

**STATEMENT OF OBJECTIVES (SOO)**

**For**

**Installation of Fiber Optic Cabling IT Infrastructure for Building  
523**

**at**

**GOODFELLOW AFB TX**

**30 JUL 2019**

**Prepared By**

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## **1.0 SCOPE**

This Statement of Objectives (SOO) defines the requirements for the Contractor to engineer, furnish, install, and test (EFI&T) Premise Wiring within building 523 (B-523) at Goodfellow AFB TX. The Contractor shall replace existing Category 5 (CAT5) Infrastructure (including, but not limited to: cabling, wall-plates, wall-boxes, jacks, floor panels, and equipment rack distribution panels) with Multi-Mode OM3 Fiber Optic cabling and associated FOC Infrastructure (including, but not limited to: cabling, wall-plates, wall-boxes, jacks, floor panels, and equipment rack distribution panels). The Contractor shall remove the existing CAT5 infrastructure after cutover completion.

## **2.0 REQUIREMENTS**

### **2.1 GENERAL REQUIREMENTS**

#### **2.1.1 Project Requirements**

##### **2.1.1.1 Network Drawings**

The Contractor shall document all premise wiring connectivity (room connections to equipment rack patch panels) in their Network Drawings.

##### **2.1.1.2 Labeling**

The Contractor shall label all connections (room jacks/wall-plates to equipment rack patch panels). Label all new premise wiring installation IAW Goodfellow AFB label scheme. Labeling will be completed via a permanent method: handwritten labeling is not authorized.

##### **2.1.1.3 Elevation Drawings**

The Contractor shall provide elevation drawings, front and rear views, of the final equipment rack configurations.

##### **2.1.1.4 Grounding**

The Contractor shall appropriately ground equipment racks to the Telecommunications Grounding Bus (TGB), and ground patch panels to the racks.

##### **2.1.1.5 Cable Management**

The Contractor shall design and install a cable management system, guiding the cabling from each room to the IT closet equipment racks utilizing, but not limited to, j-hooks, cable ladders, and/or cable troughs atop walls in false ceiling area to direct

cables from rooms to the equipment racks. The Contractor shall install requisite splice trays, and cable management arms at the equipment racks.

#### **2.1.1.6 TEMPEST**

The Contractor shall install conduit and cable trays to organize and meet TEMPEST standards.

#### **2.1.1.7 Management and Supplies**

The Contractor shall provide all equipment, tools, materials, supplies, transportation, labor, supervision, management, and other incidentals necessary to meet the requirements as stated in this SOO; no equipment, supplies, or material, will be provided by the government. All equipment, supplies, or materials installed as part of the premise wiring shall be new and not refurbished.

#### **2.1.1.8 Installation Coordination**

The Contractor shall coordinate with the 17CS/SCXP IT Manager, Building Security, Building Manager, and others as assigned by the Base, for building access and project implementation.

#### **2.1.2 Base Support**

The Contractor shall identify any Base support requirements (for example, lay-down and storage areas) necessary to complete this project in their proposal. The Contractor shall coordinate with the CS 45-60 days prior to arrival or delivery of any materials or equipment, or accessing any buildings, submitting Form 332's as necessary. The Contractor shall return all government furnished lay-down and storage areas to their original condition upon completion of the project.

#### **2.1.3 Safety Requirements**

The contractor shall remain in compliance with all Federal, State, and base security and safety laws, regulations, policies, and requirements.

##### **2.1.3.1 Site Coordination**

The Contractor shall identify construction or allied support requirements in their proposal. The Contractor shall meet with the base safety officer immediately upon arrival on site for review of the specific safety requirements prior to installation.

### **2.1.3.2 Accident/Incident Reporting and Investigation**

The Contractor shall record and report all available facts relating to each instance of injury to either Contractor or Government personnel to the 17 CS/SCXP Project Manager (PM) and the Base Safety Office unless otherwise stated in the SOO. The Contractor shall secure the scene of any accident and wreckage until released by the accident investigative authority through the Base Point of Contact (POC). If the Government elects to conduct an investigation of the incident, the Contractor shall cooperate fully and assist the Government personnel until the investigation is completed.

### **2.1.3.3 Work Area(s)**

At day's end, the Contractor shall remove all debris and surplus materials from the work place. Equipment and materials required to complete the work effort may remain on site as long as they are organized/stored in a manner that does not cause a safety hazard.

### **2.1.4 Security Requirements**

The Contractor shall process and provide a Site Visit Request Letter to 17 CS/SCXP within five (5) calendar days after contract award. This Letter shall be submitted in all CAPS. This spreadsheet shall identify the names (as shown on the driver's license), driver's license numbers and state of issue of the personnel who will be performing work under this SOO, company name, address, phone number and contract number, start date and end date. This information is required to grant access to the base. If required by the base, the Contractor shall provide identification badges for their employees. All Contractor personnel shall wear these badges while on duty on the Government site. The badges shall identify the individual, company name, and be clearly and distinctly marked as Contractor and be in accordance with base regulations.

#### **2.1.4.1 Security Clearances**

Building 523 is an Open Storage Sensitive Compartmented Information Facility (SCIF); therefore, contractors without TS-SCI clearance must be supervised at all times. During project implementation, the Contractor shall coordinate access to secure areas at least 24 hours in advance with the 17 CS/SCXP PM and building Special Security Office (SSO). It is the Government's responsibility to provide the escorts.

#### **2.1.4.2 Operational Security (OPSEC)**

Network infrastructure (MHDS, MH/HH locations, fiber paths, etc.) is on the 17 CS Critical Information List and must be protected. The Contractor shall take appropriate measures to protect detailed information pertaining to the EFI&T effort, to include appropriate marking of documents as "For Official Use Only (FOUO)," and

ensuring limited distribution of documents and schematics/drawings to only those individuals with a valid need to know. In accordance with (IAW) AFI 10-701, OPSEC Considerations, the contractor shall develop an OPSEC plan to ensure the protection of FOUO data either furnished by the government or produced by the contractor. The contractor's OPSEC plan provided in the RFP shall be incorporated into the SOO.

### **2.1.5 Environmental Management**

The Contractor shall comply with the most stringent environmental federal, state, and local laws and regulations; and Air Force policies, instructions, and plans. The federal Government is not exempt from compliance with environmental regulations. The Contractor shall maintain an awareness of changing environmental regulatory requirements to avoid environmental deficiencies for activities on Goodfellow AFB TX. The Contractor shall ensure their Sub-contractors comply with these specifications.

