3.2.3 Partition Heights: Extend the complete framing system from floor slab to underside of floor slab or roof construction above, as indicated for specific locations on the drawings.

3.2.4 Blocking and Bracing: Install ancillary framing as required for structural support due seismic bracing, special site conditions, and for adequate support of wall-mounted items installed as work of other trades.

3.2.5 Load Transfer: Isolate framing from building structure at locations indicated to prevent Transfer of loading imposed by structural movement. Comply with attached details and those of the Architect of Record.

3.2.6 Expansion and Control Joints: Do not bridge building expansion and control joints with framing or furring members. Independently frame both sides of joints with framing or furring members as indicated.

3.2.7 Installation Tolerances: Install each framing member so that fastening surfaces do not vary more than 1/8 inch from the plane formed by the faces of adjacent framing.

3.3 Gypsum Wall Board and Finishing Standards: Comply with ASTM C 840 and GA-216 except where exceeded by other requirements.

3.3.1 Panels: Set gypsum panels in compliance with designated GA Test Number per partition type. Do not install imperfect, damaged, or damp panels. Do not force any panel into position. Install face side out, and position adjoining panels so that tapered edges abut tapered edges, and field-cuts edges abut field-cut edges and ends, by providing panel lengths that will minimize end joints.

3.3.2 Sound Attenuation Blankets: Install where indicated prior to installing gypsum panels unless blankets are readily installed after panels have been installed on one side.

3.3.3 Hollow Metal Door Frames: Spot grout hollow metal door frames for hollow metal doors, and doors over thirty-two (32) inches wide. Apply spot grout at each jamb anchor clip and immediately insert gypsum panels into frames.

3.3.4 Expansion and Control Joints: Form expansion and control joints at locations indicated, and where not indicated per ASTM C 840 with space between edges of adjoining gypsum panels, as well as supporting framing behind gypsum panels.

3.3.5 Cutouts: Fit gypsum panels around ducts, pipes, and conduits. Where partitions intersect open concrete coffers, concrete joists, and other structural members projecting below underside of floor/roof slab and decks, cut gypsum panels to fit profile formed by just conditions; allow 1/4-to-1/2-inch-wide joints to install sealants.

3.3.6 Isolate Perimeter: All non load bearing gypsum partitions at structural abutments, except floors, shall be provided with perimeter continuous isolation. Provide 1/4 to 1/2 inch wide spaces at these locations and trim edges with U-bead edges trim where edges of gypsum panel are exposed. Seal joints between edges and abutting structural surfaces with the appropriated fire-smoke-rated sealant. Refer to the Architect of Record drawings.

3.3.7 Trim Accessories: For trim accessories with back flanges, fasten to framing with same fasteners used to fasten gypsum board at locations per the drawings. Otherwise, fasten trim accessories according to accessory manufacturer's direction for type, length, and spacing of fasteners.

3.3.8 Assembly Finish: Treat all gypsum board joints, interior angles, flanges of corner beads, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to achieve a Level 4 gypsum board finish.

3.4 Firestopping and Sealants

3.4.1 Pre-installation Inspection and Surface Conditions: Inspect all fire barriers for penetrations of any type; mark or otherwise identify all penetrations

indicating action required: 1) repair or 2) new installation. Examine the areas and conditions under which Work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

If the configuration of a particular penetration does not conform to the configuration necessary for the required firestopping assembly, notify the AT&T representative for the need penetration modification of the configuration to suit the assembly; do not use the firestopping assembly in other configurations except as specifically stated in the designated test report, or as approved by the code authority having jurisdiction.

3.4.2 Preparation: Clean out openings and joints immediately prior to installing material to comply with recommendations of the manufacturer and the following requirements:

a. Remove all foreign materials from surfaces of opening and joints substrates and from penetrating items that could interfere with adhesion of required material.

b. Remove loose particles remaining from cleaning operation.

c. Remove laitance and form release agents from concrete if required.

d. Prime substrates where recommended by manufacturer using that manufacturer's recommended products and methods. Confine primers to areas of bond; do not allow spillage and migration onto exposed surfaces.

e. Use masking tape to prevent applied materials from contacting adjoining surfaces that will remain exposed upon completion Work and that would otherwise be permanently stained or damaged by such contact or by cleaning methods used to remove excess applied materials. Remove tape as soon as it possible without disturbing applied material's setting condition.

