

# ***Construction Project Briefing***

**April 14, 2010**



# ***Today's Presentation***

- **Cermak Station Project**
- **Brown Line Capacity Expansion Project**
- **Subway Escalators Project**
- **Dearborn Subway Tie Replacement Project**
- **Systemwide Communications Upgrade Project**
- **Howard Signals Project**
- **Loop Signals Project**
- **Blue Line Signals Project**



# Project Title: Cermak Station Project

## Managing Department: Facilities Construction

Justification of Need:	Reconstruct station entrance after vehicle accident and fatality; make station ADA compliant
Priority of Project:	High
Project Budget	\$12.5M
Earned to Date:	\$2.6M
Percent Change Orders to Construction Contract:	0%
Percent Time Used to Date:	27%
Funding Source:	ARRA (Federal Stimulus Funds)
Procurement Status:	<ul style="list-style-type: none"> <li>• Archer auxiliary entrance: Under construction</li> <li>• Cermak main entrance: Applying for permit in Spring 2010</li> </ul>
Estimated Start Date/Estimated Length of Project:	Started in November 2009 and a 15 month construction duration
Project Manager:	Steven Mascheri (GM); Chris Mulcrone (PM)

**Detailed Overview of Scope:**

- New auxiliary entrance at Archer Avenue
- New station house with new revenue equipment, elevator, escalator, and bike racks at Cermak entrance
- Attain ADA compliance upon project completion



# Project Title: Cermak Station Project

## Managing Department: Facilities Construction

Impact on Customers:	Cermak entrance will be closed during construction. CTA will construct new Archer entrance to keep station open.
Benefit to System:	<ul style="list-style-type: none"> <li>• Station will become ADA-compliant</li> <li>• Third means of egress from platform for station access &amp; exiting</li> </ul>
Benefit to Community:	<ul style="list-style-type: none"> <li>• Station will become ADA-compliant</li> <li>• New Archer Avenue auxiliary entrance</li> </ul>
Impact on Accessibility:	Station will become ADA-compliant
Estimated # of Jobs Created:	50 on-site jobs (Contractor, CM, PM)
Customer Communication Need:	Cermak entrance to be closed during construction and will reroute customers to Archer auxiliary entrance

<b>Comparable Projects:</b>
<ul style="list-style-type: none"> <li>■ Brown Line Capacity Expansion Project</li> </ul>



# Project Title: Cermak Station Project

## Managing Department: Facilities Construction

### Construction Progress

Phase	Description	Status
Design	<ul style="list-style-type: none"> <li>▪ Archer design complete, permit issued in December</li> <li>▪ Design of Cermak underway; 30% progress set issued – CTA departments reviewing and providing comments</li> </ul>	Archer complete; Cermak Under Design
Archer Construction:	<ul style="list-style-type: none"> <li>▪ Stationhouse steel erected, concrete walkway poured</li> <li>▪ Underground utilities relocated.</li> <li>▪ Fabricating stationhouse finish materials (doors, lights, etc)</li> <li>▪ Finalizing process plan for platform cut to new stationhouse</li> </ul>	Scheduled completion June 1, 2010
Cermak Construction:	<ul style="list-style-type: none"> <li>▪ Preparing site for new stairs, escalator, and elevator</li> <li>▪ Finalizing electrical to Archer Entrance</li> </ul>	Scheduled completion December 31, 2010

<b>Delay Explanation:</b>
<ul style="list-style-type: none"> <li>■ No current delays.</li> </ul>



# Project Title: Cermak Station Project

## Managing Department: Facilities Construction



**Progress on Archer stationhouse. Stationhouse steel being erected.**



# Project Title: Cermak Station Project

## Managing Department: Facilities Construction



**Concrete walkway poured and footing for staircase being prepped for installation.**



# Project Title: Brown Line Capacity Expansion Project

## Managing Department: Facilities Construction

Justification of Need:	Accommodate increased ridership, provide accessibility, upgrade support systems
Total Project Budget:	\$529.9M
Earned to Date:	\$506.3M or 95.6%
Percent Change Orders to Construction Contract:	7.93% (includes all 7 contracts)
Percent Time Used to Date:	100%
Funding Source:	FFGA
Estimated Start Date/Estimated Length of Project	NTP 12/2004; Completion Date 12/31/2009
Project Manager:	Bob Wittmann (GM); Pedro Hurtado and John Titzer (PM)

