

Construction Project Briefing

February 10, 2021



Today's Presentation

- **Jefferson Park to O'Hare Signals Project**
- **System-Wide Traction Power Upgrades (Transformers Replacement) Project**
- **Addison Blue and Montrose Blue Art Project**
- **Chicago Austin Bus Turnaround Art Project**
- **Red and Purple Modernization Project**



Project Title: Jefferson Park to O’Hare Signals Project

Justification of Need:	The existing 30-year old signal system is approaching the end of its useful life. Maintaining the system has become increasingly difficult in as much as many components are now obsolete and difficult to repair or replace.
Priority of Project:	High
Total Project Budget:	\$ 207M
Construction Contract Value:	\$ 153,696,433.00
Earned to Date:	60%
Percent Change Orders to Construction Contract:	0
Percent Time Used:	91%
DBE:	Goal: 10% Design / 15% Construction Commitment: 10.1% Design / 15% Construction Contract is on track to meet the DBE goal Outreach events conducted: 2 (CTA) 1 (KAJV)
Funding Source:	CTA Bonds, RTA Bonds, Federal Formula Funds, and Federal TIFIA loan
Estimated Start Date/Estimated Length of Project:	NTP: May 21, 2018; Substantial Completion May 20, 2021
Designer of Record:	KAJV – Mott McDonald
Construction Manager/General Contractor:	STV/KAJV

Detailed Overview of Scope:

This is a design-build project that existing relay houses are going to be replaced with new relay houses on elevated or at grade platforms and existing relay rooms are proposed to be expanded/ refurbished and/or reconfigured to accommodate the new signal equipment. The existing relay houses/ rooms are located at the following locations: Jefferson Park, Central, Foster, Nagle, Harlem, Cumberland, River Road, Rosemont East, Rosemont Yard, Rosemont West, Old Manheim, O’Hare East and O’Hare West. Special trackwork improvements are at Central Interlocking.



Project Title: Jefferson Park to O’Hare Signals Project

Impact on Customers:	There will be 11 weekend Line Cuts: 2 – 9 Day Line Cuts from O’Hare to Rosemont, 2 Weekend Line Cuts from Rosemont to Harlem, and 7 Line Cuts from Harlem to Jefferson Park. Bus shuttles will be provided for these line cuts. In addition, there are 90 nighttime single track outages that may affect customers.
Benefit to System:	This will be the last section of the Blue Line to receive upgraded signals and interlocking systems. When completed, these systems will assure consistent, safe and reliable train operations on the entire Blue Line for many years to come. The proposed new equipment will provide bi-directional railway traffic protection and maintain headways at 90 seconds at 35 mph nominal. The Project will be designed with infrastructure provisions for a future Communication Based Train Control (CBTC) system, such as ducts for serial fiber/ cables, ample spare room for hardware in each relay/ audio house and ideal locations for transponders, radio transmitters/ antennae and wayside zone controllers.
Benefit to Community:	Improved Reliability and Safety
Impact on Accessibility:	During the 11 weekend Line Cuts, train stations will be inaccessible.
Estimated # of Jobs Created:	106 Direct, 507 Indirect
Customer Communication Need:	Construction activity notices will be provided to inform customers that Line Cuts will impact their commute.

Comparable Projects:
<ul style="list-style-type: none"> • Ravenswood Loop Connector • Congress Dearborn – Jefferson Park to Forest Park Signal Replacement



Project Title: Jefferson Park to O'Hare Signals Project

Construction Progress

Phase	Description	Status
Construction	<ul style="list-style-type: none">• Signal & Traction Power Cable Installation.• Relay Houses are being manufactured.• Signal Equipment Installation.• Nagle Cutover has started.	Ongoing Ongoing Ongoing Ongoing
Delay Explanation:		
N/A		



