

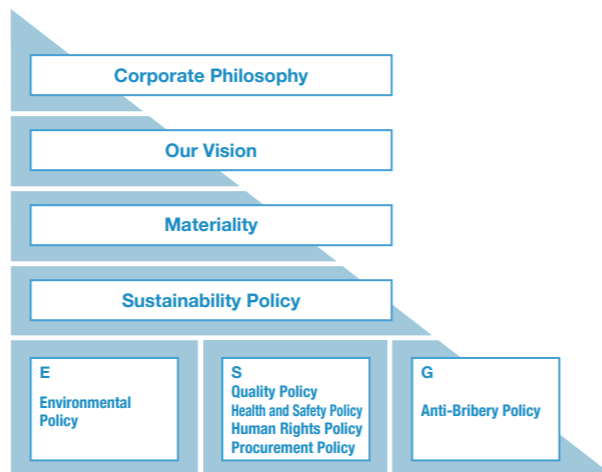
Sustainability of SHO-BOND

Basic Concept for Sustainability

With its Corporate Philosophy at the core of management, the Group has designated material issues (Materialities) to get close to its vision. Four designated Materialities involve internal activities and how business activities affect society. We believe that all of these activities are sustainability management that contributes to accomplishing the SDGs and achieving our Corporate Philosophy. We have established a Sustainability Policy and ESG-related policies to provide guidelines for constant activities in accordance with materiality priorities. In August 2022, we set KPIs for each of the priorities to measure their progress and disclosed targets and results.

We will enhance our corporate value over the medium to long term and contribute to creating a sustainable society by continuing to upgrade sustainability initiatives with the input of our internal and external stakeholders. Specifically, we will improve our promotion framework, consider measures, and regularly review them to upgrade the initiatives.

Sustainability Philosophy










Strengthening Our Sustainability Promotion Framework

The Group has established a Sustainability Committee, chaired by President and Representative Director and composed of all inside and outside directors. The Committee meets once a year as a general rule to discuss and decide on sustainability issues including social and environmental issues. The Committee also submits and reports the results of discussion on important matters to the Executive Committee and the Board of Directors. The Committee mainly discusses general important matters related to sustainability such as the development of policies and measures related to sustainability, the identification, assessment, and management of climate-related risks and opportunities, and the management of KPIs for non-financial information.

We have also established an ESG Promotion Office as an office to integrate activities related to sustainability. The ESG Promotion Office holds meetings as necessary with those charged with ESG in respective departments and at Group companies to work together at the practical level across the Group. Under such a structure, we are committed to staying and becoming more sustainable by organically cooperating among the management team, the ESG Promotion Office, respective departments, and Group companies.

KPIs Related to Sustainability

Materiality	KPIs	FY2022	
Contribution to the development of sustainable cities  	<ul style="list-style-type: none"> Number of violations of environmental laws and regulations 	0	0
	<ul style="list-style-type: none"> Rate of reduction in CO₂ emissions intensity*1 (Scope 1 and 2)*2 (vs. FY2022 [6.5 t-CO₂ / 100 million yen]) 	-25% [4.9 t-CO ₂ / 100 million yen]	±0% [6.5 t-CO ₂ / 100 million yen]
Comprehensive maintenance system backed by the organizational capabilities  	<ul style="list-style-type: none"> Average scores for contractor performance evaluation in construction industry 	MLIT: 78 or higher NEXCO: 80 or higher	MLIT: 80.0 NEXCO: 86.0
	<ul style="list-style-type: none"> Percentage of construction sites where "8 days off in 4 weeks" is achieved*3 (according to the Japan Federation of Construction Contractors) 	100%	85.9%
	<ul style="list-style-type: none"> Number of fatal accidents 	0	0
Productivity improvement through technology development  	<ul style="list-style-type: none"> Lost Time Injury (LTI) frequency rate 	0.7 or lower	0.67
	<ul style="list-style-type: none"> Achievement rate of annual overtime limit of 720 hours*4 	100%	100%
	<ul style="list-style-type: none"> Percentage of female employees in regular recruiting 	15% or more	9.5%
	<ul style="list-style-type: none"> Percentage of employees with disabilities 	2.4% or more	3.3%
Sound governance and measures for more improvements 	<ul style="list-style-type: none"> Rate of response to safety confirmation 	100%	100%
	<ul style="list-style-type: none"> Compliance training participation rate 	100%	98.8%
	<ul style="list-style-type: none"> Number of serious violations of laws and regulations 	0	0
	<ul style="list-style-type: none"> Information security training participation rate 	100%	90.3%

