

# STATE OF NORTH CAROLINA STANDARD FORM OF INFORMAL CONTRACT AND GENERAL CONDITIONS

FOR  
*Fayetteville State University (FSU)*  
*Lyons Science Comprehensive Renovation Project*  
*Request for Proposal (RFP)*

*For Network Cabling*

*Project ID# - 16-0076*

**ADDENDUM #1**

## SCOPE OF WORK

**Note, this project is funded by Title III federal grant funds and requires the contractor and any subcontractors to comply with the federal-funded project requirements and provisions identified in this contract.**

Fayetteville State University (FSU) will be accepting sealed bids from qualified Panduit certified IT contractors interested in providing Data Network Cabling to the Lyons Science Comprehensive Renovation Project. Cabling shall be installed per FSU Standards and Specifications which is included at the end of this bid proposal Below. Required drawings E-0.1, E-2.1, E-2.2, E-2.3, E-2.4, and E-2.5 which are needed to bid the project can be acquired by contacting Harold Miller via email or phone at [hmiller1@uncfsu.edu](mailto:hmiller1@uncfsu.edu) or 301-257-9418..

Contractors requiring additional information or clarification relative to the technical aspects of the RFP may direct inquires to the Information Technology Network / Data Center Specialist.

Paul Jones  
Communications Specialist  
ITTS-Network Dept.  
Fayetteville State University  
1200 Murchison Road  
Fayetteville, NC 28301  
910-672-2985  
[tjones71@uncfsu.edu](mailto:tjones71@uncfsu.edu)

## NOTICE TO BIDDERS

Sealed bid for this work will be received by:

Harold Miller, Director of Planning & Construction  
Facilities Management Building  
Fayetteville State University  
1200 Murchison Road  
Fayetteville, NC 28301  
Phone: 301-257-9418 Email: [hmiller1@uncfsu.edu](mailto:hmiller1@uncfsu.edu)

up to **3:00 PM**, on **Monday, October 26, 2020** and immediately thereafter publicly opened and read aloud. Complete plans and specification and contract documents are included in this document.

Note: A mandatory pre-bid meeting will be held on **Monday, October 12, 2020** at the **Lyon Science Annex Building, Room 128, at 10:00am**. Please note that appropriate face mask is required, and Social distancing will be followed. A site visit will follow shortly after the pre-bid meeting.

Contractors are hereby notified that they must have proper license under the State laws governing their respective trades and that North Carolina General Statute 87 will be observed in receiving and awarding contracts. General Contractors must have general license classification for (See Licensing Board Rules & Regulations).

No bid may be withdrawn after the opening of bids for a period of 30 days. The Owner reserves the right to reject any or all bids and waive informalities. Bids shall be made only on the BID/ACCEPTANCE form provided herein with all blank spaces for bids properly filled in and all signatures properly executed.

Please note on the envelope – **Bid: Attn: Harold Miller**

***Fayetteville State University (FSU)  
Lyons Science Comprehensive Renovation Project  
For Network Cabling***

***Bid Date: October 26, 2020 Time: 3:00pm***

***Location: Lyons Science Annex: Room 128***

***Contractor Name:***

***License Number:***

# BID/ACCEPTANCE FORM

for  
**Fayetteville State University (FSU)**  
**Lyons Science Comprehensive Renovation Project**  
**Request for Proposal (RFP)**  
**For Network Cabling**  
**Project ID# - 16-0076**

We are in receipt of Addendum \_\_\_\_\_ 1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4

The undersigned, as bidder, proposes and agrees if this bid is accepted to contract with the **State of North Carolina** through the **Fayetteville State University** for the furnishing of all materials, equipment, and labor necessary to complete the construction of the work described in these documents in full and complete accordance with plans, specifications, and contract documents, and to the full and entire satisfaction of the **(State of North Carolina)** and the **Fayetteville State University** for the sum of:

**BASE BID:** \_\_\_\_\_ **Dollars \$** \_\_\_\_\_

*(Designer to include this table only if applicable to the project)*

| Alternate # | Add/Deduct | Alternate bid price | Accepted (OWNER INITIALS ON EACH LINE INDICATES ACCEPTANCE OF ALTERNATE) |
|-------------|------------|---------------------|--|
| 1           |            |                     |  |
| 2           |            |                     |  |
| 3           |            |                     |  |

Respectively submitted this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_

\_\_\_\_\_  
**(Contractor's Name)**

Federal ID#: \_\_\_\_\_

By: \_\_\_\_\_

Witness: \_\_\_\_\_

Title: \_\_\_\_\_

*(Owner, partner, corp. Pres. Or Vice President)*

\_\_\_\_\_  
*(Proprietorship or Partnership)*

Address: \_\_\_\_\_

Attest: *(corporation)*

Email Address: \_\_\_\_\_

**(Corporate Seal)**

By: \_\_\_\_\_ License #: \_\_\_\_\_

Title: \_\_\_\_\_

*(Corporation, Secretary./Ass't Secretary.)*

**ACCEPTED by the STATE OF NORTH CAROLINA**

Through the

Total amount of accepted by the owner, included base bid and bid alternates: \_\_\_\_\_

\_\_\_\_\_  
Fayetteville State University

*(Agency/Institution)*

BY: \_\_\_\_\_ DATE: \_\_\_\_\_ TITLE: Vice Chancellor for Business and Finance  
Carlton Spellman



Attach and submit with bid

State of North Carolina

AFFIDAVIT A – Listing of Good Faith Efforts

County of \_\_\_\_\_

(Name of Bidder)

Affidavit of \_\_\_\_\_

I have made a good faith effort to comply under the following areas checked:

**Bidders must earn at least 50 points from the good faith efforts listed for their bid to be considered responsive.** (1 NC Administrative Code 30 I.0101)

- 1 – (10 pts)** Contacted minority businesses that reasonably could have been expected to submit a quote and that were known to the contractor, or available on State or local government maintained lists, at least 10 days before the bid date and notified them of the nature and scope of the work to be performed.
- 2 --(10 pts)** Made the construction plans, specifications and requirements available for review by prospective minority businesses or providing these documents to them at least 10 days before the bids are due.
- 3 – (15 pts)** Broken down or combined elements of work into economically feasible units to facilitate minority participation.
- 4 – (10 pts)** Worked with minority trade, community, or contractor organizations identified by the Office of Historically Underutilized Businesses and included in the bid documents that provide assistance in recruitment of minority businesses.
- 5 – (10 pts)** Attended prebid meetings scheduled by the public owner.
- 6 – (20 pts)** Provided assistance in getting required bonding or insurance or provided alternatives to bonding or insurance for subcontractors.
- 7 – (15 pts)** Negotiated in good faith with interested minority businesses and did not reject them as unqualified without sound reasons based on their capabilities. Any rejection of a minority business based on lack of qualification should have the reasons documented in writing.
- 8 – (25 pts)** Provided assistance to an otherwise qualified minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letters of credit, including waiving credit that is ordinarily required. Assisted minority businesses in obtaining the same unit pricing with the bidder's suppliers in order to help minority businesses in establishing credit.
- 9 – (20 pts)** Negotiated joint venture and partnership arrangements with minority businesses in order to increase opportunities for minority business participation on a public construction or repair project when possible.
- 10 - (20 pts)** Provided quick pay agreements and policies to enable minority contractors and suppliers to meet cash-flow demands.

**The undersigned, if apparent low bidder, will enter into a formal agreement with the firms listed in the Identification of Minority Business Participation schedule conditional upon scope of contract to be executed with the Owner. Substitution of contractors must be in accordance with GS143-128.2(d) Failure to abide by this statutory provision will constitute a breach of the contract.**

**The undersigned hereby certifies that he or she has read the terms of the minority business commitment and is authorized to bind the bidder to the commitment herein set forth.**

Date: \_\_\_\_\_ Name of Authorized Officer: \_\_\_\_\_

Signature: \_\_\_\_\_

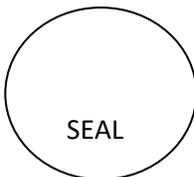
Title: \_\_\_\_\_

State of \_\_\_\_\_, County of \_\_\_\_\_

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_ 20

Notary Public \_\_\_\_\_

My commission expires \_\_\_\_\_



**Attach and submit with bid**  
**State of North Carolina --AFFIDAVIT B-- Intent to Perform Contract**  
**with Own Workforce.**

County of \_\_\_\_\_

Affidavit of \_\_\_\_\_

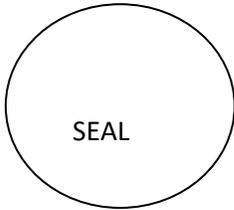
(Name of Bidder)

I hereby certify that it is our intent to perform 100% of the work required for the \_\_\_\_\_ contract.

(Name of Project)

In making this certification, the Bidder states that the Bidder does not customarily subcontract elements of this type project, and normally performs and has the capability to perform and will perform all elements of the work on this project with his/her own current work forces; and  
The Bidder agrees to provide any additional information or documentation requested by the owner in support of the above statement. The Bidder agrees to make a Good Faith Effort to utilize minority suppliers where possible. The undersigned hereby certifies that he or she has read this certification and is authorized to bind the Bidder to the commitments herein contained.

Date: \_\_\_\_\_ Name of Authorized Officer: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Title: \_\_\_\_\_



State of \_\_\_\_\_, County of \_\_\_\_\_  
Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_  
Notary Public \_\_\_\_\_  
My commission expires \_\_\_\_\_

Do not submit with bid  
**State of North Carolina - AFFIDAVIT C - Portion of the Work to be  
 Performed by HUB Certified/Minority Businesses  
 County of \_\_\_\_\_**

(Note this form is to be submitted only by the apparent lowest responsible, responsive bidder.)

If the portion of the work to be executed by HUB certified/minority businesses as defined in GS143-128.2(g) and 128.4(a),(b),(e) is equal to or greater than 10% of the bidders total contract price, then the bidder must complete this affidavit.  
 This affidavit shall be provided by the apparent lowest responsible, responsive bidder within **72 hours** after notification of being low bidder.

Affidavit of \_\_\_\_\_ I do hereby certify that on the  
 (Name of Bidder)

(Project Name)

Project ID# \_\_\_\_\_ Amount of Bid \$ \_\_\_\_\_

I will expend a minimum of \_\_\_\_\_% of the total dollar amount of the contract with minority business enterprises. Minority businesses will be employed as construction subcontractors, vendors, suppliers or providers of professional services. Such work will be subcontracted to the following firms listed below.

Attach additional sheets if required

| Name and Phone Number | *Minority Category | **HUB Certified<br>Y/N | Work Description | Dollar Value |
|-----------------------|--------------------|------------------------|------------------|--------------|
|                       |                    |                        |                  |              |
|                       |                    |                        |                  |              |
|                       |                    |                        |                  |              |
|                       |                    |                        |                  |              |
|                       |                    |                        |                  |              |

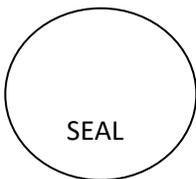
\*Minority categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**) American Indian (**I**), Female (**F**) Socially and Economically Disadvantaged (**D**)

**\*\* HUB Certification with the state HUB Office required to be counted toward state participation goals.**

**Pursuant to GS143-128.2(d), the undersigned will enter into a formal agreement with Minority Firms for work listed in this schedule conditional upon execution of a contract with the Owner. Failure to fulfill this commitment may constitute a breach of the contract.**

The undersigned hereby certifies that he or she has read the terms of this commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: \_\_\_\_\_ Name of Authorized Officer: \_\_\_\_\_



Signature: \_\_\_\_\_

Title: \_\_\_\_\_

State of \_\_\_\_\_, County of \_\_\_\_\_  
 Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_  
 Notary Public \_\_\_\_\_  
 My commission expires \_\_\_\_\_

**Do not submit with bid**

**State of North Carolina**

**AFFIDAVIT D – Good Faith Efforts**

County of \_\_\_\_\_

(Note this form is to be submitted only by the apparent lowest responsible, responsive bidder.)

If the goal of 10% participation by HUB Certified/ minority business **is not** achieved, the Bidder shall provide the following documentation to the Owner of his good faith efforts:

Affidavit of \_\_\_\_\_ I do hereby certify that on the  
(Name of Bidder)

(Project Name)

Project ID# \_\_\_\_\_ Amount of Bid \$ \_\_\_\_\_

I will expend a minimum of \_\_\_\_\_% of the total dollar amount of the contract with HUB certified/ minority business enterprises. Minority businesses will be employed as construction subcontractors, vendors, suppliers or providers of professional services. Such work will be subcontracted to the following firms listed below. (Attach additional sheets if required)

| Name and Phone Number | *Minority Category | **HUB Certified Y/N | Work Description | Dollar Value |
|-----------------------|--------------------|---------------------|------------------|--------------|
|                       |                    |                     |                  |              |
|                       |                    |                     |                  |              |
|                       |                    |                     |                  |              |
|                       |                    |                     |                  |              |
|                       |                    |                     |                  |              |

\*Minority categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**) American Indian (**I**), Female (**F**) Socially and Economically Disadvantaged (**D**)

**\*\* HUB Certification with the state HUB Office required to be counted toward state participation goals.**

**Examples** of documentation that may be required to demonstrate the Bidder's good faith efforts to meet the goals set forth in these provisions include, but are not necessarily limited to, the following:

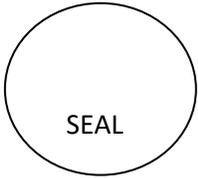
- A. Copies of solicitations for quotes to at least three (3) minority business firms from the source list provided by the State for each subcontract to be let under this contract (if 3 or more firms are shown on the source list). Each solicitation shall contain a specific description of the work to be subcontracted, location where bid documents can be reviewed, representative of the Prime Bidder to contact, and location, date and time when quotes must be received.
- B. Copies of quotes or responses received from each firm responding to the solicitation.
- C. A telephone log of follow-up calls to each firm sent a solicitation.
- D. For subcontracts where a minority business firm is not considered the lowest responsible sub-bidder, copies of quotes received from all firms submitting quotes for that particular subcontract.
- E. Documentation of any contacts or correspondence to minority business, community, or contractor organizations in an attempt to meet the goal.
- F. Copy of pre-bid roster
- G. Letter documenting efforts to provide assistance in obtaining required bonding or insurance for minority business.
- H. Letter detailing reasons for rejection of minority business due to lack of qualification.
- I. Letter documenting proposed assistance offered to minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letter of credit, including waiving credit that is ordinarily required.

