WIRING

PART 1 - GENERAL

1.01 SECTION INCLUDES

Signal cable, power lead-in, loop detector lead-in, tracer wire circuit materials, and grounding, methods, designated for modification or installation in the project plans, or by the Engineer.

PART 2 - PRODUCTS

2.01 CABLE

A. Cable for signalization shall be rated 600 volts minimum. Cable shall be plainly marked on the outside of the sheath with the manufacturer's name and identification of the type of the cable.

B. Power Lead-In Cable shall be 600 volt, single conductor, stranded copper, Type USE, with UL approval.

C. Signal Cable shall be multi-conductor copper wire, and meet the requirements of IMSA Specification 19-1.

D. Loop Detector Wire (With Plastic Tubing) wire shall meet the requirements of IMSA Specifications 51-5.

E. Detector Lead-In Cable shall meet the requirements of IMSA Specifications 50-2.

F. Tracer wire shall be a #10 A.W.G., single conductor, stranded copper, Type THHN, with UL approval and an orange colored jacket.

G. Communication cable for signal interconnection circuits shall be #19 A.W.G., solid copper conductor, twisted pairs. The cable shall be polyethylene insulated, aluminum shielded, conforming to the requirements of REA Specification PE-39, latest revision thereof for paired communication cable with electrical shielding.

H. Ground wire shall be a No. 6 A.W.G. bare copper wire and bonding jumpers shall be No. 6 A.W.G. bare cooper wire connected by approved clamps.

PART 3 - EXECUTION

3.01 CABLE

A. Where practical, color codes shall be followed so that the red insulated conductor connects to the red indication terminal, yellow to yellow, and green to green. Identify circuits at the controller with durable labels attached to the cables.

B. Signal cable runs shall be continuous from connections made in the signal pole bases to the terminals in the controller cabinet. Splicing will not be allowed in underground handholes unless specifically called for in the project documents.

C. Power lead-in cable runs shall be continuous from the secondary service point to the meter socket and from the meter socket to the controller cabinet.

D. Loop detector lead in cable, shall be continuous from the terminal in the controller cabinet to a splice made with the detector loop leads, in the first handhole or pole base provided adjacent to the detector loop.

3.01 CABLE (Continued)

E. Tracer wire shall be spliced in the handholes and controller to form a continuous network.

F. Provide four (4) feet of cable slack in each handhole and two (2) feet of cable slack in each pole and controller base. Coil cable slack in handhole and place on the hooks.

G. Pull cables through conduit by means of a cable grip designed to provide a firm hold upon the exterior covering of the cable(s), with a minimum of dragging on the ground or pavement. This shall be accomplished by means of reels mounted on jacks, frame mounted pulleys, or other suitable devices. Only NEC or UL approved lubricants may be used to facilitate the pulling of cable.

3.02 GROUNDING

A. Bond poles and cabinets to form a continuous grounded system.

B. Grounding of the conduit and neutral at the service point shall be accomplished as required by the National Electric Safety Code, except bonding jumpers shall be No. 6 A.W.G. or equal.

C. Install a ground wire in all conduit that carries 120 volt signal cables.

END OF SECTION