

Tokyo 2020's Legacy Venues Steadily Shaping Up



The abundant use of wood is impressive in this completed perspective drawing of the New National Stadium.

The rendering is intended to show conceptual image at completion and may subject to change. Copyright © Taisei Corporation, Azusa Sekkei Co., Ltd. and Kengo Kuma and Associates Joint Venture

The vision laid out by renowned Japanese architect Kengo Kuma's architectural firm, Kengo Kuma & Associates, with the collaborative design of Taisei Corporation and Azusa Sekkei, is taking shape for what will be the centerpiece of the world's most watched sporting event: the New National Stadium. The Olympic and Paralympic Games Tokyo 2020 are an opportunity for Japan to become a more tolerant and diverse society, and at the same time showcase their flair for technological innovations, especially with regard to safety. Oil dampers on the lower floors, from the second basement floor to the first floor, of the New National Stadium, for example, have been designed to efficiently absorb the energy produced by

earthquakes, whilst the materials used for the trusses of the large roof are a combination of steel frames and wood that can resist distortion due to earthquakes, strong winds, and any other inclement weather.

With such a high-capacity stadium, however, it is not just the structural safety of the building that has to be considered. The ability to calmly and safely evacuate spectators is also of the utmost importance. To that end, the stands have been designed in a way that ensures anyone from any seat across all three levels can be safely evacuated within 15 minutes. Special evacuation elevators to help with people in wheelchairs have also been strategically placed throughout the stadium, as have temporary evacuation areas.

New structures for the Olympic and Paralympic Games Tokyo 2020 will continue to be valuable assets that serve the citizens and the visitors to Tokyo well into the future.

Fusing safety with traditional Japanese aesthetics, Kuma's design philosophy was geared towards the creation of an environmentally-conscious stadium. Wood has been an integral feature in Kuma's work, and one that he has managed to harness in the design of the New National Stadium. Wood for elements in the stadium's structure has been sourced from all 47 of Japan's prefectures. "It will be a stadium where the warmth of trees can be felt from all auditoriums," Kuma says. "We set up the eaves canopy on the outer periphery to block solar radiation and rain, making it suitable for the climate of Japan, to connect the building and the environment together and make it a Japanese-like stadium that harmonizes with nature." Being surrounded by the beautiful, lush green landscape of Meiji Jingu Gaien, the structure was given an unobtrusive flat roof and designed to be no taller than 50 meters. In addition, the roof's canopy will enable it to efficiently capture wind, allowing air to flow naturally into the stadium and discharge air from both the field and the stands.

All across Tokyo, other Olympic and Paralympic projects are progressing smoothly. Based on a guiding principle, the "Tokyo 2020 Accessibility Guidelines," a higher level of barrier-free facilities will be required for the Games. By the year 2020, multiple exemplary venues will be opened for use by various people, including Paralympic athletes and spectators with special needs. Among them, in Tokyo's lush green Tama area, the Musashino Forest Sport Plaza was the first to open, and has been open to the public since 2017. The main arena has a large space for wheelchair users. A sufficient height is secured between the rows of seats so that the sports action can be clearly seen even if the crowd in front stands up.

Also high on the agenda is the creation of a lasting legacy of the Tokyo 2020 Games. Ariake Arena, for example, aims to become the new sporting and cultural center of

Tokyo and is due for completion in late 2019. It will continue to provide people with high-quality sports watching opportunities after the Games, but also has plans to expand into hosting other cultural events, such as concerts.

As these projects continue to move further away from conceptual drawings and into reality, Tokyo's citizens are getting a better idea of the positivity that hosting the Olympic and Paralympic Games Tokyo 2020 will bring. Not only will they help elevate social awareness of people with impairments, but they will also provide a wealth of opportunities for everyone in Japanese society to enjoy for years to come.



The curved design of the Musashino Forest Sport Plaza.



The open atmosphere of the waterside location and the impressive purity of Ariake Arena is shown in this completed projection drawing. (Simulated image as of October, 2015)