PRIORITY PROJECTS

INVEST IN TRANSIT

The 2018-2023 Regional Transit Strategic Plan for Chicago and Northeastern Illinois

Regional Transportation Authority

cta

Metra

pace

Transit capital investment makes sense.

Transit is a central part of the region's transportation and logistics network. People use it to get to work, school, medical appointments, and more. The transit system – and our investment in it – must remain competitive to ensure our region continues to thrive. The "Priority Projects" on the following pages are key initiatives that the Transit Agencies would like to complete with a stable, dedicated capital investment program. In total, $30 billion of Priority Projects are not fully funded today.

The "10-Year Project Cost" for each Priority Project is the estimated cost of delivering the portion of the project realistically achievable in the next 10 years (2018 – 2027) and is subject to change. A portion of funding required to advance some of these Priority Projects is programmed in the Transit Agency capital programs, yet all are still under-funded or un-funded. See the RTA's most recent Operating Budget, 2-Year Financial Plan, and 5-Year Capital Program for more detail.

CTA PRIORITY PROJECTS

Project Name	Description	10-year Project Cost	Page
Replacement Bus Purchase	Ongoing need to replace buses as they age	$618M	6
Life-Extending Bus Overhaul (1000 series)	Overhauls to maintain sufficient fleet until the first order of replacement buses is received	$90M	7
Mid-Life Bus Overhaul (4300 series)	Overhauls to maintain vehicles, ensure reliability, and enable to perform through full useful life	$35M	8
Railcar Purchase	Replacement of 2600- and 3200-series rail cars	$1.6B	9
Railcar Overhaul (2600s and 5000s)	Quarter-life overhaul of 5000-series rail cars and life-extending overhauls of older 2600-series rail cars	$525M	10
Red Line Extension*	Extension of the Red Line from 95th Street to 130th Street	$2.3B	11
Red Purple Modernization**	Advancement of the Red and Purple Modernization (RPM) Program, the largest line rebuild and capital improvement project in CTA history	$8.7B	12
Blue Line (O'Hare) Traction Power Capacity & Track Improvements	Upgrades and State of Good Repair projects along the O'Hare Branch of the Blue Line	$300M	13
Blue Line (Congress Branch) Improvements***	First phase of reconstruction of Forest Park Branch of the Blue Line	$454M	14
Green Line Improvements	Track, structural, station, and power improvements	$454M	15
Red Line Improvements	Upgrades and State of Good Repair projects along the Red Line	$224M	16
Brown Line Improvements	Upgrades and State of Good Repair projects along the Brown Line	$223M	17
Systemwide Structural Renewal	State of Good Repair projects on CTA 'L' structure	$250M	18
Rail Yard Improvements	Improvements to CTA Rail Yards	$88M	19
Subway Life Safety Improvements	Upgrade to existing subway ventilation equipment	$120M	20
Radio System Upgrade	Replacement of obsolete radio system	$35M	21
Tactical Signal Improvements (Systemwide)	State of Good Repair projects and replacing obsolete equipment on CTA rail signal system	$141M	22
Systemwide Station Program	Station upgrades, modernization, and accessibility improvements	$600M	23
Future BRT/Bus Slow Zone Removal/ TSP/Dedicated Lane projects	Targeted street and traffic signal improvements to increase bus speeds	$200M	24
Information Technology	Improvement of business processes and systems	$170M	25
Non-Revenue Vehicle Replacement Program	Replacement of vehicles needed for maintenance and operations support	$60M	26
Critical Needs at CTA Facilities	Roof and other upgrades to maintenance facilities	$110M	27
Rail Shops Improvements	Provide repair and replacement to worn components at rail maintenance shops	$191M	28
Bus Garage Improvements	Provide repairs at bus maintenance garages and shops	$245M	29
New Training Center	New facility to instruct and train bus and rail operators	$42M	30
New Control Center	Replace obsolete equipment at CTA's Control Center	$150M	31
Total		$17.9B	

**Ideally, 50% of this project cost would come from the federal New Starts program and the region would support the local match.*

*** The total project costs includes all of the RPM Phase One costs (including $2.1 billion of identified funds) plus a hypothetical next phase of RPM, the specific components of which have not been fully defined, that could occur within the 10 year time frame. Ideally, 50% of this project cost would come from the federal Core Capacity program and the region would support the local match.*

**** Trackwork is the first priority of the Forest Park Branch Reconstruction project (estimated at $2.5 billion) and is included in the 10-Year Project Cost shown here. It is assumed the remainder of the project would occur outside the 10-year timeframe of this report.*

METRA PRIORITY PROJECTS

Project Name	Description	10-year Project Cost	Page
Fleet Modernization Plan	Replace and repair aging commuter rail cars and locomotives	$2.1B	32
75th Street Corridor	Reconfigure track shared by Metra, Amtrak, and freight trains	$1.5B	33
A-2 Interlocking Replacement	Separate tracks at busiest switching location on Metra system	$500M	34
Bridge Replacement and Repair	Replace and repair 61 bridges systemwide	$2.0B	35
Track Improvements	Replace and repair trackwork components	$1.9B	36
Positive Train Control (PTC) - systemwide*	Install federally-mandated rail operational safety system	$385M	37
Signal & Electrical Improvements	Replace and upgrade train control and grade crossing signals and systems	$1.2B	38
Yards, Facilities, and Equipment Improvements	Modernize Metra's railcar and locomotive repair shops and yards	$664M	39
Chicago Union Station Improvements	Implementation of key projects benefiting commuters using Chicago Union Station	$500M	40
Rail Station Improvements	Rehabilitation and upgrades to station buildings, platforms, and parking lots	$853M	41
Total		$11.6B	

**This project is currently fully funded in order to complete the federal mandate regarding Positive Train Control (PTC) implementation on a specific schedule. However, it is unclear at this time what the ongoing capital needs for this new system will be once it is implemented, so it is still included on the Priority Projects list.*

