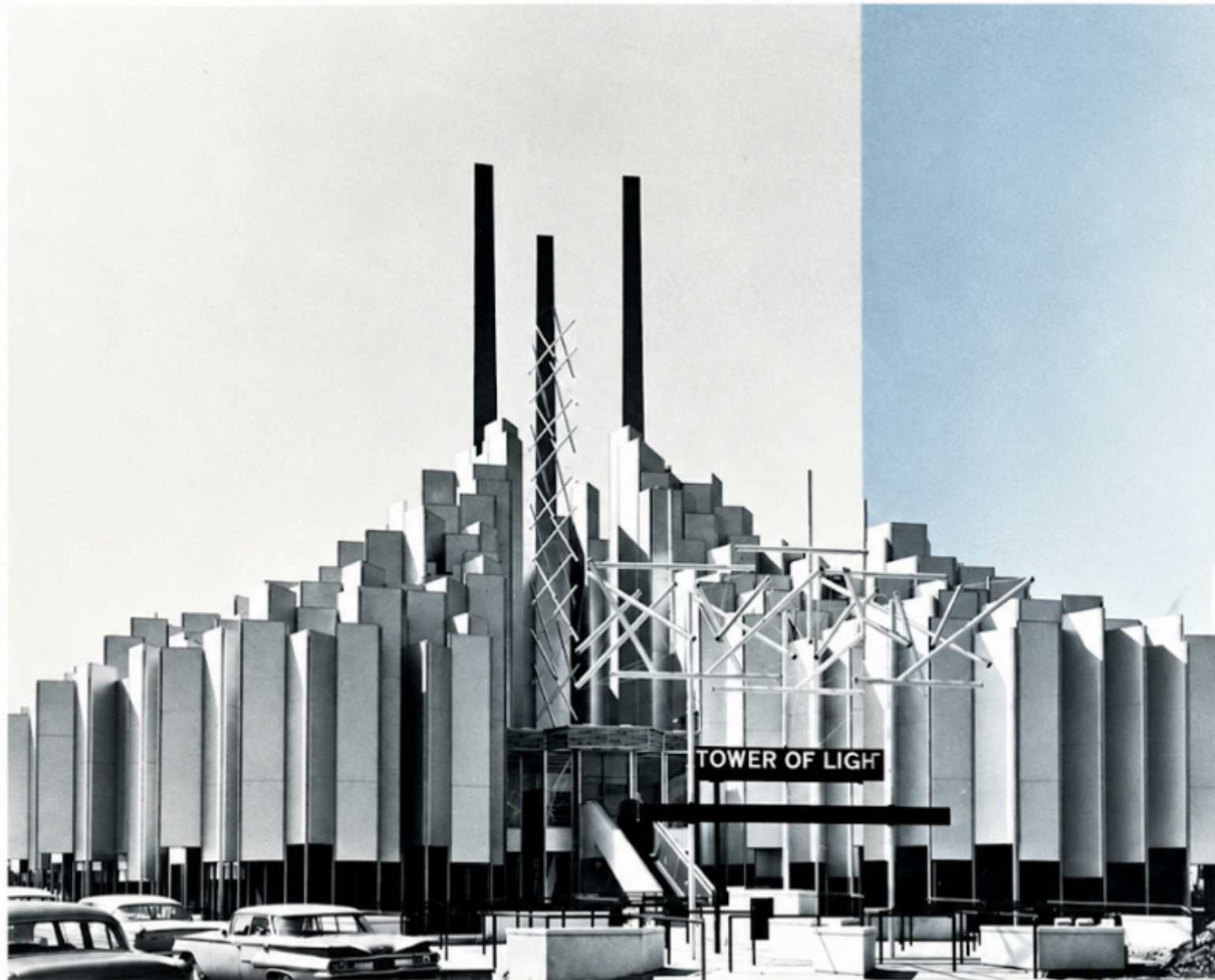


Magnificent Pavilion Houses Show of Investor-Owned Electric Utility Industry



**'TOWER OF LIGHT' RISES
80 FEET; FEATURES
WORLD'S BRIGHTEST BEAM**

THE Electric Power & Light Exhibit building at the World's Fair — the "Tower of Light" — is truly a structure of magnificence and beauty. It is the type of building people expect, but seldom see, at such an exposition.

