Construction Project Briefing

February 10, 2020



Today's Presentation

- Your New Blue Projects
 - ELMI East Lake, Milwaukee, Illinois Substation Upgrade
 - Jefferson Park to O'Hare Signals Project
 - **O Grand, Chicago & Division Renovations**
 - Logan Square Station Repairs
- Electric Bus En Route Charger Stations
- Red and Purple Modernization Project



Justification of Need:	The existing traction power equipment at these substations is well past its useful life and needs to be replaced to assure reliable 600-volt DC traction power. Rehabilitate the substation buildings to a state of good repair.
Priority of Project:	High
Total Project Budget:	\$ 69M
Construction Contract Value:	\$ 42.9M
Earned to Date:	90%
Percent Change Orders to Construction Contract:	0
Percent Time Used:	97%
DBE:	Goal: 20% / Commitment: 20% Contract is on track to meet the DBE goal Outreach events conducted: 2 (CTA)
Funding Source:	CTA Bonds, RTA Bonds
Estimated Start Date/Estimated Length of Project:	NTP: April 10, 2017; Substantial Completion March 8, 2020
Designer of Record:	T.Y. Lin International
Construction Manager/General Contractor:	STV

Detailed Overview of Scope:

Rehabilitation of existing buildings and building envelopes to a state of good repair at East Lake, Milwaukee, and Illinois. Scope of work includes replacement of roof, tuck-pointing, hazardous material abatement, structural repairs and improvements, plumbing and mechanical repairs and improvements, and electrical repairs and improvements.

Replace existing AC/DC conversion equipment at all locations and getaway cables at East Lake.

Part of the scope of this project includes CTA purchasing 10 East Lake from ComEd.



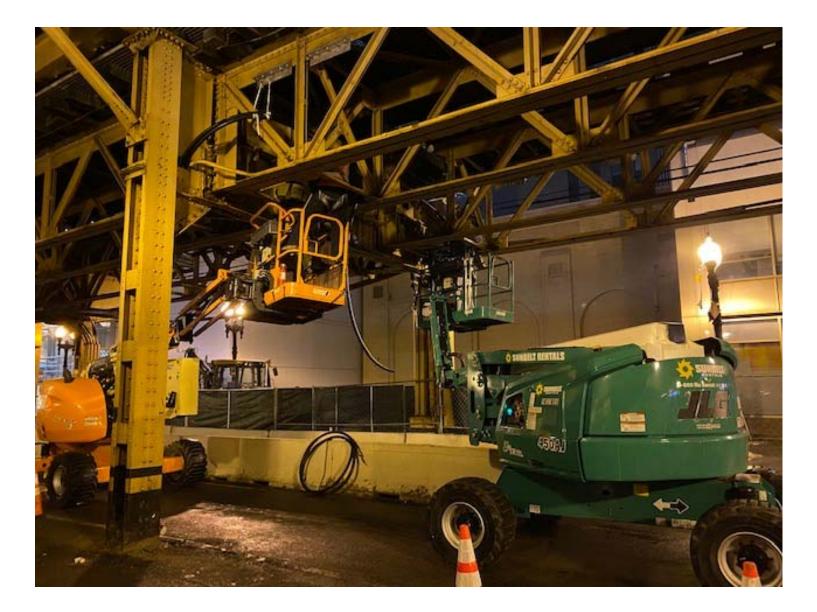
Impact on Customers:	There will be minimum impact to CTA customers.
Benefit to System:	 Additional traction power capacity Reduced traction power related train defects Improved reliability for revenue service Improved safety
Benefit to Community:	Improved Reliability and Safety
Impact on Accessibility:	None
Estimated # of Jobs Created:	897 indirect, 188 direct
Customer Communication Need:	Construction activity notices will be provided to inform businesses and residents regarding temporary construction impacts (noise, dust, street/alley closures) throughout the project.
Comparable Projects:	

Traction Power Systems Upgrades and Improvements Kimball, Princeton, and State Substation Projects.