Failure to provide the documentation as listed in these provisions may result in rejection of the bid and award to the next lowest responsible and responsive bidder.

Pursuant to GS143-128.2(d), the undersigned will enter into a formal agreement with Minority Firms for work listed in this schedule conditional upon execution of a contract with the Owner. Failure to fulfill this commitment may constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of this commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: \_\_\_\_\_ Name of Authorized Officer: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Title: \_\_\_\_\_



State of \_\_\_\_\_, County of \_\_\_\_\_  
Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_  
Notary Public \_\_\_\_\_  
My commission expires \_\_\_\_\_

**Do not submit with bid  
APPENDIX E**

**MBE DOCUMENTATION FOR CONTRACT PAYMENTS**

Prime Contractor/Architect: \_\_\_\_\_

Address & Phone: \_\_\_\_\_

Project Name: \_\_\_\_\_

SCO Project ID: \_\_\_\_\_

Pay Application #: \_\_\_\_\_ Period: \_\_\_\_\_

The following is a list of payments made to Minority Business Enterprises on this project for the above-mentioned period.

| MBE FIRM NAME | * TYPE OF MBE | AMOUNT PAID THIS MONTH (With This Pay App) | TOTAL PAYMENTS TO DATE | TOTAL AMOUNT COMMITTED |
|---------------|---------------|--|------------------------|------------------------|
|               |               |  |                        |                        |
|               |               |  |                        |                        |
|               |               |  |                        |                        |
|               |               |  |                        |                        |
|               |               |  |                        |                        |
|               |               |  |                        |                        |

\*Minority categories: Black (B), Hispanic (H), Asian American (AA), American Indian (AI), White Female (WF), Socially and Economically Disadvantaged (SED)

Approved/Certified By:

\_\_\_\_\_  
Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

**SUBMIT WITH EACH PAY REQUEST - FINAL PAYMENT - FINAL REPORT**

FAYETTEVILLE STATE UNIVERSITY  
FACILITIES PLANNING AND CONSTRUCTION

**UTILITY INTERRUPTION REQUEST FORM**

**REQUESTOR INFORMATION**

Requester: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_(\_\_\_\_)\_\_\_\_\_

**LOCATION & PURPOSE OF OUTAGE**

Building: \_\_\_\_\_

Floor(s): \_\_\_\_\_

Room/Areas: \_\_\_\_\_

Purpose of Outage: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**REQUESTED PERIOD OF OUTAGE**

Beginning Date: \_\_\_\_\_ Time: \_\_\_\_\_

Ending Date: \_\_\_\_\_ Time: \_\_\_\_\_

| <b>APPROVAL</b>                               |             |
|---|-------------|
| _____   | _____       |
| <b>FMPC Project Manager</b>                   | <b>Date</b> |
| _____   | _____       |
| <b>Director of Operations</b>                 | <b>Date</b> |
| _____   | _____       |
| <b>Director of FMPC</b>                       | <b>Date</b> |
| _____   | _____       |
| <b>Associate VC for Facilities Management</b> | <b>Date</b> |

## **FSU's Utility Interruptions Procedure**

### **General**

One of the most critical responsibilities of the Facilities Management Planning & Construction Project Manager (FMPC PM) is to schedule and to coordinate utility interruptions to existing building systems. Interruptions must be planned and scheduled with input from the users of the building as to their programs affected by the interruption in order to minimize negative impacts to the community. Utility interruptions are usually required in new construction to achieve connection of the new building system to existing campus distribution systems. In renovation and utility upgrade projects, utility interruptions are almost always required to complete the contract work. It is the policy of Fayetteville State University to coordinate all utility outages related to construction through Facilities Management Planning and Construction Office.

### **Procedure**

- All utility interruptions expected to last 4 hours or less requires a minimum 72 hours advance notice.
- FMPC PM must notify Director of Operations or designee of proposed outage to coordinate time and required FSU personnel.
- If the Director of Operations is not available FMPC PM should notify Supervisor of HVAC/Plumbing/Electrical Shop.
- Once utility interruption time is confirmed, FMPC PM must notify Director of FMPC and/or Associate VC for Facilities Management.
- After all confirmations have been received a campus-wide notification will be emailed and affected buildings and Campus Police will receive phone notifications.
- All utility interruption expected to last more than 4 hours require a minimum of 7 days advance notice and will occur on weekends or holidays.
- FMPC PM or designee must be present at the beginning of utility interruption and must verify utilities have been properly restored at the end of utility interruption.

(Rev.1/12/04)

**MONTHLY CONSTRUCTION PROGRESS REPORT**

|           |  |               |  |
|-----------|--|---------------|--|
| Designer  |  | Address       |  |
| Location  |  | Date          |  |
| Job Title |  | Starting Date |  |
| SCO ID#   |  |               |  |

**PERCENT COMPLETION**

|                     | % Previous Month | % This Month | % Total to Date | % Scheduled | Completion Date |
|---------------------|------------------|--------------|-----------------|-------------|-----------------|
| General Contract    |                  |              |                 |             |                 |
| Plumbing Contract   |                  |              |                 |             |                 |
| Mechanical Contract |                  |              |                 |             |                 |
| Electrical Contract |                  |              |                 |             |                 |
|                     |                  |              |                 |             |                 |
|                     |                  |              |                 |             |                 |
|                     |                  |              |                 |             |                 |

Change Orders Since Last Report:

| Change Order Number | Amount | Purpose |
|---------------------|--------|---------|
|                     |        |         |
|                     |        |         |
|                     |        |         |
|                     |        |         |

Insurance up to Date: Yes \_\_\_ No \_\_\_

Explanation (if no):  
 \_\_\_\_\_  
 \_\_\_\_\_

| <b>Financial Status:</b> | Previously Authorized | Authorized This Month | Total Contract Inc. Extras | % of Total Authorization |
|--------------------------|-----------------------|-----------------------|----------------------------|--------------------------|
| General                  |                       |                       |                            |                          |
| Plumbing                 |                       |                       |                            |                          |
| Mechanical               |                       |                       |                            |                          |
| Electrical               |                       |                       |                            |                          |
|                          |                       |                       |                            |                          |
| Totals                   |                       |                       |                            |                          |

# GENERAL CONDITIONS

## 1. GENERAL

It is understood and agreed that by submitting a bid that the Contractor has examined these contract documents, drawings and specifications and has visited the site of the Work, and has satisfied himself relative to the Work to be performed.

## 2. DEFINITIONS

**Owner:** "Owner" shall mean, The State of North Carolina through ~~(name of agency)~~ Fayetteville State University

**Contractor:** "Contractor" shall mean the entity that will provide the services for the Owner.

**Designer:** The **designer(s)** are those referred to within this contract, or their authorized representatives. The Designer(s), as referred to herein, shall mean architect and/or engineer responsible for preparing the project plans and specifications. They will be referred to hereinafter as if each were of the singular number, masculine gender.

**Contract Documents:** "Contract Documents" shall consist of the Notice to Bidders; General Conditions of the Contract; special conditions if applicable; Supplementary General Conditions; the drawing and specifications, including all bulletins, addenda or other modifications of the drawings and specifications incorporated into the documents prior to their execution; the bid; the contract; the performance bond if applicable; and insurance certificates. All of these items together form the contract.

## INTENT AND EXECUTION OF DOCUMENTS

The drawings and specifications are complementary, one to the other. That which is shown on the drawings or called for in the specifications shall be as binding as if it were both called for and shown. The intent of the drawings and specifications is to establish the scope of all labor, materials, transportation, equipment, and any and all other things necessary to provide a complete job. In case of discrepancy or disagreement in the Contract Documents, the order of precedence shall be: Form of Contract, specifications, large-scale detail drawings, small-scale drawings.

In such cases where the nature of the work requires clarification by the Designer/ Owner, the Designer/ Owner shall furnish such clarification. Clarifications and drawings shall be consistent with the intent of the Contract Documents, and shall become a part thereof.

## 4. AS-BUILT MARKED-UP CONSTRUCTION DOCUMENTS

Contractor shall provide one complete set of legible "as-built" marked-up construction drawings and specifications recording any and all changes made to the original design during the course of construction. In the event no changes occurred, submit construction drawings and specifications set with notation "No Changes." The Designer/Owner must receive "As-built" marked-up construction drawings and specifications before the final pay request can be processed.

## 5. SUBMITTAL DATA

The Contractor awarded the contract shall submit all specified submittals to the Owner/Designer. A minimum number of copies as specified by the owner, of all required submittal data pertaining to construction, performance and general dimensional criteria of the components listed in the technical specifications shall be submitted. No material or equipment shall be ordered or installed prior to written approval of the submittals by the Designer/Owner. Failure to provide submittal data for review on equipment listed in the technical specifications will result in removal of equipment by the Contractor at his expense if the equipment is not in compliance with the specifications.

## **6. SUBSTITUTIONS**

In accordance with the provisions of G.S. 133-3, material, product, or equipment substitutions proposed by the bidders to those specified herein can only be considered during the bidding phase until five (5) days prior to the receipt of bids or by the date specified in the pre bid conference, when submitted to the Designer with sufficient data to confirm material, product, or equipment equality. Proposed substitutions submitted after this time will be considered only as potential change order.

Submittals for proposed substitutions shall include the following information:

- a. Name, address, and telephone number of manufacturer and supplier as appropriate.
- b. Trade name, model or catalog designation.
- c. Product data including performance and test data, reference standards, and technical descriptions of material, product, or equipment. Include color samples and samples of available finishes as appropriate.
- d. Detailed comparison with specified products including performance capabilities, warranties, and test results.
- e. Other pertinent data including data requested by the Designer to confirm product equality.

If a proposed material, product, or equipment substitution is deemed equal by the Designer to those specified, all bidders of record will be notified by Addendum.

## **7. WORKING DRAWINGS AND SPECIFICATIONS AT THE JOB SITE**

The contractor shall maintain, in readable condition at his job site one complete set of working drawings and specifications for his work including all shop drawings. Such drawings and specifications shall be available for use by the owner, designer or his authorized representative.

The contractor shall maintain at the job site, a day-to-day record of work-in-place that is at variance with the contract documents. Such variations shall be fully noted on project drawings by the contractor and submitted to the designer upon project completion and no later than 30 days after acceptance of the project.

## **8. MATERIALS, EQUIPMENT, EMPLOYEES**

- a. The contractor shall, unless otherwise specified, supply and pay for all labor, transportation, materials, tools, apparatus, lights, power, fuel, heat, sanitary facilities, water, scaffolding and incidentals necessary for the completion of his work, and shall install, maintain and remove all equipment of the construction, other utensils or things, and be responsible for the safe, proper and lawful construction, maintenance and use of same, and shall construct in the best and most workmanlike manner, a complete job and everything incidental thereto, as shown on the plans, stated in the specifications, or reasonably implied therefrom, all in accordance with the contract documents.
- b. All materials shall be new and of quality specified, except where reclaimed material is authorized herein and approved for use. Workmanship shall at all times be of a grade accepted as the best practice of the particular trade involved, and as stipulated in written standards of recognized organizations or institutes of the respective trades except as exceeded or qualified by the specifications.
- c. Upon notice, the contractor shall furnish evidence as to quality of materials.
- d. Products are generally specified by ASTM or other reference standard and/or by manufacturer's name and model number or trade name. When specified only by reference standard, the Contractor may select any product meeting this standard, by any manufacturer. When several products or manufacturers are specified as being equally acceptable, the Contractor has the option of using any product and manufacturer combination listed. However, the contractor shall be aware that the cited examples are used only to denote the quality standard of product desired and that they do not restrict bidders to a specific brand, make, manufacturer or specific name; that they are used only to set forth

and convey to bidders the general style, type, character and quality of product desired; and that equivalent products will be acceptable. Request for substitution of materials, items, or equipment shall be submitted to the designer for approval or disapproval; the designer prior to the opening of bids shall make such approval or disapproval. Alternate materials may be requested after the award if it can clearly be demonstrated that it is an added benefit to the owner and the designer and owner approves.

- e. The designer is the judge of equality for proposed substitution of products, materials or equipment.
- f. If at any time during the construction and completion of the work covered by these contract documents, the language, conduct, or attire of any workman of the various crafts be adjudged a nuisance to the owner or designer, or if any workman be considered detrimental to the work, the contractor shall order such parties removed immediately from grounds.
- g. The Contractor shall cooperate with the designer and the owner in coordinating construction activities.
- h. The Contractor shall maintain qualified personnel and effective supervision at the site at all times during the project, and exercise the appropriate quality control program to ensure compliance with the project drawings and specifications. The designer is responsible for determining compliance with the drawings and specifications.

## 9. CODES, PERMITS AND INSPECTIONS

The Contractor shall obtain the required permits, if required, give all notices, and comply with all laws, ordinances, codes, rules and regulations bearing on the conduct of the work under this contract. If the Contractor observes that the drawings and specifications are at variance therewith, he shall promptly notify the Designer in writing. If the Contractor performs any work knowing it to be contrary to such laws, ordinances, codes, rules and regulations, and without such notice to the Owner, he shall bear all cost arising there from.

All work under this contract shall conform to the current North Carolina Building Code and other state and national codes as are applicable.

