

Newark International Airport: From Marsh to International Gateway

By Jeremy B. Katz

When Newark International Airport was built, it was a humble airport; the first in metropolitan New York. Time would provide the airport with competition and numerous periods of uncertainty. Ultimately, however, consistent growth, aided by two major expansions following its creation, would transform a marsh located outside New York City into a major international gateway.

In 1927, the City of Newark made public its intention to build an airport by the Port of Newark. In little time, the airport would prove extremely successful, becoming the world's busiest airport. Competing neighboring airports and revolutionary advancements in aviation would lead Newark Airport to a massive expansion in the 1970s. Although setbacks greatly disrupted the expansion, time brought success to the airport, prompting a second overhaul at the end of the 1990s. True to the dream of the visionaries who designed the airport, Newark Airport became, with these expansions, a gateway to the world.

“Where railways, waterways, airways and highways meet”

“Preliminary plans to provide for a \$6,000,000 commercial airport which would be constructed, owned, and operated by Newark at Port Newark, were announced [August 3, 1927] by Newark [Mayor] Thomas L. Raymond.”¹ When the plan to build Newark Metropolitan Airport² was made, it provided for ample opportunities and ease of use. The initial statement by the mayor noted that “...the airport site would be twenty-two minutes from Broadway and Canal Street when the vehicular tunnel under the Hudson River (the Holland Tunnel) is opened

and the new State Highway Route 1 is completed...”³ The mayor also announced that, pending approval of his plan, the airport was to be completed by the spring 1928. It is also important to note that the airport was designed “exclusively for commercial purposes,”⁴ meaning there were no intentions of having any portion of the airport dedicated to military aviation.

Although initial plans called for a spring 1928, completion of the airport, construction quickly fell behind the deadline. By mid-February 1928, the idea of completion by spring had been disregarded, and a new goal, to have the first unit of the airport completed by the beginning of August, was announced. However, this time frame was presented purely for financial reasons. Much of the metropolitan region's airmail was being sent a few miles away from Newark, through Hadley Field, in New Brunswick, N.J. As it turned out, many of the airmail carriers' contracts were set to expire on August 1, 1928, and it was the hope of Newark to attain those contracts; to do so required being fully operational at the contracts' end to ensure no disruption in mail service and no contract renewal at Hadley Field.⁵ In addition to the contracts' expirations, the U.S. Postmaster General, Harry S. New, was in favor of moving operations to Newark, noting that although overnight mail aircraft are capable of reaching Hadley and Newark Airports at the same time, the train to New York City would allow the mail to arrive from Newark approximately one and a half hours sooner than that from Hadley. Similarly, outgoing mail can arrive at the New York City Post Office later in the evening if the outbound aircraft were to leave Newark at the same time it would normally leave Hadley.⁶

Although the original timing goal was ambitious and unattainable, the planning teams did show great forethought in creating what they hoped to be “the main Eastern terminus of the nation’s airways.”⁷ The first instance of this forethought was to allocate for the airport nearly quadruple the land area needed for the initial plans. While the airport was to be opened using only 176 acres,⁸ 500 acres total had been set aside to allow for expansion. Additionally, the location of the airport proved an excellent choice. Apart from being easily accessible to both Newark and New York City, the airport’s location proved a wise choice as it avoided the “‘fog belt’ and smoke haze that constitute one of the greatest difficulties to the development of air commerce in and out of the metropolitan district.”⁹ By February 1928, Newark Airport had a slogan, “Where railways, waterways, airways, and highways meet.” With roadways under construction around the airport, six separate rail lines leading to the airport site, a large enough deep-sea waterway to allow both landing space for seaplanes as well as a direct line for 21 steamship lines just beyond the edge of the airport, and the development of port-related commerce along approximately three to four miles of the Port of Newark flanking the airport’s grounds, the slogan seemed not only appropriate, but indicative of a very prosperous future for the airport, with ample opportunity to carry both passengers and cargo.¹⁰

