Construction Project Briefing

July 14, 2021



Today's Presentation

- Jefferson Park to O'Hare Signals Project
- System-Wide Traction Power Upgrades (Transformers Replacement) Project
- Refreshed & Renewed Program
- Jackson Park Line Track and Structure Improvement Project
- South Shops Waste Material Storage & Sewer Upgrade
- Red and Purple Modernization 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:	68%
Percent Change Orders to Construction Contract:	0
Percent Time Used:	100%
DBE:	Goal: 10% Design / 15% Construction Commitment: 10.1% Design / 15% Construction Workforce Goals: 10% WIOA / 10% Apprentice 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.



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:

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



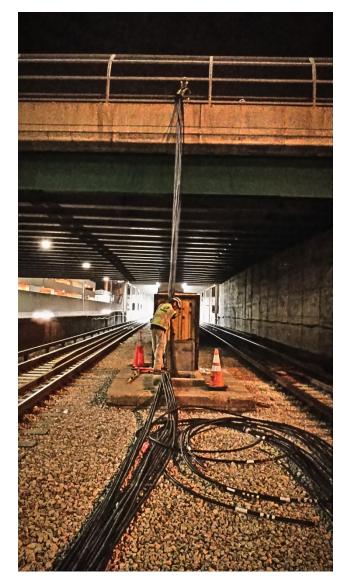
Construction Progress

Phase	Description	Status
Construction		
	Signal & Traction Power Cable Installation.	Ongoing
	Rosemont West Relay House is being manufactured.	Ongoing
	Signal Equipment Installation.	Ongoing
	All Relay House Books of Plans have been submitted.	Ongoing Review
	Old Mannheim Relay House Cutover Preparation has started.	Ongoing
	Discrepancy Closure at previously cutover houses.	Ongoing

Delay	Exp	lanation:
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N/A







Cable Pulling at Cumberland 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:	99%	
Percent Change Orders to Construction Contract:	0%	
Percent Time Used:	94%	
DBE:	Goal: 10% Commitment: 10.19% Contract is on track to meet the DBE goal	
Funding Source:	A combination of (2010 IDOT and 2018 FEDERAL grants)	
Estimated Start Date/Estimated Length of Project:	 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.



Impact on Customers:	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.



Construction Progress

Status
Completed
Completed Completed Completed





Re-filling Stone Around The Concrete Containment Pad





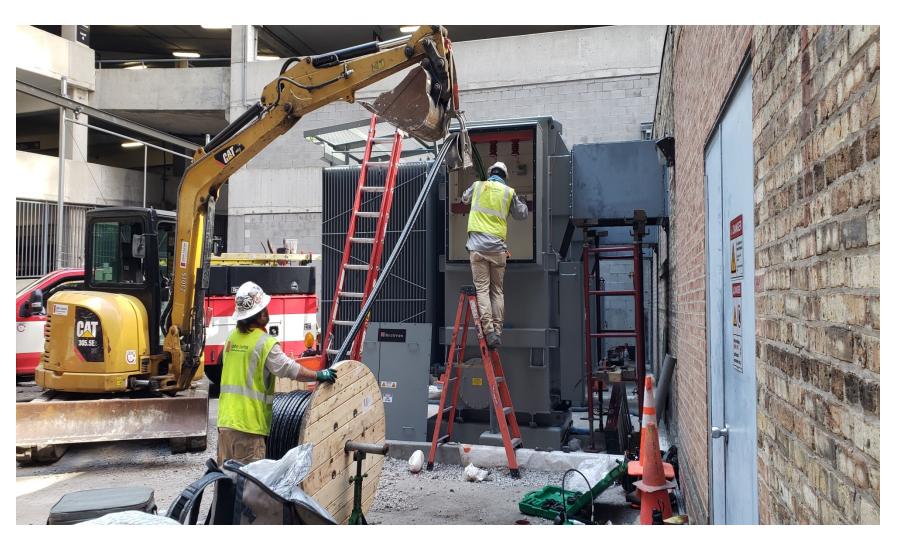
Lifting and Placing New Transformer 3 at Franklin Substation





