

AMERICAN SOCIETY OF HIGHWAY ENGINEERS

National Project of the Year Award

OFFICIAL ENTRY FORM

AWARD CATEG	ORY (Check One):	🗴 Under	\$20 Million	□ Over \$20	Million
SPONSORING R	EGION (Check On	e):			
X Northeast		Great Lake	S	□ North	west
□ Mid-Atlantic		□ North Cent	ral	□ Rock	y Mountain
□ Southeast		□ South Cent	ral	□ South	
CONTACT INFO	RMATION FO	R SUBMIT	TING REGIO)N:	
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Phone (Office): 717-790-9		hone (Mobile): 7			E-Mail Address:
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<u>PROJECT INFO</u>					
ENTERING AGENCY/CC			ing Engineering		
PROJECT NAME: Purp	<u>le Line Bus Rapid Tra</u>	nsit		TYPE: Public	<u>Fransit</u>
PROJECT LOCATION:	Washington and We	stern Avenues			
CITY: <u>Albany</u>		COUNTY:		_STATE: <u>New N</u>	
FINAL CONSTRUCTION			DGETED ČONSTR	UCTION COST:	<u>\$19.4 million</u>
PROJECT COMPLETION	DATE: November	<u>5, 2023</u>			
PHONE (OFFICE): <u>518-6</u> PROJECT TEAM PROJECT OWNER:	[: Capital District Trans	sportation Auth	<u>18-852-9049</u> E-MA ority	iL: _jsaia@jsqua	redconstruct.com
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CONTACT PERSON: Je	eremy Smith	PHONE:		_	
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PROJECT DESIGN FIRM					
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CITY:	Albany	STATE:	NY	ZIP:	12205
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		E-MAIL ADDRESS: <u>pinaloy@jnmaloy.com</u>			
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Entry Form Complet	ea By: <u>Shelly A.</u> .	Jonnston, PE		Date:	1/26/2024

INTRODUCTION

The Capital District Transportation Authority (CDTA) is the mobility solutions provider in the Albany, New York area. Their serve area is 2,300 square miles with a population of approximately 770,000 people. The Purple Line is CDTA's latest bus rapid transit (BRT) service known as BusPlus. The Purple Line BRT extends 8 miles along Washington and Western Avenues, connecting downtown Albany and Crossgates Mall, stopping at The College of Saint Rose, University at Albany as well as the Harriman State office campus. The Purple Line travels along the second busiest transit corridor in the region with over 3 million boardings annually. The Purple Line also connects to the existing Red and Blue BRT lines, thus allowing riders fast, accessible, and affordable access to major destinations within the Capital Region of New York State. The Purple Line BRT began service on November 5, 2023, which was on schedule for this multi-phase project. The construction cost was \$19.9 million for the transportation infrastructure elements.

COMPLEXITY

The project was complex because of the construction scheduling and phasing, rigorous project review process by the Federal Transit Administration (FTA), and the regulatory approvals and permitting required from many agencies, including the State University of New York (SUNY), New York State Office of General Services, and the City of Albany.

The design phase was completed between 2015 and 2020. In 2020, all design documentation, costs, and schedule, including the procurement plan, was provided to FTA for a final project review before funding was authorized for construction. The project was constructed over a three-year period.

The project elements include:

- Dedicated busway through the University at Albany campus
- Two-lane roundabout off a limited access highway
- Sixteen BRT stations featuring solar power, enhanced lighting and heated sidewalks
- Three new traffic signals and transit signal priority at 35 intersections
- Queue jump lanes and bus only lanes to enhance travel time and service reliability
- Contra-flow bus lane and multi-use path on the State Office Campus bridge over NY-85

This project involved multiple disciplines, performing design services to generate seven construction contracts, coordinated to meet a start date for the new bus service. Creighton Manning performed the transportation and civil engineering work and managed all project disciplines. Creighton Manning also served as program manager for CDTA, developing the project scope, cost, and schedule, assembling, and supporting CDTA in grant applications, FTA grant review process, and ultimately grant management. Seven major contracts were awarded, four for transportation and civil work to construct the bus stations, signal improvements, busway, and other corridor improvements, one for the bus shelters, BRT pylon signs and passenger amenities; one to expand and renovate the Albany Division Bus Garage and one to purchase the buses.

NEW APPLICATION OF EXISTING TECNIQUES/ORIGINALITY/INNOVATION

Purple Line BRT is only the third application of BRT in Upstate New York, and the most advanced to date because of the dedicated transit segments and technology applications. The project constructed the first bus only lanes in the region. The bus only lanes on Brevator Street and the Campus Access Road bridge over Route 85 reduce travel time for customers and increase the attractiveness of the transit service.

