## Management Resources (Inputs)

The YBHD Group's strengths include a workforce consisting of a large number of engineers, technical capabilities accumulated through abundant achievements and experience, and a corporate culture of embracing challenges as a leading company. In order to bolster these strengths further, we are working to enhance our management resources, such as human capital and intellectual capital.

Human capital\*

Employees group-wide 2,067 Qualified personnel 1,264 \*Including equity method affiliates

For the YBHD Group to achieve sustainable growth, it is essential to improve the technical capabilities of employees – our human talent. Orders for public works projects, in particular, require experienced, qualified personnel, so we need a large number of highly specialized engineers. In order to support and promote autonomous career development, the Group has a selfreporting system in which employees meet with the person in charge of their department to talk about transfer or skill development desires. We use this system to conduct job rotations and appropriate personnel assignments according to aptitude. We also actively provide support for employees who need to attend training sessions and seminars, including those needed



The YBHD Group has built many pioneering buildings of various types. The Saikai Bridge, which we worked on in 1955, was Japan's first large and long fixed-arch bridge. The Kasumigaseki Mitsui Building (now the Kasumigaseki Building), which we built in 1968, was Japan's first skyscraper. In addition, as a leading bridge company, we have taken on the challenge of building other Japanfirst and even world-first bridges, such as Kurushima Kaikyo Bridge, which is the world's first triple suspension bridge, and Akashi Kaikyo Bridge, which boasted the world's longest span at the time it was built.

To further enhance the technical capabilities accumulated through such abundant achievements and experience, our Technical Research Laboratory and operating companies work together, and we focus on R&D through joint research with universities and research institutes. to obtain related qualifications. The expertise of each and every employee, deepened in this way, is the source of the Group's high technical capabilities.

Qualified personnel	As of March 31, 2024
	Persons
Professional engineers	173
First-class architects	49
First-class civil engineering management engineers	744
First-class architectural construction management engineers	134
First-class construction accountants	21
Second-class construction accountants	143
Total	1,264

 $\rightarrow$  See P.63 and 68 for our human resource strategies.

Joint research achievements		As of March 31, 2024
Period	Participants	Research topic
lov. 2012 -Mar. 2024	Nippon Steel, Yokogawa Bridge Holdings, Yokogawa NS Engineering	Research on expansion devices used for bridges and other structures
Mar. 2013 -Mar. 2015	Geostr, Yokogawa NS Engineering	Development of steel-concrete composite embedded formwork for constructing large cross-section culvert top slabs
Dec. 2013 -Mar. 2016	Yokogawa Bridge, Metropolitan Expressway, Kawada Industries, Kawada Construction	Research on rapid construction updating techniques for existing RC slabs
Apr. 2014 -May 2015	Hazama Ando, Yokogawa NS Engineering	Development of segments for deep underground road confluences
Dec. 2014 -Mar. 2017	Hanshin Expressway, Hanshin Expressway Technology Center, YCE, Yokogawa Bridge	Joint research on structural improvement of closed cross-section ribbed steel plate reinforcement
Sept. 2015 -Dec. 2016	The University of Tokyo, Yokohama National University, Maebashi Institute of Technology, Yokogawa Bridge Holdings	Performance evaluation of blast furnace slag concrete for increased durability of steel bridge RC slabs
Dec. 2015 -Mar. 2019	Nippon Steel, Geostr, Yokogawa NS Engineering	Development of steel-concrete composite structure seawalls
Apr. 2016 -Mar. 2019	Nippon Steel Engineering, Yokogawa NS Engineering	Structure proposal for small and medium-span bridges and research on replacement and renewal techniques
Apr. 2016 -Mar. 2021	Yokogawa Bridge, Oxjack	Research on power dampers with bridge collapse prevention function
Apr. 2017 -Mar. 2021	Yokogawa Bridge, Oxjack	Development of earthquake-resistant equipment (grippers) in the direction of the bridge axis
luly 2017 -July 2019	Yokogawa Bridge, Metropolitan Expressway	Research on the structure and construction method of slab connectors in existing RC slab renewal
eb. 2018 -Mar. 2022	Nippon Steel, Yokogawa NS Engineering	Research on steel plate structure for rapid renewal of existing RC slab bridges
Apr. 2019 -Mar.2021	Yokogawa Bridge, Nikkei Engineering, Yokogawa Bridge Holdings	Research on floor panel span extension in "cusa" aluminum alloy permanent scaffolding
Apr. 2019 -Mar. 2022	Yokogawa Bridge, Nikkei Engineering, Yokogawa Bridge Holdings	Research on a reverse-side sound absorption feature for "cusa" aluminum alloy permanent scaffolding
luly 2019 -Mar. 2023	Tokyo Metro, Yokogawa NS Engineering	Product development of new tubular steel columns with stacked steel bearing plates
lov. 2019 -Mar. 2023	Yokogawa Bridge, Ecomott	Development of Al-based management system for tightening high-strength bolts
Apr. 2020 -Mar. 2025	Kobe University, Toagosei, Yokogawa Bridge Holdings	Research on desalination methods for bare steel surfaces
Sept. 2020 Mar. 2021	Yokogawa Bridge, Osaka Prefecture University	Development of damping assessment method for highly damped structures
Apr. 2021 -Mar. 2023	Yokogawa Bridge, Osaka Metropolitan University	Development of highly damped structures
Oct. 2022 -Mar. 2024	Yokogawa Bridge, Sooki	Development of the Superstructure One-Man Survey System "Auto-Repo"
Apr. 2024 -Mar. 2025	Nagasaki University, Yokogawa Bridge, Yokogawa Bridge Holdings	Research on techniques to improve the durability of steel bridges overseas





The YBHD Group has its own production bases, such as large plants that manufacture bridge parts, where employees and skilled production department craftsmen fabricate and assemble parts.

The Osaka Plant, which is our main plant, is located in the Sakai Senboku Coastal Industrial Zone. As a plant with state-of-the-art equipment, it is responsible for the



In the bridge business, we have received orders for new construction, maintenance work, and overseas construction from various clients, such as the Ministry of Land, Infrastructure, Transport and Tourism (MLIT), local governments, highway companies, and private companies, based on the relationships of trust we have cultivated up to the present.



In order to support business continuity as a builder of bridges that require 100 years of durability, we strive to





production of various large steel structures.

In the engineering business, we operate the industry's only plants dedicated to engineered structures (Chiba Plant and Mobara Plant) at full capacity to further increase our market share in the field of engineered structures.  $\rightarrow$  See P.117 for information on our bases.

In the engineered structure system business, we are focusing on customer development and market expansion in collaboration with more than 1,300 affiliated builders nationwide.



ensure financial soundness with a basic capital policy of maintaining a balance between financial trustworthiness and capital efficiency and a basic shareholder return policy of paying graduated dividends and flexibly acquiring treasury stock. We secure operating capital and funds for capital investment through free cash flow and indirect procurement, and financial stability and liquidity are supplemented by commitment line agreements.

 $\rightarrow$  See P.111–116 for financial information.

The YBHD Group strives to use resources efficiently by quantitatively ascertaining and scrutinizing resource and energy usage at its business sites in Japan.

In addition, we will drive the reduction of environmental impact by actively working on the use of renewable energy and the development of environmentally friendly products and construction methods.

 $\rightarrow$  See P.75–82 for our environmental initiatives.