*1 CO₂ emissions per consolidated net sales (100 million yen)
When to achieve: *2 FY2031; *3 FY2024; *4 FY2024

Efforts for Environment

Climate-related Financial Disclosure Based on the TCFD Recommendations

The SHO-BOND Group (the "Group") expressed its support for the TCFD recommendations and joined the TCFD Consortium in July 2022. Based on its corporate philosophy of "Inheriting and passing on social infrastructure to the next generation in good condition," the Group is committed to "contribution to the development of sustainable cities" as one of its Materialities and is aware that combatting climate change is an important management challenge.



Based on the recognition that a longer service life of infrastructure contributes to reducing greenhouse gas emissions, we will make efforts so that we can contribute to realizing a sustainable society. These efforts include information disclosure and other initiatives related to climate change, in addition to core business activities as an infrastructure maintenance specialist.

Strategy

The Group conducted a scenario analysis to identify and assess the impact on its overall business management of the risks and opportunities associated with the "transition" to a low-carbon economy and those associated with the "physical" changes brought about by climate change.

As assumptions for the scenario analysis, we selected the 2°C or lower and 4°C scenarios by referring to several existing scenarios published by the International Energy Agency (IEA), the Intergovernmental Panel on Climate Change (IPCC), and other organizations. Businesses subject to the analysis are the domestic construction business and the manufacturing and sales business of repair and reinforcement materials; the time horizon is assumed to be up to the year 2030. For the climate-related risks and opportunities identified, we have sorted out necessary countermeasures as shown in the table below.

By implementing the countermeasures identified in this report, we will contribute to developing sustainable cities and will achieve sustainable growth by enhancing the resilience of our business.

Risks / Opportunities covered			Countermeasures
Changes expected	Description		
Changes in reputation among shareholders and investors	Opportunity	<ul style="list-style-type: none"> Increased ESG investment in the SHO-BOND Group as an infrastructure maintenance specialist due to being highly regarded for its low CO₂ emissions 	<ul style="list-style-type: none"> Disclose information about CO₂ emissions (Scope 1, 2, and 3) and initiatives aimed at reducing CO₂ emissions intensity* (Scope 1 and 2) Promote green procurement, including switching to low-carbon materials Switch to renewable energy and promote energy conservation during construction Invest in solar power generation for own consumption, etc. Develop low-carbon and decarbonization technologies Develop new technologies that support the preventive maintenance of infrastructure Develop technologies for improving on-site working environments and implement heat stroke countermeasures Work together with the entire supply chain to strengthen BCP measures in preparation for disasters Manage sanitation related to water in a sustainable manner
Introduction of carbon pricing	Risks	<ul style="list-style-type: none"> Increased procurement costs for energy and materials Decreased transactions due to our inability to adequately respond to customers' requests for reducing CO₂ emissions Surges in the purchase prices of resin-based materials and steel materials as a result of decreased production of naphtha and iron ore Increased demand for watershed flood control and disaster restoration work, rather than seismic reinforcement work and service life extension work, in the face of growing severity of weather disasters 	
Introduction of more aggressive targets / policies for CO ₂ emissions reduction by countries around the world		<ul style="list-style-type: none"> Increased price competitiveness with the delivery of low-carbon construction services and products in the field of repair and reinforcement Due to CO₂ emissions regulations, the number of life-extending works of buildings and infrastructures increases while the amount of overall investments in construction decreases Increased demand for infrastructure maintenance to counter natural disasters 	
Changes in customer behaviors	Opportunities	<ul style="list-style-type: none"> Increased price competitiveness with the delivery of low-carbon construction services and products in the field of repair and reinforcement Due to CO₂ emissions regulations, the number of life-extending works of buildings and infrastructures increases while the amount of overall investments in construction decreases Increased demand for infrastructure maintenance to counter natural disasters 	
Rises in raw materials costs		<ul style="list-style-type: none"> Decreased productivity in line with increased heat stroke cases among on-site workers Increased costs for improving working environment and introducing equipment, etc. to prevent heat stroke Worsening worker shortages due to deteriorating outdoor working conditions 	
Acceleration of national resilience measures	Risks	<ul style="list-style-type: none"> Increased costs due to process delays at disaster-stricken sites Supply chain disruption Damage to or shutdown of operations at disaster-stricken own factories or contracted manufacturing plants 	