### **2.1.6 Permits**

The Contractor shall complete and process all permits required to complete the installation prior to modifications to a facility, Base Civil Engineering Work Request (AF Form 332), and AF Form 103, Work Clearance Form. The AF Form 332, and any other required permits (as determined by Base Civil Engineering (BCE)) shall be submitted IAW local procedures. The form(s)/permits shall be submitted within ten (10) calendar days after award.

### **2.1.7 Integrated Product Team (IPT)**

The Contractor shall chair a weekly IPT meeting that includes Contractor representatives, the Government Contracting Officer (CO), the 38 ES Cyberspace Integrator-Base (CSI-B), the Goodfellow AFB CS Project Manager, and other Base personnel as required. The Contractor shall provide an agenda no later than (NLT) one business day prior to the IPT meeting, along with a worldwide "Meet Me" teleconference capability for the duration of the project. The purpose of the IPT meeting is to discuss project progress, problems being encountered, and other information necessary/beneficial to ensure success and timely completion of contract requirements. The Contractor shall record meeting minutes and distribute to participants.

### **2.1.8 Quality Assurance**

The Contractor shall provide a Quality Control Plan for the life of the project and shall provide Quality Assurance Support for the life of the project. The Contractor's quality assurance evaluator (QAE) shall assist the Government representative in performing random spot checks and system acceptance tests. The Contractor shall be responsible for identifying system deficiencies and/or discrepancies throughout the life of the

project. A weekly report (soft copy) shall be submitted indicating progress/status and listing any deficiencies/discrepancies found and actions to correct them.

## **2.1.9 Contractor Personnel**

### **2.1.9.1 Project Management**

The Contractor shall provide a Project Manager (PM) and alternate(s) responsible for contract performance and continuity. The Contractor shall identify the Project Manager's or alternate's range of authority to act for the Contractor relating to daily contract operation.

### **2.1.9.2 Site Point of Contact (POC)**

The Contractor shall designate the Contractor's on-site team leader and alternate(s) as the Site POC for individual projects in their Site Visit Request Letter. The Site POC or alternate(s) shall be on site during duty hours until project completion and shall oversee all facets of the installation tasks. The Site POC shall be the interface for all work site communications with the Government, including quality, safety, and discrepancy matters.

### **2.1.9.3 Personnel Requirements**

The Project Manager, Site POC, and respective alternate(s) shall be able to read, write, speak, and understand English and shall be on site to coordinate permits, clearances, and receive shipments/material related to the task order.

### **2.1.9.4 Installation Personnel Requirement**

As this project entails Inside Cable Plant connection with a classified system, the personnel performing the installation must be an American citizen with (a minimum of) a Secret Security Clearance.

### **2.1.9.5 Enterprise Wide Contractor Manpower Reporting Application (ECMRA)**

The contractor shall report ALL contractor labor hours (including subcontractor labor hours) required for performance of services provided under this contract for the Premise Wiring Fiber Optic Cable IT Infrastructure Installation via a secure data collection site. The contractor is required to completely fill in all required data fields using the following web address <http://www.ecmra.mil>. Reporting inputs will be for the labor executed during the period of performance during each Government fiscal year (FY), which runs October 1 through September 30. While inputs may be reported any time during the FY, all data shall be reported no later than October 31 of each calendar year. Contractors may direct questions to the ECMRA help desk.

### **2.1.10 Warranty & O&M Services**

Warranty will be a minimum warranty as prescribed in NETCENTS or equivalent. The warranty period shall start from the date of system and/or project acceptance. The Contractor shall provide written procedures and required information for any warranty services at or prior to site acceptance.

### **2.1.11 Manuals**

The Contractor shall provide the latest version of the operation, installation, and maintenance manuals and practice/users guide for each system installed as provided by the original manufacturer with all new equipment, and shall be provided to 17 CS/SCXP PM.

## **2.2 SPECIFIC REQUIREMENTS**

The Contractor shall replace the existing CAT5 Cabling and supporting IT Infrastructure with Multi-Mode OM3 Fiber Optic Cabling (FOC) and supporting IT Infrastructure. It is expected that the Contractor shall leave in-place the legacy cabling to account for all end-points, minimizing building network downtime, verifying connections while installing the new infrastructure, testing all new IT Infrastructure, thereafter transitioning to the new cabling and removing the legacy cabling. The Contractor shall coordinate with the 17 CS/SCXP Office to transition to the new IT Infrastructure after all testing has been performed. Said transition plan is to be a part of the Contractor's Test Plan.

A network diagram does not exist for the current IT Infrastructure. What is provided is the quantity of known network drops, the quantity of drops in the rooms, and the configuration of those drops. The Contractor shall install replacement equipment where the existing equipment is located, i.e., replace network wall plates in place where possible. The installation involves only NIPR and SIPR drops.

The Contractor's cabling system solution shall not impede access to electrical boxes/openings or any other existing equipment, such as air dampers, fire alarm devices, or any safety devices, etc.

### **2.2.1 Current IT Infrastructure and Equipment**

Building 523 is a two-story Class-2 structure, containing five (5) communications rooms (IT closets), with hardened ceilings in the hallways. Cable management is to be run above the classrooms, in the attic, until the IT closet on each floor. See Section 5.1 and Section 5.2 for floorplans and existing CAT5 network drops for the first and second floors, respectively.

### **2.2.1.1 IT Closets / Equipment Racks**

- There are two (2) IT rooms on the first floor in rooms 113, and 138
- There are two (2) IT closets on the second floor in rooms 210, and 239

### **2.2.1.2 Approved Open Storage SCIF**

The building is an approved Open Storage SCIF.

### **2.2.1.3 Cabling above false ceiling**

Legacy cabling in the building does not adhere to good cable management. A desired outcome of this project is orderly cable management practices such as utilizing cable ladders, j-hooks, and/or cable troughs, also conduits for wall penetrations, cable arms at the racks, and proper cable labeling.

## **2.2.2 New Installation**

The Contractor shall replace the existing CAT5 IT infrastructure with new multi-mode (MM) OM3 FOC IT infrastructure throughout Building 523.

