

Construction Project Briefing

October 10, 2018



Today's Presentation

- **ELMI – East Lake, Milwaukee, Illinois Substation Upgrade**
- **Ravenswood Loop Signals Upgrade Project**
- **95th Street Terminal Improvement Program**
- **Quincy Loop Station Upgrade**
- **Garfield Green Station Renovation**
- **Belmont and Jefferson Park Station Improvements (Blue Line)**



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

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:	38%
Percent Change Orders to Construction Contract:	0
Percent Time Used:	50%
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.



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

Impact on Customers:	There will be minimum impact to CTA customers.
Benefit to System:	<ul style="list-style-type: none">• 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

Phase	Description	Status
Construction	<ul style="list-style-type: none"> • All traction power equipment has been delivered at Illinois Substation. • Manufacturing of traction power equipment is in progress for Milwaukee and East Lake. • Demolition of existing traction power equipment has started at Illinois and Milwaukee. • Factory Acceptance Testing of traction power equipment is progressing. • Structural repairs to grade beam and transformer foundation pads at Milwaukee Substation. • Traction power equipment delivery has continued at Milwaukee Substation. • DC Switchgear deliveries, installation, testing, and commissioning has continued at Milwaukee Substation. • Building Electrical and Mechanical installation is in progress at Illinois and Milwaukee. • Tuckpointing, masonry, demo, and lead paint abatement is in progress at East Lake Substation. • Utility installation including AC and DC ductbanks is in progress at Illinois and Milwaukee. 	<p>Completed</p> <p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p>
<p>N/A</p>		



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



ComEd 140 kV Equipment Protected from Lead Paint Abatement at East Lake Substation



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



Removal of old 12.5 kV Transformer at Milwaukee Substation



Project Title: Ravenswood Loop Signal Upgrade Project

Justification of Need:	The signal system for the Ravenswood Loop Connector section of the CTA Brown Line was originally commissioned in 1975. In order to decrease headways and improve reliability, the system will be replaced with a new system.
Priority of Project:	High
Total Project Budget:	\$ 50 M
Construction Contract Value:	\$ 32.6M
Earned to Date:	65.8% (thru Aug)
Percent Change Orders to Construction Contract:	0
Percent Time Used:	100%
DBE:	Goal: 10% / Commitment: 10% Contract is on track to meet the DBE goal. Outreach events conducted: 1 (CTA)
Funding Source:	CTA PBV, CTA Bonds, FTA
Start Date/Length of Project:	NTP: November 4, 2015; Substantial completion April 2, 2018 (Actual projected 4 th quarter 2018.)
Designer of Record:	Parsons Transportation
Construction Manager/General Contractor:	Parsons Brinckerhoff/Ragnar Benson Construction, LLC

Overview of Scope: The signal system upgrade will include the following features:

- Removal of all existing signal equipment, cabling, and signal platforms.
- Design & install new platforms, cabling, cable support brackets, and signal equipment.
- Communication network design, configuration, installation, and commissioning.



Project Title: Ravenswood Loop Signal Upgrade Project

Impact on Customers:	54 hour line cut to cut over new signal system.
Benefit to System:	<ul style="list-style-type: none">• Decreased headways• More reliable equipment• More robust signal network• Better diagnostic abilities• More reliable track circuit indications• Added loss of shunt detection system• Optimized curve speeds (potentially reduce run times)
Benefit to Community:	<ul style="list-style-type: none">• Maximizing number of trains allowed in the corridor.• Less customer inconvenience due to signal system malfunction.
Impact on Accessibility:	None
Estimated # of Jobs Created:	650 indirect, 136 direct
Customer Communication Need:	<ul style="list-style-type: none">• Construction activity notices will be provided to inform businesses and residents regarding line cut and construction impacts (noise, dust, street/alley impacts) throughout the project.

