

**EQUIPMENT BUILDING**  
**(KS-21135)**

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**1. GENERAL**

**1.01** This section provides standards for a transportable building for use as a factory or site assembled equipment facility. These standards are provided for use in the design of new buildings or building additions that are intended to house telephone equipment that meets the requirements of Section 800-610-164, "New Equipment-Building System (NEBS), General Equipment Requirements."

**1.02** This section supersedes Section 11.2 of Specification X-74300, "NEBS Building Engineering Standards (BES)." Whenever this

section is reissued, the reason for reissue will be listed in this paragraph.

**2. SCOPE**

**2.01** The KS-21135 equipment building is an economical solution to telephone operating company needs for a transportable building. It is engineered particularly for housing microwave radio, repeater, and carrier equipment, but it can be used for other equipment assemblies and nonequipment purposes. (See Fig. 1 and 2.)

**2.02** The prefabricated structure is modular in design and may be added to as future expansion of service requires. Building costs are minimized by the factory construction of the building and the use of standardized equipment layouts. Factory installation and testing of the complete equipment system also minimizes installation intervals and costs. The building is designed to be disconnected and transported to a new site when equipment usage ends.

**3. GENERAL DESCRIPTION**

**3.01** The transportable equipment building is supplied as a structural steel or aluminum structure available in building widths of 8, 10, and 12 feet. They are constructed in varying lengths ranging from 16 to 40 feet, increasing in 4-foot increments. Standard interior ceiling height is 8 feet, but 10-foot heights are available by special request.

**3.02** The buildings are fabricated by several approved manufacturers who use standard construction techniques and materials controlled by the specifications. The standardization of architectural finishes creates a uniform appearance for all buildings regardless of their place of manufacture. An expandable building constructed to the KS-21135 specification can be offered for areas anticipating or experiencing a need for increased equipment space.

