USE: Requirements for service entrance run.

PREVIOUS REVISION	ORIGINATED	PREVIOUS NUMBER
01-01-02	03-94	ER 300, 06-01-78

LATEST REVISION: Added Reference Section and relocated specifications regarding raintight service head to ER 19-290.

REFERENCE: Indiana Electrical Code / National Electrical Code (IEC/NEC), latest revision

SPECIFICATION:

1. GENERAL:

1.1 The Service Raceway or Entrance Run is a conduit (electrical raceway) that is approved and suitable for the intended application, and encloses the service entrance conductors. For overhead services, the Entrance Run originates on the outside of the building near where the service bracket is attached. For underground services, the Entrance Run is the conduit extending to the service equipment from the point of connection to the service lateral.

1.2 The Service Raceway or Entrance Run should be rigid or intermediate metal conduit, or non-metallic conduit in preference to thin wall conduit or tubing. This is especially important in areas where atmosphere is corrosive. Rigid aluminum conduit may be used if all precautions against corrosion due to atmosphere, dissimilar metals, or other corrosive compounds are observed in accordance with rules of the National Electric Code. Aluminum conduit shall not be used as the entrance run if the entrance run extends through a roof and is used as a mast to support to service drop conductors.

1.3 The Entrance Run shall have no junction boxes, or conduit fittings having external openings or covers, on the supply side of the meter socket unless, or large installations, it is specifically permitted by an authorized representative of the Company. For multiple meter installations, an approved, sealable, cable trough may be used in the Entrance Run.

1.4 If approved Service Entrance Cable is used, the Service Entrance Conductors and the Entrance Run are inseparable and will be considered as the Entrance Run.

1.5 A meter socket, or Instrument Transformer Cabinet, installed ahead of the service equipment, shall be considered as being inserted in the Entrance Run.

1.6 The Customer shall install the Entrance Run, from the point which has been designated by the Company for attachment of the service connection, to the first switch or connection box of the service equipment. The upper and outer end of the Entrance Run, for an overhead service, shall terminate in an approved raintight service head. The Entrance Run shall be located on the outside surface of the building except at the point where the Entrance Run passes through the wall. The first switch or connection box shall be in a readily accessible location, nearest the point of entrance of the entrance run.

ENTRANCE RUN

1.7 The Entrance Run shall not be carried within the hollow spaces of the walls of buildings. The Entrance Run is not fully protected against over-current and therefore any portion within a building is more or less hazardous and hence should be as short as possible.

1.8 In buildings where a power service and a lighting service are both required. A separate Entrance Run and a separate Entrance Conductors shall be used for each class of service. Where a four wire 120-208 Y volt (120 volt single phase, 208 Y volt three phase) secondary has been installed the four wire Entrance Run and service connection serves all classes of load in the building.

2. SERVICE ENTRANCE CONDUCTORS:

2.1 The Service Entrance conductors shall be installed by the Customer and shall have adequate current-carrying capacity to safely carry the load in accordance with rules of the National Electrical Code. The rated capacity of the conductors should be equal to the rated capacity of the Entrance Switch or Service Equipment. If the customer elects to use conductors of reduce current-carrying capacity, they shall be of sufficient current-carrying capacity to carry the expected load. Each ungrounded service entrance conductor shall have overcurrent protection. Such protection shall be provided by an overcurrent device in series with each ungrounded service entrance conductor, having a rating or setting not higher than the allowable current carrying capacity of the conductor. (For conductor size recommendations, see ER 19-240 for overhead services, and ER 19-270 for underground services.)

2.2 The conductors in the Entrance Run shall extend at least three feet beyond the upper and outer end of the raintight service head and shall be continuous without splices or taps.

2.3 The covering of the insulated neutral conductor shall be white or grey. If white or grey is not easily obtainable, black covered conductor may be used, provided all exposed lengths of the neutral conductor are identified with white paint.

2.4 If permitted by local code, bare wire may be used for the Grounded Neutral conductor in the Entrance Run provided the voltage to ground on the other conductors in the Entrance Run does not exceed 300 volts.

2.5 Conductors other than Service Entrance Conductors or grounding conductors shall not be installed in the Entrance Run.

2.6 Approved service cable (bearing the Underwriter's Laboratory label for identification) may be used, where permitted by local authority enforcing the code in place of conduit and separate Service-Entrance Conductors. The cable shall be continuous without splices and shall have no bend with radius less than 5 times the diameter of the cable and shall be used only with fittings especially designed for the cable.