



STATE OF FLORIDA
DEPARTMENT OF MANAGEMENT SERVICES
INVITATION TO NEGOTIATE (ITN) 730:0408

BI-WEEKLY CONSTRUCTION MEETINGS

During construction, mandatory bi-weekly progress meetings shall be held at the construction site or via conference call. The facilities office shall coordinate these meetings with authorized DOR facility staff and the designated Tenant Broker. The meeting shall include:

- A. updated progress schedule to achieve the desired completion date;
- B. special problems, remedial actions, review of the ITN requirements.
- C. status of fees, permits, building inspection, violations.

OCCUPANCY

The date of lease payment commencement shall be determined by the date a Certificate of Occupancy is issued and final acceptance by the State Fire Marshal. In addition, the following criteria have been met:

- A. Certification of Occupancy shall be submitted to the Department Facility office in Tallahassee 30 days prior to the lease start date.
- B. All installations are operational and complete; review of ITN requirements.
- C. The Issuing Officer and designated Tenant Broker have signed a letter of acceptance. The Department of Revenue shall be allowed to occupy and operate in the premises **5 business days prior to actual occupancy date, at no charge to the Department.**
- D. **The Department shall be allowed to install our equipment in the Telecommunications Room two weeks prior to occupancy on 07/18/2019; the room shall have the ability to be secured.**

FIRE PREVENTION

Lessor shall conform to all requirements of the State Fire Marshal and shall obtain 50% completion inspection and final inspections by the State Fire Marshal as required by 633.085, Florida Statutes. Lessor shall provide the facilities office with a copy of all letters and approvals from the State Fire Marshal. Fire and Life Safety equipment shall be maintained by the Lessor and shall meet the state and local requirements for life safety.

Note: It shall be the Lessor's responsibility to contact the Local Fire Protection Agency who shall perform subsequent inspections either annually or every two years thereafter as per Florida Statutes and provide documentation to the Facilities office in Tallahassee.

SECURITY REQUIREMENTS: SHALL INCLUDE, BUT NOT LIMITED TO THE FOLLOWING:

- A. All doors leading outside the building, (apart from the main entrance(s)), are to be equipped with interior push bar release locks and a singular cylinder deadbolt lock (main entrance to have a singular cylinder deadbolt lock), with battery backup to supply electricity for no less than 6 hours when power is lost.
- B. Doors to automatically lock upon closure and require an electronic key card or proximity card reader to gain entry. This system is required to prevent unauthorized entry into the leased space, yet provide employees with convenient entry and exit of the building.
- C. The main client entrance shall be a dead bolt lock.



STATE OF FLORIDA
DEPARTMENT OF REVENUE
INVITATION TO NEGOTIATE (ITN) 730:0408
Addendum for Telecommunications and Cabling Requirements
ADDENDUM: H

TELECOMMUNICATIONS SYSTEMS AND CABLING REQUIREMENTS

The telecommunications room to be completed on or before 07/18/2019.

Table of Contents

Definition of Terms	1
SECTION 1 – Service Entrance, Main Cross Connect, Equipment Rooms and Telecommunications Rooms	4
SECTION 2 – Horizontal Cabling	8
SECTION 3 – Horizontal and Vertical Cabling for Sites with more than one floor or Telecommunications Room (TR).....	10
SECTION 4 – Horizontal Cable Documentation and Testing	12
SECTION 5 – Public Address Systems	12
SECTION 6 – Telephone System Wiring	12
Section 7 – Exceptions to the Requirements	13
Appendix A – Diagrams	14

Definition of Terms

1. **SECURITY ROOM / SECURED AREA / RESTRICTED AREA** – A **Security Room** is a room that has been constructed to resist forced entry and must meet the **Minimum Protection Standards** established in **Communications Room Security Policy #IS020** (see Appendix B). The following shall be designated, but not exclusive of, a security room:
 - a. Service Entrance
 - b. Telecommunications Room
 - c. Equipment Room

2. **Equipment Rooms (ER) and Telecommunications Rooms (TR)**, (often referred to as wiring closets) are the locations within a building where cabling components such as **19” Equipment Racks, Cross-Connects** and **Patch Panels** are located. The **Equipment Room (ER)** is the primary location where the horizontal structured cabling system originates. If the site is a larger site, there may be a need for one or more **Telecommunications Rooms (TR)** connected to the primary **Equipment Room (ER)** via Back-Bone Cabling systems.
 - a. **Horizontal Cabling** is terminated in the (ER/TR) on **Data Patch Panels** and then uses horizontal pathways to reach **Work Areas (WA)**.

NOTE: **Equipment and Telecommunications Rooms** shall be designated as “**security rooms**” or a “**secured area**”, and be designated as “**Restricted Areas**” and meet the Minimum Protection Standards established in **Communication Room Security Policy #IS020** (see Appendix B).

Please initial Offeror acknowledgement on all pages of this submittal form: _____



STATE OF FLORIDA
DEPARTMENT OF REVENUE
INVITATION TO NEGOTIATE (ITN) 730:0408
ADDENDUM: H

3. **Equipment Room (ER)** - An **Equipment Room (ER)** is the primary location of the core of the building's **Structured Cabling System**. This is a location, where the **Service Entrance (SE)** lines, shall interface with the buildings **Structured Cabling Systems**, via a **Main Cross-Connect (MC)**.

NOTE: In smaller office locations, the **Equipment Room (ER)** may also function as a **Telecommunications Room (TR)**.

TELECOMMUNICATIONS ROOMS (TR) - The **Telecommunications Room (TR)** is an additional location where **Horizontal Cabling** from (WA)'s, are terminated in **Data Patch Panels** mounted in **19" Equipment Racks**.

4. **Telecommunications Rooms (TR)** are used when additional connectivity is required between the core of the network in the **Equipment Room (ER)**, and **Work Areas (WA)** not serviced by the cabling connected to the **Patch Panels** in the primary **Equipment Room (ER)**.

NOTE: Multiple **Telecommunications Rooms (TR)** may be required to service a large office complex and/or Multi-Story building application.

NOTE: All **Telecommunications Rooms (TR)** shall be directly connected to the primary **Equipment Room (ER)** via **Back-Bone Cabling Systems** if served out of different physical rooms.

5. **SERVICE ENTRANCE (SE)** - A **Service Entrance (SE)** shall be provided to allow the entrance of Telephone Company and Service Provider lines into the building.

6. **MAIN CROSS-CONNECT (MC)** - The **Main Cross-Connect (MC)** is where the Demarcation Point is located. It is where lines from the Telephone Company and the Data Service Providers cabling systems interface with the building's Structured Telecommunications Cabling Systems. It is typically located in the (ER) where the in-house cabling systems connect with the Service Provider's cabling, allowing us to extend the services into the (ER).