What is also interesting to know is the amount of effort that was required to prepare the site of Newark Airport for construction. Instead of finding an area of land that needed simply to be leveled, the City of Newark chose to build on top of “a waste of useless swamp land.”^{11,12} This land, along with another 1,500 acres also owned by the City of Newark, was filled to become useable, worth \$20,000 per acre in 1928. Building the airport also required the diversion of three streams that cut through the field, as well as the use of 500,000 cubic yards of dry fill to bring the land “up to a pool-table smoothness.”¹³

As the construction progressed, it became quite evident that Newark Airport would have little trouble garnering traffic once it opened. “‘Hardly a day passes [...] but we receive inquiries from someone who wants to use the airport’”¹⁴ said the supervisor of the project, Peter J. O’Toole, Jr. O’Toole noted that commercial carriers were interested in servicing Newark from cities as far away as New Orleans and Havana, Cuba. Additionally, department stores around the area, which had recently begun receiving merchandise by air, expressed early interest in use of the airport for shipments. Finally, great interest was expressed in the airport’s ability to provide for on-site businesses, such as oil and gas stations, departure points for aerial sightseeing companies, hotels, restaurants, and more. The promise for the airport was also made evident by the numerous classified ads seen next to newspaper articles about the airport’s progress.

With Newark’s promise came a change of plans, as well. While the initial plans for the airport called for strictly commercial aviation, it was only a matter of months before the military became interested. New Jersey quickly planned to add hangers, a machine shop, and other needed buildings in order to establish a full unit of the New Jersey National Guard air service. In addition, the state planned to establish a special rail terminal for the sole use of mobilizing servicemen of the metropolitan area.

Plans for Newark Airport also brought forth ideas of technological breakthrough that would revolutionize the world of flight.

Special studies are also being made with a view to introducing such advanced features as radio beacons, which will guide a plane to a safe landing through a fog, and runway marker lights, which will shift with the wind. ‘Such rapid progress is being made,’ said Colonel [Stedman] Hanks, “that we may soon hope to see a plane led safely to a field by the direction-guiding note of the radio beacon on the pilot’s instrument board, while whatever additional information he needs is received from the airport through the headphone of his radio telephone.

This idea is the basis of the Instrument Landing System (ILS), a feature with which every modern airplane is equipped. The ILS system uses two sets of radio beacons to show the pilots their horizontal position relative to the runway centerline, and the vertical position relative to the appropriate descent path as the aircraft approaches the runway. Without such a system, safe, low visibility landings would not be possible, and air travel as it is known today could not exist.

Although the revised plan for the airport called for an August 1, 1928, opening, it was not until the first of October that, with little fanfare—in fact, nary a mention in the *New York Times* - Newark Airport would finally open officially, featuring a 1,600-foot- long runway, the first hard-surfaced runway of any commercial airport within the United States.¹⁵ In the ensuing months, the airport proved a success as it obtained new air-

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A display of classified advertisements located on the same page as the large New York Times article “Newark’s New Airport for the Metropolitan Area.” (From the New York Times February 19, 1928, p124)



Dedicating the administration building, a terminal topped with a control tower, on May 16, 1935. (Photo from Beyer Blinder Belle Architects & Planners LLP)

mail contracts, including many of those from Hadley Field, became the rendezvous point for New York sightseeing flights, and quickly became the destination of new commercial flights from numerous cities around the United States.

Throughout the 1930s, Newark's airport prospered, expanding by building more hangars, as well as increasing the runway's length. In addition, Newark became a world leader in the advancement of aviation technology. "As new safety aids for flying were developed, Newark provided a testing ground. Night lighting, paved runways, air traffic control, radio transmittal from land to air and instrument flying were all pioneered at Newark."¹⁶ With its success, Newark became the world's busiest airport by 1930. This title was held until 1939,¹⁷ with 117 combined daily arrivals and departures.¹⁸ The demise of Newark Airport, however, was soon approaching as New York City Mayor Fiorello LaGuardia completed his city's first airport, LaGuardia Field.