Project Title: Jefferson Park to O'Hare Signals Project



Nagle Relay House Installation



Project Title: Jefferson Park to O'Hare Signals Project



Nagle Relay House Installation



Project Title: Jefferson Park to O'Hare Signals Project



Nagle Relay House LCP



Project Title: Jefferson Park to O'Hare Signals Project



Junction Box Wiring at Nagle Interlocking



Project Title: Jefferson Park to O'Hare Signals Project

Continuity Testing at Nagle Interlocking



Project Title: System-Wide Traction Power Upgrades Transformer Replacements

Justification of Need:	Existing transformers were past the unit's life expectancy. Some of the existing Oil transformers started leaking PCBs presenting a potential safety hazard. Also this upgrade is needed in order to meet the future traction power demands of the 7000 series railcar fleet and during times when the CTA runs more railcars during peak hours.
Priority of Project:	High
Total Project Budget:	\$9,246,890.00
Construction Contract Value:	\$5,877,000.00
Earned to Date:	80%
Percent Change Orders to Construction Contract:	0%
Percent Time Used:	67%
DBE:	<ul style="list-style-type: none"> • Goal: 10% • Commitment: 10.19% • Contract is on track to meet the DBE goal
Funding Source:	<ul style="list-style-type: none"> • A combination of (2010 IDOT and 2018 FEDERAL grants)
Estimated Start Date/Estimated Length of Project:	<ul style="list-style-type: none"> • NTP: January 27, 2020 • Substantial Completion: July 25, 2021
Designer of Record:	CTA Engineering
Construction Manager/General Contractor:	WSP / John Burns Construction Company

Detailed Overview of Scope: Isolating, disconnecting, removing, legally disposing of, delivering, installing and restoring power to fourteen (14) transformers at the following substation locations throughout the system:

- Two (2) 2500 kva dry type transformers at 17th Substation.
- One (1) 2500 kva dry type transformer at Douglas Substation.
- Three (3) 2500 kva dry type transformers at Edmunds Substation.
- Three (3) 3000 kva oil transformer at Franklin Substation.
- One (1) 2500 kva dry type transformer at Harding Substation.
- Three (3) 2500 kva dry type transformers at Lotus Substation.
- One (1) 2500 kva dry type transformer at Washington Substation.



Project Title: Traction Power Upgrades – Transformer Replacements

Impact on Customers:	<ul style="list-style-type: none"> No customer impacts.
Benefit to System:	This improvement will enable the CTA to continue to meet traction power needs and increase traction power capacity to meet future demands and maintain current and future service levels and load on the system.
Benefit to Community:	Will maintain current operations with less delays due to power availability.
Impact on Accessibility:	None
Estimated # of Jobs Created:	TBD
Customer Communication Need:	Construction activity notices and signage information are provided for any alley or sidewalk closures while removal of existing and delivery of new transformers occurred.

Comparable Projects:

- Previous JOC project (J12-045) provided the following items:
- **79th:** Rectifier, transformer, busduct, DC breaker & Cubicle, AC breaker & Cubicle.
- **Milwaukee:** Rectifier, transformer, busduct.
- **Broadway:** Rectifier, transformer, busduct, DC breaker & Cubicle.
- **Clifton:** Rectifier, transformer, busduct, AC breaker & Cubicle.
- **East Lake:** Rectifier, transformer, busduct, DC breaker & Cubicle, AC breaker & Cubicle.



Project Title: Traction Power Upgrades – Transformer Replacements

Construction Progress

Phase	Description	Status
Construction	<ul style="list-style-type: none"> • Transformer 1 replacement (dry type) at 17th Substation. • Transformer 2 replacement (dry type) at 17th Substation. 	<p>Completed Completed</p>
	<ul style="list-style-type: none"> • Transformer 1 replacement (dry type) at Harding Substation. 	<p>Completed</p>
	<ul style="list-style-type: none"> • Transformer 1 replacement (dry type) at Lotus Substation. • Transformer 2 replacement (dry type) at Lotus Substation. • Transformer 3 replacement (dry type) at Lotus Substation. 	<p>Completed Completed Completed</p>
	<ul style="list-style-type: none"> • Transformer 1 replacement (dry type) at Washington Substation. 	<p>Completed</p>
	<ul style="list-style-type: none"> • Transformer 1 replacement (dry type) at Edmunds Substation. • Transformer 2 replacement (dry type) at Edmunds Substation. • Transformer 3 replacement (dry type) at Edmunds Substation. 	<p>Completed Completed Completed</p>
	<ul style="list-style-type: none"> • Transformer 1 replacement (dry type) at Douglas Substation. 	<p>Completed</p>
	<ul style="list-style-type: none"> • Transformer 1 replacement (oil type) at Franklin Substation. • Transformer 2 replacement (oil type) at Franklin Substation. • Transformer 3 replacement (oil type) at Franklin Substation. 	<p>Started Started Started</p>



