# Broad Range of Structures We Work On

We play an important role in the sustainability of cities by repairing and reinforcing a diverse array of structures that form the essential fabric of social infrastructure.



Silo Repair of wall surface degradation



**Harbor Quay** Protection from salt damage Prevention of concrete degradation



Tunnels Prevention of ceiling and wall spalling Stop groundwater leaks



**Road structures** Repair of expansion joints Noise reduction



**Irrigation Channels** Prevention of cracking Prevention of water leaks





**Bridges** Seismic retrofitting Prevention of concrete degradation



Railways Repair of damage at elevated railways Seismic retrofitting



Buildings Seismic retrofitting



Water Supply and Sewer Systems Protection from corrosion

## The Beliefs of the Founder

Our Medium-term Business Plan 2027 commencing in FY2025 states our basic policy of "enhancing corporate value in pursuit of economic efficiency and social progress." This basic policy encapsulates our philosophy of supporting infrastructure administrators, protecting the lifestyles of users, and passing on infrastructure to the next generation in good condition as a leading infrastructure maintenance company while also pursuing our underlying goal of corporate profitability. The concept of "contributing to society" is not only the core tenet of this basic policy, but was also a belief of our founder Akira Ueda and is part of our Corporate Credo.



Company founder Akira Ueda announcing our Corporate Credo at the Sasakawa Hall in 1979

In the publication commemorating SHO-BOND's 35th anniversary in 1993, Mr. Ueda made the following remarks:

"Reflecting on our 35-year history, I am filled with new emotions while also remaining keenly aware that we must contribute to society with an even more enterprising spirit and pave the way for the future while playing a role in public works projects.

There has been a major shift from the previous perception that concrete structures had a perpetual service life to the current awareness that appropriate maintenance and repair are essential. Infrastructure maintenance is also consistent with the current need for effective resource use so it is no surprise that our company's role in society is growing.

As a company that maintains and repairs infrastructure, we are keenly aware of our significant responsibility. Through these maintenance and repair operations, all of our employees will work together diligently to make a meaningful contribution to society."

While these words were written more than 30 years ago, they carry even greater significance today given the accelerated aging of infrastructure and the increasing severity and frequency of natural disasters

Since our founding, SHO-BOND has specialized in infrastructure maintenance based on the beliefs of our founder and the conviction of our social contribution, even before maintenance work became a major part of public works in Japan. We will continue to contribute to the realization of a prosperous and safe society by supporting the maintenance of not only our key business areas of roads and bridges but also various other potentially problematic infrastructure such as railroads and port facilities.

# Feature Passing on Cultural Heritage into the Future

Japan has many valuable cultural heritage sites that national and local governments and other administrators are working hard to preserve for future generations. In particular, buildings and civil engineering structures of great historical value must be properly repaired and reinforced to protect them from major natural disasters and deterioration over time. For more than 65 years since its founding, the SHO-BOND Group has been refining its technologies to "pass on social infrastructure to the next generation in good condition" through infrastructure maintenance, thereby contributing to the preservation of cultural heritage. Below are a few examples of our repair and reinforcement projects to preserve structures of historical value for the next generation.

### **Important Cultural Property &** Heritage of Industrial Modernization

## Kachidoki Bridge

Year completed: 1940 Location Administrator

Chuo Ward, Tokyo Tokvo Metropolitan Government Project description: Installation of stoppers for earthquake resistance. application of concrete protective coating, concrete sectional repair (2017)



## Important Cultural Property

# Old Amagi Tunnel

Year completed: 1904 Location: Administrator Project description: Waterproofing (1988)

Kawazu Town to Izu City Shizuoka Prefecture Shizuoka Prefectural Government

The Old Amagi Tunnel is a stone tunnel built near the Amagi Pass in the center of the Izu Peninsula. Built entirely of cut stone, work on the tunnel began in 1900 and was completed 5 years later. The tunnel has a total length of approx. 444.5 meters and a total width of approx. 4.1 meters, making it the longest existing stone road tunnel in Japan. The tunnel has appeared in many Japanese literary works including Yasunari Kawabata's "Izu no Odoriko" (The Dancing Girl of Izu), and is now popular as a hiking course. It has been designated as a national Important Cultural Property for its high degree of technical completeness as an existing stone road tunnel and for being representative of the late Meiji Period.

SHO-BOND performed waterproofing work on the tunnel in 1988 The tunnel's interior had deteriorated over the 80-plus years since its completion and was leaking heavily so we filled the joints with resin material to stop the water.