Another innovative feature was the UAlbany Gardenway, a dedicated bikeway for the Purple Line that extends one mile through the University at Albany campus and includes a new bus priority lane and BRT stations, along with new and expanded multi-use paths along Alumni Drive that increase connectivity and improve walker and cyclist safety. The Busway provides exclusive access for BRT buses and enhances travel for CDTA customers.

The traffic signal system in the corridor was upgraded to state-of-the-art hardware and software, utilizing cloud-based remote access to the network for real-time operations reporting and the use of video detection for special bus phases. A queue jump lane is a transit treatment that includes a dedicated bus only lane and a special signal. The Purple Line BRT has three queue jumps and two special signal intersections. The queue jump signal is a specialized traffic system that grants priority to buses at intersections equipped with queue jump lanes. When activated, it provides buses with a brief, exclusive phase, allowing them to enter the intersection ahead of other vehicles, minimizing delays and increasing efficiency. This signal not only enhances the reliability of the BRT lines, but also incentivizes more people to choose eco-friendly and time-efficient public transit options.

A two-lane roundabout was constructed at the main entrance to Crossgates Mall from a limited access highway. It required relocation and widening of the intersection. The roundabout improves bus schedule adherence and service reliability especially for the main transit hub at the mall. Additional improvements to traffic signals, pavement markings and pavement conditions improved access to and from the mall.

Innovative features at select BRT stations included roof mounted PV panels to offset the energy demand that will generate power in the non-winter seasons. The heated sidewalk system required design of a complex system of underground conduits and a large electrical cabinet housing the heated sidewalk control system and interconnection of the rooftop solar into the public utility system.

SOCIAL/ ECONOMIC CONSIDERATIONS

Bus Rapid Transit is a sustainable way to transport residents and employees quickly, efficiently, and safely. The new BRT service has the following social and economic benefits:

- Improves mobility for transit-dependent and disabled populations
- Provides fast, efficient, and environmentally sound connections between key destinations
- Supports urban revitalization and transit-oriented development
- Alleviates parking demand and associated costs
- Improved signal coordination reduces travel time for all traffic in the corridor

SAFETY

Implementing the Purple Line BRT contributes to reductions in traffic crashes. The safety benefits are highlighted by the following:

- Dedicated bus lanes reduce interaction between buses and other vehicles, minimizing the risk for traffic crashes.
- Enhanced pedestrian accommodations including sidewalks, curb bump outs, Rectangular Rapid Flashing Beacons (RRFB), and crosswalks improve accessibility and pedestrian safety.
- Raised median with fence and trees on Western Avenue serves to calm traffic and direct pedestrians to a safe crosswalk.
- A dedicated multi-use path enhances safety for cyclists on the UAlbany campus.
- Roundabout reduces the potential for rear end accidents on the highway and right-angle accidents on the mall ring road.
- Bus stations with clear sight lines, bright lighting, shelters, and heated sidewalks improve safety and security for passengers.

