SECTION 13561

ATMS POWER SERVICE

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Furnish and install a complete electrical power service as shown in the Details and Specifications. Includes all coordination with the power service provider, wires, surge protection, rigid metal riser, weatherhead, transformer, disconnects, conduit risers and stand-off brackets, breakers, clamps, conduit, junction boxes, grounding materials, duct seal, pull wire, locate tape, labor, workmanship, equipment, testing, documentation, and incidental items required for a fully operational system.

B. Furnish and install Power Pole.

1.2 RELATED SECTIONS

A. Section 13551: General ATMS Requirements

1.3 REFERENCES

A. AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals

B. ASTM A 123: Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products

C. ASTM B 117: Operating Salt Spray (Fog) Apparatus

D. Electrical Utility Service Equipment Requirements Committee (EUSERC)

E. Local utility electric service requirements

F. National Electrical Manufacturers Association (NEMA) Standards

G. National Electric Code (NEC)

H. Underwriters Laboratories (UL)

1.4 SUBMITTALS

A. In accordance with Section 13551.

PART 2 PRODUCTS

2.1 GENERAL

A. Comply with NEC regulations, local utility electric service requirements and standards, and Department standards for all electric service products.

B. Provide approved underground service pedestal. Use a safety switch as indicated in SL series Standard Drawing for service pedestal. Service Enclosures must be NEMA 3R rated. Refer to NEMA Standards Publication 250-1997.

C. Provide circuit breakers sized as indicated in plans.

D. Provide riser and weatherhead in compliance with Department and local utility standards. Refer to SL series Standard Drawings.

E. Provide approved blade disconnect as shown on plans and details.

F. Provide MasterLock P848 Lock for all disconnects and service pedestals. Provide two keys per lock to the Engineer.

G. Pole Mount: Refer to SL series Standard Drawings.
   1. Service disconnect according to plans.
   2. Provide a manual EUSERC approved circuit closing link by-pass release meter socket.
   3. Unmetered street lighting circuit.

H. Underground Service Pedestal: As specified, ASTM B 117, and ASTM A 123 (Cabinet), UL E 50076.
   1. Enclosure: 0.120 inch galvanized steel or anodized aluminum.
      a. 0.080 inch galvanized steel or anodized aluminum covers.
      b. Finished surface with an environmental green, baked enamel over zinc-chromate primer as specified, or anodized aluminum. ASTM B 117.
      c. Bottom access opening.
      d. Electrical Utility Service Equipment Requirements Committee (EUSERC) approved circuit-closing by-pass release meter socket.
      e. Baffled ventilation louvers.

I. Circuit Breaker: Main Breaker
   1. Six space metered.
   2. Six space unmetered bus.

J. Detachable, pad-mount base.

2.2 WOOD POWER POLE

A. Power pole shall comply with local utility electric service requirements.

PART 3 EXECUTION

3.1 GENERAL

A. Comply with NEC regulations, local utility electric service requirements and standards, and Department standards for all electric service installations

B. Install underground service pedestal.

C. Coordinate any utility connection with the Engineer and contact the utility company at least 60 days before the desired connection date.

D. Verify the exact location, voltage, procedure, and materials required by the utility company.

E. All underground and riser electrical conductors will be copper rated RHH-USE-RHW.

F. Ground all electrical equipment, including cabinets in accordance with NEC requirements. Hard draw all ground wires.

G. Supply all conduit and conductors to power source connection location. Final connection is to be made by the power company.

3.2 POWER SERVICE

A. Make timely and appropriate arrangements with the local power company for the installation of power service.

B. The Department will be responsible for all on-going electrical costs.

3.3 WOOD POWER POLE

A. Install power pole as indicated on plans and in accordance with all Department and local utility standards. Contact the power company 10 days prior to pole installation.

B. Install wood pole below grade to a minimum depth equal to one-sixth the total pole height. Refer to AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, current edition.

C. When wood pole is installed on a slope of 2:1 or greater, increase the installation depth by 1 times the diameter of the pole (depth is to be measured from the down-slope side of the pole).

D. Backfill with native material in 1 foot lifts to match surrounding grade. Tamp each lift to 90 percent compaction.

END OF SECTION