New Transformer 3 Set in Place at Franklin Substation





Cable Pull Between the AC/DC Gears and the New Transformer 3 at Franklin Substation



Justification of Need:	The South Shops Facility Waste Material Storage Building project is needed for waste materials produced at the South Shops Bus facility, such as used fluids and oils. Currently there is no facility to properly store waste materials in accordance with environmental standards. The 77th Bus Garage, Unit 1 Building, Bay 1, Sewer Reconstruction/ Masonry Wall Stabilization project is necessary to avoid further wall degradation and possible future wall collapse. The existing collapsed sewer section below the wall location, undermines the wall, and has caused the current deteriorated state.
Priority of Project:	Medium
Total Project Budget:	\$2,382,350.00
Construction Contract Value:	\$931,605.00
Earned to Date:	\$275,500.00
Percent Change Orders to Construction Contract:	0%
Percent Time Used:	60.5%
DBE:	Goal: 25% Commitment: 28.61% Contract is on track to meet the DBE goal Outreach events conducted: 4 (CTA)
Funding Source:	Various
Estimated Start Date/Estimated Length of Project:	NTP- 1/22/2021 Estimated duration 256 days
Designer of Record:	CTA Engineering
Construction Manager/General Contractor:	WSP / Kiewit Infrastructure

Detailed Overview of Scope: South Shops Facility Waste Material Storage Building. Install new cast-in place concrete foundation, footings, and walls, new concrete floor, drainage trench, drainage dry sump pit and interior integrated perimeter concrete floor curb. New galvanized structural steel framing, chain link fascia panels, metal roof, and other galvanized accessories. New transformer inside of existing electrical room, overhead power supply with 3 new wood poles, cross arms, hardware and insulators, all necessary wiring and connections, new circuit breaker, conduit, junction boxes, and occupancy sensor switch.

77th Bus Garage, Unit 1 Building, Bay 1, Sewer Reconstruction/ Masonry Wall Stabilization. Excavate, remove, backfill with cementitious low strength material: New (340) linear feet of sewer, (2) manholes, (2) catch basins. Replace (2) manholes. Replace (430) linear feet of 6" inch clay sewer pipe with 6" inch Extra Strength Vitrified Clay Pipe (ESVCP). Replace all pavement and concrete. Install new 2" x 12" timber ledger boards with stainless steel rods at Storage Rooms #2, #5, and #6.



Impact on Customers:	No impact to customers.	
Benefit to System:	The South Shops Facility Waste Material Storage Building project will provide a separate location for the storage of waste materials that the facility currently does not possess. This will allow for proper and safe storage of materials before they are removed from the facility. The 77th Bus Garage, Unit 1 Building, Bay 1, Sewer Reconstruction/ Masonry Wall Stabilization project is necessary to avoid further wall degradation and possible future wall collapse. This will bring the wall and sewer to a state of good repair and prolong the life of the facility.	
Benefit to Community:	Continued use of facility at 77 th bus garage, unit 1 building 1 and sewer reconstruction on 77 th street. The hazardous waste facility will bring South Shops into compliance with environmental standards. These will both allow for bus maintenance and service to continue out of 77 th Garage and Shop.	
Impact on Accessibility:	No impact to accessibility	
Customer Communication Need:	No customer communication needed.	