Kachidoki Bridge is a double-leaf bascule bridge spanning the Sumida River close to its mouth. Boasting the largest moving span in Japan, the bridge has a central section that can be raised to permit passage of large vessels. This bridge was also intended to serve as the main gateway to the site of the world exposition scheduled to be held in 1940, and was built with the most advanced technology of the time to demonstrate Japan's technological proficiency. It is designated as a national Important Cultural Property as a valuable structure in the history of Japan's bridge technology, and is recognized by the Minister of Economy, Trade and Industry (METI) as a Heritage of Industrial Modernization site serving as a testament to Japan's industrial modernization process.

SHO-BOND worked on Kachidoki Bridge between 2015 and 2017 to extend its service life. To ensure that this valuable bridge remains in good condition, we repaired the damaged concrete and applied a protective coating, replaced the expansion joints, and seismically reinforced the bearings.



orking on Kachidoki Bridge



# **History of SHO-BOND**

# 1958-

### Fusion of technologies in the fields of chemistry and civil engineering

The origin of our company, "Showa Kogyo Corporation," was established on June 4, 1958. Initially, our business was construction using PVC components, but in the process, we discovered and put into practical use the repair performance of concrete with epoxy resin, which opened up a new market of synthetic resin adhesives for civil engineering works.

The effectiveness of the company's new method for repairing concrete was demonstrated during work to repair damage to the Showa Ohashi Bridge caused by the 1964 Niigata Earthquake. This was the start of the company's reputation as an expert in repair and reinforcement work. In March 1965, trial installations started for the Cut-off Joint an expansion device for highway bridges developed and patented jointly with Japan Highway Public Corporation. This innovation was subsequently used frequently throughout Japan for the construction of expressways



nufacture of "SHO-BOND" adhesives in Kawaguchi Factory in 1961



The Showa Ohashi Bridge in Niigata collapsed in 1964 during a powerful earthquake

Major Events Related to Infrastructure Maintenance

# 1975-

### Growth into a listed company by leveraging the "comprehensive maintenance system"

In 1975, SHO-BOND was split into two companies: SHO-BOND CORPORATION and SHO-BOND Chemical, which clarified our path to growth as a special construction company. The Central Technical Research Institute was relocated in 1977 and concentrated on creating products and construction methods combining chemical and civil engineering technologies. These activities reinforced SHO-BOND's reputation as a technology-oriented organization. Reforming its organization gave SHO-BOND comprehensive maintenance capabilities encompassing the development of technologies, supply of construction materials, and construction.

In the mid-1980s, as attention to infrastructure repair increased, our company's business also expanded, and in 1987 we were listed on the second section of the Tokyo Stock Exchange, and two years later we were promoted to the first section

The Central Technical Research Institute was moved to Omiv

We were listed on the second section of the Tokyo Stock

(now the city of Saitama) in 1977

Exchange in 1987

1995-

### The rapid growth of seismic retrofitting after the Great Hanshin-Awaji Earthquake

The powerful earthquake that devastated the Kobe region in January 1995 caused many deaths and severely damaged structures, such as the collapse of expressway bridges. However, there was no damage to the piers that SHO-BOND had reinforced shortly before this disaster. The reliability of SHO-BOND's seismic retrofitting method was widely recognized, resulting in a rapid increase in orders for these projects in all areas of Japan. As a result, our sales and earnings increased significantly.

In 1996, operations began at the new Technical Research Institute in the city of Tsukuba in Ibaraki prefecture. Research involving devices for earthquake resistance produced new products including the Restraining Chain.



The elevated bridge on the Hanshin Expressway colla due to the earthquake in 1995



Restraining Chain was developed in 1997

# 2011-

### **Unprecedented disasters highlight** the need for infrastructure maintenance

Catastrophic disasters that occurred in Japan after 2010 further highlighted the importance of seismic retrofitting and repairing aging infrastructure. During this period, there was a large volume of infrastructure maintenance work in all areas.

Many maintenance and reinforcement projects have been implemented in accordance with the Fundamental Plan for National Resilience following the 2011 Great East Japan Earthquake. Currently, activities are underway based on the Five-Year Acceleration Plan for Disaster Prevention, Disaster Mitigation, and Building National Resilience that began in 2021

The collapse of the ceiling of the Chuo Expressway Sasago Tunnel in 2012 again underscored the urgent need for repairing Japan's aging infrastructure. Based on a Japanese government Basic Plan for Life Extension of Infrastructure, the Expressway Renewal Project started in 2015 and will continue until 2030.