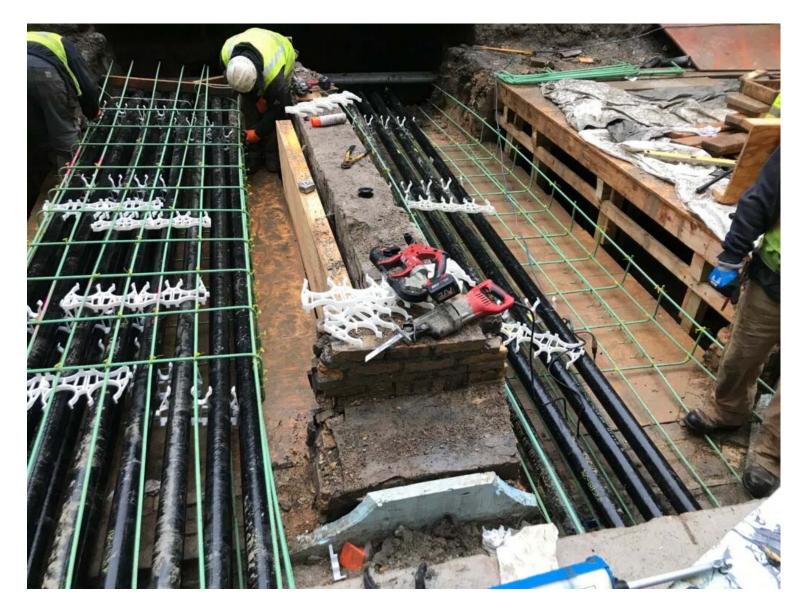
Project Title: ELMI – East Lake, Milwaukee, Illinois Substation Upgrade Construction Progress

Construction	 Installation, Testing and Putting in-Service DC Switchgear. Lineups #1, #2, #3, & #4 are in-service. Tuckpointing, demolition, lead paint abatement, epoxy floor installation, plumbing, lighting and fire alarm installation are in progress at East Lake Substation. Exterior Ductbank installation has started. 	Completed Completed Ongoing Ongoing
	 Lineups #1, #2, #3, & #4 are in-service. Tuckpointing, demolition, lead paint abatement, epoxy floor installation, plumbing, lighting and fire alarm installation are in progress at East Lake Substation. 	Completed Ongoing
Delay Explanation:		
N/A		



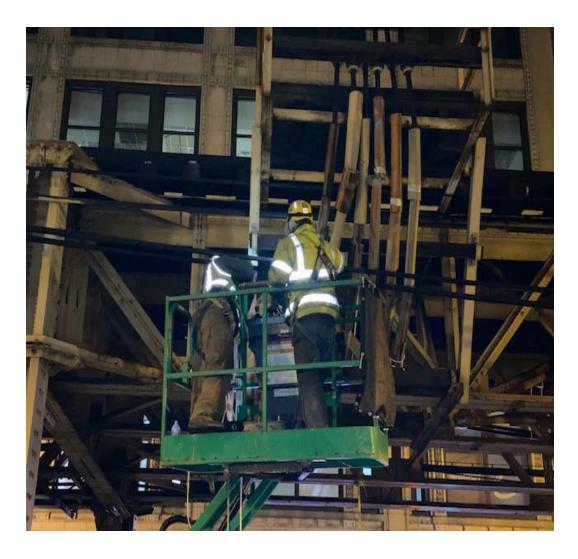


Traction Power Cable Installation at East Lake Substation





Traction Power Ductbank Installation at East Lake Substation





Traction Power Cable Support Bracket Installation at East Lake Substation

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:	35%
Percent Change Orders to Construction Contract:	0
Percent Time Used:	57%
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

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.



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.
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.
Improved Reliability and Safety
During the 11 weekend Line Cuts, train stations will be inaccessible.
TBD
Construction activity notices will be provided to inform customers that Line Cuts will impact the commute.