3.4.3 Ventilation: Ventilate firestopping and sealants per the manufacturers' instructions by natural means or, where this is inadequate, forced air circulation.

3.4.4 Protection: Protect applied materials during and after curing period from contact with contaminating substances or from damage resulting from construction operations (using substantial barriers if necessary) or other causes so that they are without deterioration or damage at time of Substantial Completion.

3.4.5 Application: Apply the approved product to the designated surfaces in strict accordance with the manufacturer's application procedures per the reviewed and approved-as-noted shop drawings.

3.4.6 Repair: If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated applied material immediately so that installations with repaired areas are indistinguishable from original Work in accordance with manufacturer's instructions.

3.4.7 Firestopping: Comply with the “System Performance Requirements” per manufacturer's product recommendations for types' of materials, locations of use, and application procedures, as referenced on the drawings. Install firestopping materials, including forming, packing, and other accessory materials, in exact accordance with manufacturer's instructions and conditions of the testing. Remove combustible forming materials, unless they are a required component of the tested assembly.

a. Install fill materials (forming/damming materials) and other accessories of type required to support fill materials during their application and in the position needed to produce the cross-sectional shapes and depths required to achieve fire ratings of designated through-penetration firestop systems. After installing fill materials, remove combustible forming materials and other accessories not indicated as permanent components of the System.

3.4.8 For Fire-Resistive Joint Sealants: Comply with the “System Performance Requirements” per manufacturer's product recommendations per ASTM C 1193 for materials, locations of use, and installation procedures, as referenced on the drawings. Install joint fillers to provide support of sealants during application and at position required to produce the cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability and develop fire-resistance rating required.

a. For Acoustical Joint Sealant: Comply with recommendations of ASTM C 919 for use of joint sealants in acoustical applications as applicable to the referenced drawings for manufacturers, type of materials, and locations and conditions.

b. Installation of Sealants: Install sealants by proven techniques that result in sealants directly contacting and fully wetting joint substrates, completely filling recesses provided for each joint configuration, and providing uniform, cross-sectional shapes and depths relative to joint width that allow optimum sealant movement capability. Install sealants at time joint fillers are installed.

c. Tooling of Nonsag Sealants and Installation of Preformed Foam Sealants: Install each length of sealant immediately after removing protective wrapping, taking care not to pull or stretch material, and to comply with sealant manufacturer's directions for installation methods, materials, and tools that produce seal continuity at ends, turns, and intersections of joints. For application at low ambient tem-

peratures where expansion of sealant requires acceleration to produce seal, apply heat to sealant in conformance with sealant manufacturer's recommendations.

3.4.9 Do not leave gaps between ends of backer or filler materials. Do not stretch, twist, puncture, or tear this material.

3.4.10 Field Quality Control: Inspect completed installations for completeness and correct installation. If installed Work is to be covered in completed Work, inspect and obtain approval prior to covering from the AT&T representative and the code authority having jurisdiction. Where deficiencies are found, repair or replace firestopping or sealant material so that it complies with requirements. Submit report of inspection to the AT&T representative.

3.4.11 Cleaning: Clean off excess fill materials adjacent to openings and joints as Work progresses by methods and with cleaning materials approved by the fill component manufacturer.

3.5 Door, Frame, and Hardware

3.5.1 Install standard fire-rated steel doors, frames, and accessories in accordance with final shop drawings, manufacturer's data, and fit as in compliance

3.5.2 Installation of Frames within Gypsum Wall Assembly: Installation procedures for fire-rated shall comply with provisions of SDI-105 “Recommended Erection Instructions for Steel Frames,” and in accordance with NFPA Standard No. 80 by placing frames prior to construction of enclosing partitions unless otherwise indicated. Set frames accurately in position, plumbed, aligned, and braced securely until permanent anchors are set. Install at least three (3) wall anchors per jamb at hinge and strike levels.

In closed steel stud partitions, attach wall anchors to studs with screws. After wall construction is completed, remove temporary braces and spreaders leaving surfaces smooth and undamaged.

3.5.3 Door Installation: Fit hollow metal fire-rated doors accurately in frames within clearances specified in NFPA Standard No. 80, and ANSI/SDI-100.

