



## SIEMENS IN NEW YORK CITY

Siemens has an extensive footprint as a leading technology partner for the New York City metropolitan region, helping shape the city's transportation systems. With its innovative technologies, Siemens has helped New York City increase ridership, safety, and efficiency.

**Communications Based Train Control for the Metropolitan Transit Authority:** Siemens has engineered rail automation technology called Communications Based Train Control (CBTC) for the New York City MTA. The technology has been installed on the 100+ year old New York Canarsie L subway line that intelligently automates operations so more trains can be added to the system— resulting in passengers waiting less at the station platform. Siemens has also been awarded a \$156 million contract by MTA to install CBTC on the Queens Boulevard Line, one of the busiest subway lines on the New York City Transit system.

- The upgraded CBTC system has allowed MTA to handle and sustain increasing ridership on the line over the last 20 years and increased ridership by 27 percent on the Canarsie line since CBTC was installed in 2007.
- In similar systems across the world, Siemens CBTC system is increasing line capacity by up to 20 percent and cutting annual energy consumption by 15 percent.

**Positive Train Control for Metro North/Long Island Railroad:** Siemens is in the process of upgrading Positive Train Control (PTC) technologies for the two largest commuter lines in the U.S., NY MTA's Metro-North and Long Island Rail Road. The improvements will increase efficiency and safety on 700 miles of track that serves 800 million passengers per year.

**Next-Generation Rail Travel for Amtrak:** Siemens is manufacturing 70 advanced technology electric locomotives for Amtrak to run in and out of New York City along the Northeast Corridor. These new electric workhorses are designed for improved reliability and easier maintenance leading to faster turn-around times and increased availability for service. A state-of-the-art microprocessor system performs self-diagnosis of technical issues, takes self-corrective action and notifies the locomotive engineer. In addition, there are redundant systems to ensure power is maintained to the passenger cars to keep heating and cooling systems working, the lights on and the doors operational. The locomotives also meet the latest federal rail safety regulations, including crash energy management components.

- The locomotives are energy efficient and use a regenerative braking system to feed energy back into the power grid. Together, the 70 locomotives could save over 3 billion-kilowatt hours of energy and could result in more than \$300 million in savings over 20 years.

**Modernizing Infrastructure Across the City:** Intelligent software and automation have an impact on more than just New York's transportation infrastructure, Siemens has provided technology to make the most out of both new and 100+ year old landmarks and systems. Siemens systems help automate pools at the new World Trade Center site, energy-efficient building management solutions are modernizing Carnegie Hall as it approaches its 125-year anniversary, and software specially designed for ConEdison isolates electric grids in downtown Manhattan during flooding so that the utility can keep the power on.

### Driving the Future of Transportation

Siemens' technology has helped move modern urban transportation forward by offering smart transit and intelligent transportation solutions:

**Vehicle-to-Infrastructure Technology:** Siemens, as a member of the Tampa-Hillsborough Expressway Authority (THEA) team, has been chosen by the U.S. Department of Transportation (DOT) to provide innovative vehicle-to-infrastructure (V2I) technology for a new Connected Vehicle pilot project. This is one of three projects funded by the USDOT to pilot next-generation technology in infrastructure and vehicles that can impact unimpaired vehicle crashes, which make up 80 percent of the crashes on the road.

- Siemens V2I technology will enable vehicles and pedestrians to communicate with traffic infrastructure like intersections and traffic lights in real-time to reduce congestion specifically during peak rush hour in downtown Tampa.
- The technology will also significantly help improve safety and reduce greenhouse gas emissions.

# SIEMENS

- Siemens has been in the transportation business for over 160 years, introducing the first electric railway in 1879 and has since worked on rail projects across the globe. Siemens leverages its global rail and transportation experience and engineers it specifically for the U.S. to move people in and around cities and communities.
- In the U.S., Siemens is providing rail vehicles, locomotives, automation, components and systems to more than 25 agencies including Washington D.C., Boston, Philadelphia, Denver, Salt Lake City, Chicago, New Orleans, Minneapolis, Houston, Portland, Sacramento, San Diego, St. Louis, Atlanta and Charlotte.
- Cities like Portland, Washington D.C., Philadelphia, New Orleans, New York and Chicago also rely on Siemens to provide traction-power substations and electricity transmission, as well as signaling and control technology for freight and passenger rail and transit systems.
- In the U.S., Siemens' invests more than \$100 billion annually on R&D, and has engineered next-generation technologies for some of the country's most innovative transportation projects.
  - Last July, a Siemens S70 light rail vehicle set the Guinness World Record for **longest distance traveled by a battery-powered tram** from one charge in 24 hours. The S70 light rail vehicle traveled 15.283 miles (24.596 km) in 24-hours, on San Diego Metropolitan Transit System's Green Line.
  - In Texas, San Antonio VIA Metropolitan Transit is already experiencing a **20 percent reduction in travel times** for its bus riders thanks to newly installed Siemens software used as part of their new bus rapid transit system.
  - Siemens installed the **first regenerative energy storage unit** on the new TriMet Portland-Milwaukie Light Rail Transit Line.
- Siemens has also expanded its transportation manufacturing portfolio. Beginning with building light rail vehicles and streetcars over 30 years ago, Siemens has added electric and diesel-electric locomotives, and high-speed trainsets (including coaches) to its 800 + person manufacturing operations in Sacramento, California. Siemens has additional transportation manufacturing hubs in: Louisville, KY; Marion, KY; Pittsburgh, PA

## Key Data\*

With approximately 4,000 Siemens employees, and over 100 working within Siemens Mobility, New York City serves as central headquarters for Siemens Mobility business. Siemens also partners with over 140 suppliers across the New York and New Jersey region.

*Please note that employment figures are based on where employees work, not where they live.\**

For more information, please visit <http://news.usa.siemens.biz/>.

**Siemens Corporation** is a U.S. subsidiary of Siemens AG, a global powerhouse focusing on the areas of electrification, automation and digitalization. One of the world's largest producers of energy-efficient, resource-saving technologies, Siemens is a leading supplier of systems for power generation and transmission as well as medical diagnosis. With approximately 348,000 employees in more than 190 countries, Siemens reported worldwide revenue of \$86.2 billion in fiscal 2015. Siemens in the USA reported revenue of \$22.4 billion, including \$5.5 billion in exports, and employs approximately 50,000 people throughout all 50 states and Puerto Rico.

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