Comparable Projects:

N/A

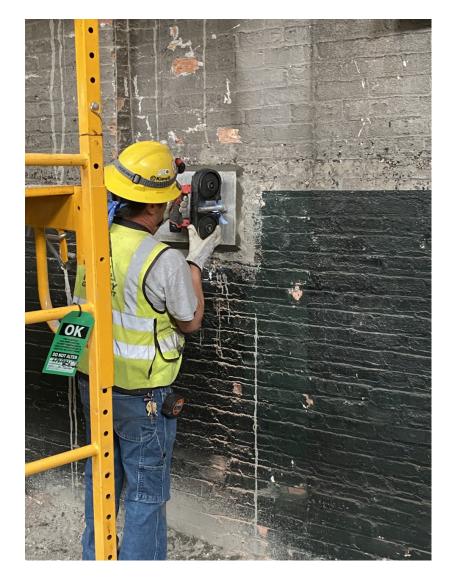


Construction Progress

Phase	Description	Status
Construction	 Wall Stabilization Mobilization Construction 	Ongoing Ongoing
	Sewer ReconstructionMobilizationConstruction	Ongoing Upcoming
	 Waste Material Storage Building Material Fabrication Mobilization Construction 	Upcoming Upcoming Upcoming

Delay Explanation:		
N/A		







Wall Stabilization of Building 1 Interior





Wall Stabilization of Building 1 Exterior



Justification of Need:	The Refreshed & Renewed Program is a CTA Facilities Maintenance implemented plan to promote safety, security and longevity to all CTA Facilities including, but not limited to: Rail Stations and Platforms, Bus Garages and Rail Shops across the system. The Refreshed & Renewed Program performs major improvement work at these transit operations facilities for both the customer and the internal needs of the Authority.
Priority of Project:	Medium
Total Project Budget:	\$25,000,000
Expended to Date:	\$770,446.20
Used last Month:	\$129,145.67
Funding Source:	Various
Estimated Start Date/Estimated Length of Project:	January 2021 to December 31, 2021
Contractor	CTA Forces

92 Rail stations will receive lighting upgrades, painting and deep cleaning as part of this program.

35 stations will have a detailed Scope of work which includes:

- · Maintaining Cleanliness throughout public, as well as, back-of-house areas
- Ensuring stations are graffiti free;
- · Re-painting painted surfaces;
- Maintaining pathways of ingress and egress are clear of obstruction;
- · LED lighting conversions and component;
- · Removing obstructions from windows and store front systems that may impede natural light and safe viewing points.
- · Address and repair any unsafe defects such as spalling concrete and rotted wooden platforms;
- Replacing outdated and damaged signage;
- Maintaining a warm/cool working environment.



Impact on Customers: (Slow zones, single tracks, reroutes, weekends, etc.)	No track access occurrences within the scheduled work of the Refreshed & Renewed program will affect customers. Minimal impacts to customers will be work-arounds at any given station/facility that may affect customers, or employees, for a relatively short amount of time (Typically less than 1 day.)
Benefit to System:	The Refreshed & Renewed Program is implemented to promote the continued safety, security and longevity of all CTA Facilities including, not limited to: Rail Stations and Platforms, Bus Garages and Rail Shops across the system.
Benefit to Community:	Improved overall lighting and wayfinding signage, newly painted & refreshed stations, safety, cleanliness and appearance. Focus on the Customer experience, both Internal and external.

Comparable or Upcoming Projects:

- Station Renewal
- Logan Square Station Renewal



Construction Progress

Department	Description	Status
Construction	Painting and Lightning Only Improvements 92 Stations Paint Stations Full Program Scope 35 Stations Addison (Red) 35th (Red) 35th (Green) Belmont (Red) Polk (Pink) Conservatory (Green) 47th (Red) Rockwell (Brown). Cicero (Pink) Western (Congress) Kedzie (Orange) Painting and Lightning Only Improvements 92 Stations SBE Contract Procurement	Completed Completed Completed Completed Completed Completed Completed Completed Completed In Progress Up Coming Up Coming

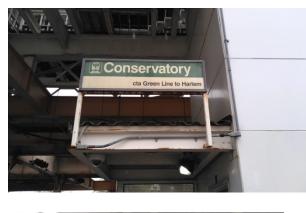
Delay	Exp	lanation:
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N/A