With the main Newark carriers moving immediately to LaGuardia Field upon its opening due to far less expensive rent, Newark Mayor Meyer C. Ellenstein opted to close the control tower on May 31, 1939. In the airport's first decade, more than 2,000,000 passengers, 17,000,000 pounds of express mail, and 30,000,000 additional pounds of regular mail had been handled by the airport. However, even high rent

was unable to make the airport profitable or even break-even, with a yearly deficit of approximately \$210,000 being covered by the taxpayers of Newark for the years leading up to its close. Although Mayor Ellenstein had protested the transferring of flights from

Newark to New York—he cited collusion between the airlines and the City of New York—his pleas were unanswered. Unceremoniously, the world's busiest airport closed its control tower—prompting the Civil Aeronautics Administration to declare the uncontrolled airport unsafe for flight—victim to a new, larger field.¹⁹

On April 1, 1941, Newark Airport would reopen, following some improvements, in the midst of negotiations with the four major airlines in the area to return commercial flights to the once bustling field.²⁰ Service at the field, however, would last only slightly more than a year, as the War Department took over the airport in June 1942, being used as the headquarters for the Atlantic Overseas Air Technical Service Command. More than 51,000 warplanes passed through Newark, being dismantled upon landing and loaded onto ships at the Port of Newark for transportation to Europe. Although commercial service was discontinued at the airport for the

next few years, the military did help the airport's future, adding runways, acquiring more land, and erecting new buildings. The airport would reopen in February 1946 with three runways and major commercial routes. On March 22, 1948, following discussions with the State of New Jersey, the Port Authority of New York began administering the airport. Under its watch, more land was acquired, giving Newark Airport its present 2,027 acres, and a new instrument runway was built. A new terminal building at the north end of the airport and control tower were also built, giving way to a new era at Newark Airport.²¹



A Standard J-1 at an open house August 4, 1945, while the airport was still being operated by the Overseas Air Technical Service Command. In addition to the North American P-51 (prop-less and covered) in the immediate background, a number of Republic P-47s are recognizable across the field (inset). (Photo by William Larkins from the AAHS Archives, neg #1355)

The Jet Age: A Modern Newark Airport Takes Form

With residential areas surrounding three of Newark Airport's four sides, it took a study and Port Authority permission to overcome opposition to jet traffic from nearby residents. The *New York Times* reported, following a request from American and United Airlines to authorize plans to fly jets into Newark, the following:

...For the last two years, the [Port Authority] has permitted jets to land at Newark and discharge passengers and freight only when weather conditions were unsuitable for landings at New York International Airport at Idlewild. But the jets must take off empty. [...] Newark will never be considered a first-class modern air terminal so long as its operations are limited to propeller-type aircraft...²²

With the support of the FAA chief Najeeb E. Halaby, who noted that Idlewild alone would be unable to meet the New York area's aviation demands with the expected surge in traffic due to the jet age,²³ as well as strict noise abatement procedures,²⁴ scheduled jet flights commenced at Newark Airport on September 11, 1961, when a United Airlines Caravelle aircraft departed Newark for Chicago²⁵ nearly a decade after the world's first commercial jet flight²⁶ and just shy of three years after the first jet flight at Idlewild.^{27, 28}

With traffic already on the rise—2,861,000 passengers in 1961—and three airlines, TWA, American, and Eastern scheduling jets by the end of the same year, it was clear that Newark's decade-old North Terminal would soon be unable to handle the traffic the jet age would bring, projected at 19,000,000 passengers by 1980. With such a projection, the

Port Authority called for the construction of new, modern terminals along the southwest side of the airport. Additionally, the plans called for longer runways and various support buildings. The *New York Times* reported:

[The plan] calls for a new passenger terminal two and a half times the size of the existing terminal, which is to be converted into an aircraft hanger.

The airport's two runways are to be modified and extended and a new runway is to be built parallel to and slightly north of the existing instrument runway, 4-22²⁹. The new runway system would increase the airport's operating capacity by 50 percent and extend buffer zones between runways and nearby communities.