To meet the demands of this new business climate, SHO-BOND established the in-house company structure, strengthened the order-taking and construction system through close collaboration with partner companies, and increased emphasis on R&D for creating new technologies. To build a stronger base for these activities, training programs, reinforcement of the culture of safety, and other measures were given even more emphasis. Due to these initiatives, sales and earnings increased along with the growth of the infrastructure maintenance market



A construction site of the Expressway Renewal Project in 2018



# 2019-

### Challenge overseas business

In April 2019, SHO-BOND and MITSUI & CO., LTD. established SHO-BOND & MIT Infrastructure Maintenance Corp. (SB&M) to operate an infrastructure maintenance business overseas. The aim is to use SHO-BOND's proven technologies to help solve problems in other countries involving aging infrastructure.

In Thailand, SB&M and CPAC, a member of the Siam Cement Group, established CPAC SB&M Lifetime Solution Co., Ltd. in 2020. In the United States, SB&M invested in Structural Technologies, LLC, an infrastructure repair maintenance company, in July 2023.



On-site supervision in Laos in 2023



We held an infrastructure maintenance seminar in Bangkok in 2024



Amendment of the Basic Act for National Resilience

Corporation (SB&M)



		KAKO-Group (Construction Su Tohoku kako corporation Kako corporation Yokohama kako corporation Kanto kako corporation Niigata kako corporation	Ibsidiary) CHUBU KAKO CORPORATION KANSAI KAKO CORPORATION CHUGOKU KAKO CORPORATION SHIKOKU KAKO CORPORATION KYUSHU KAKO CORPORATION
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	[	Maintenance Technology Inc.	
	[	SHO-BOND (HONG KONG) Ltd	l.

CPAC SB&M
Lifetime Solution Co., Ltd.

## **Business Environment**



Source: Prepared by SHO-BOND based on MLIT data

## Accelerated Aging of Infrastructure

Most of the infrastructure in Japan was built after the high economic growth period, and its aging is expected to accelerate in the future. In response to these social issues, national and local governments are taking action nationwide to formulate plans for appropriately maintaining, managing, and renewing infrastructure and extending the service life.

## Percentage of Structural Infrastructures Built More Than 50 Years Ago



3. In addition to the above, there are approximately 200,000 bridges and 300 tunnels whose construction year is unknown

## **Materiality**

The SHO-BOND Group has designated four Materialities based on social demands and the expectations of stakeholders. The Materialities are our priorities in order to achieve sustainable growth with our stakeholders as the Group plays a role in solving social issues while continuing to increase corporate value. The Group will continue to leverage business activities for constant progress concerning these Materialities in order to contribute to long-term sustainable growth and the development of a sustainable society.

## Process to Identify Materiality

In April 2020, the SHO-BOND Group identified materiality with the participation of employees, senior management and prominent individuals outside the group.

The SHO-BOND Group will continue to upgrade Materiality initiatives with the input of the group's internal and external stakeholders.

## Materiality Matrix

To identify materiality, a materiality matrix was created by evaluating social issues from the standpoints of the importance to stakeholders and the importance to business operations. Then 22 social issues that were very important from both standpoints were selected as the issues that the SHO-BOND Group should target.

To determine importance to stakeholders, evaluations were performed by using the perspectives of shareholders and other investors in Japan and other countries, local governments, government agencies and other sources of orders for the SHO-BOND Group, manufacturers of building materials, chemicals and other materials procured by the group, construction firms and other subcontractors, residents near business sites and other members of society, government actions and policies, and other stakeholders. For importance to business operations, evaluations were performed by the group's senior management, including outside directors, and employees.



perspectives of stakeholders and the group's businesses. The top 22 issues were then chosen as the priority social issues

Identification of social issues

Establishment of priorities

To identify materiality, we first identified 55 social issues to be examined. This process incorporated the SHO-BOND Group's policies, social demands, the expectations of stakeholders and other factors.

> Corporate values/business strategy issues Global framework/principles/guidelines\*1 Japanese government policies\*2 Evaluation by ESG assessment companies\*3



- \*1 GRI standard, SASB standard, SDGs, ISO26000, 10 Principles of the UN Global Compact, OECD Guidelines for Multinational Enterprises, and others
- \*2 Policies of the Ministry of Land, Infrastructure, Transport and Tourism for public works
- projects and other policies \*3 MSCI, FTSE, Robeco SAM and others





# The Value Creation Process

Our mission is to pass on social infrastructure to the next generation in good condition while bringing out the best in the distinctive comprehensive infrastructure maintenance business model.

We are dedicated to playing a role in maintaining a safe and affluent society for everyone. Through a continual approach to the four components of our Materiality, we provide solutions for social issues and create economic value, as well as promote the long-term growth of corporate value.



SHO-BOND 2024 Integrated Report