HISTORIC PRESERVATION REVIEW BOARD
Historic Landmark Case No. 14-96

International Telecommunications Satellite Organization Headquarters (Intelsat)
3400 International Drive NW
Square 2055, Lots 803, 804, 805, 806 and part of 807

Meeting Date: April 25, 2019
Applicants: D.C. Preservation League
Affected ANC: 3F

The Historic Preservation Office recommends that the Board designate the former headquarters of the International Telecommunications Satellite Organization (Intelsat) at 3400 International Drive NW a historic landmark in the D.C. Inventory of Historic Sites, and that a nomination be forwarded to the National Register of Historic Places.

The Intelsat building faces west at 3400 International Drive NW with east-facing frontage carrying the address of 4000 Connecticut Avenue NW, and a south facing address of 3007 Tilden Street NW. It was constructed in two phases from 1982 to 1986 and is arranged in a geometrical system of octagonal office pods and taller, glass-covered atria. Ranging in height from four to six stories, the building responds to to the site's fairly steep grade, maintaining a consistent roof level. The nomination includes the landscaped parcel to the southeast of the building, known as Squirrel Park.

History of Intelsat
Just a year after President Kennedy made it clear to the world that the Cold War with Russia extended to outer space, he signed the Communications Satellite Act of 1962. The "space race," that resulted in the moon landing also encompassed efforts to create an international communications system reliant on artificial satellites. The International Telecommunications Satellite Organization (Intelsat) was created in 1964 by international treaty to "improve global communication, particularly between developing and developed economies" and to "provide global telephone connectivity via satellites at a time when market forces were perceived as unable to adequately meet this goal."[1]

The United States joined seventeen other countries in creating Intelsat and within ten years the membership had grown to 86 countries. By 2001, when Intelsat became a private company, it provided service to 150 countries. In addition to its diplomatic operations, its first major technological achievement was the 1965 launch of Intelsat I, the world's first communications satellite placed in geosynchronous orbit, providing telephone and broadcast coverage to what would eventually become a fully global network. International telephone and television services

[1]Stiglitz, Joseph, Kenney, Joan, Schwartz, Marius, et al. "Towards Competition in International Satellite Services: Rethinking the Role of INTELSAT." https://clintonwhitehouse4.archives.gov/WH/EOP/CEA/html/paper.html, 1995.

grew almost instantly, with Intelsat today providing "broadband connectivity, multi-format video broadcasting, secure satellite communications and seamless mobility services."[2]

Seminal Intelsat communications achievements include the following:

- Launching the first commercial satellite in geosynchronous orbit
- Providing the world's first international network of satellites
- Providing the world's largest satellite network
- Enabling the television broadcast of the 1969 moon landing to 500 million viewers worldwide
- Enabling the television broadcast of the 1985 Live Aid benefit concert to support famine victims in Africa, which reached millions of viewers in 88 nations worldwide
- Providing the first High Definition (HD) transmission between the U.S. and Japan in 1989[3]

These achievements, as well as oversight of satellite launches and administration of the international network, took place within the Intelsat building, including in two satellite command centers originally located on either side of the lobby.

Design and Construction of the Intelsat Building

In 1980, Intelsat initiated an international design competition for a leased site at the former National Bureau of Standards campus between Tilden and Van Ness Streets, Reno Road, and Connecticut Avenue NW. The site occupies the easternmost 11.75 acres of the International Center and is owned by the Department of State.

An architectural review panel composed of Intelsat representatives as well as three notable architects—Pietro Belluschi of the United States, Michael Austin-Smith of Great Britain, and Marco Zanuso of Italy—reviewed submissions from around the world. The two primary criteria for a successful design were that at least 70 percent of the office space would have natural light, and that the building would have an energy efficient design.

The panel selected Australian architect John Andrews and awarded him the challenging task of designing "a major architectural statement, a distinctive and lasting emblem of [Intelsat's] character as a high-tech international satellite consortium."[4] Andrews' design "promised substantial energy savings, respect and appreciation for the natural contours of the site and its extant tree cover, and a striking space-age appearance for the new building."[5] The somewhat hilly terrain was preserved at the south end of the site in what is now known as Squirrel Park, an informally landscaped area with shade and ornamental trees, paths and benches that not only has provided a community amenity since construction, but is integrated into the building's passive cooling system.

