

Fraport Brasil delivers expanded runway at Porto Alegre Airport

The 3,200-meter-long runway is the last construction work required under the concession agreement

April 2022 marks a great achievement for the people of Rio Grande do Sul. The longawaited runway expansion at the Porto Alegre Airport was finished and approved by the competent authorities. The runway was cleared for use on May 19th, 2022, after a total investment of BRL 135 million and the fulfillment of the publicity requirements of the Aeronautical Cartography Institute (ICA in the Portuguese acronym)—the authority in charge of issuing new procedure charters for the use of the newly-expanded runway, which is now 920 meters longer.

The runway expansion should have been delivered by December 2021 as part of Fraport Brasil's improvement obligations under the concession agreement signed with ANAC, the Brazilian Civil Aviation Agency. However, due to the Covid-19 pandemic and the consequent delay in clearing part of the Vila Nazaré area, which was inside the airport site, the Agency granted another eight months for the completion of the works.

The runway expansion works began in March 2018 and comprised several adaptations and projects that go beyond the extension itself. In December 2018, the new taxiway P was delivered, which improved aircraft movement in aprons 1 and 2, especially for larger planes used in international flights.

In the first quarter of 2019, power substation 2, which powers the Passenger Terminal, was delivered; the RESA (end of runway safety area) at threshold 11 was renovated; several improvements were made to the pavements of taxiways and runway shoulders; and a perimeter wall and new operational fences were built to provide greater security to the aircraft movement areas.

In October 2021, works began in the Vila Nazaré area. A perimeter wall was built and vegetation was cleared. A two-stage cleaning operation was required to fully clean the site. A total of 28,388 tons of debris were removed at a cost of more than BRL 4.5 million. The RESA (runway end safety area) was also built at threshold 29 and the air navigation aids were installed.



Airport drainage

Due to the characteristics of the soil and topography of the airport site, Fraport Brasil built a new drainage system that has five rainwater collection reservoirs.

Rainwater is channeled into and accumulated in these reservoirs and, through gravity and pumps, it flows either to the Gravataí River or to Pump Room 6 ran by the government of Porto Alegre.

All five reservoirs collect rainwater from the airport, but reservoirs 1, 2 and 5 also contain rainwater from the city of Porto Alegre. The total storage volume of the five reservoirs can reach 1,015,371.20 m³ and corresponds to 406 Olympic swimming pools, in an area of 422,165.70 m², the equivalent to 50 soccer fields.

Only 14% of this volume comes from the airport and the remaining 86% comes from the city of Porto Alegre. To support the system's operation, four Pump Rooms were built. They are powered by electric energy and have individual generator groups for backup.

At a total cost of BRL 170 million, this is considered one of the largest drainage programs in the city.

Runway capacity after the expansion

The old 2,280-meter-long runway allowed operations with a maximum range of approximately 9,000 km, but with limited cargo capacity (75%) if the aircraft was at maximum passenger capacity. The expansion to 3,200 m will allow full cargo operations with a range of around 12,000 km.

After the extension, the airport will be able to receive aircraft of the following types: B747.400 - 13,450 km of range and approximate weight of 397 tons (combining passengers, cargo and fuselage); B777.300ER - 11,120 km of range and approximate weight of 300 tons (combining passengers, cargo and fuselage), and A330-900 - 13,334 km of range and approximate weight of 251 tons (combining passengers, cargo and fuselage).



The extension will benefit the Rio Grande do Sul industry, which today relies on road transportation to take most of its production to São Paulo and from there to other destinations abroad by air.

"The airside infrastructure works on the runway and taxiways are in full compliance with the obligations established in the Concession Agreement, the regulations of the International Civil Aviation Organization, the Brazilian Regulations for Civil Aviation, and the regulations of the Air Navigation Management Center. The runway capacity remains the same and the procedures for the safe and efficient operation of the infrastructure also follow all relevant regulations. We will not have delays or other negative impacts on the operation due to the length of the runway," explained Andreea Pal, president of Fraport Brasil.

"The airside infrastructure works were incredibly challenging in terms of volume and timing, not only because of technical issues, but also because of the additional difficulties imposed by the pandemic. Despite all challenges, the HTBM Consortium (HTB, Tedesco and Barbosa Mello) met the deadlines agreed upon with the client, achieving all the goals established in the contract with maximum safety, quality and sustainability. In this Project, 7,444 direct jobs were created, over 85% of which were occupied by people from Rio Grande do Sul. We, at HTB, are not only pleased to have been chosen for the execution of this very important project, but also because being chosen by Fraport in its first major operation in Brazil shows their trust in our expertise," celebrated Detlef Dralle, CEO of HTB, the leading company of the HTBM Consortium.

ILS (Instrument Landing System)

Fraport Brasil received on April 20, 2022, the formal approval for navegation aids, including the Instrument Landing System (ILS), by CINDACTA II (Second Integrated Center for Air Defense and Air Traffic Control). The ILS has been in operation since April 21, 2022.

CAT II operation requires horizontal visibility greater than 300 meters and vertical visibility greater than 30.5 meters. Additionally, pilots must have a license to fly ILS CAT II approaches and the aircraft must have the appropriate equipment. Therefore, CAT II operations require certain conditions.



However, it is important to note that the airport never closes. Air Traffic Control, through the data collected by the equipment installed next to the runway, alerts about the visibility conditions. It is always the pilot's decision to land or not according to their training and the aircraft's characteristics.

Socio-environmental responsibility

On December 17, 2021, Fraport Brasil delivered the building of the Early Childhood Education School "Escola Marista de Educação Infantil Cezar Busatto". The place is part of the improvement and infrastructure works at the Irmãos Maristas properties and aims to contribute to a high-quality environment for the children of the community.

Since 2018, the Company has been interacting with the government of Porto Alegre to learn about the project and understand its needs and complexities. The construction of the school had already started, but it had not been finished yet. Fraport Brasil was in charge of renovating the existing structure and expanding the building, as well as organizing the rooms and purchasing furniture. The Company also assessed the descriptive memorial for compliance with current technical and safety standards.

For the construction of the daycare center, the Standard Project Type C was used, as created by the Proinfância program of the Fund for the Development of Education (FNDE). In the renovation of the existing building, new roof, flooring, tiling, doors and windows were installed. A complete infrastructure project was prepared for the expansion of the building. Additionally, a Databook (owner's manual) was prepared to be delivered to the site managers.

"The first step was evaluating the existing structure and studying the standard project. When building facilities of this type to be delivered to third parties, one must take into account the maintenance cost and requirements, in addition choosing the right materials and techniques. The goal is to deliver a functional, high-quality school that is inexpensive from a maintenance standpoint," explained Airina Ribas, infrastructure manager at Fraport Brasil.

The institution has a total of 700 m² of constructed area (530 m² in the exisiting building + 170 m² in the expanded area) and the capacity to serve 120 children in two shifts, or 60 full-time students, from 0 to 5 years and 11 months of age.



"This project represents a great achievement for the families of Irmãos Maristas, both in social and economic terms. With the new daycare center, mothers have a safe place to leave their children and many will be able to return to the job market, fostering the region's economy and supporting their family's financial independence," said Andreea Pal.