



Introducing various activities to promote
the procurement of recycled asphalt
concrete under the “Leading City Network
for Green Public Procurement” project!

Note 01 What is Recycled Asphalt Concrete?

Recycled asphalt concrete refers to **a product of which a minimum 25% is made out of recycled asphalt concrete aggregates**, under 「Article 3-2 of the Enforcement Decree of Construction Waste Recycling Promotion Act」.

For full confirmation, please check for the certification mark, since only those with Good Recycled(GR) certificates or Korea Eco Label are recognized as green products and services.

Korea Eco Label



Good Recycled Certificates



Note 02

Why is the Procurement of **Recycled Asphalt Concrete** Important?

Recycling used asphalt not only reduces the need to develop extensive disposal sites for asphalt waste but also solves **issues resulting from a scarcity of aggregate paving resources**, presenting enormous **environmental and economic benefits**, compared to the use of normal asphalt concrete.

(Economy) **Budget reduction by 2.4 billion KRW each year** arising from the use of recycled asphalt concrete (Mandatory Use Rate: 40%)

(Environment) **About 24,139 KRW in economic benefits** per ton of recycled asphalt concrete

※ Source : Ministry of Environment (2011), 2011 Casebook regarding Best Practices on Reclaimed Aggregates and Recycled Asphalt Concrete



Note 03

What is the Use Ratio of **Recycled Asphalt Concrete** across the Globe?

Regarded as a solution to both the depletion of resources and environmental issues, recycled asphalt concrete is widely used at a rate **of 50% to 70% in Japan and European countries** whereas the usage rate in South Korea rests at 19%.

〈 Ratio of Recycled Asphalt Mixture Used 〉

Japan	Sweden	The Netherlands	France	Denmark	Belgium	South Korea
76.1%	70%	70%	65%	58%	51%	19%

European Asphalt Paving Association ('13), Korean Ascon Cooperative ('18)



Creation of Guidelines on the Procurement of Recycled Asphalt Concrete

The Korea Environmental Industry and Technology Institute (KEITI, Contracting Entity) and the ICLEI Korea Office (Executing Agency) created and distributed “**Guidelines on the Procurement of Recycled Asphalt Concrete**” for each region as the institute’s first initiative to promote the procurement of recycled asphalt concrete.

The customized guidelines include information regarding companies that produce green products and services in each jurisdiction and detailed procurement methods, facilitating the purchase of green products by procurement officials from companies in their jurisdiction.



Hosting of Recycled Asphalt Concrete Seminar for Interested Parties

As its second initiative, KEITI held **Regional Recycled Asphalt Concrete Seminars for Interested Parties** to share opinions from the perspectives of both producers (producing companies) and consumers (local governments) and seek out directions for future cooperation.

(Gyeonggi Province) 27 Jul 2020 (Mon), Gyeonggi Provincial Government

(Busan Metropolitan City) 31 Jul 2020 (Fri), Busan Metropolitan City Hall

(Daejeon Metropolitan City) 11 Sep 2020 (Fri), Video Conference (Online)



Training to Promote the Procurement of Recycled Asphalt Concrete

The third initiative, “**Training Regarding Best Cases on Recycled Asphalt Concrete**” was offered to staff members of business sites that frequently procure recycled asphalt concrete and those in charge of procurement for construction projects in counties and districts, to improve awareness on recycled asphalt concrete.

(Busan Metropolitan City) 26 Jun 2020 (Fri), Busan Metropolitan City Hall

※ Training programs planned for public officials in charge of facilities in Gyeonggi Province and Daejeon Metropolitan City were cancelled due to COVID-19.



Publication of Case Report on the Best Practices Recycled Asphalt Concrete Pavement

Last but not least, this project carried out **quality-verification research on recycled asphalt concrete, using a road scanner**, in conjunction with KRM (Korea Road Management), a start-up located in the Korea Institute of Civil Engineering and Building Technology (KICT).

The region surveyed segments of “**the Route 38 in Dangjin City,***” a very suitable location for research comparing the quality of recycled and normal asphalt concrete as it was used and maintained following construction under similar conditions (construction period, environmental conditions, traffic volume, etc.).