Comparable Projects:

- Loop Signal Project
- Dearborn Signal Project



Project Title: Ravenswood Loop Signal Upgrade Project

Construction Progress

Phase	Description	Status
Construction	• Installation of cable brackets and cable.	Complete
	• Installation of foundations and structural steel to support new signal houses.	Complete
	• Installation of new signal houses.	Complete
	• Installation of new signal equipment.	Ongoing
	• Integration and troubleshooting of new system.	Ongoing
	• System Cutover.	Planned

Delay Explanation:

General Contractor's performance.



Project Title: Ravenswood Loop Signal Upgrade Project



Setting of Illinois Relay House



Project Title: Ravenswood Loop Signal Upgrade Project



Control Line Testing at Cleveland Relay House



Project Title: 95th Terminal Improvement Program

Justification of Need:	The terminal is functionally obsolete and does not allow for optimal bus operations and pedestrian flow.
Priority of Project:	High
Total Project Budget:	\$280 M
Construction Contract Value:	Advance Package 1: \$ 2,482,588 Advance Package 2: \$24,697,210 Main Terminal Contract: \$188,395,277
Earned to Date:	Advance Package 1: 100% Advance Package 2: 100% Main Terminal Contract: 71%
Percent Change Orders to Construction Contract:	Advance Package 1: (0.3%) Advance Package 2: 7% Main Terminal Contract: 4.7%
Percent Time Used:	Advance Package 1: 100% Advance Package 2: 100% Main Terminal Contract: 93%
DBE:	Advance Package 1: Goal: 30% / Commitment: 35.19% / Final Attainment*: 37.26% Advance Package 2: Goal: 30% / Commitment: 30% / Final Attainment*: 37.80% Main Terminal Contract: Goal: 27% / Commitment: 27% Contract is on track to meet the DBE goal Outreach events conducted: 8 *Attainment is based on progress payments and may vary over the life of the project
Funding Source:	Federal, State, Bond



Project Title: 95th Terminal Improvement Program

Estimated Start Date/Estimated Length of Project:	Main Terminal Contract: NTP: Nov 24, 2015; Substantial Completion Dec. 16, 2018
AP1/AP2 Construction Manager/General Contractor:	Walsh / II in One JV
Main Terminal Contractor:	F.H. Paschen / Milhouse JV
Owners Representative:	Jacobs/SQN JV

Detailed Overview of Scope:

The 95th Terminal Improvement Project will create new South and North terminal buildings at 95th on the Dan Ryan Red Line. The new terminal buildings will create a functional and efficient intermodal facility to enhance bus service and improve pedestrian safety. Scope includes the replacement and expansion of the terminal and platform and the addition of bus and pedestrian bridges. New administrative office space will be built and new bus bays will be provided around the terminal buildings.



Project Title: 95th Terminal Improvement Program

Impact on Customers:	Track closures and weekend station closures during construction. Temporary relocation of certain bus operations to nearby streets during construction phasing.
Benefit to System:	Improved customer circulation and safety by relieving congestion. Improved bus service and improved pedestrian safety.
Benefit to Community:	Improved pedestrian safety with new pedestrian bridge over 95 th Street, longer train platform extending to the new South Terminal Building.
Impact on Accessibility:	New south and north terminal buildings with improved accessible routes to buses.
Estimated # of Jobs Created:	3,640 indirect, 762 direct
Customer Communication Need:	Requires periodic track closures and possible station closures with bus shuttle service. Bus Operations may be relocated to adjacent streets during certain phases of construction.