Comparable Projects:

- Ravenswood Loop Connector
- Congress Dearborn Jefferson Park to Forest Park Signal Replacement



Construction Progress

Phase	Description	Status
Construction		
	Manhole Investigation. Manholes are being cleaned, check valves are being inspected.	Ongoing
	Ductbank Investigation and Installation.	Ongoing
	Removal of cable from ductbanks.	Ongoing
	Signal & Traction Power Cable Installation.	Ongoing
	Innerduct installation.	Ongoing
	Asbestos testing.	Ongoing
	Relay Houses are being manufactured.	Ongoing
	Signal Equipment Installation.	Ongoing
Delay Explanati	on:	
N/A		





Jefferson Park Relay House Factory Wiring







Designer of Record: Construction Manager / General Contractor:	WSP
Estimated Start Date/Estimated Length of Project:	 NTP: September 27, 2018 Projected Substantial Completion: March 18, 2020 Contractual Substantial Completion: March 18, 2020 Mueller & Mueller
Funding Source:	CTA Bonds, RTA Bonds, IDOT, TIFIA, TIF
DBE:	 Goal: 30% Design / 30% Construction Commitment: 30% Design / 30% Construction Contract is on track to meet the DBE goal Outreach events conducted: 2 (CTA) & 2 (FHP)
Percent Time Used:	89.8% (thru December 2019)
Percent Change Orders to Construction Contract:	0%
Earned to Date:	47.0% (thru December 2019)
Construction Contract Value:	\$29,955,000
Total Project Budget:	\$39,000,000
Priority of Project:	High
Justification of Need:	Most elements of the Grand, Chicago, and Division Blue Line Stations have not experience major renovation or updating since the construction of the Dearborn Subway in 1951. In order to bring both stations to a state of good repair, upgrades are required. New elements will be brought up to current ADA standards.

Detailed Overview of Scope: The Grand, Chicago, and Division Blue Line Stations will be brought to a state of good repair. Scope of work includes electrical and lighting upgrades, floor and wall replacements, sidewalk repair, updated signage, stair repairs, water mitigation, and improved customer amenities.



Impact on Customers:	 9 Total Weekend Station Closures (3 at each station). Stairways will be taken out of service, sequentially, for 42 days each. 9 Weekend Single Tracks. 60 Nightly Single Tracks. Longitudinal Partial Platform Closures: 2 at each station (8 total) for a duration of 3-4 weeks each.
Benefit to System:	Extensive renovations to all three stations.
Benefit to Community:	Improved reliability, and safety
Impact on Accessibility:	No impact
Estimated # of Jobs Created:	507 indirect, 106 direct
Customer Communication Need:	Construction activity notices and customer notices will be needed to alert customers, businesses and residents to weekend and night work occurrences. Extensive communication will be required for weekend closures and extended partial platform closures.

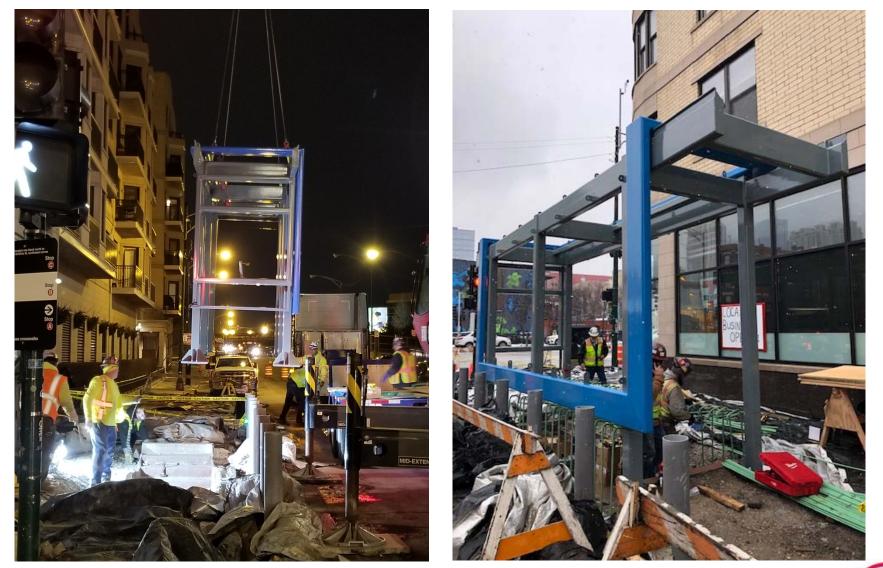
Comparable Projects:

- O'Hare Line Addison, Irving Park, Montrose, Harlem, and Cumberland Station Renovations
- O'Hare Line Belmont and Jefferson Park Station Improvements



Construction Progress

	Description	Status
Design	Achieve Final Design.	Complete
Construction	 Topping Slab Replacement at Division Station. 	Complete
	Topping Slab Replacement at Grand Station.	Complete
	Topping Slab Replacement at Chicago Station.	Complete
	Stairway and Partial Mezzanine Closures.	Ongoing
	Installation of Stair and Mezzanine Enhancements.	Ongoing
	Installation of Platform Level Enhancements.	Ongoing
	Installation of Street Level Head Houses and Sidewalk Work.	Ongoing
Delay Explanation		I
N/A		





Installation of New Stairway Canopy at Grand Station





Reconstruction of Stairway Wall at Mezzanine of Chicago Station





Structural Tile Installation at Division Station

Justification of Need:	The purpose of this project to perform repairs to increase the useful life of the station by upgrading the Logan Square Station on the Blue Line.
Priority of Project:	Medium
Total Project Budget:	\$ 7.0 M
Construction Contract Value:	\$ 2.5 M
Earned to Date:	25%
Percent Change Orders to Construction Contract:	0%
Percent Time Used:	80 %
DBE:	 Goal: 30% Commitment: 30.21% Contract is on track to meet the DBE goal Outreach events conducted: 2 (CTA)
Funding Source:	RTA Bonds, TIFIA
Estimated Start Date/Estimated Length of Project:	 NTP : July 19, 2019 Substantial completion : January 20, 2020
Designer of Record:	In House Engineering
Construction Manager / General Contractor:	WSP

Detailed Overview of Scope: The Logan square station scope of work is as follow and includes the installation of new LED lighting fixtures at stations and platform, power wash tube walls, prime and paint stations and platform ceilings, installation of stair handrails, installation of new tactile tile at stair landings, signage, roof replacements at station entrances (3 locations), and elevators upgrades (2 elevators). The elevator upgrades will be procure under the project budget under our CTA west shop facility and will include a separate completion schedule.

Impact on Customers:	 There will be 4 weekend single tracks. There will be up to 8 single nightly single tracks. There will be partial platform closures during weekend single tracks. There will be a single stairs entrance closures.
Benefit to System:	 Improved elevators (2) systems Improved lighting system
Benefit to Community:	Improved customer experience and safetyModernized elevators
Impact on Accessibility:	Once the elevator equipment is ready to be installed, both elevators will be out of service
Estimated # of Jobs Created:	• 50-60
Customer Communication Need:	 Construction Activity Notices Customer notice alerts Signage information boards

Comparable Projects:



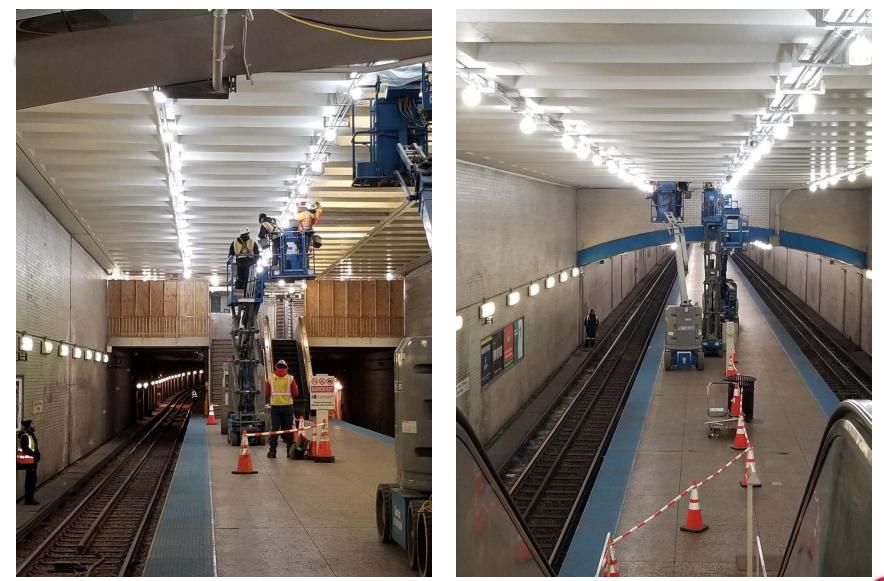
Construction Progress

Phase	Description	Status
Phase Design Construction	Description • In-house Design • Weekends single tracks 1 & 2 for Southbound track to power wash, prime and paint. • Weekends single tracks 3 & 4 for Northbound track to power wash, prime and paint. • New electrical conduit, wiring and LED light fixture installation. • New stair handrails. • Station entrances roofs replacements (Weather dependent.)	Status Completed Completed Ongoing Ongoing Ongoing
Delay Explanation: N/A		





Priming/Painting Coffered Ceilings over Tracks and Platform





Electrical Installation for new Lighting over Platform

Justification of Need:	
Priority of Project:	Normal
Total Project Budget:	\$31.9M
Construction Contract Value:	(\$13,934,337.00 Infrastructure Installation) – (\$18,012,857.00 Bus Procurement)
Earned to Date:	43%
Percent Change Orders to Construction Contract:	0%
Percent Time Used:	88%
DBE:	 Goal: 30% Commitment: 30% Contract is on track to meet the DBE goal Outreach events conducted: 1(Mortenson)
Funding Source:	FTA, CTA Bond, Grants CMAQ
Estimated Start Date/Estimated Length of Project:	 NTP: 7-12-2018 Projected Substantial Completion: 4-15-2020 Contractual Substantial Completion: 12-14-2019
Designer of Record:	JLK Architects
Construction Manager / General Contractor:	CM = WSP/SQN GC = Proterra / Mortenson

Detailed Overview of Scope:

The Contractor will provide design, construction services, vehicle delivery, and equipment installation services to the CTA for a complete charging infrastructure system for 100% electric propulsion buses at the Navy Pier Bus Turnaround, the Chicago & Austin Bus Turnaround, and the Chicago Garage.

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Impact on Customers:	 This work will have minimal impact on CTA customers at Navy Pier, and Chicago & Austin Bus Turnaround. There will be a lane closure at the Grand Ave. / Park Ave. intersection during the tie in to the ComEd vault for power later in Q4.
Benefit to System:	The City of Chicago has committed to "Going Green". Electric buses reduce the strain on the environmental hazards of traditional combustion engines.
Benefit to Community:	Clean, quiet, well lit buses promote green living.
Impact on Accessibility:	N/A
Estimated # of Jobs Created:	100
Customer Communication Need:	Construction activity notices will be provided to inform customers and local businesses/residents how the lane closures will impact them.

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Comparable Projects:

• This is the first of its kind at this scale in the United States.

Construction Progress

Phase	Description	Status
Design Construction:	Navy Pier Building Design	Ongoing
	 Chicago Garage Contractor has demobilized until the technology portion is ready for installation. Charging equipment technology installation. 	Complete Upcoming
	Chicago/Austin	
	 ComEd has completed the power cut over. Interior painting is complete. Lighting is in place and the plaza is currently lit. Contractor has demobilized the onsite trailer and winterized the construction site. Contractor maintains a temperature of 66 degrees through the winter. 	Complete Complete Complete Complete Ongoing