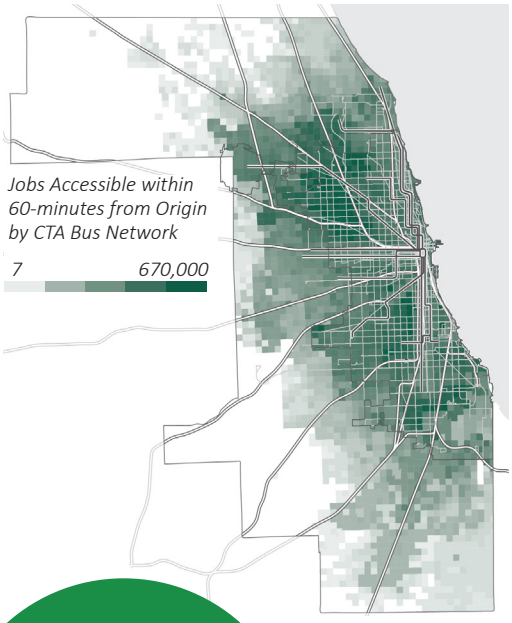
PACE PRIORITY PROJECTS

Project Name	Description	10-year Project Cost	Page
Fixed Route Buses - Replacement	Replacement of buses reaching useful life	$177M	42
Fixed Route Buses - Expansion	Buses for new services	$94M	43
Paratransit Vehicles - Replacement	Replacement of vehicles reaching useful life	$57M	44
Paratransit Vehicles - Expansion	New Dial-a-Ride and ADA vehicles for aging population	$13M	45
Community Vehicles - Replacement	Replacement of vehicles reaching useful life	$20M	46
Community Vehicles - Expansion	New Community and Call-n-Ride vehicles	$3M	47
Vanpool Vehicles - Replacement	Replacement of vans reaching useful life	$51M	48
Associated Capital Maintenance Items	Capital costs associated with the maintenance of buses	$28M	49
Regional Transit Signal Priority (RTSP)	Expand Transit Signal Priority installations region-wide	$10M	50
Intelligent Bus System (IBS) Replacement	Equipment for bus tracking, communications, and data	$11M	51
Farebox System	Replace fareboxes that are over 20-years old	$21M	52
Improve Support Facilities	Improvements to garage facilities including underground storage tanks	$79M	53
Construct New Support Facilities	Add needed capacity for bus maintenance and storage	$69M	54
Security, Computer, Software, and Office Systems Upgrades	Upgrade systems to provide enhanced asset protection and business systems	$52M	55
Support Equipment/Non-Revenue Vehicles	Facility and system maintenance equipment and vehicles	$25M	56
Improve Passenger Facilities - Transportation Centers	Improvements to transportation and transfer facilities	$26M	57
Improve Passenger Facilities - Park-n-Ride Lots	Updates and repairs to Park-n-Ride lots	$7M	58
Pulse Infrastructure	Enhance Pulse service	$51M	59
Pedestrian Infrastructure/Shelters/Signs	Shelters, pedestrian access, and completion of conversion to posted stops	$33M	60
Bus on Shoulder (BoS) Facilities	Passenger facilities for Bus on Shoulder service	$15M	61
ADA Regional Paratransit Program	Replacement of vehicles and radio systems for existing program. New vehicles, transfer locations, and maintenance facilities for direct Pace ownership of assets for ADA service within City of Chicago	$193M	62
Total		$1.0B	

Infrastructure
Facilities
Rolling Stock
Equipment

REPLACEMENT BUS PURCHASE

On-going need to replace buses as they age



Maintaining a bus fleet that is beyond its useful life results in more failures, service interruptions and unplanned maintenance, all of which drives operating costs higher and reduces reliability. The industry standard service life of a transit bus is 12-15 years, and currently, CTA's average bus age is just under 8 years; by 2021 it will be nearly 12 years. In order to maintain a bus fleet that is in good repair, the next bus order must be planned and programmed now. This project would purchase replacement buses in three separate installments, for a total of 1,030 buses.

KEY BENEFITS:

Fewer service interruptions and reduced costs

1,866

buses in the CTA fleet. The useful life for a bus is 12 years

10-Year Project Cost
$618 Million

$594 Million Unfunded Need

$24 Million Funding Included in Capital Program

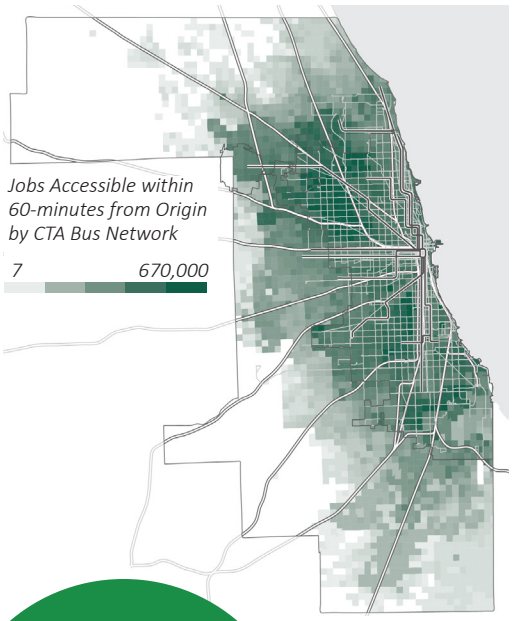
Funding

Ongoing, but limited by funding

Infrastructure
Facilities
Rolling Stock
Equipment

LIFE-EXTENDING BUS OVERHAUL (1000-SERIES)

Overhauls to maintain sufficient fleet until the first order of replacement buses is received



Vehicle overhauls involve strategic replacement of parts at scheduled intervals and are required in order to appropriately maintain the buses and ensure that they will continue to perform through their full useful life (or beyond). Regular overhauls to the bus fleet improves the reliability, comfort, and cost-effectiveness of transit service, which improves the customer experience.

This project provides for a life-extending overhaul of the 1000-series stainless steel New Flyers. This project is necessary in order to have sufficient fleet until the first order of replacement buses is received.

