THE PARACHUTE JUMP, southwest corner of the block between Surf Avenue, the Riegelmann Boardwalk, West 16th Street and West 19th Street, Brooklyn. Invented by Commander James H. Strong. Engineered by Elwyn E. Seelye & Company. Originally erected 1939. Moved to present site 1940-41 by architect Michael Marlo and engineer Edwin W. Kleinert.

Landmark Site: Borough of Brooklyn Tax Map Block 7073, Lot 1 in part consisting of the property encompassed by the concrete platform beneath the described improvement.

On September 15, 1987, the Landmarks Preservation Commission held a public hearing on the proposed designation as a Landmark of The Parachute Jump and the proposed designation of the related Landmark Site (Item No. 14). The hearing had been duly advertised in accordance with the provisions of law. Two witnesses spoke in favor of designation. One witness spoke in opposition to designation. The Commission has received many letters in favor of designation.

DESCRIPTION AND ANALYSIS

Summary

Inspired by the growing popularity of civilian parachuting and towers constructed to teach the military correct technique, Commander James H. Strong’s Parachute Jump was erected for the 1939-40 New York’s World’s Fair in Flushing Meadow. As detailed by Elwyn E. Seelye & Company, the 170-ton tower stands 262 feet tall, a height exceeded at the fair only by that of the famous Trylon. It was considered to be an engineering feat. The mechanisms within the tapered steel structure permitted fair visitors to ride to the top and safely descend, two-by-two, perched on a seat beneath a parachute. The exhilarating ride provided the couple with an unsurpassed view of the fairgrounds. After the closing of the fair, the Parachute Jump was purchased by the Tilyou brothers and moved to their Steeplechase Park, Coney Island’s most famous and longest enduring amusement park. Steeplechase had been founded by their father, George C. Tilyou (1862-1914), whose enterprises at the turn of the century helped to revive Coney as a wholesome family resort. Steeplechase was closed in 1964; however, the Parachute Jump continued to function until 1968. Still a prominent feature of the Brooklyn skyline, today the tower stands unused, but in fundamentally sound structural condition.
The History of Coney Island

Coney Island has played a part in the history of New York since the first days of European exploration, when Henry Hudson docked his ship, the Half Moon, off its coast in 1609. Lady Deborah Moody and forty followers settled Gravesend, the area north of Coney Island, in 1643; she bought the island itself from the Canarsie Indians in 1654. Not until 1824 did the Gravesend and Coney Island Road and Bridge Company build a shell road from the thriving center of Gravesend to what is now West 8th Street on the island. Along with the commencement of steamer ship service from New York in 1847, this improved access allowed about a half dozen small hotels to spring up by the 1860s. During this period many famous Americans rusticated there: Washington Irving, Herman Melville, Henry Clay, Daniel Webster, and Walt Whitman.

But the nature of vacationing at Coney Island changed quickly during the 1870s, when several railroad companies began service from Brooklyn; the completion of F.L. Olmsted's Ocean Parkway, a designated New York City Scenic Landmark, also provided a comfortable route for carriages. Grand hotels and restaurants accommodated the mostly well-to-do visitors, who came to enjoy not only the ocean and cool sea breezes but also the amusements which were transforming Coney into the most famous family park among its American counterparts. A festive atmosphere was ensured by the transferral to Coney Island of structures from the dismantled Centennial Exposition which had been held in Philadelphia in 1876.

Coney Island developed into "America's first and probably still most symbolic commitment to mechanized leisure." The island increasingly became the site for technologically advanced structures such as the balloon hangar, elephant-shaped hotel and observatory (built in 1882, it became an unofficial symbol of American amusement parks), and the Iron Pier (1878) which housed many amusements. Mechanically-driven rides were pioneered at Coney, one example being LaMarcus A. Thompson's Switchback Railway (1884), a precursor of the roller coaster. Most of these rides succeeded because they combined socially acceptable thrills with undertones of sexual intimacy. Indeed, Coney Island, which earned the sobriquet "Sodom by the Sea," was "the only place in the United States that Sigmund Freud said interested him." As early as 1883, Coney's name was identified with entertainment, proven by the renaming of a midwestern park as "Ohio Grove, The Coney Island of the West."

Between 1880 and 1910 its three large and successful race-tracks gave Coney Island the reputation as the horseracing capital of the country. In addition to gamblers, such features attracted confidence men, roughnecks, and prostitutes. Coney's many activities could be viewed from above in the three-hundred-foot Iron Tower (originally the Sawyer Tower at the 1876
Exposition). This most notorious phase of Coney's history ended around the turn of the century after many hotels burned down in fires during the 1890s and racetrack betting was outlawed by the state in 1910.