*CO₂ emissions per consolidated net sales (100 million yen)

Metrics and Targets

To realize a decarbonized society—the basic principle underlying the Act on Promotion of Global Warming Countermeasures, the Group has set targets of reducing its CO₂ emissions intensity (Scope 1 and 2) 25% from FY2022 levels by FY2031 and ultimately achieving carbon neutrality by FY2051.

CO₂ Emissions Reduction Targets

Metrics	Base year	Base year result
CO ₂ emissions intensity (Scope 1 and 2)	FY2022	6.5 t-CO ₂ / 100 million yen
Target year	Targets	
FY2031	-25%	
FY2051	Net zero	

CO₂ Emissions (Scope 1, 2, and 3)

Category	Unit	FY2022
Scope1	t-CO ₂	2,667
Scope2		2,571
Total of Scope1 and 2		5,238
CO ₂ emissions intensity	t-CO ₂ /100 million yen	6.5
Scope3	t-CO ₂	110,008
Total of Scope1, 2, and 3		115,246

Coverage: Domestic group companies

See our website below for more details.
<https://www.sho-bondhd.jp/english/csr/tcf/>

Managing Sanitation Related to Water in a Sustainable Manner

At construction sites of repair and reinforcement projects undertaken by the Group, we use a huge amount of water. We use water mainly for workers to break up existing concrete, spray water as a dust control measure, and wash their hands. However, we are often unable to draw water to construction sites and we need to take special control measures when discharging used water. Drawing and discharging water at construction sites are big issues. Based on this background, we place emphasis on managing sanitation related to water in a sustainable manner.

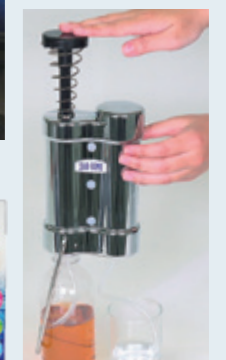
As one of initiatives to solve the issues, we started using a circulation-type hand wash station at our construction sites. This station is a system that filters the water used by workers to wash their hands. The station enables them to wash their hands with clean water at any time while saving them the time of drawing water. Maintaining sanitation at construction sites helps prevent the spread of infectious diseases and eliminate inconvenience for workers. In addition, we consider donating this circulation-type hand wash station to a nearby designated shelter or a developing country after completing construction work.

Further, we distributed high-performance and handy water purifiers to our employees to help protect them and their families when a disaster struck. This water purifier can help people ensure life-sustaining water at the time of a disaster because it can turn rainwater and muddy water into drinking water without electricity.

Through such initiatives, we will continue to help achieve the SDGs while increasing the health and safety of our employees.