Projects constructed by the State of North Carolina or by any agency or institution of the State are not subject to county or municipal building codes and may\* not be subject to inspection by county or municipal authorities. Where appropriate, the Contractor shall, cooperate with the county or municipal authorities by obtaining building permits. The contractor at no cost may obtain permits to the owner.

All fire alarm work shall be in accordance with the latest State Construction Office (SCO) *Guidelines for Fire Alarm Installation* (NFPA72). Where the contract documents are in conflict with the SCO guidelines, the SCO guidelines shall govern. The Contractor shall be responsible for all the costs for the correction of the work where he installs it in conflict with the latest edition of the SCO *Guidelines for Fire Alarm Installation*.

\*Inspection and certification of compliance by local authorities is necessary if an architect or engineer was not employed on the project, or if the plans and specifications were not approved and the construction inspected by the State Construction Office.

## 10. PROTECTION OF WORK, PROPERTY, THE PUBLIC AND SAFETY

- a. The contractors shall be jointly responsible for the entire site and the building or construction of the same and provide all the necessary protections, as required by the owner or designer, and by laws or ordinances governing such conditions. They shall be responsible for any damage to the owner's property or of that of others on the job, by them, their personnel, or their subcontractors, and shall make good such damages. They shall be responsible for and pay for any damages caused to the owner. All contractors shall have access to the project at all times, except as indicated in the Supplemental General Conditions.

- b. The contractor shall provide cover and protect all portions of the structure when the work is not in progress, provide and set all temporary roofs, covers for doorways, sash and windows, and all other materials necessary to protect all the work on the building, whether set by him, or any of the subcontractors. Any work damaged through the lack of proper protection or from any other cause, shall be repaired or replaced without extra cost to the owner.
- c. No fires of any kind will be allowed inside or around the operations during the course of construction without special permission from the designer and owner.
- d. The contractor shall protect all trees and shrubs designated to remain in the vicinity of the operations by building substantial boxes around it. He shall barricade all walks, roads, etc., as directed by the designer to keep the public away from the construction. All trenches, excavations or other hazards in the vicinity of the work shall be well barricaded and properly lighted at night.
- e. The contractor shall provide all necessary safety measures for the protection of all persons on the job, including the requirements of the A.G.C. *Accident Prevention Manual in Construction*, as amended, and shall fully comply with all state laws or regulations and North Carolina State Building Code requirements to prevent accident or injury to persons on or about the location of the work. He shall clearly mark or post signs warning of hazards existing, and shall barricade excavations, elevator shafts, stairwells and similar hazards. He shall protect against damage or injury resulting from falling materials and he shall maintain all protective devices and signs throughout the progress of the work.
- f. The contractor shall adhere to the rules, regulations and interpretations of the North Carolina Department of Labor relating to Occupational Safety and Health Standards for the Construction Industry (Title 29, Code of Federal Regulations, Part 1926, published in Volume 39, Number 122, Part II, June 24, 1974, *Federal Register*), and revisions thereto as adopted by General Statutes of North Carolina 95-126 through 155.
- i. In the event of emergency affecting the safety of life, the protection of work, or the safety of adjoining properties, the contractor is hereby authorized to act at his own discretion, without further authorization from anyone, to prevent such threatened injury or damage. Any compensation claimed by the contractor on account of such action shall be determined as provided for under Article 13(b).
- j. Any and all costs associated with correcting damage caused to adjacent properties of the construction site or staging area shall be borne by the contractor. These costs shall include but not be limited to flooding, mud, sand, stone, debris, and discharging of waste products.

## 11. SUBCONTRACTS AND SUBCONTRACTORS

The Contractor is and remains fully responsible for his own acts or omissions as well as those of any subcontractor or of any employee of either. The Contractor agrees that no contractual relationship exists between the subcontractor and the Owner in regard to the contract, and that the subcontractor acts on this work as an agent or employee of the Contractor.

## 12. CONTRACTOR-SUBCONTRACTOR RELATIONSHIPS

The Contractor agrees that the terms of these Contract Documents shall apply equally to each Subcontractor as to the Contractor, and the Contractor agrees to take such action as may be necessary to bind each Subcontractor to these terms. The Contractor further agrees to conform to the Code of Ethical Conduct as adopted by the Associated General Contractors of America, Inc., with respect to Contractor-Subcontractor relationships. The Owner reserves the right to limit the amount of portions of work to be subcontracted as hereinafter specified.

### 13. CHANGES IN THE WORK AND CLAIMS FOR EXTRA COST

- a. The owner may have changes made in the work covered by the contract. These changes will not invalidate and will not relieve or release the contractor from any guarantee given by him pertinent to the contract provisions. These changes will not affect the validity of the guarantee bond and will not relieve the surety or sureties of said bond. All extra work shall be executed under conditions of the original contract.
- b. Except in an emergency endangering life or property, no change shall be made by the contractor except upon receipt of approved change order from the designer, countersigned by the owner authorizing such change. No claim for adjustments of the contract price shall be valid unless this procedure is followed. Should a claim for extra compensation by the contractor be denied by the designer or the owner, the contractor may pursue his claim in accordance with G.S. 143-135.3.

In the event of emergency endangering life or property, the contractor may be directed to proceed on a time and material basis whereupon the contractor shall proceed and keep accurately on such form as specified by the designer or owner, a correct account of costs together with all proper invoices, payrolls and supporting data. Upon completion of the work the change order will be prepared as outlined under either Method "c(1)" or Method "c(2)" or both.

- c. In determining the values of changes, either additive or deductive, contractors are restricted to the use of the following methods:
  1. Where the extra work involved is covered by unit prices quoted in the proposal, or subsequently agreed to by the Contractor, Designer, Owner and State Construction Office the value of the change shall be computed by application of unit prices based on quantities, estimated or actual as agreed of the items involved, except in such cases where a quantity exceeds the estimated quantity allowance in the contract by one hundred percent (100%) or more. In such cases, either party may elect to proceed under subparagraph c (2) herein. If neither party elects to proceed under c (2), then unit prices shall apply.
  2. The contracting parties shall negotiate and agree upon the equitable value of the change prior to issuance of the change order, and the change order shall stipulate the corresponding lump sum adjustment to the contract price.
- d. Under Paragraph "b" and Methods "c(2)" above, the allowances for overhead and profit combined shall be as follows: all contractors (the single contracting entity (prime), his subcontractors (1<sup>st</sup> tier subs), or their sub-subcontractors (2<sup>nd</sup> tier subs, 3<sup>rd</sup> tier subs, etc.) shall be allowed a maximum of 10% on work they each self-perform; the prime contractor shall be allowed a maximum of 5% on contracted work of his 1<sup>st</sup> tier sub; 1<sup>st</sup> tier, 2<sup>nd</sup> tier, 3<sup>rd</sup> tier, etc. contractors shall be allowed a maximum of 2.5% on the contracted work of their subs. ; Under Method "c(1)", no additional allowances shall be made for overhead and profit. In the case of deductible change orders, under Method "c(2)" and Paragraph (b) above, the contractor shall include no less than five percent (5%) profit, but no allowances for overhead.
- e. The term "net cost" as used herein shall mean the difference between all proper cost additions and deductions. The "cost" as used herein shall be limited to the following:
  1. The actual costs of materials and supplies incorporated or consumed as part of the work;
  2. The actual costs of labor expended on the project site; labor expended in coordination, change order negotiation, record document maintenance, shop drawing revision or other tasks necessary to the administration of the project are considered overhead whether they take place in an office or on the project site.
  3. The actual costs of labor burden, limited to the costs of social security (FICA) and Medicare/Medicaid taxes; unemployment insurance costs; health/dental/vision insurance premiums; paid employee leave for holidays, vacation, sick leave, and/or petty leave, not to exceed a total of 30 days per year; retirement contributions; worker's compensation insurance

premiums; and the costs of general liability insurance when premiums are computed based on payroll amounts; the total of which shall not exceed thirty percent (30%) of the actual costs of labor;

4. The actual costs of rental for tools, excluding hand tools; equipment; machinery; and temporary facilities required for the work;
5. The actual costs of premiums for bonds, insurance, permit fees and sales or use taxes related to the work.

Overtime and extra pay for holidays and weekends may be a cost item only to the extent approved by the owner.

- f. Should concealed conditions be encountered in the performance of the work below grade, or should concealed or unknown conditions in an existing structure be at variance with the conditions indicated by the contract documents, the contract sum and time for completion may be equitably adjusted by change order upon claim by either party made within thirty (30) days after the condition has been identified. The cost of such change shall be arrived at by one of the foregoing methods. All change orders shall be supported by a unit cost breakdown showing method of arriving at net cost as defined above.
- g. Change orders shall be submitted by the contractor in writing to the owner/designer for review and approval. The contractor will provide such proposal and supporting\_data in suitable format. The designer shall verify correctness. Delay in the processing of the change order due to lack of proper submittal by the contractor of all required supporting data shall not constitute grounds for a time extension or basis of a claim. Within fourteen (14) days after receipt of the contractor's accepted proposal including all supporting documentation required by the designer, the designer shall prepare the change order and forward to the contractor for his signature or otherwise respond, in writing, to the contractor's proposal. Within seven (7) days after receipt of the change order executed\_by the contractor, the designer shall, certify the change order by his signature, and forward the change order and all supporting data to the owner for the owner's signature. The owner shall execute the change order, within seven (7) days of receipt.

At the time of signing a change order, the contractor shall be required to certify as follows:

"I certify that my bonding company will be notified forthwith that my contract has been changed by the amount of this change order, and that a copy of the approved change order will be mailed upon receipt by me to my surety."

- h. A change order, when issued, shall be full compensation, or credit, for the work included, omitted or substituted. It shall show on its face the adjustment in time for completion of the project as a result of the change in the work.
- i. If, during the progress of the work, the owner requests a change order and the contractor's terms are unacceptable, the owner, may require the contractor to perform such work on a time and material basis whereupon the contractor shall proceed and keep accurately on such form as specified by the Designer or owner, a correct account of cost together with all proper invoices, payrolls and supporting data. Upon completion of the work a change order will be prepared with allowances for overhead and profit per paragraph d. above and "net cost" and "cost" per paragraph e. above. Without prejudice, nothing in this paragraph shall preclude the owner from performing or to have performed that portion of the work requested in the change order.

#### **14. ANNULMENT OF CONTRACT**

If the contractor fails to begin the work under the contract within the time specified, or the progress of the work is not maintained on schedule, or the work is not completed within the time specified, or fails to perform the work with sufficient workmen and equipment or with sufficient materials to ensure the prompt completion of said work, or shall perform the work unsuitably or shall discontinue the prosecution of the work, or if the contractor shall become insolvent or be declared bankrupt or commit any act of bankruptcy or insolvency, or allow any final judgment to stand against him unsatisfied for a period of forty-eight (48) hours, or shall make an assignment for the benefit of

creditors, or for any other cause whatsoever shall not carry on the work in an acceptable manner, the owner may give notice in writing, sent by certified mail, return receipt requested, to the contractor and his surety (if applicable) of such delay, neglect or default, specifying the same, and if the contractor within a period of seven (7) days after such notice shall not proceed in accordance therewith, then the owner shall, declare this contract in default, and, thereupon, the surety shall promptly take over the work and complete the performance of this contract in the manner and within the time frame specified. In the event the contractor, or the surety (if applicable) shall fail to take over the work to be done under this contract within seven (7) days after being so notified and notify the owner in writing, sent by certified mail, return receipt requested, that he is taking the same over and stating that he will diligently pursue and complete the same, the owner shall have full power and authority, without violating the contract, to take the prosecution of the work out of the hands of said contractor, to appropriate or use any or all contract materials and equipment on the grounds as may be suitable and acceptable and may enter into an agreement, either by public letting or negotiation, for the completion of said contract according to the terms and provisions thereof or use such other methods as in his opinion shall be required for the completion of said contract in an acceptable manner. All costs and charges incurred by the owner, together with the costs of completing the work under contract, shall be deducted from any monies due or which may become due said contractor and surety (if applicable). In case the expense so incurred by the owner shall be less than the sum which would have been payable under the contract, if it had been completed by said contractor, then the said contractor and surety (if applicable) shall be entitled to receive the difference, but in case such expense shall exceed the sum which would have been payable under the contract, then the contractor and the surety (if applicable) shall be liable and shall pay to the owner the amount of said excess.

#### **15. TERMINATION FOR CONVENIENCE**

- a. Owner may at any time and for any reason terminate Contractor's services and work at Owner's convenience, after notification to the contractor in writing via certified mail. Upon receipt of such notice, Contractor shall, unless the notice directs otherwise, immediately discontinue the work and placing of orders for materials, facilities and supplies in connection with the performance of this Agreement.
- b. Upon such termination, Contractor shall be entitled to payment only as follows: (1) the actual cost of the work completed in conformity with this Agreement; plus, (2) such other costs actually incurred by Contractor as approved by Owner; (3) plus ten percent (10%) of the cost of the balance of the work to be completed for overhead and profit. There shall be deducted from such sums as provided in this subparagraph the amount of any payments made to Contractor prior to the date of the termination of this Agreement. Contractor shall not be entitled to any claim or claim of lien against Owner for any additional compensation or damages in the event of such termination and payment.

#### **16. OWNER'S RIGHT TO DO WORK**

If, during the progress of the work or during the period of guarantee, the contractor fails to prosecute the work properly or to perform any provision of the contract, the owner, after seven (7) days' written notice sent by certified mail, return receipt requested, to the contractor from the designer, may perform or have performed that portion of the work. The cost of the work may be deducted from any amounts due or to become due to the contractor, such action and cost of same having been first approved by the designer. Should the cost of such action of the owner exceed the amount due or to become due the contractor, then the contractor or his surety, or both, shall be liable for and shall pay to the owner the amount of said excess.

#### **17. REQUESTS FOR PAYMENT**

Contractor shall refer to the Supplemental General Conditions for specific directions on payment schedule, procedures and the name and address where to send applications for payments for this project. It is imperative that invoices be sent only to the above address in order to assure proper and timely delivery and handling.