@Conservatory

Before



After









Conservatory Painting & Signage Enhancements



Before











Conservatory (Green) Painting Enhancements



Before



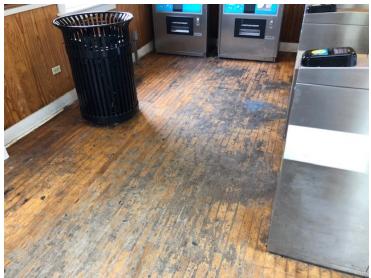
After

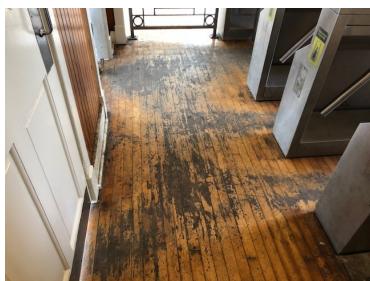




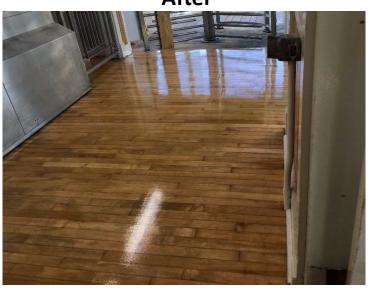








After





Conservatory (Green) Hardwood Floor Enhancements



Before After





47th (Red) Lighting Enhancements



Before





After





47th (Red) Painting Enhancements



Before





After





Rockwell (Brown) Painting & Concrete Enhancements



Before











Rockwell (Brown) Painting & Vandal Shield Enhancement



Justification of Need:	Currently, there are ties and running rail on the Cottage Grove branch that are in need of replacement. The ties have passed their useful life expectancy and have started to deteriorate. The 90 lb. running rail is the only 90 lb. rail that remains in use on the CTA's mainline track throughout the system and is in need of replacement. The ties and running rail replacement is vital to make sure the Cottage Grove branch remains safe and reliable to CTA customers.
Priority of Project:	P1
Total Project Budget:	\$12,708,268
Expended to Date (thru March):	\$960,000
Used last Month:	\$494,000
Funding Source:	60402 (Rebuild IL)
Estimated Start Date/Estimated Length of Project:	Track work schedule: Q1 2021 through Q2 2023 Structure work schedule: Q1 2021 through Q4 2021
Contractor	CTA Forces

Detailed Overview of Scope:

Track: Replace 2 miles of ties on the Cottage Grove branch including the crossover ties. Replace over a half mile of existing 90lb running rail with new 115lb running rail.

Structure: Renew high priority structural components in advance of track installation to extend asset life. Work includes 22 stringers and seven cross girders.



Impact on Customers: (Slow zones, single tracks, reroutes, weekends, etc.)	Work is being performed under normal traffic operations on weekdays and some weekends. Occasional single tracks and reroutes will also be utilized to facilitate complex work. Construction slow zones will be implemented while the tracks are being renewed.
Benefit to System:	Track: The age of the track ties has resulted in deteriorated/spilt ties that are no longer capable of maintaining proper track geometry resulting in alignment and gage issues and subsequently slow zones. The current 90 lb. rail that exists on the Cottage Grove branch is the only existing 90 lb. rail left in CTA revenue track and is in need of updating to increase reliability during temperature extremes. Replacing the track ties and running rail will bring the Cottage Grove branch up to a state of good repair and reduce travel time and delays. Structure: The system will be made structurally sound, by renewing all of the identified P1 defects in the area.
Benefit to Community:	The track ties and running rail play a vital role in track geometry and reliability. Replacing the track ties and running rail on the Cottage Grove branch will eliminate slow zones and provide faster, more reliable service to the community. Rehabilitation of the systems generally provides for the safe transport of passengers, removing any slow zones and restoring the effectiveness of the structure carrying the trains.