Circulation-type hand wash station installed at a site



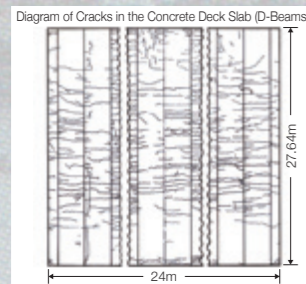
Handy water purifier

Feature Curbing CO₂ Emissions by Repair Work

We have positioned “contribution to the development of sustainable cities” as one of our Materialities, and recognizing that a longer service life of infrastructure contributes to curb CO₂ emissions, we have formulated an action policy for mitigating climate change through our business in a way that leverages our strengths as an infrastructure maintenance specialist. In this feature, we take a look at the restoration of the Showa Ohashi Bridge, which was a project of significance to the Group, to check what effect the restoration work had on CO₂ emissions. We have done this by estimating the CO₂ emissions volumes generated by new materials and waste in a scenario where the earthquake-damaged deck slabs were repaired and a scenario where they were disposed of and replaced.

Overview of the Repair and Restoration Work

Work Process 1 Injecting adhesives into the cracks



The impact from the collapse caused hairline cracks with a combined length of 2,427 meters along five of the bridge's deck slabs



- Injection devices were set up at approximately 12,000 places (bonded using SHO-BOND #101)
- The adhesive was injected at a low pressure so that it filled up the cracks (SHO-BOND Grout SS)

The state of the cracks viewed from directly below the deck slabs

Injecting grout

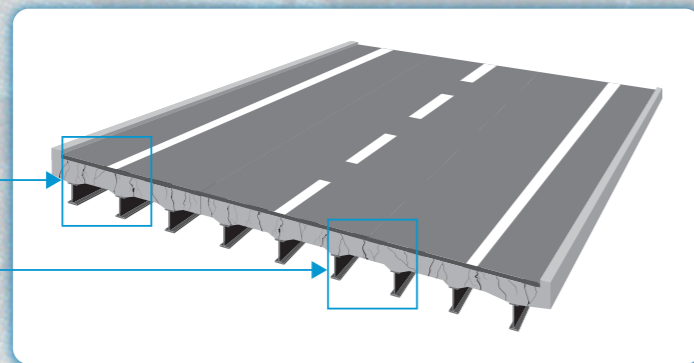
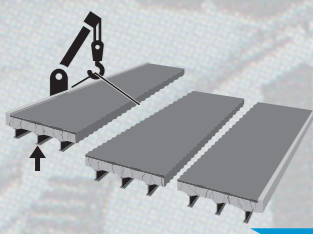


Illustration of a collapsed bridge deck slab

Work Process 2 Dividing and joining the deck slabs



- At the time, it was not possible to lift the collapsed deck slabs using a crane, so they had to be divided into three parts and carried to land
- Crack repair (work process 1) was carried out on the divided deck slab parts



- SHO-BOND #202 was used as an adhesive to join the original concrete and new concrete

Applying #202



- Once the repaired deck slabs had been put back in place, the severed reinforcing bars were reconnected
- Formworks were set up in preparation for concrete placement to join together collapsed members that had been divided into three



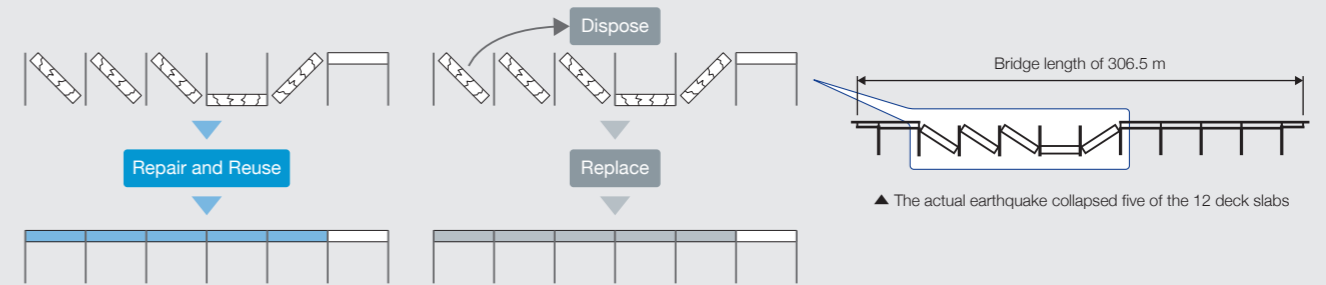
- Concrete placement and asphalt paving

Concrete placement



Setting up concrete forms

Materials and Waste Volumes – Estimate Assumptions



The comparison scenarios cover the **repair** or **disposal and replacement** of five deck slabs