7. **Demarcation Point** - Also called **Point of Demarcation (POD)**, **Demarc extension**, or **Demarc**, it is the physical point at which the public network of a telecommunications company (i.e., a phone or cable company) ends and the private network of a customer begins. This is usually where the cable physically enters a building via a **Service Entrance** and is located in the (MC) or (ER).

8. **Extended Demarcation Wiring for Data Circuit** – *It is the responsibility of the Lessor to provide demarcation extensions.* To allow for the connection of Data Services from the (MC) to the (TR) there shall be two (2), **Single Mode Fibers** and two (2), **Category 6, Back-Bone** cables installed from the (MC) to the (ER/TR).

- a. **Single Mode** fibers installed from (MC) to (ER/TR).
 - a. These will be terminated using **LC** connectors in a **surface mounted service enclosure** mounted on the Back-Board in the (MC)
 - b. In the (ER/TR) they will terminate using **LC** connectors, in a **2U high Extended Demarcation Point Termination Module / (IC)** mounted near the top of the **19" Equipment Rack**.

Please initial Offeror acknowledgement on all pages of this submittal form: _____



STATE OF FLORIDA
DEPARTMENT OF REVENUE
INVITATION TO NEGOTIATE (ITN) 730:0408
ADDENDUM: H

- b. **Category 6** shall be terminated in the (MC) in a **surface mounted service enclosure**, that shall be mounted on the **Back-Board** and in the (TR) the Cat 6 and cables will terminate in RJ45 interfaces wired using **ANSI/TIA 568-B pinout**, in the **Extended Demarcation Point Termination Module/ (IC)** that is mounted near the top of the **19" Equipment Rack**.

NOTE: If the (MC) to the (TR) distance is in **excess of 90 meters** the Lessor shall **not** be required to install the two (2) Category 6 demarcation extensions.

9. **Extended Demarcation Wiring for Telephone System** – *It is the responsibility of the Lessor to provide demarcation extensions.* All telephone lines/numbers from the **Demarcation Point** present in the (MC/ER), shall be extended from the (MC/ER) to the (TR) via 24/AWG unshielded twisted pair **Back-Bone** cabling. There shall be sufficient 24/AWG unshielded cabling installed between the (ER) and the (TR) to support the need of the tenant. Extended telephone lines shall be terminated in a **Voice Patch Panel** mounted in the top of the **19" Equipment Rack** in the (ER/TR) directly below the **Extended Demarcation Point Termination Module/ (IC)**.

10. **19" EQUIPMENT RACK - 2 Post** Standard Computer Equipment Rack.

11. **INTERMEDIATE CROSS CONNECT (IC) WHICH IS ALSO REFERRED TO AS THE EXTENDED DEMARCATION POINT TERMINATION MODULE, FOR 19" EQUIPMENT RACK-** A 2U high rack mounted patch panel capable of terminating fiber and copper extended demarcation points and back-bone cabling.

12. **VOICE PATCH PANEL** – 2U HIGH 48 PORT Voice Patch-Panels are used to terminate Extended Telephone Demarcs (phone numbers) in the Equipment Rack in the (ER) or (TR), using 8-Position, 2-Conductor interfaces, using pair 1, on pins 4 and 5 to provide dial tone.

13. **DATA PATCH PANEL** – 2U-high 48-port RJ 45 Category 6 compliant Patch panels.

14. **BACK-BONE CABLING SYSTEMS** – Backbone cabling is necessary to connect entrance facilities at the (MC), to the (IC) in equipment rooms (ER), and telecommunications rooms (TR) as follows:

- a. Between **Main Cross-Connects (MC)** and **Equipment Rooms (ER)**
- b. Between **Equipment Rooms (ER)** and **Telecommunications Rooms (TR)**,
- c. For **Vertical Connections** between floors and
- d. In a campus environment, cabling between various buildings' entrance facilities.

15. **HORIZONTAL CABLING SYSTEM AND COMPONENTS** – **Horizontal Cabling Systems** includes the **Equipment Racks, Patch Panels, Cross-Connects in Telecommunications and Equipment Rooms, Patch cords, Category 6 home runs** to the (WA) and the **Wall Jacks** used to terminate the Horizontal cables from the (TR) to the (WA).

- a. All **Horizontal Cabling** and associated components need to be compliant with the minimum standards for Category 6 certification.

Please initial Offeror acknowledgement on all pages of this submittal form: _____



STATE OF FLORIDA
DEPARTMENT OF REVENUE
INVITATION TO NEGOTIATE (ITN) 730:0408
ADDENDUM: H

16. **WALL JACK** – Category 6 compliant, 4-port Quad outlets using Keystone Type inserts.

17. **WORK AREA (WA)** – A **Work Area** is where the **Horizontal Cabling System** from the (**ER or TR**) terminates at the **Wall Jacks**. This can be in a Cubicle, Office or mounted on a wall.

TELECOMMUNICATIONS AND WIRING SYSTEM - The Lessor shall provide and pay for the required materials and labor to install a structured telecommunication system(s) in accordance with the installation requirements of the selected system, from the street to the end user desk. Since different types of telecommunication systems may be installed during the life of the lease, the general facilities should allow for the support of any type of telecommunication system(s). The facilities shall be constructed in a manner that shall meet all local fire, electrical and building codes as well as the needs of the Department and provide high quality of service. Please see Diagram 2 – Facilities Sample Layout, in Appendix A.

SECTION 1 – Service Entrance, Main Cross Connect, Equipment Rooms and Telecommunications Rooms

1. **SERVICE ENTRANCE** - A **Service Entrance** shall be provided to allow the entrance of telephone company lines into the building. This entrance shall be a sleeve of corrosion resistance conduit 4 inches in diameter to ensure the protection of incoming lines. The entrance location shall be capable of allowing spare conduits of equal size for future growth. **Pull strings shall be left in all Conduit runs used to install cabling to allow for future expansion.**
2. **MAIN CROSS-CONNECT** - The **Main Cross-Connect (MC)** facility shall require a plywood backboard 4' X 8' 3/4 inch thick treated with a fire retardant material and wall-mounted. The plywood backboards shall be affixed in such a manner that it shall support the weight of the cable, terminals, and other equipment that shall be attached to it.

The **Main Cross-Connect (MC)** may be located as follows:

- A. In a locked panel box on an exposed wall, near the service entrance.
- B. In a walk-in **Equipment Room (ER)**, that houses the service entrance.
- C. In a **Telecommunications Room (TR)** that also serves as the communications **Equipment Room (ER)**.