Comparable or Upcoming Projects:

- Previous Jackson Park Girder reconstruction 2018
- South Loop Track Renewal



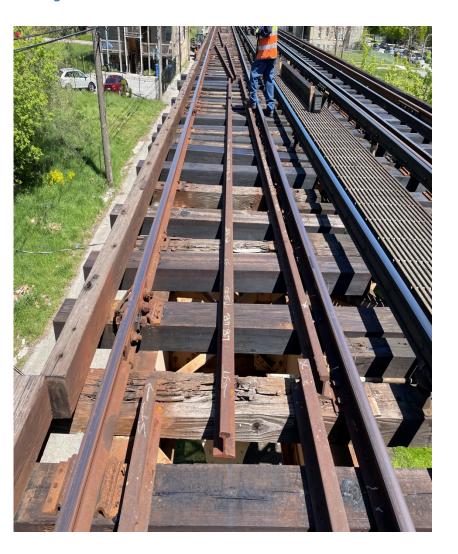
Construction Progress

Department	Description	Status
CTA Power & Way Maintenance	 Track Renewal Renew ties and fasteners 59th Street to 61st Street on the Southbound Track Renew ties and fasteners 59th Street to 61st Street Northbound Track Replace rail NBT Replace rail SBT Renew 61st Interlocking Structure Renewal Renew Stringers & Cross Girders 59th Street to 63rd Street 	35% Complete Complete Complete Upcoming Upcoming Ongoing

Delay Explanation:

No delays.



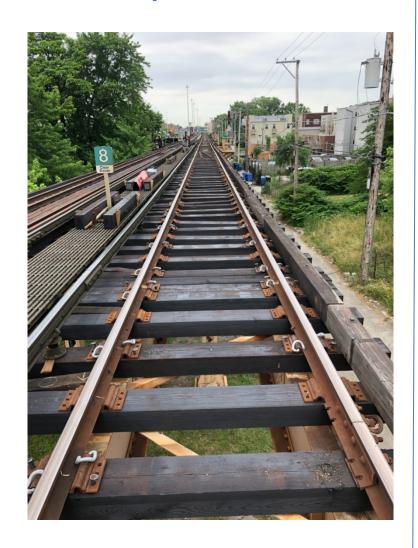




Tie and Rail Renewal NBT

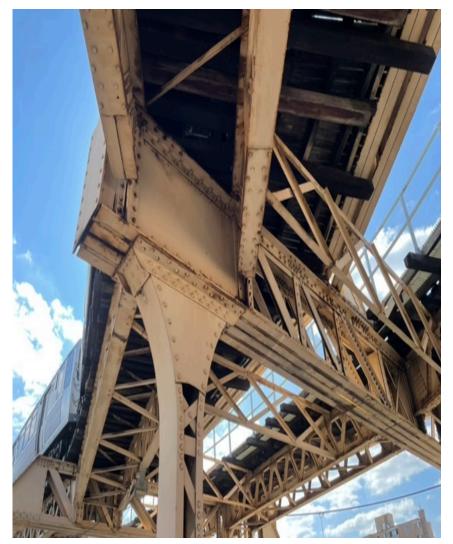


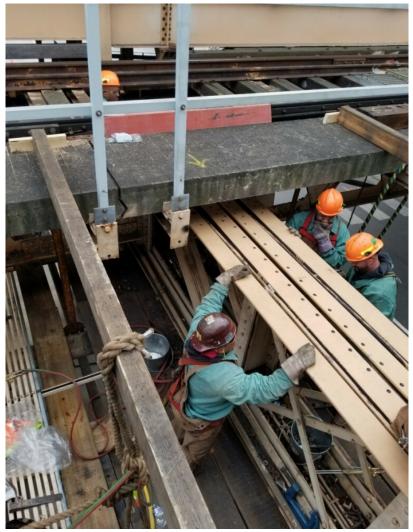




Tie Renewal SBT







Structure Renewal



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:	Original – \$1,272,275,929 Current – \$1,269,060,861	
Earned to Date:	38%	
Percent Change Orders to Construction Contract:	-0.25%	
Percent Time Used:	43%	
DBE:	Design Goal: 20% / Commitment: 20.64% Construction Goal: 20% / Commitment 20% Workforce Goal: WIOA 10%/ Apprentice 15%/ EDA 35% 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
- Red Line Extension