- (A) The Contractor shall verify all legacy end-point connections, wall-jacks to network panel/port.
- (B) The Contractor shall utilize a consistent color management scheme IAW Goodfellow AFB cable management scheme for the installation: Green cabling for NIPR, Red cabling for SIPR.
- (C) The Contractor shall utilize different connectors for each type of cable, i.e., SC-connector type for NIPR and a LC-connector type for SIPR, at both the end-point in the rooms (wall-plate, Panduit, direct connection, and floor tile) and at the equipment rack FODP.
- (D) The Contractor shall run NIPR and SIPR FOC in separate cable trays for management
- (E) The Contractor shall furnish and install new FODPs.
- (F) The Contractor shall install media converters, fiber patch cables, and CAT6 patch cables at each user drop.
- (G) The Contractor shall fire-stop all cable entrances cut, drilled, or core-drilled into walls, per Industry, TIA, and Safety codes.

- (H) To maintain operations, the new FOC premise wiring shall be installed prior to removal of the existing CAT5 UTP premise wiring to minimize downtime.
- (I) All FOCs shall be “home runs” from User drop (wall-plate, Panduit, direction, and floor tile) to FODP in the IT closet servicing that zone/area.
- (J) The Contractor shall properly label faceplates, patch panels, and cabling per current TIA-606 standard, and shall be so notated in their network diagram.
- (K) The Contractor shall test and certify all new FOC (per TIA 568.C standard). Test results shall be a part of their Test Report.

### **2.2.2.1 Office Network Drops**

The Contractor shall properly install and terminate three hundred and one (301) NIPR drops, and three hundred fifty two (352) SIPR drops within B-523.

#### **2.2.2.1.1 Installation by room**

Legacy installation in B-523 is itemized in Tables 1 and 2, and Section 5: see Room Drop Configuration – NIPR, Room Drop Configuration – SIPR, Room Drop Locations – NIPR, and Room Drop Locations - SIPR. The figure(s) in Section 5 depict the notional location of the existing network drops and the configuration of the drops. The drop configuration varies for each drop, and for each room. Table 1 and Table 2 itemizes the quantity of NIPR and SIPR drops, respectively, and the current configuration, i.e., wall-panel, or Panduit, or floor panel. Section 5 roughly depicts the location of the drops and the configuration of the drop, i.e., single-gang, dual-gang, etc.

Nomenclature explanation:

- NIPR-WM NIPR cabling, wall-mounted panel with x# jacks/terminations
- NIPR-FLP NIPR cabling, floor access panel with x# jacks/terminations
- NIPR-FLH NIPR cabling, floor access via cut-out (typically direct connection to device, left under the floor tile with a shielded jack attached) – will be counted as singles
- NIPR-PNB NIPR cabling, routed via wall-mounted Panduit, connected to junction box with x# jacks/terminations
- NIPR-Col NIPR cabling, routed via column, connected to junction box with x# jacks/terminations

Table 1: NIPR Drops by Room Number

Room Network Drop Locations - NIPR						
Room	NIPR-WM	NIPR-FLP	NIPR-FLH	NIPR-PNB	NIPR-Col	# NIPR drops per room
100						0
101				1		1
103						0
104						0
105				2		2
106						0
107						0
108						0
109						0
112			4			4
113			48			48
114						0
115						0
117			21	6		27
120						0
121						0
122						0
124						0
125						0
126						0
130						0
131			12			12
132						0
133						0
134						0
135						0
137			2			2
138				2		2
139		2				2
140			10			10
141						0
143						0
144			5			5
145						0
146			2			2
147						0
148		1				1
149		4				4
150			20			20
151A			13			13
151B			21			21
152		3				3
153		4				4
153A		6				6
154		1				1
154B		2				2

Room Network Drop Locations - NIPR						
Room	NIPR-WM	NIPR-FLP	NIPR-FLH	NIPR-PNB	NIPR-Col	# NIPR drops per room
155A		1				1
155B			20			20
201						0
202						0
205		1				1
206		1				1
208		1				1
209						0
210						0
211						0
212						0
213						0
214						0
217						0
219						0
220						0
224						0
225		12				12
226						0
227						0
228						0
231		2				2
232		2				2
233						0
234		7				7
235		4				4
236						0
237						0
238						0
239		2				2
240		36				36
241						0
242						0
243						0
246		4				4
247		9				9
248		1				1
248B		1				1
249		2				2
250B		1				1
250A		2				2
						0
301	0	112	178	11	0	301
Sums	NIPR-WM	NIPR-FLP	NIPR-FLH	NIPR-PNB	NIPR-Col	# NIPR drops per room

Table 2: SIPR Drops by Room Number

	Room Network Drop Locations - SIPF					
Room	SIPR-WM	SIPR-FLP	SIPR-FLH	SIPR-PNB	SIPR-Col	# SIPR drops per room
100						0
101						0
103						0
104						0
105						0
106						0
107						0
108						0
109						0
112						0
113			15			15
114						0
115						0
117			9			9
120						0
121						0
122						0
124						0
125						0
126						0
130						0
131						0
132						0
133						0
134						0
135						0
137			20			20
138						0
139						0
140			3			3
141						0
143						0
144						0
145						0
146						0
147						0
148						0
149						0
150			5			5
151A			5			5
151B			1			1
152		16				16
153						0
153A		3				3

154						0
154B						0
155A						0
155B						0
201						0
202						0
205		21				21
206		21				21
208		21				21
209						0
210						0
211						0
212						0
213			8	2		10
214						0
217						0
219						0
220						0
224						0
225		4				4
226						0
227						0
228						0
231		21				21
232		21				21
233		1				1
234		7				7
235						0
236						0
237						0
238						0
239		21				21
240		36				36
241						0
242						0
243						0
246		3				3
247						0
248		21				21
248B		20				20
249		21				21
250B		21				21
250A		5				5
						0
352	0	284	66	2	0	352
Sums	SIPR-WM	SIPR-FLP	SIPR-FLH	SIPR-PNB	SIPR-Col	

### **2.2.2.2 Cabling within the False Ceiling**

The Contractor shall design a cable management system, guiding the cabling from each room to the IT closet equipment racks, utilizing, but not limited to, j-hooks, cable troughs, cable ladders, management arms, conduit, etc. Surface mount raceways are to be an “off white” color.

### **2.2.3 Grounding and Bonding**

The Contractor shall document that the equipment is properly grounded, installing Grounding Bus Bar (GBB) (where one does not exist), connecting rack(s) to GBB, and verifying via tests (IAW ANSI/TIA-607C). The Contractor shall provide test method and resistance test values verifying grounding. Grounding Tests shall be a part of the Contractor’s Test and Installation Test Plan, including pictures of the final installed product.