KEY BENEFITS:
Extended life of buses

1000-series buses were built in
2006

1000-series bus

10-Year Project Cost
$90 Million

$41 Million Unfunded Need

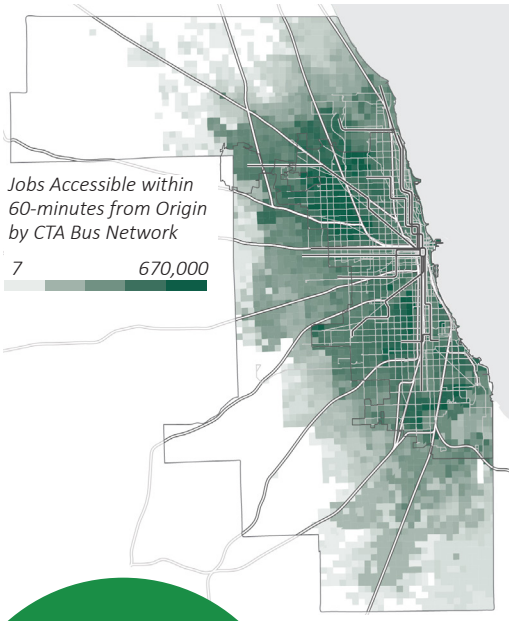
$49 Million Funding Included in Capital Program

Funding
Currently in planning and design

Infrastructure
Facilities
Rolling Stock
Equipment

MID-LIFE BUS OVERHAUL (4300-SERIES)

Overhauls to maintain vehicles, ensure reliability, and enable to perform through full useful life



Vehicle overhauls involve strategic replacement of parts at scheduled intervals and are required in order to appropriately maintain the buses and ensure that they will continue to perform through their full useful life (or beyond). Regular overhauls to the bus fleet improves the reliability, comfort, and cost-effectiveness of transit service, which improves the customer experience.

This project provides for the mid-life overhaul of the 4300-series buses, which are currently 8-9 years old. The typical industry standard service life for a transit bus is 12-15 years.

KEY BENEFITS:

Improved reliability and comfort

4300-series bus

97
articulated buses in the 4300-series

10-Year Project Cost
$35 Million

$24 Million Unfunded Need

$11 Million Funding Included in Capital Program

Funding
Not started due to funding limitations

Infrastructure
Facilities
Rolling Stock
Equipment

RAILCAR PURCHASE

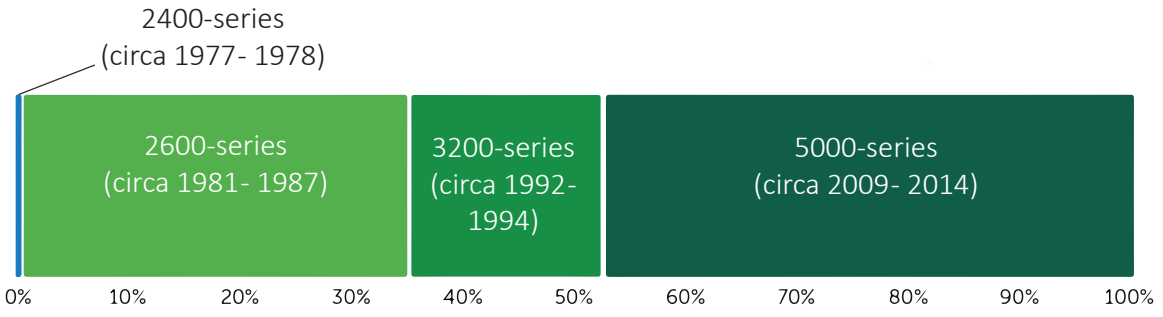
Replacement of 2600- and 3200-series rail cars

The purchase of new railcars will allow CTA to retire the oldest cars of its fleet. The first phase will replace the majority of 2600-series rail cars with new and up-to-date 7000-series rail cars. The average age of the 2600-series is 33 years, which is beyond the typical service life of a rail vehicle. Future phases of the rail car purchase will address the remaining cars in the 2600-series, as well as the 3200-series cars, which are currently 23-25 years old. Without this rail car purchase, the 2600- and 3200-series cars would need to be maintained past their useful lives, at increasing cost to CTA and reduced reliability, which has a significant, direct impact on rider experience. Replacing these rail cars provides the CTA with modern, updated vehicles that will decrease maintenance and operating costs while enhancing customer comfort.

The 7000-series railcars will feature up-to-date full-color LED destination signs, GPS-triggered announcements, interior LED lighting to provide higher-quality light for passengers, improved air conditioning system, and a video surveillance system that serves as a visible deterrent to crime and provides identification of offenders. New communications equipment will provide better communication of maintenance and diagnostic information and allow for this information to be remotely transferred to maintenance shops for rapid diagnostics and repair solutions to avoid system failures. The 7000-series will also feature regenerative braking, which allows trains to recover braking energy and return it to the third rail to be used by other trains.

KEY BENEFITS:
More reliable service, better on-board security and traveler information, improved energy efficiency, and increased customer comfort

New CTA rail cars



CTA current rail car fleet. The 2600-series make up one-third of CTA rail fleet.

