# GENERAL

## Section Includes

### This section describes Basic Communication Requirements required to provide for a complete installation of all communication systems for this project. This section shall apply to all other Division 27 specification sections as well as all work shown on the drawings.

## Related Documents

### Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 specification sections, apply to work of this section and all other sections of Division 27.

## Description of Work

### The work included under this Section consists of providing all work, supervision, and construction procedures necessary for the installation of the complete communication systems required by these specifications and/or shown on the drawings of the contract.

### Install and connect all appliances and equipment as specified and indicated for this project, in accordance with the manufacturer's instructions and recommendations. Furnish and install complete connections and devices as recommended by the manufacturer or required for proper operation.

### These Specifications, together with the Drawings accompanying them, are intended to depict the installation requirements of the infrastructure necessary to support the Structured Cabling Systems included in this Project. Contractor shall furnish materials shown on the drawings or mentioned in the specifications, or both, that are necessary for the complete provisioning and build-out of the Structured Cabling Systems herein depicted. Additionally, Contractor shall provide all incidental equipment, required tools, and incidental materials required for the completion of the Structured Cabling Systems whether or not specified or shown on the drawings.

### Drawings are diagrammatic; their intent is to depict the on-site conditions accurately, but discrepancies between on-site conditions and drawings do exist. It is the Contractor’s responsibility to familiarize itself with the on-site conditions and to immediately point out any discrepancies between drawings and on-site conditions to the Architect.

### Do not use drawing scale to determine length or location dimension. Scaled drawings are still to be considered diagrammatic. If exact lengths or locations are known, the drawings will show the dimensions or coordinates.

## Permits

### If any portion of this work requires various permits or licenses, the Contractor shall obtain or assist UNL in obtaining all such permits and licenses.

## Quality Assurance

### Obtain materials for systems from either a single manufacturer or a manufacturer approved by the Structured Cabling System’s manufacturer to ensure quality of appearance and performance.

### Equipment and materials shall be of the quality and manufacturer indicated. The equipment specified is based on the acceptable manufacturers listed in each section. Where “approved equal” is stated, equipment shall be equivalent in every way to that of the equipment specified and subject to approval of the Architect based on submittals provided.

## References and standards

### All work done shall comply with applicable ordinances, rules, and regulations. All work must comply with and conform to the following codes and standards as applicable to the project:

#### State of Nebraska State Building Code

#### National Electric Code (NEC) and Nebraska Electrical Code

#### National Fire Protection Association (NFPA) 101 Life Safety Code

#### Occupational Safety and Health Act of 1970 (OSHA)

#### American National Standards Institute (ANSI)

#### Institute of Electrical and Electronics Engineers (IEEE)

#### Telecommunications Industry Association (TIA/EIA 568-A, A-1, A-2, A-3, A-4, A- 5(e), 569-A, 606, 607, TSB – 67, 72, 75, 95, and other applicable EIA standards)

#### National Board of Fire Underwriters (NBFU)

#### National Bureau of Standards (NBS)

#### Underwriters Laboratories, Inc. (UL), Federal Specifications

#### BICSI best practices

### The latest editions of these Codes and Standards shall be applicable unless otherwise designated. Where conflicts exist from one code to another, the code to adhere to will be decided by UNL Facilities Project Manager.

## Submittals

### All submittals for products and hardware provided under the Communications Specification section shall be made to the Architect and the UNL IS Project Manager for review and approval prior to installation of products and hardware.

### Manufacturers’ cut sheets shall be submitted for all products to be supplied by Contractor in response to Division 27 Specification sections.

### The Contractor will provide resumes of supervisors, technicians, and installers indicating their experience in this technology on projects of this magnitude completed within the previous five years.

### The Contractor will submit all as-built drawings and the manufacturers’ 25-year warranty certifications at the completion of the project and before final payment will be made for the project.

## Material Substitutions

### Submit requests for substitutions within 30 days of contract award, or sooner if required to maintain schedules.

### Acceptance of substitutions is at the Architect's and UNL IS Project Manager’s discretion. Submit sufficient information to show that the proposed substitute is equivalent to the item specified.

### Acceptance of Closed Circuit Television (CCTV) substitutions must be approved by UNL Police.

### Make changes needed to accommodate the substitution without impact to the installation schedule or work under other divisions and at no expense to the owner.

### Substitutions of any components must comply with warranty requirements of the overall system.

### The Structured Cabling System is intended to provide a level of link performance that exceeds the latest ANSI/TIA/EIA standards for cable installations. Any substitutions of any type proposed by the Contractor must not degrade the performance of the overall system.

# Products (Not applicable)

# Execution

## Verification

### It is incumbent upon the Contractor to verify that the installation and materials used have been inspected before they are enclosed within building features, or otherwise hidden from view. The Contractor shall bear costs associated with uncovering or exposing installations or features that have not been inspected. Inspection forms verifying an inspection as complete along with results of the inspection shall be dated and signed by both the General Contractor and the Contractor. If installation methods and materials are approved, and that is so stated on the inspection form, then Contractor may enclose installation and material within building features or other features such as Outside Plant pathway and spaces.

### After installation, test and certify all cabling systems per the appropriate standards and manufacturers’ requirements.

## INSTALLATION

### Contractor is responsible for examining existing conditions and comparing them with drawings and specifications and notifying the General Contractor of any discrepancies before commencing work.

### All installations shall be performed in a neat and workmanlike manner. All methods of construction that are not specifically described or indicated shall be subject to the control of the Architect.

### Contractor is responsible for all materials, labor, installation, testing, certification, documentation, and approval for acceptance of the Structured Cabling System.

## COORDINATION

### Contractor is responsible for coordinating with the General Contractor and other associated disciplines to address and adjust for any discrepancies.

### Contractor shall coordinate the work specified in the Communication sections with the work of the other trades involved in this project and in particular with the building automation system, electrical, mechanical and plumbing trades.

### Contractor shall coordinate with Division 26 – Electrical for communications pathway, power, grounding and bonding, and space development.

### All questions and issues regarding coordination and construction element phasing shall be directed to the General Contractor and UNL Project Manager.

### The Contractor shall make every effort to coordinate their work so there shall be a minimum of disruption to any occupants of the UNL campus. There shall be no prolonged disruption of existing service such as telephone, cable television, electrical, and other utilities. Any necessary disruption shall be scheduled with the appropriate staff well in advance.

### Contractor will follow all stipulations set forth through the general specification sections with regard to delivery hours, delivery locations, storage, and communications with the Architect and General Contractor.

### The Contractor shall coordinate with and follow the requirements of all other applicable specification sections including, but not limited to, the following:

#### Hazardous material

#### Storage

#### Security

#### Safety

#### Logistics

## Adjustments

### Contractor is responsible for coordinating and documenting with the General Contractor and other associated disciplines to address any approved change orders.

END OF SECTION 270000