Project Title: Traction Power Upgrades – Transformer Replacements



Removing Existing Fence at Franklin Substation



Temporary Fence Enclosure at Franklin Substation



Project Title: Traction Power Upgrades – Transformer Replacements



Excavating Around TX1 at Franklin Substation



Taking Soil Samples at Franklin Substation

BLUE LINE ADDISON STATION

CONSTANT FLOW INTO MULTITUDES OF SPECIFIC FORMS

FRANCESCO SIMETI

2020

ART-GLASS

FUNDING: FTA/CAPITAL

ARTIST BUDGET \$100,000



Francesco Simeti combines illustrations of indigenous trees and plants with vintage etchings of Chicago's natural sceneries and images of architectural ornamentation by Louis H. Sullivan, the Irish-born Chicago architect and singular genius known as 'the father of modernism'.

The title of this artwork is a phrase excerpted from *A System of Architectural Ornament*, the collection of Sullivan's masterpiece drawings and ideas, published as his final statement about the geometry underlying both natural and man-made forms.

Born in Palermo, Sicily (1968), Francesco Simeti lives and works in Brooklyn, New York. He has exhibited throughout the United States and Europe and is recognized for design industry collaborations with Maharam textiles, New York; Fabscarte, Milan and Mother of Pearl, London. Museum collections with his work include The Cooper Hewitt, National Design Museum, New York; The Philadelphia Museum of Art; The Rhode Island School of Design; and The Victoria and Albert Museum, London.



BLUE LINE ADDISON STATION

CONSTANT FLOW INTO MULTITUDES OF SPECIFIC FORMS

FRANCESCO SIMETI

2020

ART-GLASS



BLUE LINE MONTROSE STATION

WINDY CITY ODYSSEY

CHRIS COSNOWSKI

2020

ART-GLASS

FUNDING: FTA/CAPITAL

ARTIST BUDGET \$100,000



Windy City Odyssey offers CTA riders a whimsical visual journey through various aspects of Chicago's storied history, character, and cultural significance. Chicago artist Chris Cosnowski renders the toys and trophies of yesteryears childhood with symbolic photorealism. These playful motifs attempt to transport riders into a momentary reverie from their daily routine.

Chris Cosnowski is a Chicago artist and art educator. He earned a Master of Fine Arts in painting from Northwestern University and strives to create meaningful works that engage viewers. His subject matter, evoking nostalgia, consists primarily of trophies and plastic toys and subtly transforms the small figurines and trinkets into heroic and idealized figures, conflating high and low art.



BLUE LINE MONTROSE STATION

WINDY CITY ODYSSEY

CHRIS COSNOWSKI

2020

ART-GLASS

Motifs:

Bodybuilder Trophy – Chicago is known as “The City of Big Shoulders.”

Airplanes - represent Chicago’s O’Hare International Airport.

Tyrannosaurus Rex Skull - The Field Museum.

Three Little Pigs - The Chicago Stockyards; and the idea of building a strong home.

Blue Knight Chess Piece - The Chess records logo, the original Chicago blues label.

Bozo the Clown - WGN had the longest running Bozo show from 1960-2001.

Tugboat - Our hard-working city located on Lake Michigan and the Chicago River.

Cow - Mrs. O’Leary’s Cow (note the bell) and The Great Chicago Fire.

Running Trophies - The Chicago Marathon; also conveys the energy of our busy city.

Penny - The State of Illinois’ greatest political figure, President Abraham Lincoln.

Ballet Dancer - Joffrey Ballet.

Fish - The Shedd Aquarium.

Plastic blue M - Montrose Blue Line station.

Astronaut Figure – Museum of Science and Industry, whose collection includes an original Apollo 8 space suit.

Purple Lion - The Art Institute of Chicago Lions.

Red Lips – Three iconic neon landmarks advertising Magikist (early 1960s through late 1980s; a former rug cleaning company) adorned several major Chicago highways. Towering 80 feet above the Kennedy Expressway, just to the east of this station, this last pair was razed in late 2003.