10-Year Project Cost
$1.6 Billion

$1 Billion Unfunded Need

$548 Million Funding Included in Capital Program

Funding
Contract awarded; first phase funded

Infrastructure
Facilities
Rolling Stock
Equipment

RAILCAR OVERHAUL (2600- AND 5000-SERIES)

Quarter-life overhaul of 5000-series rail cars and life-extending overhauls of older 2600-series rail cars

5000- series interior
Source: Chicago-L.org/ Corey Ellison

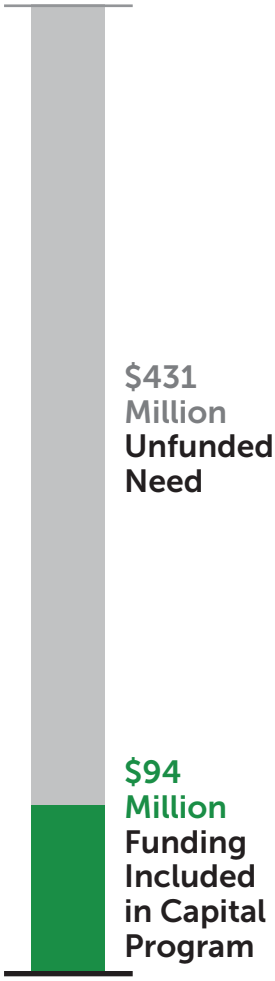
KEY BENEFITS:
Extended life of rail cars and improved reliability and comfort

Vehicle overhauls involve strategic replacement of parts at scheduled intervals and are required in order to appropriately maintain the cars and ensure that they will continue to perform through their full useful life (or beyond). Regular overhauls to the rail fleet improves the reliability, comfort, and cost-effectiveness of transit service, which improves the customer experience. This project includes the first overhaul for the 5000-series trains (CTA's newest rail cars) and a life-extending overhaul for CTA's oldest cars, the 2600-series. The quarter-life overhaul of the 5000-series will include major component rebuild and as-needed repairs to the car body. The 2600-series overhaul is necessary to keep them in service through the delivery of the first 7000-series cars, due to the peak-period growth on the rail system.

The project also includes a new maintenance shop, which replaces a former CTA facility from the 1890s, in order to provide adequate space to perform the overhauls, while continuing to support ongoing maintenance needs.

1,492
railcars in CTA fleet

10-Year Project Cost
$525 Million

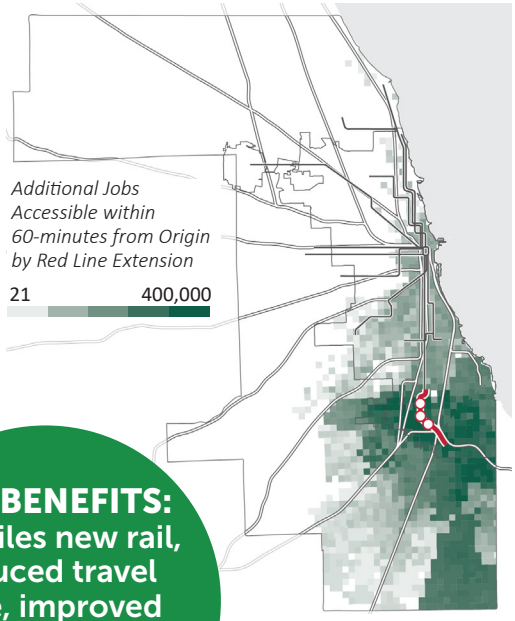


Funding
Project in planning

Infrastructure
Facilities
~~Rolling Stock~~
Equipment

RED LINE EXTENSION

Extension of the Red Line from 95th Street to 130th Street



KEY BENEFITS:
5.3 miles new rail, reduced travel time, improved job access, and economic development

Rendering of a Future RLE Station from CTA Conceptual Planning

128,366
people live in area surrounding project

The project will extend the Red Line from the existing terminal at 95th/ Dan Ryan to 130th Street, on Chicago's Far South Side. The proposed 5.3-mile extension would include four new stations near 103rd Street, 111th Street, Michigan Avenue, and 130th Street. Each new station would include bus and parking facilities. The project will decrease commuting time between the far south side and downtown by up to 20 minutes per trip, expanding access to jobs for Southside residents.

Additional project benefits include:

- Improvements to mobility and accessibility for transit-dependent residents in the project area.
- Improvements to rapid transit rail service to isolated areas, providing viable linkages between affordable housing, jobs, services, and educational opportunities, thereby enhancing livability and neighborhood vitality.
- Providing an opportunity for potential connections and linkages to other public transportation modes including regional commuter rail in the project area.
- Fostering economic development in the project area, where new stations may serve as catalysts for neighborhood revitalization and help reverse decades of disinvestment in local business districts.
- Providing a modern, efficient rail car storage yard and shop facility to provide storage and cost-effective preventive maintenance for rail cars associated with the RLE Project, rail cars currently stored in the existing 98th Street Yard and Shop, and rail cars supporting additional Red Line expansion of service.

10-Year Project Cost
$2.3 Billion

$2.2 Billion Unfunded Need

$85 Million Funding Included in Capital Program

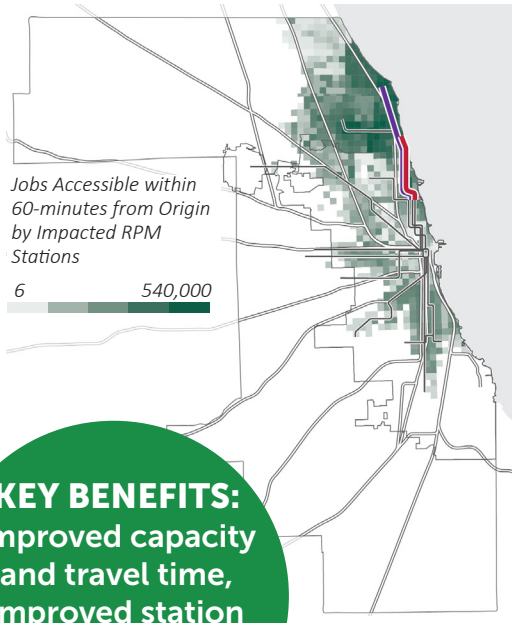
Funding

In Planning. The funded amount is not limited to the 2017-2021 Capital Improvement Program. Ideally, 50% of this project cost would come from the federal New Starts program and the region would support the local match.

