



2023

**Environmental, Social and
Governance Report**

Shenzhen Expressway Corporation Limited

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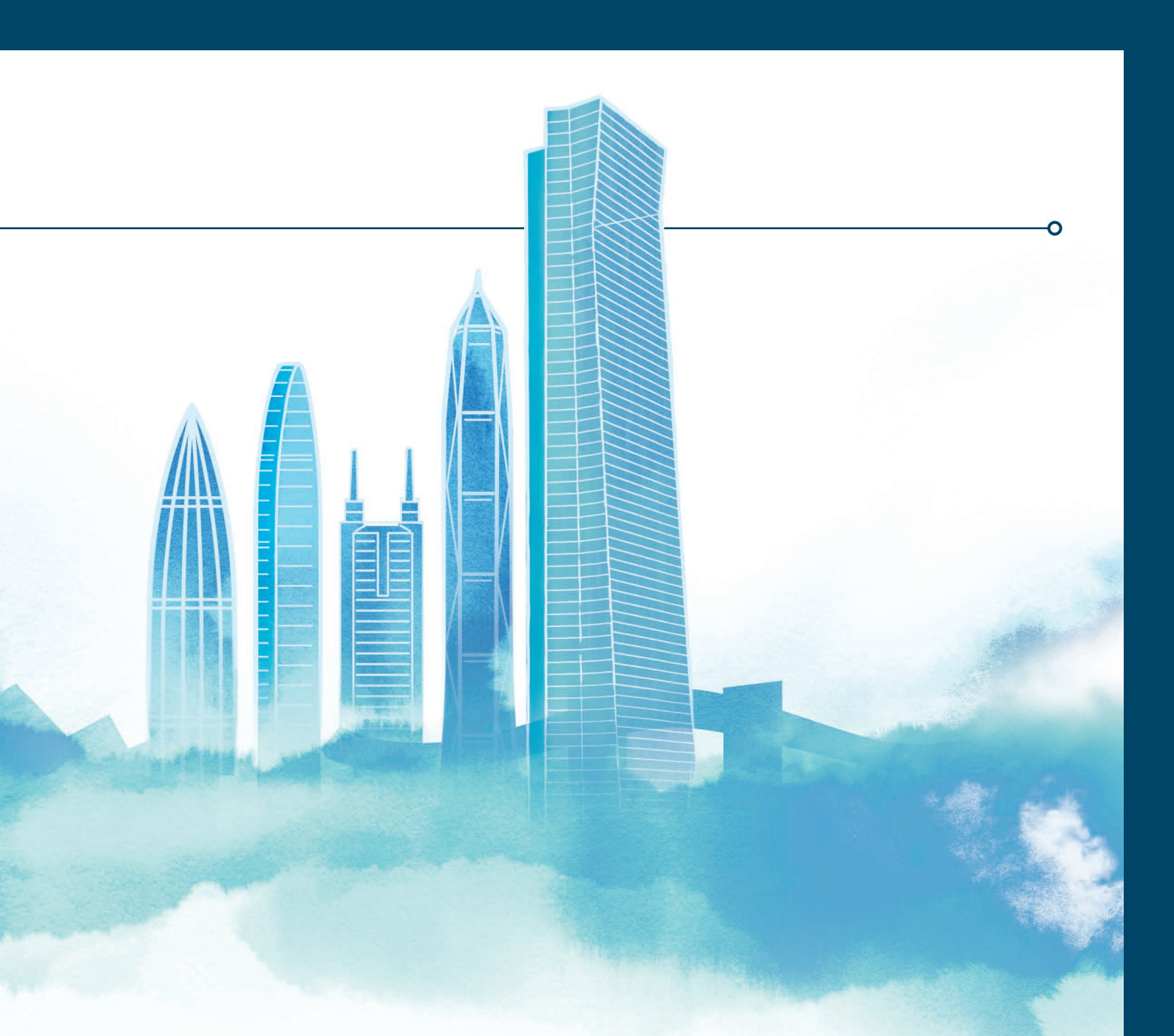
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About the Report



Introduction of the Report

This report is the fourth Environmental, Social and Governance (ESG) report and the fifteenth Social Responsibility Report issued by Shenzhen Expressway Corporation Limited (hereinafter referred to as “Shenzhen Expressway,” “the Group,” “the Company,” or “we”). The report reflects the performance of the Company and its subsidiaries in the areas of environment, society and governance (hereinafter referred to as “ESG”). The purpose of this report is to present Shenzhen Expressway’s practices and achievements objectively and transparently in the social responsibility and sustainable development aspects to stakeholders such as shareholders, employees, government, customers, partners and the public.

Scope of the Report

This report is an annual report covering the period from January 1, 2023, to December 31, 2023, some of the information may be traceable beyond the reporting period. The organisational scope of this report includes Shenzhen Expressway Corporation Limited and its subsidiaries.

Basis of Preparation

This report is prepared in accordance with the *Shanghai Stock Exchange on the Application of Self-Regulation Rules for Listed Companies No.1-Standardized Operation* and *Appendix 27 Environmental, Social and Governance Reporting Guide of Main Board Listing Rules*, issued by the Hong Kong Exchanges and Clearing Limited.

Data Sources

All information in this report is derived from the Company's financial reports and from the Company's statistical, aggregated and reviewed environmental, social and governance information. Unless otherwise specified, all data in this report are measured in RMB. During the reporting period, due to adjustments in statistical methods for certain data, some information has been restated. In cases where there is inconsistency with data from previous annual reports, the information in this report shall prevail.

Publication Channels

You can access and view this report on the Company's website (www.sz-expressway.com), the website of Shanghai Stock Exchange (www.sse.com.cn) and the website of Hong Kong Exchanges and Clearing Limited (www.hkexnews.hk). This report is published in both Chinese and English. In the case of any discrepancies in the understanding of the two texts, the Chinese version shall prevail.

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Message from the Board of Directors

2023 is the year in which the implementation of the strategic plan of the 14th Five-Year Plan has begun, and it is also the year Expressway pursued progress in the face of the complex and changing external environment. We're overcoming pressure and thriving, and we keenly feel the increasing weight of our responsibilities. We deeply recognise that the Company's sustainable development is increasingly intertwined with ESG. With the characteristics of "innovation, intelligence, green and efficiency," we integrate the ESG concept into decision and action. In a spirit of hard work, we strive to pursue the long-term mission and vision of Expressway, and to contribute the power of Shenzhen State Enterprise to the promotion of sustainable development of the whole society.

In tandem with governance, ensuring prudence and transparency. Shenzhen Expressway consistently adheres to compliant and responsible business practices, continuously improving its corporate governance structure. The Company strengthens internal supervision and risk management, and enhances the supervision and restraint of wielding power, in order to ensure the stable and transparent operation.

Living in harmony with the environment, safeguarding clear skies and white clouds. Shenzhen Expressway is committed to achieving the "dual carbon" goals, focusing on building smart highways, advocating green operations, emphasizing ecological environmental protection and striving to reduce carbon emissions. We strive to create a new chapter in the construction of ecological civilisation in the new era, jointly depicting a harmonious and beautiful picture of the relationship between human beings and the environment.

Advocating for win-win cooperation with talents, promoting "people-oriented" concept. We regard every passionate and dedicated employee as the most valuable asset of the Company, and strive to create a fair, harmonious and friendly working environment, building a high-quality and professional team that is courageous in innovation, run the enterprise with integrity and excellence.

Moving forward with society, contributing to community prosperity. Shenzhen Expressway assumes the responsibility as a state-owned enterprise, is committed to developing high-quality and convenient infrastructure, providing high-quality services to society, actively participating in public welfare undertakings and promoting rural revitalisation.

Looking to the future, Shenzhen Expressway will continue to adhere to the values of "integrity, responsibility, people-oriented and innovation." We will persist in the dual-core strategy of "toll highways + general environmental protection," strive to overcome difficulties and advance the overall goal of building a world-class enterprise of high quality, together with each of the stakeholders, to promote high-quality and sustainable development of the economy and society!

Liao Xiang Wen

Executive Director and President

Statement of the Board of Directors

The Company's Board of Directors attaches great importance to the sustainable development management. The Company has established an effective ESG management mechanism and has formed an ESG governance structure featuring clear hierarchy and labour division.

As the highest governance body in the Group, the Board of Directors is the highest responsible organisation for ESG matters of the Group, responsible for considering and approving the ESG strategy, vision and objectives, and reviewing and evaluating the risks and significance related to ESG matters. The Board of Directors hears and reviews the Company's Environmental, Social and Governance Report annually, and supervises the implementation progress against the related ESG targets.

During the reporting year, the Company has completed the review and assessment of ESG issues and set ESG environmental targets. The Board of Directors reviewed, discussed and confirmed the ESG work results of this year. This report was adopted by the Board of Directors on 22 March 2024.



About Us

Company Profile

Shenzhen Expressway (stock code: 600548.SH/00548.HK), founded in 1996, specialises in investment, construction and operation management of toll highway and general environmental protection. At present, the general environmental protection business mainly includes solid waste resources treatment and clean energy generation. Besides, we are also a service provider of high-quality construction management and highway operation management for the government and other enterprises. Supported by our relevant management experience and resources, we also carry out project development and management, operation and maintenance, engineering management and industrial finance and other services based on our main business.

As of the date of this report, The Group has operated and invested in a total of 16 highway projects, and the mileage of high-grade highways invested or operated is approximately 660 kilometres converted based on the proportion of controlling interests. The Company actively participated in many regional urban infrastructure development projects and invested in 21 environmental protection, clean energy and financial projects. We also operated many platform companies of investment, construction, operation, environment, urban infrastructure and new energy.



Our history **28** years



Total assets **67.51** billion



Total workforce **7,062**

Business Segments

Toll highway

The Group, as an important service provider for the construction and operation of transportation infrastructure in the Guangdong-Hong Kong-Macao Greater Bay Area, is undertaking key projects of the Greater Bay Area (GBA). The operated and invested toll highway projects are mainly located in the Pearl River Delta and economically developed areas in the central and eastern regions, connecting airports, ports and other infrastructures like crisscrossing arteries, which plays an important role in facilitating the regional economic development.

General environmental protection

The Group has run large-scale clean energy generation and recovery and solid waste treatment with quick business growth and fostering capacity. Meanwhile, the Group runs business in the dismantling and laddering utilisation of retired automobiles and new energy batteries, to take practical action for the lucid waters and lush mountains.

New businesses

The Group also launches the new urban construction business and the industrial-financial integration business and has participated in the construction of a number of large-scale municipal projects with its excellent construction management capacity. The combination of industry and finance has become a new driver for the sustainable development of its dual core businesses and the Group has formed a business landscape of “participating in one and controlling two”¹.

¹ Shenzhen Expressway has invested in Bank of Guizhou by equity participation, whilst having controlling shares in Shenzhen Expressway Private Equity Industrial Investment Fund Management Company Limited and Shenzhen Expressway Financial Leasing Company Limited.

Corporate Culture

Mission

Building high-quality infrastructure

Shenzhen Expressway has specialized in the infrastructure field for years, especially in traffic and urban infrastructure and general environmental protection, to create the core competitive edge of "dual core businesses". We also explore and foster new businesses such as urban comprehensive services and integration of industry and finance and leverage our construction and operation management capacity in transportation infrastructure, municipal engineering, urban comprehensive development and other aspects to deliver top-notch products and services for the government and the social.

Serving a better life in the city

As a key enterprise of transportation infrastructure in Shenzhen, Shenzhen Expressway plays a protective role in urban infrastructure construction and urban operation with the backing of talents, funds and technological advantages. In this way, we provide residents there with safer and more convenient travel conditions and a cleaner and more beautiful living environment, allowing coexistence and win-win results between ourselves and the city.

Vision

To become a pioneer of road transport and urban infrastructure

At the historical juncture of building the Greater Bay Area and building Shenzhen into a demonstration area of socialism with Chinese characteristics, improve asset scale, investment return, engineering construction and operational management capacities by adjustment, consolidation and optimisation, capacity expansion and quality improvement, cost reduction and efficiency increase and a development and innovation strategy holding a leading position in the toll highway industry.

To become a segment leader of general environmental protection

We have actively expanded featured environmental protection and integrated clean energy, on the agenda of focusing on expansion, keeping exploring, fostering capability and building a team strategy. We have forged competitive strengths in niche-general environmental protection and built a leading brand in this regard with distinctive characteristics and edges.

Our core values



Integrity

Integrity is crucial for Shenzhen Expressway's survival



Responsibility

Responsibility is fundamental for Shenzhen Expressway's achievements



People-oriented

People-oriented is the source of Shenzhen Expressway's vitality



Innovation

Innovation is the key to Shenzhen Expressway's success

Corporate spirit

Delve to the deep

Specialise in our core businesses by dedication, being pragmatic, learning and improving our expertise

Strive for the top



















Never slack off in good times and never give up in bad times; pursue development actively and seek breakthroughs and improvements

Fight for the speed

Always strive to make progress with persistent efforts and passion and always pursue excellence to be a pioneering leader

Core Highlights in ESG

Highlights in 2023

Social Contributions	 The tax amount for the year 2023 was RMB530 million	 The social contribution per share was RMB2.02
	 Dividends distributed for the fiscal year 2022 amounted to RMB1 billion in 2023	 Cash dividends have been continuously distributed for 26 years, accumulating to a total of RMB13.2 billion
	 The community comprehensive service center has accommodated a total of 70,000 people	 725 volunteers offered a total of 1,450 hours of volunteer
Research and Development (R&D) Innovation	 R&D investment reached RMB33.48 million in 2023	 The proportion of management and technical personnel reached 31.48% in 2023
	 A total of 17 new patents were acquired as of 2023	
Intelligent Expressway	 The total distance of expressways on the operating management and control platform based on BIM was 144 kilometres	 Adopting a digital management model for the entire lifecycle of infrastructure
	 Implementing intelligent road administration using a road network monitoring and command dispatch platform	 Deploying a road inspection application system based on unmanned aerial vehicles (drones)
	 Utilizing AI-powered cameras for intelligent inspections	
Energy Saving and Environmental Protection	 2023 total processed amount of organic waste 1,419,928 tons	 2023 recycled used power batteries 2,947 tons
	 2023 wind power generation grid-connected electricity 1,638,792 MWh Equivalent to reducing carbon dioxide emissions by 1,340,531.86 tons and reducing the use of standard coal by 201,407.54 tce	 2023 biogas power generation grid-connected electricity 45,290 MWh Equivalent to reducing carbon dioxide emissions by 26,002.25 tons and reducing the use of standard coal by 3,945.28 tce.

ESG Honours in 2023



In March 2023, was honoured as the "State-Owned Enterprise Livelihood Reputation Award" in the 10th Nanfang Metropolis Daily "Community Reputation List" selection



In July 2023, achieved the highest A+ ESG rating in the railway and highway industry, as assessed by CCXGF



In August 2023, was selected for the "Greater Bay Area State-Owned Enterprise ESG Development Index" and "China ESG listed company Great Bay Area Pioneer 50" in the ESG China Forum 2023 Guangdong Summit



In September 2023, was honoured as the "Listed Company ESG Top 100 Award in China" in the 17th China Listed Company Value Selection initiated by Securities Times



In October 2023, was honoured as the "2023 Greater Bay Area Listed Company Annual Contribution Award" and "2023 Top 20 Listed Companies in Greater Bay Area in Green Governance" at the 7th China (Shenzhen) Corporate Governance Summit



In October 2023, was honoured as the "ESG Exemplary Enterprise Award" during the "Rural Revitalisation, Leading the Way in the Greater Bay Area" ESG roadshow saloon organised by Times Media Group



In October 2023, was selected for "Best Practice Case for Corporate Governance of Listed Companies in 2023" by China Association for Public Companies



In November 2023, was selected for the "Best Practice Case for the Board of Directors of Listed Companies of Listed Companies in 2023" by China Association for Public Companies



In November 2023, was selected for the "Best ESG Practice Case of 2023" by the China Association for Public Companies



In November 2023, Ranked 33rd in the Top 100 ESG Ratings of Listed Companies in the Guangdong-Hong Kong-Macao Greater Bay Area jointly released by CCXGF and Phoenix TV



In November 2023, was honoured as the "2023 High-Quality Development Listed Company Award" in "the 8th Golden Tangerine Awards of Time Finance" series of lists initiated by Guangdong Times Media Group Co., Ltd.



In November 2023, was honored with the "China Reform Cup ESG Top 100 Award" and was selected for inclusion in the China Reform Cup CSI ESG Top 100 Index during the inaugural China Reform Cup ESG Top 100 Index released at the 2023 Golden Bull Enterprise Sustainable Development Forum



In December 2023, ranked 26th in the "Social Responsibility of State-owned Enterprises - Vanguard 100 Index" in the Research Report on Corporate Social Responsibility of Local SASAC and Local State-owned Enterprises (2023) released under the guidance of the Social Responsibility Bureau of the State-owned Assets Supervision and Administration Commission of the State Council



In 2023, was honoured as the "Progress Award in the Assessment of Ecological Civilisation Construction in Shenzhen City for the Year 2022"

Special Topic

Walking Hand in Hand with the Industry — Forging a Low-Carbon Model

Shenzhen Expressway adheres to a dual-core development strategy of “toll highways” and “general environmental protection.” While consolidating and enhancing the toll highway business, the Company has entered the field of general environmental protection. It actively promotes environmental investments, continues to focus on clean energy and unites efforts to safeguard the everlasting green mountains and flowing rivers.

Shenzhen Expressway has successively established environmental companies primarily focused on expanding waste-related environmental businesses, new energy companies primarily focused on expanding wind solar power generation and other new energy businesses and infrastructure and environmental protection companies primarily engaged in the construction and management of environmental industry projects. The Company also holds partial equity in Shenzhen Water Planning & Design Institute Co., Ltd. and Derun Environment, which focus on water environment governance, creating a comprehensive environmental group with core operations in environmental investment, technology and services throughout the environmental industry chain.



The Environmental Company Nanning Bioland Organic Waste Treatment Project

General Environmental Protection Industry



Clean Energy Generation

Shenzhen Expressway has implemented a comprehensive development strategy for the large environmental protection industry, with clean energy generation at its core. By combining light and heavy elements and using a participatory and controlling approach, the Company actively invests in various areas of the industry chain, including wind power, photovoltaic power stations, wind turbine aftermarket operation, financial leasing and maintenance and carbon trading. This strategy contributes to Shenzhen’s efforts to achieve carbon peak targets. The Company’s total installed capacity of wind power in operations 648 MW in 2023.

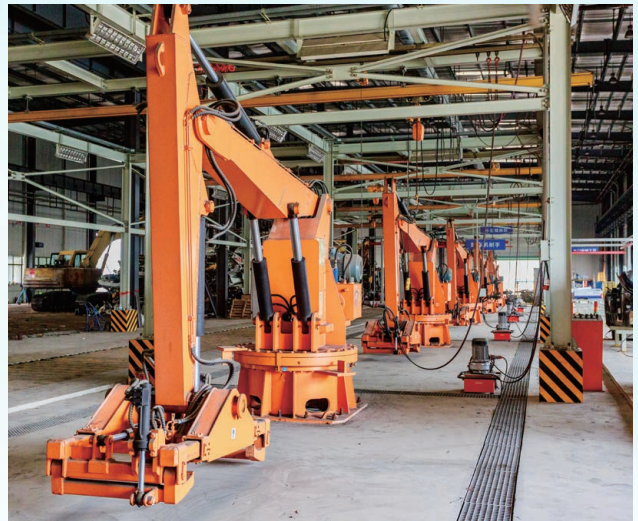


Recovery and Solid Waste Treatment

Shenzhen Expressway has successfully launched 14 organic waste treatment projects into commercial operation. Relying on advanced processing technologies, organic waste undergoes anaerobic fermentation to produce biogas, while the dehydrated digestate can be transformed into organic fertilizer. The separated fats, after processing, can be used to produce chemical products, effectively realizing an efficient and sustainable development model of “environmental protection – resource cycling – carbon emission reduction.”



The New Energy Company Ningxia Gantang Wind Power Project



Infrastructure and Environmental Protection Company Qiantai Power Battery Recycling Project

The Company is committed to becoming a leading enterprise in the large environmental protection sector, focusing on two main businesses: clean energy generation and recovery and solid waste treatment. Simultaneously, it is strategically positioning itself in the decommissioning of retired automobiles and the disassembly and cascading utilisation of new energy batteries, as well as the environmental protection services industry. The Company is actively shouldering the mission of safeguarding green mountains and clear waters through practical actions.

In 2023,
Shenzhen
Expressway



2023 total processed amount of organic waste **1,419,928** tons



2023 recycled used power batteries **2,947** tons



In 2023, the revenue from Shenzhen Expressway's general environmental protection industry amounted to **RMB1.618** billion, accounting for **17.41%** of the total



2023 wind power generation grid-connected electricity **1,638,792** MWh
Equivalent to reducing carbon dioxide emissions by **1,340,531.86** tons and reducing the use of standard coal by **201,407.54**tce



2023 biogas power generation grid-connected electricity **45,290** MWh
Equivalent to reducing carbon dioxide emissions by **26,002.25** tons and reducing the use of standard coal by **3,945.28**tce

01

Governing with Wisdom

Ensures the Solid Foundation for Development

We recognise that effective governance is the cornerstone of the healthy and sustainable development of the Company. Therefore, Shenzhen Expressway has consistently been committed to enhancing its governance structure, establishing sound operational rules and ensuring stability and transparency in operations through enhanced internal oversight and risk management. This effort lays a solid foundation for the Company's development and creates greater value for society.