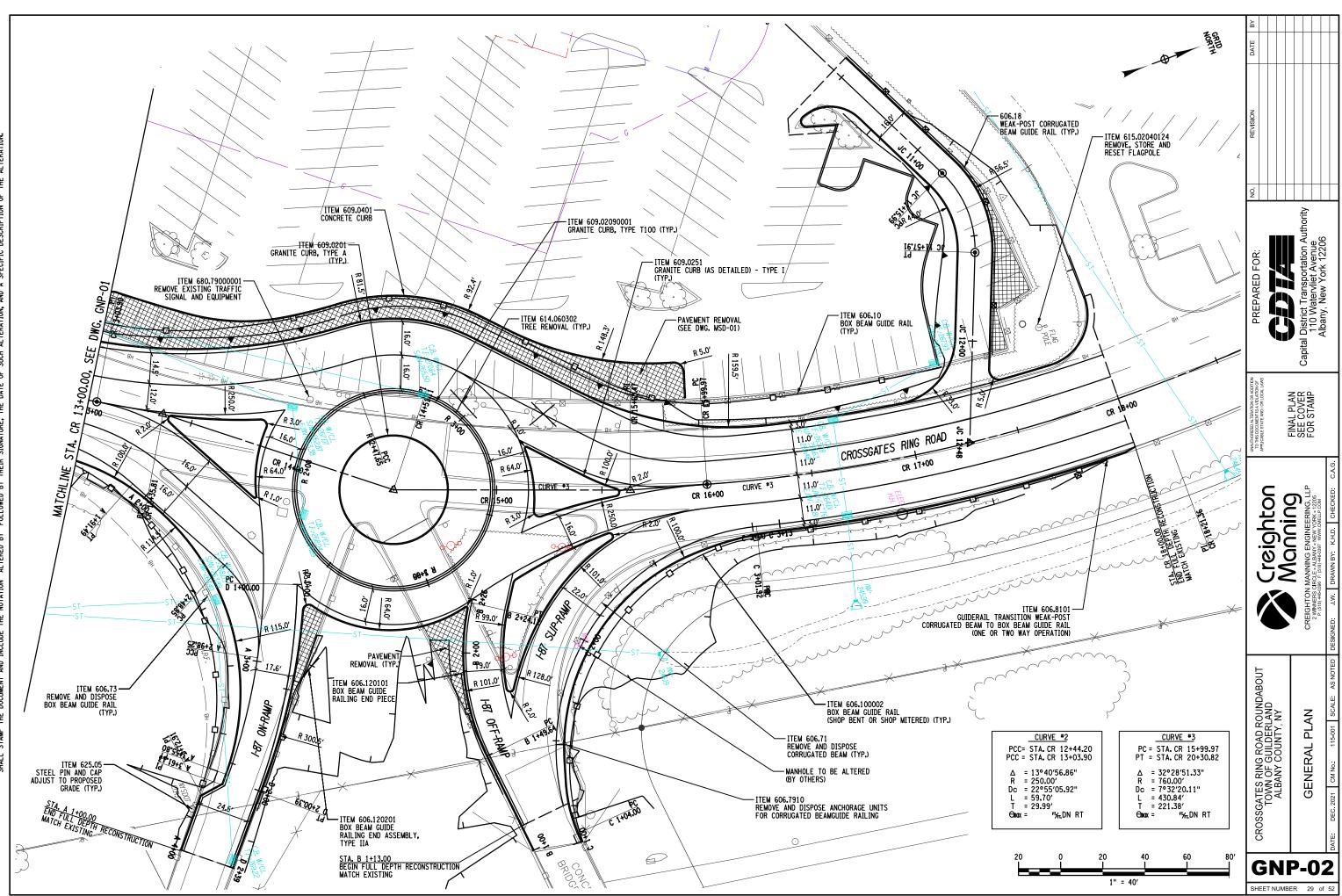
AESTHETICS AND SUSTAINABLE FEATURES

The new BRT service has the following aesthetic and sustainable features:

- Branding is a key component of a BRT system to set customer expectations. The 16 new articulated BRT buses have a distinct logo and graphics in purple on a silver background, setting them apart from local, fixed route buses in the corridor. The visual identity extends to the pylons and bus shelters at each of the stations.
- Red colored pavement on the bus only lanes highlight the prominence of the transit service, while at the same time visually enforcing dedicated transit space.
- BRT service improves air quality by reducing the number of single occupant vehicles
- Photovoltaic and solar panels at the bus stations reduce greenhouse gases.
- Porous pavement on the dedicated busway reduces stormwater runoff.
- Roundabout eliminates vehicles idling and improves air quality.