A movement led by George C. Tilyou to transform Coney's corrupt image introduced the idea of the enclosed amusement park to American recreation. By 1894 there were dozens of separately owned rides; but the following year Capt. Paul Boyton opened Sea Lion Park, a group of rides and attractions one enjoyed after paying an admission fee at the gate. During the next decade, Coney's three most famous enclosed parks opened: Steeplechase Park (Tilyou's own endeavor), Luna Park, and Dreamland, forming "the largest and most glittering amusement area in the world." Throughout Coney Island and intermingled with rides (such as the Barrel of Love and the Hoop-la) and food vendors, were other typical carnival features such as freak shows, guess-your-weight stands, and games. This scene was enlivened by barkers calling out to potential spectators, elaborate pavilions of eclectic design, and thousands of incandescent light bulbs. The size of the crowd on a typical Sunday afternoon in the summer of 1900 was about 100,000.

Another transformation occurred at Coney Island around 1920, with the influx of lower-income visitors, who arrived on the newly-completed subway lines for a mere nickel. Many elegant eating places had suffered with the beginning of Prohibition; the democratization of Coney facilitated their replacement by stands offering cheaper fare. The best known example is Nathan's Famous which, in 1916, began selling hot dogs for a nickel. Visitors were entertained at Tilyou's theater by Irving Berlin, Mae West, and John Philip Sousa. By 1925, an average Sunday afternoon attendance had soared to one million.

In spite of the nighttime blackout imposed on Coney's lights during World War II, the amusement parks flourished, due to entertainment-seeking servicemen on leave and to the rationing of gasoline. But Coney's heyday came to an end after the war. Although the island survived attempts by Parks Commissioner Robert Moses to obliterate the animated jumble of buildings, rides, and attractions, it did not fare as well with fire damage and the growing mobility provided by the automobile. The New York City Housing Authority sought to revitalize the area by replacing small summer cottages with high-rise residential towers, a plan which only further undermined the neighborhood's character. Today many of Coney Island's landmarks have disappeared, due to neglect, fire, or poor planning; however, enough still stands to remind us of Coney Island's importance as New York's playground and as the prototype for amusement parks throughout the country, from Playland in Rye, New York, to Abbott Kinney's amusement piers in Venice, California.
The History of Parachuting

The development of the parachute began with a drawing (1480s) by Leonardo da Vinci and the discussion of the principles of the parachute in Fausto Veranzio's book, *Machinae Novae* (1595); however, the first practical demonstration of a man-carrying parachute occurred when Sebastian Lenormand leaped from the top of Montpelier Observatory, Paris, in 1783. The parachute came into general use during hot air balloon flights. In America, the first such jump was performed over Jersey City, New Jersey, by Frenchman Louis-Charles Guille in 1819. The usefulness of parachutes increased after the Wright Brothers' famous Kitty Hawk flight of 1903; nine years later Captain Albert Berry demonstrated that parachuting could be a life-saving device for the military, and during World War I improvements in parachute design popularized their use among pilots.

Forerunners of the Parachute Jump

Early parachute design and jumping techniques were pioneered from airplanes; however, when the emphasis shifted to training larger numbers of parachutists in the 1930s, towers were erected. These structures were akin to the observation towers, built beginning in the late nineteenth century, which were ascended via stairs or steam-powered elevators. The 985-foot Eiffel Tower, designed by Gustave Eiffel for the Paris World's Fair (1889) is the best-known example.

Commander James H. Strong, U.S. Navy (Retired), designed the Parachute Jump based on his experiments of the 1930s. In his distinguished career as a commander of the U.S. Naval Air Forces, Strong had observed the training of parachutists, including the dangerous "free jump" method pioneered in the Soviet Union. Strong patented an innovative tower design on August 7, 1936; it used auxiliary cables to hold the 'chutes open and prevent them from drifting. He built and tested several versions in the mid-1930s on his property near Hightstown, New Jersey. Although intended for military purposes, during 1935-37 one of these towers accommodated thousands of riders, inquisitive passers-by, "without a single adverse experience." This approving public response must have encouraged Strong and his associates at Miranda Brothers, Inc. to consider adapting the device to a new purpose. A 150-foot, two-arm version was marketed as an amusement ride by Miranda Brothers, under license from Strong's firm, American Armament Corp (later renamed Safe Parachute Jumps, Inc.)