3.5.4 Adjustment and Cleaning: Check and readjust operating hardware items, leaving steel doors and frames undamaged and in complete and operating condition.

a. Required for factory primed units; immediately after erection, sand smooth any rust or damaged areas of prime coat, and apply touch-up of compatible air-drying primer.

b. Required for factory prefinished units; immediately prior to final inspection, remove protective plastic wrappings from prefinished units.

4.0 Completion

4.1 The completed partition system shall be free from all defects, excessive vibration, and all exposed surfaces smooth and uniform. Installer must complete each component manufacturer's “check list” and make all necessary adjustments for satisfactory inspection/acceptance.

4.2 The installer prior to final inspection shall have performed all cleaning operations, and replaced all components which were defective (chipped, broken, stained, scratched or otherwise damaged), or not in specified conformance.

4.3 Clean-up: Upon completion and acceptance of the Work, the vendor shall and at their expense, remove promptly from the premises (both in-house and on-site) all implements, equipment, tools, machines, surplus and waste materials and debris generated by their work.

The vendor shall secure permits required by the Department of Environment Protection (State) and/or the Environmental Protection Agency (Federal), and OSHA (if need be), for removal and handling of all hazardous wastes generated by their operations.

4.3.1 The vendor shall coordinate with the general contractor and the local authorities the need for waste separation and/or recyclable material disposal.

4.3.2 If the vendor fails to clean up as provided herein, AT&T and/or the general contractor shall charge the cost thereof or deduct same amount from AT&T and general contractor's payment to vendor.

4.4 Inspection: The vendor with the general Contractor, and AT&T/Manufacturer's representatives shall conduct an inspection of the completed System in whole or in part pending project conditions. This inspection shall occur prior to AT&T acceptance per general contractor construction schedule.

4.5 Submittals: The vendor shall provide all the required documentation with up-to-date project correspondence upon completion of the Work, including but not limited to:

- All “as-built” construction documents, details and catalog part numbers as required.

- The System's guarantee statement including component vendor name, address, and phone number.
- The vendor assumes responsibility for replacement, repair, and service of any component which proves defective in material or workmanship for a period as agreed to by AT&T upon final acceptance.
- Extra material (if required): Submit the type and quantity of materials as specified with verification being made for on-site-storage accessibility with AT&T prior to shipment.
- Operational material (if required): The vendor shall submit all reference materials/manuals required to assure the proper operational status of the system as designed and installed.
- Maintenance material (if required): The manufacturer's “hard-copy” maintenance procedures.
- System Details and Part Numbers: Stating the complete system in graphic details with component numbers per manufacturer's “technical” ordering catalog.

4. Details

See following attachments.

