



STATE OF NEW JERSEY
DEPARTMENT OF LABOR & INDUSTRY
Percy A. Miller, Jr., Commissioner

RULES AND REGULATIONS

governing the

DESIGN AND CONSTRUCTION REQUIREMENTS

for approval of

STANDARD ARMCO STEELOX BUILDINGS

BUREAU OF ENGINEERING AND SAFETY
C. George Krueger, *Deputy Director*
Division of Labor

TRENTON, NEW JERSEY

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SECTION 1 - SCOPE AND PURPOSE

These rules and regulations embrace minimum requirements for design and construction standards of the Standard Armco STEELOX Building. Cable type buildings to and including 28 feet wide are approved for use as storage buildings and manufacturing buildings. The Rigid Bent 36 feet wide building is approved for use as storage buildings, manufacturing buildings and places of public assembly. Conformance to these rules and regulations shall be required for the approval of filed plans and acceptance of construction.

SECTION 2 - DEFINITIONS

- 2.1 *Approved*: shall mean approved by the Commissioner or his authorized representative.
- 2.2 *Bureau*: shall mean the Bureau of Engineering and Safety of the Department.
- 2.3 *Commissioner*: shall mean the Commissioner of the New Jersey Department of Labor and Industry or his authorized representative.
- 2.4 *Department*: shall mean the New Jersey Department of Labor and Industry.
- 2.5 *Effective Date*: shall mean the date on which these rules and regulations become effective.
- 2.6 *Shall*: shall mean a mandatory requirement.
- 2.7 *Should*: shall mean an advisory recommendation.
Adequately, Effective or Securely: shall mean conditions subject to determination by the Commissioner.
- 2.8 Words in the singular and plural shall have the same meaning in the plural and singular respectively.
- 2.9 *Substantial*: shall mean construction of such strength and workmanship that the assembly shall under normal or reasonably foreseen conditions or circumstances resist usage, wear, shock and deterioration.
- 2.10 *Place of public assembly*: any structure or building that is used for the purpose of public entertainment at any time and located in a municipality that has no local building supervision.

SECTION 3 - FILING OF PLANS

- 3.1 Excepting as provided hereinafter there shall be compliance with the requirements as specified in general rules and regulations for examination and approval of plans.
- 3.2 *Minimum information*-
Inasmuch as standard drawings have been approved and are on file with the Bureau, requirements regarding details of design as ordinarily required will be waived. The following minimum information shall be provided on all drawings:
 - a. *Plot plan to a scale of 1 inch equals 50 feet or larger.*
 - b. *Foundation plan to a scale of 1/8 inch or larger to also include egress locations. Foundation plan shall show a section of the foundation, minimum depth 3 feet 6 inches. (See Section 5).*
 - c. *Elevation - side and end, to a scale of 1/16 inch equal 1 foot or larger.*
 - d. *Typical cross section, to the same scale as elevation.*
 - e. *Reference shall be made to applying standard drawings.*
- 3.3 Where there are deviations from approved standards, complete plans and details of design of such modifications shall be submitted for approval in addition to the minimum information set forth above.
- 3.4 Plans for sanitation facilities and provisions for heating the building as required in the 'Rules and Regulations Governing Sanitation in Places of Employment' are to be made a part of the filing.

SECTION 4 - APPROVED DRAWINGS AND OCCUPANCIES

The following type of structures are approved for the indicated occupancies. Information and details shown on approved standard drawings of the approved designs may be referred to by a suitable notation on plans that are submitted for approval. The redrawing of such information and details may be omitted.

Approved types of structures -

Frameless:

12-A 12-B
16-A 16-B
20-A 20-B
24-A 24-B
28-A 28-B

Rigid Bent:

36-A 36-B 36-C

Approved occupancy for each approved type of structure is indicated by a final letter sub-script as follows:

A-Storage

B-Manufacturing

C-Public Assembly

SECTION 5 - GENERAL REQUIREMENTS

- 5.1 Plans for all buildings drawn in accordance with Section 3 above shall be submitted in triplicate together with the necessary applications and fee. Plans and applications must be sealed by a New Jersey Licensed Professional Engineer or Registered Architect for approval and be approved before commencement of construction.
- 5.2 The design shall conform to the design standards that have been approved and which are on file at Bureau offices.
- 5.3 *Foundations -*
- 5.3.1 The bottom of footings shall rest on firm, undisturbed soil but in no case shall be less than 3 feet 6 inches below grade.
- 5.3.2 All footings shall be of poured concrete with a minimum width of 12 inches; foundation walls shall be 8 inches structural concrete block excepting that in -
- (A) *Types 24B and 28B (Manufacturing) and Type C (Public Assembly) buildings, poured concrete foundation walls shall be required.*
- (B) *Buildings of Type B and C shall have standard anchor bolts with a 4 inch bend firmly embedded in concrete to a depth of at least 12 inches.*
- 5.4 *Fire Protection -*
- 5.4.1 Reasonable consideration shall be given to fire protection and fire prevention, the requirements for which shall be governed by the estimate of the content, fire resistance for which must be approved. If the fire load is estimated to exceed 10 pounds per square foot over any portion of the area, the percentage to be allowed before additional fire resistance shall be required shall be determined by the Commissioner.
- 5.4.2 Adequate fire protection shall be provided for the heating unit which is installed to heat the building.
- 5.4.3 Buildings shall not exceed 10,000 square feet in fire area. Buildings with a gross floor area of more than 10,000 square feet shall be divided into fire areas not exceeding 10,000 square feet by fire resistive walls of 2 hour fire rating extending 3 feet above the roof and 3 feet at each side at the exterior walls of the building. In lieu of wing walls 'T' six feet wide walls or other arrangements providing effective fire cutoffs may be accepted.
- 5.4.4 Buildings that exceed 4,000 square feet in floor area shall comply with one of the following two requirements:
- a. *Exterior wall construction shall have at least one hour fire resistive rating.*
- b. *Distance from other buildings, property lines, or combustible storage shall be not less than 50 feet.*
- 5.5 Buildings that are 160 feet or more in length shall be designed for expansion, the form of construction for which shall be approved.
- 5.6 Where the collateral load exceeds 6 lbs. per square foot additional structural requirements shall be approved.
- 5.7 Immediately upon completion of construction, a field inspection shall be made by a Licensed Professional Engineer or Registered Architect and shall be certified in writing to the Bureau that the building conforms with the approved plans and design standards if such be the case. Such a certification shall be one of the minimum requirements for acceptance.

- 5.8 The structure shall be in a safe condition at all times and no other loads other than those indicated on approved drawings shall be super-imposed.
- 5.9 No building of any of the types specified herein shall be either erected, altered or used unless approval has been received from the Bureau.
- 5.10 There shall be compliance with the requirements for sanitation, ventilation and lighting as provided for in appropriate rules and regulations now in effect.

SECTION 6 - SPECIAL REQUIREMENTS

6.1 *Manufacturing* -

- 6.1.1 Fire protection for the structural members shall be provided in such a manner and of such incombustible material as to be equal to the insulating value of $\frac{1}{4}$ inch of asbestos-cement board to the bents.
- 6.1.2 The building shall be adequately insulated to provide an average temperature during the working hours of not less than 70°F. Adequate temperature control shall be provided during periods of hot weather.
- 6.1.3 Where the fire load exceeds 10 pounds per square foot, an altered design shall be submitted for approval.