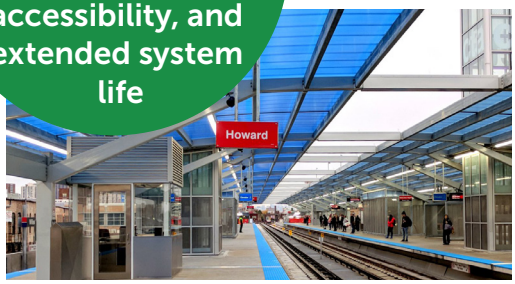
Infrastructure
Facilities
~~Rolling Stock~~
Equipment

RED PURPLE MODERNIZATION (RPM)- FUTURE PHASES

Advancement of the Red and Purple Modernization (RPM) Program, the largest line rebuild and capital improvement project in CTA history



KEY BENEFITS: Improved capacity and travel time, improved station accessibility, and extended system life



Wilson station after reconstruction

70,800

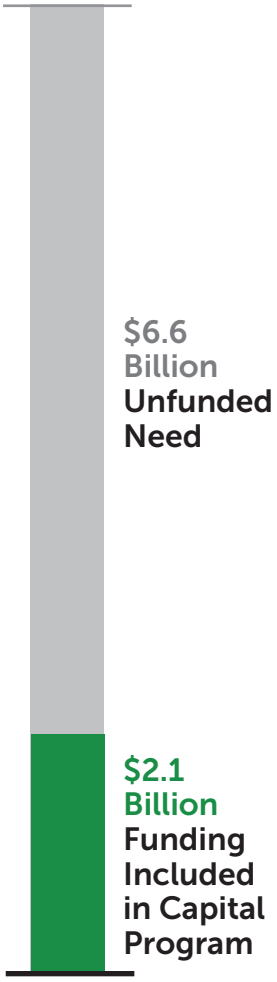
daily passengers board affected line

The purpose of the RPM Program is to improve capacity, travel time, ride quality, and safety in one of CTA's highest ridership corridors. The project will also improve access to the system for people with disabilities through expanded and modernized stations that will accommodate more passengers more comfortably.

The project will allow CTA to increase capacity to meet ridership demands while improving the quality, speed, and passenger comfort of each ride and improving access to job markets and destinations. The capacity expansion would have the added benefit of bringing this critical infrastructure into a state of good repair, thereby improving efficiency and service reliability and extending the overall life of the transit system by 60 to 80 years.

A reconstructed Wilson Station was recently opened, including new track and structure, and RPM Phase One is now fully funded. Phase One will completely rebuild the Lawrence, Argyle, Berwyn and Bryn Mawr stations and all the tracks and support structures for more than a mile adjacent to the stations. The project will also construct a bypass just north of Belmont station for northbound Brown Line trains to modernize the 100-year-old Clark junction where Red, Purple and Brown Line trains currently intersect. Future phases will include the Red and Purple Lines between the future Bypass and Wilson station and between Bryn Mawr and Howard, as well as the Purple Line from Howard to Linden in Evanston and Wilmette.

10-Year Project Cost
$8.7 Billion



Funding

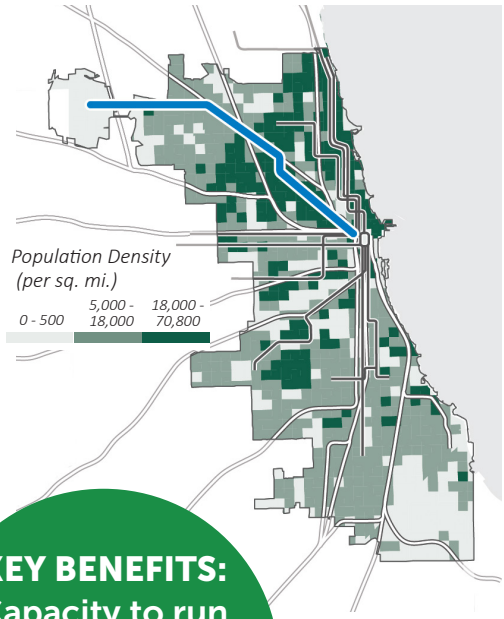
*Current Phases Underway, Future Phases in Planning**

**The funded amount includes all of RPM Phase One (not limited to the 2017-2021 CIP). Total need represents a hypothetical next phase of RPM, the specific components of which have not been fully defined, that could occur within the 10 year time frame. Ideally, 50% of this project cost would come from the federal Core Capacity program and the region would support the local match.*

Infrastructure
Facilities
Rolling Stock
Equipment

BLUE LINE (O'HARE) TRACTION POWER CAPACITY & TRACK IMPROVEMENTS

Upgrades and State of Good Repair projects along the O'Hare Branch of the Blue Line



KEY BENEFITS:
Capacity to run more trains, faster speeds, and improved reliability

This project builds on the success of the Your New Blue program (YNB). YNB focused on the infrastructure needed to speed travel times and increase capacity on CTA's fastest growing line. Rail service along the Blue Line must continue to grow to accommodate increasing ridership correlating with population shifts and new developments along the O'Hare Branch corridor, particularly between the Logan Square station and the Dearborn subway. Increased Blue Line service is needed during peak hours; however, the existing traction power system is not equipped to meet future needs. In addition, slow zones in the Dearborn subway (between Clark/Lake and Division/Milwaukee) and in the Kimball Subway (Logan Square to Belmont) are slowing passenger travel times. This project will remove slow zones and increase capacity through subway waterproofing and track improvements and traction power improvements. Work in the two subways would save passengers approximately 2.5 minutes (round trip) and will also prevent future slow zones.