Comparison of CO₂ Emissions

	Repair	Disposal and Replacement
Volume of new materials (concrete, reinforcing bars, wooden forms, adhesives, etc.)	163.1t	2011.2t
CO₂ emissions (Scope 3, Categories 1 + 5)	43.7 t-CO₂	404.2 t-CO₂

CO₂ emissions higher by a factor of **9.2**

As you can see above, the estimates show that the CO₂ volumes (Scope 3) generated by new materials and waste in the disposal and replacement scenario was 9.2 times higher than in the scenario where the five deck slabs were repaired. When considering actual construction, in addition to CO₂ emissions from new materials and waste (Scope 3), you also need to factor in Scope 1 and Scope 2 emissions from sources such as construction machinery, heavy machinery, and various transportation vehicles, and it is estimated that this will make the difference even greater.

We will continue to contribute to mitigating climate change through our main business of repair and reinforcement construction.

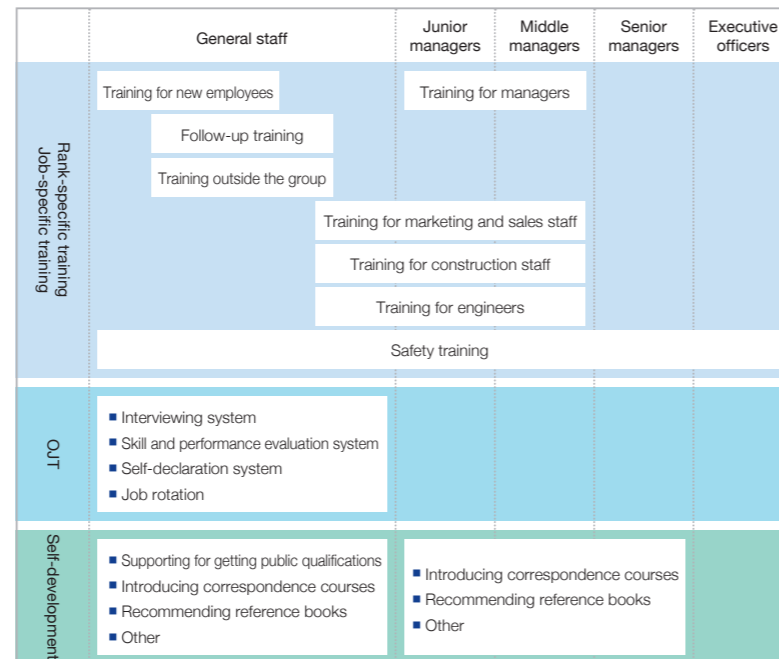
- Notes About the Estimates
- The estimates do not take the bridge beams (steel frame) into consideration.
 - The size of the deck slabs was: a total width of 24.8m, slab width (road and pavement) of 24m, beam length of 27.54m, slab thickness of 18cm, and paving thickness of 5cm (based on documents from the time).
 - For the replacement scenario, the volume of main new materials was 1,516 tons of concrete, 380 tons of asphalt paving, 97 tons of reinforcing bars, and 18 tons of wooden formworks.
 - For the repair scenario, the volume of main new materials was 117 tons of concrete, 35 tons of asphalt paving, 9 tons of reinforcing bars, 2 tons of wooden formworks, and 1 ton of adhesive materials.
 - For the replacement scenario, the volume of waste was estimated as the volume of the replaced deck slabs.
 - The estimates do not include the materials' packaging, etc.
 - The volume of reinforcing bars, etc., found in the deck slabs have been estimated using specifications from 1964.
 - In order to make a fair comparison with repair work carried out in 1964, the volume of materials used for new construction has been estimated based on construction methods used at the time.
 - The CO₂ emission factors used in the estimates are derived from the databases of the Ministry of the Environment and various other sources.
 - Emissions from the processes of recovering and reinstalling the collapsed deck slabs are deemed to be roughly equal for both scenarios and have therefore been omitted from the estimates.