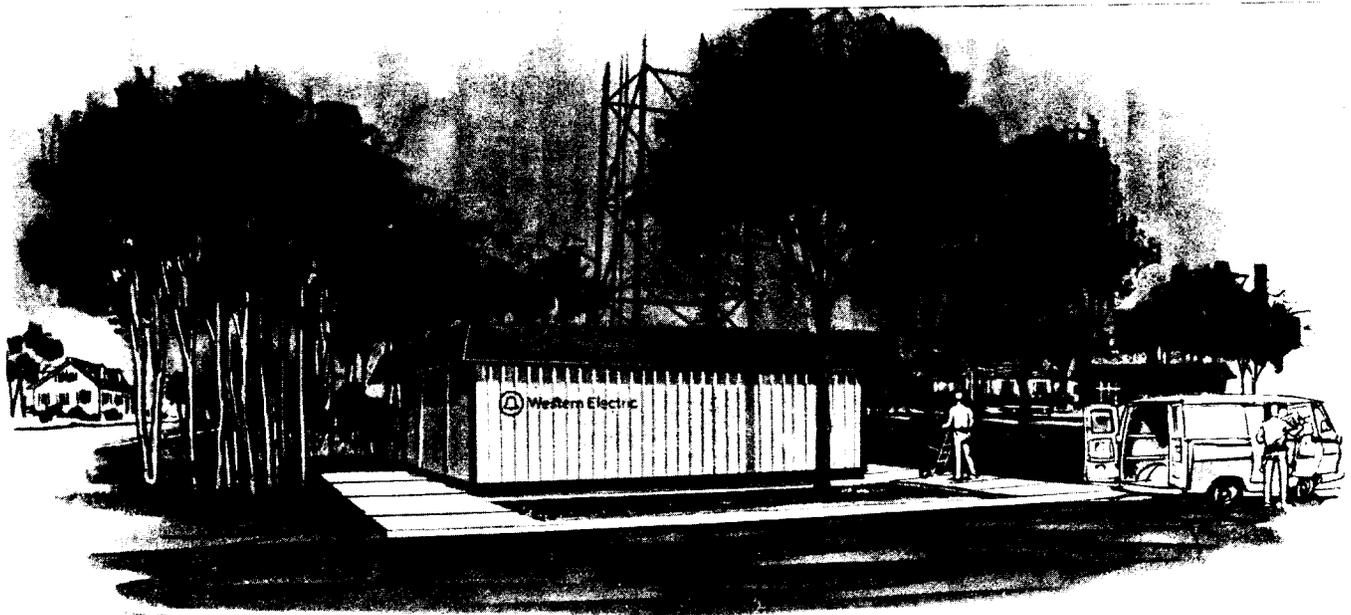
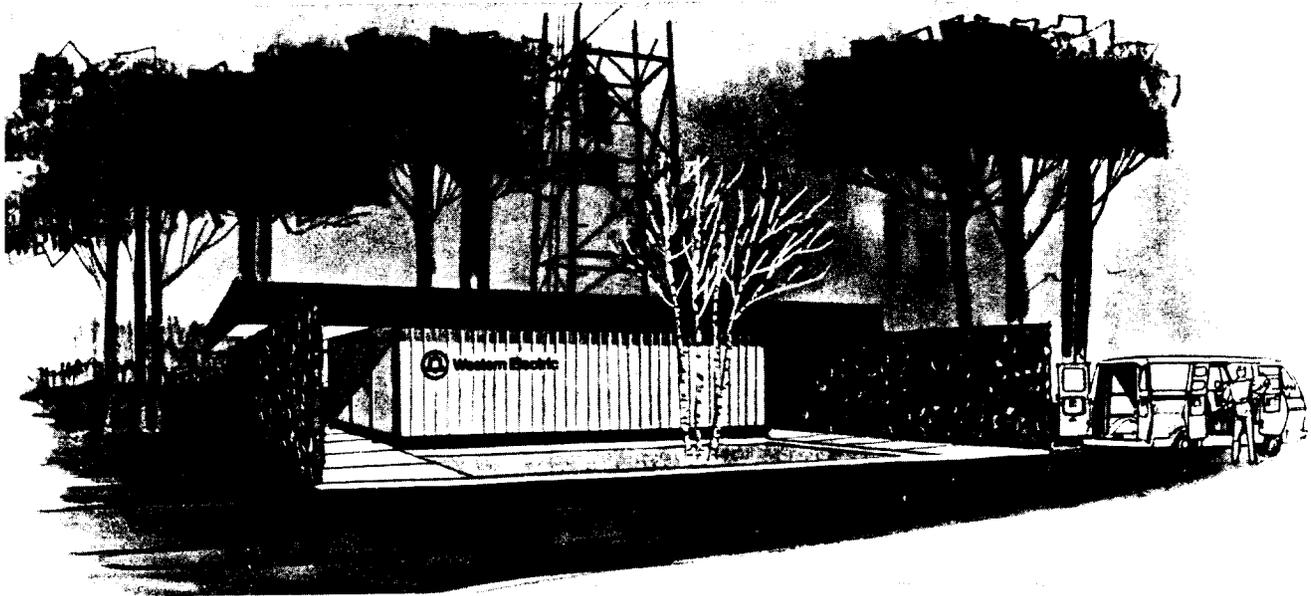