Popular CTA Blue Line Station
Source: David Wilson via Flickr

10-Year Project Cost
$300 Million

$300 Million Unfunded Need

$0 Funding Included in Capital Program

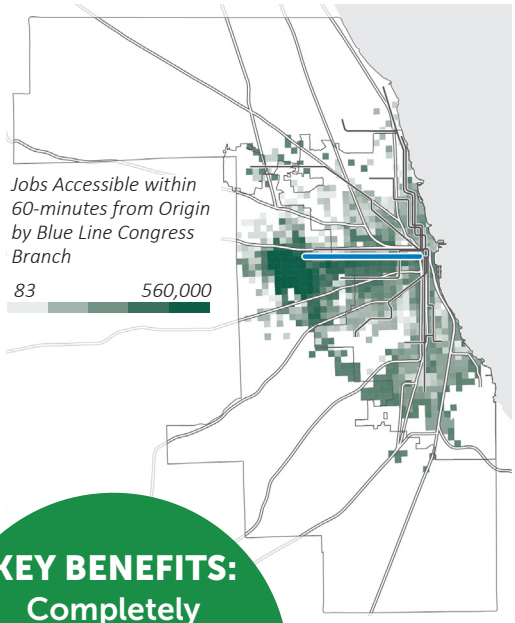
Funding
In Planning

81,400
daily passengers board affected line

Infrastructure
Facilities
Rolling Stock
Equipment

BLUE LINE (CONGRESS BRANCH) IMPROVEMENTS

First phase of reconstruction of Forest Park Branch of the Blue Line



KEY BENEFITS:
Completely reconstructed track, faster speeds, and elimination of slow zones

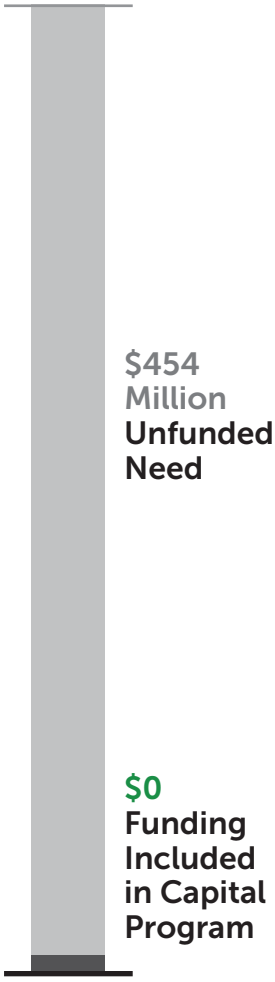
Blue Line track maintenance

The full Forest Park Blue Line Reconstruction program is estimated at $2.5 billion in year of construction dollars. The project would fully reconstruct the track, which is the first and most critical phase of the program, replacing everything in the track bed: ties, rail, third rail, ballast (the stone material that holds the ties in place) and drainage systems. It would also add a turnback west of IMD, to be able to increase service to the employment center at the Medical District. Currently, CTA maintenance crews focus heavily on this area to mitigate slow zones. This branch is now at 30% slow zones, resulting in longer travel times and decreased job access for residents of the West Side. Reconstructed track would save passengers approximately 7 minutes (round trip) and will also prevent future slow zones.

The full $2.5B program would completely reconstruct the Blue Line between UIC Halsted and Forest Park, including new stations, a new rail yard and new power substations.

31,700
daily passengers board affected line

10-Year Project Cost
$454 Million

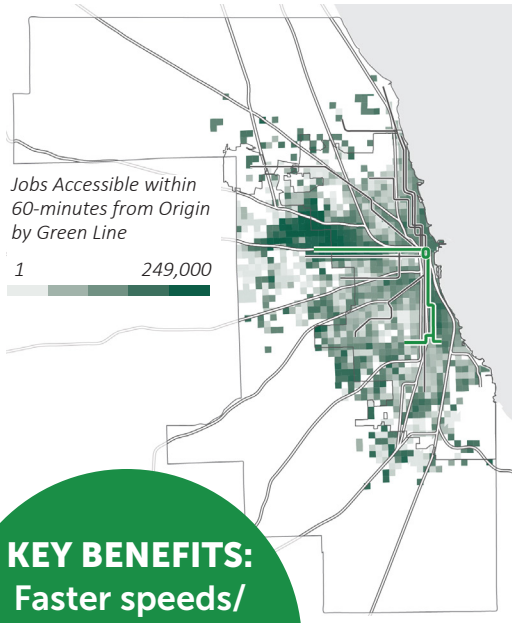


In Planning. Trackwork is the first priority of the Forest Park Branch Reconstruction project (estimated at $2.5 billion). It is assumed the remainder of the project would occur outside the 10-year time frame of this report.

Infrastructure
Facilities
~~Rolling Stock~~
Equipment

GREEN LINE IMPROVEMENTS

Track, structural, station, and power improvements



KEY BENEFITS:
Faster speeds/ improved reliability and customer experience

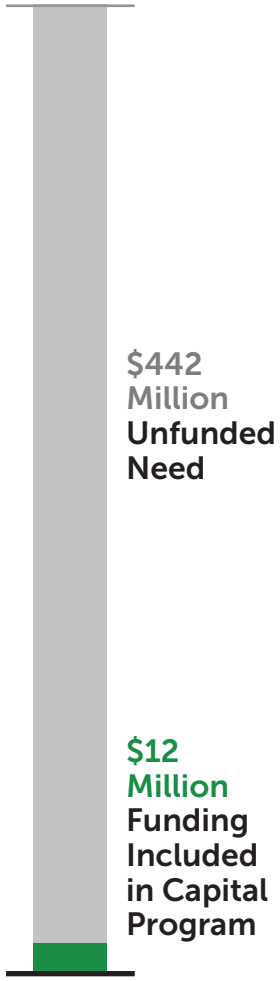
Green Line trackwork

The Green Line was last significantly overhauled in the late 1990s and early 2000s. In 2013, CTA upgraded track on the Englewood Branch of the South Green Line (in advance of the Red South project), and in 2016 CTA upgraded track on the embankment portion of the West Green Line. Slow zones on the Lake Street Branch (Loop to Laramie) and South Green Line (Loop to 59th) now need to be addressed through track upgrades. Slow zones on the South Green Line are currently at 22%, while the Lake Street branch segment is at 10% slow zones. Investment could speed travel times by 5 minutes (round trip), improving access to jobs with a reasonable commute time, and improving customer experience.

In 2018, CTA will begin a $50 million upgrade at Garfield Green Line, funded by a competitive TIGER grant. Additional needed work on this line will include upgrades to other Green Line stations, as well as structural renewal on aging elevated steel and power substation improvements for improved reliability. The program represents a balanced investment in the highest priority elements for a rail line that serves the South and West sides of Chicago and the near West suburbs.