#### **2.2.3.1 Grounding Bus Bar**

The Contractor shall install Grounding Bus Bars (GBB) in the IT Rooms/Closets, near to the equipment racks.

#### **2.2.3.2 Grounding Racks**

The Contractor shall ground the equipment racks to the GBB.

#### **2.2.3.3 Equipment Racks**

The Contractor shall ground the equipment racks to the Telecommunications Bus Bar, IAW Industry Standards. See Appendix A for applicable standards. A Telecommunications Grounding Bus Bar will be installed in each IT closet by the Base CE.

#### **2.2.3.4 Equipment**

The Contractor shall ground equipment to the equipment racks IAW industry standards.

### **2.2.4 Patch cables**

The Contractor shall provide and install FOC patch cables, of the appropriate color, and connector type from the FODPs to the network devices in the equipment racks, and from the wall panels to the equipment.

## **2.2.5 Legacy Cabling Removal**

The Contractor shall remove and dispose of all existing CAT5 (NIPR and SIPR) cabling, jacks, panels, etc. (CAT5 equipment) replaced by the FOC after new FOC cabling is installed and successfully tested. (See Table 1, and Section 5 for an itemization of existing CAT5 NIPR and SIPR drop locations, and the locations of IT closets). The Contractor shall coordinate with 17 CS/SCXP for disposition of CAT5 equipment.

### **2.2.5.1 Repair**

The Contractor shall be responsible for patching holes in walls/ceilings after old cabling is removed.

## **2.2.6 Fire Code**

The Contractor shall include in their Installation Plan how they will seal wall penetrations to meet Fire Codes.

## **2.3 OTHER REQUIREMENTS**

### **2.3.1 Installation Schedules**

The Contractor shall provide a complete milestone schedule that denotes project activities to include time-phased start and completion dates for the project and sub-projects associated with the installation of the components and system. The Contractor shall provide an installation schedule NLT 10 days after contract award.

### **2.3.2 Weekly Status Reports**

The Contractor shall prepare a Weekly Status Report and distribute to IPT members. The purpose of the report is to inform IPT members of project progress, problems being encountered, and other topics necessary/beneficial to ensure success and timely completion of the contract requirements. The Status Report and meeting agenda may be combined as long as the resulting report contains all the required elements and contains sufficient detail to serve as project record.

### **2.3.3 Drawings**

#### **2.3.3.1 As-Built Drawings**

The Contractor shall provide updated As-Built drawings in Visio and pdf formats of the Rack Elevation, and Inside Cable Plant, and distribute to THE 17 CS/SCXP Project Manager (PM). These drawings shall depict the entire pathway, and details of the installation, including but not limited to: labeling, cables, inner-ducts, conduits,

maintenance loops, distances, Inside Cable Plant, and As-Built Rack Elevations, as specified by the 17 CS/SCX.

#### **2.3.4 Test and Acceptance/Installation Test Plan**

The Contractor shall provide test equipment and personnel required to conduct all posttests. The Contractor shall record all post-inspections, and tests as they are accomplished. The Contractor shall make all test sheets/results available for 17 CS/SCXP representative upon completion. The Contractor shall notify the 17 CS/SCXP at least five (5) calendar days prior to any testing. All testing will be IAW accepted telecommunications industry standards for the type of project being accomplished. It is assumed that all cables when delivered are fault free from the manufacturer. All cables shall be tested prior to installation. No cable faults are allowed in the new installation. The Contractor shall provide test reports to the government within ten (10) calendar days of completion. The Contractor is required to locate, repair, and retest all irregularities found during the testing phase caused by the cable installation. The Contractor shall coordinate with 17 CS/SCXP before starting the final system test.

##### **2.3.4.1 Test Plan**

The Contractor shall provide a test plan as to how the system shall be tested to demonstrate to the Government that the system is fully operational and meets or exceeds the specified requirements and that the system is fully ready to be placed into service. The Contractor shall test the system to demonstrate its proper performance to the Government quality assurance representative. These tests shall be accomplished prior to the system being placed into service.

##### **2.3.4.2 Testing**

The Contractor shall conduct on-site testing IAW Original Equipment Manufacturer (OEM) installation manuals, practices and the appropriate vendor's test procedures. The Contractor shall furnish all test equipment and personnel required to conduct all required testing. During any testing phase, the Government reserves the right to perform any of the contractor-performed inspections and tests to assure solutions conform to prescribed requirements. The Contractor shall provide on-site support during the acceptance testing. The Contractor shall participate with the Government in testing the complete communications system. When any system, subsystem, component, or requirement test fails to meet the requirements of the test, Government acceptance and payment will be withheld until the cause of the failure is corrected to the Government's satisfaction. After appropriate corrective action has been taken, all tests including those previously completed, related to the failed test and the corrective action shall be repeated and successfully completed prior to Government acceptance.

### **2.3.4.3 Acceptance/Installation Test Report**

The Contractor shall provide an installation test report of the results of the testing accomplished under the installation test plan. The Test Report(s) shall be provided to the Government no later than 10 calendar days after test(s) have been completed.

### **2.3.4.4 Final Acceptance**

The Contractor shall schedule a final project walk-through with the Base POC. This should be scheduled 10 calendar days prior to acceptance.

### **2.3.5 Property Protection**

The Contractor shall be responsible for safeguarding all Government property provided for Contractor use. At the end of each work period, all Government facilities, equipment, and materials shall be secured. When not under direct control of Contractor personnel, all Government facilities, equipment, and materials utilized by contracting personnel shall be secured.

### **2.3.6 Documentation**

The Contractor shall provide the Government with all documentation compiled during the course of the project. The documentation will be delivered by the Contractor in both hard copy and soft copy formats (on a Data CD or Data DVD). This documentation will include but not limited to the following.

The Contractor shall provide standard commercial deliverables and documentation. Documentation shall be provided in Microsoft Word 2010 (or higher) format, or PDF format, unless specified otherwise or agreed to by the CO and the Contractor before installation.

#### **2.3.6.1 Product Inventory**

The Contractor shall provide the Government with the serial numbers of all equipment installed. The Contractor shall provide the Government As-Built Documentation (to include all wiring diagrams).