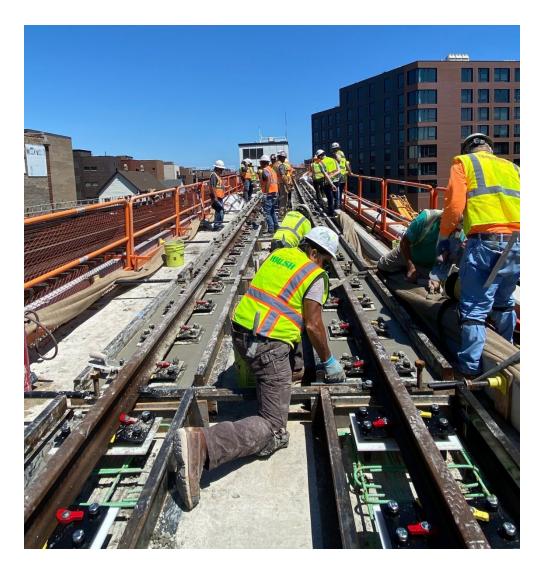
Phase	Description	Status
Administrative / Design:	 Continued submittal/revisions of required management plans. Continued Design Development in support of Red-Purple Bypass, Lawrence to Bryn Mawr Modernization, and Corridor Signal Improvements. 	Ongoing Ongoing
	Pre-Stage Work– Punchlist work	Ongoing
Construction:	 Red-Purple Bypass (RPB). Red-Purple Bypass track structural steel installation. Track installation on concrete track deck. Ravenswood structure rehabilitation. Ravenswood temporary track foundation installation. Factory testing Kenmore relay house. 	Ongoing Ongoing Ongoing Ongoing Ongoing
	 Corridor Signal Improvements (CSI) DGTrack Circuit Testing. 	Ongoing
	 Lawrence to Bryn Mawr Modernization Continued production of Pre-cast Box Girder Segments. Continued existing conditions survey. Demolition of Tracks 3 and 4. Sheeting, tieback installation and excavation. Embankment wall and viaduct demo. Salvage and demolition of Berwyn and Lawrence Stations . 	Ongoing Ongoing Complete Ongoing Ongoing Ongoing
Delay Explanation:		





RPB – Slide-in Steel Preparation





RPB – Track Plinth Concrete Pour





RPB – Vautravers Building Foundation





LBMM – Bryn Mawr Stageline Sheeting





LBMM – Engineered Barrier at Hollywood



Outreach type	Major Activities	Timing
Lawrence to Bryn Mawr Stage A groundbreaking with Mayor Lightfoot, Sen Durbin and Rep Quigley	 Weekly Red-Purple Bypass Project updates for 44th ward Launched weekly RPM Scoop newsletter Lawrence to Bryn Mawr Stage A project groundbreaking RPM monthly virtual office session/responses provided 48th ward/DPD/BACP monthly small business coordination mtg 1128 W Ardmore meeting about Lawrence to Bryn Mawr work 	Weekly May 28 June 2 June 8 June 8 June 11
CONSTRUCTION TALKS THI Interested in learning more about CAREERS in the CONSTRUCTION INDUSTRY Featuring The Chicagoland Laborers' Training Center June 30th, 2021 from 12:00pm to 1:00pm Register for this webinar here: https://tinyurl.com/CTALiUNA	 Workforce/DBE Outreach and Compliance Monthly Meeting. Construction Talks w/ Laborers' International Union North American (LiUNA!) DBE Dollars Awarded To-Date: \$167.8M 	Ongoing June 30