The Designer/Owner will process all Contractor pay requests as the project progresses. The Contractor shall receive payment within thirty (30) consecutive days after Designer/Owner's approval of each pay request. Payment will only be made for work performed as determined by the Designer/Owner.

Retainage:

~~a.~~ ~~a.~~ Retainage withheld will not exceed 5% at any time.

~~b.~~ \_\_\_\_\_ ~~b.~~ The same terms apply to general contractor and subcontractors alike.

~~c.~~ Following 50% completion of the project no further retainage will be withheld if the contractor/subcontractor has performed their work satisfactorily.

~~e.~~ \_\_\_\_\_ ~~Following 50% completion of the project no further retainage will be withheld if the contractor/subcontractor has performed their work satisfactorily.~~

~~d.~~ \_\_\_\_\_ Exceptions:

1. Owner/Contractor can reinstate retainage if the contractor/subcontractor does not continue to perform satisfactorily.
2. Following 50% completion of the project, the owner is authorized to withhold additional retainage from a subsequent periodic payment if the amount of retainage withheld falls below 2.5%.

Final payment will be made within forty-five (45) consecutive days after acceptance of the work, receipt of marked-up "as-built" drawings and specifications and the submission both of notarized Contractor's affidavit and final pay request. All pay requests shall be submitted to the Designer/Owner for approval.

**THE CONTRACTOR'S FINAL PAYMENT AFFIDAVIT SHALL STATE:** "THIS IS TO CERTIFY THAT ALL COSTS OF MATERIALS, EQUIPMENT, LABOR, SUBCONTRACTED WORK, AND ALL ELSE ENTERING INTO THE ACCOMPLISHMENT OF THIS CONTRACT, INCLUDING PAYROLLS, HAVE BEEN PAID IN FULL."

**18. PAYMENTS WITHHELD**

The designer with the approval of the Owner may withhold payment for the following reasons:

~~a-d.~~ \_\_\_\_\_ Faulty work not corrected.

~~b-e.~~ \_\_\_\_\_ The unpaid balance on the contract is insufficient to complete the work in the judgment of the designer.

~~e-f.~~ \_\_\_\_\_ To provide for sufficient contract balance to cover liquidated damages that will be assessed.

~~d-g.~~ \_\_\_\_\_ The secretary of the Department of Administration may authorize the withholding of payment for the following reasons:

i. Claims filed against the contractor or evidence that a claim will be filed.

ii. Evidence that subcontractors have not been paid.

When grounds for withholding payments have been removed, payment will be released. Delay of payment due the contractor without cause will make owner liable for payment of interest to the contractor as provided in G.S. 143-134.1. As provided in G.S. 143-134.1(e), the owner shall not be liable for interest on payments withheld by the owner for unsatisfactory job progress, defective construction not remedied, disputed work, or third-party claims filed against the owner or reasonable evidence that a third-party claim will be filed.

**19. MINIMUM INSURANCE REQUIREMENTS**

The work under this contract shall not commence until the contractor has obtained all required insurance and verifying certificates of insurance have been approved in writing by the owner. These certificates shall document that coverages afforded under the policies will not be cancelled, reduced in amount or coverages eliminated until at least thirty (30) days after mailing written notice, by certified mail, return receipt requested, to the insured and the

owner of such alteration or cancellation. If endorsements are needed to comply with the notification or other requirements of this article copies of the endorsements shall be submitted with the certificates.

a. **Worker's Compensation and Employer's Liability**

The contractor shall provide and maintain, until final acceptance, workmen's compensation insurance, as required by law, as well as employer's liability coverage with minimum limits of \$100,000.

b. **Public Liability and Property Damage**

The contractor shall provide and maintain, until final acceptance, comprehensive general liability insurance, including coverage for premises operations, independent contractors, completed operations, products and contractual exposures, as shall protect such contractors from claims arising out of any bodily injury, including accidental death, as well as from claims for property damages which may arise from operations under this contract, whether such operations be by the contractor or by any subcontractor, or by anyone directly or indirectly employed by either of them and the minimum limits of such insurance shall be as follows:

Bodily Injury: \$500,000 per occurrence  
Property Damage:\$100,000 per occurrence / \$300,000 aggregate

In lieu of limits listed above, a \$500,000 combined single limit shall satisfy both conditions.

Such coverage for completed operations must be maintained for at least two (2) years following final acceptance of the work performed under the contract.

c. **Property Insurance (Builder's Risk/Installation Floater)**

The contractor shall purchase and maintain property insurance until final acceptance, upon the entire work at the site to the full insurable value thereof. This insurance shall include the interests of the owner, the contractor, the subcontractors and sub-subcontractors in the work and shall insure against the perils of fire, wind, rain, flood, extended coverage, and vandalism and malicious mischief. If the owner is damaged by failure of the contractor to purchase or maintain such insurance, then the contractor shall bear all reasonable costs properly attributable thereto; the contractor shall effect and maintain similar property insurance on portions of the work stored off the site when request for payment per articles so includes such portions.

d. **Deductible**

Any deductible, if applicable to loss covered by insurance provided, is to be borne by the contractor.

e. **Other Insurance**

The contractor shall obtain such additional insurance as may be required by the owner or by the General Statutes of North Carolina including motor vehicle insurance, in amounts not less than the statutory limits.

f. **Proof of Carriage**

The contractor shall furnish the owner with satisfactory proof of carriage of the insurance required before written approval is granted by the owner.

20. **ASSIGNMENT**

No assignment of the Contractor's obligations or the Contractor's right to receive payment hereunder shall be permitted. However, upon written request approved by the Owner and solely as a convenience to the Contractor, the Owner may: (1) forward the Contractor's payment check directly to any person or entity designated by the Contractor, and (2) include any person or entity designated by Contractor as a joint payee on the Contractor's payment check. In no event shall such approval and action obligate the Owner to anyone other than the Contractor, and the Contractor shall remain responsible for fulfillment of all contract obligations.

**21. CLEANING UP AND RESTORATION OF SITE**

The Contractor shall keep the sites and surrounding area reasonably free from rubbish at all times and shall remove debris from the site from time to time or when directed to do so by the Owner. Before final inspection and acceptance of the project, the Contractor shall thoroughly clean the sites, and completely prepare the project and site for use by the Owner.

At the end of construction, the contractor shall oversee and implement the restoration of the construction site to its original state. Restoration includes but not limited to walks, drives, lawns, trees and shrubs, corridors, stairs and other elements shall be repaired, cleaned or otherwise restored to their original state.

**22. GUARANTEE**

The contractor shall unconditionally guarantee materials and workmanship against patent defects arising from faulty materials, faulty workmanship or negligence for a period of twelve (12) months following the final acceptance of the work and shall replace such defective materials or workmanship without cost to the owner.

Where items of equipment or material carry a manufacturer's warranty for any period in excess of twelve (12) months, then the manufacturer's warranty shall apply for that particular piece of equipment or material. The contractor shall replace such defective equipment or materials, without cost to the owner, within the manufacturer's warranty period.

Additionally, the owner may bring an action for latent defects caused by the negligence of the contractor, which is hidden or not readily apparent to the owner at the time of beneficial occupancy or final acceptance, whichever occurred first, in accordance with applicable law.

Guarantees for roofing workmanship and materials shall be stipulated in the specifications sections governing such roof, equipment, materials, or supplies.

**23. STANDARDS**

All manufactured items and/or fabricated assemblies subject to operation under pressure, operation by connection to an electric source, or operation involving a connection to a manufactured, natural, or LP gas source shall be constructed and approved in a manner acceptable to the appropriate State inspector which customarily requires the label or re-examination listing or identification marking of appropriate safety standard organization, such as the American Society of Mechanical Engineers for pressure vessels; the Underwriters Laboratories and/or National Electrical Manufacturers Association for electrically operated assemblies; or the American Gas Association for gas operated assemblies, where such approvals of listings have been established for the type of device offered and furnished. Further, all items furnished shall meet all requirements of the Occupational Safety and Health Act (OSHA), and State and federal requirements relating to clean air and water pollution.

All equipment and products must be independent third party tested and labeled (UL, FM, or CTS) before final connections to Owner services or utilities.

**24. TAXES**

- a. Federal excise taxes do not apply to materials entering into state work (Internal Revenue Code, Section 3442(3)).
- b. Federal transportation taxes do not apply to materials entering into state work (Internal Revenue Code, Section 3475(b) as amended).

- c. North Carolina sales tax and use tax, as required by law, do apply to materials entering into state work and such costs shall be included in the bid proposal and contract sum.
- d. Local option sales and use taxes, as required by law, do apply to materials entering into state work as applicable and such costs shall be included in the bid proposal and contract sum.
- e. **Accounting Procedures for Refund of County Sales & Use Tax**

Amount of county sales and use tax paid per contractor's statements:

Contractors performing contracts for state agencies shall give the state agency for whose project the property was purchased a signed statement containing the information listed in G.S. 105-164.14(e).

The Department of Revenue has agreed that in lieu of obtaining copies of sales receipts from contractors, an agency may obtain a certified statement as of April 1, 1991 from the contractor setting forth the date, the type of property and the cost of the property purchased from each vendor, the county in which the vendor made the sale and the amount of local sales and use taxes paid thereon. If the property was purchased out-of-state, the county in which the property was delivered should be listed. The contractor should also be notified that the certified statement may be subject to audit.

In the event the contractors make several purchases from the same vendor, such certified statement must indicate the invoice numbers, the inclusive dates of the invoices, the total amount of the invoices, the counties, and the county sales and use taxes paid thereon.

Name of taxing county: The position of a sale is the retailer's place of business located within a taxing county where the vendor becomes contractually obligated to make the sale. Therefore, it is important that the county tax be reported for the county of sale rather than the county of use.

When property is purchased from out-of-state vendors and the county tax is charged, the county should be identified where delivery is made when reporting the county tax.

Such statement must also include the cost of any tangible personal property withdrawn from the contractor's warehouse stock and the amount of county sales or use tax paid thereon by the contractor.

Similar certified statements by his subcontractors must be obtained by the general contractor and furnished to the claimant.

Contractors are not to include any tax paid on supplies, tools and equipment which they use to perform their contracts and should include only those building materials, supplies, fixtures and equipment which actually become a part of or annexed to the building or structure.

## **25. EQUAL OPPORTUNITY CLAUSE**

The non-discrimination clause contained in Section 202 (Federal) Executive Order 11246, as amended by Executive Order 11375, relative to equal employment opportunity for all persons without regard to race, color, religion, sex or national origin, and the implementing rules and regulations prescribed by the secretary of Labor, are incorporated herein.

The contractor(s) agree not to discriminate against any employee or applicant for employment because of physical or mental disabilities in regard to any position for which the employee or applicant is qualified. The contractor agrees to take affirmative action to employ, advance in employment and otherwise treat qualified individuals with such disabilities without discrimination based upon their physical or mental disability in all employment practices.

## **26. MINORITY BUSINESS PARTICIPATION**

GS 143-128.2 establishes a ten percent (10%) goal for participation by minority business in total value of work for each State building project.

For construction contracts with a value of less than \$300,000, the Owner has the responsibility to make a good faith effort to solicit minority bids and to attain the goal. The contractor shall include with his bid a completed Identification of HUB Certified/Minority Business Participation form. Contractor shall submit completed Appendix E MBE Documentation for Contract Payments form with final payment request.

For construction contracts with a value of \$300,000 or greater, the contractor shall comply with the document *Guidelines for Recruitment and Selection of Minority Businesses for Participation in State Construction Contracts* including Identification of Minority Business Participation, Affidavits A, B, C, and D, and Appendix E. These forms provided herein are hereby incorporated and made a part of this contract.

**27. ACCESS TO PERSONS AND RECORDS**

The State Auditor shall have access to persons and records as a result of all contracts or grants entered into by the Owner in accordance with General Statute 147-64.7. The Owner’s internal auditors shall also have the right to access and copy the Contractor’s records relating to the Contract and Project during the term of the Contract and within two years following the completion of the Project/close-out of the Contract to verify accounts, accuracy, information, calculations and/or data affecting and/or relating to Contractor’s requests for payment, requests for change orders, change orders, claims for extra work, requests for time extensions and related claims for delay/extended general conditions costs, claims for lost productivity, claims for lost efficiency, claims for idle equipment or labor, claims for price/cost escalation, pass-through claims of subcontractors and/or suppliers, and/or any other type of claim for payment or damages from Owner and/or its project representatives.

**28. GOVERNING LAWS**

This contract is made under and shall be governed by and construed in accordance with the laws of the State of North Carolina. The Contractor shall comply with all applicable federal, State and local laws, statutes, ordinances and regulations including, but not limited to, the Omnibus Transportation Act of 1991 and its implementing regulations.

**29. CONTRACTOR EVALUATION**

The contractor’s overall work performance on the project shall be fairly evaluated in accordance with the State Building Commission policy and procedures, for determining qualifications to bid on future State projects. In addition to final evaluation, an interim evaluation may be prepared during the progress of project. The owner may request the contractor’s comments to evaluate the designer.

## **SUPPLEMENTARY GENERAL CONDITIONS**

### **TIME OF COMPLETION**

The Contractor shall commence work to be performed under this Contract on a date to be specified in written order from the Designer/Owner and shall fully complete all work hereunder within **(Fifty (50))** consecutive calendar days from the Notice to Proceed. For each day in excess of the above number of days, the Contractor shall pay the Owner the amount **(\$ 300 )** as liquidated damages reasonably estimated in advance to cover the losses to be incurred by the Owner should the Contractor fail to complete the Work within the time specified.