The former Intelsat headquarters occupies a substantial V-shaped footprint with arms of different lengths. Its overarching modular concept is an interlocking series of geometric forms—octagonal multi-level office blocks clad in aluminum panels and glass with built-in sunshades; octagonal, full height atria capped by glass roofs; and concrete and glass block cylindrical stair

[2] http://www.intelsat.com/about-us/overview/
[3] http://www.intelsat.com/about-us/history/
[4] DeFerrari, John. Intelsat National Register Nomination Form, p. 9.
[5] *Ibid.*

towers lining the perimeter. The atria were designed to provide vertical and horizontal circulation, through concrete elevator towers wrapped with spiral stairs and over a series of bridges.

One of the building's significant achievements was its energy efficient design. At a time when the U.S. was recovering from the Oil Embargo of 1973 and the oil crisis of 1979, the Intelsat building was designed to consume 40 percent less energy than similarly scaled buildings. Andrews incorporated a number of innovative energy efficiency measures, including:

- Separate air conditioning units, which functioned more economically than traditional centralized systems
- Clear, tinted and reflective glass on the atria roofs to reduce the impact of summer sunlight and increase the amount of winter sun
- Multi-purpose, double glazed sunshades over the windows that deflect summer sun and winter wind and were angled to provide upward air circulation
- Recovery and reuse of waste heat, particularly that generated by computer systems associated with the satellite communications and control centers
- Passive cooling in the atria, using convection and passing air over the cool water of decorative indoor pools
- Green roofs, which were virtually unheard of at this time
- Underground parking, which reduced surface runoff
- Retention of green space and an extensive tree canopy surrounding the building, which provided passive cooling

The Intelsat building became D.C.'s first major "green" office building nearly a decade before the creation of the Green Building Council and the codification of sustainable design concepts in the Leadership in Energy & Environmental Design (LEED) standards. Andrews designed Intelsat based on his own experiences and acumen.

The building was widely praised in the architectural press, soliciting enthusiasm from *Washington Post* architecture critics Wolf von Eckardt and Benjamin Forgey, and inspiring articles in *Architectural Review*, *Architecture*, and *Architectural Record*, all of which expressed excitement over both the building's design and its energy-saving features.

As are many of Andrews' works, the building's style is hard to characterize, although it exhibits elements of brutalism, post modernism, and neo-expressionism. The extensive use of glass and aluminum reflects Intelsat's Space Age use of the building.

John Andrews

With a master's degree in architecture from Harvard University, John Hamilton Andrews, a native of Australia, worked in Toronto for several years before starting his own firm in 1962. His North American works include Scarborough College in Toronto (1963, 1970), the Miami Seaport Passenger Terminal (1970), Gund Hall at the Harvard Graduate School of Design (1972), and Kent State University School of Art (1972), among others. At 1800 feet tall, his iconic, space needle-like CN Tower in Toronto was the world's tallest building from its opening in 1976 through 2007. It was constructed, in part, as a telecommunications tower.

In 1972, Andrews opened an office in Sydney, designing the Cameron Offices, a series of interconnected government office blocks (1970-76); King George Tower (1976); RMIT Student Union and Library; Little Bay Housing (1981); Sydney Convention Centre (1988, demolished 2013); World Trade Centre (1989); and the Veterinary Science Complex at Sydney University (1995).

In addition to his numerous projects, Andrews taught at the University of Toronto, eventually becoming chair of the School of Architecture. His collection of international awards includes the Centennial Medal, Canada (1967) Arnold Brunner Award, US Academy of Arts and Letters (1971), American Institute of Architects Honor Award and Bartlett Award (1973), Royal Australian Institute of Architects (RAIA) Gold Medal (1980), Officer of the Order of Australia (1981), and the Sir John Sulman Medal for Public Architecture (1989).

The Intelsat Building itself was recognized with five awards for craftsmanship, a Mayor's Architectural Design Merit Award, and an American Society of Civil Engineering award.

Designing specifically for the conditions of each site is a hallmark of Andrews' work and part of what makes it difficult to categorize stylistically. In describing his own work, Andrews said "I'm not a modernist. I'm a rationalist. I believe in appropriateness. Each time I came up with a design solution I believed it was the right answer, the appropriate answer."[6]

Even his earliest major commission at Scarborough College, his work exhibited elements of a "design vocabulary that he would use again with striking effect in a number of future projects, including the Intelsat headquarters—a modular design of segmented geometric shapes that follows the contours of its sloping site and relates closely to its natural environment."[7] His rational approach emphasizes circulation, user friendly environments, connectivity, and functionality, incorporated within an overarching geometry and with an eye toward climate and environmental concerns.