Aligning with the United Nations Sustainable Development Goals (SDGs)



Key Issues:

- Compliance
- Information Disclosure
- ESG Governance
- Fulfilment of Commitments



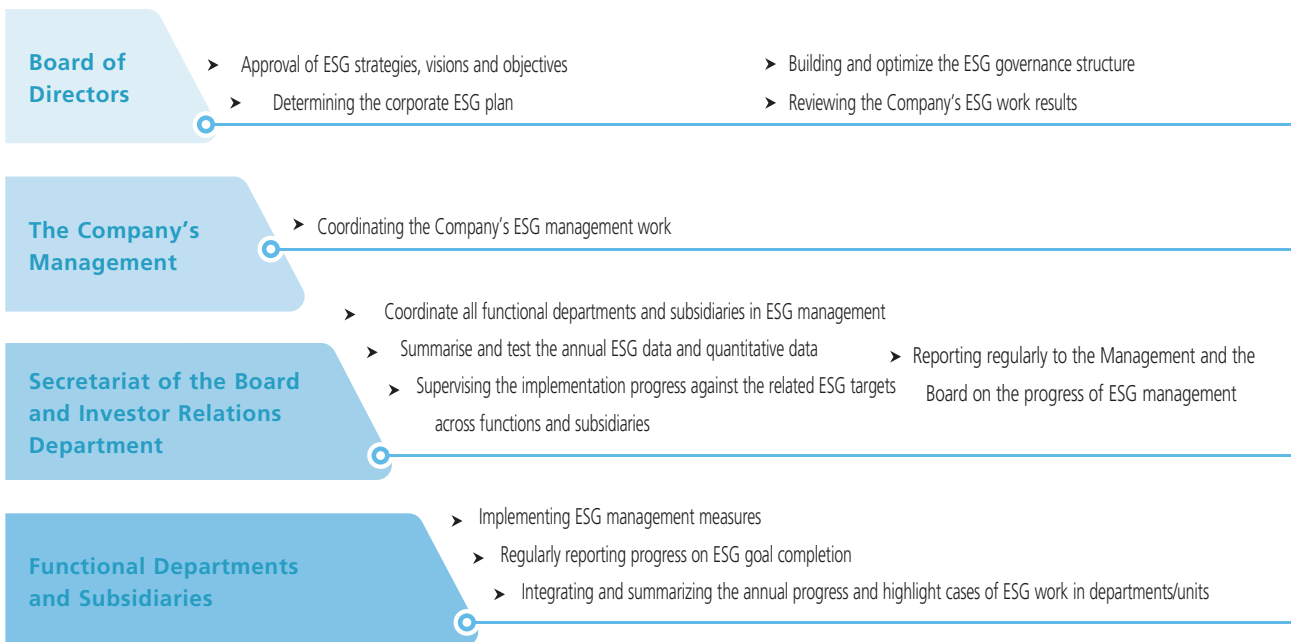
Focusing on Responsible Governance

Fulfilling social responsibility is a strategic choice for achieving the long-term success of the Company. Shenzhen Expressway continues to integrate ESG principles into its development strategy, establishing a sound ESG governance system and working mechanisms. This ensures that the entire process of corporate decision-making, management and operations, as well as the entire industry chain, is integrated. The Company actively responds to the reasonable demands of various stakeholders.

ESG Governance Structure of Shenzhen Expressway

The Board of Directors is the highest responsible body and decision-maker for ESG matters of Shenzhen Expressway. It is mainly responsible for overall deliberation and approval of ESG strategies, visions and objectives, review and evaluation of risks and importance related to ESG matters, and review and approve public disclosures related to ESG matters. The Secretariat of the Board & Investor Relations Department, under the administration of the Board of Directors, is mainly responsible for co-ordinating all functional departments and subsidiaries to carry out ESG-related work, supervising the Company's ESG performance and related target progress, and reporting the Company's ESG matters to the Company's management and the Board of Directors.

Shenzhen Expressway ESG Governance Structure



Stakeholder Communication

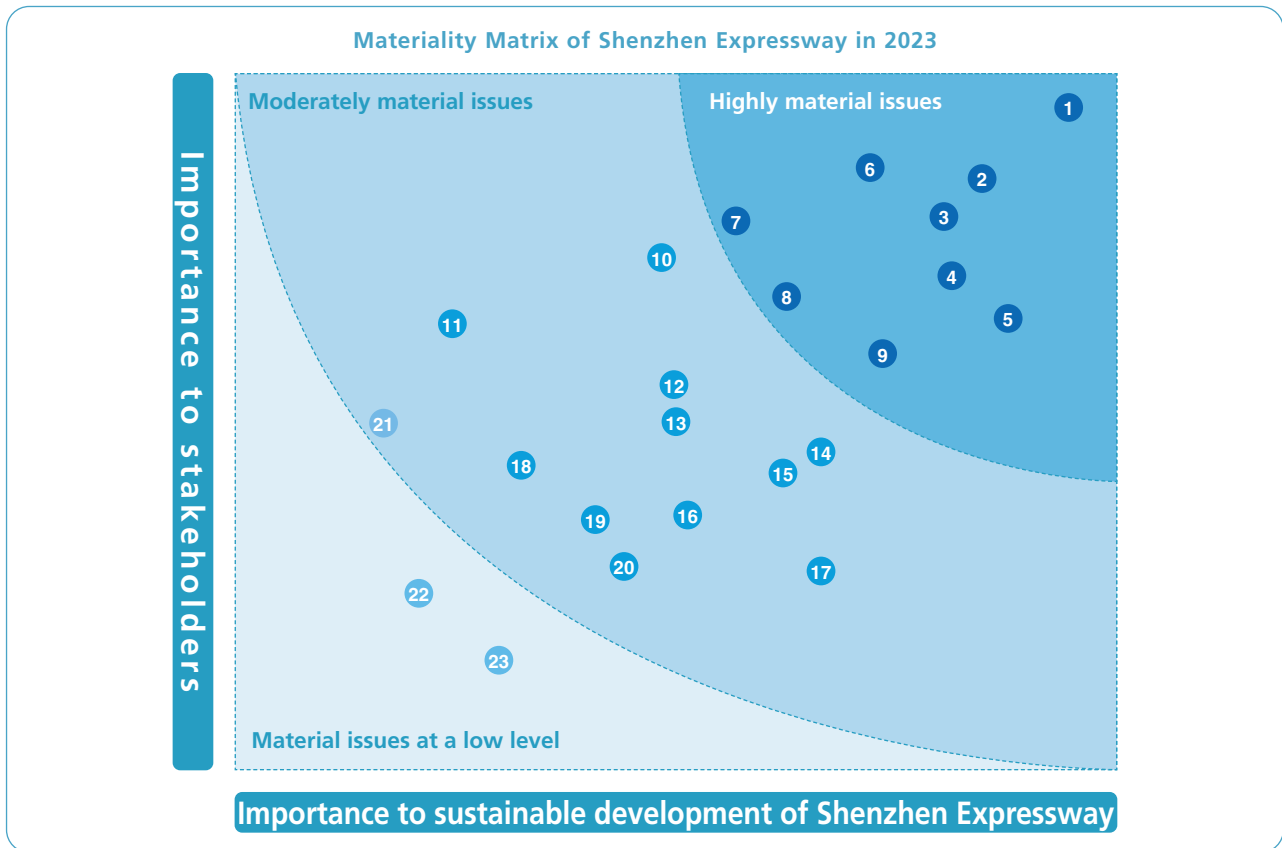
Shenzhen Expressway attaches great importance to communication with stakeholders including governments, shareholders, employees, customers, suppliers and communities. Diversified communication channels and feedback mechanisms are established in line with their characteristics, to disclose the Company's sustainable development tendency in a timely manner and to ensure that the demands of stakeholders are accurately identified, fully understood and responded in a targeted way.

Communication with Stakeholders of Shenzhen Expressway

Stakeholders category	Major issues	Demands and expectations	Responses
 <p>Government and regulatory agency</p>	<ul style="list-style-type: none"> Compliance Serve social and economic development 	<ul style="list-style-type: none"> Comply with laws and regulations Implement national policies and promote social and economic development Targeted poverty alleviation and support for regional development 	<ul style="list-style-type: none"> Continuously strengthen the corporate compliance management and ensure legal and compliant operation Formulate and continue to optimize the Company's strategic positioning, industrial orientation and business measures, ensure conformance to the orientation of national policies Balance economic and social benefits in development and promote social and economic development Carry out targeted poverty alleviation and support regional development by means of industrial investment, personnel assignment and public welfare investment
 <p>Shareholders</p>	<ul style="list-style-type: none"> Investment return Risk prevention Information disclosure 	<ul style="list-style-type: none"> Robust income and dividends Reduce investment risk Open and transparent information 	<ul style="list-style-type: none"> Do well in business operation, improve business performance and maintain a stable dividend policy Improve enterprise management and attach importance to risk identification and control Conduct information disclosure in a compliance manner and attach importance to investor relations
 <p>Suppliers</p>	<ul style="list-style-type: none"> Pursue mutual benefit and win-win results Fulfillment of commitments 	<ul style="list-style-type: none"> Carry out cooperation for mutual benefit and win-win results Fulfil contracts Promote industry development 	<ul style="list-style-type: none"> Implement fair procurement and build a responsible supply chain Keep promises and fulfil commitments Encourage suppliers to use new technologies, new materials and new processes, optimize their management mode and jointly promote industry development
 <p>Customers</p>	<ul style="list-style-type: none"> Quality services Safe travel Easy access to comprehensive traffic information Well-established facilities 	<ul style="list-style-type: none"> High quality services Ensure safe and smooth traffic flow Ensure timely rescue and obstacle removal Comprehensive and timely road information Well-established road facilities 	<ul style="list-style-type: none"> Render feedback on services and open the complaint channels to public Improve traffic efficiency with new technologies and innovative modes Strengthen emergency rescue and attach importance to road safety management Timely release traffic information Strengthen road maintenance
 <p>Employees</p>	<ul style="list-style-type: none"> Equal employment Career development Occupational health and safety 	<ul style="list-style-type: none"> Salary and benefits Development opportunities Training system 	<ul style="list-style-type: none"> Continuously improve the salary performance system and carry out employee satisfaction survey Optimize the position system and assessment and promotion mechanism and put into place systems for competitive recruitment of management positions and new employee guides Attach importance to career development training, expand online and offline training courses, put into place incentive mechanism for those getting academic education and technical titles, etc.
 <p>Communities</p>	<ul style="list-style-type: none"> Operational ethics Community relations Public charity 	<ul style="list-style-type: none"> Environmental impact of Highway and environmental protection projects Business ethics Participate in community development Support public charity 	<ul style="list-style-type: none"> Do well in project environmental assessment, planning and design Value coordinated development with surrounding communities, make public the complaint channels and timely and properly handle reasonable appeals Carry out targeted poverty alleviation and support regional development Carry out public welfare activities
 <p>NGOs/non-government environmental protection groups</p>	<ul style="list-style-type: none"> Environmental impact management Low-carbon operation Resource utilisation 	<ul style="list-style-type: none"> Make rational use of resources Protect the ecological environment 	<ul style="list-style-type: none"> Improve the efficiency of energy and resource utilisation Implement green operation and office Strengthen the disclosure of environmental information

Assessment of Material Issues

During the preparation of the Environmental, Social and Governance (ESG) report, we identified 23 potential materiality issues combined with the regulatory disclosure requirements and the focuses of stakeholders and benchmarked them with the outstanding enterprises in the industry. External experts in sustainable development were invited to provide professional advices on the ranking of materiality issues, to ensure that the existing issues are highly related to the business operation of Shenzhen Expressway and the development of the industry. The final review of major issues and ranking by the Company's management that the identified materiality issues are feasible and effective. Based on the analyzed results of materiality issues, the major issues are fully elaborated in this Report and will be carefully considered when formulating internal development strategies and management policies.



Highly material issues

- 1 Compliance
- 2 ESG governance
- 3 Occupational health and safety
- 4 Information disclosure
- 5 Fulfillment of commitments
- 6 Investment return
- 7 High quality services
- 8 Safe travel
- 9 Business ethics

Moderately material issues

- 10 Timely and comprehensive road information
- 11 Risk control
- 12 Equal employment
- 13 Career development
- 14 Climate action
- 15 Land use
- 16 Contributing to economic and social development
- 17 Environmental impact management
- 18 Low-carbon operation
- 19 Biodiversity
- 20 Facilities improvement
- 21 Public charity

Material issues at a low level

- 22 Resource utilisation
- 23 Community relations

Advocating Integrity and Cleanliness

Shenzhen Expressway adheres to the business philosophy of integrity and cleanliness. Focusing on responsibility implementation, the Company strengthens the construction of the anti-corruption management system. It reinforces constraints and supervision on the operation of power, urging functional departments to closely integrate anti-corruption risk prevention with their business management. This promotes the integration of anti-corruption risk prevention into various aspects of the Company's production and operation processes.

Compliance Management

Shenzhen Expressway comprehensively strengthens compliance construction, using *Shenzhen Expressway Group Co., Ltd. Compliance Manual* as the general guideline and the *Regulation Management Measures* as the basic system. It has issued the *Compliance Risk Checklist for 13 Key Business Areas such as Tendering and Procurement* and established a compliance management organisational structure with clear responsibilities and coordinated linkage. The Company has established three lines of defense: "Business Department – Risk Management and Legal Affairs Department – Audit Department, Discipline Inspection Department," with strict control at each level, progressing layer by layer to prevent and mitigate potential compliance risks. Through the application of a compliance information system, we embed compliance risk audits into existing business information systems, integrate identified compliance risk points and prevention measures into existing business processes and strengthen real-time management and risk analysis of business operations through dynamic monitoring.

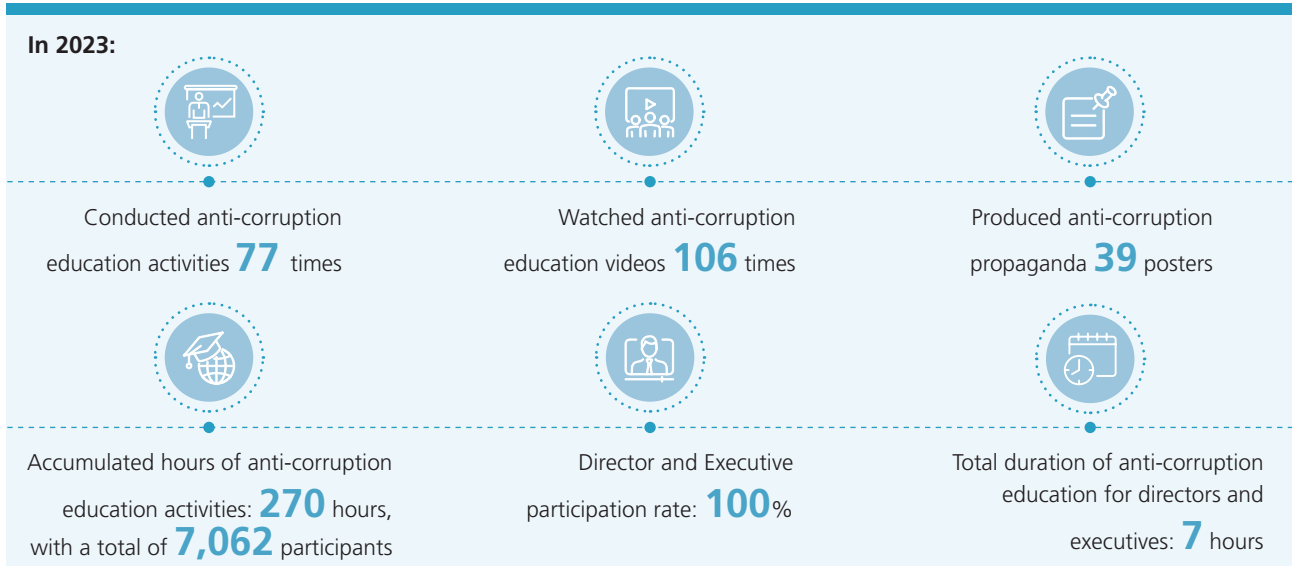
During the reporting period, Shenzhen Expressway held a signing ceremony for the *Compliance Commitment Letter*. Senior management of the Group led by example, fully demonstrating a role of setting an example and guiding others, thereby promoting a compliance mindset among all members of the Group.

Risk Prevention and Control

Shenzhen Expressway has established a comprehensive risk prevention and control system and mechanism throughout the entire chain, and has constructed a "six-sphere Integrated Plan" supervisory pattern. It actively promotes coordination and integration of various supervisory measures and facilitates the better transformation of institutional advantages into governance effectiveness. The Company diligently conducts annual assessments of major risks and effectively tracks and monitors these risks on a quarterly basis, implementing corresponding measures. The Company focuses on key areas such as production and operation, reform and innovation, industrial investment and risk prevention and control. It strengthens daily supervision and inspections, conducts in-depth research to address issues and proactively prevents and resolves operational risks. During the reporting period, we ensured the integrity and efficiency of major construction projects through comprehensive supervision. Independent third-party professional institutions were hired to conduct full-process audit and actively promote the creation of "sunshine, quality, and integrity" projects.



Focusing on key areas of concentrated authority, capital operation, fund management and out-of-town projects, which involve centralised power, intensive capital and abundant resources, Shenzhen Expressway continues to intensify its supervision efforts. The Company increases control measures for key individuals, key processes and key areas that may pose significant risks of integrity and compliance in operational management activities. There is ongoing enhancement in the manual for preventing and controlling integrity risks. In 2023, we have set quantitative assessment requirements for 6 task contents, including strengthening work style construction, promoting the development of an honest culture and preventing corruption at its source, to reinforce organisational responsibilities.



Report Acceptance

Shenzhen Expressway standardises the acceptance and disposal process of reported issues, rigorously investigates and expeditiously handles various reported problems, deepens accountability investigations and supervises the resolution of issues, continually enhancing the standardisation, rule of law and regularisation levels. In accordance with the *Management Measures for Disciplinary Inspection, Petition and Reporting* we have defined the process for accepting and handling reports, ensuring that letters, complaints, reported cases and incidents are accurately, promptly and fairly addressed.

Work Process for Discipline Inspection, Petition and Reporting



Discipline Inspection and Supervision Reporting Channel of Shenzhen Expressway

- Mailing Address: 46/F, Hanking Center, No. 9968, Shennan Avenue, Nanshan District, Shenzhen, Guangdong Province, China
- Reporting E-mail: jjjian@sz-expressway.com
- Reporting Hotline: 0755-86698236

Reporter Protection System of Shenzhen Expressway

Shenzhen Expressway strictly adheres to the laws and regulations relating to the protection of whistleblowers' information and has established clauses for whistler protection with the aim of fully protecting the rights of reporters and preventing any form of retaliation for their reporting activities. We have established a dedicated processing team responsible for receiving, registering, investigating and handling reported matters, ensuring the confidentiality of the reporter's personal information.



All departments, units and personnel must keep strictly confidential the whistle-blower's name, employer, home address and other relevant information



Relevant reporting materials must be submitted to the Company's Discipline Inspection Committee for confidential management



The reporting materials shall not be excerpted, copied, withheld or destroyed without permission and transfer of reporting materials to the unit or person reported against is strictly forbidden



The acceptance of the report from the reporter and the verification of the situation with the reporter shall be carried out under the condition of maintaining confidentiality and not disclosing the reporter's identity



Rewards and publicity for the meritorious whistle-blower shall not disclose the name, employer and other information about the reporter without the written consent of the whistle-blower

Integrity Education

Shenzhen Expressway adheres to the principles of prioritizing education, prevention and warning in promoting ethical culture. It considers the construction of an ethical culture as a foundational project, continually enhancing the dissemination, impact and penetration of ethical culture. The Company has established a "Ethical Column" in its office system, regularly publishing distinctive columns such as "Legal Articles," "Disciplinary News," "Warning Cases," and "Discipline Highlights" to effectively strengthen awareness of ethical conduct. In 2023, the signing rate of Shenzhen Expressway staff's commitment to ethical conduct reached 100%.

Integrity Management

Shenzhen Expressway advocates the concept of integrity and adheres to business ethics. The Company regards integrity as the foundation for its establishment, cultivating a core set of values based on integrity. We deeply instill a sense of integrity in the hearts of all employees to make each employee an executor and defender of business ethics. During the reporting period, all newly appointed and newly hired personnel at Shenzhen Expressway underwent business ethics training.