At the **Main Cross-Connect (MC)** location there shall be:

- A. Two (2) **Dedicated Isolated Ground**, 120 VAC, 20 Amp **Quadruplex** receptacles. All isolated dedicated outlets shall be color-coded (**Orange**) to denote the **dedicated ground**. Each isolated dedicated ground circuit may have up to the maximum allowable outlets per the local electric code.
- B. One (1) 6 AWG solid copper insulated electrical grounding wire from the building ground terminated to a 12" **Telecommunications Grounding Bar** on the (**MC**) backboard.
- C. A minimum light intensity level of 50 foot candles.

Please initial Offeror acknowledgement on all pages of this submittal form: _____



STATE OF FLORIDA
DEPARTMENT OF REVENUE
INVITATION TO NEGOTIATE (ITN) 730:0408
ADDENDUM: H

- D. Conduit equal in size and quantity of the service entrance conduits, to the communications **Equipment Room (ER)** if required. **Pull strings shall be installed in all conduits for future use.**
- E. Extended Demarcation Wiring for Data Circuit – *It is the responsibility of the Lessor to provide demarcation extensions.* To allow for the connection of Data Services from the (MC) to the (TR) there shall be two (2), Single Mode Fibers and two (2), Category 6, Back-Bone cables installed from the (MC) to the (ER/TR).
- a. **Single Mode** fibers installed from (MC) to (ER/TR).
- a. These will be terminated using **LC** connectors in a **surface mounted service enclosure** mounted on the **Back-Board** in the (MC)
- b. In the (ER/TR) they will terminate using **LC** connectors, in a **2U high Extended Demarcation Point Termination Module/ (IC)** mounted near the top of the **19" Equipment Rack**.
- b. **Category 6** shall be terminated in the (MC) in a **surface mounted service enclosure**, that shall be mounted on the **Back-Board** and in the (TR) the Cat 6 and cables will terminate in RJ45 interfaces wired using **ANSI/TIA 568-B pinout**, in the **Extended Demarcation Point Termination Module/ (IC)** that is mounted near the top of the **19" Equipment Rack**.

NOTE: If the (MC) to the (TR) distance is in **excess of 90 meters** the Lessor shall **not** be required to install the two (2) Category 6 demarcation extensions.

3. Extended Demarcation Wiring for Telephone System – *It is the responsibility of the Lessor to provide demarcation extensions.* All telephone lines/numbers from the **Demarcation Point** present in the (MC/ER), shall be extended from the (MC/ER) to the (TR) via 24/AWG unshielded twisted pair **Back-Bone** cabling. There shall be sufficient 24/AWG unshielded cabling installed between the (ER) and the (TR) to support the needs of the tenant. Extended telephone lines shall be terminated in a **Voice Patch Panel** mounted in the top of the 19" **Equipment Rack** in the (TR) directly below the **Extended Demarcation Point Termination Module/ (IC)**.

4. **EQUIPMENT AND TELECOMMUNICATIONS ROOMS**

EQUIPMENT ROOM - An **Equipment Room (ER)** location shall be provided where the service entrance lines shall interface with the Inside Building Cabling using a **Main Cross-Connect (MC)**.

TELECOMMUNICATIONS ROOM (TR) - **Telecommunications Rooms (TR)** shall be provided as required that, meet the **Minimum Protection Standards**, which requires that any **Telecommunication Room (TR)** be a "**Security Room**" or a "**Secured Area**", and be designated as "**Restricted Areas**" and meet the Minimum Protection Standards established in Communications Room Security Policy #ISO20 (see Appendix B).

- A. The (TR) should be centrally located to the leased space and may also serve as the **Equipment Room (ER)**, containing the **Main Cross-Connect (MC)** facilities.
- B. (ERs) and (TRs) should be a minimum of 75 square feet with a height of at least 8 feet.

Please initial Offeror acknowledgement on all pages of this submittal form: _____



STATE OF FLORIDA
DEPARTMENT OF REVENUE
INVITATION TO NEGOTIATE (ITN) 730:0408
ADDENDUM: H

- C. The entry into the room shall be through a locked door at least 36 inches wide, and the (TR) shall only be accessible from the leased area.
- D. Lighting shall be installed to provide minimum light intensity levels of 50-Foot Candles.
- E. The room shall be served by a HVAC system, capable of maintaining a constant temperature of 72 degrees Fahrenheit (+ or - 3 Degrees), 24 hours a day, 7 days a week (24 x 7), must be dust free, and in a location where electromagnetic interference is minimal.
- F. Additional HVAC or exhaust fans may be required if the room temperature exceeds the computer equipment recommended temperature range.
- G. In the (ER/TR) there shall be conduit equal in size and quantity to the Service Entrance conduits installed from the Main Cross-Connect (MC) location, if required. All conduits shall have pull strings installed.
- H. If the (TR) serves as the (ER), it shall contain the extended demarcation point for provider service lines, as well as the primary location for all Horizontal Cabling systems terminated for the building's structured wiring system and telecommunications equipment and shall not contain any unrelated equipment.
- I. A plywood backboard, 4 X 8 feet by 3/4 inches, shall be mounted on the longest unobstructed wall in the (TR) to support the installation any equipment necessary for the operation of telecommunication systems.
- J. An additional plywood backboard, 4 X 8 feet by 3/4 inches is required if the (TR) also serves as the Equipment Room (ER).
- K. Where needed, there shall be mounted plywood backboards to install such devices as key service units, line and station connecting blocks, surge protector assemblies, demarcation points, main distribution wire cable, and any other equipment necessary for the operation of a telecommunication system.
- L. The plywood backboards shall be securely affixed to the wall in such a manner that it shall support the weight of the cable, terminals, and other equipment that shall be attached to it.
- M. The plywood backboards shall be treated with fire-retardant material.
- N. The telecommunications room to be completed on or before 07/18/2019.
- O. The Department shall be allowed to install telecommunications equipment two weeks in advance of occupancy.

NOTE: Only Telecommunications System Components and related equipment shall be stored in the (ER/TR)—No Unrelated Equipment may be stored in the (ER/TR).

Please initial Offeror acknowledgement on all pages of this submittal form: _____



STATE OF FLORIDA
DEPARTMENT OF REVENUE
INVITATION TO NEGOTIATE (ITN) 730:0408
ADDENDUM: H

Cleaning and maintenance will be performed only in the presence of a Department of Revenue employee authorized to enter the room.