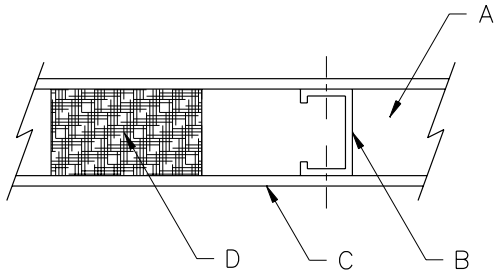

FIGURE A
TYPICAL PLAN SECTION

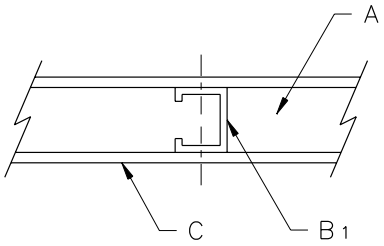

FIGURE B
TYPICAL PLAN SECTION

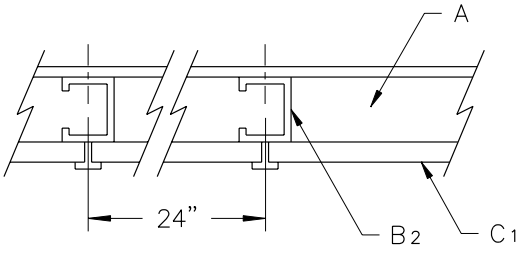

FIGURE C
TYPICAL PLAN SECTION

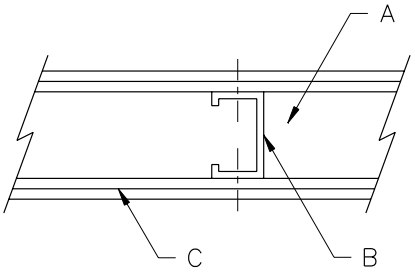

FIGURE D
TYPICAL PLAN SECTION

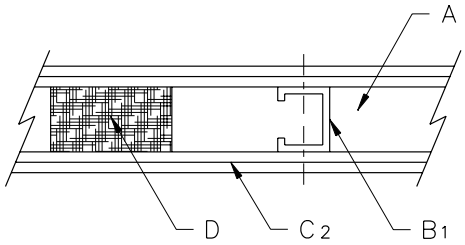

FIGURE E
TYPICAL PLAN SECTION

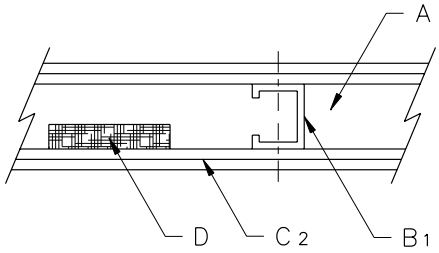

FIGURE F
TYPICAL PLAN SECTION

A. TOP & BOTTOM STEEL RUNNER (TRACK)
B. 3–5/8 MTL. STUD @ 24" O.C.
B1. 1–5/8 MTL. STUD @ 24" O.C.
B2. 2–1/2 MTL. STUD @ 24" O.C.
C. 5/8" TYPE "X" GYPSUM BOARD
C1. 1" X 24" TYPE "X" GYPSUM BOARD
C2. 1/2" TYPE "X" GYPSUM BOARD
D. OPTIONAL SOUND PROOF INSULATION