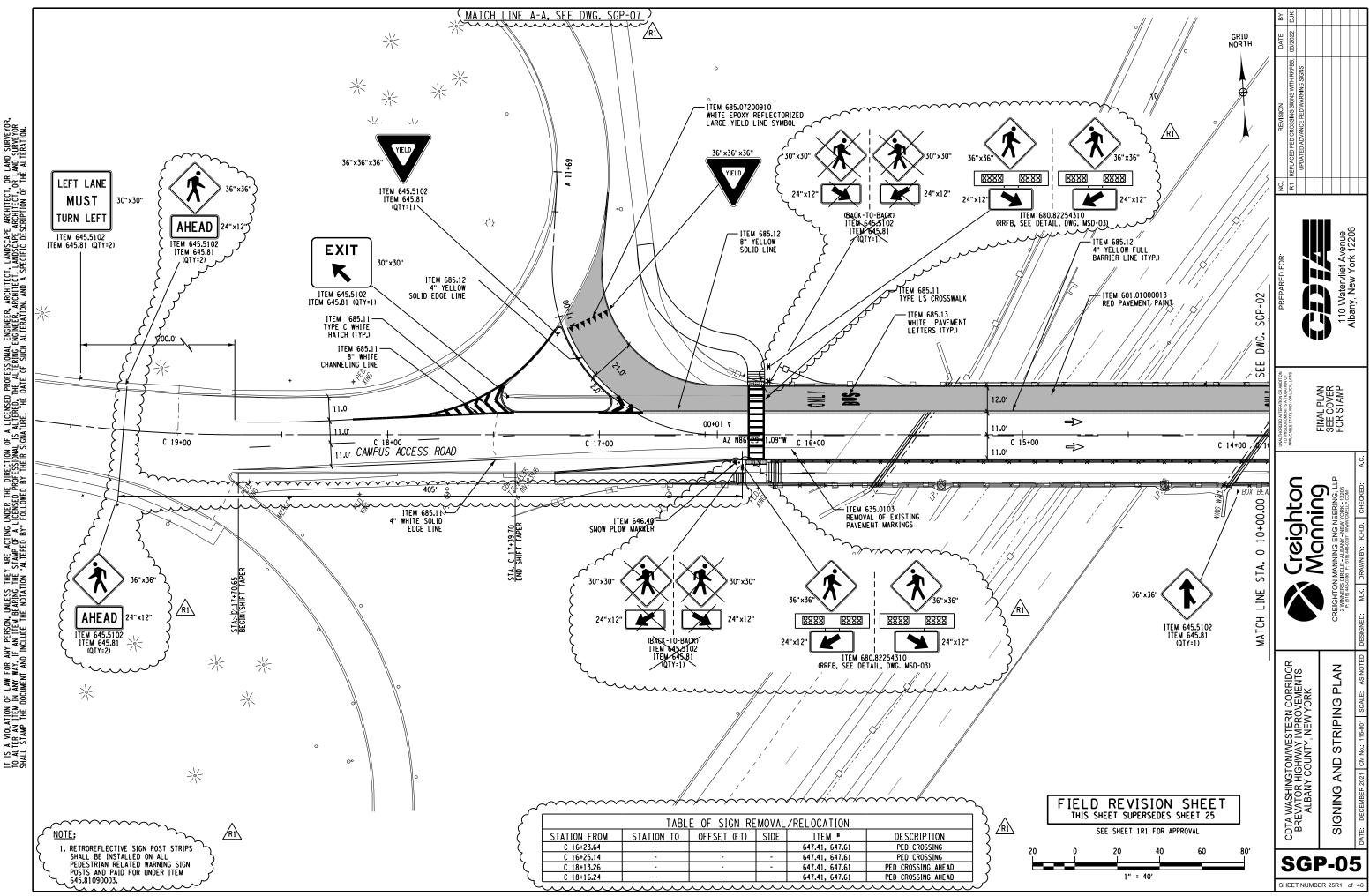
MEETING AND EXCEEDING OWNER'S/CLIENT'S NEEDS

FTA Capital Investment Grants (CIG) program funding was secured for Small Starts Project Development. The Small Starts program is a highly competitive national grant program, which requires FTA and Congressional approval. The Small Starts process involves performance-based metrics, and a detailed scope, cost and schedule review by FTA's third party Program Management Oversight Consultant. CDTA was very happy when they were awarded \$60.9 million by USDOT for the Purple Line BRT in September 2021. Creighton Manning provided technical and administrative support for the FTA grant application and supported CDTA in securing additional Federal, State and Local funds to fully fund the project.