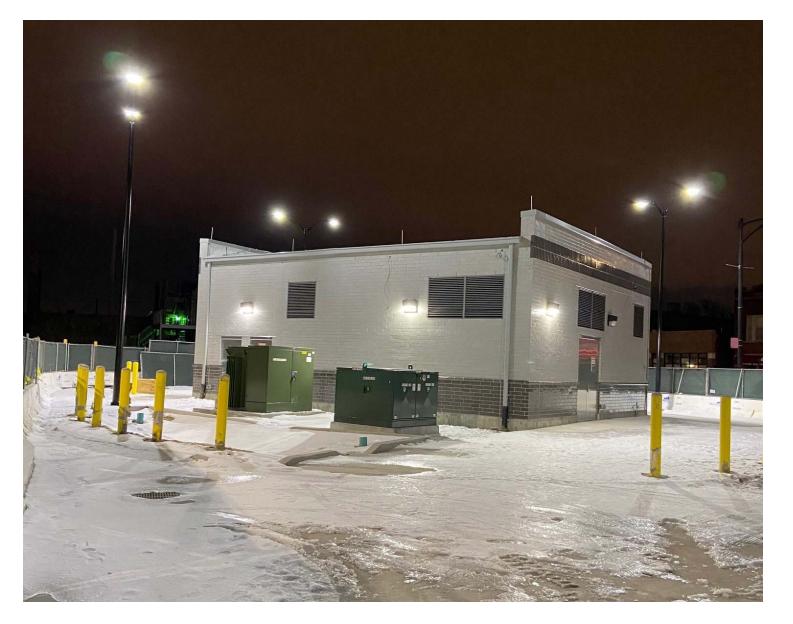


Project Title: Project Title: Electric Bus En Route Charger Stations





Chicago Austin – High Voltage Signage – Interior Components





Chicago Austin – Illuminated Building

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:	14%
Percent Change Orders to Construction Contract:	0%
Percent Time Used:	16%
	Design Goal: 20% / Commitment: 20.64%
DBE:	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

Detailed Overview of Scope:

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.



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:	
- Brown Line Capacity Expansion Project	
- Your New Blue Program	6
- Red Line Extension	

Project Title: RPM Phase One – Design-Build Contract Construction Progress

Continued submittal/revisions of required management plans. Performed site surveys in support of the design effort throughout the project area. 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.	Ongoing Ongoing Ongoing Ongoing Ongoing
Red-Purple Bypass (RPB) – Material deliveries. – Track structure foundation installation. – Clark Substation Traction Power Modifications.	Ongoing
Corridor Signal Improvements (CSI) – DGTrack Circuit Testing Pre-Stage Work – Reverse Running Install & Test between Montrose and Addison. – Weekend Thorndale Ductbank Installation.	Ongoing Ongoing
	 Material deliveries. Track structure foundation installation. Clark Substation Traction Power Modifications. Corridor Signal Improvements (CSI) DGTrack Circuit Testing Pre-Stage Work Reverse Running Install & Test between Montrose and Addison.

Delay Explanation:	
N/A	6





Red-Purple Bypass: Drilling Shaft





Red-Purple Bypass: Installing Permanent Liner





Red-Purple Bypass: Transition Concrete Pour

Justification of Need:	 Advance Utility Relocation to relocate utilities in conflict with future RPM Phase One construction. Demolition Work Orders: Two Mid-Con Work Orders to demolish buildings at 18 parcels to facilitate future RPM Phase One Construction.
Priority of Project:	• High
Total Project Budget:	 Additional support costs as part of RPM Phase One Project Budget of \$2.2B Advance Utility Relocation: \$55,000,000 per Ordinance No. 017-53 and 019-110 Demolition: \$4,380,195 Construction Contract Value
Construction Contract Value:	 Advance Utility Relocation: \$31,819,073.70 Work Orders Authorized (as of 1/24/20) Demolition: \$4,380,195
Earned to Date:	 Advance Utility Relocation: 100% (ComEd duct bank), 92% (all work) Demolition: 98%
Percent Change Orders to Construction Contract:	 Advance Utility Relocation: N/A Demolition: 0% (Demolition Package 1 Reduced by Unused Allowances)
Percent Time Used:	Advance Utility Relocation: 100%Demolition: 100%
DBE:	 Advance Utility Relocation: CTA Diversity continues to work with Utilities to provide opportunities for DBEs and other diverse contractors. Demolition: Work Orders are on track to meet the DBE goals of 30%
Funding Source:	CTA Bonds, FTA Core Capacity Grant, CMAQ, TIFs
Estimated Start Date/Estimated Length of Project:	 Advance Utility Relocation NTP: 06/25/18 (373 days) Planned Substantial Completion: Q1 2020 Demolition NTP: 01/16/18 (322 Days) Planned Substantial Completion: 12/04/18 Demolition Substantial Completion: 03/22/2019 (Contractor notified of potential Liquidated Damages)