CHICAGO/AUSTIN BUS TURNAROUND

SUNBURST

SHINIQUE SMITH

2020

ALUMINUM, PAINT

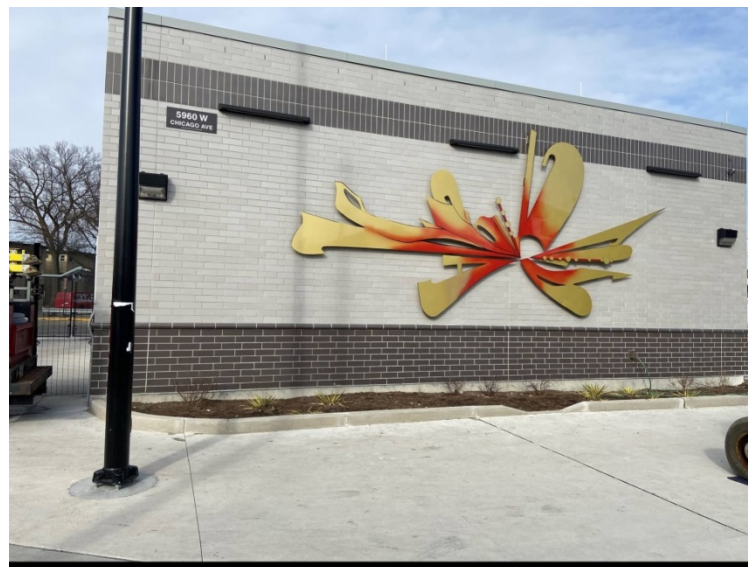
FUNDING: FTA/CAPITAL
ARTIST BUDGET \$200,000



Sunburst symbolically highlights the new solar-powered bus charging stations, radiating bright energy on this well-traveled corner in all seasons. The artist hopes the sculpture will serve as a talisman for all who reside or visit the Austin community.

Shinique Smith is recognized internationally for her exuberant paintings and sculpture that celebrate the power of human expression and resilience.

Born in Baltimore (1971) and currently residing in Los Angeles, Shinique Smith's work has been exhibited and collected by prestigious institutions including The National Portrait Gallery, Washington, DC; The Studio Museum of Harlem; The Whitney Museum of American Art; Minneapolis Art Institute; Museum of Fine Arts, Boston; Baltimore Museum of Art; Contemporary Art Center - New Orleans; and the Denver Art Museum.