In addition, a 120-acre cargo area as well as a 200-acre maintenance area were proposed. Up to seven hangars and a 20-acre fuel storage area would be provided...³⁰

In November 1964, a more detailed description of the planned work was made. This included an expanded terminal complex comprised of four individual terminals, each the size of the existing North Terminal. The four terminal buildings were each to have satellites that would house the gates, in total supporting 76 aircraft, with apron space allowing for 25 more to be parked. Additionally, a parking facility would be built, allowing for 12,000 cars to park at the airport. Finally, in addition to expanding the instrument runway, a second, parallel runway was to be built. While this plan seemed good at first, predictions for what the future would hold brought forth ideas to build a fourth New York area airport.³¹

When Newark Airport was ready to actually begin building, in October 1967, new projections for the upcoming years



An Eastern Airlines Lockheed L-1049A Constellation, N6201C, s/n 4001, at Newark Airport October 3, 1964. (Photo from the Robert Hufford collection of the AAHS archives)



American Airlines Boeing 720-023B, N7529A, s/n 18015, at Newark Airport October 3, 1964. (Photo from the Robert Hufford Collection of the AAHS archives)

revealed ugly truths, calling for, yet again, the revision of plans. Perhaps the airport's situation was best summarized by the *New York Times* headline "Newark Airport Grows, but Still Lags." John P. Veerling, the director of the expansion project, noted "...[The expansion] is not going to pick up the demands of the region, but if we don't do it, it'll be that much more. It's better to do all that you can, rather than sit back and do nothing..."³² Even New Jersey Governor Richard J. Hughes was not optimistic, saying as he broke ground on the construction site, "[the expansion] will not afford the solution to the overriding problem of providing sufficient airport facilities to meet the future demands" and that the best solution to the problem would be the building of another airport.^{33, 34} The FAA, in its own report, strongly suggested, in addition to improving the three New York airports, the building of a fourth, as well as the increase in landing fees and fares during peak times, and the decrease of both during off-peak times, in an attempt to keep down delays come the expected influx of traffic over the ensuing years.³⁵ With the newly introduced jumbo jets—expected to enter service during the construction of the terminals—Newark's four-terminal project was reduced to three larger terminals. In addition to a changed gate layout, 2,000 of the planned 12,000 parking spaces were removed to accommodate the new terminals.

In addition to setbacks caused by the changing aviation industry, transportation to the airport became another setback. While the Pennsylvania Railroad's tracks are at one point less than a mile from the airport, congestion problems during peak hours led to the decision that the train would not be a viable option to shuttling passengers to the airport. With an increase in expected car and bus traffic, the lengthening and improvement of State Routes 1 and 22, along with the widening of the New Jersey Turnpike, became entered in the expansion plan. Apart from simply changing blueprints, these revisions also

increased the projected cost of the expansion from \$150 to \$200 million.³⁶

By 1966, eleven airlines were occupying the North Terminal, which had recently been expanded to squeeze in more gates. Initial construction on the 425-acre terminal site began with land preparation in the fall 1965; as was the case when Newark Airport was first built, the land was marsh that needed to be filled before building could take place. To do this, mud was brought, by barge, from offshore and piped to the new terminal area.³⁷

With construction underway, airlines quickly began to plan for what the future would hold at Newark Airport. Pan American Airways (Pan Am) announced in November 1965 their intention to spread international flights from Kennedy International - at the time, the only New York area airport to service international destinations - to Newark. Noted Pan Am President Harold E. Gray, demand for international destinations among residents of northern New Jersey was on the rise and the airline wanted to make travel more convenient than requiring passengers to make their way out to Queens, New York. Pan Am's press release listed intentions to lease counter space and six gates as soon as the first of the new terminals at Newark was to open, with flights to Bermuda and Puerto Rico initially planned, as well as other destinations as demand dictated.³⁸ Pan Am also addressed the issue of jet aircraft noise, citing that, upon the completion of the runway extension, additional flights would not increase the noise levels in the areas surrounding the airport.³⁹

While construction went smoothly and according to plan, Newark's luck was such that more problems would arise before the expansion was complete. As 1970 came to a close, Newark saw not the expected surge in air traffic, but a massive slump. Compared to 1969, traffic had fallen by more than 10 percent, and nearly 20 percent compared to 1968. Indeed, the loss of