The Company respects market rules, abides by the spirit of contracts and maintains a fair competitive environment. We adhere to the "Sunshine Purchase Policy" and have formulated a series of management regulations and systems, including the Procurement Management Procedure, Procurement Operation Rules, Evaluation and Determination Committee Establishment and Management Measures and Tender Supervision Group Establishment and Management Measures. All procurement activities must be publicly disclosed on the Shenzhen Sunshine Procurement Platform. In 2023, we further increased procurement transparency, with the public procurement rate rising by 16% compared to the previous year.



Case

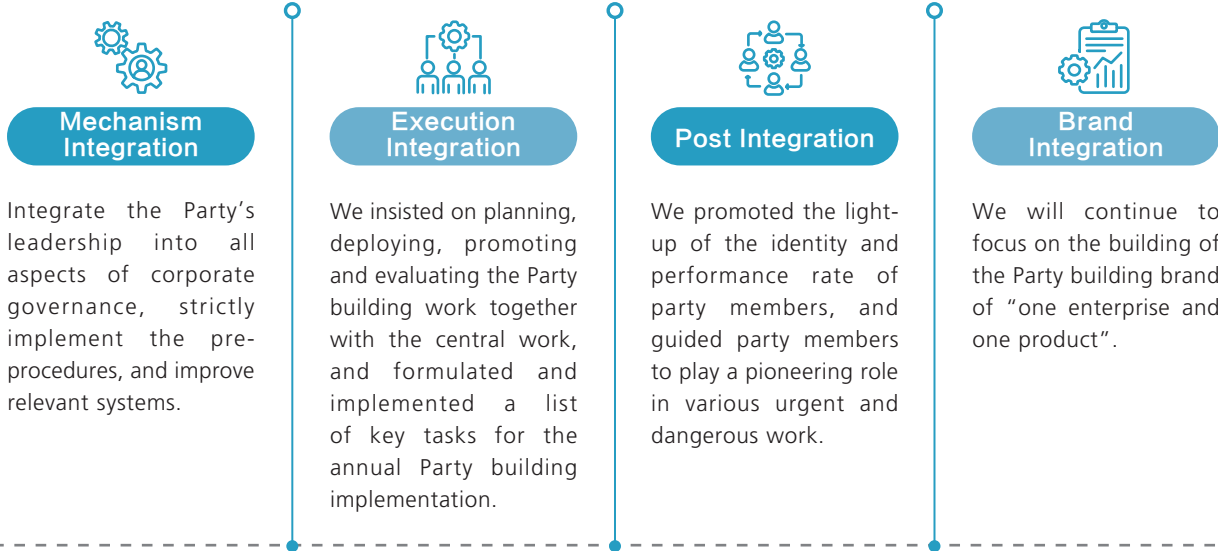
Shenzhen Expressway held a bid selection work case sharing

In March 2023, Shenzhen Expressway organised a training session for over 140 contract management and discipline inspection supervisors at all levels, focusing on bid selection laws and regulations, Group procurement systems, bid selection practices and the discipline of the bid selection committee. The training aimed to enhance participants' understanding of various elements, priorities and responsibilities related to bid selection work, fostering a deeper and more intuitive comprehension. It also reinforced the importance of business ethics and fair competition among the participants.

Igniting the Party Building Brand

As a state-owned listed enterprise, Shenzhen Expressway has always adhered to the unity of the Party’s leadership and standardised corporate governance. The Company always insists that Party building is inseparable from business, bearing in mind that Party building is the most important responsibility, and development is the first priority. The Company has adhered to the principle of “focusing on Party building around business and promoting the development of Party building” and continued to strengthen Party building innovation in terms of concepts, mechanisms, methods and carriers.

Four Major Integrations of Party Building Work and Operation



We led the construction of corporate culture with Party building, focused on building the “456 Project of Leading Party Building and Cultural Empowerment”, cultivated corporate culture with the spirit of great Party building and core socialist values, and cultivated corporate culture with the spirit of “breaking”, the spirit of “creating” and the style of “working”, created a corporate culture construction system with the characteristics of Shenzhen Expressway, and created a strong atmosphere of “working together to create a future”.



Framework of “Party Building Pilot and Culture Empowerment 456 Project”

We insist on integrating the Party flag into the front line of key projects, and insist that a project is a position. With the vanguard of Party members, the vanguard of Party members and the youth commando as the starting point, we carry out the actions of party members to light up their identity, responsibilities and commitments. At the same time, we insist on leading the team building with Party building, creating a youth civilization number, and giving full play to the role of Party members and youth backbones in the face of critical tasks of emergencies and difficulties, continuously improving the service level, promoting the quality and efficiency of projects under construction, and winning unanimous praise from all parties in the society.

02

Managing Precisely for Quality Projects

Shenzhen Expressway adheres to fulfilling the mission of “building high-quality infrastructure and serving a better life in the city”. Through rich experience in infrastructure construction, advanced operation and maintenance technology and warm and comfortable operations management services, we continuously enhance the comfort of the driving experience. We showcase our commitment to quality by providing a safe and convenient travel environment, practicing the corporate mission.

Aligning with the United Nations Sustainable Development Goals (SDGs)



Key Issues

- High Quality Services
- Safe Travel
- Facilities Improvement
- Contributing to Economic and Social Development

Keeping a Tight Grip on Safety

Shenzhen Expressway adheres to the concept of safe development and implements the work safety policy of “safety first, dual prevention, system guarantee, responsibility implementation”. With the most resolute attitude, strongest actions, solid measures and strict requirements, we focus on all aspects of road traffic safety.

Safety System

Design of Work Safety System

In accordance with laws and regulations such as the *Management Measures of Emergency Plans for Work Safety Accidents* and *Basic Norms for Work Safety Standardisation of Enterprises*, Shenzhen Expressway has further revised relevant management systems. Building upon the existing system, it has constructed a “1+N+5” framework for work safety management systems. This framework integrates work safety management requirements with the system, clearly defining three key pathways: “Dual Prevention Mechanism Construction, Multilayered Control System, Work Safety Standardisation.” Implementation involves a four-step closed-loop management approach: “Regular assessment, Leak detection and correction, System optimisation, Inertial operation,” aiming to enhance the comprehensiveness and practicality of safety management systems.

“1+N+5” framework for work safety management



1 overall work safety procedure



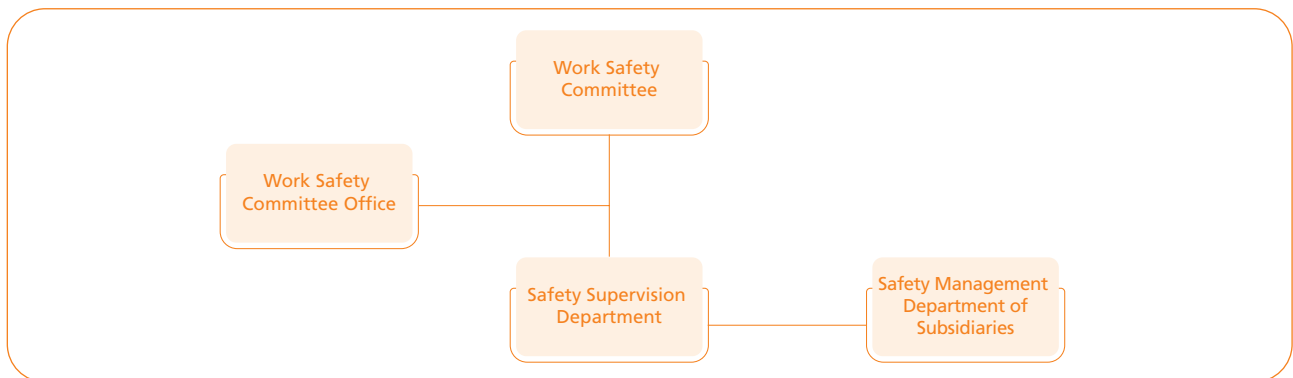
N supporting work safety management systems



5 work safety guidance manuals for major business sectors

Work Safety Management Organisation

Shenzhen Expressway continues to enhance its four-level work safety management structure. At the Group level, a Work Safety Committee has been established, with the Chairman and General Manager jointly serving as the committee directors, responsible for the management and supervision work. The Group has a Work Safety Committee Office and a Safety Supervision Department. Each subsidiary Company has established a safety management department, equipped with suitable specialised full-time or part-time personnel.



Work Safety Management Structure

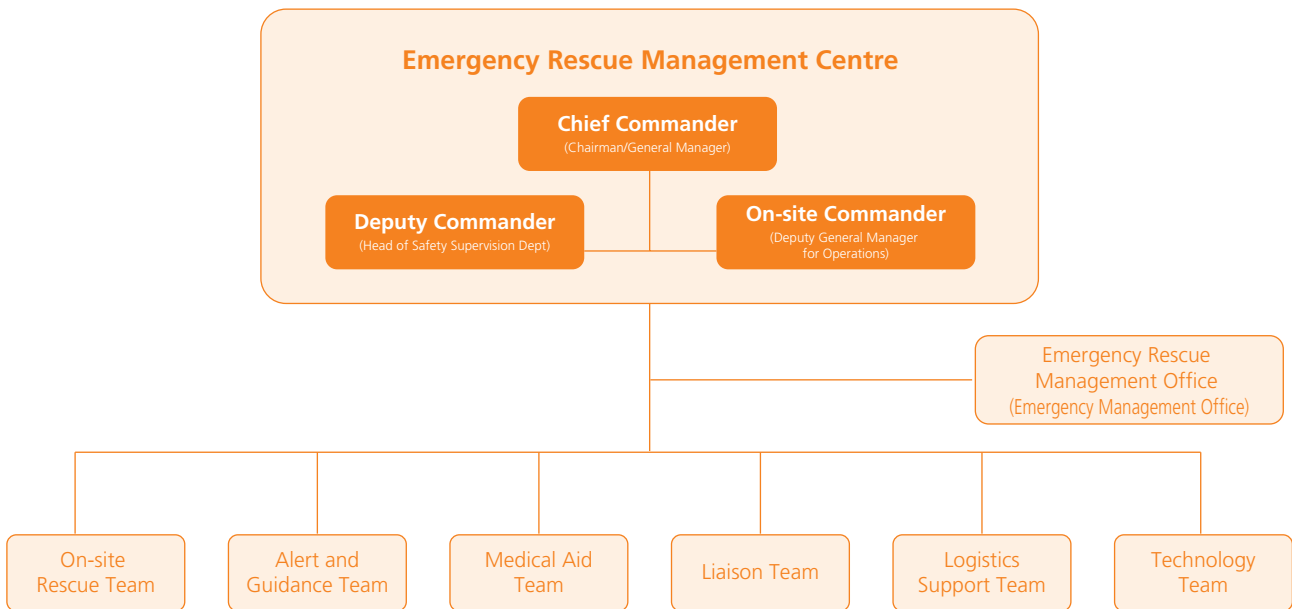
Work Safety Standardisation Construction System

Shenzhen Expressway strives to establish a long-term work safety mechanism. In accordance with the relevant arrangements and management requirements of “Work Safety Standardisation Construction,” the Company is optimizing the safety management system, deepening the construction of risk control lists and job responsibility lists. It is accelerating the integration of work safety standardisation systems across various business sectors such as engineering construction and operation, promoting the construction of standardised maintenance demonstration zones. During the reporting period, the Company effectively implemented the operation of a first-level work safety standardisation system.

In 2023, Shenzhen Expressway achieved the first-level standardisation in work safety.

Safety Operation Control and Prevention

Shenzhen Expressway adheres to the principle of “assigning responsibility for each risk and managing risks at different levels based on their severity,” deepening the construction of a dual prevention mechanism. The Company comprehensively carries out risk safety classification and control, as well as hazard investigation and rectification. We have formulated the *2023 Action Plan for the Special Inspection and Rectification of Major Accident Hazards in Shenzhen Expressway Company* and implemented risk identification work. Emphasis has been placed on the inspection of hazards in key areas such as engineering construction and highway operations. Based on the identified results, we have organised the *Task List for the Heads of Headquarters and Affiliated Enterprises*, detailed the formulation and implementation of control measures and tracked each item in each department and affiliated enterprise. This has led to the development of the *Emergency Plan for Production Safety Accidents*, the enhancement of special emergency plans for occupational health and safety and on-site disposal plans. The focus is on fundamentally eliminating hazards and resolving issues at their roots.



Shenzhen Expressway Emergency Organisation Structure

To ensure that emergency rescue resources are in a good standby state, the Company has equipped an Emergency Rescue Command Centre composed of the Chief Commander, Deputy Commander, On-site Commander, Emergency Management Office and various emergency functional groups. The command centre, serving as the decision-making and commanding body of the Company’s emergency management, is capable of effectively enhancing the rapid response, emergency rescue and collaborative combat capabilities of the emergency organisation.

Responsibility Assessment

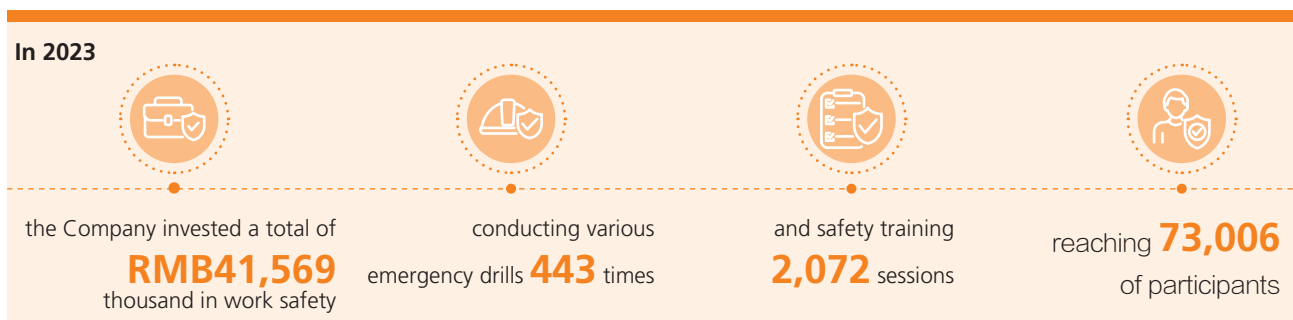
Shenzhen Expressway is building a comprehensive safety responsibility system, promoting the implementation of safety responsibilities throughout the entire chain, from leadership teams to grassroots levels, from the safety department to business departments and from internal systems to external stakeholders. The safety responsibilities are progressively detailed at each level and work tasks are systematically decomposed. As a crucial element of the executive compensation and performance assessment system, the Company further refines the content and quantifies the assessment indicators of safety production management responsibilities, effectively enhancing the operability of safety production. During the reporting period, we engaged a third-party organisation to assess the performance of 11 units in on-site management, education and training, emergency plans and other aspects. The results indicate that the Company’s safety production standardisation system is running well.



In 2023, the Company did not experience any responsible work accidents and achieved the “zero casualties” work safety goal.

Safety Promotion

The work on ensuring safety in production is a long and arduous task. To further enhance the safety awareness of all staff and fortify their ideological defence, Shenzhen Expressway conducts safety training and education at the Group, headquarters department and subsidiary company levels. Through innovative activities such as themed safety training, safety knowledge promotion, safety knowledge competitions and safety awareness consultation days, the Company aims to facilitate continuous learning and knowledge acquisition for all employees.



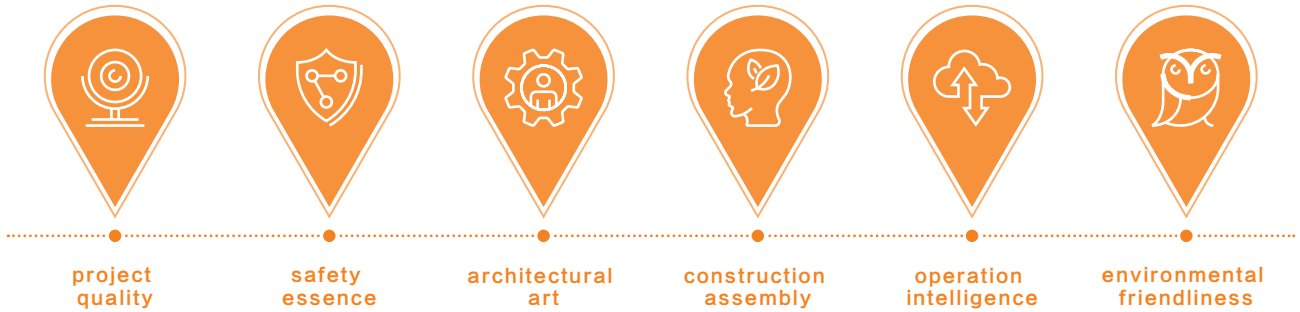
“Zero Accident in Construction Projects” Special Training



2023 Safety Production Excellent Practices Project Assessment Meeting

Elevating Road Quality

Shenzhen Expressway is committed to providing high-quality products and services. We adhere to the construction philosophy of “project quality, safety essence, architectural art, construction assembly, operation intelligence and environmental friendliness”. Our goal is to build safe and high-quality projects for a century. Focusing on project quality, we aim to create high-quality projects that are durable, safe, comfortable and environmentally friendly.



Project Quality Management

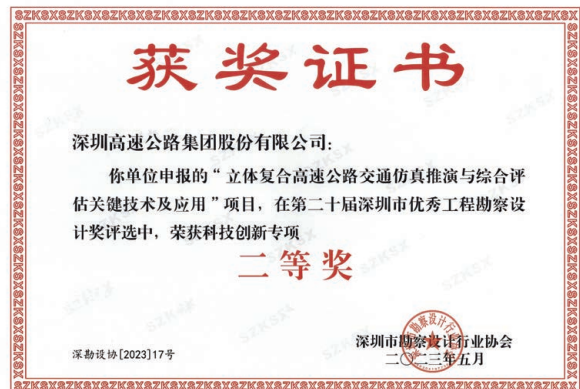
According to the *Law of the People’s Republic of China on Product Quality, Regulations on Quality Management of Construction Projects* and other laws and regulations, Shenzhen Expressway has established an Engineering and Technical Committee. This committee works to enhance the quality control system throughout the entire process, including project planning, engineering design, project bidding, material monitoring, construction and project operation. By strictly controlling quality risks, we ensure the quality of both projects and services.

In road construction, we employ effective measures such as quality inspections and performance evaluations. At key points in projects, we conduct cross-inspections of quality by combining internal technical experts with external specialists. This approach emphasises the effectiveness of inspections and ensures implementation at each level. Throughout the year, comprehensive inspections were carried out on dimensions such as raw material quality, project entities, management practices and construction sites. The overall quality of inspected projects remained stable and there were no quality incidents during the year.

Case

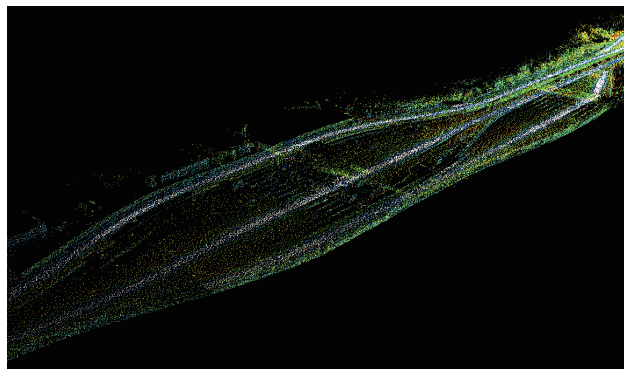
Shenzhen Expressway quality innovation won the Second Prize in Shenzhen Excellent Engineering Survey and Design Technology Innovation

Shenzhen Expressway utilised techniques such as big data, traffic modelling and simulation and driving simulation to produce research outcomes such as “highly reliable simulation deduction technology,” “key design indicator system,” and “sign guidance system.” These achievements have reached international advanced levels, supporting the implementation of the three-dimensional composite expansion plan for the Shenzhen Bao’an International Airport Expressway expansion and reconstruction project. The innovations have also been applied to other projects, including the Outer Ring Expressway, the Coastal Expressway and various other major transportation infrastructure projects nationwide. This has significantly enhanced the design and construction quality of major transportation infrastructure projects in China.

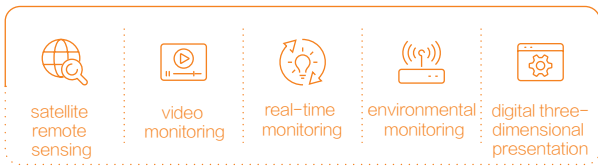


Case Shenzhen Expressway has implemented digital supervision for major projects

Shenzhen Expressway has advanced the application of technologies such as satellite remote sensing, video monitoring, real-time monitoring, environmental monitoring and digital three-dimensional presentation in engineering. Integrated with the key highway construction management system, the Company utilises applications such as “BIM+ Project Management + Imaging System,” blockchain, AI and the Internet of Things (IoT) to enhance the efficiency of project information collection and supervision. This approach aims to enhance the overall quality of engineering projects.



• Shenzhen Expressway Highway Point Cloud Data



In terms of maintenance and operation, we aim to make the managed roads safer, more comfortable and more efficient. We have established a workflow for the road maintenance project database. The Company has compiled the accumulated technology and experience into a *Maintenance Management Manual*. Combined with seasonal characteristics and the conditions of various road sections, we formulate targeted preventive maintenance plans to extend road surface performance.