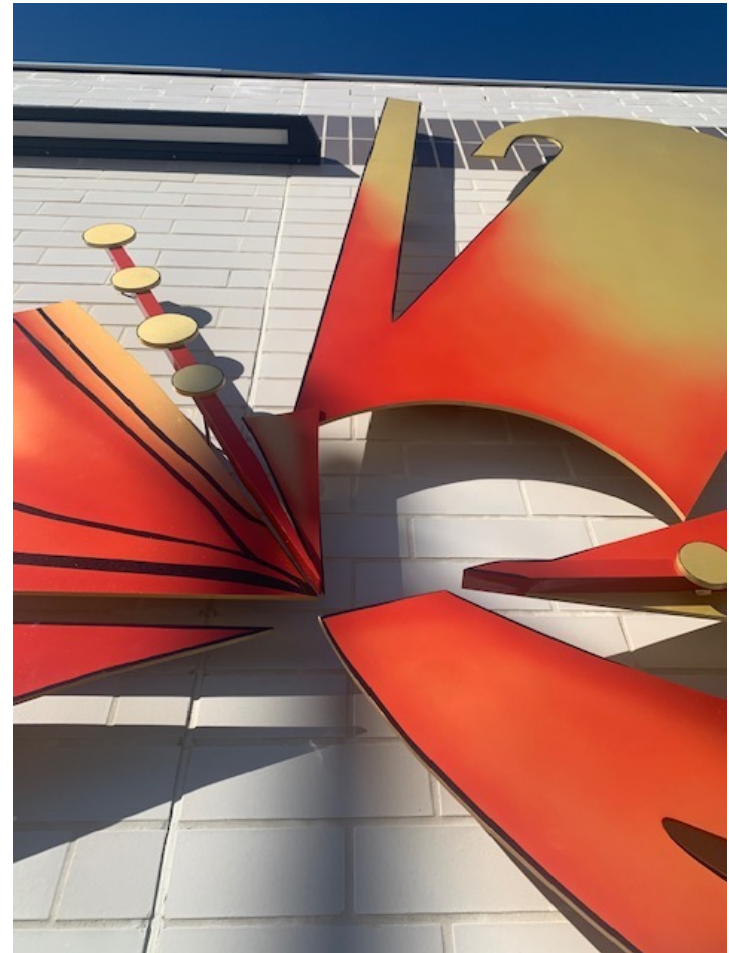
CHICAGO/AUSTIN BUS TURNAROUND

SUNBURST

SHINIQUE SMITH

2020

ALUMINUM, PAINT



Project Title: RPM Phase One – Design-Build Contract

Justification of Need:	The RPM Phase One Project is greatly needed in order to expand capacity on CTA’s most utilized rail line and to replace aging infrastructure.
Priority of Project:	High
Total Project Budget:	\$2.1 Billion (excludes Transit TIF interest payments)
Contract Value:	\$1,272,275,929
Earned to Date:	32%
Percent Change Orders to Construction Contract:	0%
Percent Time Used:	35%
DBE:	Design Goal: 20% / Commitment: 20.64% Construction Goal: 20% / Commitment 20% Contract is on track to meet the DBE goal
Funding Source:	CTA Financing, FTA Core Capacity Grant, CMAQ, TIFs
NTP / Construction Start / Estimated Completion	February 8, 2019 / October 2019 / 2025
Design Build Contractor:	Walsh-Fluor Design-Build Team
Owners Representative:	Elevated Solutions Partners

22

RPM Phase One consists of the following elements that will allow CTA to expand service along the Red and Purple lines:

- Lawrence to Bryn Mawr Modernization (LBMM) – complete reconstruction and addition of ADA accessibility at four Red Line stations (Lawrence, Argyle, Berwyn, and Bryn Mawr) and reconstruction of 6 miles of track, structures, and viaducts from Leland Ave. to Ardmore Ave.
- Red-Purple Bypass (RPB) - Construction of a grade-separated bypass for the Brown Line at Clark Junction, just north of Belmont Ave. Includes realignment and reconstruction of 1.4 miles of mainline tracks and structure between Belmont station and south of Cornelia Ave.
- Corridor Signal Improvements (CSI) – Installation of new higher-capacity signal system on 23 miles of track between Belmont and Howard stations.



Project Title: RPM Phase One – Design-Build Contract

Impact on Customers:	Track closures and temporary station closures during construction. Temporary relocation of bus stops and bus reroutes during construction phasing. Temporary sidewalk, traffic lane, and parking lane closures during construction phasing.
Benefit to System:	The Red-Purple Bypass will allow CTA to operate more trains and reduce delays at the Clark Junction. Signal improvements will reduce customer congestion by allowing for additional trains. 100 year old structures are being replaced to improve reliability and extend life of system. Four new, larger, ADA accessible stations with wider platforms will replace current 90+ year old facilities.
Benefit to Community:	Improved pedestrian safety around new modern stations and structures. Enhanced lighting, improved street clearance, removal of columns from streets, enhanced signage, improved areas under track structures, and new station entrance at Hollywood Avenue.
Impact on Accessibility:	Upon project completion, Lawrence, Argyle, Berwyn and Bryn Mawr stations will include elevator access and other ADA access improvements throughout. Station improvements include wider platforms, better lighting, and modern accessible amenities.
Estimated # of Jobs Created:	1,400+ and counting.
Customer Communication Need:	Frequent communication is required to provide customers advance and real-time information regarding rail and bus service modifications due to construction.

