

ASTM GROUP: THE HIGHWAY OF THE FUTURE AT CLIMATE WEEK NYC

The Group will present the A4 Turin - Milan modernisation project, Europe's first Green and Hi-Tech motorway

New York, 23 September 2024. ASTM Group - the world's second-largest operator of motorway concession networks, and a global player in major infrastructure construction projects and in technology for infrastructures - brings Italian innovation to **Climate Week NYC**. The **A4 Turin - Milan Highway of the Future** project will be unveiled as part of the **NEST Climate Campus** (24-26 September), the forum that promotes sustainability initiatives in support of circular economy, environmental technologies and renewable energies. The event, part of Climate Week NYC, was organised with the coordination of the **Ministry of Foreign Affairs** and the **ICE Agency**, in collaboration with the **Consulate General of Italy** in New York.

Since 2009, **Climate Week NYC** is one of the most important climate change appointments, with over 600 events and activities throughout New York City. Each year, it brings together key players from governments, businesses and civil society, who meet to address the crisis, drive change and support projects already in place. The event - which this year will take place from 22 to 29 September - is held in cooperation with the United Nations General Assembly, in coordination with the United Nations and the City of New York.

ASTM Group will present the **connected, resilient and sustainable** Highway of the Future project, embodied by the A4 Turin - Milan, within the thematic area "*Mobility, Transportation and Sustainable Travel*".

Umberto Tosoni, CEO of ASTM, said, "*We are honoured to represent Italy at a globally significant event such as Climate Week NYC, which offers us the opportunity to contribute to shaping a more sustainable future for the benefit of all. At this event, we will unveil our vision for the Highway of the Future: connected, sustainable, and technologically advanced. This project will serve as a tangible example of how infrastructure can evolve to minimize environmental impact, enhance safety, and optimize mobility through smart, integrated solutions. We also see this infrastructural model as one we can introduce to the U.S. concession market, which we are monitoring closely, with a particular emphasis on the emerging highway Express Lanes.*"

Highway of the Future Project: A4 Turin – Milan

The Highway of the Future represents more than just a road—it reflects a bold, innovative vision for sustainable mobility. By integrating cutting-edge technology with a focus on environmental stewardship, the project aims to create a transportation system that is more efficient, safer, and delivers an improved experience for travellers. The A4 Turin-Milan corridor, spanning almost 125 km, will be transformed into one of the most advanced digital, resilient, and sustainable highways in both Italy and Europe. This project will serve as a model for ecological and digital transition, positioning the A4 as a living laboratory for future-forward infrastructure development.

The new road pavement

The new road pavement is made from a compound composed of graphene, polymer additives and selected hard-to-recycle plastics (such as toys, fruit crates, and baskets) that would otherwise be sent for waste-to-energy processing. Additionally, **70%** of the material from the existing pavement is reused, significantly reducing the need for new natural aggregates to just 30% compared to traditional maintenance methods. This new surface will reduce energy consumption by around 90 million kWh (-30%), which is equivalent to the annual energy needs of about 30,000 households. It will also cut CO2 equivalent emissions by 18,350,000 kg (-38.5%), comparable to the carbon absorption of roughly 115,000 trees.

Moreover, compared to traditional paving methods, this project will reuse approximately 1.5 million kg pounds of hard plastics (equivalent to the weight of over 1,200 cars), save nearly 23 million kg of bitumen,

and prevent the extraction of around 480 billion pounds of raw materials from quarries, resulting in a 40% reduction in non-renewable materials used.

Rainwater collection and reuse system

The first-ever **rainwater collection and reuse system** has been installed along the motorway. This innovative infrastructure is designed to efficiently capture rainwater, which will be stored in reservoirs for future use. The collected water will be reintegrated into the **motorway's ecosystem, providing resources for toll stations and nearby service areas for everyday cleaning operations**. Additionally, these water reserves will be available for external entities located near the system for industrial purposes and potentially for agricultural use.

Technology in mobility

The project includes the extension of the vehicle-infrastructure dialogue systems (**V2X**), the application of average vehicle speed detection and traffic monitoring systems, the expansion of the infrastructure sensor system, the use of dynamic weight control systems for heavy traffic, along with wrong-way detection systems and technology for monitoring environmental conditions and hazardous materials.

ASTM Group's Key Projects in the American Market

The ASTM Group is actively operating in the United States through its subsidiaries **Halmar International**, **ASTM North America**, and Sinelec USA. This region is recognized for its high potential across key sectors, including motorway concessions, Engineering, Procurement, Construction (EPC), and technology.

To date, the Group is engaged in the completion of the following major projects:

EPC (Halmar International):

- The design and build **Penn Station Access** in the **New York** railroad system (\$1.85 billion)
- The replace the **Park Avenue** viaduct on the **Metro-North Railroad**, Phase 1 (\$383 million)
- The renovation of certain areas of **JFK** airport (a project worth \$1.24 billion)
- The construction of a tunnel under the **Potomac** River, a significant environmental project for Washington DC (total value \$819 million)

PPP (ASTM North America)

- The improvement of accessibility of 13 stations of the **Metropolitan Transportation Authority** of New York¹ (\$450 million)

TECHNOLOGY (Sinelec USA)

- Implementation and management of a Commercial Vehicle Management System (CVMS) for the Solano Transportation Authority (STA), the heart of the innovative Commercial Vehicle Management Center (**CVEF**), built on the I-80 in **Solano County, California**

¹ Halmar International is responsible for the construction and subsequent maintenance of the vertical transport systems. ASTMNA is responsible for the concession, which will last for 25 years.

ASTM Group is among the leading global infrastructure players in the management of motorway concession networks, EPC design and construction projects and technology for infrastructures. Operating in more than 15 countries, with about 16,500 employees and associates, the Group adopts a “one-company” business model incorporating integrated skills that cover the entire value chain of the infrastructure sector. ASTM Group is the second largest operator in the world in the management of motorway infrastructure with a network of approximately 6,200 km, with more than 1,400 km of this in Italy, 4,700 km in Brazil – through the company EcoRodovias – and 84 km in the United Kingdom, through its subsidiary Road Link.

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