Case The Engineering and Technology Committee organised a special maintenance project review meeting

In September 2023, the Engineering and Technology Committee organised a review meeting for the special maintenance projects on the directly managed road sections of the Operation Development Company. The meeting listened to presentations from the design unit regarding the construction drawing design schemes for two projects. Experts and representatives at the meeting conducted thorough discussions and reviews on the road surface treatment plan, road surface drainage design, traffic evacuation design and maintenance plan for drainage facilities in the directly managed road sections.



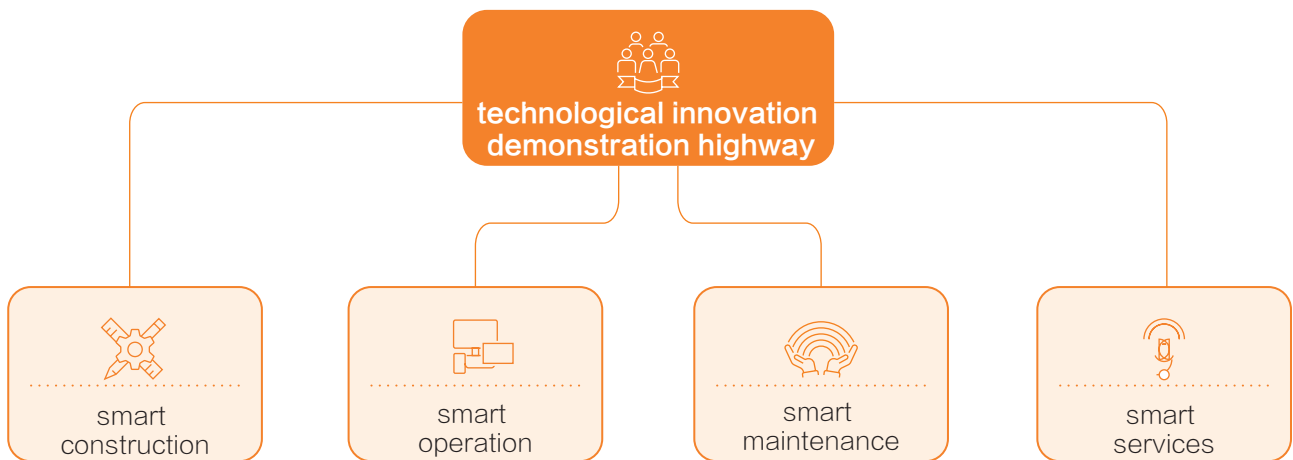
The Motorway Quality Index (MQI) for the Company’s operated road sections from 2021 to 2023 is as follows:

MQI	Longda Expressway	Jihe West	Jihe East	Meiguan Expressway	Coastal Expressway	Outer Ring Project	Qingyuan-Lianzhou Expressway	Yiyang-Changde Expressway
2021	92.29	94.31	94.01	95.04	97.03	–	90.86	95.28
2022	90.81	94.69	94.38	94.98	96.95	–	91.03	95.09
2023	91.94	94.69	94.38	92.64	96.06	96.22	90.91	94.72

Smart Expressway Construction

Innovation is the key to Shenzhen Expressway’s success. The Company takes the lead in the field of smart transportation, embedding various intelligent technologies to advance research and application of intelligent traffic. We have introduced the “1343CITI” digital blueprint framework and set the “SZE1231” research and development innovation goal strategy, using the technological innovation system and information technology as carriers to enhance the application level of the Company’s technological innovation achievements.

We promote the application of smart engineering technology, integrating smart technologies into traditional highway projects. The focus is on enhancing the digital capabilities of expressway construction and operation. We are building a technological innovation demonstration highway around smart construction, smart operation, smart maintenance and smart services.



Case Smart Construction

With BIM and smart construction as the core, we strengthen the intelligent management capabilities of engineering projects and the visual management capabilities of road assets. Based on BIM, we accumulate digital assets and achieve data management throughout the entire lifecycle.

Case Smart Operation

Building on existing systems for road maintenance and network monitoring, we plan to incorporate a smart application platform covering structural health monitoring, smart tunnels, proactive traffic control and more. This aims to achieve smooth traffic flow, congestion relief and emergency safety.

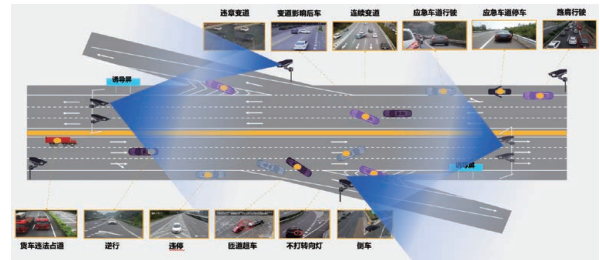
Case Smart Maintenance

Real-time collection of road infrastructure images, AI automatic identification and comparison of road damage conditions to enhance inspection efficiency. The construction simulation function accurately analyses reasonable construction times, reducing the frequency of maintenance and major repairs.

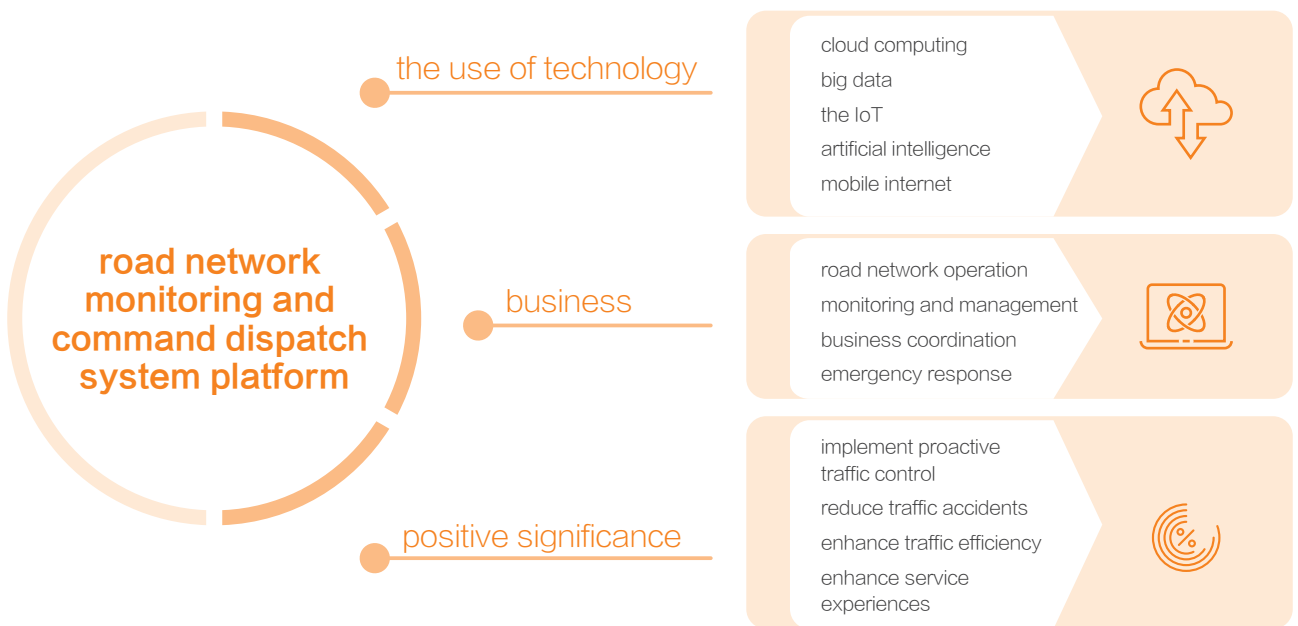


Case Smart Services

Establish an intelligent and agile customer service system for passing vehicles using the V2I system, smart service area management system and smart customer service system, aiming to enhance customer satisfaction.



The Company utilises new technologies such as cloud computing, big data, the IoT, artificial intelligence and mobile internet to real-time monitor road conditions, implement proactive traffic control, reduce traffic accidents, enhance traffic efficiency and service experiences. Our successfully developed road network monitoring and command dispatch system platform is now operational, providing an information application platform for road network operation monitoring and management, business coordination, emergency response and other related operations.



Case Deploying a road inspection application system based on unmanned aerial vehicles (UAVs)

Shenzhen Expressway has established a UAV command and dispatch centre. The UAV flight dispatch system and business management system include functions such as inspection task application, approval, execution, inspection event management and inspection report generation. This system can dispatch multiple UAVs for real-time remote collaborative operations, meeting various requirements for road inspections, infrastructure inspections, emergency command and rescue operations.

 road inspections	 infrastructure inspections
 emergency command	 rescue operations



• UAV Command and Dispatch Centre

Case The Coastal Phase II project uses the “Concrete Levelling Robot” for beam surface levelling

The “Concrete Levelling Robot” utilises a domestically developed GNSS fully automatic navigation system, a dual-degree-of-freedom adaptive system and integrates intelligent motion control algorithms, high-precision laser recognition measurement, real-time control and other technologies. It can overcome challenges in controlling bridge deck smoothness and slab thickness, effectively enhancing the construction quality of the flatness of the prestressed concrete cast-in-place continuous box girder bridge deck.



• Concrete Levelling Robot

Shenzhen Expressway values knowledge and innovation, placing importance on the protection of intellectual property rights and providing incentives for innovation. We have implemented the Intellectual Property Rights Management Procedure to carry out the Company’s intellectual property protection and patent management work, effectively preventing infringement and protecting against infringements. Additionally, in accordance with the *Innovation Incentives and Constraints Management Measures*, we reward employees for their research and innovation achievements to stimulate creativity among our staff.

Providing Pleasant Driving Experience

In line with the customer philosophy of “sincere companionship and win-win growth”, Shenzhen Expressway takes serving the passengers, creating comfortable driving environment and spreading city civilisation as responsibility. We build a leading brand of professional highway service, improve the sense of comfort, happiness and satisfaction of drivers and passengers.

Create Quality Service

Using the “36710” service standard model as a carrier, Shenzhen Expressway is extending the service chain and demonstrating brand value through comprehensive and multi-dimensional service enhancement methods. We create service concepts, improve service quality, standardize service operations and streamline service procedures by focusing on the interests and demands of customers. With high-quality talents and ethics, we provide a safe and comfortable traveling atmosphere, as well as efficient transportation.

We concentrate on improving service capabilities by providing “36710 Civilisation Service” training to better serve drivers, passengers and the general public, achieving goal-oriented service quality, standardized service methods and proceduralized service processes. In 2023, we refined six major fee collection processes, increased employees’ awareness and skills and achieved a 2-second reduction in single-vehicle service time at toll stations.



“36710 Civilisation Service” training



“The Most Beautiful Road Sister Team” of Qinglian Company

We pay close attention to consumer feedback and gather information from them through a variety of ways. Shenzhen Expressway features a unified 24-hour hotline and also collects driver and passenger demands through on-site visits, websites, media and complaint channels. For all forms of consumer complaints received through various channels, we follow the principle of “responsibility from the first inquiry,” following through to completion and assigning accountability to individuals. All complaints are treated in accordance with the processes of acceptance, recording, filing, investigation, handling, follow-up, summarizing analysis and archiving, with event recording, investigation, handling, follow-up and written response within one working day.

We conduct questionnaire surveys and telephone visits to evaluate customer satisfaction data in the three main aspects of impression, quality and service. 2,350 questionnaires were returned and 360 customers were interviewed by telephone. The customer satisfaction survey index was 95.8.



2,350 questionnaires were returned



360 customers were interviewed by telephone



The customer satisfaction survey index was **95.8**

Ensure A Worry-free Trip

Guarding the highway safety is the glory of Shenzhen Expressway. We take multiple steps and use advanced intelligent control technology to improve the operation monitoring, control and emergency management capabilities of traffic hotspots, resulting in an orderly, safe and smooth highway passage environment and a better travel experience.

Highway Network Monitoring

Shenzhen Expressway encourages the development of a highway network monitoring and command dispatch system platform, creating a comprehensive monitoring platform for operation management, emergency response and public travel information services. The overall situation of road events is presented macroscopically through road operation monitoring, event monitoring and vehicle control, combined with intelligent dynamic algorithms to take preemptive measures such as ramp control, dynamic toll adjustment and road coordinated information control of surrounding road networks.



Active Traffic Control

Releasing Guidance Information

To improve the efficiency of public travel during peak traffic periods on holidays, Shenzhen Expressway uses various promotional methods such as distributing guide books to passengers, hanging travel guide banners at toll station entrances and using various media such as traffic broadcasts, TV stations, WeChat, Weibo, Official Accounts and newspapers to forecast rush sections, periods and other relevant information, clearly indicating immediate detours, and guiding traffic flow to avoid peak travel.



Live Commentary on Road Conditions



Road Condition on Noticeboard



Travel Guidance on Official Account



Travel Guidance on Weibo

Toll Plaza Diversion

Shenzhen Expressway continues to optimize the “one station, one policy” congestion management plan. Each toll station conducts advance analysis to assess traffic capacity, comprehensively understands peak traffic characteristics, optimizes handover times, increases flexible staffing, opens additional lanes to manage peak traffic, dynamically adjusts the mix of lanes and promptly activates emergency toll collection mechanisms to ensure smooth passage through toll plazas.



Traffic flow prediction and analyzation

Predict the increase in traffic flow at key toll stations to guide the emergency resource preparation work at each toll station.



On-site service and operation management

Follow the standardized operation and service procedures to ensure smooth and orderly traffic flow at the toll plaza.



Resource allocation and arrangement

Assess the allocation of various resources to meet and respond to emergency traffic flow needs.



Unified dispatching and commanding

The customer service center is responsible for collecting and summarizing information and guiding toll stations to implement contingency plans as needed.



On site guidance and information notices

Improving signage, updating traffic and road conditions through noticeboard, media and mobile signage.



Supervising and correcting

Establish a supervising team to undertake special analysis and distribute guidance on important congested road sections and toll stations.

Case

The Bulong toll station has added a pre-payment system to ease traffic congestion

Qinglong Company has implemented a new intelligent toll collecting mode of “ETC pre-transaction + CPC pre-estimation + special situation guidance + lane verification” to relieve congestion at the Bulong toll station. Following the implementation of the gantry pre-transaction system, the transaction time for a single ETC card was decreased from 410 milliseconds to 150 milliseconds and the maximum passing capacity of a single lane increased from 791 to 892 vehicles/hour. During peak hours, the toll plaza order has much improved.



Landscaping Design for Road Environmental Purposes

Shenzhen Expressway continues to improve the road environment by greening the triangular area, optimizing signage and enhancing the environment of key road sections and stations; strengthening service area management, promoting the establishment of “drivers’ homes” in service areas, deepening the special action of “toilet revolution,” and improving driver and passenger satisfaction.

Case Shenzhen Expressway started operating the first fully liquid-cooled supercharging demonstration station in Shenzhen

In September 2023, the supercharging demonstration station in Changzhen Parking Area of Shenzhen Expressway started operating. The fully liquid-cooled supercharging architecture of the charging station is able to match different vehicle models, improving the long-distance commuting efficiency of cars. The charging station's operation represents a significant breakthrough for Shenzhen Expressway in the sphere of highway charging services. Next, Shenzhen Expressway will continue to improve the charging experience by strengthening the safety management of charging heaps.



Emergency Rescue Guarantee

The differential satellite positioning technology and license plate identification technology of Shenzhen Expressway highway network system can help in promptly finding road surface incidents, hence increasing response efficiency. The rescue team is on standby 24 hours a day and is equipped with heavy-duty, medium-sized, small-sized wrecking trucks, flatbed trailers, cranes, we assign municipal road vehicles and wrecker trucks at congested points to ensure the safety and smooth flow of road.



Roadside Assistance



Escort Data Security

Shenzhen Expressway actively engaged in network security, establishing a sound information security management system such as the *Information System Network and Data Security Management Procedure*, the *Network and Data Security Emergency Response Plan*, implementing technical preventive measures and adopting multiple security measures to protect customer information. The Company upgraded its security equipment and terminal security software, purchased intrusion prevention systems (IPS), coordinated third-party inspection units for frequent inspections and improved overall security testing and defense capabilities.

Every year, we assess the state of the whole Group's OA system role privileges, the original transaction records and video are saved in the intranet and access rights are set. Strict control over query and operation permissions for client information data is enforced.

03

Powering Environmental Protection

to Guard the Green Original Intention

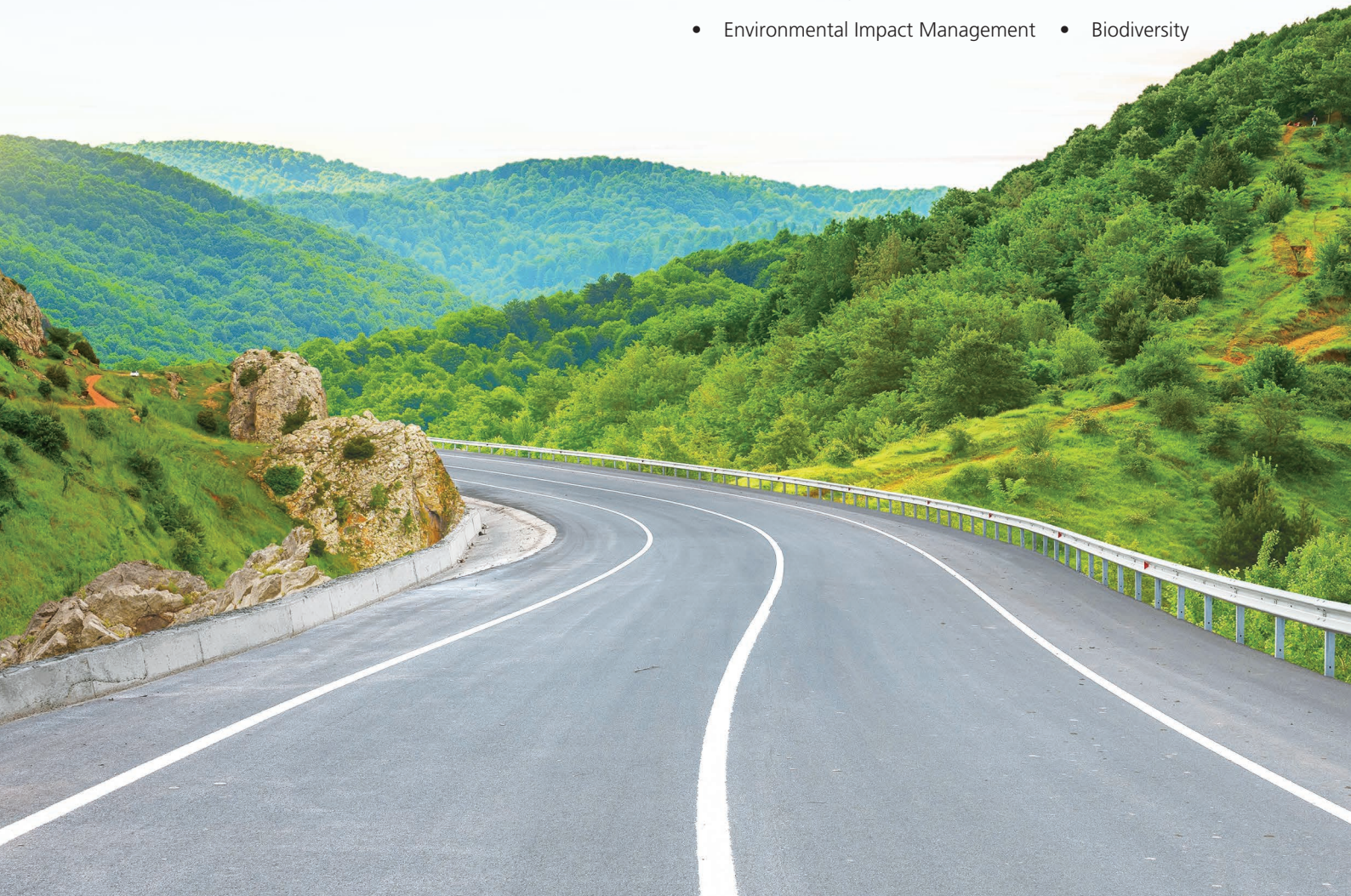
Shenzhen Expressway is completely committed to the concept of environmentally friendly development, emphasizing efficient resource utilisation as well as environmental protection. While pursuing high-quality development goals in the sector of transportation, the Company actively performs the obligation of environmental ecosystem enhancement. We are dedicated to become a global advocate and performer for green development and will continue to contribute more to establishing ecological balance and supporting sustainable development.

Aligning with the United Nations Sustainable Development Goals (SDGs)



Key Issues

- Resource Utilisation
- Land Use
- Low-carbon Operation
- Climate Action
- Environmental Impact Management
- Biodiversity



Strengthening Environmental Management

Shenzhen Expressway strictly complies with relevant laws and regulations such as the *Environmental Protection Law of the People's Republic of China* and the *Law of the People's Republic of China on the Environmental Impact Assessment* and has issued environmental management system documents, strengthened environmental monitoring, promoted environmental protection concepts and raised the level of environmental management.