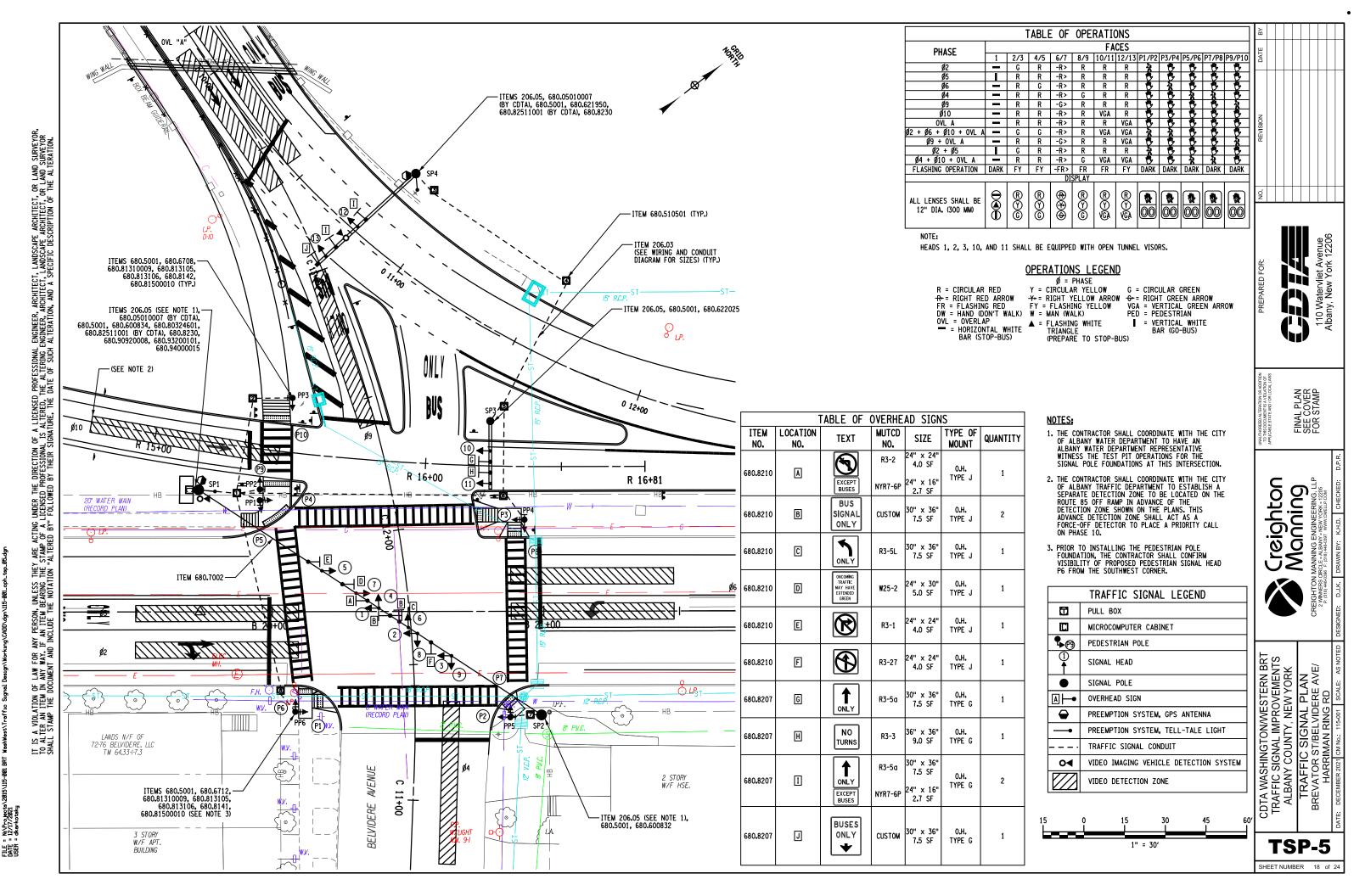


IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR TO ALTER AN ITEM IN ANY MAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