In the spring of 1936, the management of Riverside Park, Chicago's largest amusement park, expressed interest to the Miranda firm in the commercial adaptation of a parachute tower. American Armament Corp. outfitted a 200-foot observatory tower, already on the site and renamed Pair-o-Chutes, with six two-
passenger parachute rigs, which were fitted to the steel-frame tower by an umbrella-shaped crown resembling the one later developed for the World's Fair. A double harness replaced the single sling used for military training, thereby enabling couples to share the ride's thrills together. The success of Pair-o-Chutes inspired its recommendation to the New York World's Fair in 1939-40.

The Parachute Jump at the World's Fair

Recognizing the success of the Century of Progress Exposition of 1933-34 in Chicago, New York planned a world's fair to take place in 1939-40 in Flushing Meadows. The emphasis of the fair was on the future and how developments in technology and merchandise could contribute to a better life for the average American. Because of the large site, the fair was divided into seven zones. One of these, the Amusement Zone, was located around Fountain Lake. Even here there was a futuristic emphasis, as was noted by August Loeb in his article discussing such rides as the Stratoship, "an aerial joyride," and the Parachute Jump, located at the extreme southeastern end of the Amusement Zone.

Strong adapted his Chicago design, increasing the height to 250 feet and adding bays for a total of twelve parachutes, each thirty-two feet in diameter (eight feet wider than the standard Navy model), although at first only eleven were actually deployed. Beneath a 'chute held permanently open by large metal "spreaders," passengers shared a double seat and were guided down by vertical wires to prevent swaying; shock absorbers eliminated any effect of impact upon landing.

International Parachuting, Inc. signed the first contract for erection in the 280-acre recreation area. The structural steelwork of the 170-ton tower was designed by Elwyn E. Seelye & Co., engineers, manufactured by the Bethlehem Steel Company, and erected at the fairgrounds by Skinner, Cook & Babcock, contractors. Total expenses for the original construction came to almost $99,000. Appropriately enough, Life Savers Candy Company was its official sponsor. The tapering tower with its umbrella-shaped crown was similar in design to the Riverside Park model. The overall height, including a twelve-foot flagpole added in order to supersede the height of the statue of a Communist worker atop the Soviet Pavilion, was 262 feet from grade. Only the 610-foot Trylon, the famous needle-like symbol of the fair, was taller.

The Parachute Jump gave its passengers "all the thrills of 'bailing out' without hazard or discomfort" for forty cents (twenty-five cents for children, until seven p.m.) The Fair's Official Guild Book (1939) described the ride:

Each parachute has a double seat suspended from it. When two passengers have taken their places beneath the
'chute, a cable pulls it to the summit of the tower. An automatic release starts the drop, and the passengers float gently to the ground. Vertical guide wires prevent swaying, a metal ring keeps the 'chute open at all times, and shock absorbers eliminate the impact of landing.16

Although the ride provided visitors with magnificent vistas and the feeling of being parachutists, several minor mishaps dissuaded some from chancing the jump. A more substantial problem was the Parachute Jump's location, away from the area's main entrance. With the loss of the Life Saver sponsorship at the end of the first season, it was decided to relocate the tower nearer to the IND subway entrance, next to the popular Children's World. A twelfth 'chute was installed, and new footings were designed by R. Doulton Stott, architect. The John W. Ryan Construction Company supervised the ride's re-siting. The estimated cost of the move was recorded as $88,500. If the figures listed by McCullough are correct, the profit for the two seasons was approximately $28,500.17

The Parachute Jump at Steeplechase Park18

Following the close of the fair in October, 1940, the Parachute Jump was acquired by Edward F. (Frank) Tilyou and George C. Tilyou, Jr., operators of Steeplechase Park and sons of the park's founder. In so doing, they maintained the tradition which began at the time of the 1876 Centennial Exhibition of Coney inheriting amusements from world's fairs.

Steeplechase Park was the brainchild of George Cornelius Tilyou (1862-1914), who began his career as a teenager selling souvenirs of Coney Island and who is best remembered for his key role in Coney's burgeoning amusement industry. George grew up at Coney Island, where his parents owned the Surf House, one of the area's first hotels. His keen understanding of the psychology of holiday pleasure-seekers led him to successfully package and sell salt water and sand to tourists who had traveled east for the Philadelphia Centennial Exhibition. Although involved in real estate transactions by the time he was seventeen, he satisfied his interest in amusements while working with his father building Tilyou's Surf Theatre, the island's first.