Environmental Management System

The Shenzhen Expressway has an environmental management system that encompasses a number of its business processes. Additionally, the Company has employed specialized environmental supervision to oversee environmental protection efforts, guaranteeing that environmental considerations are taken into account at every stage of the process, including route selection, design, material procurement, project construction and operation. In 2023, Shenzhen Expressway's environmental management system was running well and its subsidiaries – Nanjing Wind Power, Bioland and Shenshan Qiantai, for example – have obtained the certification of ISO 14001 environmental management system.



The Certification of ISO 14001 Environmental Management System

Environmental Supervision System



Preparation phase

- Environmental impact assessment by professional organisations: engage professional organisations to conduct detailed environmental impact assessments to ensure compliance with environment protection legal requirements.
- High environmental protection standards: not only meeting basic legal requirements but also strive to achieve the highest environmental protection standards.



Construction phase

- Monitor over water, gas, sound, solid waste, ecological environment and radioactive substances according to specific requirements of the EIA report and its reply.
- Ensure compliance with specific requirements for pollution and ecological environmental protection during construction.



Check-up phase

- Supervise and inspect the construction unit to organise the documents and data of project completion in time.
- Give opinions on environmental supervision.
- Submit the general report of environmental supervision during the project construction period.
- Impose various constraints on the construction contractor to minimize the project's environmental impact.

Environmental Risk Prevention

Shenzhen Expressway takes decisive measures to prevent and respond to environmental concerns. The Company developed the *Emergency Plan for Sudden Environmental Incidents*, clarified the roles of personnel at all levels in dealing with incidents, improved employees' emergency response abilities for environmental protection, ensured maximum control of incident spread, reduced potential risks and maximized protection of the ecological environment and public health.

In order to enhance the Company's emergency response capabilities for hazardous waste leaks and environmental emergencies, we conducted emergency drills to examine and evaluate the project's emergency rescue system, continuously improve emergency plans and consolidate employees' emergency rescue knowledge through drills to strengthen emergency response capabilities.

Case

Bioland conducts emergency drill on hazardous waste leakage accident

When a worker in Bioland accidentally knocked down a bucket of waste oil (replaced by water), resulting in a large amount of waste oil leaking from the bucket, the commander immediately initiated the emergency response plan. During the drill, the teams responded quickly and emergency materials and vehicles were transported to the scene for emergency rescue tasks. This drill improved the workers' ability to respond to emergencies involving hazardous waste and chemical spills during their daily work.



Environmental Protection Public Welfare Activities

Shenzhen Expressway has been making efforts to set a good example for environmental protection public welfare. We promote environmental protection concepts and advocate for energy conservation and emission reduction, conveying important information about energy conservation and emission reduction to the society, attracting more people to join the environmental protection action.

Case

Shenzhen Expressway organised the subsidiary companies to carry out energy-saving publicity week activities

In July 2023, Shenzhen Expressway's affiliated companies utilized their business advantages to engage in a variety of energy-saving campaign, advocating for low-carbon production and green lifestyle, practicing the concept of low-carbon development and making every effort to create a strong atmosphere of energy conservation and carbon reduction.



• Operation Development Company Held Greening Transportation Campaign



• Environmental Company Participate in Environmental Protection Exhibitions

Case

Lisai Environmental Protection's science education exhibition hall officially opened to the public

In June 2023, Lisai Environmental Protection hosted the unveiling ceremony of the "Lighting up the New Coordinates of Waste Classification, Understanding the New Green Fashion" domestic waste classification science education base, declaring the exhibition hall open to the public. The science education base provides visitors with an intuitive and immersive experience, reminding everyone to address the issue of waste from a scientific perspective, practice waste classification, promote environmental protection and share the beauty of the city.



Constructing and Operating Sustainable Infrastructure

Shenzhen Expressway has been committed to green construction and operation. Sustainability and environmental protection are no longer optional in modern society, they are critical goals that must be completed. We uphold our moral obligation to the environment by ensuring that all initiatives engaged adhere to the highest green standards.

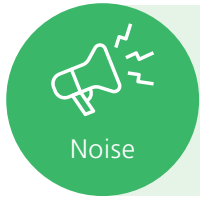
Practicing Civilized Construction

Shenzhen Expressway advocates and practices civilized construction. We have taken a series of comprehensive and detailed measures to promote refined management of the construction process, seeking the best balance between urban quality and construction speed and striving to make every construction project an interpretation of civilisation.



Dust

Shenzhen Expressway requires construction sections to prepare a *Dust Pollution Prevention and Control Special Plan*, implement dust control measures and encourage resource recycling. To increase dust control and maintain regular management, eco-friendly and energy-saving procedures are utilized in construction, adhering to the “three concentrations”² approach. The Company has set aside particular funding for dust control, encouraging construction parties to take precautions to reduce environmental impact.



Noise

Shenzhen Expressway seeks to address noise pollution issues and has enclosed steel processing plants and concrete mixing stations using the “three centralized” principle, which reduces noise and air pollution during construction. Additionally, Shenzhen Expressway monitors construction units to implement noise reduction measures such as the “eight must-dos”³ in accordance with the *Technical Specification for Prevention and Control of Construction Project Noise Pollution*.



Water pollution

Shenzhen Expressway installs mobile toilets, wastewater sedimentation tanks and grease traps on the construction site to utilize some of the wastewater. We apply sealed sewage suction trucks to transfer construction effluent that cannot be reused to the municipal wastewater treatment plant for treatment. We will install interception ditches and sedimentation tanks near construction sites to collect and drain wastewater created during construction to ensure adequate wastewater treatment and to maintain water resources and environmental quality.

We regularly conduct contractor civilized construction evaluation activities, summarize and analyse the environmental hygiene of the construction site, neatness of construction materials storage, standard attire of construction personnel, as well as control of construction noise and dust. We honour and award excellent construction sites in order to promote uniformity, standardisation and civilisation.

² Enforcement of closed construction for steel processing plants, concrete mixing plants and asphalt mixing plant production.

³ Effectively managing public visits, communicating with impacted communities, issuing public announcements, adhering to the law on continuous construction, putting various noise reduction measures into place, scientifically planning construction time, bolstering public awareness and education on civilized construction, and ensuring online monitoring and networking are all critical tasks.

Low Carbon and Green Operation

Shenzhen Expressway has always adhered to the development concept of cleanliness and low carbon and has established a comprehensive energy management system. In the production and operation process, we strictly control energy consumption, strengthen energy conservation and emission reduction management and control measures, regularly update electromechanical equipment, promote material recycling and through continuous improvement and innovation, promote the Company's development towards a more environmentally friendly and efficient direction.

During the road operation stage, we added no-honking signs in key road sections, installed sound barriers along the route and used new shock-absorbing noise-reducing road materials to reduce traffic noise pollution. We have actively adopted energy-saving LED light sources and implemented a series of energy-saving measures such as using electronic invoices. Compared to traditional high-pressure sodium lamps, LED light sources have the advantages of lower energy consumption and lower emissions. By the end of 2023, a total of 25,421 sets of LED light sources have been deployed on the road sections directly under our jurisdiction in Shenzhen. Compared with high-pressure sodium lamps, the annual electricity consumption is reduced by 54.5% through saving about 20.28 million kilowatt-hours of electricity, which is equivalent to reducing about 11,565.68 tons of carbon dioxide emissions. In 2023, approximately 144 million pieces of paper are saved by the issuance of electronic invoices for the Group's road sections, equivalent to reducing approximately 423.55 tons of carbon dioxide emissions.



The Application of Unmanned Aerial Vehicle Patrol Reduces the Energy Consumption of Vehicles



Purchasing New Energy Dumping Trucks to Improve Energy Efficiency



Shenzhen Expressway Advocates Issuing and Receiving Electronic Invoices to Reduce Paper Consumption

Case Qinglong Company recycles asphalt pavement materials

Qinglong Company has set a maintenance management goal of achieving a 95% recycling rate of old asphalt pavement materials. The Company's three pavement maintenance construction units have the closed-loop production capacity for waste material recycling at production which based in Huizhou and Dongguan. Through complete recycling of used pavement materials and sensible use of varying degrees of waste materials, the Company has fulfilled its green maintenance objective and offered an example of sustainable development.

Resource Usage Data of Shenzhen Expressway in 2023



103,737,634 kWh

Electricity



123,716 kg

Liquefied petroleum gas



732,790 Litre

Gasoline



1,710,269 ton

Water resources



407,473 Litre

Diesel



184 ton/million revenue

Water use intensity



2,589,477 Cubic metre

Natural gas



15,231 kWh/million revenue

Comprehensive energy consumption intensity

Benchmarking year 2021, we expect to reduce water consumption per million RMBrevenue by 2.5% and to reduce comprehensive energy consumption per million RMBrevenue by 3% in 2024.



Low Carbon Office Work

Shenzhen Expressway has always been dedicated to green office practices. Green environmental conservation, we believe, is not only a responsibility, but also an opportunity and a driving force for innovation. To reduce paper and resource waste, we continuously improve the information infrastructure platform, promote the construction of informatisation systems in various sectors, and achieve paperless office in various application scenarios such as document management, contract management, financial reimbursement, and human resources management across the entire Group through OA implementation. To reduce energy usage and carbon footprint, we advocate for energy conservation and the adoption of efficient office equipment. Furthermore, we encourage employees to choose sustainable commuting alternatives such as cycling, public transportation, or carpooling to reduce traffic emissions. We aggressively limit the negative impact on the environment by implementing sustainable office practices, while providing a healthy, efficient and comfortable working environment.

Case

Advocate green office and practice low-carbon life

Shenzhen Expressway encourages an energy-saving culture among all employees and works to create a resource-saving enterprise. At the offices in Hanking Center and Jiangsu Building, Business Company implements lighting and air conditioning energy management, tightly managing water, electricity and gas usage, eliminating waste and advocating for all employees to actively practice green office habits.



Protection of Ecological Environment

Shenzhen Expressway places a high value on the influence of its operations on the surrounding ecological environment. In the project planning, design, construction and operation stages, we strictly adhere to the *Land Administration Law of the People's Republic of China*, the *Water Pollution Prevention and Control Law of the People's Republic of China*, the *Law of the People's Republic of China on the Prevention and Control of Solid Waste Pollution* and other laws and regulations. The Company developed the *Ecological Environment Protection Management Measures*, the *Ecological Environment Civilisation Construction Assessment Management Measures* and the *Ecological Civilisation Construction Work Plan*, standardising work processes and operating procedures at various management levels.

Emissions Management

The Company has taken proactive measures to reduce its own waste emissions. This is not only the responsibility of the Company, but also our commitment to society and the ecological environment. Shenzhen Expressway has established emission management systems in the engineering construction, road operation and environmental protection business sectors, implementing effective measures for the treatment of waste gas, wastewater and solid waste. Substantial results have been made in eliminating/reducing environmental pollution and reducing waste emissions.

Case

The project of Tonggang Avenue makes sand by separating waste residue soil

During the building process, the Tonggang Avenue construction project generated a significant amount of waste soil and sand was required for the concrete components of the main structure and the road stable ground. In order to achieve high value-added resource utilisation of the mud cakes separated from the construction waste soil, Shenzhen Expressway adopts the domestically pioneered mud cake granulation production line. This line uses recycled clay-based aggregates technology, mud-sand separation technology and environmental carbon fixation technology. By using construction waste soil to achieve carbon fixation, this effectively improves the environmental and ecological benefits of resource utilisation of construction waste soil.



Case

Lisai Environmental reuses low-concentration wastewater

Lisai Environmental replaces a portion of the tap water with treated low-concentration sewage for various purposes such as flushing, deodorising, car washing, filter cloth washing, cooling, so as to save water resource while also significantly reducing the amount of wastewater discharged in the factory area.



Using 2021 as a baseline, we expect a 3% reduction in waste generated per million revenue, a 3% reduction in non-hazardous waste per million revenue, a 3% reduction in emissions of air pollutants per million revenue, and a 3% reduction in wastewater discharge per million revenue in 2024.

Resource-based Treatment of Solid Waste

While proactively working to minimise the amount of solid waste generated during its construction and operation, Shenzhen Expressway also strives to develop solid waste recycling business, making positive contributions towards reducing solid waste generation in society through recycling, reuse and resource-based treatment.

In the field of organic waste treatment, Shenzhen Expressway manages the whole process from classified collection and transportation, harmless treatment to resource utilisation, and carries out technological research on issues such as solid residue, low-concentration wastewater, three-phase centrifugal liquid, and biogas residue, so as to further promote the innovation and application of environmental protection technology, and maximise the transformation from “waste” to “treasure”. In the business of dismantling scrapped automobiles and recycling of power batteries, Shenzhen Expressway utilises intelligence and informationisation to solve the problem of solid waste resourcisation of power batteries, and realises the resource recycling in the whole industry chain of the after-market of scrapped automobiles and retired power batteries, including the gradient utilisation of dismantled batteries of scrapped vehicles and the recycling of the final raw materials.

Case ▯ Bioland develops the food waste recycling project

The Nanning project of Bioland adopts the “pre-treatment + anaerobic fermentation + resource utilisation” to process food waste and waste oil. Food waste is pre-treated, crushed and sorted, while other waste goes to an incineration terminal for power generation. Organic matter is dehydrated and the water residue enters the anaerobic fermentation system to produce biogas. The oil is processed into industrial oil, achieving the resource utilisation and harmless treatment of kitchen waste.



Case

Shenshan Qiantai develops the project of new energy vehicle retired power battery dismantling

Shenshan Qiantai is mainly engaged in the resource recycling of the automobile aftermarket industry chain. By the combination of scrapped vehicles dismantling, retired power batteries recycling, dismantling and cascade-utilising products reproducing, raw materials recycling of power batteries and other methods, it has fully exploited the available resources of retired power batteries and scrapped vehicles, and realised the full life-cycle service from production and circulation to secondary utilisation and material recycling of scrapped vehicles and power batteries.

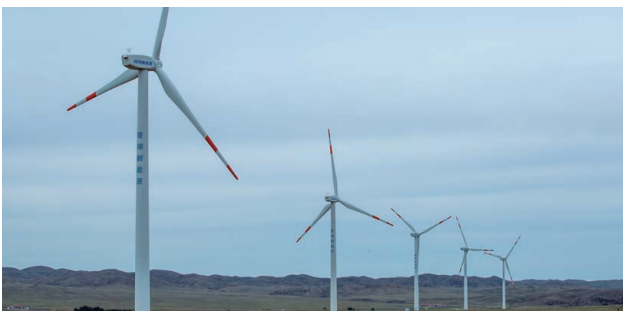


Clean Energy Development

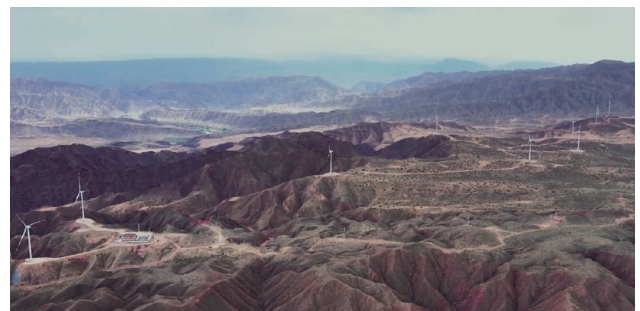
Shenzhen Expressway is accelerating the development of clean energy projects to promote the green and low-carbon transformation of energy. The company has the integrated business capability for investment, development, operation, maintenance services of wind farms, photovoltaic projects and project-related financing. The development of clean energy and promoting the transformation to green and low-carbon energy. We are continuously improving the standardised operation and control system of wind farms, achieving a dual increase in efficiency, benefits and quality. In the future, we will continue to explore new business models and market opportunities in the segmented field of clean energy, constantly innovating and surpassing, contributing our wisdom and strength to reducing greenhouse gas emissions, improving air quality and building a green, low-carbon and sustainable world.



Qianxin Wind Power Plant in Xinjiang



Lingxiang Wind Power Plant in Baotou



Zhongwei Gantang Wind Power Plant in Ningxia

Biodiversity Conservation

Shenzhen Expressway has taken multiple land use and environmental protection measures in its highway construction. We have established a leadership group for ecological civilisation construction and through scientific construction planning, phased construction, vegetation protection and environmental supervision measures, and aim to reduce the impact of construction on land and the ecological environment. This will promote sustainable development and biodiversity conservation, achieving harmony between construction projects and the natural environment.



Design stage

We strive to minimise land occupation and prioritise the use of bridge structures. When the project route passes through the forest land and mountain land, we adopt the design method of half-bridge and half-road to avoid mountain excavation as far as possible to protect the natural ecological environment.



Preparation stage

We actively discover and stop illegal land occupation in line with the principle of "Zero Tolerance" through intensive inspections along the route, to ensure zero occurrence of illegal land occupation of red-line land.



Construction stage

We authorise a third party organisation to monitor the environment and water and soil conservation conditions of each project and generate monitoring reports. These reports will be used to guide the construction unit to take necessary corrective measures to ensure compliance.

The Company takes a variety of measures to protect biodiversity, including natural ecological restoration, ecological monitoring, road design improvements, ecological education and awareness, and support for ecological conservation programs to avoid encroachment on wildlife habitats.

Case

Qinglong Company cleans up *Mikania micrantha* along the highway

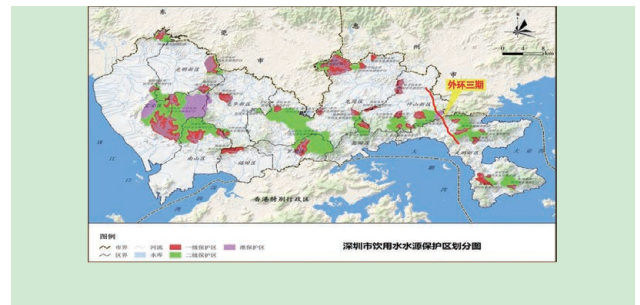
Mikania micrantha is known as a crazy "plant killer", and its proliferation will have a strangulation and exclusion effect on other plants. In order to protect the biodiversity along the highway, Qinglong Company combined the satellite remote sensing and drone monitoring maps of the Forestry Bureau to carry out the centralised removal and remediation work in spring and autumn, and cleaned up *Mikania micrantha* of about 13,000 square meters, which effectively protected the plant diversity and the living environment of other organisms.



Case

Water resources protection in the project of Outer Ring Phase III

In the planning and implementation of Outer Ring Phase III construction project, Shenzhen Expressway fully considered the importance of the surrounding ecological environment and water source protection. There are multiple scattered water source protection areas along the project route. In order to minimise the impact on the river, the Company decided to use bridge crossings to avoid causing significant influence on the river water. For the roadbed near the Changliubei Reservoir, we adopted a design that separates surface water from the roadbed, effectively preventing road surface water from entering the water source protection area and maintaining the natural water flow into the reservoir, thus effectively safeguarding the safety of the water source and ecological balance.



• Distribution of Water Source Protection Areas Along the Project

Responding to Climate Change

Climate change has been a critical challenge over the world. The frequent occurrence of extreme weather and natural disaster events threaten the safety and sustainability of transportation infrastructure and large-scale projects. In response, Shenzhen Expressway actively responds to the challenge and makes significant contributions to mitigating climate change, enhancing traffic safety and sustainability through practical actions.

Climate Change Management

Shenzhen Expressway recognises the threat posed by climate change to the stability and safety of transportation infrastructure and clarifies the governance responsibilities of the board of directors in addressing climate change related issues. Sorting out the potential climate-related risks and possible financial impacts and develops corresponding response measures with reference to the core elements of Task Force on Climate-Related Financial Disclosures (TCFD), it has formulated internal systems such as the *Measures for the Management of Ecological Environment Protection* and the *Measures for the Assessment and Management of Ecological Civilisation Construction* to further contribute to addressing global climate change.

Basic Requirements for Carbon Reduction in the *Measures for the Management of Ecological Environment Protection*



Actively responding to the “carbon peak” and “carbon neutrality” strategies, controlling greenhouse gas emissions, reducing pollutant emissions, effectively controlling total energy consumption and actively promoting the construction of “waste-free cities.”

Incorporating the special plan for ecological environment protection and resource conservation into the development strategies and plans of each unit and steadily and orderly promote the Group’s green, low-carbon and sustainable development.


Ensuring technical support for ecological and environmental protection work, encourage the research and development or application of new technologies, processes, equipment and materials that are energy-saving, low-carbon and environmentally friendly, strengthen carbon emission management and promote the synergistic effect of pollution reduction and carbon reduction in the Group.



Calculate and convert the carbon emission reduction data of the Company in production and operation activities according to relevant standards.






Identification of Climate Risks and Opportunities

Shenzhen Expressway has conducted a comprehensive review of possible climate-related risks and potential financial impacts. The Company’s risk management committee assists the board of directors in monitoring the overall risk situation of the Company, providing reminders or risk response suggestions to the board of directors on high risks, guiding the level of Company’s management to establish a comprehensive risk management system and related systems and implementing corresponding risk mitigation measures. In the future, we will continue to refer to the best practices of our peers and internationally leading standards, enhance our short-term and medium to long-term climate change management strategies and continuously update the greenhouse gas emission reduction targets to continuously enhance the Company’s adaptability to climate change and ensure that we can flexibly respond to climate challenges.