5. Electrical requirements in the (ER/TR):

- a. All isolated dedicated outlets shall be color-coded (**Orange**) to denote the dedicated ground. Each isolated dedicated ground circuit may have up to the maximum allowable outlets per the local electric code.
- b. In the (ER / TR) there shall be two (2) dedicated, isolated ground, 120 VAC, 20 Amp **Quadruplex** receptacles on each wall.
- c. In the (ER / TR) there shall be (1) each dedicated, isolated ground, 120 VAC, 20 Amp **Quadruplex** receptacle mounted immediately above the base of each rack.
- d. In the (ER / TR) there shall be one (1) 6 AWG, solid copper, insulated electrical grounding wire from the building ground, terminated to a 12" **Telecommunications Grounding Bar** on the (TR) backboard. (Cooper B-Line Manuf. Part # SBTGB or equivalent)

6. Equipment Rack requirements in the (ER/TR):

- e. **Equipment Racks** - The Lessor shall provide the appropriate number of equipment racks based on the size of the facility infrastructure. There shall be appropriate wire management harnesses for these racks in the Department's (ER / TR).
- f. The Equipment Rack shall be a standard, self-supporting aluminum 2-Post, 45U Relay Rack, designed specifically for use in telecommunications equipment installations, AMP-559260-1, 19" x 7' (45U x 19"EIA x 3"D) or equivalent. **The Equipment Racks must use Threaded Holes, not Square Holes.**
- g. There shall be at least one (1) equipment shelf in each 19" Rack.
- h. Wire management shall include a horizontal "ladder" cabling tray sufficient for the connection of the top of the rack system to the plywood backboard.
- i. Horizontal Wire Management shall include 2U Wire Management Panels, (1) above and (1) below each Patch Panel. (Tripp Lite Mfg. Part# SRCABLEDUCT2UHD or equivalent)
- j. Vertical Wire Management Panels are required on each side of the rack, spanning the full height (6') on both sides. (Tripp Lite Mfg. Part# SRCABLERINGVRT or equivalent)
- k. The Equipment Racks shall be securely bolted to the floor with a minimum of two bolts on each base angle plate.
- l. The Equipment Racks shall be bonded to the building ground per electric code, using the Telecommunications Grounding Bar on the (ER / TR) backboard.

Please initial Offeror acknowledgement on all pages of this submittal form: _____



STATE OF FLORIDA
DEPARTMENT OF REVENUE
INVITATION TO NEGOTIATE (ITN) 730:0408
ADDENDUM: H

There shall be eight Foot (8') Category 6 Patch Cables provided for connectivity in the Telecommunications Room.

SECTION 2 – Horizontal Cabling

(These specifications are required for all sites)

HORIZONTAL CABLING INSTALLATION:

- 1) **Vendor Selection** – The Communications Cabling contractor providing quote must have a **Registered Communications Distribution Designer (RCDD)** on staff, to make sure design and installation meet the requirements of the industry standards and building codes.
- 2) **Physical Installation Processes** - All cabling installation methods and procedures shall be compliant with the most current series of ANSI/TIA-568-C standards for Structured Balanced Twisted Pair cabling installations.
- 3) **Horizontal Cabling Components** – The **Horizontal Cabling Components** extend from the **Equipment Room/Telecommunications Room (ER/TR)** to the telecommunications outlet/connector in the **Work Area (WA)** and shall meet the requirements of ANSI/TIA-568-C.2 standards for Balanced Twisted Pair Cabling Systems.

All Horizontal Cables, Wall-Jacks, Patch Panels and Patch Cables, shall meet a minimum of Category 6 compliance per **ANSI/TIA-568-C.2** for Balanced Twisted Pair cabling systems.

- A. Horizontal cabling uses a star topology
- B. **All drops shall be Homeruns** – The **Horizontal Cabling** shall be **continuous**, there shall be no splicing of **Horizontal Cabling**, from the wall jack location in the **(WA)** to the RJ-45 patch panel in the **(ER/TR)**.
- C. There shall be at least **Two (2') feet of slack** in the cable at the **(WA)** end of the cable. Slack shall be pulled into the ceiling area when installing the wall jack assembly.
- D. A minimum of **Two (2)** permanent links shall be provided for each work area. Additional runs may be installed at designated **Work Areas (WA)** as required.
- E. All cable runs which enter masonry and/or masonry walls shall be in a half-inch conduit. All conduit ends shall have a plastic end cap to protect against sharp edges.
- F. Additional line locations not specified in this section shall be indicated on blueprint as to their termination points. These lines shall be installed technically equivalent to those installed in the

Please initial Offeror acknowledgement on all pages of this submittal form: _____



STATE OF FLORIDA
DEPARTMENT OF REVENUE
INVITATION TO NEGOTIATE (ITN) 730:0408
ADDENDUM: H

permanent and modular unit locations and shall require the same modular Quad outlet wall jacks as used in the rest of the **Work Areas (WA)**.

- G. Each 4-pair cable shall be terminated to an 8-position, Category 6 certified RJ45 modular jack at the **Work Area (WA)** utilizing Keystone Type inserts.
- H. The **maximum** Category 6, horizontal copper/ UTP **cable length shall be 90 m** (295 ft.) Each 4-pair cable shall be terminated to an 8-position RJ45, **Data Patch Panel** in the **Equipment Room/Telecommunications Room (ER/TR), ANSI/TIA-568-B**.
- 4) The **Work Area (WA)** telecommunications outlet and connectors shall meet Category 6, ANSI/TIA-568-C.2 standards at a minimum.
- a) Category 6, RJ45, 4-Port Modular Jack Wall plate using Keystone inserts;
- b) Category 6, RJ45 Modular Jack Insert; LEVITON Manufacturer Part #5G108-RL5 or equivalent
i) All Cat 6, jacks shall be terminated TIA/EIA T568B
- c) Category 6 Patch Cables, ten (10') Feet in Length for each (WA), connection shall be provided by Lessor.
- 5) **Equipment Room/Telecommunications Room (ER/TR) Horizontal Cross-Connect (HC)** Horizontal Cabling shall be terminated to in the (ER/TR) on a 48 port, 2RU, 110-RJ45 **Data Patch Panel**. (ER/TR) **Data Patch Panel** components must be Category 6 compliant, at a minimum and consist of the following or equivalent components:
- a) Category 6, 48-Port, 2U, 110-RJ45 Patch Panel; LEVITON Manuf. Part #5G596-U48 or equivalent.
i) The 48 Port, 2U, 110-RJ45 Patch Panel (HC) shall be permanently installed on the provided 19" Equipment Rack in the (ER / TR)
ii) All Cat 6, Patch Panels shall be terminated **ANSI/TIA-568B**.
iii) All Cat 6, Patch Panels ports in a common (ER) or (TR) shall be numbered sequentially, with no duplication of port numbers
iv) 2U Cable management between 48-port panels
v) Full-length cable management on both sides of the 19-inch rack
- b) **Category 6 Patch Cables** - Eight (8') Feet in Length for each (TR) Patch Panel, connection shall be provided by Lessor.
- 6) **Category 6, Horizontal Cabling System Rating** – Regarding the advertised capability of the installed cabling system, the lowest-rated component determines the overall rating of the cabling system (permanent links or channels). All cabling must pass ANSI certification testing per the latest revision of ANSI/TIA-568-C.2 standard and results must be provided to the Department of Revenue.