**Detailed Overview of Scope:**

- Extend platforms to allow for 8-car operations
- Make stations ADA accessible
- Rehab 18 stations; add elevators to 13 stations
- Restore 8 historic stations in agreement with the Illinois Historic Preservation Agency
- Upgrade signal, power and communications delivery system



# Project Title: Brown Line Capacity Expansion Project

## Managing Department: Facilities Construction

### Construction Progress

Phase	Description	Status
Construction	Fullerton <ul style="list-style-type: none"> <li>▪ <b>Station Substantially Complete on December 31, 2009.</b></li> <li>▪ Punch List work is ongoing</li> </ul>	Substantially Complete
	Belmont <ul style="list-style-type: none"> <li>▪ <b>Station Substantially Complete on December 31, 2009.</b></li> <li>▪ Punch List work is ongoing</li> </ul>	Substantially Complete

<b>Delay Explanation:</b>
<ul style="list-style-type: none"> <li>▪ No current delays.</li> </ul>



# Project Title: Subway Escalators

## Managing Department: Facilities Construction

Justification of Need:	Escalators beyond useful life; high maintenance cost
Total Project Budget:	\$22.8M
Construction Contract Value:	\$17.1M
Earned to Date:	\$14.1M or 82%
Percent Change Orders to Construction Contract:	3.98%
Percent Time Used to Date:	76%
Funding Source:	FTA
Estimated Start Date/Estimated Length of Project	NTP 1/7/08; Completion Date 9/22/10
Project Manager:	Bob Wittmann (GM); Rick Herndobler (PM)

<b>Detailed Overview of Scope:</b>	
■	Replace nine escalators, reopen one exit and relocate one escalator facility on Red and Blue Lines Subway



# Project Title: Subway Escalators

## Managing Department: Facilities Construction

### Construction Progress

Phase	Description	Status
<b>Completed</b>	Jackson/Van Buren Red (street to mezzanine escalator)	Returned o service 2/19/09
	Monroe/Adams Red (platform to mezzanine escalator)	Returned to service 3/19/09
	Adams/Jackson Red (street to mezzanine escalator)	Returned to service 4/18/09
	Randolph/Washington Blue (platform to mezzanine escalator)	Returned to service 5/4/09
	Adams/Jackson Red (street to mezzanine escalator)	Returned to service 9/4/09
	Harrison Red (platform to mezzanine escalator)	Returned to service 9/9/09
	Monroe/Adams Red (street to mezzanine escalator)	Returned to service 9/28/09
<b>Construction</b>	Monroe/Adams Red (street to mezzanine)	Return to service scheduled in July 2010
	Madison/Monroe Blue (platform to mezzanine)	Return to service scheduled in August 2010

**Delay Explanation:**

- Monroe/Adams Red – Unexpected deterioration of steel beam supporting bottom of escalator requires replacement with a new concrete beam. Deterioration was hidden by old escalator. Design and construction of new beam delayed this escalator but will not delay overall project completion.
- Madison/Monroe Blue – Unexpected deterioration of the existing structural stair slab adjacent to the escalator was revealed during stair reconstruction. Design and construction of stair slab repairs delayed this escalator but will not delay overall project completion.



# Project Title: Dearborn Subway Tie Replacement Project

## Managing Department: Power & Way Construction

Justification of Need:	Growing number of slow zones in Dearborn Subway
Priority of Project:	Critical
Total Project Budget:	\$87.8M
Construction Contract Value:	\$59.6M
Earned to Date:	\$55.4M
Percent Change Orders to Construction Contract:	5%
Percent Time Used to Date:	100%
Funding Source:	ARRA
Procurement Status:	Completed
Estimated Start Date/Estimated Length of Project:	NTP 3/27/09; Total project length = 345 days from NTP (March 7, 2010).
Project Manager:	Carole Morey (GM); David Heard (PM)

**Detailed Overview of Scope:**

- Work includes replacement of all wooden half-ties and ballasted track with direct fixation track systems, replacement of portions of running rail and all contact rail and contact rail chairs, special track work in LaSalle Crossover, negative return and signal work, concrete repair in deteriorated sections of tunnel and foot walk, and grouting and sewer cleaning.