Risk Type	Climate-related risk	Potential financial impact	Measure
 Transition Risk	Policy and law <ul style="list-style-type: none"> Rising price of greenhouse gas emissions Strengthening reporting obligation Litigation risk Restrictions on business license 	<ul style="list-style-type: none"> Increased compliance costs; Restrictions on the use of carbon-intensive assets Deregistration, asset impairment and early retirement of existing assets due to policy changes. 	<ul style="list-style-type: none"> Exploring clean energy and green technologies investment to reduce the Company’s greenhouse gas emissions and lower additional costs Establishing a well-developed reporting and monitoring system to meet government reporting obligations Abiding by laws and regulations to ensure the legality and compliance of the Company’s operation and reduce the risk of legal litigation Diversifying business to reduce reliance on specific licenses
	Science and technology <ul style="list-style-type: none"> Replacing existing products and services with low emission solutions Upfront cost of the transition to low emission technologies 	<ul style="list-style-type: none"> Divestment and early elimination of existing technologies Capital investment in new technologies Operational costs for the adoption and deployment of new technologies and practices 	<ul style="list-style-type: none"> Gradually introducing clean energy and low emission transportation solutions, such as electric vehicles, hybrid vehicles, to provide more environmental-friendly transportation services Incorporating the initial costs of transitioning to low emission technologies into financial planning, ensuring sufficient budget for technology upgrades and renovations Regularly evaluating the benefits of technological upgrades and transformations to ensure reasonable returns on investment in upfront costs

Risk Type	Climate-related risk	Potential financial impact	Measure
 Transition Risk	Market <ul style="list-style-type: none"> Risks arising from changing supply and demands as the economy responds to climate change, which may include: <ul style="list-style-type: none"> Changes in customer behavior Uncertainty of market signals Increase in the cost of raw material and equipment Competitive upgrading in the clean energy industry 	<ul style="list-style-type: none"> Decreased income due to changes in demand for goods and services Sudden and unexpected changes in energy costs Changes in enterprise valuation 	<ul style="list-style-type: none"> Providing diversified transportation services based on changes in customer needs, including clean energy vehicles and green transportation options, to meet the needs of different customer groups Diversifying business investment portfolio, including clean energy, green technology and intelligent transportation systems, to cope with market uncertainty Enhancing the efficiency of resource and energy utilisation to reduce raw material costs and resource waste
	Reputation <ul style="list-style-type: none"> Changes in consumer preference Stigmatisation of the company Increased stakeholder concerns 	<ul style="list-style-type: none"> Decreased income caused by the decreasing demand for goods and services Decrease in capital availability Increased spending on marketing 	<ul style="list-style-type: none"> Actively collecting and analysing customer feedback to understand their needs and preferences and adjust products and services based on feedback Establishing transparent communication channels and actively communicating the Company's environmental and sustainability measures Actively collaborating with stakeholders, including government, non-governmental organisations, communities and investors, to jointly promote sustainable development goals
 Physical risks	Acute risk <ul style="list-style-type: none"> Risk of increasingly severe climate events 	<ul style="list-style-type: none"> Interruption of business, transportation, supply chain and distribution chain Damage to tangible assets (plant, equipment, infrastructure). 	<ul style="list-style-type: none"> Establishing a comprehensive climate event emergency plan, including warning systems and emergency response measures, to respond to sudden climate events, ensure road operation and safety Reconstructing and enhancing roads, bridges and drainage systems to enhance disaster resistance and reduce damage to facilities caused by climate events
	Chronic risk <ul style="list-style-type: none"> Risks of long-term changes in weather patterns 	<ul style="list-style-type: none"> Impact on insurance liability. Restrictions on the ability to procure insurance. Degradation or limitation of resource availability (such as water). 	<ul style="list-style-type: none"> Establishing an advanced meteorological monitoring system, closely track long-term changes in weather patterns, predict meteorological events and take measures in advance Adjusting the Company's long-term plans, including road maintenance, construction and renewal plans, to adapt to constantly changing weather conditions based on climate change trends

Opportunity Type	Climate-related opportunity	Potential financial impact	Measure
 <p>Technological opportunity</p>	<ul style="list-style-type: none"> Clean energy technology: adopting clean energy technology and developing energy storage technology Intelligent transportation systems: Developing intelligent transportation systems, enhancing transportation efficiency and reducing energy consumption 	<ul style="list-style-type: none"> Reduction of operating costs: adopting clean energy and intelligent transportation technologies can reduce fuel and maintenance costs and enhance operational efficiency 	<ul style="list-style-type: none"> Investing in clean technology: Actively investing in and adopting clean energy technologies and intelligent transportation systems to reduce greenhouse gas emissions and lower operating costs Diversifying business: providing clean energy transportation options, attracting more customers and increasing revenue sources Participating in green projects: Participate in clean transportation projects and infrastructure construction and strive for support and rewards from the government and environmental organisations communicating transparently: Actively communicating with stakeholders about the Company's climate related initiatives, enhancing the Company's reputation and sustainability commitment
 <p>Market opportunity</p>	<ul style="list-style-type: none"> Green travel demand: meeting consumers' demand for environmentally friendly travel methods, providing clean energy transportation services and attracting more environmentally conscious customers Clean transportation projects: Participate in and invest in clean transportation projects, such as electric vehicle charging infrastructure and public transportation systems Clean energy consumption demand: increasing clean energy supply and expanding charging infrastructure 	<ul style="list-style-type: none"> Increase of revenue: Provide clean transportation services and infrastructure, attract more customers and increase the Company's revenue sources 	
 <p>Reputation opportunity</p>	<ul style="list-style-type: none"> Social responsibility: actively participate in climate action, enhance the Company's reputation among society and stakeholders, attract investment and partners Sustainable development: showcasing the Company's commitment to sustainability, increasing public recognition and enhancing brand image 	<ul style="list-style-type: none"> Investment return: Participating in clean transportation projects and green infrastructure can earn funding and rewards from governments and environmental organisations, improving investment return rates 	

Metrics and Targets

Greenhouse Gas Emission Data of Shenzhen Expressway in 2023

Greenhouse gas emission	Unit	Year 2023
Scope 1	Tons of carbon dioxide equivalent	8,999
Scope 2	Tons of carbon dioxide equivalent	59,162
Scope 1 + Scope 2	Tons of carbon dioxide equivalent	68,161
intensity of GHG emissions (Scope 1 +Scope 2)	Tons of carbon dioxide equivalent/million revenue	7.33

On the basis of 2021, we expect to reduce GHG emissions per million RMB revenue (Scope 1 + Scope 2) by 3% in 2024, In 2023, GHG emissions per million RMB revenue reduced by 2.27%.

04 "Talent First", Nurturing a Thriving Team

Being people-oriented is the source of vitality for Shenzhen Expressway. Shenzhen Expressway thoroughly implements the "people-oriented" concept, makes every effort to protect the rights and interests of employees, pays comprehensive attention to their development and needs and creates a fair, harmonious and loving working environment for employees. We believe that real success and long-term prosperity can be achieved only when companies and employees grow together.

Aligning with the United Nations Sustainable Development Goals (SDGs)



Key Issues

- Equal Employment
- Career Development
- Occupational Health and Safety



Employee Rights and Welfare

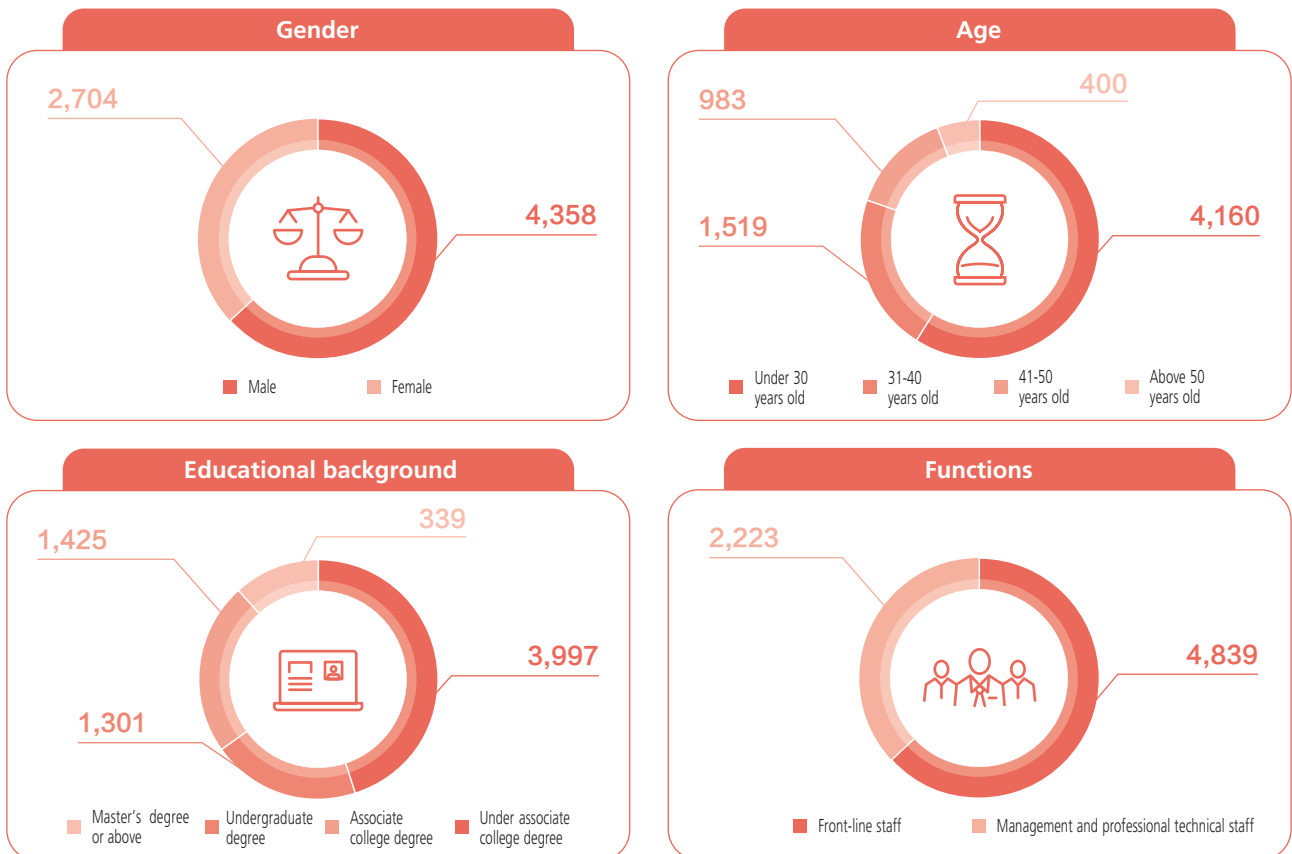
Shenzhen Expressway strictly complies with relevant laws and regulations such as the *Labour Law of the People’s Republic of China* and the *Labour Contract Law of the People’s Republic of China*, continuously establishes and improves various employment management systems, strengthens the construction of employee rights system, continuously optimises employee compensation and incentive system and creates a diverse, equal and inclusive workplace culture.

Diversified and Compliant Employment

Shenzhen Expressway respects the right of employees to choose their careers, adheres to reasonable and legal employment, provides equal employment and development opportunities for every employee. The Company has formulated the *Employee Recruitment Management Measures* and *New Employee Enrolment and Confirmation Management Measures* to attract employees from different backgrounds through multiple channels such as campus recruitment, social recruitment and internal selection, fully leveraging the advantages of diversification.

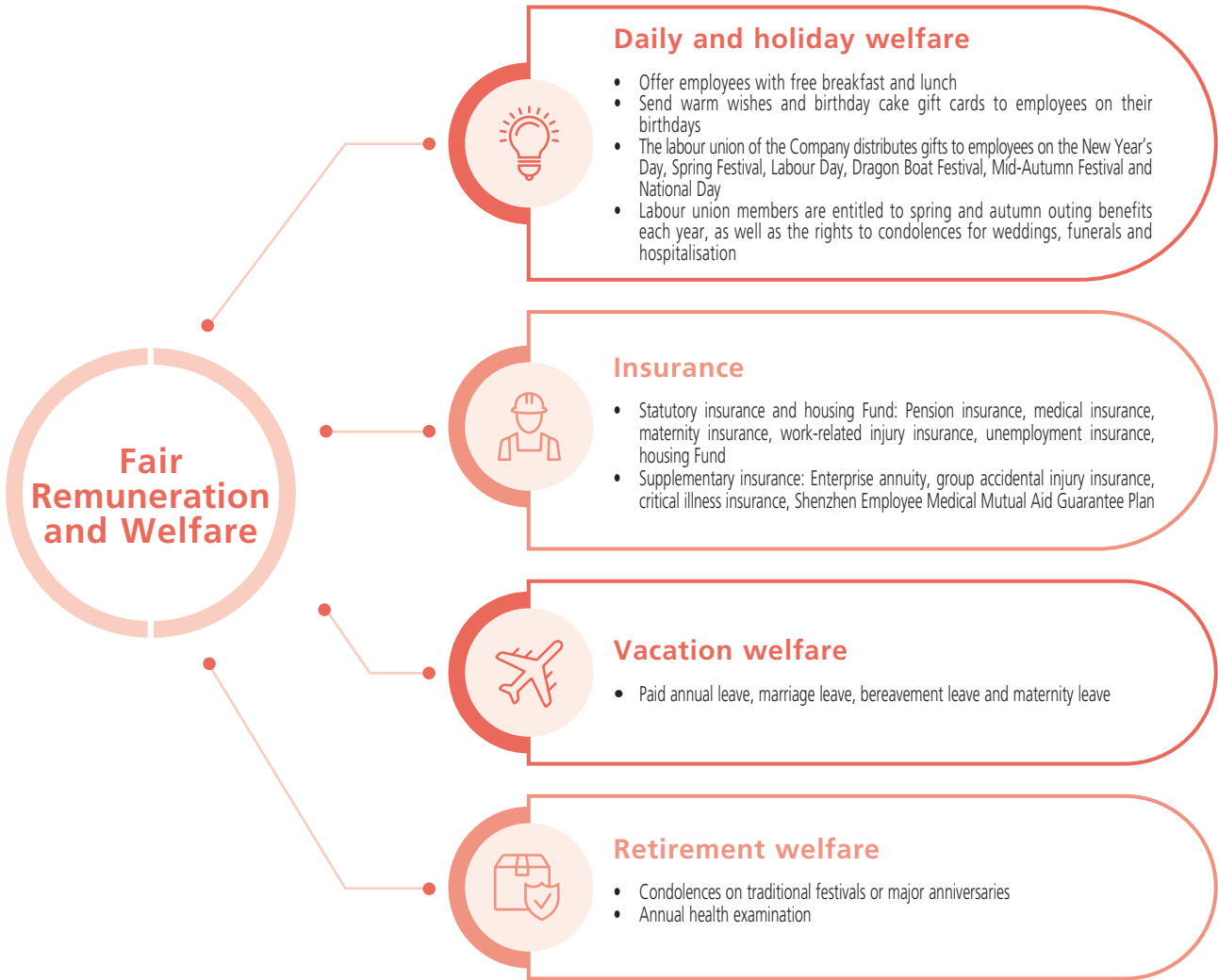
We explicitly prohibit the employment of child labour and forced labour in the recruitment process and business. By verifying the identity of job applicants, any form of child labour and forced labour can be eliminated to avoid employment risks. We supervise the management of labour by contractors, requiring them to strictly implement the *Regulations on Protection of the Rights and Interests of Migrant Workers*, enforce the management of real-name system for migrant workers, special accounts for migrant workers’ wages, and the system of general contractors for wage payment, in order to protect the legitimate rights and interests of migrant workers.

At the end of the reporting period, the total number of employees in the Company divided by gender, age, professional composition and function is as follows:



Fair Remuneration and Welfare

Shenzhen Expressway has developed a reasonable, fair and competitive salary system. Adhering to the principle of “salary based on job, salary change based on job change” and are guided by strategy, market and performance, we have revised the Salary and Welfare Performance Management System and Incremental Profit Incentives and Constraints Program to ensure that, the salary gap between employees is reasonable and in line with job value differences internally, and the alignment between the Company’s salary level and market salary level externally



Democratic Communication and Management

Shenzhen Expressway attaches great importance to and listens to employee opinions and has established diversified two-way communication channels and mechanisms, providing employees with a platform to express their own demands and participate in company management. It also provides an important basis for the Company to enhance its management level. The Company encourages employees to participate in the Company’s decision-making and management through employee representative conferences, employee symposiums, opinion collection boxes and other means, so that the employees can pay more attention to the development of the Company and enhance their centripetal force and cohesion. We conduct employee satisfaction surveys from four perspectives: work content, work report, work team and enterprise management, in accordance with the *Employee Satisfaction Survey and Evaluation Management Procedure*. We continuously follow up and solve the problems that employees have raised a lot of feedback on.

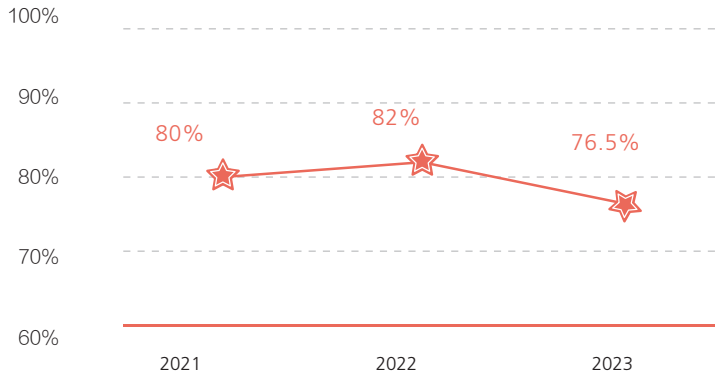


The overall participation rate of the 2023 employee satisfaction survey was **74.2%**



with a satisfaction index of **76.5%**

Shenzhen Expressway overall employee satisfaction rate from 2021-2023

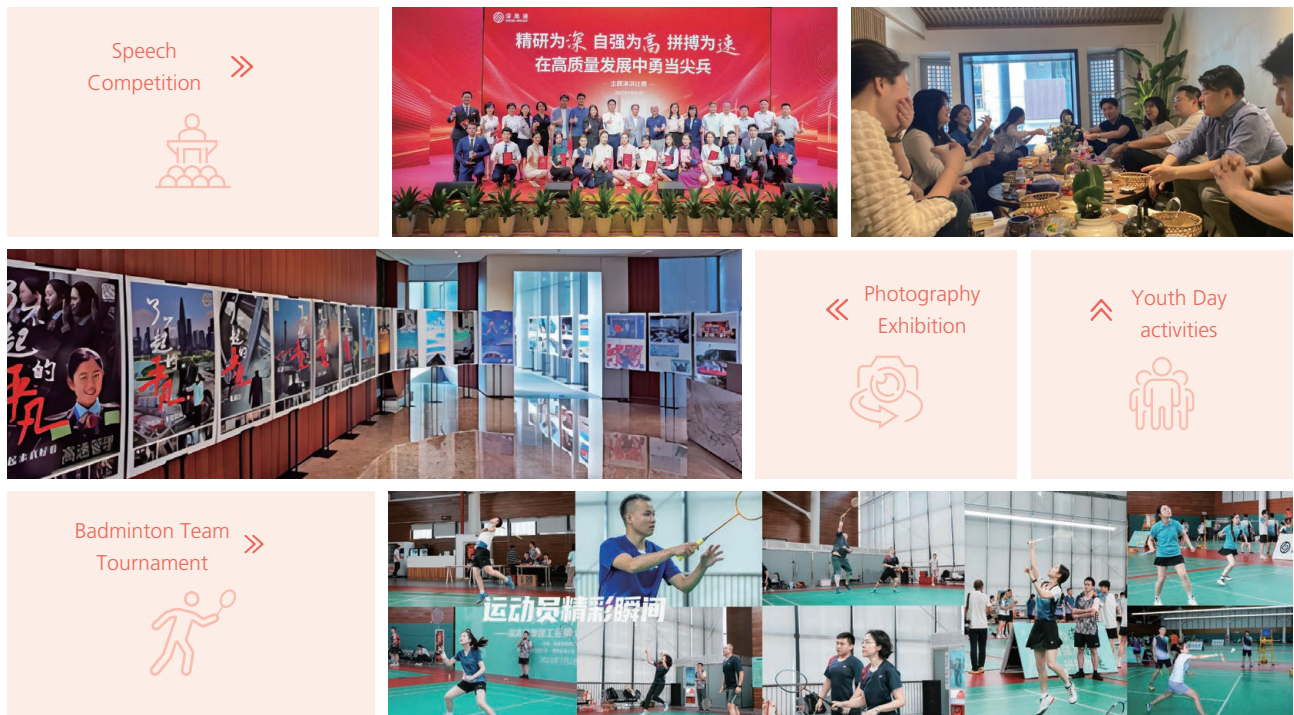


Take Care of Employees

Shenzhen Expressway cares about employees' work and life, has initiated an employee mutual aid plan. During their tenure, employees can voluntarily contribute to critical illness insurance and personal accidental injury mutual aid fund ("mutual aid fund") to help employees reduce medical expenses in the event of a major illness or accidental injury. For employees who encounter difficulties, we provide necessary assistance in a timely manner and offer diverse support to them. We hope that such efforts can make every employee feel the warmth of home.