Talent Development

Employees are the most valuable asset of the Group. To play a role in the creation of a sustainable society, we must have a workforce with highly advanced skills along with environments that allow these people to fully utilize this knowledge.

Experience is a critical component of repair and reinforcement construction activities. For this reason, on-the-job training is a key element of measures to develop employees' skills. Young people are assigned responsible tasks. This process gives these people the ability to solve problems on their own in business activities.

Employees are given the opportunity to acquire know-how and technologies that match each stage of their advancement at the Group. People progress to the next level in a well-planned and effective manner. We develop the skills of everyone at the Group from a long-term perspective.



Training for New Employees

Training for new employees is designed as a first phase to let them acquire know-how essential for working at the Group and develop them to become the core workforce. This one-year training consists of introductory training provided mainly in the form of classroom lectures and practical training provided at workplaces to which new employees are temporarily assigned.

[Introductory training]

The main purposes of the 45-day introductory training that new employees immediately enter are to (1) let them become aware of being a member of a company, (2) let them acquire basic knowledge about their jobs, and (3) foster a sense of solidarity among them as an employee of the SHO-BOND Group.

Many of newly hired graduates majored in civil engineering and construction at college or university, but most of them learn the maintenance field for their first time. We design training programs in a way that allows them to acquire fundamental knowledge until they enter the practical training.

[Practical training]

The practical training accounts for the majority of the one-year training for new employees. This practical training is an important process for new employees to put the knowledge they have acquired during the introductory training into practice under the direction of senior employees.

We believe that the fundamentals of any kind of job at the Group lie at work sites, no matter what careers new employees will choose in the future. This is why the practical training is basically provided in work sites where new employees learn repair and reinforcement construction activities.



Technical training at the Technical Research Institute



New employee learning on-site practices from a senior employee who has entered his sixth year of working at the Group

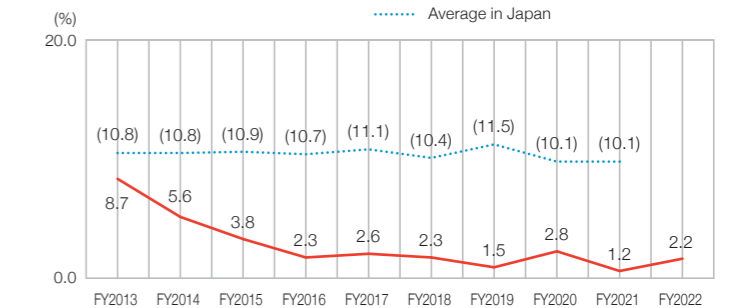
Creating Employee-friendly Workplaces

Group companies exercise care to ensure that their people can stay in company for a long time, doing their jobs with confidence and good health. Workplaces are structured to enable people to develop and take full advantage of their skills.

We started to maintain proper working hours earlier than most companies. Thanks to this effort, our employees' awareness has improved significantly and their working hours have accordingly become proper around the time when work style reforms have progressed at other companies. Our turnover remains low at present.

We keep a high employee retention rate by continuing to improve workplace environments based on employees' needs about child-rearing, nursing care, transfers to different locations, and other employment matters.

