



ALP-45DP Locomotive Procurement

The ALP-45DP is the first dual-mode locomotive of its kind in North America, transforming how thousands of commuters travel every day. Capable of operating on both diesel power and overhead catenary electric power, the locomotive offers unprecedented operational flexibility –allowing seamless transitions between electrified and non-electrified territories without stopping. Deployed by NJ TRANSIT and Montreal's Exo (formerly Agence Métropolitaine de Transport), the fleet represents a major step forward in reliable, sustainable, and efficient commuter rail service.

What challenges did STV address?

Both agencies required a next-generation locomotive capable of supporting high speeds, reducing emissions, improving rider experience and adapting to diverse operating environments. Creating a locomotive that could meet stringent performance requirements in dual-power mode – and seamlessly transition between them – required rigorous design oversight, testing and technical evaluation. Ensuring compliance with complex safety and operational standards was central to the procurement.

What solutions did STV deliver?

STV provided comprehensive engineering support throughout the procurement, including design reviews, specification compliance checks, production oversight, testing support and on-site inspections. The firm supported NJ TRANSIT's acquisition of 35 locomotives and Exo's purchase of 20 locomotives. The ALP-45DP fleet delivers speeds up to 100 mph in diesel mode and 125 mph in electric mode, while producing less noise and fewer emissions than previous generations.

How does this project benefit the region?

The dual-mode capability improves operational flexibility across complex rail networks, reduces delays associated with locomotive swaps and supports a more environmentally responsible rail system. Riders benefit from smoother, quieter and more reliable service, while agencies gain long-term efficiency and resilience across their fleets.

Key stats and accolades

- 35 NJ TRANSIT locomotives and 20 Exo locomotives procured
- 125 mph top speed (electric) and 100 mph (diesel)
- First dual-mode locomotives used by NJ TRANSIT
- Recognized with regional and national ACEC Engineering Excellence Awards



Securing a first-of-its-kind dual-mode locomotive to bring more sustainable, reliable commuter rail to communities.

Client

NJ Transit & Exo (formerly Agence Métropolitaine de Transport)

Location

New Jersey & Montreal, Canada

Markets

Rail Transportation: Commuter & Heavy Rail

Services

Advisory: Vehicle Procurement & Engineering

Project Status

Complete

 **Featured**





Rail Transportation

NJ Transit Meadows Maintenance Complex Expansion





Rail Transportation

Metro-North Railroad Dual-Mode Locomotive Procurement





Rail Transportation

Exo 2050 Train Car Procurement



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