#### **2.3.6.2 Manuals and Practices**

The Contractor shall provide at least one paper copy and one soft copy of the latest version of operation, installation, and maintenance manuals and practices/users guide provided for by each manufacturer.

### **3.0 GENERAL INFORMATION**

#### **3.1 Period of Performance**

The period of performance for the project shall be determined based on the proposed schedule and actual contract award date. The period of performance is a base period of proposed project duration including installation, testing, and acceptance.

#### **3.2 Place of Performance**

The place of performance is Goodfellow AFB TX.

#### **3.3 Hours of Operation**

The Contractor shall routinely work during normal duty hours (7:00am to 4:30pm local time zone) of the site. However, mission requirements may necessitate work outside normal hours (nights and/or weekends), especially if existing service must be interrupted. Any site work requested by the Contractor to be performed outside of normal duty hours shall be coordinated with the Goodfellow AFB 17 CS/SCXP POC at least 10 calendar days in advance. If performance of work outside normal duty hours will be required to meet the scheduled dates stated above, include desired working days in the Proposal.

#### **3.4 Holidays/Down Days**

The Contractor shall not perform work under this contract on federal holidays or site-unique down-days unless expressly authorized by the CO and coordinated with the Goodfellow AFB 17 CS/SCXP Project manager.

#### **3.5 Minimum Contractor Qualifications**

All work shall be performed by an experienced Telecommunications Contractor. The Contractor shall have a minimum of three (3) years' experience in Telecommunications Systems installations.

## 4.0 APPENDICES

### 4.1 Appendix A - APPLICABLE STANDARDS

The Contractor shall utilize the most current revisions of these standards. This list is not all-inclusive list of standards. The Contractor shall comply with all applicable commercial codes and standards.

Air Force Instruction	AFI 91-203	Air Force Consolidated Occupational Safety Instruction
Air Force Manual (AFM)	33-214, Volume 2 21 September 2011	Communications and Information EMISSION SECURITY COUNTERMEASURES REVIEWS
ANSI/NECA/BICSI	607-2011; 2011	Standard for Telecommunications Bonding and Grounding Planning and Installation Methods for Commercial Buildings
Building Industries Consulting Services International (BICSI)	BICSI TDM Manual	Telecommunications Distribution Methods (TDM) Manual
Base Information Transport Infrastructure (BITI) Wired Base Area network (BAN) Technical Requirements Document (TRD)	BITI January 2014, or most recent	Version 1.4
BICSI TDM Manual	Most recent	Building Industries Consulting Services International Telecommunications Distribution Methods (TDM) Manual
Committee on National Security Systems (CNSSAM)	CNSSAM TEMPEST/1-13 17 JANUARY 2014	(U) RED/BLACK Installation Guidance
Committee on National Security Systems (CNSSI)	CNSSI No. 7003 September 2015	Protected Distribution Systems (PDS)
Occupational Safety & Health Administration (OSHA)	CFR 29 Part 1910.268	Telecommunications
Department of Defense	UFC 3-580-01 01 June 2016 Change 1, 01 Jun 2016	Unified Facilities Criteria (UFC) Telecommunications Interior Infrastructure Planning and Design
Department of Defense	DoDM 5105.21, Volume 2, October 19, 2012 Incorporating Change 1, Effective April 5, 2018	Sensitive Compartmented Information (SCI) Administrative Security Manual: Administration of Physical Security, Visitor Control, and Technical Security
National Electric Code	NEC 2014	National Electric Code Book
National Electrical Manufacturers Association (NEMA)	NEMA TC 2	Electrical Polyvinyl Chloride (PVC) Tubing and Conduit
National Fire Protection Association (NFPA)	NFPA 70	National Electric Code
National Security Telecommunications and Information Systems Security (NSTISS)	NSTISSAM TEMPEST/1- 95 30 January 1995	Shielded Enclosures

National Security Telecommunications and Information Systems Security	NSTISSAM TEMPEST/2-95 12 December 1995	RED/BLACK Installation Guidance
National Security Telecommunications Information System Security Advisory Manual 2-95 and 2-95A	NSTISSAM TEMPEST/2-95, 2-95A February 3, 2000	RED/BLACK Installation Guidance
Rural Utilities Service (RUS) Bulletin	RUS 1735F-401	RUS Standard for Splicing Copper and Fiber Optic Cables
Rural Utilities Service (RUS) Bulletin	RUS 1751F-801	Electrical Protection Fundamentals
Rural Utilities Service (RUS) Bulletin	RUS 1753F-151 (515b)	Specifications and Drawings for Underground Cable Installation
Rural Utilities Service (RUS) Bulletin	RUS 1753F-201 (PC-4)	RUS Standard for Acceptance Tests and Measurements of Telecommunications Plant
Rural Utilities Service (RUS) Bulletin	RUS 1753F-207 (PE-87)	REA Specification for Terminating Cables
Telecommunications Industry Association (TIA)	TIA-526-7	Measurement of Optical Power Loss of Installed Single-Mode Fiber Cable Plant
Telecommunications Industry Association (TIA)	TIA-568-C.0	Generic Telecommunications Cabling for Customer Premises
Telecommunications Industry Association (TIA)	TIA-568-C.1	Commercial Building Telecommunications Cabling Standard
Telecommunications Industry Association (TIA)	TIA-568-C.2	Balanced Twisted-Pair Telecommunications Cabling and Components Standard
Telecommunications Industry Association (TIA)	TIA-568-C.3	Optical Fiber Cabling Components Standard
Telecommunications Industry Association (TIA)	TIA-569-C	Commercial Building Standard for Telecommunications Pathways and Spaces
Telecommunications Industry Association (TIA)	TIA-570-C	Residential Telecommunications Infrastructure Standard
Telecommunications Industry Association (TIA)	TIA-598-C	Optical Fiber Cable Color Coding
Telecommunications Industry Association (TIA)	TIA-606-B	Administration Standard for Telecommunications Infrastructure
Telecommunications Industry Association (TIA)	TIA-607-B	Commercial Building Grounding and Bonding Requirements for Telecommunications
Telecommunications Industry Association (TIA)	TIA-942	Telecommunications Infrastructure Standard for Data Centers