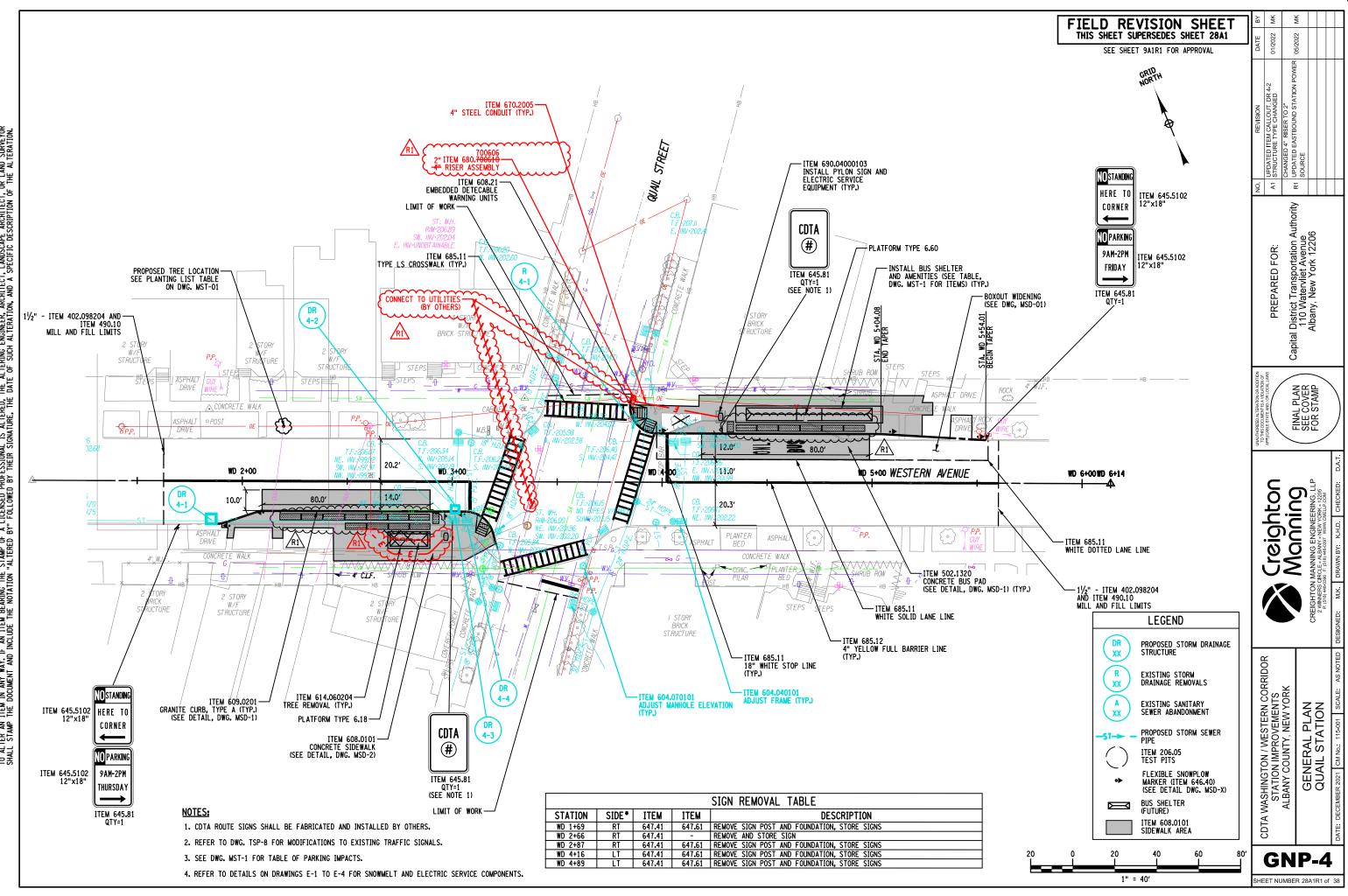
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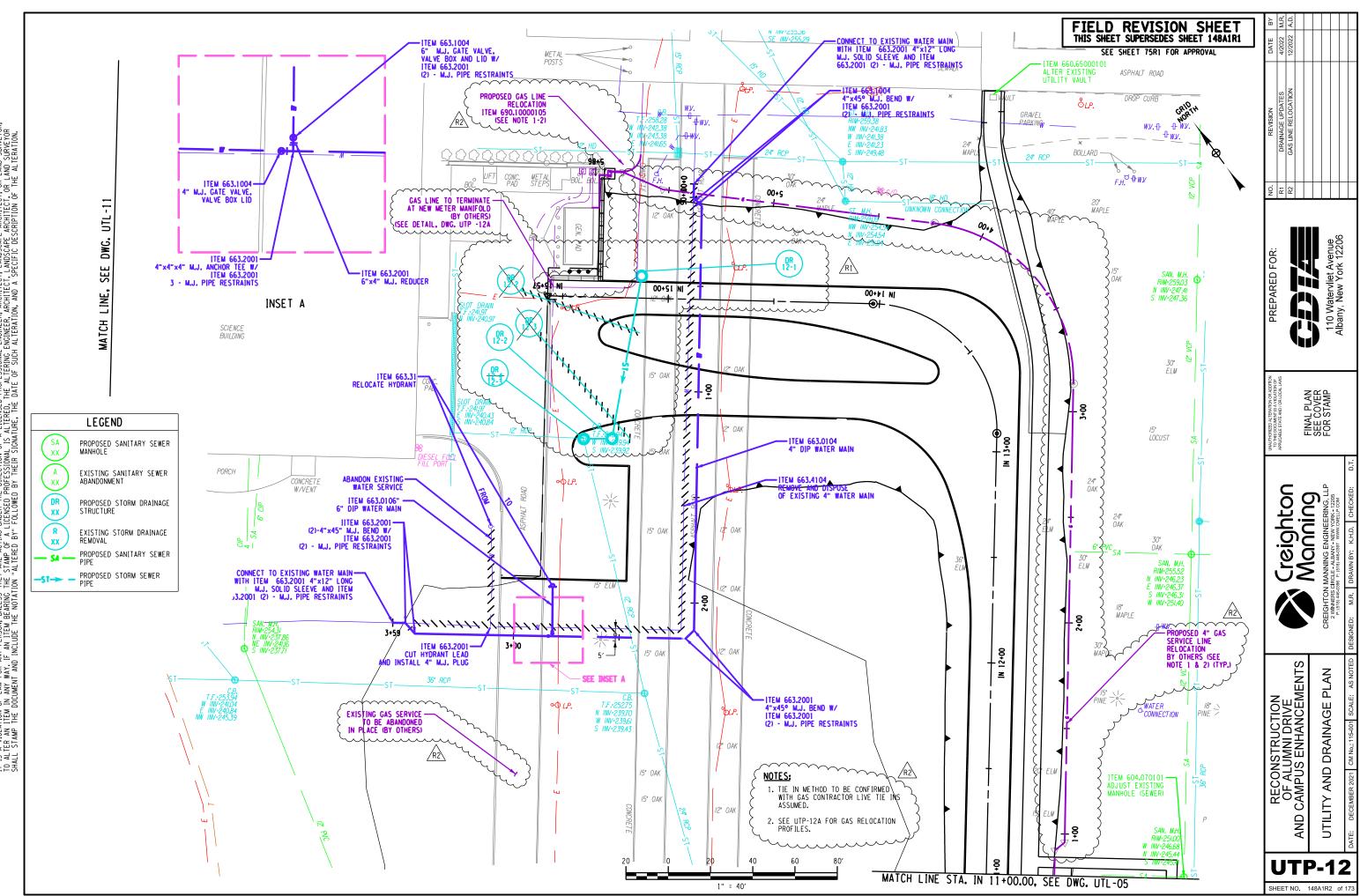