If the Contractor is delayed at any time in the progress of his work by any act or negligence of the Owner, his employees or his separate contractor, by changes ordered in the work; by abnormal weather conditions; by any causes beyond the Contractor's control or by other causes deemed justifiable by Owner, then the contract time may be reasonably extended in a written order from the Owner upon written request from the contractor within ten days following the cause for delay. Time extensions for weather delays, acts of God, labor disputes, fire, delays in transportation, unavoidable casualties or other delays which are beyond the control of the Owner do not entitle the Contractor to compensable damages for delays. Any contractor claim for compensable damages for delays is limited to delays caused solely by the owner or its agents.

### **PERFORMANCE AND PAYMENT BONDS: N/A**

### **CONSTRUCTION SCHEDULE:**

- Contractor shall perform all work in the designated areas outside of regular working hours, which are [7:00] a.m. to [7:00] p.m., Monday through Friday.
- Contractor may not begin work in the designated areas until [TBD].
- Contractor shall coordinate installation of \_\_\_\_\_ by a separate contract

### **UTILITIES**

Utilities: Drinking water, water required to carry on work, and 120 volt electrical power required for small tool operation may be obtained without cost to the Contractor from existing utilities at locations designated by the Owner's Representative. Provisions for obtaining power, including temporary extensions, shall be furnished and maintained by the Contractor. Upon completion of work such extensions shall be removed and any damage caused by use of such extensions shall be repaired to satisfaction of the Owner's Representative, at no cost to the Owner.

Provisions for obtaining power, including temporary extensions, shall be furnished and maintained by the Contractor. Upon completion of the work, such extensions shall be removed and any damage caused by use of such extensions shall be repaired to the satisfaction of the Owner's Representative, at no cost to the Owner

#### Restroom:

Existing toilet facilities within Project Limits or Restrooms designated by the Owner's Representative for use by the Contractor will be available. Failure of the Contractor to maintain restrooms in a clean condition will be cause for the Contractor's discontinued use of the restroom.

## EPA

Any items removed during demolition and any waste generated must be recycled, if recyclable, and properly disposed of through local solid waste management. Contractor must provide Owner proof of documentation for all items recycled and or disposed of properly.

## SECURITY

Request for “Off Campus Hours Access” must be made on the “Off Hours Building Access” form provided in the appendix. This is required if contractor is to work on weekends or after hours.

## NOTIFICATION

Before beginning Demolition Work or service outages, the Contractor shall provide, at minimum, seventy-two (72) hours advance notice to Owner’s Representative for purpose of verifying utility locations including, but not limited to, gas, telecommunications, electric, water, steam, sewer, and nitrogen. Contractor shall minimize the number of outages, minimize the length of outages and related work shall be continuous until the utility is restored.

## USE OF SITE

a. Access: Access to construction site shall be as indicated on Drawings and as directed by the Owner's Representative.

b. Parking:

(1) Contractor(s) must register all vehicles with FSU Police & Public Safety and obtain one of the following parking permits per vehicle:

- Academic Year (Sep 1-Aug 31) - \$100
- Contractor for the Year (Sep 1-Aug 31) - \$75
- Month- \$40
- Week- \$7

(2) These permits are to be used for general contractor or subcontractor owned and labeled vehicles only. Personal vehicles are prohibited from use of these permits. Violation of this requirement may result in ticketing and/or towing at the vehicle owner’s expense and suspension of progress payments.

(3) Parking of personal vehicles within project access/lay down/staging areas is prohibited. Violation of this requirement may result in ticketing and/or towing at the vehicle owner’s expense and suspension of progress payments.

(4) Parking or driving on sidewalks, landscaped areas, within fire and service lanes or generally in areas not designated for vehicular traffic is prohibited except as allowed in the contract documents. Violation of this requirement may result in ticketing and/or towing at the vehicle owner’s expense and suspension of progress payments.

(5) Vendor Permits may be purchased by contractor management personnel on an as available basis by contacting the Parking and Transportation office in the Turner Avenue Parking Structure. These permits will allow contractor management personnel to park in various University lots while conducting business on University construction projects.

(6) Temporary University parking permits may be purchased by contractor employees for use with their personal vehicles on an as available basis by contacting the Police & Public Safety Department located in the Mitchell Building.

c. Storage of materials:

The Contractor shall store all materials within project limits. The Contractor shall confine apparatus, materials, and operation of workers to location established by the Owner's Representative. The Contractor shall not unreasonably encumber premises with materials. In addition, storage trailer locations may be available within 1-1/2 miles of project site as directed by the Owner's Representative. Storage trailer locations shall be subject to approval by the Owner's Representative and are available to the Contractor without cost.

b-d. Care of Project Work Site:

The contractor shall be responsible for maintaining the construction site in a reasonably neat and orderly condition by regular cleaning and mowing of the premises as determined by the Owner's Representative.

e-e. Discharge to Sewer Request:

Local ordinances, and state and federal environmental regulations prohibit hazardous materials from being disposed into either the storm water or sanitary sewer systems. Unless specifically approved, all chemical products such as paints, dyes, lawn care products, maintenance products, and oil is are prohibited from drain disposal. Any product, including contaminated water, being discarded into the storm water or sanitary sewer systems requires written approval from the Owner.

### PROTECTION OF OWNER'S PROPERTY

a. The Contractor shall be responsible for repair of damage to building exterior and interior, drives, curbs, streets, walks, grass, shrubbery and trees, which was caused by workmen or equipment employed during progress of work. All such repairs shall be made to satisfaction of the Owner's Representative, at no cost to the Owner, or reimburse the Owner if the Owner elects to make repairs. For landscape damage, the Owner shall make such repairs. Compensation for these repairs shall be determined by the Owner's Representative using the "Valuation of Landscape Trees, Shrubs, and other Plants" as published by the International Society of Arboriculture, as last revised.

### Hot Work Permitting:

(1) Hot work Requirements – The contractor shall comply with the following hot work requirements and the requirements of NFPA 51B.

(a) Hot work shall be defined as any work involving burning, welding, grinding, cutting, or similar operation that is capable of initiating fires or explosions.

(b) A Hot Work Permit shall be used on all hot work outside a designated hot work area. This permit shall be clearly visible within proximity of the hot work. The permit authorizing individual(s) shall be as designated by the Contractor. These permits may be obtained from the Owner's Representative.

(c) Notify the Owner's Representative prior to starting hot work in buildings where fire alarm / fire suppression systems exist so Campus Maintenance can be notified.

(d) A copy of all completed hot work permits shall be provided to the Owner's Representative.

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### **FEDERAL FUNDING (TITLE III) CONTRACT PROVISIONS**

The following additional contract provisions must be complied with as part of this contract. All are subject to audit and require proof of compliance documentation to be forwarded to the Owner.

1. The Contractor, as one of the considerations for the awarding of this contract, shall furnish the Owner a construction schedule setting forth planned progress of the project broken down by the various divisions or part of the work and by calendar days. If the Contractor fails to begin the work under the contract within the time specified, or the progress of the work is not maintained on schedule, or the work is not completed within the time above specified, or fails to perform the work with sufficient workmen and equipment or with sufficient materials to ensure the prompt completion of said work, or shall perform the work unsuitably or shall discontinue the prosecution of the work, or if the Contractor shall become insolvent or be declared bankrupt or commit any act of bankruptcy or insolvency, or allow any final judgment to stand against him unsatisfied for a period of forty-eight (48) hours, or shall make an assignment for the benefit of creditors, or for any other cause whatsoever shall not carry on the work in an acceptable manner, the Owner may give notice in writing, sent by certified mail, return receipt requested, to the Contractor and his surety of

such delay, neglect or default, specifying the same, and if the Contractor within a period of fifteen (15) days after such notice shall not proceed in accordance therewith, then the Owner shall, declare this contract in default, and, thereupon, the surety shall promptly take over the work and complete the performance of this contract in the manner and within the time frame specified. In the event the surety shall fail to take over the work to be done under this contract within fifteen (15) days after being so notified and notify the Owner in writing, sent by certified mail, return receipt requested, that he is taking the same over and stating that he will diligently pursue and complete the same, the Owner shall have full power and authority, without violating the contract, to take the prosecution of the work out of the hands of the Contractor, to appropriate or use any or all contract materials and equipment on the grounds as may be suitable and acceptable and may enter into an agreement, either by public letting or negotiation, for the completion of said contract according to the terms and provisions thereof or use such other methods as in his opinion shall be required for the completion of said contract in an acceptable manner. All costs and charges incurred by the Owner, together with the costs of completing the work under contract, shall be deducted from any monies due or which may become due said Contractor and surety. In case the expense so incurred by the Owner shall be less than the sum which would have been payable under the contract, if it had been completed by said Contractor, then said Contractor and surety shall be entitled to receive the difference, but in case such expense shall exceed the sum which would have been payable under the contract, then the Contractor and the surety shall be liable and shall pay to the Owner the amount of said excess.

2. The Owner, Owner's financial representatives or agencies, Education Department, the Comptroller General of the United States, or any of their duly authorized representatives, must have access to any books, documents, papers and records of the contractor which are directly pertinent to a specific program for the purpose of making audits, examinations, excerpts and transcriptions.

3. Copeland "Anti-Kickback" Act (18 U.S.C. 874 and 40 U.S.C. 276c) as supplemented by Department of Labor regulations (29 CFR Part 3—Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States)—Contractor shall be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he is otherwise entitled.

4. Davis-Bacon Act, as amended (40 U.S.C. 276a to a-7) —Contractor must be in compliance with the Davis-Bacon Act (40 U.S.C. 276a to a-7) and as supplemented by Department of Labor (DOL) regulations (29 CFR Part 5— Labor Standards Provisions Applicable to Contracts Governing Federally Financed and Assisted Construction). Under this Act, Contractor shall be required to pay wages to laborers and mechanics at a rate not less than the minimum wages specified in a wage determination made by the Secretary of Labor. In addition, Contractor shall be required to pay wages not less than once a week. Contractor must submit to the Owner, copies with blue ink signatures, of weekly certified payroll once project begins through completion whether workers were on site or not. Contractor must post current DOL Davis-Bacon poster on job site. The prevailing wage for Cumberland County, North Carolina (See [www.wdol.gov](http://www.wdol.gov) ) are listed in this project manual, below #11. Please review the requirements of this contract provision, which require, among other things, weekly payment to covered workers, weekly reporting of certified payroll, posting of prevailing wages at the project site. The following are sources to assist contractors in meeting the Davis-Bacon requirements:

- a. Free workplace law poster <http://www.nclabor.com/posters/posters.htm>
- b. Employees certified weekly payroll (you can find sample at [http://www1.eere.energy.gov/wip/pdfs/wh-347\\_example.pdf](http://www1.eere.energy.gov/wip/pdfs/wh-347_example.pdf) )
- c. Davis Bacon Wage Determination <http://www.wdol.gov/dba.aspx#3>
- d. Davis Bacon Wage Determination - Excel Sheet [http://www1.eere.energy.gov/wip/dol\\_wage\\_determinations\\_sep\\_eecbg.html](http://www1.eere.energy.gov/wip/dol_wage_determinations_sep_eecbg.html)
- e. Davis Bacon help desk, please call 1-866-487-9243.

The recipient shall report all suspected or reported violations to the Federal awarding agency.

***The recipient (FSU Project Manager) shall place a copy of the current prevailing wage determination issued by the Department of Labor (DOL) in each solicitation and the award of a contract shall be conditioned upon the acceptance of the wage determination...use Cumberland County, NC and print out from DOL website for each project to ensure current minimum wages as of project bid date.***

5. Contract Work Hours and Safety Standards Act (40 U.S.C. 327–333) —Contractor must be in compliance with Sections 102 and 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 327–333), as supplemented by Department of Labor regulations (29 CFR Part 5). Under Section 102 of the Act, each contractor shall be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than 1 1/2 times the basic rate of pay for all hours worked in excess of 40 hours in the work week. Section 107 of the Act is applicable to construction work and provides that no laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.

6. Rights to Inventions Made Under a Contract or Agreement —Contracts or agreements for the performance of experimental, developmental, or research work must provide for the rights of the Federal Government and the recipient in any resulting invention in accordance with 37 CFR Part 401 —Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements, and any implementing regulations issued by the awarding agency.

7. Clean Air Act (42 U.S.C. 7401 et seq.) and the Federal Water Pollution Control Act (33 U.S.C. 1251 et seq.), as amended —For contracts and subgrants of amounts in excess of \$100,000, Contractor required to comply with all applicable standards, orders, or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401 et seq.) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251 et seq.). Violations shall be reported to Education Department and the Regional Office of the Environmental Protection Agency (EPA).

8. Byrd Anti-Lobbying Amendment (31 U.S.C. 1352) —Contractors who apply or bid for an award of \$100,000 or more shall file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. 1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. The disclosures are forwarded from tier to tier up to the Owner.

9. Debarment and Suspension (E.O. 12549 and E.O. 12689) —No contract may be made to parties listed on the General Services Administration's List of Parties Excluded from Federal Procurement or No procurement Programs in accordance with E.O. 12549 and E.O. 12689—Debarment and Suspension. This list contains the names of parties debarred, suspended, or otherwise excluded by agencies, and contractors declared ineligible under statutory or regulatory authority other than E.O. 12549. Contractors with awards that exceed the small purchase threshold (\$25,000 or greater) must provide the required certification regarding its exclusion status and that of its principal employees. **FSU PM to verify.**

10. Equal Employment Opportunity (EEO) —Contractor must be in compliance with E.O. 11246—Equal Employment Opportunity, as amended by E.O. 11375—Amending Executive Order 11246 Relating to Equal Employment Opportunity, and as supplemented by regulations at 41 CFR Part 60—Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor. Contractor must post current EEO poster on job site.