## 4.2 Appendix B – ACRONYMS

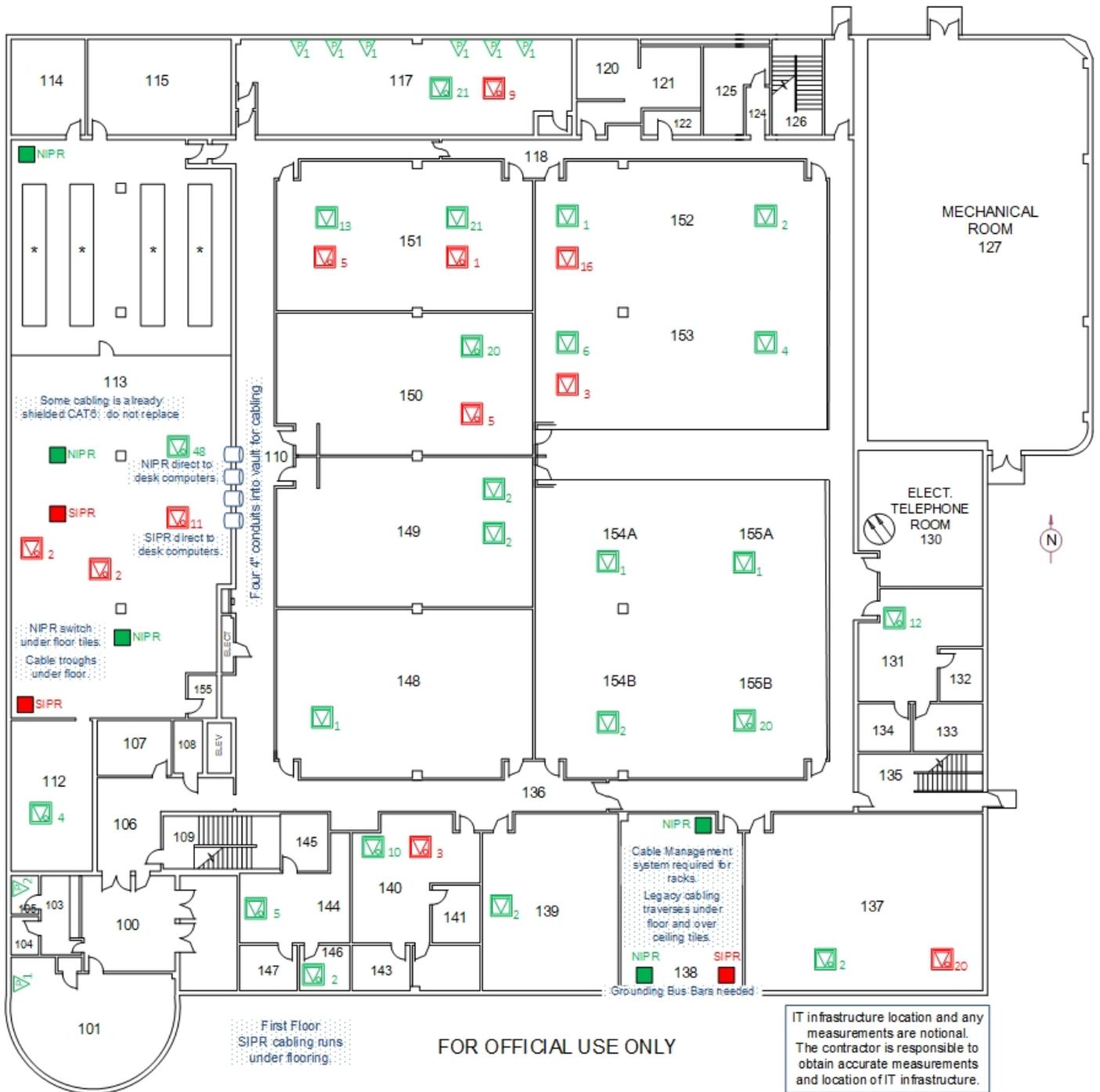
Approx.	Approximately	Approx.
A/V	Audio Visual	A/V
BCE	Base Civil Engineering	BCE
BITI	Base Information Transport Infrastructure	BITI
CAT	Crisis Action Team	CAT
CCC	CAT Control Center	CCC
CDRL	Contract Deliverable	CDRL
CE	Civil Engineering	CE
CFE	Contractor-Furnished Equipment	CFE
CFP	Contractor-Furnished Property	CFP
CIL	Critical Information List	CIL
CIP	Common Installation Picture	CIP
CIPS	Cyberspace Infrastructure Planning System	CIPS
CMA	Controlled Movement Area	CMA
CO	Contracting Officer	CO
Comm.	Communications	Comm.
CP	Command Post	CP
CS	Communications Squadron	CS
CSI-B	Cyberspace Integrator-Base	CSI-B
CVC	CIPS Visualization Component	CVC
DOD	Department of Defense	DOD
eCMRA	Contractor Manpower Reporting Application	eCMRA
EFI&T	Engineer, Furnish, Install and Test	EFI&T
ES	Engineering Squadron	ES
FOC	Fiber Optic Cable	FOC
FODP	Fiber Optic Distribution Panels	FODP
FOUO	For Official Use Only	FOUO
FY	Fiscal Year	FY
GUI	Graphical User Interface	GUI
GV	Giant Voice	GV
HDPE	High Density Polyethylene	HDPE
HH	Hand Hole	HH
IAW	In Accordance With	IAW
IPT	Integrated Product Team	IPT
IT	Information Technology	IT
JWICS	Joint Worldwide Intelligence Communications Systems	JWICS
MH	Maintenance Hole	MH
MM	Multi-Mode	MM
NIPR	Non-classified Internet Protocol Router network	NIPR
NLT	No Later Than	NLT

OEM	Original Equipment Manufacturer	OEM
O&M	Operations and Maintenance	O&M
OPSEC	Operational Security	OPSEC
OSHA	Occupational Safety & Health Administration	OSHA
OSS	Operations Support Squadron	OSS
OTDR	Optical Time Domain Reflectometer	OTDR
PDF	Portable Document Format	PDF
PDS	Protected Distribution System	PDS
PM	Project Manager	PM
POC	Point Of Contact	POC
Prime	Prime Contractor	Prime
QAE	Quality Assurance Evaluator	QAE
QCM	Quality Control Manager	QCM
Qty.	Quantity	Qty.
RUS	Rural Utilities Service Bulletin	RUS
SCI	Sensitive Compartmented Information	SCI
SCIF	Sensitive Compartmented Information Facility	SCIF
SCX	Scheduler Planner	SCX
SE	System Engineer	SE
SIPR	Secret Internet Protocol Router network	SIPR
SM	Single Mode	SM
SOO	Statement of Objectives	SOO
SSO	Special Security Office	SSO
Sub	Sub-Contractor	Sub
TIA	Telecommunications Industry Association	TIA
TGB	Telecommunications Grounding Bus	TGB
TRD	Technical Requirements Document	TRD

## **5.0 Installation Figures**

Note: The drawings / figures are for reference only.

