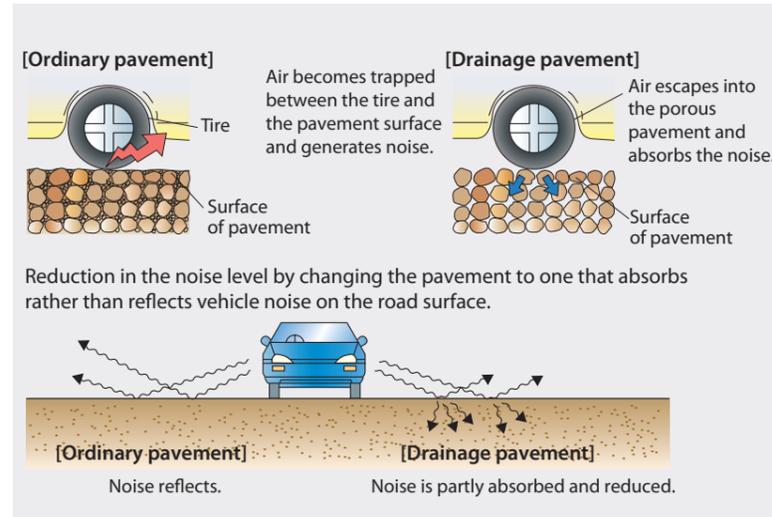


Pavement

In 1955, the percentage of paved national highways in Japan was less than 14% of the total road network. The percentage increased sharply thereafter as motorization rapidly progressed, reaching 57% in 1965, 79% in 1975, and over 90% today. Various paving technologies have been researched and developed since roads in Japan are subject to large seasonal temperature differences and heavy rainfall. New technologies are being developed to address an aging society and environmental issues.

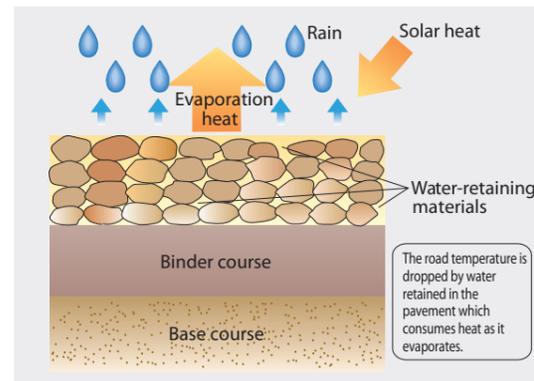
Drainage and low-noise pavement

The surface of a newly developed pavement is more porous than ordinary pavement and allows water to seep into and pass through the pavement. It flows along an inclined, impermeable course and is then discharged out the side gutters. The pavement drains the rain water and allows the road surface to remain non-slippery, controls spray and ensures good visibility. The porousness of the pavement also suppresses the noise generated by tires and traffic.



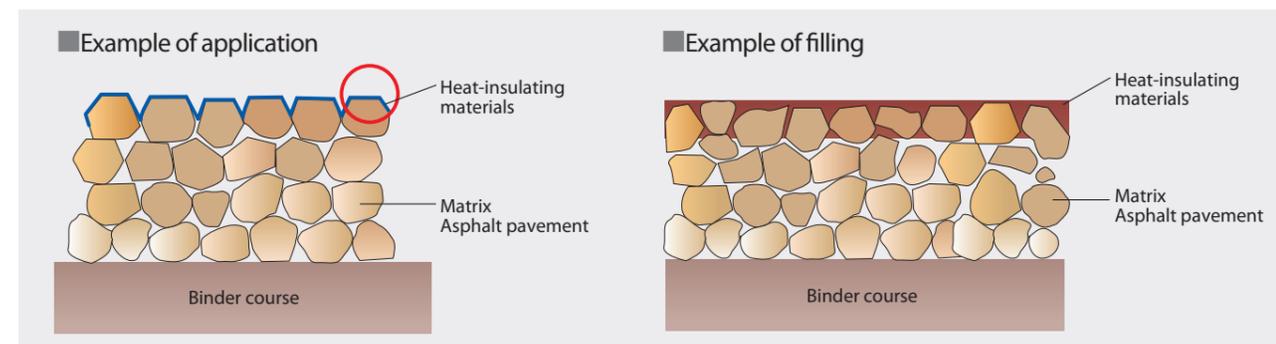
Water-retaining pavement

The pavement retains water and thus lowers the road temperature through water evaporation. Diverse techniques, from which rain water and underground water slowly evaporate, have been proposed. For example, injecting water-retaining materials like polymers into the voids of asphalt mixtures is one such option.



Heat-insulating pavement

Special paint is applied on the pavement surface to reflect infrared rays from the sun and thus reduce the amount of heat that is absorbed and accumulated in the pavement. The paint controls the rise in the surface temperature of the pavement and improves the thermal environment for pedestrians and road-side users, helping to mitigate the heat-island phenomenon.



Chapter 3

Summary of Principal Policies

Principal policy directions

In order to build a world-leading safe, smart, and sustainable road transportation system, we will implement road measures based on the following basic policies.

1 Disaster prevention and mitigation, national resilience

- Protect people's lives and livelihoods from disasters -
securing the passage of emergency vehicles within approximately one day, and general vehicles within approximately one week after a disaster strikes, we will work to build a disaster-resilient road network, and promote efforts to support evacuation, lifesaving emergency and recovery activities, and to strengthen crisis management measures.

2 Full-scale shift to preventive maintenance

- Transfer safe and secure roads to the next generation -
In order to make an early transition to preventive maintenance that reduces life-cycle costs and realizes efficient and sustainable maintenance management, we will accelerate measures for facilities that need repairs identified through periodic inspections and promote the active use of new technologies.

3 Development of networks and hubs to facilitate movement of people and goods - Connect people and regions -

In order to build a national arterial road network providing speed and accessibility, we will work on the development and functional enhancement of high-standard road infrastructure, and the enhancement of "modal connect" through the development of transportation hubs, the promotion of traffic congestion countermeasures, and logistics support.

4 Realization of a decarbonized society through promotion of Green Transformation (GX) - Contribute to carbon neutrality by 2050

Based on the "Strategy to Promote Carbon Neutrality on Roads", we will promote decarbonization efforts in the road sector in order to achieve a carbon neutral and decarbonized society in 2050.

5 Digital Transformation (DX) of Road system

- Promote xROAD initiative-

In order to promote safe, smart, and sustainable road use, we will accelerate "xROAD," a DX initiative to make road surveys, construction, maintenance, management, and administrative procedures more sophisticated and efficient through the introduction of new technologies and the utilization of data.

6 Improvement of safety, security and liveliness in road space - Improve comfort of regions and towns -

In order to realize a society in which everyone can live in safety, security, and comfort, we will promote traffic safety measures, universal design, the elimination of utility poles, and the development of road space for bicycles, as well as initiatives to meet the diverse needs of road space, such as the creation of new forms of mobility including e-scooter and regional activities.

※In addition to the above, we will promote road policies based on the "Comprehensive Strategy for the Vision for a Digital Garden City Nation" (Cabinet resolution made on December 26, 2023), "Grand Design and Action Plan for New Capitalism 2023 Revised" (Cabinet decision on June 16, 2023), "National Spatial Plan (National Plan)" (Cabinet decision on July 28, 2023) and "Fundamental Plan for National Resilience" (Cabinet decision on July 28, 2023).