SECTION 16195
ELECTRICAL IDENTIFICATION

PART 1 GENERAL

1.1 SESSION INCLUDES:
   A. Nameplates.
   B. Wire and conduit markers.
   C. Box color coding.
   D. Lighting and power junction boxes.
   E. Panel directories.

1.2 SUBMITTALS
   A. Submit shop drawings under provisions of Section 01300.
   B. Include schedule for nameplates.

PART 2 PRODUCTS

2.1 MATERIALS
   A. Nameplates: Engraved three-layer laminated plastic, white letters on a black background.
   B. Underground-Type Plastic Line Marker: Manufacturer's standard permanent, bright-colored, continuous-printed plastic tape, intended for direct-burial service; not less than 6" wide x 4 mils thick. Provide tape with printing which most accurately indicates the type of the buried conduit.
   C. Wire and Cable Markers: Cloth markers, split sleeve or tubing type.

PART 3 EXECUTION

3.1 INSTALLATION
   A. Degrease and clean surfaces to receive nameplates.
   B. Install nameplates parallel to equipment lines.
   C. Secure nameplates to equipment fronts using screws, rivets, or adhesive. Secure nameplate to outside face of recessed panel board doors in finished locations.
   D. Embossed tape will not be permitted for any application.
   E. Provide underground-type plastic line marker above exterior underground conduits. Bury 6" to 8" below finish grade. Provide line markers on each side of trench if wider than 16".

3.2 WIRE IDENTIFICATION
   A. Wire Color Coding:
      1. 120/208-volt system, "A" phase - black, "B" phase - red, "C" phase - blue, neutral - white, and ground green.
   B. Maintain A, B, C, phase relation left to right or top to bottom when viewed from front. Maintain color-coding throughout entire project.
   C. Conductors #10 and smaller shall have a continuous outer factory finish, meeting the requirements of 16195-3.2a. NEC 310-12 shall be met for neutrals and equipment grounding conductors.

3.3 NAMEPLATE ENGRAVING SCHEDULE (EXAMPLE)
   A. Provide nameplates of minimum letter height as scheduled below.
   B. Panelboards, Switchboards and Motor Control Centers: ½"; identify equipment designation. ¼"; identify voltage rating.
   C. Individual Circuit Breakers, Switches, and Motor Starters, Switchboards, and Motor Control Centers:
3/8"; identify circuit and load served, including location.
D. Safety Switches, Enclosed Switches, and Motor Starters: ¼"; identify load served.
E. Transformers: ⅜" identify equipment designation. ¼"; identify primary and secondary voltages.
F. Electrical Cabinets and Enclosures: ⅛"; identify equipment designation.
G. System Terminal Cabinets: ⅛", identify equipment designation.
H. Switches Not Within Sight of the Equipment or Light(s) Controlled: ⅛", identify load served.

3.4 BOX COLOR CODING SCHEDULE (EXAMPLE)
A. Paint junction box and cover in the following manner:
   1. Emergency power - red.
   2. Fire alarm - orange.
   4. Intercom system - blue.
   5. Security system - black.
   6. ITV system - brown.
   7. Data and Telephone systems - yellow.
   8. AC and EMS controls - purple.
   9. Video Surveillance system - Gold
   10. Card Access system - Tan
B. In exposed finished painted areas, occupied by students, identify junction box with ½" diameter self-adhesive colored dot (same as in 16195-3.4 A) instead of painting.
C. For junction boxes above suspended ceilings, install ½" diameter self-adhesive colored dot (same as in 16195-3.4 A) on ceiling "T" bar below each junction box to show location.
D. Paint emergency power panels and disconnect switches, red.
E. Hand holes: Paint interior of hand holes to match color in Section 16195-3.4 (A).

3.5 LIGHTING AND POWER JUNCTION BOX IDENTIFICATION
A. Permanently identify lighting and power junction box covers with circuit and panel board number on the outside.
B. In exposed finished student occupied areas, place circuit and panel board number on inside of cover.

3.6 PANEL DIRECTORY
A. Shall be typewritten, indicate specific and clear area of control, using official Florida Tech room numbers, and be protected by a plastic covering.

END OF SECTION