A TWA Boeing 707-331, N772TW, parked at Newark, November 25, 1978. (Photo by Howard Chaloner via Airliners.net)



A United Airlines Boeing 747-122, N4703U, parked at Newark with the tail of a United DC-10 in the background, April 13, 1979. (Photo by Howard Chaloner via Airliners.net)

traffic was so dramatic that the FAA lifted a quota on hourly landings and takeoffs - put in place to ease congestion in much of the Northeast in June 1969 - for Newark Airport, leaving them in place at Kennedy and LaGuardia. Still looking towards the future, though, Newark officials noted that a recession in the airline industry had hindered air traffic throughout the United States, with all three New York airports seeing a loss in traffic, although Newark was the hardest hit. With environmental impacts likely restricting expansions at Kennedy, Newark looked to the future to bring more traffic, and potentially future expansions when the New York airports next reached their maximum capacity.⁴⁰

As construction progressed at Newark Airport, one setback arose over the issue of minority labor. Leaders of the black community made numerous claims that Essex County construction unions systematically discriminated against blacks, keeping them from joining the unions and thus working on the massive Newark Airport construction. By the end 1971, the problem had become serious enough that the Port Authority set specific goals for the number of minority construction workers to be working on new contracts.⁴¹ As 1972 began, construction unions received additional pressure from Washington to hire minorities. In addition, six major airlines - frustrated with the 14-month quarrel between black leaders and the unions that effectively brought a stalemate to construction on the first two terminals since the spring 1971 - announced their endorsement of a plan created by Newark's black leaders to require substantial numbers of Puerto Rican and black workers to be hired to finish construction on the two partially-built terminals.⁴²

In the meantime, as the new terminal buildings were under construction, Newark took its first step, "a relatively modest step"⁴³ noted airport manager Joseph L. Vanacore, in its goal to become an international hub by 1976, by opening a customs area within the terminal. With plans to convert the terminal into a full international arrivals terminal pending the completion of the new terminals, when domestic airlines would move to the new buildings, praise was strong for Newark, which celebrated that New Jersey residents would no longer have to travel to New York (Kennedy Airport) to fly internationally. The culmination of this plan was to occur in 1976, when the third new terminal, earmarked for international arrivals, was to be

completed, bringing Newark Airport's international abilities to the same sophistication as Kennedy's.

As the final touches to the first two terminals, A and B, were being completed, Newark's future looked extremely promising. The only major New York airport with room to expand, Newark handled only 6.7 million passengers in 1972, compared to Kennedy's 20.7 million and LaGuardia's 14.2 million.⁴⁴ Rechristened Newark International Airport, Terminal A opened on August 8, 1973, eight years after construction began, serviced by four airlines; Terminal B followed soon after, opening for traffic in mid-September. With the new terminals, the old terminal was officially renamed the North Terminal, "relegated to handling infrequent international and charter flights."⁴⁵

The early 1970s saw no end to the slowing of air traffic from the high levels of the late 1960s. In part because of the Arab oil embargo, costs for air travel continued to rise, with airlines taking action in order to protect themselves from debt. American Airlines, for example, cut 21.6 percent of its flights between October 1973 and January 1974. Salaries and employee numbers were also cut. While American was one of the more strongly hit airlines, the cuts they made were not too unusual throughout the industry.⁴⁶ Because of the industry-wide crisis, Terminals A and B were not even filled to capacity, when less than a decade earlier forecasters said the completion of all three terminals would not be enough to meet all air traffic demand for the area. By this time, Newark had also not been given the international flights expected, with scheduled service only to the Bahamas, Bermuda and Toronto. While Newark was designed to process 18 million passengers yearly, its 1973 volume was just 6.8 million. With this news, Newark halted for three years the construction of Terminal C in the middle 1974, realizing the terminal would not be needed until the airline industry became revived.⁴⁷