Comparable Projects:
<ul style="list-style-type: none"> Wilson Station



Project Title: 95th Terminal Improvement Program

Construction Progress

Phase	Description	Status
Construction	<ul style="list-style-type: none"> ▪ South Terminal: <ul style="list-style-type: none"> ▪ Various punchlist work is ongoing. ▪ Building systems commissioning and training of CTA Maintenance personnel is ongoing. ▪ North Terminal Building: <ul style="list-style-type: none"> ▪ Rebar, framing, and concrete pours completed for the structural floor slabs of the four quadrants of the new concourse level additions. ▪ Building steel erection is nearing completion; curtainwall framing install continues, panels and glazing install began where available. ▪ Electrical and plumbing infrastructure install is ongoing. ▪ One of four escalator trusses installed; preparation for remaining three is ongoing. ▪ North Terminal Bus Area: <ul style="list-style-type: none"> ▪ East side bus canopy foundation grade beam and steel columns are complete. ▪ West side bus canopy foundation grade beam is ongoing. ▪ East and west side abutment wall reconstruction is complete. ▪ North Bus Bridge support columns and new bridge widening steel erection is complete. ▪ North Bus Bridge steel detailing and prep for new bridge deck is ongoing. ▪ 96th relay house wiring work and cable install is ongoing. 	<p>Ongoing Ongoing</p> <p>Ongoing</p> <p>Ongoing</p> <p>Ongoing Ongoing</p> <p>Complete</p> <p>Ongoing Complete Complete</p> <p>Ongoing</p> <p>Ongoing</p>
Delay Explanation:		
N/A		



Project Title: 95th Terminal Improvement Program



Bus Canopy Steel - Crossarms and Column Welding



Project Title: 95th Terminal Improvement Program



Concourse Level Structural Slab Concrete Pour



Project Title: 95th Terminal Improvement Program



Elevator Tower Steel Erection (left) and Curtainwall Framing Install (right)



Project Title: 95th Terminal Improvement Program



Steel Erection for North Bus Bridge Widening



Project Title: Quincy Loop Station Upgrade

Justification of Need:	The Station is not currently accessible. The project will provide another accessible Loop station, as well as provide additional repairs and improvements throughout the station.
Priority of Project:	High
Total Project Budget:	\$18M
Construction Contract Value:	\$11.7M
Earned to Date:	76%
Percent Change Orders to Construction Contract:	0
Percent Time Used:	100%
DBE:	Goal: 30%, Commitment: 30% Contract is on track to meet the DBE goal Outreach events conducted: 1 (CTA)
Funding Source:	TIF, CTA Bonds
Estimated Start Date/Estimated Length of Project:	NTP: July 27, 2016; Contract substantial Completion, February 1, 2018 (Actual projected – 4 th Qtr. 2018)
Designer of Record:	Exp US Services
Construction Manager/General Contractor:	Parsons Brinckerhoff/Ragnar Benson Construction, LLC

Detailed Overview of Scope: The station will include the following features:

- Two (2) new Elevators with connection bridges to stationhouses.
- One new exit stair.
- New electrical service.
- New and upgraded Electrical fixtures.
- Painting upgrades.
- Replacement of existing wood floors with new tile floors at both stationhouses.



Project Title: Quincy Loop Station Upgrade

Impact on Customers:	There will be minimum impact to CTA customers.
Benefit to System:	<ul style="list-style-type: none">• Accessible Station.• New upgraded electrical service to the station.• Upgraded lighting.• New stationhouse floors.
Benefit to Community:	<ul style="list-style-type: none">• It will improve beneficial use of the station by providing accessible path to the station.• Easy access entrances through two new (2) entry points.• New outer loop platform exit stair will provide a new exit point from platform to street.
Impact on Accessibility:	Station will be fully accessible upon completion.
Estimated # of Jobs Created:	234 indirect, 49 direct
Customer Communication Need:	<ul style="list-style-type: none">• Construction activity notices will be provided to inform businesses and residents regarding temporary stations and construction impacts (noise, dust, street/alley impacts) throughout the project.

Comparable Projects:

- IMD Station – Blue Line



Project Title: Quincy Loop Station Upgrade

Construction Progress

Phase	Description	Status
Construction	<u>Street Level, East Side:</u>	
	• Installation of elevator enclosure metal panels completed.	Completed
	• East elevator control closet , equipment , and entrance shroud build out continues.	Ongoing
	• Installation of elevator glazing panels continues.	Ongoing
	• Installation of elevator cab and equipment build out continues.	Ongoing
	• Elevated connection bridge walkway build out continues.	Ongoing
	<u>Street Level, West Side:</u>	
	• Installation of elevator enclosure metal panels continues.	Ongoing
	• West elevator control closet , equipment , and entrance shroud build out continues.	Ongoing
	• Installation of elevator cab and equipment build out continues.	Ongoing
	• New exit stair build out continues.	Ongoing
	• Elevated connection bridge walkway build out continues.	Ongoing
	<u>Other planned activities:</u>	
	• Electrical conduit /wiring installation throughout the station continues.	Ongoing
	• New janitor closets build out continues.	Ongoing
• New drop metal ceiling installation at mezzanine level continues.	Ongoing	
• New station access ADA door at bridge level build out at east and west stations continues.	Ongoing	