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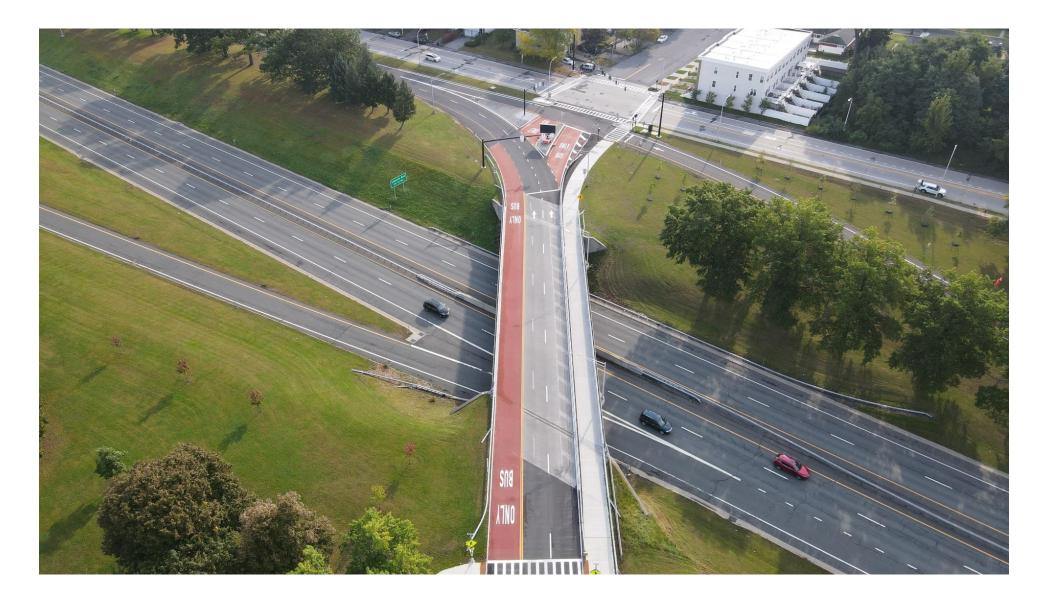


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VERIFICATION OF SUBSTANTIONAL COMPLETION BY THE DATE NOTED

The local newspaper, Troy Record, ran an article highlighting the start of service for the Purple Line BRT in November 2023. A copy of the article is attached.

STATEMENT OF COMMITMENT

At least one representative from the project team will proudly attend the awards luncheon if the CDTA Purple Line BRT is recognized as the Project of the Year.

LATEST HEADLINES

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CDTA launches 'Purple Line' bus service



The CDTA's Purple Line launched Monday. The route will run between downtown Albany to Crossgates Mall. (Erica Bouska – MediaNews Group)

By **ERICA BOUSKA** | ebouska@troyrecord.com November 6, 2023 at 4:15 p.m. ALBANY, N.Y. — Monday saw the completion of the final leg of the transportation proposal U.S. Senate Majority Leader Chuck Schumer and the Capital District Transportation Authority (CDTA) announced in 2013. The new BusPlus Purple Line launched, finalizing the project that included construction of the Blue Line and updates to the Red Line.