Balance Work and Life

The Company has organised various recreational and sports activities for employees according to local conditions to help employees develop a healthy lifestyle and positive attitude towards life after work. For example, we have held events such as basketball friendly matches, fitness classes, calligraphy lectures, photography exhibitions, allowing employees to cultivate their sentiments through cultural exchanges and release stress during sports.



Support Employees in Difficulty

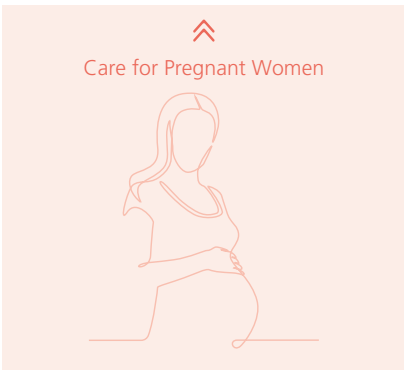
The Company conscientiously implements a long-term mechanism for assisting employees in need, ensuring that every employee who encounters difficulties can receive timely assistance and support. Especially for employees who unfortunately suffer from major illnesses or accidental injuries, we actively take rescue measures to help them quickly overcome difficulties and regain confidence. In 2023, we assisted a total of 27 employees in need.

Care for Female Employees

Shenzhen Expressway is well aware of the important role and contribution of female employees in the Company. We continue to pay attention to and support their career development and personal growth, creating a relaxed and friendly working environment for them. The Company strictly implements the regulations on leave for female employees during menstruation, pregnancy, childbirth, lactation and menopause and has set up dedicated rest and lactation rooms to facilitate female employees to receive sufficient care when needed.



In 2023, we assisted a total of **27** employees in need



Talent Training and Development

Shenzhen Expressway adheres to the talent concept of “setting a stage for the hardworking and growing together with them” and regards every enthusiastic and practical employee as the most precious asset of the Company. We are committed to making progress and growing together with our employees and we look forward to every employee achieving professional growth at Shenzhen Expressway.

Double Improvement in Skills and Education

Shenzhen Expressway has established a training system based on the job competency of employee. We are guided by corporate strategy and aim to cultivate modern talents in management, technology, operation and other fields required for career development. We continuously improve internal systems such as the *Employee Training Management Measures* and the *Professional Title and Qualification Examination Management Measures*. Through scientific and reasonable training plans and diversified training methods, we stimulate employees’ learning enthusiasm and innovation ability.

Shenzhen Expressway has carefully formulated a comprehensive training plan and various business sectors have held multiple general training courses covering comprehensive management, operational management, professional skills and more. At the same time, we tailor training programs for employees at different levels and positions based on their personalised learning needs. In terms of training methods, we adopt strategies such as internal and external training, self-development learning, to provide high-quality training to each employee. In addition, to meet the growing cross regional training needs of the Company, we have utilised advanced remote learning platforms to carry out online and offline synchronous live streaming training activities, greatly increasing the convenience and effectiveness of training.

Shenzhen Expressway Employee Training System



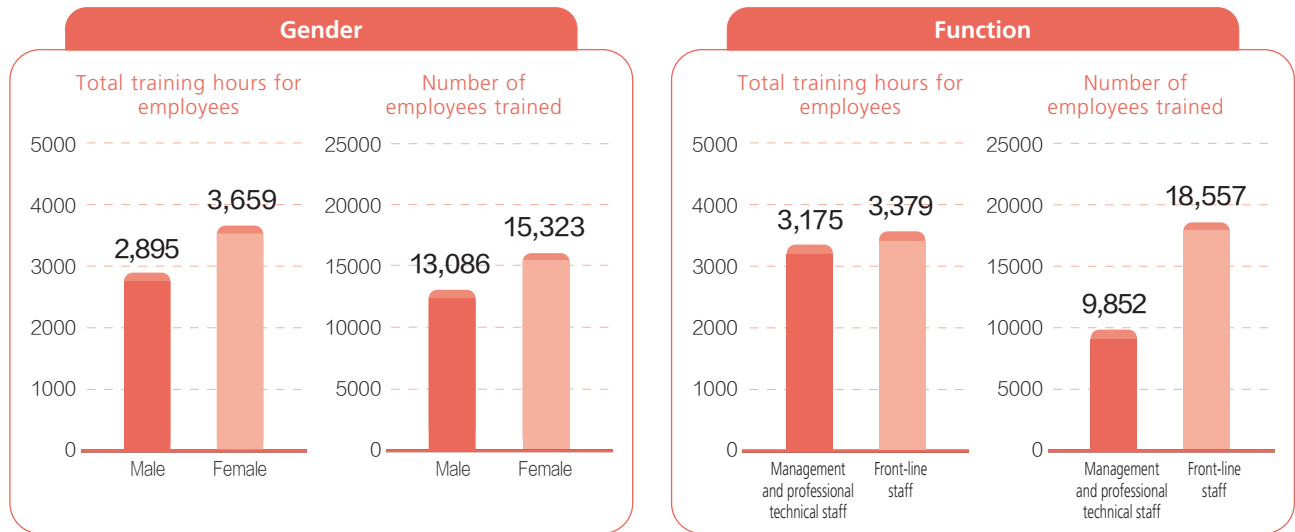
Case

The Digital Technology Company organised the “Employee Lecture Hall” activity

In March 2023, Digital Technology Company organised the first phase of the “Employee Lecture Hall” for the year 2023, where engineers provided professional basic knowledge training namely “The Road to Construction, the Bridge of Integration and the Tunnel of Development”. This activity filled the gaps in knowledge among employees and stimulated their enthusiasm for learning business knowledge and technical abilities.



During the reporting period, the total training hours for employees were 6,553.50 hours and the total training investment was RMB2,145 thousand. The training data divided by gender and position are as follows:



Shenzhen Expressway advocates the on-the-job self-study and cooperates with major universities to cultivate new young employees, so that they can obtain opportunities for continuing education and obtain work-related qualification certificates. The Company provides corresponding subsidies and rewards. In the current year, for employees who have obtained professional qualification certificates, the Company has provided per capita training subsidies of RMB1,750 and per capita rewards of RMB3,625.

Case The "Dream Fulfilment Plan" helps employees improve their academic qualifications

Education is a crucial part of the pursuit of success and personal growth. In 2017, Shenzhen Expressway launched the "Dream Fulfilment Plan", which introduced educational consulting agencies to provide guidance and training for employees on application and further education. Since the launch of the "Dream Fulfilment Plan", the Company has provided a total of RMB2,020 thousand in subsidies to students and 421 employees have received opportunities for further education. During the reporting period, the Company provided a total of RMB780,000 in study subsidies to 158 toll station guides.

Talent Selection and Retention

Shenzhen Expressway is committed to building high-quality professional teams with "bold innovation, good management, significant achievements, integrity and honesty". We have formulated the *Measures for Selection and Appointment of Management*, the *Measures for Management of Employee Position System* and the *Measures for Management of Employee Competition for Promotion*.

We have established an internal employee rotation mechanism to assist employees at all levels in establishing clear career development goals based on their individual preferences. We select outstanding individuals to enter the reserve talent pool and provide corresponding career guidance and training. At the same time, we will establish a fair and open performance evaluation and promotion management system to promote the standardisation and scientificity of employee performance evaluation. We hope that through a comprehensive combination of long-term incentives, special incentives and interest bundling incentives, outstanding talents can stand out and dedicated employees can receive the praise and rewards they deserve.



During the reporting period, the overall employee turnover rate decreased by **8%**.

During the reporting period, the overall employee turnover rate decreased by 8%.

Occupational Health and Safety

Shenzhen Expressway put the health and safety of our employees first in business operations. We strictly abide by the *Occupational Safety and Health Supervision System* and have formulated the *Work Safety Education and Training Management System*. Through systematic and comprehensive safety production education and training, we aim to enhance the safety and health management awareness of employees, enabling every employee to live a healthy life and work happily. During the reporting period, the Company organised more than 2,072 safety training and education activities, with a total of 73,006 person-times participating.



the Company organised more than **2,072** safety training and education activities



with a total of **73,006** person-times participating

Employee health and safety protection mechanism:



Healthy workplace

- The office area is healthy, spacious and comfortable, with no harmful pollutants.
- Smoking is prohibited in all public areas of the Company, and there is a designated smoking room on each floor.
- Food self-inspection and food sample retention to ensure food safety.



Health insurance and medical examination

- Purchase employer liability insurance.
- Regularly organise employee health checkups to remind employees to pay attention to their own health.



Health protection

- Set a series of Health testing equipment such as blood pressure monitors and body fat scales in the office for employees.
- Provide various personal protective equipment and labour protection supplies, such as dust masks, protective gloves, safety clothing, etc.



Health awareness

- Carry out employee mental health training to enhance their ability to self-regulate emotions.
- Carry out health awareness training, popularise health knowledge and enhance employee safety and health awareness.



Healthy activities

- Hold physical and cultural event such as badminton and basketball matches.



05

Creating Harmony and Benefit People's Livelihoods Together

Shenzhen Expressway always remembers its social responsibility as a corporate citizen, takes the people's aspirations for a better life as its goal and works together with numerous partners to practice the value chain system of "openness, sharing, cooperation and win-win results", contributing our strength to the prosperity of society and the happiness of the people.

Aligning with the United Nations Sustainable Development Goals (SDGs)



Key issues

- Public Charity
- Community Relations
- Contributing to Economic and Social Development
- Pursue Mutual Benefit and Win-win Results



Building a Responsible Supply Chain

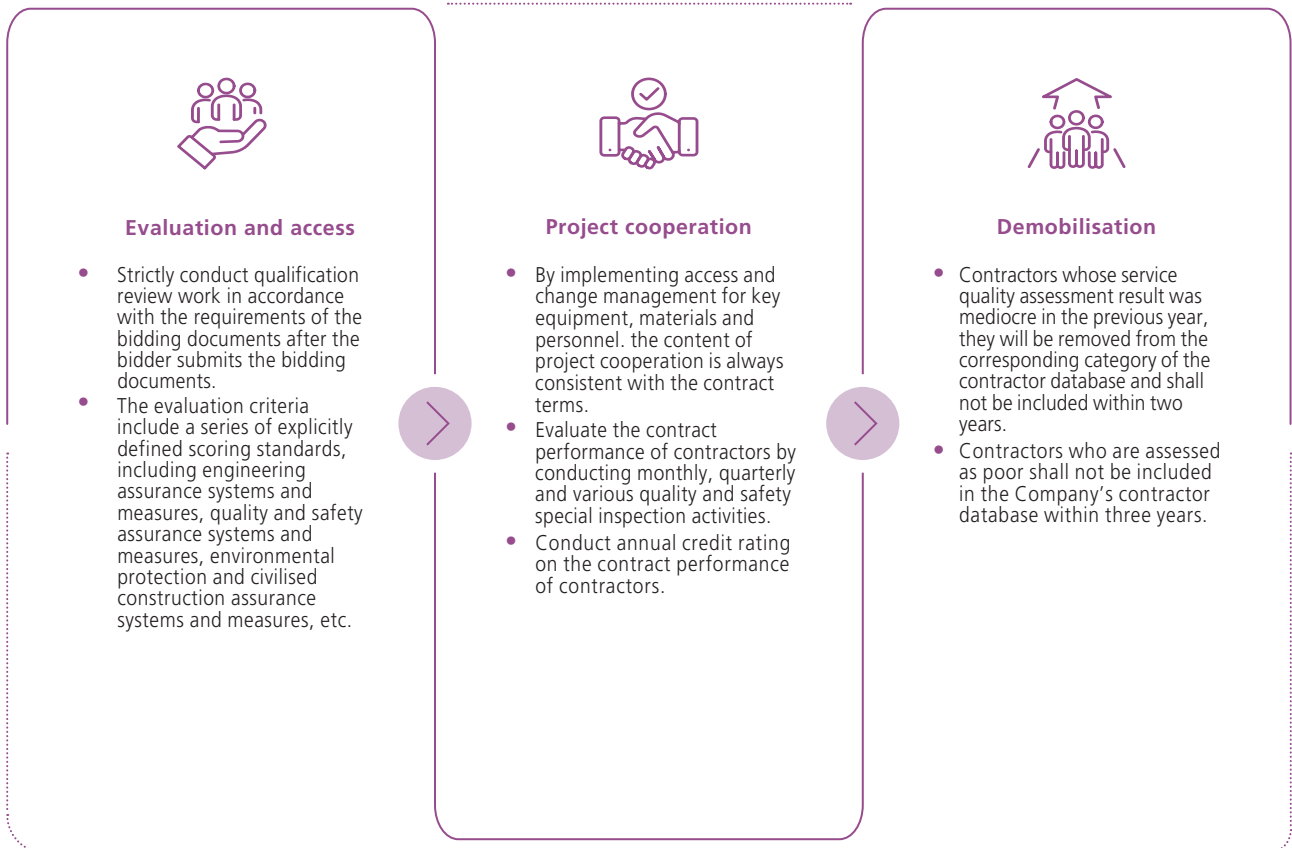
Shenzhen Expressway always practices responsible and sunshine procurement, pursues green and sustainable development of the entire industrial chain, strictly implements and continuously improves supplier management and supervision mechanisms. The Company has established a mature and effective whole-process operation system for supplier admission, assessment, evaluation, communication, training and withdrawal, actively empowering supplier development and jointly creating a harmonious and healthy supply chain environment.

Supplier Management

During the procurement process, Shenzhen Expressway adheres to the principles of "fairness, openness, impartiality and good faith", strictly abides by relevant laws and regulations such as the *Tendering and Bidding Law of the People's Republic of China*, the *Procurement Law of the People's Republic of China* and the *Contract Law of the People's Republic of China* and formulates and continuously improves systems such as the *Procurement Management Procedure*, *Procurement Operation Rules*, and *Measures for Supplier Performance Evaluation Management*, ensuring the orderly operation of the supply chain management system.

Shenzhen Expressway has established systems, clarifying the full lifecycle management process of supplier admission, evaluation, cooperation and withdrawal, promoting suppliers to enhance product quality and service capabilities, forming a standardised, fair and unified supplier management system and ensuring the orderly operation of the supply chain management system.

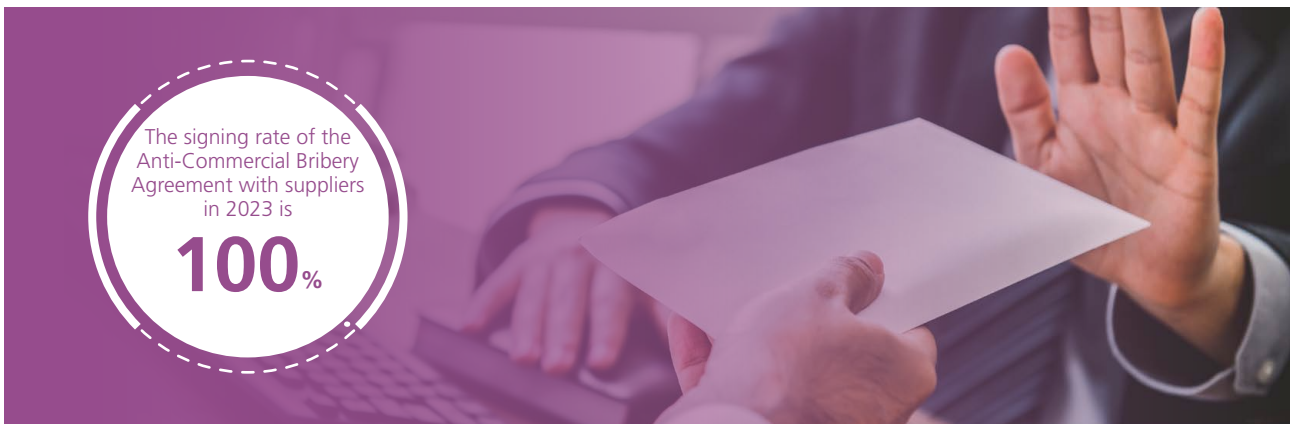
Shenzhen Expressway Management Process for Contractors



Responsible and Sunshine Procurement

Shenzhen Expressway adheres to the principles of "fairness, openness, impartiality and good faith", clarifies the requirements for integrating sustainable development concepts into procurement management and creates a sustainable supply chain.

The Company implements Sunshine Procurement, procurement activities must be publicized on the Shenzhen Sunshine Procurement Platform. It establishes a procurement mechanism with full process supervision in advance, during and after the bidding process in accordance with the work philosophy of "standardisation, efficiency, fairness and integrity", resolutely eliminates all forms of corruption in the bidding process, strictly reviews each item in accordance with the *Compliance Risk List for Bidding and Procurement Management* and prioritises suppliers with good credit and industry representativeness to reduce supply chain risks from the source. During the reporting period, the Company did not engage in any illegal or irregular activities related to bidding and procurement.



During the procurement process, we conduct comprehensive environmental and social assessments of the suppliers. In the engineering construction sector, we require suppliers to develop scientific and reasonable measures to ensure environmental protection and civil construction. At the same time, we also require suppliers to protect the legitimate rights and interests of migrant workers entering the city.

Environmental Requirements for Contractors in the Construction Sector

Collaborative construction stage



- Environmental protection material and equipment requirement:

The contractor is required to use environmental protection materials that are conducive to environmental protection, materials-saving, water-saving, energy-saving and utilisation, and land resources-saving for green construction.

- Environmental protection requirement in construction stage:

Establish environmental protection system during construction.

Environmental protection measures shall be taken for temporary roads, temporary facilities, subgrade construction and bridge construction on site.

Prevent and control of construction dust pollution. Manage water source protection areas.

Project completion stage



- After the completion of the project, the contractor is required to fully restore the land temporarily occupied during the construction period, such as the construction road, residence, material yard, mixing yard and construction site, according to the principle of "destroying a place then restoring the place."

Impelling Community Development

Shenzhen Expressway is committed to developing high-quality and convenient infrastructure, focusing on the practical needs of the public, actively participating in social welfare undertakings, and contributing to the quality of life and well-being of the public.

Assisting in Traffic improvements

Shenzhen Expressway leverages its own advantages to invest in regional transportation construction and promote the development of regional transportation. The Company undertakes the construction of major projects in Shenzhen, such as the Coastal Phase II project, Outer Ring expressway and Tonggang Avenue in the Shenshan Cooperation Zone, further optimising the transportation network and improving transportation efficiency in the region. In the future, Shenzhen Expressway will continue to leverage its advantages, continuously innovate and contribute to the continuous improvement of regional transportation and the sustained prosperity of the economy.

Case

Infrastructure and Environmental Protection Companies assists in the transportation development of the Shenshan Special Cooperation Zone

Tonggang Avenue, as the main urban road for north-south transportation in the Shenshan Special Cooperation Zone, is one of the "five horizontal and six vertical" arterial road networks in the city. It is a major transportation artery for the coordinated development of the port industry and advanced manufacturing industry. Through scientific resource allocation of key lines and left-hand roads, Infrastructure Environmental Protection Company achieved the goal of two lanes on the left open to traffic seven months in advance while keeping the total construction period unchanged, and won the Special Contribution Award of the Shenshan Cooperation Zone.



Improving Rural Infrastructure

Rural infrastructure is an important support for rural revitalisation. Shenzhen Expressway is committed to building transportation hub projects and upgrading rural infrastructure, creating a more comfortable and convenient living environment for rural residents, stimulating the vitality and potentials of rural communities and promoting rural economic prosperity. The rural transportation infrastructure improvement project invested by the Company fully playing the role of driving investment and creating employment, achieving a benefit range of 301 square kilometres and a benefiting population of over 30,000 people.



achieving a benefit range of

301 square kilometres



a benefiting population of over

30,000 people

Case

Shenzhen Expressway's participation in the construction of the Longli River Bridge helps upgrade rural transportation infrastructure and promote the development of the cultural tourism economy

Longli River Bridge, the world's first mountain valley landscape cable-pull bridge invested and constructed by Shenzhen Expressway, is located in Longli County, Qiannan Buyi and Miao Autonomous Prefecture, Guizhou Province. and spans the flowers and valleys. It is the only expressway connecting the grassland area with the outside world, providing residents with a more convenient way of travel. The Longli River Bridge is a mountain canyon landscape bridge with a common deck of driveway and glass footpath. In 2023, with the formal completion of tourism facilities such as glass walkway and panoramic sightseeing elevator for the main bridge and tower column of the bridge, Longli County will add another tourism route integrating grassland, bridge, canyon, countryside, hot spring hotel and other sites, serving the local people's livelihood and industrial development and strengthening the development of surrounding culture and tourism economy.