# Project Title: Dearborn Subway Tie Replacement Project

## Managing Department: Power & Way Construction

Impact on Customers:	One construction season (2009-2010); 2 Single Tracks, 21 Line Cuts
Benefit to System:	Slow zones in Dearborn Subway will be eliminated; can safely run trains at higher speeds.
Benefit to Community:	Faster commute time through the Dearborn subway once construction is complete.
Impact on Accessibility:	N/A
Estimated # of Jobs Created:	Over 200 on-site jobs (Contractor, CM, PM)
Customer Communication Need:	Project website, signage, additional Customer Assistants at Blue Line Stations

- Comparable Projects:**
- Block 37 Half Tie Project (Red and Blue Lines)
  - State Street Subway Tie Project



# Project Title: Dearborn Subway Tie Replacement Project

## Managing Department: Power & Way Construction

### Construction Progress

Phase	Description	Status
Milestone A	<ul style="list-style-type: none"> <li>Tie demolition, rail replacement and placement of temporary plates between the North Portal and Grand Crossover</li> </ul>	Completed 8/24/09
Milestone B	<ul style="list-style-type: none"> <li>Half-tie replacement and replacement of rail from 1000 feet south of Grand crossover to south end of platform at Clark/Lake.</li> </ul>	Completed 8/31/09
Milestone C	<ul style="list-style-type: none"> <li>Half-tie replacement and replacement of running rail from south end of platform at Clark/Lake to east of river.</li> <li>Removal of ballast, pour of new invert and half-ties and replacement of running rail from east of river to south portal.</li> <li>Special track work at LaSalle crossover.</li> </ul>	<b>Completed</b> <b>12/14/09</b>
Substantial Completion	<ul style="list-style-type: none"> <li>Project has reached substantial completion.</li> </ul>	<b>Completed</b> <b>3/7/10</b>

#### Delay Explanation:

- No current delays.

#### Remaining Work:

- Final punchlist items to be completed under flagging protection.



# Project Title: Systemwide Communications Upgrade

## Managing Department: Power & Way Construction

Justification of Need:	Upgrade communication infrastructure to address technological changes.
Priority of Project:	High
Construction Contract Value:	\$44.5M
Earned to Date:	\$37.7M
Percent Change Orders to Construction Contract:	43%
Percent Time Used to Date:	98%
Funding Source:	IDOT, RTA, Bond funds
Procurement Status:	N/A
Start Date/Estimated Length of Project:	NTP given 9/1/05; contract extended to 12/31/09
Project Manager:	Carole Morey (GM); Herb Nitz (PM)

**Detailed Overview of Scope:**

- Upgrade of new fiber optic and copper backbone
- Installation of over 40 miles of new fiber and over 60 miles of new copper (w/Brown Line)
- Installation of over 120 new high-speed fiber optic nodes



# Project Title: Systemwide Communications Upgrade

## Managing Department: Power & Way Construction

Impact on Customers:	N/A
Benefit to System:	Improve system-wide communication capabilities, reduce operating costs and support future technology enhancements that can improve safety, security and efficiency.
Benefit to Community:	N/A
Impact on Accessibility:	N/A
Estimated # of Jobs Created:	N/A
Customer Communication Need:	N/A

<b>Comparable Projects:</b>
<ul style="list-style-type: none"> <li>■ Blue Line Signals project</li> </ul>