Exhibit Defies Comparison

Rising 80 feet from a glimmering reflecting pool, the Tower of Light appears to be an inverted crystalline chandelier floating above the pool. The exhibit defies comparison with any other structure at the Fair, or for that matter, with any building man has ever created.

Some 1200 aluminum, "sandwich-type" panels make up the staggered prisms that rise to a peak at the center of the structure. Triangular in shape, the prisms give the pavilion a definite vertical appearance, in contrast to the conventional solidity or bulk of most exposition buildings.

Three steel pylons rise to 120 feet in the core of the structure, to frame the 12-billion candlepower light beam which emanates from the center of the building. Viewed from the front, the pavilion is open to its center so that the shaft of light appears to slice right through the structure.

The "Tower of Light," the New York World's Fair exhibit building of the investor-owned electric utility industry, was described by *The New York Times* as one of the most interesting structural ideas at the Fair. The 80-foot building, with a facade of "sandwich-type" aluminum panels, rises from a glimmering reflecting pool. At night, ever-changing floodlights create a series of colors on the building that defy description. From the center of the building, a 12-billion candlepower light beam reaches toward the sky, creating a spectacle unrivaled at the Fair.

Designed by RCS

The building was conceived and designed by Robinson-Capsis-Stern Associates, Inc., New York City, and shaped to house the investor-owned electric utility companies' World's Fair exhibit, *The Enjoyment of Electricity*, and was sculptured to fit this basic requirement. Robinson-Capsis-Stern also designed and produced the exhibit show.

The distinctive impression of verticality became the basis of the building's design. Synergetics, Inc., Raleigh, N. C., was the architectural and engineering firm for the Tower of Light building. The firm employed the use of the myriad array of triangular prisms and an ingenious integration of flood lighting to carry out effectively the design concept.

At night the pavilion is alive with multi-colored lights that reflect on the specially treated prisms and pylons, giving the structure a fairy-tale castle effect.

From the center of the building, 12 5-kw "Xenon" lights, each emitting 1 billion candlepower, send a shaft of light high into the air. This is the greatest concentration of exposition lighting in the world. The powerful lights were manufactured for the exhibit by General Electric Co. During the day, the stippled aluminum prisms reflect the sun's rays.

The architects of the building used a complicated steel framework which produces an intriguing irregular shape in the building, not only vertically but horizontally. Because of this unique design, the building appears to change its form as the visitor moves around it.

Fassler Iron Works, New York City, the firm responsible for the steel construction, including the framework, the two exit stairways, and the 120-foot pylons, used more than 30,000 individual pieces of steel and 200,000 bolts.