In 1977, light began to shine down on Newark's recent grim period. The year was the first since 1969 where more than 7 million passengers passed through the airport's gates.⁴⁸ In addition, plans were finally set to bring a trans-Atlantic flight to Newark, with TWA flying a Boeing 707 to London on April 30, 1978, as 300 spectators watched the departure from Terminal A while sipping champagne with TWA officials. *American Aviation Historical Society Journal, Summer 2007*



Eastern Airlines Boeing 727-25, N8117N, s/n 8268, at Newark on October 3, 1964. (Photo from the Robert Hufford collection of the AAHS archives)

TWA also announced plans to expand service to Frankfurt on June 8.⁴⁹ Additionally, United Airlines announced in April 1978 their intention to add Boeing 747 and Douglas DC-10 wide-body service to Newark in early June, along with an overall increase in flights, upping their passenger capacity by 33.6 percent. In total, United would bring 29 daily flights to the airport, more than at either Kennedy or LaGuardia.⁵⁰

The year 1978 also brought another blessing to Newark Airport, the Airline Deregulation Act 1978. Since 1938, it had been the job of Civil Aeronautics Board (CAB) to oversee airline fares, routes, and schedules as if the industry were a public utility. In doing so, fares for short-haul routes were held back at the expense of high-priced long-haul routes, regardless of the wishes of the airlines. The CAB was well known for its long chain of bureaucracy, which often resulted in airlines waiting for years to receive a decision. For example, Continental Airlines waited for eight years until a Federal court ordered the CAB to approve a new Denver to San Diego route. By the mid-1970s, as the airlines pulled out of their slump, Congress worried about the possibility that another airline crisis could force major carriers into bankruptcy, and hearings on deregulation began. On October 24, 1978, President Carter signed the Airline Deregulation Act, which, among many provisions, took away the price controls of the CAB, allowing the airline industry to be exposed to market forces.⁵¹ Without regulations on airfares, low-cost airlines were able to form. Among the many was PEOPLEExpress. The airline that started service on April 30, 1981, with a handful of ex-Lufthansa 737-100s, transformed Newark from a sleepy backwater into a busy aviation hub. Air Florida, Capitol Air and New York Air also took advantage of deregulation and started serving Newark. These new, inexpensive flights caused airline passengers to rediscover the airport west of the Hudson and also promoted the major carriers to add service. Traffic growth was dramatic: in 1984, Newark's 345,200 aircraft movements exceeded those at both La Guardia and JFK - 343,100 and 306,700, respectively. Two years later, Newark regained its title as the region's busiest airport when it handled 29,433,000 [passengers], versus 27,224,000 at JFK.⁵²

Based in the run-down North Terminal when its operations commenced, PEOPLEExpress, in January 1985, reached an

agreement with the Port Authority to finish the last part of Terminal C, which, since June 1984, had been used as a temporary international arrivals terminal. Instead of building Terminal C as originally planned - consisting of three satellites, like Terminals A and B - a new design featuring two linear concourses with a 41-gate capacity was chosen. While Terminal C was finally completed more than two decades after ground was broken, PEOPLEExpress would not survive to see its new home, being bought out by Continental Airlines in 1987. Continental opened its portion of Terminal C, used for domestic flights, in May 1988, and the North Terminal was forever closed to passenger traffic, destined for demolition a decade later. As the 1980s came to a close, Newark Airport's passenger traffic fell from its record numbers in the middle of the decade, but cargo traffic skyrocketed, increasing 312 percent over the decade, with Federal Express and United Parcel Service both building their own facilities at the airport. Before the end of the decade, international arrivals also moved to Terminal B, with numerous European carriers joining U.S. airlines in flying daily international flights into the airport. The huge success of the 1980s would pave the way for Newark Airport to expand further in upcoming years, transforming the airport into a 21st century international airport.⁵³

Newark Airport Enters the 21st Century

Since 1990, Newark Airport has been making numerous expansions and renovations to allow for more traffic and ease of use for passengers. The expansions included more gates, more room for larger aircraft, longer runways, and more comfortable terminals. While many renovations to the airport have affected the many diverse airlines that serve the airport, it is Continental Airlines, the largest carrier at Newark Airport, which spurred the most construction, centered around its Terminal C.⁵⁴

In addition to numerous long-distance domestic and international flights, Continental's route system includes many short-haul regional flights operated by its subsidiary, Continental Express. In 1994, Continental opened its new terminal, C-4, for Continental Express. The 28,000 square foot building had access to an adjacent aircraft ramp, with room for 28 aircraft. This terminal would serve Continental Express well as it retired its propeller-driven fleet, favoring regional jets. However, it would not last long, giving way to a greatly expanded Terminal C within a decade.