# Project Title: Systemwide Communications Upgrade

## Managing Department: Power & Way Construction

### Construction Progress

Phase	Description	Status
Construction	<ul style="list-style-type: none"> <li>▪ Brown Line Communications package (excludes VMS scope)</li> <li>▪ Digital Advertising/ VMS signs (Brown Line)                             <ul style="list-style-type: none"> <li>▪ The installation of Digital Advertising screens on the Brown Line has been suspended. Instead, variable message signs (VMS) will be installed at the Belmont and Fullerton stations. VMS/Digital Advertising signs at the remaining Brown Line stations will be installed under a separate contract.</li> </ul> </li> <li>▪ Dearborn Phone Cutover                             <ul style="list-style-type: none"> <li>▪ Dearborn phones and fiber installed under the Blue Line Signals Contract. Integration of phones to occur under Systemwide Communications Upgrade contract. Per Aldridge, problems with Avaya PBX installation has delayed phone cutovers. As of 4/2/10, Aldridge reported PBX issues have been resolved and integration will resume.</li> </ul> </li> <li>▪ Base Contract Work                             <ul style="list-style-type: none"> <li>▪ Upgraded new fiber optic and copper backbone</li> <li>▪ Installed over 40 miles of new fiber and over 60 miles of new copper (w/Brown Line)</li> <li>▪ Installed over 120 new high-speed fiber optic cable nodes</li> </ul> </li> </ul>	<p>Substantially complete; punchlist under development</p> <p>Substantially complete; punchlist under development</p> <p>Substantially complete; punchlist under development</p>
Testing/ Cutovers/ Demo	<ul style="list-style-type: none"> <li>▪ Approved Systemwide upgrades/Bulletin 15 work (added to contract under Change order #7 and approved in June 2008)</li> </ul>	Substantially complete March/April 2010

#### Delay Explanation:

- Proceed order (6/1/09) extended contract for an additional 7 months at no cost to CTA.



# Project Title: Howard Signals Project

## Managing Department: Power & Way Construction

Justification of Need:	Restore Reliability and Improve Performance of the Train Control System
Priority of Project:	High
Total Project Budget:	\$7M
Construction Contract Value:	\$5.5M (Signal); \$355K (JOC); \$555K* (Additional JOC work funded)
Earned to Date:	\$784K (Signal); \$320K (JOC)
Percent Change Orders to Construction Contract:	0%
Percent Time Used to Date:	29% (Signal); 100% (JOC); 0% (Additional JOC)
Funding Source:	CTA Bonds
Estimated Start Date/Estimated Length of Project:	NTP issued August 6, 2009; Completion by July 27, 2011
Project Manager:	Barney Gray (GM); Grace Ohs (PM)

- Detailed Overview of Scope:**
- Upgrade existing Vital Processor Interlocking (VPI) systems at Interlockings near the Howard Street Station. Upgrades to Communication hardware and software. Also includes replacement of faceplates for Howard Control Panel, new CTC Workstation, and new Maintainer’s overview displays.
  - Project also includes supplemental JOC work at Howard Tower. Roof replacement, HVAC replacement, and new fire suppression system is included.
  - Additional \$555K in JOC work includes Jarvis wall and abutment repair and backup generators.

\*Additional \$555K JOC work will be paid out of separate funds allocated by Capital Finance department.



# Project Title: Howard Signals Project

## Managing Department: Power & Way Construction

Impact on Customers:	During non-rush periods, reduced train speeds when workers are on the ROW.
Benefit to System:	Improve signal system at Howard Interlocking to prevent delays to service.
Benefit to Community:	More consistent travel times due to increased reliability.
Impact on Accessibility:	N/A
Estimated # of Jobs Created:	N/A
Customer Communication Need:	<ul style="list-style-type: none"> <li>• Courtesy notification to the Alderman and Community about the project.</li> <li>• Train announcements about reduced speeds due to workers on ROW.</li> </ul>

<b>Comparable Projects:</b>	
■	Blue Line Signals Project
■	Loop Signals Project



# Project Title: Howard Signals Project

## Managing Department: Power & Way Construction

### Construction Progress

Phase	Description	Status
Construction	▪ Printed circuit boards received, installation to start April 2010	Ongoing
JOC Construction	▪ Wight-Hill started work 6/10/09, HVAC and roof work is substantially complete.	Close-Out

<b>Delay Explanation:</b>
■ No current delays.