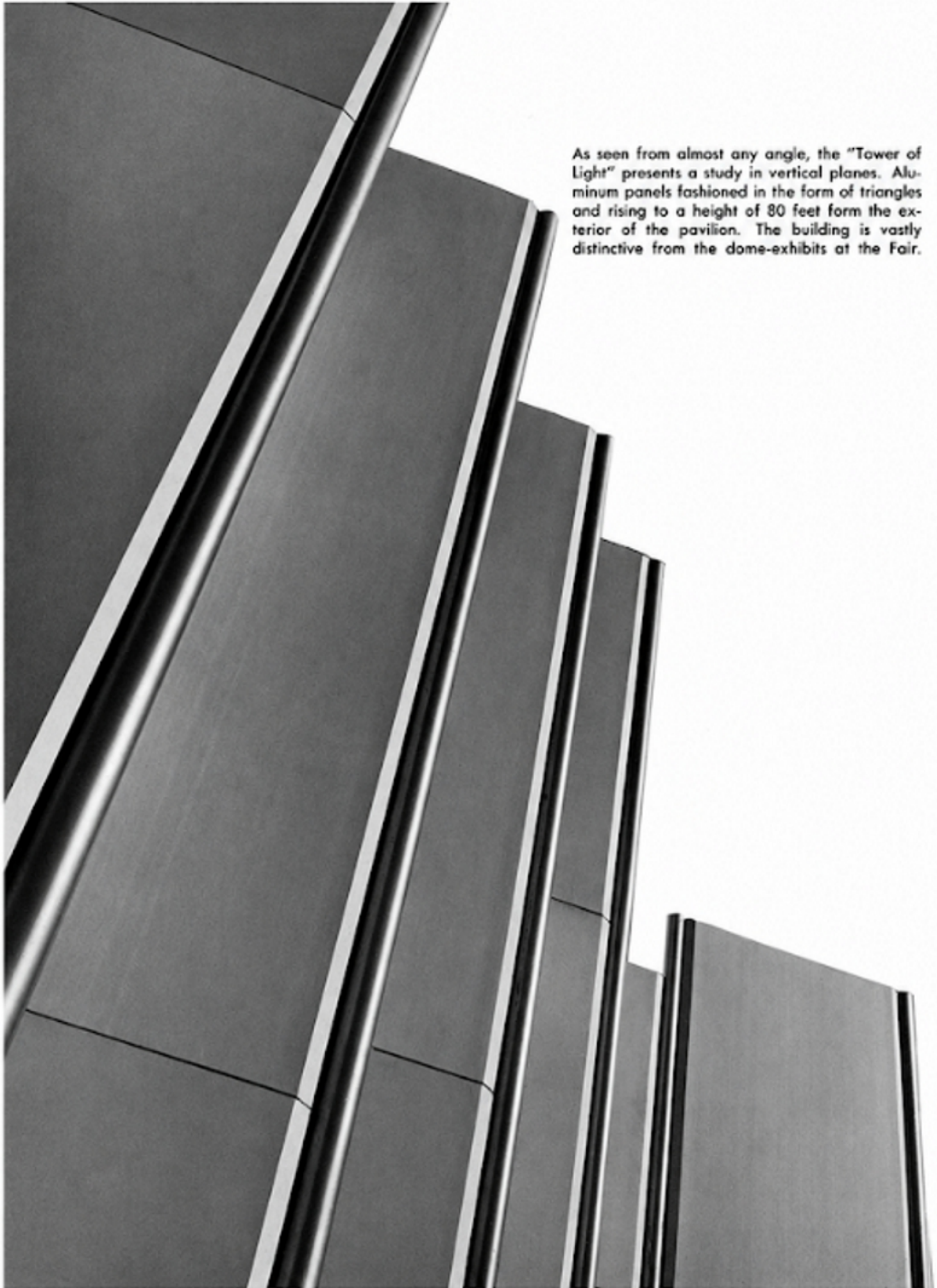
The framework, itself, is a complicated steel maze of 4-in. pipe cores in angle and bar bracing, formulating triangular modules, which make up the vertical and horizontal trusses. Some 2200 pieces of pipe are included in the 240 vertical columns of the superstructure.

Because the degree of plumb for the framework could not exceed one quarter of an inch, an unusual assembly method was required for setting of the columns. Sleeves were welded into baseplates; the columns were then slipped over the sleeves with such accuracy that the installed columns were plumb to a fraction of an inch of the line established.

Erection of the 120-foot pylons, each of which weighs 13 tons, was a job for giants. It was necessary to make each of the hollow, triangular-shaped pylons into four separate sections, each weighing about three tons. Because the job of erecting one piece of the pylon above the other was so complicated, a two-way



A bank of 12 "Xenon" lamps, each with an intensity of more than 1 billion candlepower, gives the "Tower of Light" the greatest concentration of exposition lighting in the world. The lamps were manufactured by General Electric Co. Originally the lamps were used for solar simulators in space research.