Please initial Offeror acknowledgement on all pages of this submittal form: _____



STATE OF FLORIDA
DEPARTMENT OF REVENUE
INVITATION TO NEGOTIATE (ITN) 730:0408
ADDENDUM: H

CABLING, PATCH-PANEL AND WALL-JACK LABELING -

Backbone Cabling – All fiber optic and Category 6 Backbone Cabling shall be permanently labeled as follows:

- 1) Each Fiber / Category 6 cable shall be permanently labeled at each end with a unique, 2-digit cable number.
- 2) Each Fiber Enclosure shall be permanently labeled using an “xx-yy-zz” identifier.
 - a) The “xx” identifies the type of room that the optical fiber is terminated in, either an **Equipment Room (ER)**, or a **Telecommunications Room (TR)**
 - b) The “yy” identifies the number of the room that the optical fiber is terminated in, either an **Equipment Room (ER)**, or a **Telecommunications Room (TR)**
 - c) The “zz” identifies the unique, 2-digit cable number.
 - d) **Example 1:** **Equipment Room (ER)** # 1, Cable number 2 = Label “ER-01-02”
 - e) **Example 2:** **Telecommunications Room (TR)** # 3, Cable number 5 = Label “TR-03-05”

Horizontal Cabling - Each **Work Area (WA)** telecommunications outlet shall have a unique label placed on the Faceplate or cover of the jack to identify the outlet per the following standard:

- 1) Each **(WA)** Outlet label will contain an “xx-yyy” identifier.
 - a) The “xx” is the number of the Telecommunications Room **(TR)** that the particular **(WA)** Telecommunications Outlet is terminated in. (TR # 1 = 01)
 - b) The “yyy” is the number of the **(WA)** Telecommunications Outlet, which shall correspond to RJ45 Patch Panel port number it is terminated to in the **(TR)**. (Pt 15 = 015)
 - c) Example: (TR1), Patch Panel Port 15 = **(WA)** Outlet Label “01-015”

SECTION 3 – Horizontal and Vertical Cabling for Sites with more than one floor or Telecommunications Room (TR)

Horizontal and Backbone Specifications for SITES utilizing multiple floors and/ or multiple TRs

- A. Where **Telecommunication Rooms (TRs)** are not located on a common floor with the **Equipment Room (ER)**, the Lessor shall provide Backbone Cabling facilities consisting of either:
 - a. Multi-mode fiber optic cable (Multimode optical fiber cabling: OM3; 850-nm laser-optimized 50/125 µm is recommended, OM2; 50/125 µm is allowed).
 - b. 100-ohm Balanced Twisted-Pair cabling (Category 6), from the **Main Cross-Connect (MC)** to an **Intermediate Cross-Connect (IC)**, in each **(TR)**.
 - i. **Copper Cable Specifications** – A minimum of two (2) permanent links will be provided to at least one **(TR)** per floor, and must be terminated on a dedicated RJ45 Patch Panel in each **(ER)** and **(TR)**

Please initial Offeror acknowledgement on all pages of this submittal form: _____



STATE OF FLORIDA
DEPARTMENT OF REVENUE
INVITATION TO NEGOTIATE (ITN) 730:0408
ADDENDUM: H

NOTE: If the (MC) to the (TR) distance is in **excess of 90 meters** the Lessor shall **not** be required to install the two (2) Category 6 demarcation extensions

- c. Topology must be Star Topology per ANSI/TIA-568-C standards
- d. Optical Fiber Specifications - The terminal ends of all fiber cable strands shall be terminated with **LC Connectors**. The connectors shall be mounted on patch panels and installed in 19-inch Rack Mounted Intermediate Cross Connect (IC), where an Equipment Rack is available, or alternatively, in a Wall Mounted Fiber Enclosure if no Equipment Rack is present. All fiber cabling and components shall comply with the following ANSI/TIA-568-C.0 standards:
 - i. Multimode optical fiber cabling: OM3; 850-nm laser-optimized 50/125 μm is recommended, OM2; 50/125 μm is allowed.
 - ii. Multimode optical fiber cabling must contain a minimum of 6 strands of fiber.
 - iii. Multimode optical fiber cabling shall be terminated on both ends using LC connectors with a maximum insertion loss of 0.75 dB.
 - iv. Single mode optical fiber cabling may be used where the required distance exceeds the limitations of OM3 multimode cabling for 1000BASE-SX Ethernet

Locations offering large square footage and on multiple floors or in multiple buildings, one or more additional **(TR)** rooms may be required.

- e. Where multiple Telecommunication Rooms **(TRs)** on the same floor are more than 250 feet apart the, Lessor shall provide multi-mode fiber optic (50/125 micron/ minimum rating OM2) cable from the **Main Cross-Connect (MC)** to an **Intermediate Cross-Connect (IC)**, in each of the **(TRs)** on that floor.
- f. The Lessor shall provide multi-mode fiber optic (50/125 micron/ minimum rating OM2) cable for a Horizontal Cross-Connect (HC) facility between the Telecommunications Rooms (TRs) on the common floor, per Department specification.
- g. Where multiple Telecommunication Rooms **(TRs)** are located in separate a building from the Primary Building's **(ER)/ (MC)** facilities, the Lessor shall provide multi-mode fiber optic (50/125 micron/ minimum rating OM2) cable from the **Main Cross-Connect** location **(MC)** in the Primary Building, to the Main Cross-Connect location (MC) in the Secondary Building.
- h. **Single mode optical fiber cabling may be used where the required distance exceeds the limitations of OM3 multimode cabling for 1000BASE-SX Ethernet.**

Please initial Offeror acknowledgement on all pages of this submittal form: _____



STATE OF FLORIDA
DEPARTMENT OF REVENUE
INVITATION TO NEGOTIATE (ITN) 730:0408
ADDENDUM: H

SECTION 4 – Horizontal Cable Documentation and Testing

(THESE SPECIFICATIONS ARE REQUIRED FOR ALL SITES)

CABLING SYSTEM DIAGRAMS

Schematic Diagrams - The Lessor shall provide an electronic copy and **Two (2)** printed sets of Cabling System Diagrams after wiring installation has been completed. The diagrams shall indicate the location and labeling information of all cabling system components.