# 5.1 Building 523 First floor floorplan, existing CAT5 network drops

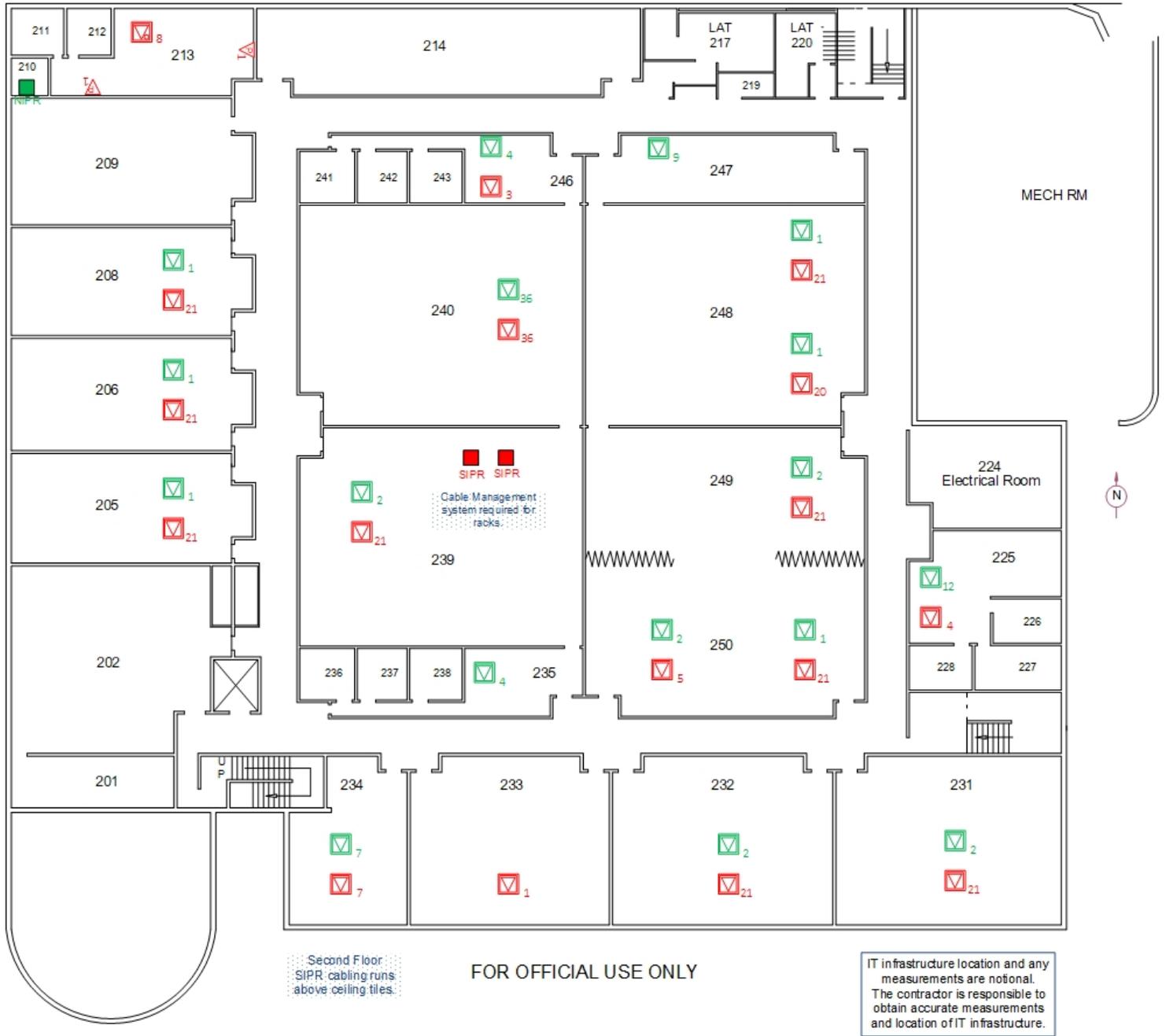


GOODFELLOW AFB, TX  
BLDG 523, 1<sup>ST</sup> FLOOR

**LEGEND:**

- LAN EQUIPMENT
- ▽ NIPR Data Wall-Mounted panel w/#jacks
- ▽ NIPR Data Panduit to junction box w/#jacks
- ▽ NIPR Data Column w/junction box w/#jacks
- ▽ NIPR Data Floor Access Panel w/#jacks
- ▽ NIPR Data Floor cut-out direct connection or leave under floor tile
- ▽ SIPR Data Wall-Mounted panel w/#jacks
- ▽ SIPR Data Panduit to junction box w/#jacks
- ▽ SIPR Data Column w/junction box w/#jacks
- ▽ SIPR Data Floor Access Panel w/#jacks
- ▽ SIPR Data Floor cut-out direct connection or leave under floor tile