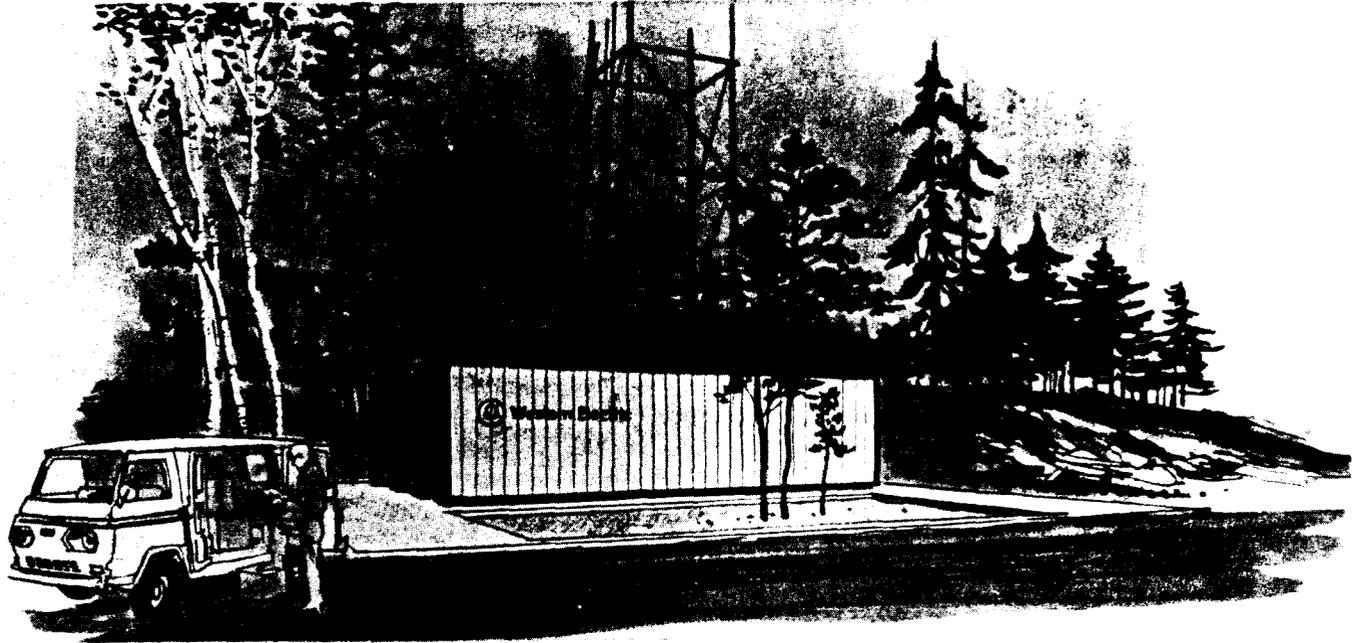
Fig. 1—Sample Design Styles for Equipment Buildings in Urban Locations

3.03 The transportable building is designed to accept the installation of the following equipment:

- 4, 6, and 11 GHz Radio Systems
- Carrier—N&T Type

- Repeater Equipment.

3.04 Because of the variety of equipment and equipment layouts to be used in the transportable building, a group of building options will be available to insure equipment operating



**Fig. 2—Equipment Building in Unpopulated and Country Locations**

conditions that are compatible with the requirements of a particular system.

**3.05** Available options in the building design include the following:

- (a) Climate control
- (b) Fire detection
- (c) Small arms protection
- (d) Falling ice protection
- (e) Exterior lighting
- (f) Building expansion capability
- (g) A variety of building sizes.

#### **4. STANDARD LOADING REQUIREMENTS**

**4.01** The following are the standard loading requirements for the KS-21135 equipment building:

- (a) Wind load—The building can withstand 40 pounds per square foot.

- (b) Floor load—The building supports a minimum of 150 pounds per square foot. In addition, the unit sustains a 2000-pound load over a 2-1/2 by 2-1/2 foot square.

- (c) Dynamic load—The building withstands a vertical shock equivalent to 1 g and a lateral load equivalent to seismic zone 3.

- (d) Roof load—The roof is designed to withstand a snow load of 40 pounds per square foot.

#### **5. SITE PREPARATION**

**5.01** Recommendations for foundations and building hold-down requirements are provided in the specifications to guide local engineers in the design of footings and foundations for their particular site.

#### **6. ARCHITECTURAL FINISH**

**6.01** Several styles of standardized architectural finishes are available for the transportable buildings to insure an appearance that is acceptable and that will harmonize with the architectural style of the area in which it is located.

**7. TRANSPORTATION**

**7.01** All fully equipped buildings are within the minimum dimensions and weight limitations required to allow their transportation on all state highways in the U. S.

**8. FIRE RATING**

**8.01** The transportable building is constructed of noncombustible fire-retardant materials (minimum flame spread of 25 or less). Interior walls, flooring, and ceiling roof are a minimum one-hour, noncombustible, fire-rated construction. All exposed structural members are coated for a minimum of one hour of fire protection with a UL approved and rated coating.

**9. ENVIRONMENTAL REQUIREMENTS**

**9.01** Building interior environmental conditions vary somewhat with each different operating system. However, in general, the interior design state can be maintained at a dry-bulb temperature of 40°F to 100°F at 20 percent to 55 percent relative humidity. Ventilating fans and KS-7406 filters are provided on all buildings as an option.

**10. REFERENCES**

Specification KS-21135—"Equipment Building"

Section 760-600-151—"General Fire Specification Guide for the Bell System," March 1972