Comparable Projects:	
<ul style="list-style-type: none"> - Brown Line Capacity Expansion Project - Your New Blue Program - Red Line Extension 	



Project Title: RPM Phase One – Design-Build Contract

Phase	Description	Status
<p>Administrative / Design:</p>	<ul style="list-style-type: none"> ▪ Continued submittal/revisions of required management plans. ▪ Continued Design Development in support of Pre-Stage, Red-Purple Bypass, Lawrence to Bryn Mawr Modernization, and Corridor Signal Improvements. ▪ Issued Construction Documents for Red-Purple Bypass work. ▪ Issued Construction Documents for Pre-Stage work. ▪ Issued Construction Documents for Lawrence to Bryn Mawr Modernization Segmental Box Girder. 	<p>Ongoing Ongoing</p> <p>Ongoing Ongoing Ongoing</p>
<p>Construction:</p>	<ul style="list-style-type: none"> ▪ Red-Purple Bypass (RPB). <ul style="list-style-type: none"> – Red-Purple Bypass track structural steel installation. – Red Purple Bypass form, reinforce and pour concrete track deck – Ravenswood structure rehabilitation. ▪ Corridor Signal Improvements (CSI) <ul style="list-style-type: none"> – DGTrack Circuit Testing. ▪ Pre-Stage Work <ul style="list-style-type: none"> – Signal bracket & messenger cable installation. – Wayside platform installation. – Montrose track structure foundation rehabilitation. – Thorndale, & Loyola relay/audio house cabling. – Montrose, Berwyn relay/audio house testing – Construction of Bryn Mawr Temp Station. – Construction of Argyle Temp Station. ▪ Lawrence to Bryn Mawr Modernization <ul style="list-style-type: none"> – Continued production of Pre-cast Box Girder Segments. 	<p>Ongoing Ongoing Ongoing</p> <p>Ongoing</p> <p>Ongoing Ongoing Ongoing Ongoing Ongoing Ongoing</p> <p>Ongoing</p>
<p>Delay Explanation:</p>		



Project Title: RPM Phase One – Design-Build Contract



LBMM - Lawrence Station Entrance Rendering



Project Title: RPM Phase One – Design-Build Contract



LBMM - Argyle Station Entrance Rendering



Project Title: RPM Phase One – Design-Build Contract



LBMM - Berwyn Station Entrance Rendering



Project Title: RPM Phase One – Design-Build Contract



LBMM - Bryn Mawr Station Entrance Rendering



Project Title: RPM Phase One – Design-Build Contract



RPB - Straddle Beam and Girders Installation



Project Title: RPM Phase One – Design-Build Contract



LBMM - Bryn Mawr Temporary Station Platform



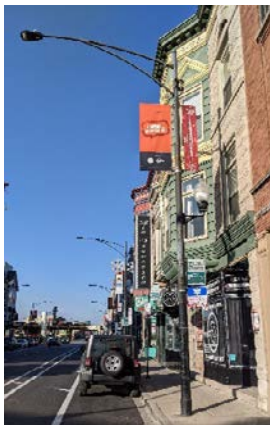
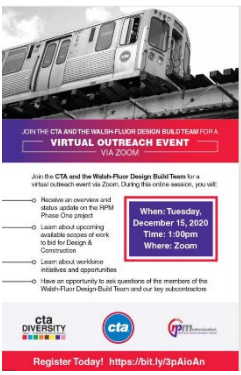
Project Title: RPM Phase One – Design-Build Contract



LBMM - Argyle Temporary Station



Project Title: RPM Phase One – Design-Build Contract

Outreach type	Major Activities	Timing
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Community</p>  <p>#MyLakeviewEast banner on N Clark St</p>	<ul style="list-style-type: none"> • 3300 N Sheffield Neighbors temp track community meeting. • Community flyering for bypass temp track & steel erection work. • Installation of “Open for Business” marketing banners. • Bryn Mawr pavers meeting. • Monthly virtual office hours. • Lawrence to Bryn Mawr chambers of commerce monthly meeting. 	<p>Dec. 16</p> <p>Dec. 23&30</p> <p>Dec. 24</p> <p>Jan. 6</p> <p>Jan. 12</p> <p>Jan. 19</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Workforce & SBE/DBE</p>  <p>RPM DBE and workforce event</p>	<ul style="list-style-type: none"> • Workforce/DBE Outreach and Compliance Monthly Meeting. • RPM DBE & Workforce Virtual Outreach. • CTA Elevating Futures Scholarship Fund: Announced via press release that program’s second year and application period is now open. 	<p>Ongoing</p> <p>Dec. 15</p> <p>Dec. 29</p>