Changes in Turnover



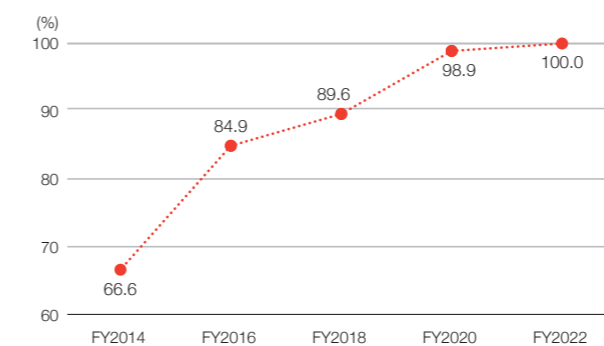
Maintaining Proper Working Hours

The Proper Working Time Project was started in 2014 with measures that include improvements to the rules of employment and the initiation of no overtime days to prevent excessive working hours and encourage employees to take time off.

In 2017, the Group started using a new system for recording working time. This framework allows efficiently monitoring the number of hours on the job and when individuals go to work on a weekend or holiday.

We continued to take measures to raise awareness of the paid leave system among employees, such as designation of a month where encouraging them to take paid holidays. In FY2022, we achieved the target that all employees take 100 or more days off per year. For the fiscal year ending June 30, 2023, we increased the target number of days off to 110 and are continuing to encourage the use of vacation time.

Percentage of Employees Taking 100 or More Days Off per Year



Supporting Employees in Balancing Work and Child-rearing and/or Nursing Care

We provide employee assistance programs more than required by law and promote the use of them to allow employees to balance work and child-rearing and/or nursing care with confidence. To increase the use by men of time off for child care, a new system for encouraging the use of such programs started in 2019. A Child Care Leave Promotion Pamphlet has been prepared to raise the awareness and use of the programs. This has contributed to an increase in the use of child care leave by male employees. In FY2022, all male employees who were entitled to take child care leave actually took it.

In 2020, SHO-BOND CORPORATION received Kurumin certification as a company that supports child care.

	FY2018	FY2019	FY2020	FY2021	FY2022
Percentage of men who took child care leave	0.0%	45.8%	80.0%	65.0%	100.0%



Selection of Employment Type and the Self-declaration System

The Group gives employees the flexibility to choose an employment type with or without transfers to different locations. Many individuals change this employment type to reflect the current stage of their lives. Every year, there are employees who ask to be shifted to or from status that allows transfers. The self-declaration system allows individuals to confirm their employment type and job status once every year.

Diversity and Inclusion

Promoting Women's Active Engagement and Advancement in Workplaces

The Group aims to increase the percentage of female engineers in regular recruiting to 15% or higher, and seeks to ensure more female engineers.

We keep a high female employee retention rate by providing training programs targeted at female engineers and conducting a monthly survey of how their minds have changed, in addition to making their workplace environments more employee-friendly. We will continue to recruit and develop more female engineers to have a higher retention rate and produce more female managers in the future.

	FY2018	FY2019	FY2020	FY2021	FY2022
Changes in the number of female engineers	14	16	18	23	26

Efforts for Health and Safety

Based on the philosophy that our highest priorities are the protection of life and the safety of construction activities, not only will the SHO-BOND Group comply with laws and regulations related to occupational health and safety but all of its officers and employees will also work to eliminate workplace accidents as well as make efforts to maintain and promote good health. What is more, we will further aim to create comfortable working environments.