# Project Title: Loop Signals Project

## Managing Department: Power & Way Construction

Justification of Need:	Upgrade Towers and Interlocking Control Systems to current technology; Tower 18 past useful life
Total Project Budget:	\$103.2M
Construction Contract Value:	\$67.9M
Earned to Date:	\$49.7M or 73.2%
Percent Change Orders to Construction Contract:	40.7%
Percent Time Used to Date:	100%
Funding Source:	FTA, RTA and Bond Funds
Estimated Start Date/Estimated Length of Project	NTP 2/21/07; Original Completion Date 9/2009; Revised Completion Date 9/2010
Project Manager:	Barney Gray (GM); Brittany Dyra (PM)

- Detailed Overview of Scope:**
- New Bi-directional Cab Signal System for the Loop
  - Construction of new Control Tower at Lake/Wells
    - New control panel with remote controls for Tower 12 and Jefferson
  - Installation of a new Signal Facility Building at Randolph/Wells
  - Installation of a new Tower 12 Relay House
  - Installation of new Interlocking at Jefferson



# Project Title: Loop Signals Project

## Managing Department: Power & Way Construction

### Construction Progress

Phase	Description	Original Completion Date	Revised Completion Date	Actual Completion Date
Milestone 1	Approved Signal Block Design	8/20/07	4/2008	3/18/08
Milestone 2	Approved Cable Plan	9/4/07	5/2008	5/21/08
Milestone 3	Approved Tower 18 Circuit Design	9/19/07	6/2008	12/2/08
Milestone 4	Audio Circuit Cutover	9/2008	N/A	9/14/08
Milestone 5	Tower 18 Relay Room	3/20/09	11/2009	TBD*
Milestone 6	Tower 18	None Provided	5/2010	
Milestone 7	Tower 18 Interlocking	8/2009	6/2010	
Milestone 8	Tower 12 Interlocking	8/2009	9/2010	
Milestone 9	Substantial Completion	9/2009	9/2010	

#### Delay Explanation:

- Original project schedule to be complete 9/2009; current project schedule shows completion for 9/2010. See dates above for details.

\* Tower 18 Relay Room cutover was completed 11/16/09; testing still remains related to this milestone



# Project Title: Blue Line Signals Project

## Managing Department: Power & Way Construction

Justification of Need:	Signal system is beyond expected service life and upgrades needed for compatibility with new AC-powered railcars. Traction Power upgrades needed to reduce power shutdowns and service disruptions.
Total Project Budget:	\$243M
Construction Contract Value:	\$185.1M
Earned to Date:	\$178.8M or 97%
Percent Change Orders to Construction Contract:	7.1%
Percent Time Used to Date:	100% of original time, 100% with new date of 11/22/09
Funding Source:	CTA Bonds, RTA, FTA, IDOT
Estimated Start Date/Estimated Length of Project	NTP 12/1/05; Original Scope Completion Date 7/1/09, Substantial Completion Date for Additional Work 11/22/09
Project Manager:	Barney Gray (GM); Grace Ohs (PM)

- Detailed Overview of Scope:**
- Blue Line Signal and Traction Power Upgrades.
  - Replace and upgrade signals, power distribution, and associated components at various facilities in the Dearborn Subway, and on the Congress and Kennedy Branches of the Blue Line and State Street Subway. Upgrades to communication facilities.



# Project Title: Blue Line Signals Project

## Managing Department: Power & Way Construction

### Construction Progress

Phase	Description	Status
Punch list	<ul style="list-style-type: none"> <li>Partial substantial completion from Forest Park to Jefferson Park for signal work. Punch list work continues.</li> </ul>	Ongoing
Construction	<ul style="list-style-type: none"> <li>Additional work: Automatic Vehicle Identification Upgrades, Worker Ahead Zone Modifications, Track Markers, and Lake Street Cable Rerouting for Blocked Duct Bank.</li> <li>Testing of 13<sup>th</sup> and 17<sup>th</sup> Towers started 1/25/10 and will continue for five weeks. Testing to be completed March 19, 2010.</li> </ul>	<p>Ongoing</p> <p>Started 1/25/10</p>

#### Delay Explanation:

- Contract Completion date extended from July 1, 2009 to November 22, 2009 for the completion of additional work. Final acceptance and punchlist items will continue after November 22, 2009.