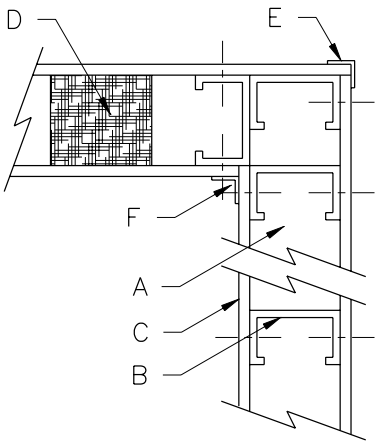

FIGURE G
TYPICAL
CORNER DETAIL

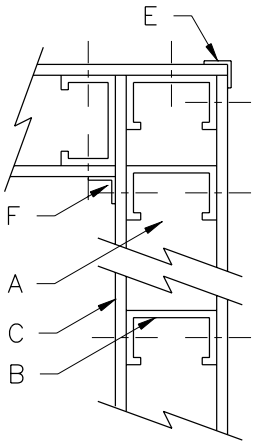

FIGURE G1
OPTIONAL
CORNER DETAIL

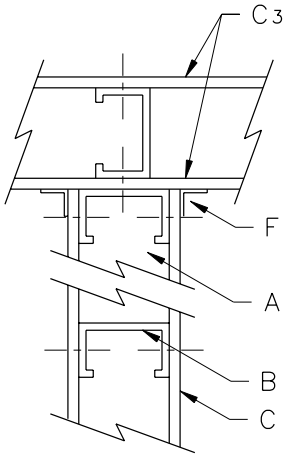

FIGURE G2
PARTITION
INTERSECTION

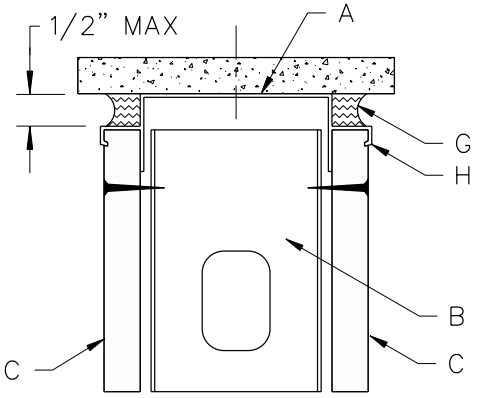

FIGURE H
ANCHORAGE TO CONCRETE
CEILINGS, WALLS OR COLUMNS
BASE SIMILAR

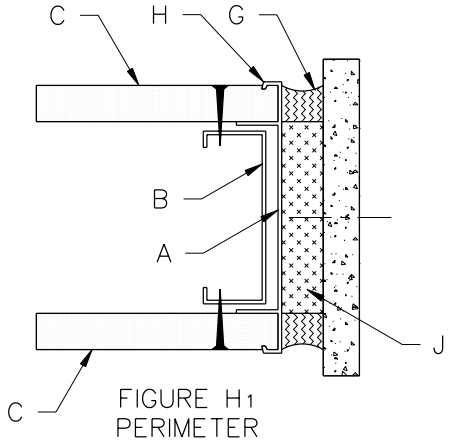

FIGURE H1
PERIMETER
RELIEF DETAIL

A. TOP & BOTTOM STEEL RUNNER
B. MTL. STUD @ 24": O.C.
C. 5/8" TYPE "X" GYPSU BOARD
C3. EXISTING FIRE RATED PARTITION
D. OPTIONAL SOUND PROOF INSULATION
E. DRYWALL CORNER BEAD
F. TAPE AND JOINT COMPOUND
G. SEALANT
H. DRYWALL TRIM
J. GLASS/MINERAL INSULATION

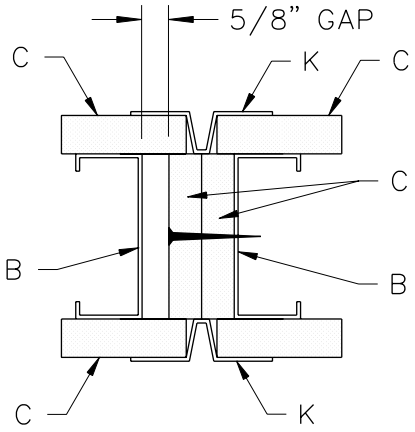

FIGURE J
TYPICAL CONTROL JOINT
@ BLDG. EXPANSION
JOINT

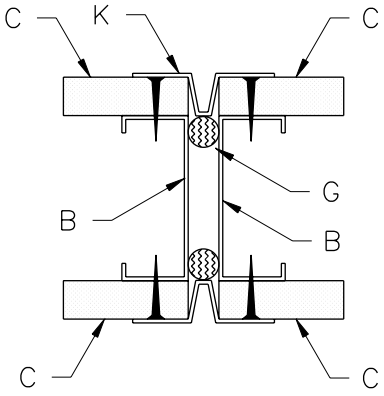

FIGURE J 1
TYPICAL WALL CONTROL UNIT

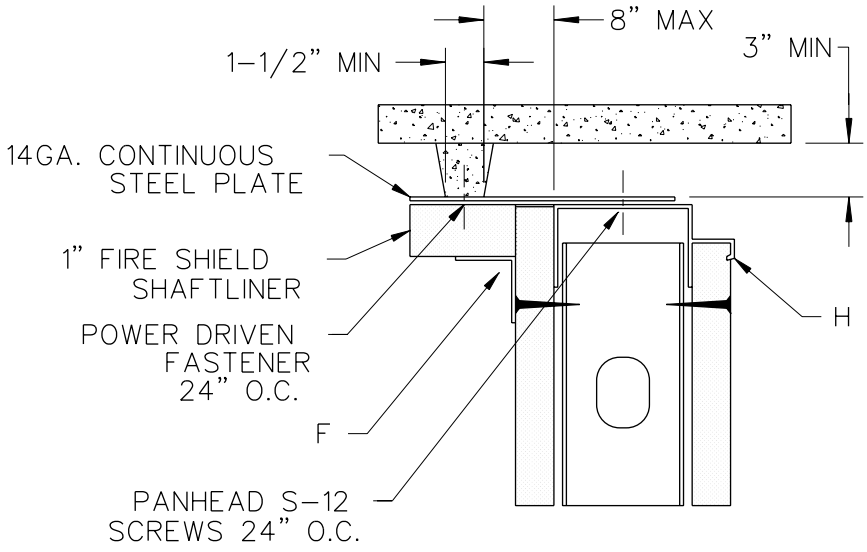

FIGURE K
STUD CAVITY WALL
PARALLEL TO
DECK VALLEYS

B. MTL. STUD @ 24": O.C.
C. 5/8" TYPE "X" GYPSU BOARD
F. TAPE AND JOINT COMPOUND
G. SEALANT
H. DRYWALL TRIM
K. VINYL/METAL CONTROL JOINT