## 5.2 Building 523 Second floor floorplan, existing CAT5 network drops



GOODFELLOW AFB, TX  
BLDG 523, 2<sup>nd</sup> FLOOR

**LEGEND:**

□ LAN EQUIPMENT

▽ NIPR Data Wall-Mounted panel w/# jacks

▽ NIPR Data Panduit to junction box w/# jacks

▽ NIPR Data Column w/junction box w/# jacks

▽ NIPR Data Floor Access Panel w/# jacks

▽ NIPR Data Floor cut-out direct connection or leave under floor tile

▽ SIPR Data Wall-Mounted panel w/# jacks

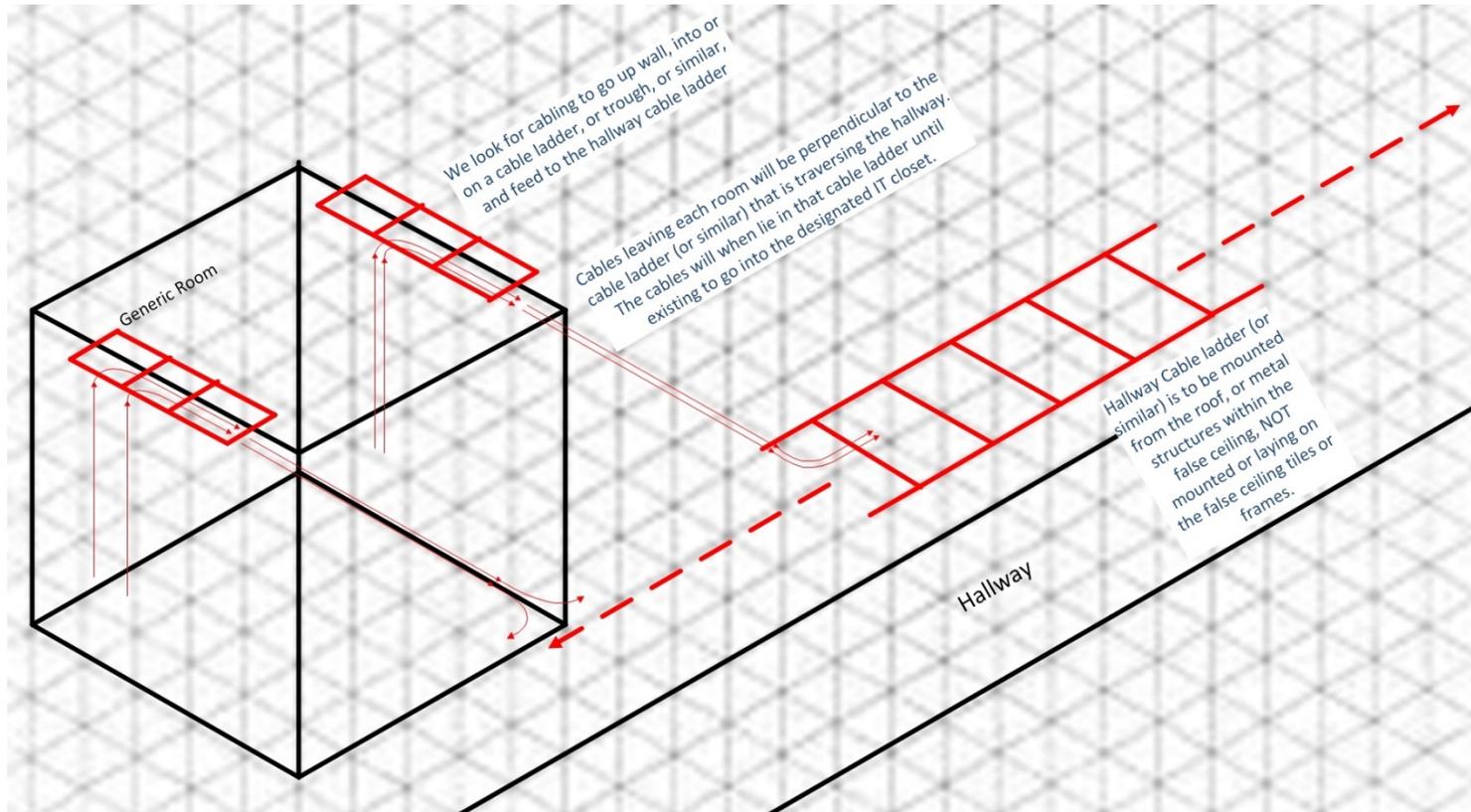
▽ SIPR Data Panduit to junction box w/# jacks

▽ SIPR Data Column w/junction box w/# jacks

▽ SIPR Data Floor Access Panel w/# jacks

▽ SIPR Data Floor cut-out direct connection or leave under floor tile

### 5.3 Notional Cable Routing Solution



## 5.4 Room Network Drop Configuration - NIPR

Room Network Drop Configuration - NIPR							
Room #	Singles	Doubles	Triples	Quads	Quintuples	Sextuples	# NIPR drops per room
100	1						1
101							0
103							0
104							0
105		1					2
106							0
107							0
108							0
109							0
112	4						4
113	48						48
114							0
115							0
117	27						27
120							0
121							0
122							0
124							0
125							0
126							0
130							0
131	12						12
132							0
133							0
134							0
135							0
137	2						2
138	2						2
139		1					2
140	10						10
141							0
143							0
144	5						5
145							0
146	2						2
147							0
148	1						1
149		2					4
150	20						20
151A	13						13
151B	21						21
152	1	1					3
153	6						6
153A	4						4
154	1						1

154B	2						2
155A	1						1
155B	20						20
201							0
202							0
205	1						1
206	1						1
208	1						1
209							0
210							0
211							0
212							0
213							0
214							0
217							0
219							0
220							0
224							0
225	12						12
226							0
227							0
228							0
231	2						2
232	2						2
233							0
234	7						7
235	4						4
236							0
237							0
238							0
239	2						2
240	36						36
241							0
242							0
243							0
246	4						4
247	9						9
248	1						1
248B	1						1
249	2						2
250B	1						1
250A	2						2
301	291	10	0	0	0	0	301
Sums of Drops	Singles	Doubles	Triples	Quads	Quintuples	Sextuples	# NIPR drops per room

## 5.5 Room Network Drop Configuration - SIPR

Room Network Drop Configuration - SIPR							
Room #	Singles	Doubles	Triples	Quads	Quintuples	Sextuples	# SIPR drops per room
100							0
101							0
103							0
104							0
105							0
106							0
107							0
108							0
109							0
112							0
113	15						15
114							0
115							0
117	9						9
120							0
121							0
122							0
124							0
125							0
126							0
130							0
131							0
132							0
133							0
134							0
135							0
137	20						20
138							0
139							0
140	3						3
141							0
143							0
144							0
145							0
146							0
147							0
148							0
149							0
150	5						5
151A	5						5
151B	1						1
152	16						16
153	3						3
153A							0
154							0
154B							0

155A							0
155B							0
201							0
202							0
205	21						21
206	21						21
208	21						21
209							0
210							0
211							0
212							0
213	10						10
214							0
217							0
219							0
220							0
224							0
225	4						4
226							0
227							0
228							0
231	21						21
232	21						21
233	1						1
234	7						7
235							0
236							0
237							0
238							0
239	21						21
240	36						36
241							0
242							0
243							0
246	3						3
247							0
248	21						21
248B	20						20
249	21						21
250B	21						21
250A	5						5
352	352	0	0	0	0	0	352
Sums of Drops	Singles	Doubles	Triples	Quads	Quintuples	Sextuples	# SIPR drops per room