

## GENERAL SAFETY PRECAUTIONS EXCHANGE AND TOLL HIGH DC VOLTAGE CABLE FACILITIES

### 1. GENERAL

1.01 This section is issued to provide the outside plant forces with the general safety precautions to be followed when working on exchange and toll high DC voltage cable facilities.

1.02 Any DC voltage over 60 volts on a cable pair is considered as a high DC voltage.

1.03 Examples of equipment requiring high DC voltage facilities are:

- Subscriber Line Carrier (Anaconda Electronics) S6, S6A, and KS20988
- L Carrier (Coaxial)
- N and ON Carrier
- TI Carrier
- 1A Line Concentrator
- Metering Circuits
- Telegraph

1.04 Some equipment and circuits require a positive and negative battery up to 135 volts on a cable pair to power carrier auxiliary repeaters and terminating telephone equipment.



**ATTENTION** Accidental contact across a positive and negative 135 DC volt cable pair could result in an electric shock of 270 DC volts. It is possible that involuntary reactions to that shock could cause some physical injury.

**REMINDER** The normal central office ringing voltage is  $\pm 105$  AC volts superimposed on -48 volts. If the outside forces encounter a subscriber cable pair during a ringing cycle they will receive a significant shock that could cause involuntary action which may cause some physical injury.

1.05 It is recommended that the outside forces review this practice at least every six months.

### 2. SAFETY PRECAUTIONS

2.01 To protect the outside forces from encountering high DC voltage shock, the high DC voltage must be removed from the cable pairs before any work is performed.

2.02 The inside forces upon request of the outside forces are responsible for removing the power on the cable facilities prior to the start of work by the outside forces.

2.03 The outside forces should make a high DC voltage test on the facility pairs *to verify* that the inside forces have removed the power on the cable pairs requested, prior to starting work.



**CAUTION** A potential of 270 DC volts may exist across the high DC voltage cable pairs. The outside forces should use insulated tools and/or rubber gloves when making voltmeter test connections.

2.04 Adequate practices cover the toll, exchange, and the serving test center responsibilities on removing the high DC voltage from the cable facilities.

**NOTE:** An excellent example of the safety precautions furnished for inside and outside forces is outlined in Section 632-800-962PN Cable Maintenance, - Cable Failures - Restoration of Facilities Used For N and ON Type Carrier.