TESTING AND TEST RESULTS - All Backbone and Horizontal Cabling elements shall be tested per **ANSI/TIA-568-C Standards**. The ANSI/TIA-568-C, series of Standards include component and cabling specifications as well as testing requirements for Category 6 Balanced Twisted Pair copper cabling.

- A. The results of each test shall meet ANSI/TIA-568-C.2 minimum standards for Backbone and Horizontal Cabling.
- B. Optical Fiber Cabling fibers must be tested and accepted using TIA/EIA 526-14 Method B
- C. The Lessor shall provide an electronic copy of the test results for all Backbone and Horizontal Cabling.

SECTION 5 – Public Address Systems

PUBLIC ADDRESS SYSTEMS - The entire facility shall be wired (including speakers and amplifiers) for a public address system and it shall be fully operational at the time of move-in. The public address system shall be installed at the lessor's expense and will have the capacity for multiple zones; as determined by the tenants' needs.

SECTION 6 – Telephone System Wiring

Telephone System Wiring – All telephone lines/numbers from the **Telephone Company Demarcation Point** present in the (MC/ER), shall be extended from the (MC/ER) to the (TR) via 24/AWG unshielded twisted pair cabling. There shall be sufficient 24/AWG unshielded cabling installed between the (ER) and the (TR) to support the need of the tenant.

All terminations shall be in accordance with standard telephone practices for color coding. The arrangement of 66MI-50 connection blocks, shall be in a manner that reflects good workmanship and practices. All runs shall be tested and labeled on both ends. All cables shall be placed in ceiling using wire management system components to ensure that all runs are grouped throughout the path to their destination.

Please initial Offeror acknowledgement on all pages of this submittal form: _____



STATE OF FLORIDA
DEPARTMENT OF REVENUE
INVITATION TO NEGOTIATE (ITN) 730:0408
ADDENDUM: H

- a. This cabling will be terminated in the **(ER)** on 66MI-50 blocks mounted on the Back-Board in close proximity to the **Telephone Company Demarcation Point**. The **(TR)** end of this cable, will terminate in a 110 RJ-45 Patch Panel or Panels installed at the top of the 19" equipment racks installed in the **(TR)**.
- b. The **Voice Patch Panels** shall be of sufficient size to support the number of phones line required for the site. The **Voice Patch Panels** shall be mounted near the Top of the 19" rack in the **(TR)**. **(See Diagram 1)**
 - a. Based on the size of the building communications infrastructure, multiple **19" Equipment Racks** may be required and if there is a need for additional Telephone Line services, additional sets of **Voice Patch Panels** shall be mounted in the top of the additional Equipment Racks, using the same methodology as used to extend the **Telephone Company** wiring to the first **Equipment Rack**.
- c. Tip and Ring wires for each phone number will be wired to conductors 4 (Ring) and 5 (Tip) in the RJ-45 jack **(See Figure 1)** to support plug and play connectivity using patch cables to allow for the quick and easy relocation of phone numbers within the building. Please reference Diagram 1 in Appendix A.
- d. It is the Lessor's responsibility to have the phone numbers from the telephone company demarcation, **Cross-Connected** to the **66MI-50** block installed in the **(ER)** and extended to a **110 RJ/45** Patch panel (**Voice Patch Panel**) installed in the top of the same 19" racks in the **(TR)**, that will be used to terminate the Category 6 Horizontal Cabling runs from the **Work Areas (WA)**.
- e. These, **Cross-Connects** shall be completed and **Dial-Tone** shall be available on the day selected by the Department to occupy the facility.
- f. **Voice Patch Panels' Labels** – The Voice Patch Panels in the equipment racks in the **(TR)** shall be clearly labeled with the last 4 digits of the phone number associated with each port in the Patch Panel.
 - a. The Lessor shall provide two (2) printed copies of a spreadsheet documenting the complete list of 10-digit phone numbers and what port in the associated **Voice Patch Panels** the numbers are connected to. The Lessor shall also provide an electronic copy of the same information.

Section 7 – Exceptions to the Requirements

Exceptions to the "requirements" will be reviewed on a case-by-case basis and will require a detailed review of the existing space being offered. Requests for exceptions shall be reviewed and approved by

Please initial Offeror acknowledgement on all pages of this submittal form: _____



STATE OF FLORIDA
DEPARTMENT OF REVENUE
 INVITATION TO NEGOTIATE (ITN) 730:0408
 ADDENDUM: H

the department of Revenue’s facilities management team, and signed off by the ISP Telecommunication Team’s designated representative.

Any requests to re-use existing Category 5E wiring systems shall require a complete and successful Category 5E, ANSI/TIA 568-C.2 compliant Industry Standard Certification Test before any approval can be made.

Appendix A – Diagrams

FIGURE 1: TELEPHONE LINES SHALL BE CONNECTED TO PAIR ONE (1) ON PINS 4 AND 5, IN THE CENTER OF THE RJ-45 JACK. EVERY PHONE LINE SHALL BE CONNECTED USING TIP, ON PIN FIVE (5) AND RING, ON PIN FOUR (4) IN THE RJ45 VOICE PATCH PANEL MOUNTED IN THE TOP OF THE 19” RACKS IN THE TELECOMMUNICATIONS ROOM(TR).



Please initial Offeror acknowledgement on all pages of this submittal form: _____