Case

Shenzhen Expressway supported the upgrading and reconstruction of the tap water plant in Lufeng Da'an Town

The Lufeng Da'an Tap Water Plant was built in 1988. Due to its long history of construction, the equipment and simple process of the water plant were rudimentary, resulting in poor water quality. The upgrading project of the plant has been postponed due to financial restrictions. Taking the opportunity of the "6.30" initiative to help rural rejuvenation, Shenzhen Expressway offered a one-time fund of RMB3,600 thousand for the renovation project. Upon completion, the project will deliver high-quality drinking water for approximately 45% of the household population in Da'an Town.



Serving Community in Peace and Harmony

In the process of planning expressway construction of Shenzhen Expressway, the actual situation and needs of the surrounding residential areas were deeply considered and special attention was paid to the potential impact of noise on the lives of residents. We use soundproof screens with excellent sound absorption and insulation performance, scientifically determine the installation height and position, and maintain a peaceful and harmonious living environment in the surrounding communities.



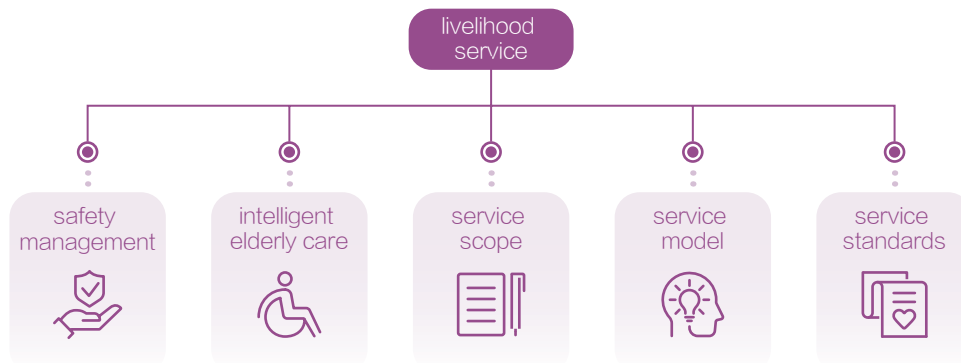
Install sound insulation screens near sensitive areas such as residential areas along the Coastal Expressway to reduce the spread of traffic noise and the impact of noise generated by vehicles on residents along the expressway.

Caring for the Elderly and Children

“Elderly care and youngster nurturing” is related to thousands of households and the people’s well-being. Deeply exploring diversified business models, with the construction of centralised elderly care institutions as the entry point for the Company’s health care business, to make public welfare sustainable. We actively participate in and promote various social activities related to elderly care, filial piety and respect towards elderly. We advocate for the whole society to respect and protect the quality of life and dignity of the elderly, pay attention to and support the growth of the younger generation and enable everyone to enjoy the beauty and happiness of life in the warmth and care of society.

 Core philosophy of Shenzhen Expressway’s Health Care Business: Focusing on warm service, making every moment lives up to its promises

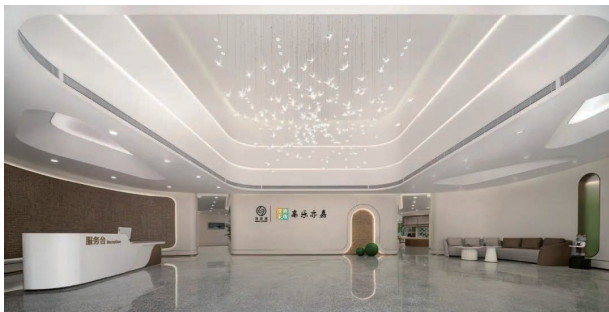
The Company establishes a livelihood service model based on five dimensions: “safety management, intelligent elderly care, service scope, service model and service standards”. The goal is to build a professional health and wellness service platform with “high quality, high aesthetics and high standards” and a “standardised, refined and intelligent” safety operation service system, shaping a distinctive livelihood service brand for Shenzhen Expressway.



Case

Shenzhen Expressway’s Guangming Welfare Institute has officially operated

In April 2023, Shenzhen Expressway’s Guangming Welfare Institute (Gaole Yijia) was officially put into operation. Guangming Social Welfare Institute provides universal and basic high-quality health and wellness services for the elderly, pioneering a new model of multi-level health and wellness based on elderly care institutions, radiating to communities and homes. The welfare home has 100 beds, providing preferential accommodations for eligible elderly people in need. This will further ensure and enhance people’s livelihoods, enhance their well-being and provide a “Guangming model” and “Shenzhen Expressway standard” for Shenzhen’s health care industry.



• Lobby of Guangming Welfare Institute



• Living environment of Guangming Welfare Institute

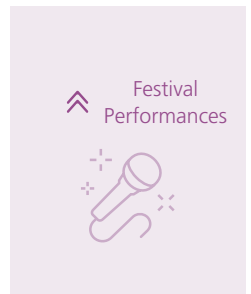
Case Guangming Welfare Institute launched a science popularisation activity on Alzheimer's disease prevention and control

In September 2023, Guangming Welfare Institute launched a one-month "Being and Time" Alzheimer's disease themed promotion month and art exhibition series of activities, including Alzheimer's disease prevention and control science lectures, cognitive function screening and health consultations for the elderly and nearby residents. The Guangming Welfare Institute has set up corresponding treatment sections, which can effectively alleviate the cognitive decline of patients through fixed service team members, scene restoration, outdoor street landscaping, horticultural planting and sensory stimulation.



• Free Clinic of Alzheimer's Health

The childcare centres set at Herunjiayuan and Fenghuang Jiulongtai, invested by Shenzhen Expressway, aim at building inclusive childcare centre that can provide comprehensive, high-quality and safe childcare services for children in the community, allowing parents to achieve affordable childcare at their doorstep and ensuring that every baby receives scientific nurturing and care.



Shenzhen Expressway also pays attention to the growth of children living in rural communities. In 2012, while investing in Longli County, the Company also brought in the social responsibility of supporting the education industry. We have launched the "Starlight Project Public Welfare Action", hoping to illuminate the hearts of left behind children in remote areas, like the sparkles of star. For twelve consecutive years, we have been carrying on the starry love of Shenzhen Expressway.

Enthusiastic in Public Welfare and Charity

Shenzhen Expressway deeply dedicates itself to social public welfare and charity work, forming volunteer teams to go deep into rural areas, communities and schools and spreading the power of public welfare to build a better society. Since 2015, the Company has established a volunteer team with the aim of "serving society and spreading civilisation". The volunteer recruitment platforms have gathered public welfare projects in various fields such as education, environmental protection, poverty alleviation and medical care. Employees are encouraged to choose suitable projects based on their interests and professional backgrounds to participate in. Through internal publicity and external media channels, more people are attracted to and support public welfare undertakings. In 2023, the total number of employees participating in voluntary service was 725, providing a total of 1,450 hours of volunteer service and investing RMB6.33 million.



the total number of employees participating in voluntary service was **725**

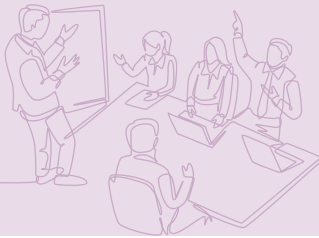


providing a total of **1,450** hours of volunteer service



investing RMB **6.33** million

Public Welfare Training for Maternal and Child Care for Investment Company >>



Volunteer Blood Donation by Employees of Bay Area Development Company >>



Community Environmental Sanitation and Cleanliness of Shenchang Company >>



<< Volunteers from the Operation Development Company Assist in the Shenzhen Marathon



Appendix

Key Performance Indicators

Indicators	Units	2023	2022	2021
Environment				
Emissions				
Exhaust gas emissions				
Nitrogen oxides (NOx)	kg	65,208	4,601	22,507
Sulphur oxides (SOx)	kg	2,380	1,630	32,990
Particulate matter (PM)	kg	1,666	158	768
Greenhouse gases (GHG) emissions				
Direct (Scope 1) GHG emissions	tCO ₂ e	8,999	8,706	8,485
Indirect (Scope 2) GHG emissions	tCO ₂ e	59,162	60,068	73,177
Total GHG emissions (Scope 1 and Scope 2)	tCO ₂ e	68,161	68,875	81,662
Total GHG emissions intensity (Scope 1 and Scope 2)	tCO ₂ e/ million revenue	7.33	7.34	7.5
Non-hazardous waste				
Non-hazardous waste	ton	159,476	95,612	149,508
Non-hazardous waste intensity	t/million revenue	17	10.2	13.8
Hazardous waste				
Hazardous waste	kg	5,863	9,142	12,589
Hazardous waste intensity	kg/million revenue	0.63	0.98	1.2
Effluents				
Effluents	ton	1,212,384	941,867	608,015
Total effluents intensity	t/million revenue	130	100.49	55.9

Indicators	Units	2023	2022	2021
Resources consumption				
Electricity	kWh	103,737,634	105,328,316	125,950,025
Gasoline	Litre	732,790	703,942	681,188
Diesel	Litre	407,473	2,475,094	1,833,307
Natural gas	m ³	2,589,477	132,350	828,174
Liquefied petroleum gas (LPG)	kg	123,716	210	10,879
Total water usage	ton	1,710,269	1,755,037	1,537,969
Total intensity of water usage	ton/million revenue	184	187.25	141.5
Total energy consumption intensity	kWh/million revenue	15,231	19,545.38	18,180
Social				
Employment				
Employees	Person	7,062	7,279	7,105
New employees recruited in 2023	Person	1,356	2,038	2,033
Employees – By type of employment				
Full-time employees	Person	7,062	7,279	7,105
Part-time employees	Person	0	0	0
Employees – By gender				
Male	Person	4,358	4,355	4,173
Female	Person	2,704	2,924	2,932
Employees – By age group				
30 years old or below	Person	4,160	4,290	4,255
31-40 years old	Person	1,519	1,562	1,588
41-50 years old	Person	983	1,020	921
50 years old or above	Person	400	407	341

Indicators	Units	2023	2022	2021
Employees – By educational background				
Master degree and above	Person	339	354	330
Bachelor degree	Person	1,301	1,335	1,290
College degree	Person	1,425	1,366	1,259
Below college degree	Person	3,997	4,224	4,226
Employees – By job function				
Management and specialised technical staff	Person	2,223	2,367	2,330
Front-line staff	Person	4,839	4,912	4,775
Employees – By region				
Mainland China	Person	7,045	7,269	7,099
Hong Kong, Macau and Taiwan regions of China	Person	15	10	6
Other regions	Person	2	0	0
Total employee turnover rate				
Turnover rate	%	17.6	25.6	30.8
Employee turnover rate – By gender				
Male	%	17.8	25.4	-
Female	%	17.3	25.9	-
Employee turnover rate – By age group				
30 years old or below	%	26.0	34.2	-
31-40 years old	%	6.3	17.7	-
41-50 years old	%	4.5	9.2	-
50 years old or above	%	5.3	6.1	-
Employee turnover rate – By region				
Mainland China	%	17.1	27.8	30.8
Hong Kong, Macau and Taiwan regions of China	%	23.5	20	0
Other regions	%	0	0	0

Indicators	Units	2023	2022	2021
Health and safety				
Work-related fatalities	Person	0	0	0
Working days lost due to work-related injuries	Days	775	605	464
Development and training				
Training performance				
Total person-times of training	Person-times	28,409	–	–
Total training hours	Hours	6,553	16,488	11,614
Total training input	Yuan	2,145,025	646,608	1,023,082
Training performance – By gender				
Person-times of training for male	Person-times	13,086	–	–
Person-times of training for female	Person-times	15,323	–	–
Total training hours for male	Hours	2,895	–	–
Total training hours for female	Hours	3,695	–	–
Training performance – By employee category				
Person-times of training for management and specialised technical staff	Person-times	9,852	–	–
Person-times of training for front-line staff	Person-times	18,557	–	–
Total training hours for management and specialised technical staff	Hours	3,175	–	–
Total training hours for front-line staff	Hours	3,379	–	–
Supply chain management				
Suppliers	Number of suppliers	2,745	3,641	2,168
Supplier Integrity Agreement Signing Rate	%	100	100	100

Indicators	Units	2023	2022	2021
Product responsibility				
Customer service				
Business complaints	Cases	5,925	3,967	5,031
Complaint handling rate	%	100	100	100
Customer satisfaction index	%	95.8	94.84	94.77
Intellectual property protection				
IPR infringement or being infringed	Cases	0	1	4
Patents obtained	Number of patents	318	356	333
New patents	Number of patents	17	29	39
Anti-corruption				
Employees educated in anti-corruption	Person	7,062	7,279	7,105
Total hours of anti-corruption education	Hours	270	137	69
Senior management educated in anti-corruption	Person	14	14	12
Total hours of anti-corruption education for senior management	Hours	7	5	6
Community investment				
Public welfare expenditure	Yuan	6,330,014	2,800,000	500,000
Volunteer participation	Person-times	725	287	480
Hours of volunteer activities	Hours	1,450	3,444	1,932

Report Disclosure Index

Shanghai Stock Exchange on the Application of Self-Regulation Rules for Listed Companies No.1 – Standardised Operation

NO.	Description	Chapter
8.1	Stakeholder communication and social responsibility practices	Focusing on Responsible Governance Cohesive Community Development
8.2	Compliance with business ethics and anti-unfair competition	Advocating Integrity and Cleanliness Build a Responsibility Supply Chain
8.3	Social responsibility management and strategic planning	Focusing on Responsible Governance
8.4	Social contribution per share	Core Highlights in ESG
8.5	Social responsibility report disclosure subjects and public disclosure	About the Report
8.6	Scope of the social responsibility report	About the Report
8.7	Protection of employee rights and benefits	Employee's Rights and Welfare
8.8	Environmental management policy	Strengthen Environmental Management Respond to Climate Change
8.9	Environmental management performance	Strengthen Environmental Management
8.10	Environmental impacts	Green Construction and Operation
8.11	Environmental remediation	Protection of Ecological Environment
8.12	Emissions and emergency management for key emission companies	N/A
8.13	Production and product safety assurance	Keeping a Tight Grip on Safety Elevating Road Quality Pleasant Driving Experience
8.14	Employment management, occupational health and safety, employee training	Employee's Rights and Welfare Talent Training and Development Occupational Health and Safety
8.15	Science ethics	Elevating Road Quality

Environmental, Social and Governance Reporting Guide of Hong Kong Exchanges and Clearing Limited (HKEX)

Aspects	Description	Chapter	
A. Environmental			
Aspect A1: Emissions	General Disclosure	Information on: (A) the policies; and (B) compliance with relevant laws and regulations that have a significant impact on the issuer relating to air and greenhouse gas emissions, discharges into water and land and generation of hazardous and non-hazardous waste.	Strengthen Environmental Management
	A1.1	The types of emissions and respective emission data.	Protection of Ecological Environment
	A1.2	Direct (Scope 1) and energy indirect (Scope 2) greenhouse gas emissions (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	Respond to Climate Change
	A1.3	Total hazardous waste produced (in tonnes) and (where appropriate), intensity (e.g. per unit of production volume, per facility).	Protection of Ecological Environment
	A1.4	Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	Protection of Ecological Environment
	A1.5	Description of emissions target(s) set and steps taken to achieve them.	Green Construction and Operation Respond to Climate Change
	A1.6	Description of how hazardous and non-hazardous wastes are handled, and a description of reduction target(s) set and steps taken to achieve them.	Protection of Ecological Environment
Aspect A2: Use of resources	General Disclosure	Policies on the efficient use of resources including energy, water and other raw materials.	Strengthen Environmental Management
	A2.1	Direct and/or indirect energy consumption by type (e.g. electricity, gas or oil) in total (kWh in '000s) and intensity (e.g. per unit of production volume, per facility).	Green Construction and Operation
	A2.2	Water consumption in total and intensity (e.g. per unit of production volume, per facility).	Green Construction and Operation
	A2.3	Description of energy use efficiency target(s) set and steps taken to achieve them.	Green Construction and Operation
	A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency target(s) set and steps taken to achieve them.	Green Construction and Operation
	A2.5	Total packaging material used for finished products (in tonnes) and, if applicable), with reference to per unit produced.	N/A

Aspects		Description	Chapter
Aspect A3: The Environment and Natural Resources	General Disclosure	Policies on minimising the issuer's significant impacts on the environment and natural resources.	Strengthen Environmental Management
	A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	Protection of Ecological Environment
Aspect A4: Climate Change	General Disclosure	Policies on identification and mitigation of significant climate-related issues which have impacted, and those which may impact, the issuer.	Respond to Climate Change
	A4.1	Description of the significant climate related issues which have impacted, and those which may impact, the issuer and the actions taken to manage them.	Respond to Climate Change
B. Social			
Aspect B1: Employment	General Disclosure	Information on: (A) the policies; and (B) compliance with relevant laws and regulations that have a significant impact on the issuer relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare.	Employee's Rights and Welfare Talent Training and Development
	B1.1	Total workforce by gender, employment type (for example, full – or part-time), age group and region.	Employee's Rights and Welfare
	B1.2	Employee turnover rate by gender, age group and geographical region.	Key Performance Indicators
Aspect B2: Health and Safety	General Disclosure	Information on: (A) the policies; and (B) compliance with relevant laws and regulations that have a significant impact on the issuer relating to providing a safe working environment and protecting employees from occupational hazards.	Occupational Health and Safety
	B2.1	Number and rate of work-related fatalities occurred in each of the past three years including the reporting year.	Key Performance Indicators
	B2.2	Lost days due to work injury.	Key Performance Indicators
	B2.3	Description of occupational health and safety measures adopted, how they are implemented and monitored.	Occupational Health and Safety
Aspect B3: Development and Training	General Disclosure	Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities.	Talent Training and Development
	B3.1	The percentage of employees trained by gender and employee category (e.g. senior management, middle management).	Talent Training and Development
	B3.2	The average training hours completed per employee by gender and employee category.	Talent Training and Development
Aspect B4: Labour Standards	General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to preventing child and forced labour.	Employee's Rights and Welfare
	B4.1	Description of measures to review employment practices to avoid child and forced labour.	Employee's Rights and Welfare
	B4.2	Description of steps taken to eliminate such practices when discovered.	Employee's Rights and Welfare

Aspects		Description	Chapter
Aspect B5: Supply Chain Management	General Disclosure	Policies on managing environmental and social risks of the supply chain.	Build a Responsibility Supply Chain
	B5.1	Number of suppliers by geographical region.	Build a Responsibility Supply Chain
	B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, how they are implemented and monitored.	Build a Responsibility Supply Chain
	B5.3	Description of practices used to identify environmental and social risks along the supply chain, and how they are implemented and monitored.	Build a Responsibility Supply Chain
	B5.4	Description of practices used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored.	Build a Responsibility Supply Chain
Aspect B6: Product Responsibility	General Disclosure	Information on: (A) the policies; and (B) compliance with relevant laws and regulations that have a significant impact on the issuer relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress.	Elevating Road Quality Pleasant Driving Experience
	B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons.	N/A
	B6.2	Number of products and service related complaints received and how they are dealt with.	Pleasant Driving Experience
	B6.3	Description of practices relating to observing and protecting intellectual property rights.	Elevating Road Quality
	B6.4	Description of quality assurance process and recall procedures.	Elevating Road Quality
	B6.5	Description of consumer data protection and privacy policies, and how they are implemented and monitored.	Pleasant Driving Experience
Aspect B7: Anti-corruption	General Disclosure	Information on: (A) the policies; and (B) compliance with relevant laws and regulations that have a significant impact on the issuer relating to bribery, extortion, fraud and money laundering.	Advocating Integrity and Cleanliness
	B7.1	Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases.	Advocating Integrity and Cleanliness
	B7.2	Description of preventive measures and whistle-blowing procedures, how they are implemented and monitored.	Advocating Integrity and Cleanliness
	B7.3	Description of anti-corruption training provided to directors and staff.	Advocating Integrity and Cleanliness
Aspect B8: Community Investment	General Disclosure	Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests.	Cohesive Community Development
	B8.1	Focus areas of contribution (e.g. education, environmental concerns, labour needs, health, culture, sport).	Cohesive Community Development
	B8.2	Resources contributed (e.g. money or time) to the focus area.	Cohesive Community Development

Survey

Dear Readers,

Hello,

Thank you very much for reading the 2023 Environmental, Social and Governance Report of Shenzhen Expressway Group Limited. We hope you evaluate this report and provide us your valuable feedback, your comments and suggestions are the important basis to help us make continuous improvements to the report. Please fill in the survey form below and send us your feedback via ir@sz-expressway.com.

2023 Environmental, Social and Governance Report of Shenzhen Expressway Corporation Limited Feedback Form



 Name _____

 Occupation _____

 Tel _____

 Email _____

1. What is your overall evaluation of this report?

Excellent Good Average Poor Very poor

2. What do you think about the accuracy, completeness, timeliness and clarity of the information disclosed in this report?

Excellent Good Average Poor Very poor

3. Do you find the organisation and style of this report easy to read?

Excellent Good Average Poor Very poor

4. What material issues are you interested in?

5. What need-to-know information do you think is not disclosed in the report?

6. Do you have any other comments on the environmental, social and governance aspects of Shenzhen Expressway?



深圳高速公路集团股份有限公司
SHENZHEN EXPRESSWAY CORPORATION LIMITED

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