It was largely through Tilyou's efforts that the bawdy attractions of Coney were cleaned up. As a reformer in politics, he helped overthrow notorious political boss John Y. McKean, under whose rule Coney had taken on a distinctly rowdy tone. Subsequently, Tilyou was elected justice of the peace. While on his honeymoon at the Chicago World's Columbian Exposition (1893), he was enraptured by G.W.G. Ferris's enormous wheel. Upon returning east, Tilyou introduced the first pleasure wheel to Coney Island and covered it with lights; a much smaller version
than its Chicago counterpart, it was nevertheless billed by Tilyou as "The World's Largest." He imported or built several other amusement rides, scattered all over Coney. Following the lead of Captain Paul Boyton, who in 1895 created the world's first enclosed outdoor amusement park, with admission charged at a main gate to exclude the rowdy element and attract families, Tilyou opened Steeplechase Park in 1897. The fifteen-acre park was named after the undulant, curving, metal track over which wooden horses (on wheels) encircled the area's perimeter. The park's emblem, a "grotesque, vaguely diabolical ... grinning 'Funny Face',"19 was allied with the often-repeated slogan, "Steeplechase, the Funny Place." Constantly adding new attractions, including devices which Tilyou himself patented, built, or perfected--the Human Roulette Wheel, Barrel of Love, Razzle Dazzle (later called the Hoop-la), and many others--he attracted audiences eager to see their fellow visitors make fools of themselves.

When Luna Park (1903) and Dreamland (1904) opened nearby, Tilyou welcomed them, correctly predicting that the competition would increase profits for all. Tilyou's determination and resourcefulness as a showman are illustrated by his reaction to the fire which leveled Steeplechase in July, 1907: he charged "Admission to the Burning Ruins--10 Cents." The chance to rebuild allowed him to add a swimming pool and five-acre Pavilion of Fun. His unquenchable enthusiasm led him to open, in addition to his park at Coney, similar large concessions in cities across the country. He ran the park until his death in 1914, when it was taken over by his sons.

A fire damaged the park in September, 1939, providing space for a new attraction--the Parachute Jump--which cost the brothers $150,000. No figure is available for the cost of its removal and re-erection, which occurred under the direction of architect Michael Marlo and engineer Edwin W. Kleinert.

General admission to Steeplechase included the cost of riding the Parachute Jump. According to McCullough, the structure was painted every season at a cost of $15,000 and the twelve 'chutes were multi-colored--probably the originals left over from the fair. By the mid-1940s, they were replaced by white 'chutes. The ascent took fifty-seven seconds; the descent varied between eleven and fifteen seconds, depending on the wind. During the war years, the Parachute Jump was extremely popular. Many servicemen took their wives and girlfriends on the ride and although the rest of Coney Island was blacked-out in the wartime defense effort, a light atop the Parachute Jump served as a beacon for American planes and ships.20
Description

Easily recognized by its unique silhouette and admired for its filigree-like metalwork, the Parachute Jump is a six-sided steel space frame tower, approximately 262 feet tall; it supports twelve drop points from which parachutes can descend along guidelines with sufficient clearance from the central upright. The potential imbalance of stresses at the head requires that the tower be flared outward at the base to give lateral stability.

The tapered tower consists of six twelve-inch-wide flange columns serving as the tower legs and braced with horizontal angles spaced approximately every seven feet. In between the horizontal angles are vertical diagonal bracing angles. The horizontal and diagonal bracing angles are connected to gusset plates which are riveted to the column webs. The tower legs are spliced approximately every thirty feet. Just below the splices, within the tower, are horizontal bracing angles. These braces are connected to the midpoint of the horizontal bracing angles between tower legs. A ladder is attached to the north side. The paint on these steel members has worn away, exposing the material beneath.

The twelve structural steel arms, with a horizontal extension of about forty-five feet at the top of the tower, are six feet high and six feet wide. Having a space-frame type construction, each arm originally supported (in addition to its own weight) the weight of a parachute, its passengers, and attendants. An open steel grating walkway is provided around the top of the tower and along each arm. Each arm holds an octagonal subframe; from each subframe were originally suspended eight guidelines to hold the parachute open. Most of the guidelines remain, but are no longer attached to the bottom of the tower.

At ground level the tower is enclosed by a two-story building which housed the mechanical and electrical components necessary for operation. At boardwalk level, the building is articulated as one-story with six sloping sides separated by fluted, sloping piers (some are now missing.) Covered with horizontal bands, the faces of steel sheeting feature upright protrusions which alternate between a mostly solid surface and gridded fenestration. The building is capped by a narrow band with three protruding cylinders per side. Painted green at one time, the exposed metal has large rusted sections. The roof is corrugated galvanized iron sheeting; the siding is steel sheeting. The top floor of the building contains the hoisting machinery; the lower floor was used for ticket sales and as a waiting area. Each tower leg foundation consists of a concrete footing founded on twelve timber piles. The steel column is seated on a square concrete pedestal and stiffened at that point. Ten anchor bolts provide anchorage to the footing for each leg.
At the boardwalk level, the four-inch-thick concrete platform served as a landing area for the descending parachutes. It is supported by wide flange sections and four-inch-diameter lally columns approximately seven feet in height. The structural steel members are relatively light sections. The landing platform has a radius of sixty-eight feet from the center of the tower.