STATE OF FLORIDA
DEPARTMENT OF REVENUE
INVITATION TO NEGOTIATE (ITN) 730:0408
ADDENDUM: H

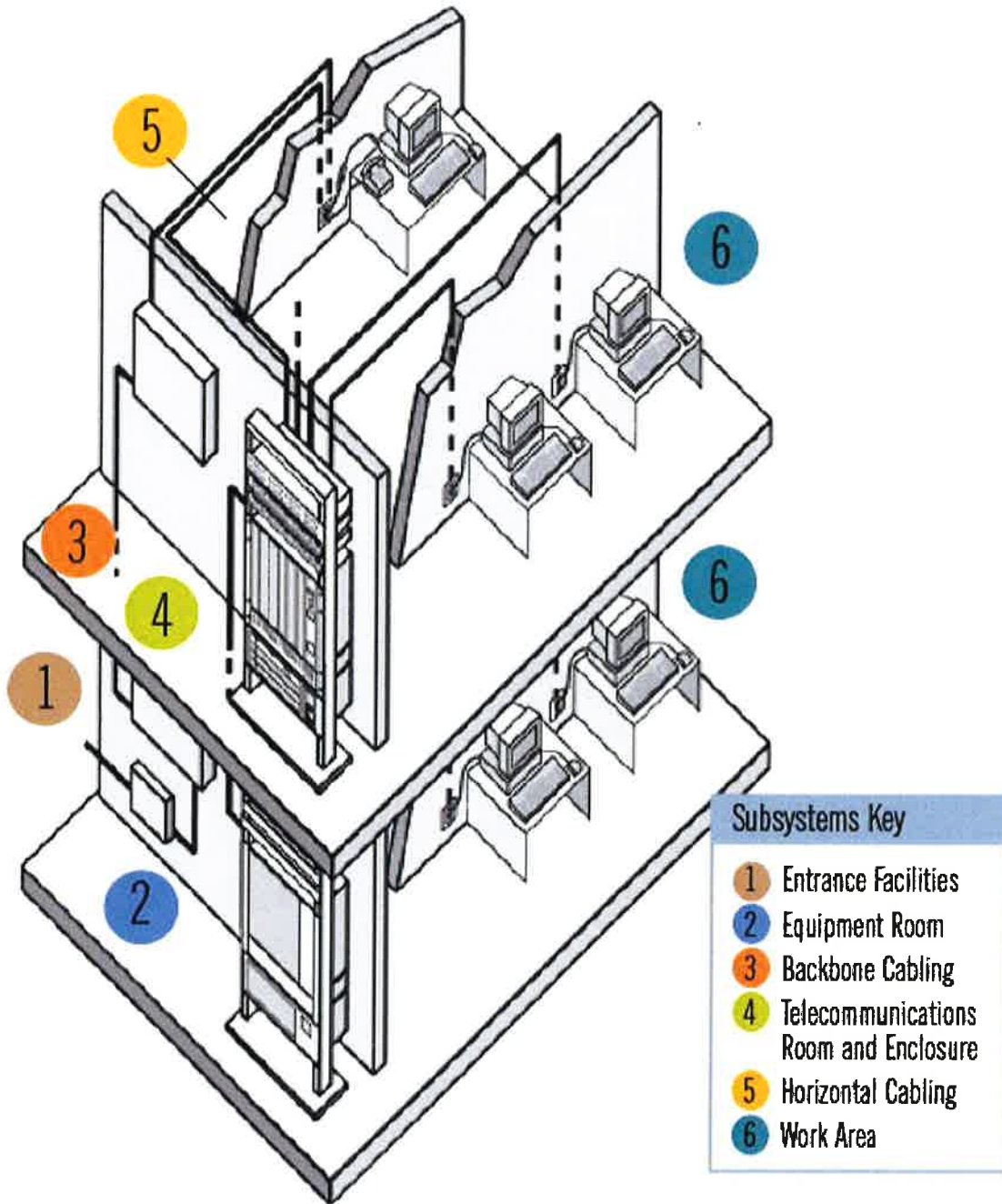


Figure 2 - Facilities Sample Layout

Please initial Offeror acknowledgement on all pages of this submittal form: _____



STATE OF FLORIDA
DEPARTMENT OF REVENUE
INVITATION TO NEGOTIATE (ITN) 730:0408
Addendum for Telecommunications and Cabling Requirements
ADDENDUM: H

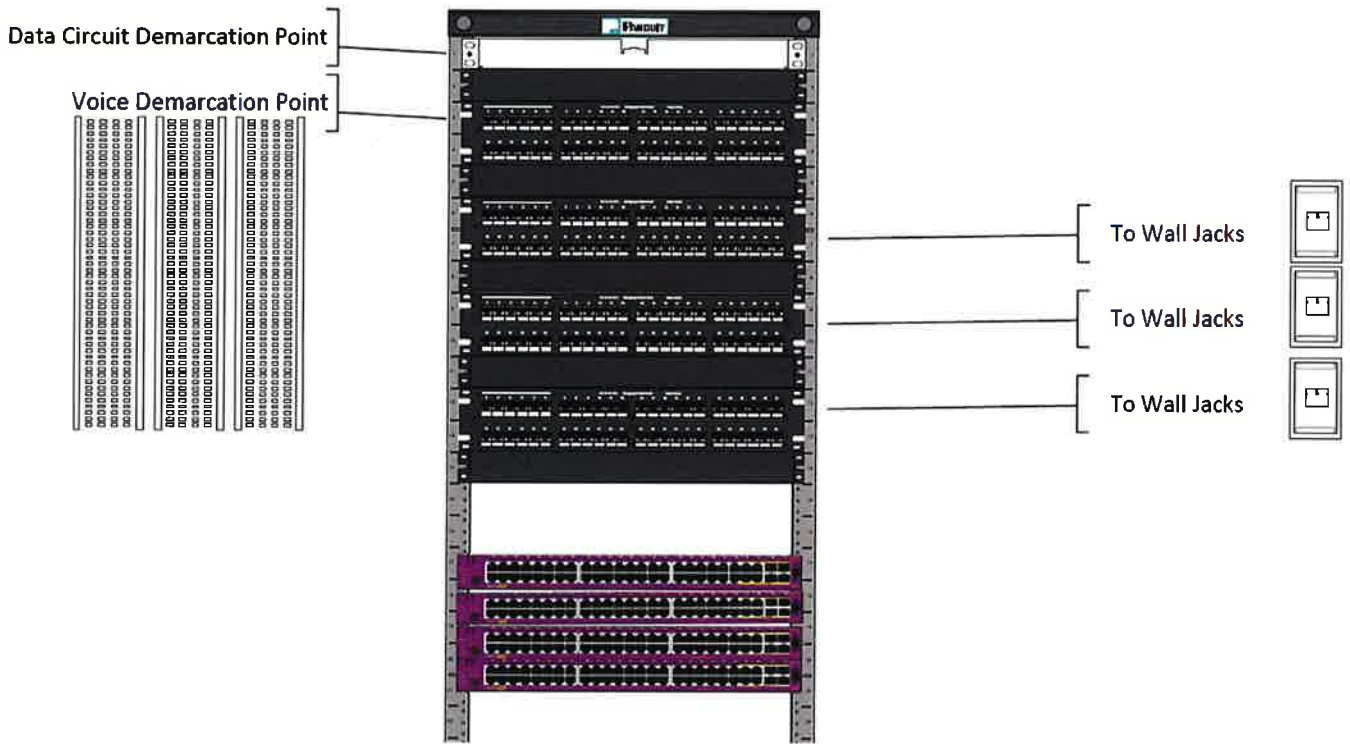


Figure 3 - Sample 19" Rack Layout

For any questions or clarifications call or email:

The Distributed Computer Systems Administrator (850) 717-6060

The Distributed Computer Systems Analyst (850) 717-6077

Please initial Offeror acknowledgement on all pages of this submittal form: _____



STATE OF FLORIDA
DEPARTMENT OF REVENUE
INVITATION TO NEGOTIATE (ITN) 730:0408
ADDENDUM: H

Communications Room Security Policy

Policy Number: IS020

Purpose

The purpose of this policy is to establish minimum physical security standards for Florida Department of Revenue (Department) communication rooms to reduce the potential for information tampering or physical damage to the communications system or network.