"(In 2013) we set a vision for 40 miles of Bus Rapid Transit (BRT) in the Capital Region," CDTA CEO Carm Basile said during a press conference Monday at the University at Albany. "Today, we have achieved that goal."

The BusPlus lines are part of the CDTA's BRT program. The three lines service the Capital Region's busiest roads with limited stops. Some benefits listed with the routes are Wi-Fi, charging ports, larger buses, and updated stations with real-time information.

The fare on BusPlus stops is slightly higher than the CDTA's other services at \$2 for standard passengers and \$1 for senior and disabled riders, according to the CDTA website.

Schumer, D-NY, said the new line has stops stretching from the Crossgates Mall to downtown Albany and runs through both the University's campus and The College of St. Rose. The other two BusPlus routes, the Red and Blue lines, launched in 2011 and 2020, respectively.

"What we're doing here today, this new Purple Bus Line and the two others we have funded already, are a national model of rapid bus transit. It's amazing," Schumer said.

The Red runs from the Albany Bus Terminal to the Gateway Plaza Mobility Center in Schenectady. The Blue Line has two routes that run along the Hudson: one from the Albany Rail Trail Station to the Waterford Station at Broad Street and 4th Street; and the other from Delaware Avenue in Albany to Remsen Street and Canal Square in downtown Cohoes.

"Making public transportation more accessible and convenient is a win-win for Troy residents," Troy City Council Majority Leader Susan Steele said in a statement to The Record. "I'm grateful to Senator Schumer and CDTA for this latest improvement for our area."

The decade-long project took \$115 million of federal funding, Schumer said: \$18 million for the Red Line, \$32 million for the Blue Line and \$63 million for the Purple Line. The funding comes from the Federal Transit Administration's (FTA) Capital Grant Small Starts Program, a discretionary grant program that funds public transit initiatives.

Projects like these, the senator said, are essential for many cities, including others in upstate New York that have large populations but cannot build a subway system.

"They need a bus system to get people around, and this is the perfect way to do it," he said. "It's really the future."

"Even if you just drive a car, and you say, 'I don't like taking the bus,' try it, you'll like it." Schumer said, "Even if you don't, it's going to make your life easier because there'll be fewer cars on the road.

"Along the new BRT route, parking is limited. The cost of building parking garages is skyrocketing and land for surface lots is non-existent," he continued. "So we really need the bus line more than ever."

Investing in public transportation can also help lower greenhouse gas emissions, reported the Environmental Protection Agency (EPA). In 2017, 17% of U.S. emissions came from cars and light-duty trucks.

Additionally, an EPA study released in 2023 found that transportation accounted for about 28% of greenhouse gas emissions between 1990 and 2021, surpassing the Electric Power Industry and the Agriculture, Residential and Commercial sectors' emissions combined.

U.S. Rep. Paul Tonko, D-Amsterdam, spoke about this project's effects on emissions at Monday's press conference as well. Tonko co-chairs the Sustainable Energy and Environment Coalition and serves on the Energy and Commerce Committee.

"This is about reducing those greenhouse gas emissions," he said. "It's about clean energy. It's about a stronger environment, a better stewardship of our planet, and growing our economy."

CDTA is also working to move its bus fleet to green electric power. As of April 2023, it has eight electric buses and federal funding and grants to get more electric buses and build infrastructure to allow more charging stations.

"Transportation infrastructure is so important toward reinvestment, revitalization, and connecting our Troy neighborhoods," Troy City Council President Carmella Mantello said to The Record. "Troy's Blue Line, which is part of CDTA's Purple Line connection, continues reducing our Capital Region's carbon footprint and, more importantly, continues to connect our cities as a region."

Schumer noted at the conference that the congestion, lack of parking and need for these bus lines are proof that the Capital Region is doing well. The Purple Line may even, Culotta said, help students make it to class on time.

"It's going to improve mobility, access to jobs, healthcare, educational opportunities, and other critical community services in the region for more than one million people every year," Culotta said. "The Purple Line can serve as a launch pad of opportunities linking riders to all the region has to offer."



U.S. Senate Majority Leader Chuck Schumer, left, and CDTA CEO Carm Basile at the press conference Monday. (Erica Bouska – Media News Group)



U.S. Senate Majority Leader Chuck Schumer, left, and CDTA CEO Carm Basile talking about a new Purple Line station. (Erica Bouska – MediaNews Group)