Four lighting standards are located around the base of the tower at the outer edge of the platform, which is almost entirely enclosed by fencing except for an access ramp at the northeastern corner. The access ramp is constructed on a three-and-a-half-inch concrete slab supported by reinforced concrete beams and four-inch diameter lally columns founded on spread footings. Access to the tower can also be gained through existing boardwalk fence gates.

Recent History

With the death of Frank Tilyou in 1964, the surviving family members reluctantly closed Steeplechase Park. In July, 1965, developer Fred C. Trump purchased the property for $2.5 million with the expectations of erecting a high-rise apartment building. In the interim he leased the property to Norman Kaufman, an amusement operator, who managed several former Steeplechase amusements; among these was the Parachute Jump, which functioned until 1968. The structure's associations with the history of Coney Island have won it a place in popular culture, including a magazine advertisement for the American Express Company.

The city took title to the twelve-acre site under condemnation proceedings in 1969 for nearly four million dollars; planners envisioned a municipal recreation area. Two years later the ride was put up for sale at auction. A lack of response led to the request for bids to demolish. The Coney Island Chamber of Commerce and Gravesend Historical Society were instrumental in having the Parachute Jump designated a New York City Landmark on July 12, 1977; but on October 20, the designation was denied by the city's Board of Estimate. The continuing threat of demolition was alleviated by structural engineering reports which attested to the tower's inherent soundness. The survival and rehabilitation of the Parachute Jump has now been secured as an important component of fast-food chain owner Horace Bullard's plans to redevelop the twenty-five acre former Steeplechase site as a modern family-oriented amusement park.

Report written by: David M. Breiner, Research Dept.
Researched by: Janet Adams, Research Dept.
Edited by: Nancy Goeschel, Research Dept.
NOTES


8. Kyriazi (1976), 118.


12. The tower was demolished after Riverside Park was closed in the late 1960s. See Kyriazi, 112-15.


17. See Harrison, 5-6, who cites sources found in Box 334; **NYT**, Jan. 29, 1940 ("Shift in Fair's Play Zone"), p. 17.


20. Harrison, 7-8; **NYT**, June 27, 1943 (Burton Lindheim, "Coney Has a War Boom"), sec. 2, p. 11.

21. This description is based on that found in Hardesty,

FINDINGS AND DESIGNATIONS

On the basis of a careful consideration of the history, the architecture and other features of this structure, the Landmarks Preservation Commission finds that the Parachute Jump has a special character, special historical and aesthetic interest and value as part of the development, heritage and cultural characteristics of New York City.

The Commission further finds that, among its important qualities, the Parachute Jump was designed by Commander James H. Strong, inspired by the early towers constructed to teach airmen the proper techniques of parachuting; that because the activity gained popularity among civilians, the Parachute Jump was erected for the 1939-40 New York World’s Fair in Flushing Meadow and considered an engineering feat; that as detailed by Elwyn E. Seelye & Company, the 262-foot tower was exceeded in height only by the Trylon, among other fair structures; that the ride was a famous one among fair visitors; that upon the closing of the Fair, the Parachute Jump was relocated to Coney Island’s most famous and longest-lasting amusement park, Steeplechase Park; that although the tower has not functioned since 1968, it is still in fundamentally sound structural condition and, due to its height and unique silhouette, a prominent feature of the Brooklyn skyline.

Accordingly, pursuant to the provisions of Chapter 21, Section 534, of the Charter of the City of New York and Chapter 3 of Title 25 of the Administrative Code of the City of New York, the Landmarks Preservation Commission designates as a Landmark the Parachute Jump, southwest corner of the block between Surf Avenue, the Riegelmann Boardwalk, West 16th Street and West 19th Street, Borough of Brooklyn, and designates Tax Map Block 7073, Lot 1 in part consisting of the property encompassed by the concrete platform beneath the described improvement, Borough of Brooklyn, as its Landmark Site.
Armbruster, Eugene L. *Coney Island*. New York: [The author], 1924.


Harrison, Helen A. "A History of the Parachute Jump, Coney Island, New York." Included in the "Study" produced by Hardesty & Hanover. (See above)


**Scientific American**, 156 (June 1937), 386-87; 159 (Oct. 1938), 196.