Initiatives for Creating SHO-BOND Culture of Safety

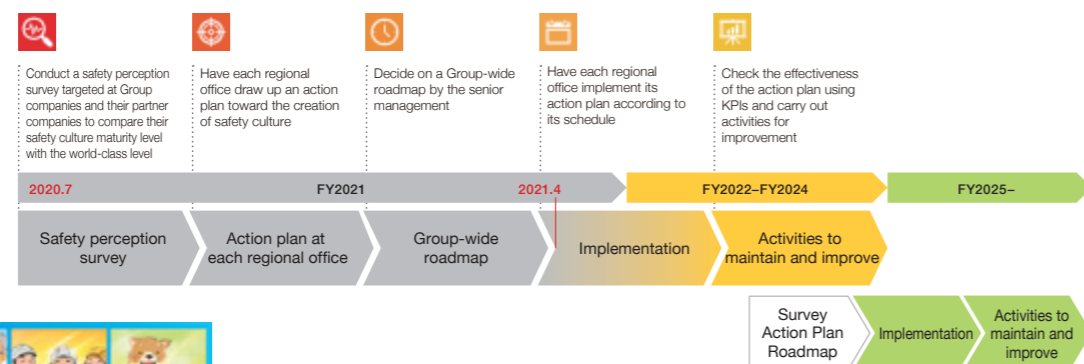
Project Overview

We believe that safe and secure workplace environments without an accident will be created by upgrading the Group's safety culture from the dependent model that workers do what they are told to the independent and mutually enlightening model that workers can proactively do their jobs without being told and mutually pay attention. Based on this belief, we promote initiatives for creating SHO-BOND culture of safety to realize a higher-level safety culture that aligns with our Health and Safety Policy.

- Health and Safety Policy
 1. We will achieve a safety culture that is of an even higher level.
 2. We will establish a health and safety management system.
 3. We will ensure the steady implementation of risk assessments.
 4. We will carry out measures for the reduction of occupational accidents involving third parties and severe workplace accidents.
 5. We will execute thoroughgoing health and safety education toward our own employees and the staff of our partner companies.
 6. We will ensure thorough preventive measures for occupational diseases.
 7. We will promote work style reforms for the prevention of health disorders caused by overwork.
 8. We will thoroughly ensure the prevention of property damage accidents.

Roadmap

for initiatives for creating SHO-BOND culture of safety



Awarding Workers for their Outstanding Health and Safety Commitment

We award workers who have earnestly participated in health and safety activities on construction sites to raise safety awareness among employees.



Awarding a worker for his outstanding health and safety commitment at construction sites

Safety Training

We provide on-site workers and other construction personnel with hands-on safety training on site to help them deepen their understanding of health and safety activities and naturally have safe behavior, mindset, and values.



On-site safety training

Digital Transformation (DX) in Health and Safety Activities

The Group drives the DX in health and safety activities to improve their effectiveness and reduce on-site workers' workloads. To this end, we formed a DX Promotion Working Team for safety. While identifying areas for improvement in the current health and safety activities, we are working to promote the DX by setting targets.

We installed 93 wearable video cameras in the Group's construction sites nationwide to enable workers to watch live streams and monitor the progress of projects from a regional office, branch, or on-site office. Such a system also enables an on-site worker and a client to connect on a livestreaming platform and enables the client to be present remotely.



Remote monitoring of construction sites using wearable video cameras

Health and Safety Patrols

President, General Managers of Regional Offices and Branches, and other senior members occasionally go out on health and safety patrols to eliminate workplace accidents and improve the health and safety levels. They conducted a total of 3,950 patrols nationwide in FY2022.



Health and safety patrol by President



Health and safety patrol by General Manager of Branch

Health and Safety Classes

The Group provides safety training programs to employees of the Construction Department, Marketing and Sales Department, and Engineering Department in July every year. In FY2022, the programs were provided in seven installments, all of which were online due in part to the COVID-19 pandemic. Contents of the programs included the overviews of workplace accidents and property damage accidents occurred in FY2022 and priority actions to take in FY2023. We also provided special education and health and safety classes by in-house lecturers to our engineers and a total of 444 employees from 81 partner companies in FY2022.

At the Tsukuba Training Center completed in October 2021, we started providing education through which employees can acquire knowledge about health and safety and experience safety hazards using VR headsets. Going forward, we will expand the scope of trainees to include employees of partner companies and other personnel, and provide practical health and safety classes to improve each trainee's risk perception and foster their awareness of health and safety, including values, decision criteria, and beliefs.



VR hands-on experience of safety hazards (VR video on the left [for illustrative purposes] and employees wearing VR headsets on the right)