*Location Surveyed: Sambong-ri, Seokmun-myeon, Dangjin-si, Chungnam to Tongjeong-ri, Seokmun-myeon, Dangjin-si, Chungnam

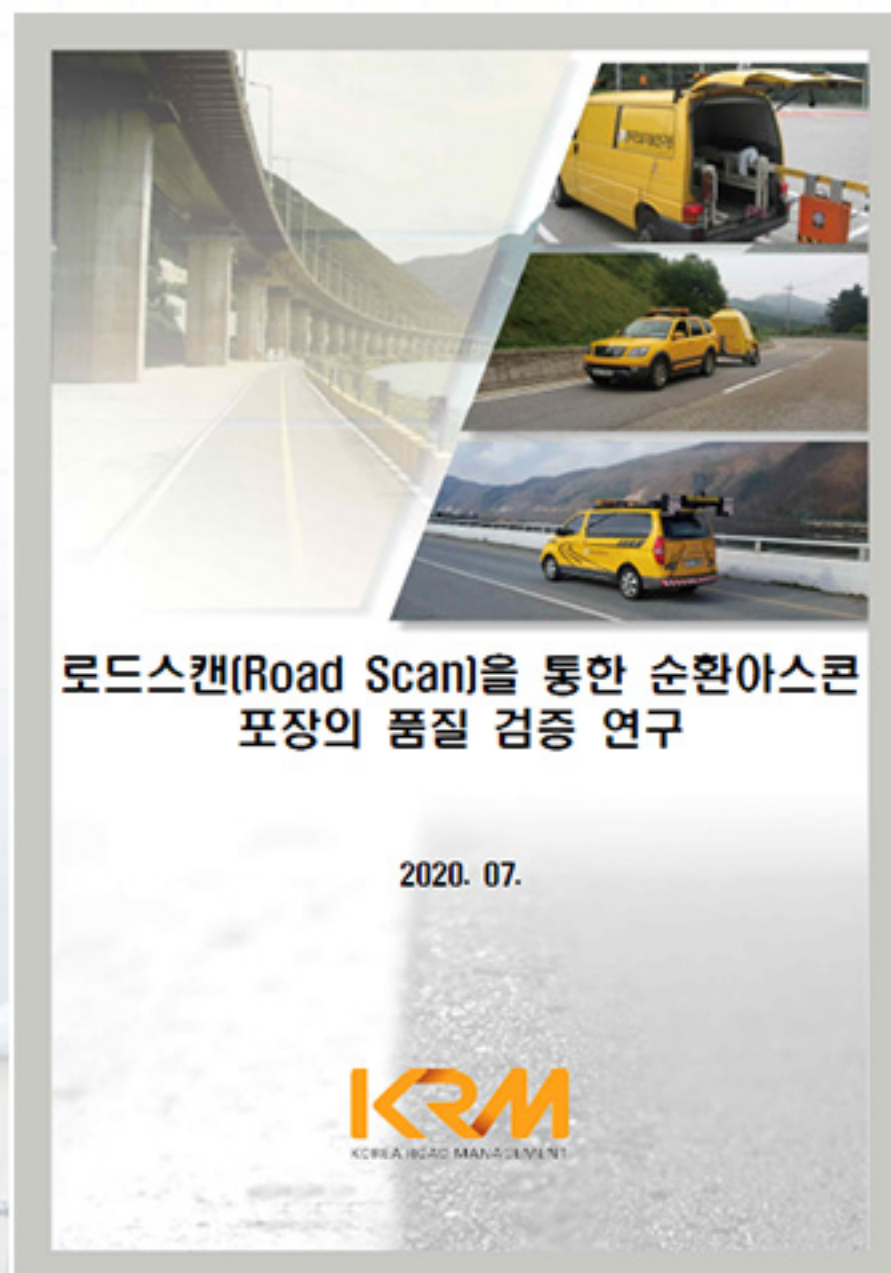


〈One/Two-lane Road (Route 38) in Dangjin City〉

- Road construction works completed in 2015
- 1st Road Scan in 2017 (Result: good pavement)
- 2nd Road Scan in 2020 (Result: good pavement)

Research Methodology?

Using a road scanner (Pavement Evaluation Surveyor (PES)), the surface conditions (crack rate, roughness, plastic deformation) of road segments were scanned, and results were compared and analyzed. The scanner was provided by the KICT.



The research result?

As a result of comparing recycled and normal asphalt concretes with regards to their crack rates, plastic deformation and longitudinal roughness using the road scanner, the **quality of recycled asphalt concrete was shown to be equivalent or superior to normal asphalt concrete at the current point in time, after a 5-year performance period!**

* Nevertheless, it is necessary to examine additional cases to demonstrate quality over the long term and provide more comprehensive performance data evaluating normal and recycled asphalt concrete.

Section Surveyed		Crack Rate(%)	Plastic Deformation(mm)	Longitudinal Roughness(mm/m)	Traffic Volume (AADT)
		2020	2020	2020	2019
North-bound One-lane Road	Test section paved w/ recycled asphalt concrete	10.68	6.55	1.96	8,710
	Section w/ normal asphalt concrete	8.64	7.71	1.10	
North-bound Two-lane Road	Test section paved w/ recycled asphalt concrete	13.50	12.81	2.54	
	Section w/ normal asphalt concrete	19.84	13.71	1.94	

This Card News was created as part of the
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