11. General Decision Number: NC150025 01/02/2015 NC25

Superseded General Decision Number: NC20140025

State: North Carolina

Construction Type: Building

County: Cumberland County in North Carolina.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.60 for calendar year 2019 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.60 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2019. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts).

| Modification Number | Publication Date |
|---------------------|------------------|
| 0                   | 01/04/2019       |
| 1                   | 09/13/2019       |

\* ELEC0379-009 01/01/2019

|                  | Rates    | Fringes  |
|------------------|----------|----------|
| ELECTRICIAN..... | \$ 26.55 | 13%+7.80 |

On smokestacks where electrical work performed is above 40 ft. from the ground: \$0.50 per hour additional.

Work from swinging scaffolds, bosun chairs, or raw structural steel: \$0.50 per hour additional.

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IRON0848-005 02/01/2018

|                             | Rates    | Fringes |
|-----------------------------|----------|---------|
| IRONWORKER, STRUCTURAL..... | \$ 25.00 | 13.50   |

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\* PLUM0421-002 07/01/2018

|  | Rates    | Fringes |
|--|----------|---------|
| PLUMBER/PIPEFITTER (Excluding HVAC System Installation)..... | \$ 28.00 | 12.01   |

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SUNC2011-018 08/24/2011

|   | Rates    | Fringes |
|---|----------|---------|
| BRICKLAYER.....   | \$ 19.75 | 9.18    |
| CARPENTER, Excludes Drywall Hanging, and Form Work..... | \$ 15.41 | 0.00    |
| CEMENT MASON/CONCRETE FINISHER...                       | \$ 16.41 | 0.00    |
| DRYWALL HANGER.....                                     | \$ 13.83 | 0.00    |
| FORM WORKER.....  | \$ 14.09 | 0.00    |

|  |          |      |
|--|----------|------|
| HVAC MECHANIC (Installation of HVAC Unit Only, Excludes Installation of HVAC Pipe and Duct)..... | \$ 17.36 | 2.23 |
| LABORER: Common or General.....  | \$ 12.00 | 2.40 |
| LABORER: Landscape & Irrigation.....   | \$ 9.13  | 0.28 |
| LABORER: Pipelayer.....  | \$ 13.35 | 2.80 |
| LABORER: Mason Tender-Brick/Cement/Concrete.....   | \$ 12.00 | 0.00 |
| OPERATOR: Backhoe/Excavator/Trackhoe.....  | \$ 16.00 | 2.48 |
| OPERATOR: Bulldozer.....   | \$ 16.00 | 1.87 |
| OPERATOR: Crane.....   | \$ 19.77 | 4.48 |
| OPERATOR: Forklift.....  | \$ 13.86 | 0.00 |
| OPERATOR: Grader/Blade.....  | \$ 15.72 | 1.49 |
| OPERATOR: Loader.....  | \$ 16.17 | 0.25 |
| PAINTER: Brush, Roller and Spray.....  | \$ 14.13 | 2.88 |
| ROOFER.....  | \$ 13.16 | 0.74 |
| SHEET METAL WORKER (HVAC Duct Installation Only).....  | \$ 17.70 | 1.68 |
| SHEET METAL WORKER, Excludes HVAC Duct and Unit Installation.....                                | \$ 15.96 | 1.01 |
| SPRINKLER FITTER (Fire Sprinklers).....  | \$ 15.52 | 0.00 |

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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons

resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts).

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

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The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

#### Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

#### Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

### Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

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### WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- \* an existing published wage determination
- \* a survey underlying a wage determination
- \* a Wage and Hour Division letter setting forth a position on a wage determination matter
- \* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations  
Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

#### NO SMOKING POLICY

[Smoking is prohibited inside the buildings at the Fayetteville State University and all properties owned, operated, leased or controlled by the Fayetteville State University. Violation of the policy is defined as smoking any tobacco products, including e-cigarettes.](#)

#### SUSTAINABILITY

[Contractor shall track and report all efforts related to recycling, reusing, and/or re-selling of all salvaged material from the project \(including clean fill material\). Report total tonnage of all demolition wastes and clean fill material diverted from a landfill. Report all material types and weights, where material was diverted, type of diversion, documentation of this diversion, and applicable dates. Total weights and percentages of total demolition material shall also be reported. This information shall be in tabular form utilizing the Sustainability Report at the end of this section. This information shall be updated monthly with final submission prior to substantial completion.](#)

## **APPENDICES**

# **FAYETTEVILLE STATE UNIVERSITY**

### **TELECOMMUNICATIONS DESIGN**

### **STANDARDS & GUIDELINES**

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## **1.0 Introduction**

The following standards for telephone, data, video, and other telecommunications distribution systems are of a general nature and may be modified by the Information Technology & Telecommunications Services (ITTS) department as necessary to accommodate special design or functional requirements. **Wiring standards are dynamic and constantly changing due to continually evolving networking standards; thus this document is meant to be dynamic, and will change as official wiring standards change.**

These standards provide requirements for designers to incorporate into bid documents. They are part of the University Wiring Standard (UWS). Designers and Contractors must consult with Fayetteville State University (FSU) ITTS for clarification of current media types and standards before completing telecom designs, purchasing materials, and commencing work. Basic requirements for all new building structures will include underground service entrance ducts, Telecommunication Rooms (TR's), a conduit riser system between TR's, a horizontal cable distribution system, and building wiring as defined in the following document. Existing building renovations may or may not require the construction of new Telecommunications duct bank. The contractor will be required to purchase, install, test, and document all communications wiring as specified by the FSU-ITTS department. The contractor may be required to provide communications manholes/duct bank within the scope of selected projects. The project communications contractor project manager and any associated installers shall be required to attend a pre-installation meeting prior to any work being performed. This meeting will be coordinated by an FSU Planning & Construction project manager.

The contractor shall be required to submit all communications materials for review and approval by the designer, FSU Planning & Construction and FSU-ITTS prior to any procurement. Telecommunications electronic equipment will be purchased by funds approved for the project, and installed by the FSU-ITTS Networking Group.

## **1.1 Codes, Standards, and Regulations**

### **Overview**

To design facilities for an effective telecommunications system, the designer and installer must be familiar with national and local regulations. Both the designer and the contractor must be familiar with and adhere to the standards of the telecommunications and building industries.

### **Agencies**

The following agencies and their codes, standards and regulations shall govern all telecommunications work performed at Fayetteville State University:

- ANSI American National Standards Institute
- BICSI Building Industry Consulting Service International
- BOCA Building Officials and Code Administrators (Standard Building Code)
- EIA Electronic Industries Association
- FCC Federal Communications Commission
- FOTP Fiber Optic Testing Procedures
- ICBO International Conference of Building Officials (Uniform Building Code)
- IEEE Institute of Electrical and Electronic Engineers, Inc
- NBC National Building Code
- NFPA National Fire Protection Association
- NEC National Electrical Code
- TIA Telecommunications Industry Association
- UL Underwriters Laboratories

### **1.2 Contractor Qualifications**

Any contractor offering a proposal for this project must meet the minimum requirements listed below and provide written, hard copy documentation of these qualifications with their proposal:

- Certified Panduit Corp. as a PCI Design and Installation Contractor able to offer the Certification Plus System Warranty, or certified by the manufacture of the approved submittal.

- BICSI Corporation member organization
- RCDD on staff or able to retain services of a Telecommunications RCDD
- Primary line of business communications structured cabling
- Five (5) years experience in the installation of optical fiber cables, including splicing, terminating and testing. Testing on optical fiber cable shall include single and multi-mode.
- Three (3) years experience in the installation of Category 6 Unshielded Twisted Pair copper cables for voice and data distribution systems, including splicing, terminating and testing. Testing of Category 6 copper cable shall include complete verification with TIA/EIA cable standards.
- Five (5) references for project of equivalent scope, type and complexity of work completed within the last five (5) years. The Contractor shall submit as proof, supporting documents and the names, addresses and telephone numbers of the operating personnel who can be contacted regarding the installation system.
- Licensed NC Contractor

The Contractor must have a minimum of one (1) Registered Communications Distribution Designer(RCDD) as recognized by Building Industry Consulting Service International (BICSI.) The RCDD shall be responsible for compliance of work with the referenced standards and guidelines. Professional resume and proof of current registration shall be supplied for approval at the time of bid. The RCDD shall be named as the project manager for the project. All supervisors assigned to the installation of this system or any of its components shall be Building Industry Consulting Services International (BICSI) Certified Cabling Installation Technicians, Installer Level II.

### 1.3 System Warranty

The Contractor shall provide the following warranties for the system and components.

**Contractor Materials and Labor Warranty:** Provide system warranties for a period specified in the contract documents against faulty materials and defects in workmanship. In addition, honor any manufacturer warranties that exceed this period of time.

**Panduit Component Warranty:** All components of the structured cabling system shall be free from manufacturing defects in material or workmanship, under normal and proper usage for a minimum of twenty-five (25) years.

**Panduit System Performance Warranty:** The permanent link of the structured cabling system will comply with Category 6 and optical fiber for end-to-end performance, as defined in TIA/EIA-568-C Telecommunications Standards, for a minimum of twenty-five (25) years.

**Panduit Assurance Warranty:** The structured cabling system will be free from defects that prevent the operation of standards based applications/protocols over Category 6 and optical fiber. The applications/protocols shall be those recognized by standards bodies IEEE, ANSI, ATM Forum and sanctioned specifically for transmission over the specified medium as defined in TIA/EIA 568-C, ISO IEC 11801, and shall support current and future applications designed for data transmission over the permanent link/ channel, as defined in TIA/EIA-568-C telecommunications standards for a period of twenty-five years. Panduit shall bear the burden to replace or repair any such defective products during the warranty period at their cost including labor and materials.

## ***2.0 Distribution System***

### **2.1 Communications Manhole**

All communications manholes shall be constructed in accordance with the plan and section view drawings in the FSU-ITTS Telecommunications Design & Standards Guideline. All new manholes shall be fitted with cable racking hardware.

#### **2.1.1 Entrance Duct**

Unless specifically directed by the FSU-ITTS department, all new buildings will be designed with a minimum quantity of four 4 inch entrance conduits. This conduit will be of a rigid metallic construction or 4 inch Schedule 40 PVC encased in concrete pending approval and inspection by FSU Planning & Construction and will extend from a communications manhole, designated by the FSU-ITTS department, to the intermediate distribution frame in the building. All

of these conduits shall be fitted with (1) 3" x 3 sleeve inner ducts. All conduits and inner ducts shall be installed with marked pull tapes. The service entrance conduits shall appear and be positioned in the right rear corner of the IDF (intermediate distribution frame), 4 inches from the rear wall, and shall be stubbed 4 inches above the finished floor. Plastic bushings shall be installed on each entrance duct. In general, no more than two 90 degree bends between the manhole and the building will be permitted.

### **2.1.1 Entrance Duct** –continued

The use of LB, LL, or LR fittings will not be approved. All metallic entrance conduits shall be installed in accordance with National Electric Code Article 250 and 800-12C. If the service entrance ducts penetrate or appear in the building before final termination in the building's IDF, they should transition to metallic conduit (if PVC) in an accessible and appropriately sized junction box. If the distance between the point of transition and the building IDF exceeds 50 ft., then at least one of the quantities of exposed entrance conduits **MUST** be rigid. In addition, where a transition junction box is installed, one of the other conduits that extend to the IDF shall be fitted with three 1-1/4" rated inner ducts. Contractor shall consult with the FSU-ITTS Networking Group when special pull boxes or junction boxes are required.

### **2.1.2 Duct bank between Manholes**

All Telecommunications duct banks shall allow no more than 180 degrees of bends between manholes. No short radius 90 degree bends are allowed.

### **2.1.3 Acceptance of Ductbank**

All ductbank both from the manhole to the building, and between manholes shall be inspected and approved by a representative from the Fayetteville State University Planning & Construction department prior to the placement of any concrete. Additionally, this ductbank shall be mandreled after completion. After a duct line is completed, a standard flexible mandrel shall be used for cleaning followed by a brush with stiff bristles.

Mandrels shall be at least 12 inches long and have diameters 1/4 inch less than the inside diameter of the duct being cleaned.

## **2.2 Telecommunications Rooms**

### **2.2.1 Main Distribution Frame**

All buildings will have an MDF (Main Distribution Frame, located on the lowest level of the building. This room will be a walk-in room with MINIMUM dimensions of 10' deep x 10' wide (double doors may be required as directed by the ITTS dept) unless otherwise specified by FSU-ITTS, and **shall be separated from other electrical, mechanical, and housekeeping spaces.** For specific power requirements for primary distribution room refer to section 2.2.4.

### **2.2.2 Intermediate Distribution Frame**

Intermediate distribution frames (IDF) will be centrally located on each level of the building, and “stacked” one above the other. At minimum, there shall be a room for each 10,000 square feet of office floor space. Rooms shall provide a minimum quantity of three (3) 4” core holes with 4” sleeves/conduits thru the floor in back left hand corner. Contractor will install a minimum quantity of three (3) 1 1/4 inch plenum rated inner-ducts in one of the four inch backbone and/or riser conduits from Telecom Room to Telecom Room.

**NOTE: Telecommunications rooms shall be located in the building such that the maximum cable distance from the data/voice outlet to the termination point in a TR does not exceed 90 meters. In addition, 10 meters is allowed for interconnect cable in the room and for station cable in the office for a total cable distance of 100 meters. Satellite rooms will have minimum inside dimensions of 10' deep x 10' wide unless otherwise specified by the FSU-ITTS Networking Group. Double doors may be specified by the FSU-ITTS Networking Group.**

### **2.2.3 Telecommunications Room Design**

All telecommunications rooms (TR) will be equipped with the following:

- Ceilings that are “open to structure”
- Room Lighting (50 ft candles measured at 3' AFF) with motion sensor light switch
- All rooms shall be located away from areas where water damage may occur. No water carrying pipes shall be permitted to run through or within the ceiling space or floor of rooms, except pipes associated with any required fire protection system. No showers, toilets, or similar wet rooms/areas shall be adjacent to or above TR's.

In addition, TR's shall be located away from electrical transformers, generators, air conditioning units, or radio transmission equipment.