Designer of Record:	Advance Utility Relocation: Relevant Utility AgencyDemolition: CTA
Construction Manager/General Contractor:	 Advance Utility Relocation: CM= WSP; GCs = Relevant Utility Agency or Contractor Demolition: CM = WSP; GCs = ICC Group Inc. and John Burns Construction
Detailed Overview of Scope:	

- Advance Utility Relocation: Relocate underground and overhead facilities prior to track and station construction.
- Demolition: Demolish properties needed for RPM Phase One prior to track and station construction.



Impact on Customers:	 Periodic flagging activities while poles being set/removed. Bus reroutes for street closures.
Benefit to System:	Reduces risk and duration for the future RPM Phase One Design-Build Project.
Benefit to Community:	Reduces risk and duration for the future RPM Phase One Design-Build Project.
Impact on Accessibility:	• None
Estimated # of Jobs Created:	• N/A
Customer Communication Need:	 Construction Activity Notices will be provided to inform businesses and residents regarding temporary construction impacts (noise, dust, street/alley closures) throughout the advance work.
Comparable Projects:	

N/A



Construction Progress

Phase	Description	
		Status
Design:	Advance Utility Relocation – Work Orders continue to be processed.	Ongoing
Construction:	 Advance Utility Relocation – ComEd, Comcast, RCN and AT&T continue relocation of existing facilities; major infrastructure is complete for ComEd, PGL and CDWM-Water. Final pole removal anticipated to be completed in early spring in Red-Purple Bypass area. Pole removal continues in Lawrence to Bryn Mawr area. Customer service transfers continue in Lawrence to Bryn Mawr area. Final pavement restoration in Red-Purple Bypass complete. Final pavement restoration in Lawrence to Bryn Mawr areas anticipated to take place in early spring. 	Ongoing
Close-Out:	Demolition Package 2 – GC is preparing closeout submittals.	Ongoing

Delay Explanation:	
N/A	







AT&T Pole Removal in Alley south of School Street





Comcast Innerduct Pull at Ainslie Street

	Outreach type	Major Activities	Timing
Community	Eawrence to Bryn Mawr	 Chinese Mutual Aid Association – Lawrence to Bryn Mawr update 48th Ward Ald. Osterman – Weekend Construction (Ardmore-Thorndale) Meeting 44th Ward – Roscoe/Sheffield closure Construction Activity Notifications (CANs) 48th Ward Ald. Osterman Bryn Mawr Businesses Monthly Meeting 48th Ward – Ald. Osterman Winter Construction update Station "Pop-Ups" Outreach, Argyle and Lawrence Stations 	Dec. 17 Dec. 19 Dec. 27 Jan. 14 Jan. 17 Jan. 21
Workforce	Community Open House	 Lawrence to Bryn Mawr Community Open Houses Workforce/DBE Outreach and Compliance Meetings RPM Phase One Electrical & Track Outreach Event (Workforce & DBE) 	Jan. 28 & 30 Monthly Dec. 12
SBE/DBE	Past Building Small Business Event	 Diversity RPM Monthly Meeting CTA Building Small Business Informational Session and One-on-One meetings 	Jan. 27 Feb. 6-7

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Project Title: RPM Community Outreach