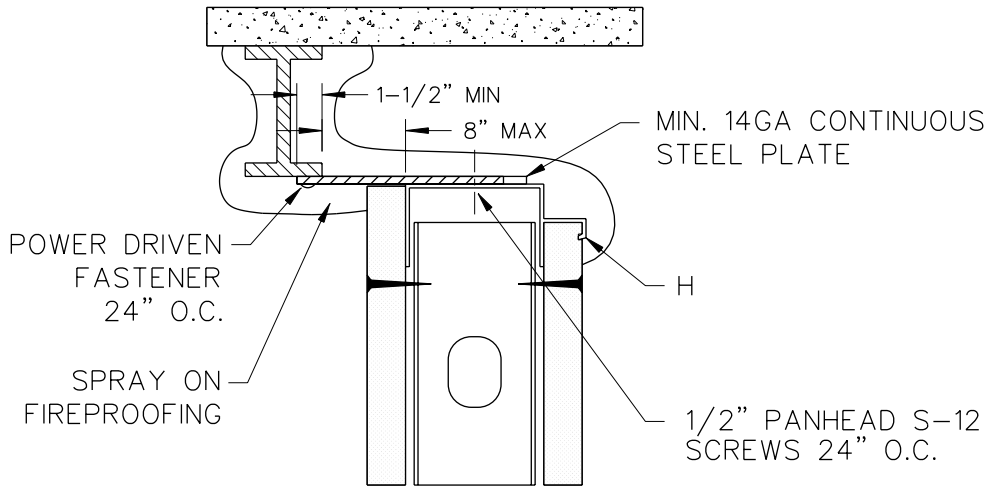

FIGURE L
PARTITION OFFSET
FROM STEEL BEAM

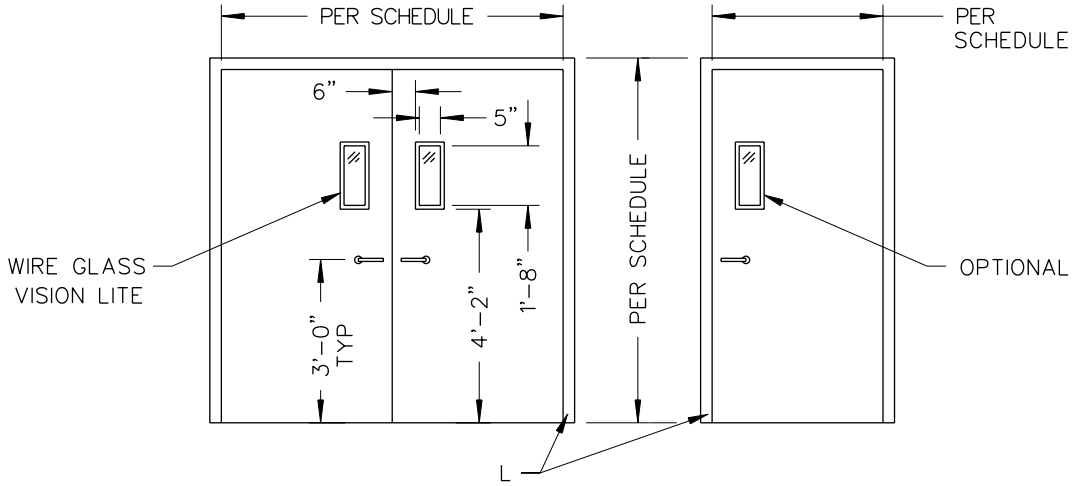

FIGURE M
DOUBLE DOOR

FIGURE N
SINGLE DOOR

H. DRYWALL TRIM
L. METAL DOOR FRAME

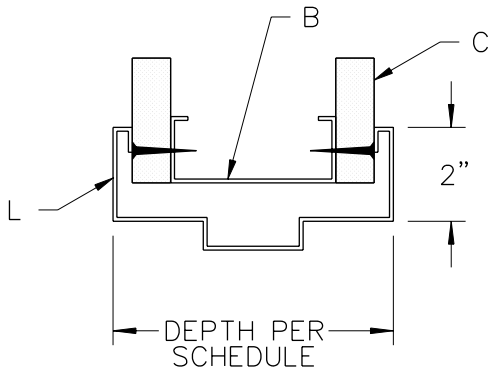

FIGURE O
DOOR JAMB: HEAD DETAIL

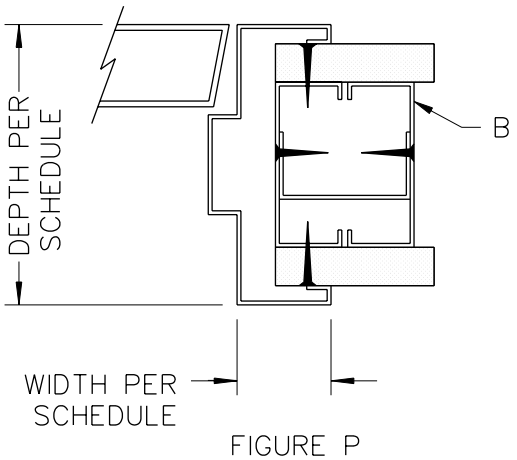

FIGURE P
DOOR JAMB

B. MTL. STUD
C. 5/8" TYPE "X" GYPSUM BOARD