42,815
weekday passengers board affected line

10-Year Project Cost
$454 Million

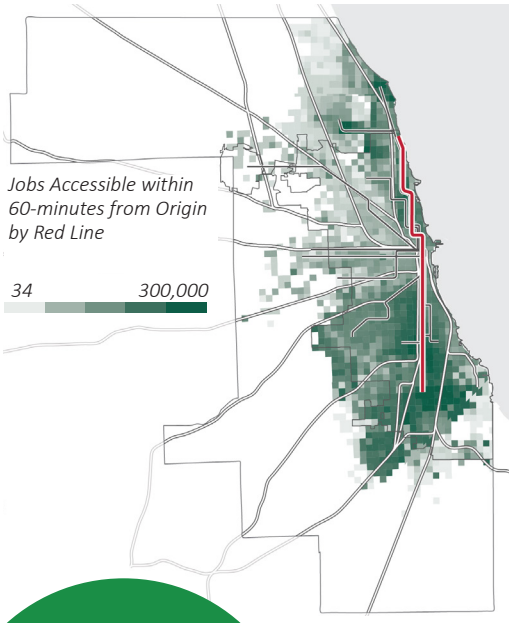


Funding
In Planning & Design

Infrastructure
Facilities
Rolling Stock
Equipment

RED LINE IMPROVEMENTS

Upgrades and State of Good Repair projects along the Red Line



This project includes multiple upgrades to the Red Line and is separate from future phases of the Red Purple Modernization (RPM). It maintains existing infrastructure throughout the Red Line in areas not addressed by RPM and provides important interim work while CTA continues to pursue future phases of RPM. The project includes track rehabilitation and waterproofing in the State Street subway, replacement and new crossovers along the line, rehabilitation of existing power substations on the Red South and structural renewal on the North Red Line.

Slow zones in the State Street subway are currently at 26%. Track and structure improvements could save passengers nearly 6 minutes round trip and will prevent future slow zones. Upgrades to the power system and the addition of new crossovers will improve system reliability.

KEY BENEFITS:
Improved travel speeds/reliability and renewal of track and structure

Red Line subway trackwork

236,800
daily passengers board affected line

10-Year Project Cost
$224 Million

$224 Million Unfunded Need

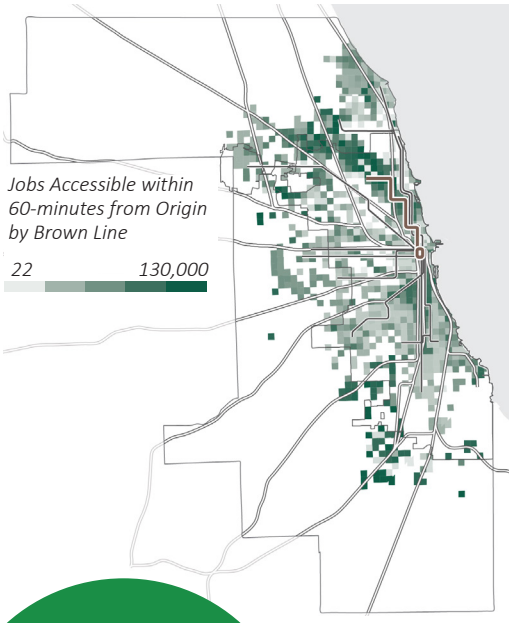
$0 Funding Included in Capital Program

Funding
Not started due to funding limitations

Infrastructure
Facilities
Rolling Stock
Equipment

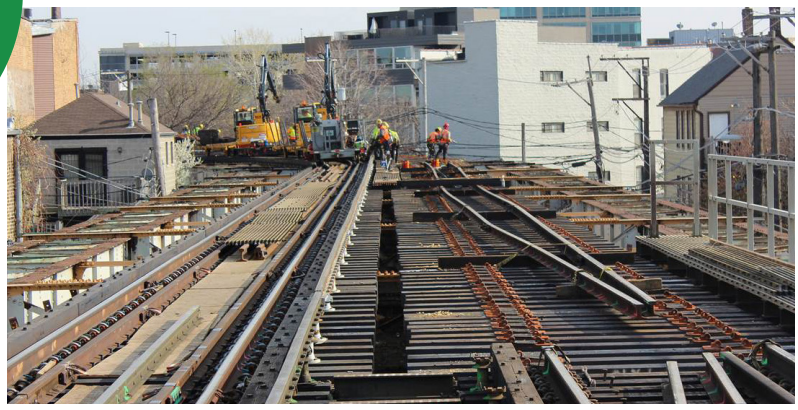
BROWN LINE IMPROVEMENTS

Upgrades and State of Good Repair projects along the Brown Line



CTA completed the Brown Line Capacity Expansion project in 2009, which upgraded stations, allowing for 8-car trains and ADA accessibility, while making targeted improvements to track, structure and power. Ridership has grown substantially since that project, due to population shifts and development along that corridor, and as result of the Capacity Expansion project itself. CTA is currently studying opportunities for future capacity expansion projects along the line. This project focuses on interim improvements to bring existing infrastructure to a state of good repair, while full future capacity increase needs will be addressed by subsequent projects. It includes track rehabilitation to both the elevated portion and the at-grade section west of Rockwell. It also includes renewal of the elevated structure, upgrades to power substations, and automation of the crossing at Western Middle track.