In early 1996, Newark Airport completed construction on a new part of Terminal B, an international arrivals area designed to help Newark continue its quest to attain more international flights. The \$120 million project resulted in a 250,000 square foot building that, while not out of the ordinary on the outside, was described as "unquestionably one of the cleanest airport buildings in the world. Not just hygienically, but esthetically, too."⁵⁵ With the size of the building came two benefits. First, Newark Airport's capacity for wide body international arrivals nearly doubled, from eight to fifteen. Second, the extra space and expansive immigration hall allowed for customs processing at a rate of 3,000 people per hour.⁵⁶

As Newark Airport continued to grow, transportation became an issue, as well. When the current terminals were designed in the 1960s, provisions were made for a transportation system among the terminals. In the early 1990s, this transportation system, a monorail, would be planned, allowing not only for people to more easily move about the airport, but also for expansions to rail lines, an idea that had not come to fruition since first proposed around the time of the airport's beginning. After more than a year of delays during construction, the first stage of the monorail, connecting the three terminals and the parking lots at each far end, opened on May 31, 1996, at a cost of \$350 million. Two enormous advantages provided by the monorail instantly were known travel times between terminals, when traffic jams on the roads connecting the terminals were so common, as well as an ease in making connections, especially for international passengers who often arrived at Terminal B, with their connections leaving from Terminals A or C.⁵⁷

In 1998, as Continental continued to dominate the scene at Newark Airport with an ever-expanding domestic and international schedule, the first discussions of another major expansion took place between Continental and the Port Authority. The two groups set the foundation for a possible expansion of the airport, whose traffic had grown by 30 percent in the past decade, with a potential cost of upwards of \$1 billion. Of that, Continental was prepared to commit \$700 million to the Global Gateway Project, as they would be, by far, the largest beneficiary of any expansion.⁵⁸



The Newark Airport Monorail. (Photo from Railway Technology)



A satellite view of Newark Airport showing terminal, runway and proximity to harbor facilities. Continental's Terminal C on the northern portion of the terminal facilities has 60 gates - more gates than Terminals A and B combined. (Image from Mapquest.com)

On June 28, 1999, a unanimous vote by the board of the Port Authority approved the Newark expansion, expected to cost \$1.37 billion, of which Continental was slated to pay at least \$590 million. In addition to Continental adding gates - Continental planned to add 12 gates to its current 44 - the plan called for Newark to receive new roads and parking structures. At a time when Newark Airport was the number one most delayed airport in the country, the project approval was a blessing to Continental, which was responsible for one quarter of the traffic among the three metropolitan airports. ⁵⁹

As the airport was in the midst of its expansion, the terrorist attacks of September 11, 2001, hit the airport, with one of the four hijacked aircraft leaving the airport. While the attacks had a profound affect on security measures at the airport, they did not serve to alter the construction. In fact, less than two months following the attacks, the Newark Airport Station was opened, completing the decade-long \$769 million monorail project. Nearly 75 years after the airport's opening, it finally had a connection to local rail lines—NJ Transit and the PATH—which provide service into New York, allowing for Amtrak connections, as well as stops throughout New Jersey.⁶⁰ In tribute to those who lost their lives in the September 11 attacks, Newark International Airport was officially renamed Newark Liberty International Airport in 2002, although locals rarely use the new name.⁶¹

