PART 1 - GENERAL

1.01 DESCRIPTION OF WORK:

A. Extent of electrical wire and electrical cable work is indicated by drawings and schedules.

B. Types of wire, cable and connectors in this section include, but are not limited to, the following and requirements of the service application:

- Copper conductors.
- Fixture wires.
- Switchboard wires.
- Tap type connectors.
- Split-bolt connectors.
- Wire nuts.

C. Applications for wire, cable and connectors required for project are as follows:

- Power distribution circuitry.
- Lighting circuitry.
- Appliance and equipment circuitry.
- Motor-branch circuitry.
- Control circuitry.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS:

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products which may be incorporated in the work include, but are not limited to, the following:
1. Wire and Cable:
   - Advance Wire and Cable, Inc.
   - General Cable Corp.
   - Rome Cable Corp.
   - Southwire

2. Connectors:
   - AMP, Inc.
   - Burndy Corp.
   - Ideal Industries, Inc.

2.02 WIRE, CABLE, AND CONNECTORS:

A. General: Except as otherwise indicated, provide wire, cable and connectors of manufacturer's standard materials, as indicated by published product information; designed and constructed as recommended by manufacturer, and as required for the installation.

B. Wire: Provide factory-fabricated copper conductor, wire of sizes, ratings, materials, and types indicated for each service. Where type is not indicated, provide proper selection as determined by Installer to comply with project's installation requirements and NEC standards. Power wiring of different voltages shall not be allowed to be run in the same raceway, junction box, or wireway. Conductor colors for ungrounded conductors in 480Y/277 volt systems shall be brown, orange, and yellow. Conductor colors for ungrounded conductors in 208Y/120 volt systems shall be red, blue, and black.

C. Connectors: Provide factory-fabricated, metal connectors of sizes, ratings, materials, types and classes as indicated for each service. Where not indicated, provide proper selection as determined by Installer to comply with installation requirements and NEC standards. All wire nuts shall be twist-on type. Non-twist-on type wire nuts shall not be allowed.

PART 3 - EXECUTION:

3.01 INSTALLATION:

A. General: Install electrical cables, wires and connectors as indicated, in compliance with manufacturer's written instructions, applicable requirements of NEC and NECA's "Standard of Installation", and in accordance with recognized industry practices as well as owner's requirements..
B. Coordinate cable and wire installation work with electrical raceway and equipment installation work, as necessary for proper interface.

C. Pull conductors together where more than one is being installed in a raceway.

D. Use pulling compound or lubricant, where necessary; compound must not deteriorate conductor or insulation.

E. Use pulling means, including fish tape, cable or rope which cannot damage raceway.

F. Install exposed cable, parallel and perpendicular to surfaces or exposed structural members and follow surface contours, where possible.

G. Keep conductor splices to minimum.

H. Install splices and taps which have mechanical strength. Current and insulation rating shall be equivalent-or-better than conductor. All splices shall be compression type with cold shrink wrap and taped.

I. Use splice and tap connectors which are compatible with conductor material.

3.02 FIELD QUALITY CONTROL:

A. Prior to energization, test cable and wire for continuity of circuitry, and also for short circuits. Correct malfunctions when detected.

B. Subsequent to wire and cable hook-ups, energize circuitry and demonstrate functioning in accordance with requirements.

C. Use THHN/THWN stranded for all field motor and control work. Use solid copper only for building branch wiring circuits at size No. 12 and No. 10. All other wiring shall be class and type approved for the applications.