- Door locks are to be keyed to telecommunications room standards. The intent is to have an electronic door access device on all telecom room doors. FSU uses the Persona Lock/Card Access system, and all measures should be taken to ensure that doors/ frames are equipped to support the Persona Lock system.
- Floors shall be covered with static resistant VCT. Sealed concrete will not be permitted. The doors should be designed as double doors, and all doors will open into the corridors or common space. The purpose of this requirement is to ensure that all TR's are accessible without having access to other spaces.
- 3/4" Fire-retardant plywood, grade A-C equivalent, fully lining all walls to a height of eight feet and beginning at floor level. Plywood shall be painted with a minimum of two coats white fire resistant paint. At least one fire retardant stamp shall be left exposed on each sheet of plywood.
- 12" wide by 1-1/2" deep tubular steel ladder runway installed around perimeter of room, 4" off wall surface, at 7' above finished floor. Equip ladder runway with bottom drop out devices at floor racks as required to ensure cable bundling is fully supported to maintain proper bend radius.
- Conditioned air which meets and typically exceeds normal building standards for office space as a minimum. Heat load requirements shall be calculated based upon electronic network switch equipment that will be installed in each room. Conditioned air shall be independently controlled for each telecom room and provided 24hours/7days a week, 365 days per year. The HVAC design for all telecommunications rooms will need to make certain that air is exchanged out of the room. The FSU-ITTS Networking Group will review and approve all HVAC designs, including mean temperature and number of air exchanges per hour. All design efforts shall attempt to locate all TR cooling equipment such that it is not located in the TR ceiling space.
- All TR signage should be consistent with FSU Facilities Management room labeling, and should be labeled "Telecom Room." All contractors will coordinate signage details with FSU Facilities Management.

- In buildings greater than four floors, with “stacked closets,” provide a 1/8” vertical strength member for strain relief of riser cables in each riser sleeve. This strength member is not part of the cable but is a separate braided cable on which riser cables are supported on. Contractors must submit product cut sheets prior to beginning work.

#### **2.2.4 Electrical Requirements**

Main Distribution Frame (MDF): A “dedicated” electrical distribution panel shall be provided in the MDF. It shall be a minimum 100 Ampere rated 3 phase panel with a minimum capacity for 16 circuits. Panel shall be commercial grade with bolt-in type breakers. Panel shall be flush mounted on wall inside MDF. Panel feeder shall be four wire (3 phase, 1 neutral, 1 grounding copper conductors) fully sized in accordance with Table 310.16 and 250.122 of the NEC, and shall originate at the MDF (Main Distribution Frame) include minimum quantity of (6) six 3/4” EMT conduits stubbed out from flush mounted panel to an accessible location above ceiling walls.

Main Distribution Frame (MDF) and Intermediate Distribution Frame (IDF): All electrical receptacles shall be 250v, 20 Ampere rated commercial grade flush mounted at 6’ 6” (on-center) AFF and located in the center on the three non-entrance walls. Each receptacle location will present a double-duplex outlet. Receptacles in each MDF and IDF shall be served with a minimum of three (3) dedicated 20 ampere branch circuits connecting to 20 ampere bolt in breakers in the MDF distribution panel. Wiring shall consist of (3) #12 awg (black/red/blue), (1) #12 awg neutral (white) and (1) #12 awg grounding conductor (green) in a 3/4” EMT conduit. Circuits shall be “split” between receptacles such that each receptacle in each double duplex outlet is served by a different circuit. Note: Electrical receptacle outlet locations **MAY** need to be field coordinated with owner to ensure that two outlets are located behind racks and one outlet above telephone equipment. All electrical panels and devices shall be UL listed and installed per manufacturer’s instructions and meet the requirements of the National Electric code.

Contractor will install a Telecommunications Bonding Backbone (TBB) in building by extending an appropriately sized #6 to 3/0 insulated ground wire (stranded)

from the Electrical Main Distribution Panel to a ground bar in the MDF. The ground bar shall be mounted in the upper left-hand corner of the rear wall at 7' 6" AFF. A continuous appropriately sized # 6 to # 3/0 insulated ground wires grounding conductor shall extend between ground bars in subsequent Telecommunications Rooms. Additionally, the ground bar on each floor shall be bonded to building steel or electrical distribution panel ground on that floor. A ground bar shall be installed as described above in each and every Telecommunications Room. Ensure that all of the ground wires described are installed in dedicated 3/4" conduits, not in riser conduits between floors. These 3/4" conduits are to be installed in the very left-hand corner of each Telecommunications Room.

### **2.3 Riser System**

Telecommunications rooms will be connected by a minimum of three 4 inch sleeves or conduits. Both sleeves and conduit will be located along the rear wall, in the left rear of the room and will be stubbed 4 inches above the finished floor, 4 inches off the rear wall. Sleeves shall be fitted with 4" set-screw or compression connectors and screw-on type plastic bushings. Bushings shall be installed before any cable is pulled through riser conduits/sleeves. If riser conduit extends between rooms that are not stacked, a marked pull tape shall be provided. There shall be no more than two 90 degree bends in the riser conduit runs between rooms without installation of a pull box 24" x 24" x 8" deep. LB fittings will not be accepted. See section 3.2.1 for riser cable specifications.

### **2.4 Floor Distribution**

#### **2.4.1 Return Air Plenum Ceiling**

Floor distribution from TR's to data/voice outlets will be provided by individual home-runs of 1" conduit. All conduits will be equipped with a marked pull tape. Marked pull tapes will be tagged in the room and at each corresponding outlet to identify where the string terminates on each floor. This will be the preferred method of distribution when ceiling space is used as a return air Plenum. In lieu of a system utilizing "home-run" conduits, a distribution system combining 1" conduits and centrally installed cable tray may be considered.

#### **2.4.2 Non-Return Air Plenum Ceiling**

When non-return air plenum ceilings are used, a distribution system combining 1" conduits and centrally installed cable tray should be considered as the primary distribution system. This system will provide an open, center-hung top-rung cable tray extended throughout corridors of the building. The tray shall be 4"

deep x 12" wide or sized to provide cable fill requirements with single center support. A minimum quantity of three (3) 4 inch conduits shall be used in lieu of cable tray when passing through fire walls. A 12 inch clearance shall be maintained on all sides of the cable tray. Complete clearance will also be provided below and above the cable tray. A 1-" conduit from each outlet shall extend back to the corridor and shall terminate 4" from the edge of the cable tray. The selection of the floor distribution system will depend on the design and intended use of that floor. The selected method of floor distribution must be approved by the FSU-ITTS Networking Group.

#### **2.4.3 Communications Outlet Box**

As a general rule for new construction, recessed outlet boxes will be used for voice, data, and video services. Outlet boxes shall be 4" x 4" x 2-1/8" deep and shall be fitted with a single gang plaster or raised ring. Each outlet box will extend 1" conduit and each conduit will have no more than two 90 degree bends between the outlet and the designated TR or cable tray. If more than two 90 degree bends are required, a fully accessible pull box must be installed with locations of pull boxes shown on the as-built drawings. The use of LB, LL, and LR fittings will not be approved.

Telecommunications outlets are not be to be "looped" in the same run of conduit.

#### **2.4.4 Grounding**

All vertical and horizontal metallic distribution systems must be grounded in accordance with National Electric Code Article 250-32. A fully developed TBB (Telecommunications Bonding Backbone) in full compliance with Joint Standard 607 shall be installed in each building renovation and/or construction project.

#### **2.5 Scheduling**

The full outfitting of the MDF shall be considered a critical path item. The contractor will complete the construction of all communications rooms, risers, and floor distribution in order to permit the installation of building communications wiring prior to the completion of lay-in ceilings in areas where above ceiling junction boxes and cable trays are installed.

### **3.0 Building Wiring**

#### **3.1 General**

The installation of the wiring system in these structures will be the responsibility of the Building Contractor which complies with this document. In small scope projects the FSU-ITTS department has the right to perform some "in house" aspects of the work. In

general, the Contractor will be responsible for the purchase, installation, termination, testing, and documentation of all specified communications cabling and the FSU-ITTS Networking Group will be responsible for the acceptance testing of the contractor's installation. Specific FSU-ITTS Networking Group and Contractor responsibilities are outlined in the sections below.

**3.2 Communication Cable**

**3.2.1 Cable Specification**

All telecommunications cables must meet or exceed the following cable specifications. Acceptable vendor cable part numbers are listed, and substitutions of the specified cables are prohibited.

**A. Standard Cable:** minimum bundle to be installed to each communications outlet unless otherwise specified.

**1. Voice/Data Cables:**

- EIA/TIA 568 Standard
- 4-Pair Category 6 UTP (unshielded twisted pair)
- UL Certified Category 6 Enhanced
- 24 AWG (0.51mm) copper conductor
- 100 ± 15 Ohm Impedance
- Sheath Color: [Blue](#) (sheath color must be [Blue](#) )

The following cables are acceptable:

General Cable GenSPEED 6000E (#7131940 for plenum or 7133940 for non plenum) Category 6E UTP

**2. Category 6 UTP Performance Specification**

The Category 6 UTP cabling system proposed for this project shall meet the following minimum system (cable and hardware combined) performance requirements as evidenced by a 3<sup>rd</sup> party verified ETL lab test report required to be submitted with bid. Systems performing with results below these levels shall not be accepted, and **cable manufacturer substitutions other than those listed in this document will not be accepted.**

| Frequency | Electrical Parameter | Performance (dB) | Margin over Standard (dB) |
|-----------|----------------------|------------------|---------------------------|
| 250 MHz   | Power Sum NEXT       | 45.7             | 15.5                      |

|         |                     |      |      |
|---------|---------------------|------|------|
| 250 MHz | Power Sum<br>ELFEXT | 27.6 | 15.3 |
| 250 MHz | P-P NEXT            | 48.6 | 15.4 |
| 250 MHz | Return Loss         | 19.9 | 11.8 |
| 250 MHz | Power Sum ACR       | 13.1 | 18.8 |
| 250 MHz | Insertion Loss      | 32.6 | 3.3  |

**B. Optional Cable:** will only be installed when /where specified. Single mode and 50 um multi-mode fiber optic cable (General Cable Gigabit plus grade).

**1. Video Cable – Room to Station**

- General Cable Coax
- 18 AWG solid copper
- 75 Ohm Impedance

**2. Multimode Fiber Cable – 12 Strands**

- 50/125 um fiber size
- 850/1300 nm wavelength
- 1500/500 MHz-km @ 850/1300 nm (nominal)
- 3.0/1.5 dB/km @ 850/1300 (nominal)

**The following cable is acceptable:**

- Corning 002S88-31180-29 PLENUM
- General Cable BE0121ANU PLENUM

**3. Singlemode Fiber Cable – 24 Strands**

- 8.3/125 um fiber size
- 1310/1383/1550 nm wavelength
- 1.0/1.0/.75 dB/km at 1310/1383/1550 nm (nominal)

**The following cable is acceptable:**

- Corning 002S88-31131-29 PLENUM
- General Cable AP0121ANU PLENUM

**C. Riser Cable**

The backbone riser system (vertical and horizontal) will consist of the conduit/sleeve and cable required to connect the building entrance room to all telecommunications rooms located on each floor. The contractor shall install all riser cable in conduit/sleeve

and use as few conduits/sleeves as possible to allow for spare empty conduit/sleeve. The FSU-ITTS Networking Group will provide cable specifications such as product code, and will be responsible for the verification of the cable after it is installed. The types and quantities of riser cables will be determined at the design phase.

#### **D. Horizontal Cable**

Typical data/voice cables consist of the following: 100 Mbps Category 6 Enhanced UTP Data Cable/Voice Cable (Data Sheath Color: [Blue](#), General Cable #7131900 for plenum or 7133900 for non-plenum) **All cables shall be neatly routed along the overhead ladder rack parallel to each other and secured with Velcro type cable wraps with an additional 10ft. (minimum) cable slack loop.**

#### **3.2.2 Cable Identification**

All cable labels shall be produced with a professional label maker. All cables shall be labeled both on the outlet and the patch panel with a telecommunications room/numeric identification code using the following format: Outlets EX. (RM100-1) Room 100 being the communications room and 1 being the port designation in that particular room. Patch panel/110 block ports shall be labeled in numerical order starting with number one and ending on the last patch panel/110 block port. Ex. (Port 1 is labeled 1 and port 48 is labeled 48). **All patch panels ports shall be labeled even if there is not a corresponding cable terminated on it. All 110 blocks for voice station cabling shall also be labeled in their entirety.**

#### **3.2.3 Responsibilities**

**A.** The telecommunications contractor will be responsible for the purchase and installation of all communications cable as specified in Sections 3.2.1. Installation will include the specified termination, testing, and documentation of all cable. The contractor will need to follow and be in compliance with all appropriate Category 6 Enhanced installation procedures as outlined in TIA/EIA 568A/B and TIA/EIA 569 standards including correct bend radius, and maintaining the appropriate twists in the pairs. Contractor shall also follow TIA/EIA 606 Standard and Joint Standard 607. The contractor will neatly bundle all cables in the room and label each cable to indicate each outlet number as shown in section shown in section 3.2.2. All cables will be labeled both at the termination point in the room and on the wall plate at the wall outlet. In addition to the bundle of installed cables the contractor will provide a pull string to each outlet for future cable installations. The contractor will conduct standard Category 6 Enhanced links

compliance tests of all cable links including tests for continuity and pair reversal. The contractor will perform this testing on 100 percent of cabling to certify that the cable and termination meets the established specifications for Category 6 Enhanced compliance as documented in the standards noted above. The contractor will provide the FSU-ITTS Networking Group power meter and OTDR test results for all installed fiber optic cables. Video station cables shall be tested for DC resistance (including continuity) and attenuation. Coaxial station cables shall also be tested utilizing a TDR, providing a hard copy printout.