Project Title: Quincy Loop Station Upgrade



New Exit Stair Build Out



Project Title: Quincy Loop Station Upgrade



New Elevator Entrance Shroud Enclosure Installation



Project Title: Garfield Green Station Renovation

Justification of Need:	The purpose of the project is to upgrade and enhance The Garfield Gateway, as well as create a transit gateway to the community. The project will increase pedestrian access and flow at the operational station with a variety of streetscape improvements, including crosswalk enhancements, new lighting, bike racks, landscaping, and traffic control devices. Also, the original historic landmark street level station will be refurbished.
Priority of Project:	High
Total Project Budget:	\$42 M
Construction Contract Value:	25,978,000
Earned to Date:	20%
Percent Change Orders to Construction Contract:	0%
Percent Time Used:	63.4%
DBE:	DBE Goal: 30% Contract is on track to meet the DBE goal
Estimated Start Date/Estimated Length of Project:	NTP: October 25, 2017 Substantial Completion : January 8, 2019
Designer of Record:	Walsh Construction Company / Exp US Services
Construction Manager / Owners Representative:	Arcadis

Detailed Overview of Scope:

This Project will bring elements of Garfield Station and the historic station to a state of good repair and enhance the aesthetics of the station. A new platform slab will be installed along with new furniture, signage, and mid-platform exit stairs. A new canopy will be placed that extends to an 8 car length and will have new LED light fixtures and new speakers. The historic track structure will be painted and new access stairs will be installed. The operational stationhouse will be refinished, a new escalator to the southbound tracks will be installed, and existing elevators will be improved. Street level improvements include bike lanes, a new bus stop configurations, and a new walkway.



Project Title: Garfield Green Station Renovation

Impact on Customers:	<p>Track Occurrences</p> <ul style="list-style-type: none"> • 30 Nightly Single Tracks • Maximum 6 Weekend Line cuts <p>Operational Stationhouse Closure</p> <ul style="list-style-type: none"> • 90 day closure of operational stationhouse. (Once temp. station is complete) • 14 day platform closure: per platform. (Back riding on each side) • Construction of temporary stationhouse just north of stationhouse.
Benefit to System:	Increased reliability and safety for customers, rail and bus operations.
Benefit to Community:	The overall aesthetics of the Garfield station, historic station, and the track structure will be improved. New LED light fixtures, platform furniture, speakers and communications, and mid-platform exit stairs will also be added. There will also be improvements to the streetscape (bus stop, landscaping) and the parking lot.
Impact on Accessibility:	The current elevator will be improved and a new escalator will be added to the Southbound tracks. New speakers and new signage.
Estimated # of Jobs Created:	114 indirect, 546 direct
Customer Communication Need:	Construction Activity Notices regarding construction-related impacts.

<p>Comparable Projects:</p>
<ul style="list-style-type: none"> • Quincy Loop Station Upgrade



Project Title: Garfield Green Station Renovation

Construction Progress

Phase	Description	Status
Construction	<ul style="list-style-type: none">• Frame/pour/cure/backfill North Stairs foundation.• Paint removal from Historic Stationhouse exterior walls.• Excavation/frame/pour/cure thickened slab for Temp Fare Area.• Install temporary platform barricade wall.• Platform canopy demolition.• North Stairs structural steel installation.• Build Temporary Fare Area.• Demolish Stub Columns & Existing Guardrail.• Install underground sewer utilities.• Demolition of West Elevator.• Platform canopy steel installation.	Completed Completed Completed Completed Ongoing Ongoing Ongoing Completed Ongoing Ongoing Ongoing