As seen from almost any angle, the "Tower of Light" presents a study in vertical planes. Aluminum panels fashioned in the form of triangles and rising to a height of 80 feet form the exterior of the pavilion. The building is vastly distinctive from the dome-exhibits at the Fair.

radio was used by one man riding inside the piece being erected, and directing the crane operator via radio. Once the piece was finally in place, it received an extra-heavy-duty welding job, parts of which measured one inch in thickness, to withstand the heavy gusts common to the area.

The pylons are equipped with internal metal access ladders so that workers can climb up the four-foot space inside to maintain the floodlights installed in two of the pylons, and perform other maintenance that may be required. All three pylons have a hatch at the top so they can be serviced from the top, down on the inside.

Entering the 'Tower of Light'

Visitors enter the Tower of Light by means of a motorized ramp that carries them across the reflecting pool at a 30-degree incline, up to the main exhibit floor. The trip takes less than one minute.

At the base of the ramp is a feed system which accommodates 1125 people who can wait on line for entrance into the building. They are allowed onto the ramp by an attendant, who controls access traffic. The pavilion will accommodate 30,000 people a day.

At the entrance of the building, where the visitors step off the ramp, 78 triangular plexiglass panes, 5' x 5' — supported in aluminum frames — form a decorative translucent ceiling.

Inside the structure, the visitors step onto a 5000-square-foot revolving ring, which will transport them clockwise through the seven-show chambers.

In keeping with the "out-of-this-world" effect the building gives, the ring is highly decorated with copper and brass. This huge "Lazy Susan," which was built by Macton Machinery Co., Stamford, Conn., is 108 feet in diameter, one of the largest such revolving rings at the Fair. This "magic ring" is covered with "Kentile" gold vinyl, a color so rich and lustrous that it is ordinarily used only to accent other floor tiles. When used as the sole floor covering on the immense ring, the gold gives a rich feeling to the spectator, which adds to the magical effect of the complete structure.

Makes Eight Stops

The rotating ring makes eight stops, including the entrance area and seven chambers, the largest number of stations on any of the rotating rings at the Fair. Eight groups of 145 spectators each can be carried on the ring at one time. The ring, in principle, is similar to a phonograph turntable. It is powered by a 15-horsepower motor.

The turntable, the first of its size with controlled acceleration and deceleration, is controlled from the loading zone. The attendant in this area and the one at the seventh chamber both can start and stop the ring. Six other attendants stationed in the other chambers can stop — but cannot start — the turntable in case of emergency.

The Enjoyment of Electricity takes place in seven chambers — spacious and air conditioned — on the upper level. Visitors are rotated through each chamber on the huge turntable.

Viewers are lined up on the ring in four rows. In six of the chambers the viewers are totally surrounded by the show, with stages on both sides of the ring. The seventh chamber is one large stage, two stories high, equipped with a spiral ramp which the audience walks down to leave the show.

At the base of the ramp a display identifies the some 150 investor-owned power and light companies which are sponsoring the pavilion. The companies are arranged according to their geographical area, so that visitors may easily identify and read about the investor-owned utility which serves them.

The ground floor is the working heart of the pavilion. Here are located the research and climate control exhibits, lounges, maintenance rooms, air conditioning system, master show control, the Tower of Light Court, and offices.

The Tower of Light Court, at the center of the structure, holds the 12 "Xenon" lamps which provide the source for the 12-billion candlepower of light. The powerful lamps are shielded in specially designed, inverted cones to prevent spectators from looking directly at the beam.

From the three maintenance rooms located on the ground floor, behind-the-scene repairs can be carried out in the chambers and other portions of the building by means of access ladders leading to the chambers, upper floor projection rooms, and the roof. A specially designed, electrically operated dumb-waiter carries light bulbs and other small equipment to the roof of the pavilion.