**B.** The FSU-ITTS Networking Group will perform acceptance testing. This testing may be done in conjunction with testing being performed by the telecommunications contractor. All cabling failing to meet the TIA/EIA current published standards will be replaced by the contractor at no cost to the university.

**C. Once installation is complete a full set of as- builds and test results shall be provided to FSU-ITTS department for further review and to keep on record.**

### **3.3 Communication Outlet**

**All outlets in office spaces will be wired to support three data communication connections (where designated).** FSU currently runs VOIP for its voice communication system so therefore all outlets shall be considered data outlets. **All data connections shall be terminated on Blue jacks and placed in a stainless steel faceplate in numerical order.** In non-office locations, in addition to data connections, coax connections will be specified by the FSU-ITTS Networking Group, in conjunction with FSU Planning & Construction, and the building occupants. Outlets will be designated on the building electrical or communications floor plan. Any additional service options or deviations from the following communications outlet standard must be coordinated with and approved by the FSU-ITTS Networking Group. All outlets will be labeled in accordance with the cable identification scheme as detailed in section 3.2.2. All office and non-office faceplate schematics can be found in the specifications portion of the bid documents or online at the FSU-ITTS website.

#### **3.3.1 Outlet Specifications**

All communications outlets must use acceptable vendor communications part numbers as listed. However, deviations from the standard or equivalent communications outlet specifications will be addressed on a case-by-case basis at the design phase. Please refer to section 3.4.1 for a list of acceptable manufacturers and acceptable components.

#### **3.3.2 Responsibilities**

The telecommunications contractor will be responsible for the purchase, installation, and labeling all wall plates, patch panels, and connectors. The contractor will also be responsible for the installation of a 1 inch conduit from the outlet box to the communications room (home run) or to the cable tray.

**3.4 Communications Room**

The communications room will contain terminations for all horizontal and vertical cabling. All rooms will be vertically interconnected via the vertical riser system.

**3.4.1 Acceptable Manufacturers and Products**

The following is a list of acceptable part numbers for use in all new construction and renovations:

| Acceptable Components |   |  |  |            |
|-----------------------|---|--|--|------------|
| Manufacturer          | Part Number   |  | Description  | Equivalent |
|                       | <i>Faceplates, Inserts, &amp; Category 6 Components</i> |  |  |            |
| Panduit               | CJ688TGBU   |  | Category 6 Enhanced Jack, Blue (Data Color)                    | No         |
| Panduit               | CPPA48FMWBL Y   |  | 48Port Patch Panel   |            |
| Panduit               | CFPL4SY   |  | Faceplate, Stainless Steel, 4-Port                             | No         |
| Panduit               | UTP28SP7BU  |  | Category 6 Enhanced Patch Cord, 7' (Patch Panel to Switch End) | No         |
| Panduit               | UTP28SP10BU   |  | Category 6 Enhanced Patch Cord,                                | No         |

|   |                                       |  |   |    |
|---|---------------------------------------|--|---|----|
|   |                                       |  | 10' (Station End)   |    |
| <i>Telecom Rack &amp; Telecom Rack Components</i> |                                       |  |   |    |
| Panduit   | CMBBL-L<br>Black                      |  | Faceplate<br>Insert, Blank  | No |
| Panduit   | CMBBL-L<br>Black                      |  | Modular<br>Patch Panel<br>Insert, Black,<br>Blank                   | No |
| Panduit   | PRV8<br>(One on each<br>side of rack) |  | <i>PatchRunner</i><br>Wire<br>Management<br>Panel,<br>Vertical, 84" | No |
| Panduit   | PRD8                                  |  | <i>PatchRunner</i><br>Panel Door                                    | No |
| Panduit   | PRSP7                                 |  | <i>PatchRunner</i><br>Cable Spool<br>(Order 4 per<br>PVR7)          | No |
| Panduit   | R2P<br>Black 7' Rack                  |  | Rack, 19" x<br>84"  | No |
| <b>Miscellaneous Hardware</b>                     |                                       |  |   |    |
| Cablofil, Inc                                     | CS12060912                            |  | Ceiling<br>Mounted<br>Center Spine<br>Tray                          | No |
| Cablofil, Inc                                     | Various Part<br>No.                   |  | Ceiling<br>Mounted<br>Center Spine<br>Tray<br>Components            | No |

### 3.4.2 Cable Termination

All cable runs, regardless of media type, shall be able to reach any communications room wall. Cable within a room will be bundled and terminated via standard Category 6 compliant patch panels, as detailed above. Cable bundles shall be secured using Velcro style, plenum-rated, tie wraps; **plastic tie-wraps are prohibited**. All patch panels will be mounted in 19" racks as detailed below. All wiring of patch panels will begin from the top down in racks, and the mounting of switch equipment will begin from the bottom up.

**All patch panels ports shall be labeled even if there is not a corresponding cable terminated on it.**

A. Although VOIP is the preferred voice option, when necessary use 110 Style connect blocks or approved equivalent shall be used to terminate "all" 100 ohm twisted pair Category 5 Enhanced telephone cable. Patch panels shall be used to terminate UTP data cables.

Connect blocks and backboards will be color coded blue to designate telephone terminations. All connecting blocks and patch panels will be labeled in accordance with section 3.2.2. Voice cable will be installed in metal "D" rings down the corner of the wall and across bottom.

B. All patch panels will be mounted to floor mounted standard 19 inch equipment racks. 19 inch freestanding flange racks shall be 7 ft. tall, of aluminum construction painted black with double sided screw holes. All cable types will be physically separated into individual groups.

C. Corning Cable Systems Connector Housings shall be used to terminate all multimode and singlemode fiber cable. **LC connectors** will be used to terminate the fiber cable. Corning Unicam connectors are the preferred LC connectors.

### 3.4.3 Responsibilities

A. The Building Contractor will be responsible for the purchase and installation of all room power outlets, lights, paneling, and riser conduit in accordance with Section 2.3. The contractor will also be responsible for the purchase and installation of all hardware, including all racks, panels, connectors, and miscellaneous parts. The contractor will be responsible for firestopping all wire and conduit penetrations consistent with all National, State, and local fire and electrical codes.

**B. Patch Panel Labeling** - All patch panels will be labeled using a professional labeling machine. All patch panels ports shall be labeled even if there is not a corresponding cable terminated on it. See section 3.2.2 for further information.

**C.** The FSU-ITTS Networking Group must approve all equivalent cable termination hardware prior to installation.

**D. Cable Bundling** – All horizontal and vertical cabling will be routed neatly and secured using plenum-rated nylon ties; plastic tie wraps are prohibited.

**3.5 Documentation**

All cabling systems will be documented in hard copy and electronic format. These as-built drawings will provide documentation of the entire installed wiring system. This documentation will include a spreadsheet (Microsoft Excel compatible format), and be submitted in a PDF/CAD format and hard copy in the following format:

| Building Name | Floor | Rack | Patch Panel Port # | Data Jack | Room Connected To |
|---------------|-------|------|--------------------|-----------|-------------------|
| Barber        | 2     | 1    | 1                  | 1D or 1V  | 220               |

One hard copy of spreadsheet documentation shall be attached to rack in each room. Additionally, the contractor will provide three (3) copies of paper blueprint drawings marked with jack numbers. These as-built drawings will also be provided on a CD-ROM in Autocad.dwg format.

**4.0 Design and Construction Drawings**

All design and construction drawings will have a communications riser diagram which illustrates all components of the building communications distribution system. Appropriate notes will be provided to describe the size of conduit and other special instructions to the contractor. In addition, electrical drawings for each floor will illustrate components of the floor distribution system and outlet locations.

**5.0 Building Access**

The Contractor will be required to the FSU-ITTS Networking Group personnel or agents to test and verify all communication cable and wiring system hardware in new buildings prior to final building inspections. All work performed by the FSU-ITTS Networking Group

personnel or its agent will be coordinated with the Fayetteville State University Planning & Construction Project Managers.

## **6.0 Telecommunications Contacts**

### **Phone Contacts:**

**(Primary Contact)** Thomas Jones (Communications Specialist): 910.672.2985

**Email:** [tjones71@uncfsu.edu](mailto:tjones71@uncfsu.edu)

(Secondary Contact) Nathaniel Gantt (Network Manager): 910.672.2151

## **7.0 Appendix A: RCDD Requirements**

Fayetteville State University ITTS now requires all selected Design or Engineering Firms to provide or retain the services of a Telecommunications RCDD if they do not have an RCDD on staff. The Fayetteville State University ITTS department has implemented this policy for several reasons: (i) the ongoing and fluid changes in technology and standards in the telecommunications industry, (ii) the need for cohesive communications and support for telecommunications-specific projects during construction evolutions on campus, and (iii) direct communications with the type of professionals that are typically responsible for telecommunications infrastructure projects.

The assigned RCDD professional will be required to assist the Fayetteville State University ITTS department, University building occupants, and University project managers as required, with developing an up to date telecommunications installation package per the Fayetteville State University Telecommunications Design & Standards Guidelines, for any new construction or renovation projects for which an architectural or engineering design firm has been selected by the University, and by where telecommunications requirements have been established through the project. The RCDD will also interface with project engineers, designers, and Fayetteville State University project managers for implementation of telecommunications infrastructures related to drawings and written specifications.

More formal procedures and processes are required for construction projects that require telecommunications implementations than projects in the past because of more complex installations, and more integrated services being implemented into the communications infrastructure. Contrary to common ongoing perceptions, it is no longer a matter of mere cabling and cable terminations that make up telecommunications installations and

implementations. These implementations can be more complex and require the knowledge of a professionally registered telecom designer to navigate.

The requirement to provision a certified professional to have this type of direct contact who understands the language of the industry, and is up to date on all industry regulations and standards while maintaining close contact and communications with the project designers and engineers, provides the University and the ITTS department with the level of efficiencies necessary to provide a sound telecommunications package. This person could also assist in leveraging potential costs savings to the project relative to telecom component requirements.

The RCDD will be “required” in the early Design & Development phase of the project, and is to remain active throughout the project until completion and sign over of said project to the University.

The selected RCDD will be responsible at minimum for the following:

**A:** Meeting with the ITTS Department, Project Managers for the University, and occupants as a kickoff or introduction to a given project.

**B:** Provisioning telecom outlet locations, cable tray designs and routes, telecom room layouts, specialty communications room layouts if required, outside plant fiber and copper, building copper and fiber riser systems, telecommunications grounding systems, voice/data cabling systems, wireless systems, WI-FI access points, etc... while coordinating with ITTS for any and all necessary details and specifications as it relates to University standards and procedures.

**C:** Identify that all correct information, bid alternates, amendments, addendums, etc. are contained on drawings and written specifications before release for public bidding.

**D:** Coordinate with project entity (GC, Electrical, etc...) on a specific project that is responsible for obtaining the telecommunications installation bid responses before award of telecommunications install. The RCDD will be responsible for reviewing these responses along with the entity that received the bid responses to assure that the telecom contractor being awarded the telecommunications install meets all required criteria as set forth in the telecommunications bid documentation. The RCDD will **NOT** be responsible for awarding the telecommunications installation. They are only to serve as a reviewer/advisor to the process to help avoid any issues with awarding the telecommunications installation to a non-qualified telecom installer.

**E:** Attend any project meetings, construction meetings, weekly meetings, or monthly owners meetings necessary to keep in pace with the project. Perform walk through at a minimum of once a month and/or at critical stages of the telecommunications installation.

**F:** Provide the firm that retains the RCDD with any installation deficiencies documentation (i.e. punch list) to require the installation contractor to provide corrective actions before acceptance of a telecommunications installation.

**G:** Verify fiber optic and copper cable testing documentation for proper compliance before telecom installer applies for any cable warranties required by the project.

**H:** Verify all telecommunications bid and documentation requirements have been met by the telecommunications installer. And perform final sign off of installation that verifies that Fayetteville State University is receiving a complete, fully tested, properly installed, warranted system, before it is handed over to the University.

The RCDD should have a minimum of the following career qualifications:

**A:** 5 Years of Telecommunications cabling and systems design experience.

**B:** Minimum of three years practical field experience in telecommunications installations; and previous design work performed in a University setting is preferred.

**C:** Working knowledge of Local Area Networks and their performance requirements as it relates to cabling infrastructure. LAN Design Certificate a plus.

Fayetteville State University ITTS will work directly through the RCDD to develop telecommunications specifications for a given project. ITTS reserves the right to perform “in house” installations that are smaller and do not require heavy document development. Design or engineering firms will need to verify this thru the project manager for the university to the ITTS Department before project design commences. This is required if an engineering firm or design firm does not already have an RCDD on staff and would have to retain the services of an independent telecom designer/RCDD.

It is strongly recommended that the designated RCDD be an independent telecommunications designer located within no more than a 3 hour radius around the Fayetteville metropolitan area, to include Raleigh, Durham, and Charlotte, and to also not be retained from a cabling contract company. This request alleviates any conflict of interest issues that could arise with competitive bidding from other cabling contract companies. This

ensures Fayetteville State University ITTS gets the best pricing from the best qualified cabling contractors that are available and are certified to install the Fayetteville State University structured cabling system.

Fayetteville State University ITTS will provide the RCDD the Fayetteville State University Telecommunications Design Standards & Guidelines Manual during the kickoff meetings. The Fayetteville State University Telecommunications Design Standards & Guidelines Manual is a fluid, living document which incorporates frequent technology changes and campus standards adjustments.

Contacts for the Fayetteville State University ITTS design requirements:

Nathaniel Gantt  
Network Manager  
Fayetteville State University  
ITTS – Network Dept.  
Phone: 910-672-2151  
E-mail: [ngantt@uncfsu.edu](mailto:ngantt@uncfsu.edu)

Thomas Jones  
Communications Specialist  
Fayetteville State University  
ITTS – Network Dept.  
Phone: 910-672-2985  
E-mail: [tjones71@uncfsu.edu](mailto:tjones71@uncfsu.edu)