Project Title: GARFIELD GREEN STATION RENOVATION



Demolition at West Elevator



Project Title: GARFIELD GREEN STATION RENOVATION



New Canopy Steel at Platform



Project Title: Belmont and Jefferson Park Station Improvements

Justification of Need:	Most elements of the Belmont and Jefferson Park Stations have not experience major renovation or updating since being built in 1970. In order to bring both stations to a state of good repair, upgrades are required. In addition, Jefferson Park Bus Terminal will be brought up to current ADA standards.
Priority of Project:	High
Total Project Budget:	\$ 42.2 M
Construction Contract Value:	\$30.8 M
Earned to Date:	17.0% (thru Aug 12)
Percent Change Orders to Construction Contract:	0
Percent Time Used:	45%
DBE:	Goal: 30% / Commitment: 30% Contract is on track to meet the DBE goal Outreach events conducted: 1 (Northeastern University El Centro Library)
Funding Source:	CTA PBV, CTA Bonds, RTA Bonds, IDOT, FTA, TIF, TIFIA
Start Date/Length of Project:	NTP: October 16, 2017; Substantial completion Belmont & Jefferson Park Rail Stations: December 31, 2018; Substantial completion Jefferson Park Bus Terminal: July 8, 2019
Designer of Record:	EXP
Construction Manager/General Contractor:	Parsons Brinckerhoff/Walsh Construction

Overview of Scope: Both the Belmont and Jefferson Park Stations will be brought to a state of good repair. Scope of work includes electrical and lighting upgrades, floor replacements, sidewalk repair, updated signage, wall repairs, water mitigation, and improved customer amenities. Belmont will also receive a Gateway Canopy element that will invoke a sense of community and protect customers from the elements. Jefferson Park Bus terminal will be brought to current ADA standards via larger bus islands, improved lighting and signage, and repaired pavement and sidewalks.



Project Title: Belmont and Jefferson Park Station Improvements

Impact on Customers:	<ul style="list-style-type: none"> • 8 Weekend Station Closures at Belmont • Belmont Bus Turnaround Closed up to 90 Days for Construction • 8 Weekend Single Tracks • 45 Nightly Single Tracks • Longitudinal Partial Platform Closures: 3 weeks each side at Belmont and Jefferson Park • One half of Jefferson Park Bus Terminal Closed at a time (Bus stops temporarily relocated) during terminal construction
Benefit to System:	Extensive renovations to both stations. Jefferson Park Bus Terminal will meet current ADA standards..
Benefit to Community:	Improved reliability, safety and accessibility
Impact on Accessibility:	Improves accessibility in the Jefferson Park Bus Terminal.
Estimated # of Jobs Created:	546 indirect, 114 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, extended partial platform closures, and bus terminal closures.

Comparable Projects:	
<ul style="list-style-type: none"> • O'Hare Line – Addison, Irving Park, Montrose, Harlem, and Cumberland Station Renovations 	



Project Title: Belmont and Jefferson Park Station Improvements

Construction Progress

Phase	Description	Status
Design	<ul style="list-style-type: none">• Achieve Final Design	Complete
Construction	<ul style="list-style-type: none">• Topping Slab Replacement at Belmont Platform	Ongoing
	<ul style="list-style-type: none">• Construction at Belmont Station	Ongoing
	<ul style="list-style-type: none">• Installation of Belmont Gateway Canopy	Planned
	<ul style="list-style-type: none">• Topping Slab Replacement at Jefferson Park Rail Station	Planned
	<ul style="list-style-type: none">• Construction at Jefferson Park Rail Station	Planned
	<ul style="list-style-type: none">• Construction at North Half of Jefferson Park Bus Terminal.	Planned
	<ul style="list-style-type: none">• Construction at South Half of Jefferson Park Bus Terminal.	Planned

Delay Explanation:



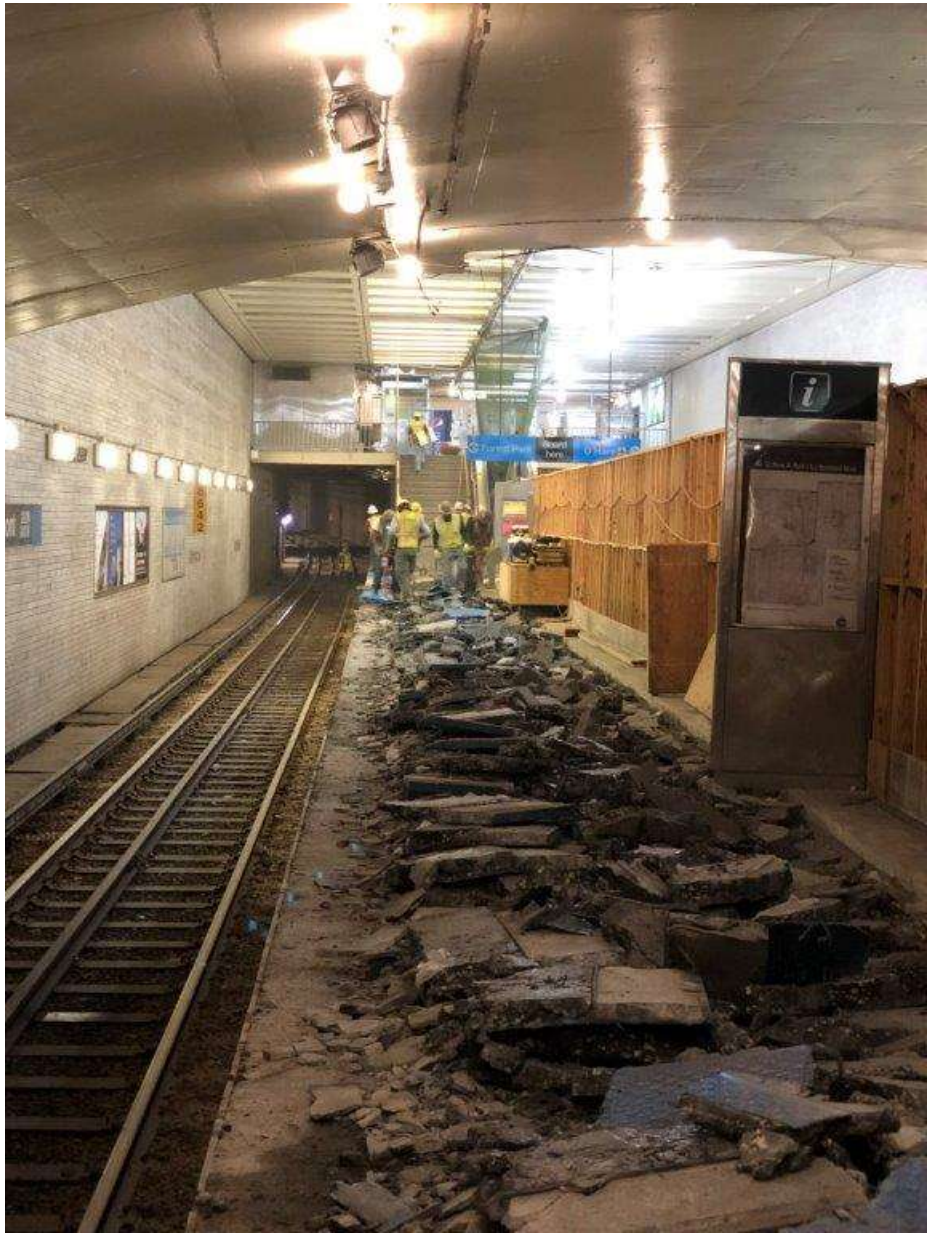
Project Title: Belmont and Jefferson Park Station Improvements



Demolition of Existing Station Canopy



Project Title: Belmont and Jefferson Park Station Improvements



Belmont Platform Concrete Demolition (Southbound)