L. METAL DOOR FRAME

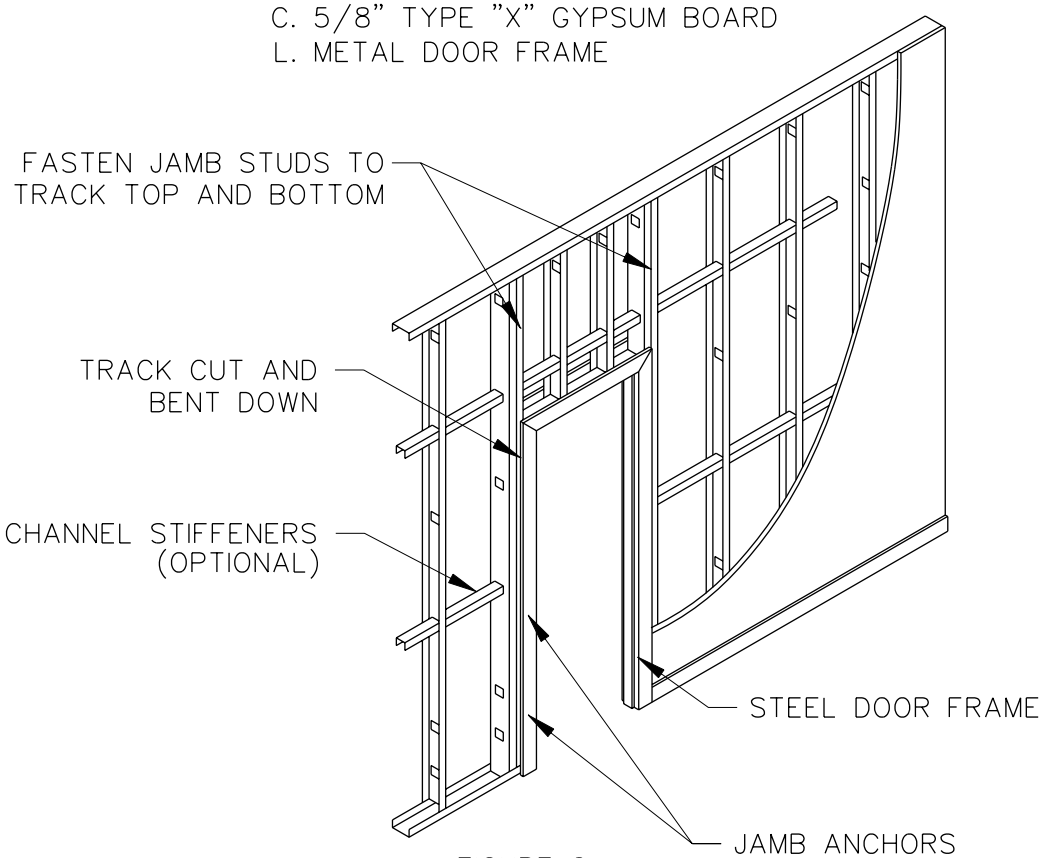

FIGURE Q
TYPICAL ELEVATION

How Are We Doing ?

Document Title:

_____

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Document No.: _____ Issue No. _____ Date: _____

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- ❒ Improve the index

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