Scope

This policy shall cover all Department communications rooms in use and shall be implemented for new installations of these systems.

Policy

All state information processing areas must be protected by physical controls appropriate for the size and complexity of the operations and the criticality of the systems operated at those locations.

Physical access to central information resources facilities shall be managed and documented by the facilities manager or his or her designated representative. Physical access to central information resources facilities shall be restricted to only authorized personnel. Authorized visitors shall be recorded and supervised.

Reviews of physical security measures for information resources shall be conducted annually by the facilities manager or designated representative(s). Written emergency procedures shall be developed, updated, and tested at least annually.

While handled or processed by terminals, communications switches, and network components outside the communication room, confidential or exempt information shall receive the level of protection necessary to ensure its integrity and confidentiality.

Information resources shall be protected from environmental hazards. Environmental controls must also provide for safety of personnel.

Requirements

A. Staff Procedures

All proposals for establishment of a Communications room shall be approved by the Manager for Facilities/Leasing. Requests for exceptions/variances to the listed security will be reviewed on a case by case basis.

Staff who are assigned to these areas shall be issued a key. They shall utilize their assigned key to gain access to the area.

Please initial Offeror acknowledgement on all pages of this submittal form: _____



STATE OF FLORIDA
DEPARTMENT OF REVENUE
INVITATION TO NEGOTIATE (ITN) 730:0408
ADDENDUM: H

Staff who have a frequent and continuing need to enter the area, but are not assigned to the area, shall be issued a card key or a unique numeric combination code to allow entrance via the card key or sequenced button activated locks. These locks are authorized for use only during duty hours. Each of these entrances shall be recorded electronically and maintained for a designated period.

All other persons (other employees and non-employees) requiring entrance to the area shall report to the main entrance of the building to sign in to the restricted area register. They will then be escorted by an employee authorized to enter the area. The restricted area register will be closed out at the end of each month and reviewed by the area supervisor. The review should determine the need for access for each individual.

B. Building/Room Procedures

Sensitive systems shall be isolated in a dedicated computing environment, and shall be correctly maintained to ensure their continued availability and integrity. These systems shall be protected from power failures and other disruptions caused by failures in supporting utilities.

A security room must be enclosed by slab-to-slab walls with a hard-top ceiling, constructed of approved materials (masonry, brick, dry wall, etc.) and supplemented by periodic inspections. All doors shall be locked with both approved deadbolts and sequenced button activated locks used in conjunction with electronic strikes. Glass in doors or windows will be security glass [a minimum of two layers of 1/8 inch plate glass with .060 inch (1/32) vinyl interlay, nominal thickness shall be 5/16 inch.] Vents or louvers will be protected by an Underwriters Laboratory (UL) approved electronic detection system that will annunciate at a protection console or a UL approved central station. Cleaning and maintenance will be performed in the presence of an employee authorized to enter the room.

A secured area must be enclosed by slab-to-slab walls constructed of approved materials and supplemented by periodic inspections, or other approved protection methods, or any lesser type of partition supplemented by UL-approved electronic intrusion detection and fire detection systems. All doors must be locked with strict key and/or combination control exercised. The area will be cleaned during duty hours in the presence of an employee authorized to enter the room. Restricted areas shall be prominently posted and separated from non-restricted areas by physical barriers and control access. A restricted area register will be maintained at a designated entrance and all visitors requiring entrance into the area shall report to the designated entrance. Visitors requiring entrance into the restricted area shall enter (in ink) in the register: their name, signature, specific restricted area requesting entrance into, purpose of entry, name of escorting employee, date and time of entry, and date and time exiting the area.

Locking systems for security rooms and security areas – Minimum requirements for locking systems are high security pin-tumbler cylinder locks that meet the following requirements:

- Key operated mortised or rim-mounted deadbolt
- Have a deadbolt throw of one inch or longer
- Be of a double cylinder design. Cylinders are to have five or more pin tumblers.
- If bolt is visible when locked, it must contain hardened inserts or be made of steel.

Please initial Offeror acknowledgement on all pages of this submittal form: _____



**STATE OF FLORIDA
DEPARTMENT OF REVENUE
INVITATION TO NEGOTIATE (ITN) 730:0408
ADDENDUM: H**

the key and the lock must be "Off Master." Card keys and sequenced button activated locks used in conjunction with electric strikes are authorized for use only during duty hours. Keys to secured areas not in the personal custody of an authorized employee and any combinations will be stored in a security container. The number of keys or knowledge of the combination to a secured area will be kept to a minimum.

Authority/References

United States Code

- IRS Publication 1075 – Tax Information Security Guidelines
- State of Florida Statutes
- Chapter 213.053, Confidentiality of State Tax Information
- Chapter 282, Communications and Data Processing
- Chapter 74-2, Information Technology Security

Definitions

Communications room – A room containing telecommunication or network hardware.

Security room – A room that has been constructed to resist forced entry

Secured area – An internal area that has been designed to prevent undetected entry by unauthorized persons during non-duty hours

Restricted area – An area in which entry is restricted to authorized personnel

Intrusion detection equipment – Equipment designed to detect attempted breaches of perimeter areas. These systems can be used in conjunction with other measures to provide forced entry protection for after-hours security. Alarms for fire and physical hazards are recommended.

Please initial Offeror acknowledgement on all pages of this submittal form: _____



STATE OF FLORIDA
DEPARTMENT OF REVENUE
INVITATION TO NEGOTIATE (ITN) 730:0408
ADDENDUM: H

Lessor:

By: _____

Date: _____

Lessee: The State of Florida
Department of Revenue

By: _____
Clark Rogers
Director Financial Management

Date: _____

Approved as to form and legality,
subject to proper execution by the
parties.

By: _____
Office of The General Counsel

Date: _____

Please initial Offeror acknowledgement on all pages of this submittal form: _____