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On December 6, 2001, Continental unveiled its C-3 concourse, which brought the total number of gates at Terminal C to 60, 10 more than the combined 27 and 23 at Terminals A and B, respectively. The new Terminal C, featuring two Continental Presidents' Clubs, food courts, restaurants, and numerous retail outlets, from office supplies to electronics and cosmetics, was extremely well received, and was judged by *Airport Retail News* to have some of the finest retail concessions at any airport in the U.S. In addition to amenities for passengers, the new terminal also offered a ramp control tower for Continental to effectively control its own ground operations and a state-of-the-art baggage system. For Continental, the expansion project culminated with the opening of its \$80 million international arrivals facility on March 28, 2002. Designed specifically for Continental, the new facility can process 1,500 passengers per hour and aids in connections between Continental flights.^{62 63}

As Continental expanded, the rest of the airport was not left behind. Both Terminals A and B have been upgraded, with newer systems to handle baggage and ease airport operations, as well as amenities to cater to passengers, such as shops and airline club lounges. Also, in May 2003, the FAA commissioned the new control tower, the fourth in the airport's history, which was built over the course of four years at a cost of \$22.4 million. The 325-foot tall building replaced the control tower built in 1960, affectionately dubbed "the toothbrush" due to its unusual shape.⁶⁴

Conclusion

Now a few years into the 21st century, Newark Airport has proven itself a major international terminal, ranked the 22nd busiest airport in the world (13th in the U.S.) in 2004 with just shy of 32 million passengers, and the 21st busiest airport for cargo traffic, with over 920,000 tons, fueled in large part because of Federal Express' Newark Airport automated sort facility.⁶⁵ With dozens of airlines operating from the airport, one can travel from Newark across North America, as well as to South America, Europe, Africa, and Asia on regularly scheduled flights, including many of the world's longest flights, with nonstop destinations including Singapore (the current longest flight), Hong Kong, Beijing, and New Delhi.⁶⁶

In 1927, the City of Newark began planning for an airport to be built on a marsh. Attaining some mail contracts and commercial flights, the airport expanded into the golden age of flight, when air travel was a luxury for the rich. As time progressed, new aircraft were built, and Newark Airport entered the jet age in the shadow of its neighboring New York fields. Although its future looked bleak numerous times, Newark Airport kept expanding, becoming the airport it is today, a gateway to the world.

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Newark Airport Statistics while under Port Authority Control

Year	Plane Movements	Passengers	Air Cargo (in short tons)	Air Mail (in short tons)
1949*	93,463	834,916	40,574	2,891
1960	163,378	2,935,613	58,313	10,557
1970	204,595	6,460,489	157,301	37,401
1980	196,781	9,223,260	107,167	38,227
1990	379,653	22,255,002	495,407	61,351
1995	420,546	26,626,231	958,419	84,818
1997	462,889	30,945,857	1,069,545	86,216
1998	455,833	32,575,874	1,074,642	120,134
1999	457,974	33,622,686	1,084,660	123,079
2000	450,289	34,188,701	1,070,380	123,015
2001	439,275	31,100,491	913,126	73,029
2002	405,816	29,220,775	906,164	38,868
2003	405,734	29,428,899	890,712	73,611
2004	437,828	31,908,556	995,313	89,913

*First full calendar year of Port Authority operations

From: "Newark International Airport." Port Authority of NY & NJ. May 15, 2006
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Airlines Currently Serving Newark Airport

Air Canada	Continental Express (Express Jet)	Midwest
Air France		Northwest
Air India	Czech Airlines	Qantas (Australia)
Air Jamaica	Delta	SAS (Scandinavia)
Air Plus Comet (Seasonal)	Delta Express	Singapore Airlines
Air Tran Airways	El Al (Israel)	Swiss
Alaska Airlines	EVA Airways (Taiwan)	TAP Portugal
Alitalia (Italy)	Flybe British European	United Airlines
America West	Jet Blue	United Express
American Airlines	KLM Royal Dutch Airlines	USA3000
American Eagle	Lot Polish	US Airways
British Airways	Lufthansa (Germany)	US Airways Express
Chautauqua	Malaysia	Virgin Atlantic (UK) ⁵⁹
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