Significance and Integrity

The Intelsat building garnered much acclaim, and some criticism, when constructed. But such strongly held opinions are what make architecture compelling. As architecture critic Benjamin Forgey wrote,

> The strong public reactions to the building, positive and negative, bode well for its future. This reminds me a lot of the furor that greeted Alfred B. Mullett's State, War and Navy building (now the Executive Office Building), which Henry Adams called Mullett's "architectural infant asylum," and which most of us, today, would fight hard to preserve. I can imagine, 50 years from now, fighting just as hard to save the Intelsat building.[8]

Its striking appearance, application of materials in a decidedly un-Washington manner, and, particularly, its incorporation of energy-efficient design at such an early date make the building

[6] Howlin, Jan. *Indesign Luminary: John Andrews.* https://www.indesignlive.com/people/luminary-archives-john-andrews, 2014.
[7] DeFerrari, p. 10.
[8] Forgey, Benjamin. "Intelsat: The Space-Age Stunner" in *The Washington Post*, Jan. 5, 1985, C1.

significant in the city. Conceived of years before any formal requirements or even publications on green construction, the Intelsat building was decades ahead of its time.

In typical John Andrews fashion, the building is uncompromising in its form-driven architecture with a strong emphasis on functionalism and user comfort. The octagonal office pods and atria, the cylindrical stairwells, the canted sunscreens shading the windows all forthrightly convey their architectural function. Moreover, its high-tech design creates a fitting headquarters for a world leader in satellite communications technology and diplomacy.

The Intelsat building has been nominated under District of Columbia Criterion D and National Register Criterion C for its architecture. The building's rationality of design, site placement, circulation, and materiality clearly reflect its embrace of modern aesthetics and construction techniques and clearly identifies its use as an important center for high-tech discovery and collaboration.

The Intelsat building was ahead of its time for "green" construction, incorporating the groundbreaking energy efficiency envisioned by Intelsat and achieved by the architect through ventilation patterns in the atria, selective glass type and tinting, the use of sunshades, and early green roofing. It was recognized at the time of its construction through numerous high-profile articles and design awards.

The HPO also finds the building to be significant under DC Criterion F as the work of a master, world-renowned architect John Andrews. Andrews' straightforward approach to architecture integrates site characteristics, program, and environmentally friendly design. His iconic buildings are internationally recognized (e.g., CN Tower); seven have been designated to Australia's Register of the National Estate, National Heritage List and/or Commonwealth List as historic despite their young age. In addition to other awards, Mr. Andrews is the recipient of the RAIA Gold Medal, Australia's highest honor for architects.

HPO also recommends significance under DC Criterion A for events as the site of several landmark telecommunications achievements. The building was the control center for the world's first geosynchronous communications satellite in what would become the worlds' first global broadcasting network. The command center used the Intelsat network to broadcast the culmination of the space race—the 1969 moon landing—with 500 million viewers worldwide, a major achievement in the history of both television broadcasting and space exploration.

The Intelsat building is significant under Criterion B for history as the home of the Intelsat organization, a consortium of countries dedicated to ensuring that satellite communication capabilities were equitably available to all countries, including developing nations. As a representative of the cooperation among nations, the building is located at the International Center. It was specifically designed for the Intelsat organization and served as its home from 1984 until 2012.

In an age of cell phones, the internet, and satellite navigation systems, it is important to recognize that only a few decades ago the infrastructure to make this technology feasible did not exist. Intelsat made possible the satellite links that continue to provide these communications services not only to individual users, but to the broader community—scientists monitoring environmental and climatic changes, disaster recovery agencies, national defense and security

interests, and mapping services such as GPS. Because of its importance under DC Criteria A and B, the Intelsat headquarters is also significant under National Register Criterion A for History.

Because the building is not yet 50 years of age, it must meet criteria consideration G for National Register listing. The building possesses exceptional historic and architectural significance for its role in developing the world's capacity to communicate by phone, broadcast television, and internet. It is a rare example of exemplary modern architecture in D.C. and the work of a recognized master. Virtually no exterior changes have occurred to the building's design, materials, and finishes, imparting a strong sense of integrity and an unquestionable ability to convey its significance.