KEY BENEFITS:
Track and substation rehabilitation and structural renewal



Brown Line elevated trackwork

64,000
daily passengers board line outside of Loop

10-Year Project Cost
$223 Million

$223 Million Unfunded Need

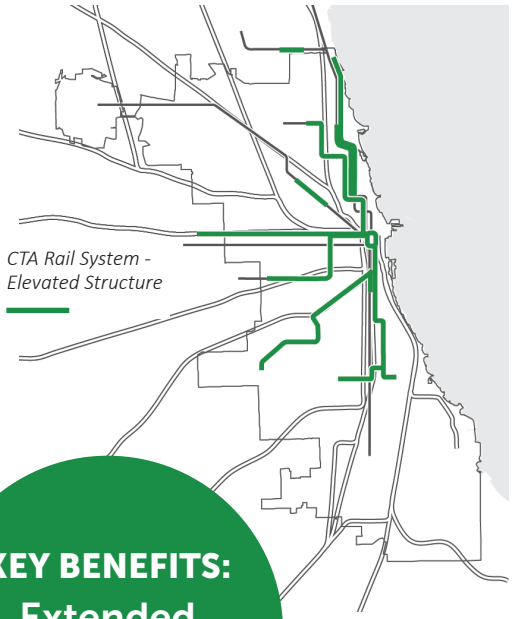
$0 Funding Included in Capital Program

Funding
In Planning

Infrastructure
Facilities
Rolling Stock
Equipment

SYSTEMWIDE STRUCTURAL RENEWAL

State of Good Repair projects on CTA 'L' structure



KEY BENEFITS:
Extended system life

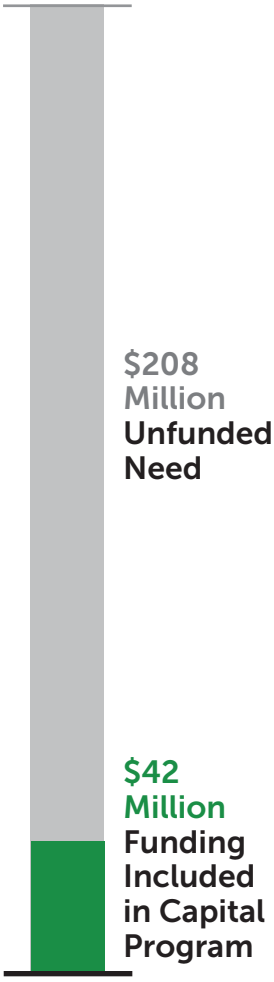
Elevated steel structure renewal

A systemwide structural renewal program would upgrade the elevated steel structure at priority areas. A part of routine maintenance, CTA inspects the elevated steel structure and rates defects on a priority basis. Priority 1 (P1) structural defects are those that have the potential to propagate to failure within one year from identification; correction of these P1 defects comprises the bulk of CTA structural maintenance work. A larger program would allow CTA to address sections of the elevated structure more holistically, upgrading full segments of elevated steel structure at one time. This would provide a more comprehensive and economical approach, with longer-ranging benefits, but can only be pursued with dedicated resources.

Additionally, segments of structure with multiple defects can result in the need for slow zones, in order to maintain safe operation. Investment in structure renewal campaign work will help prevent future structure-related slow zones, maintaining travel speeds and reliability.

35.8
miles of elevated structure in the CTA system

10-Year Project Cost
$250 Million

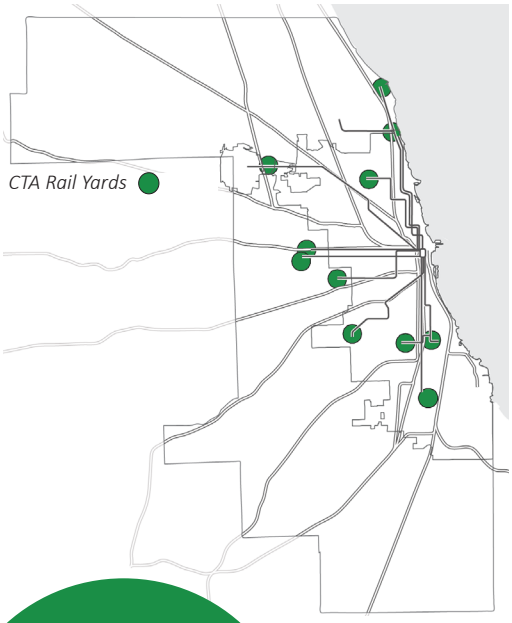


Funding
Not started due to funding limitations

Infrastructure
Facilities
Rolling Stock
Equipment

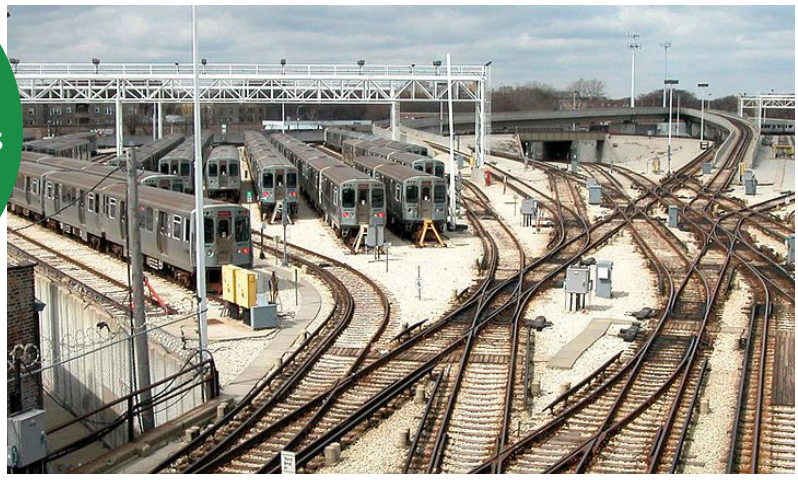
RAIL YARD IMPROVEMENTS

Improvements to CTA Rail Yards



This project would restore, preserve and improve the integrity and configuration of rail yard trackwork systemwide. Yard track failures result in service interruptions and delays and increase costs for maintenance and operations. New track configurations, as well as upgrades to existing infrastructure, will reduce those failures and the resulting costs. CTA yards are in varying condition, with needs ranging from full reconstruction through partial renewals and minor improvements.

KEY BENEFITS:
Reduced maintenance costs and more efficient operations



Complicated track work at Howard rail yard

1,492
rail cars are maintained at CTA's yards and shops

10-Year Project Cost
$88 Million

$72 Million Unfunded Need

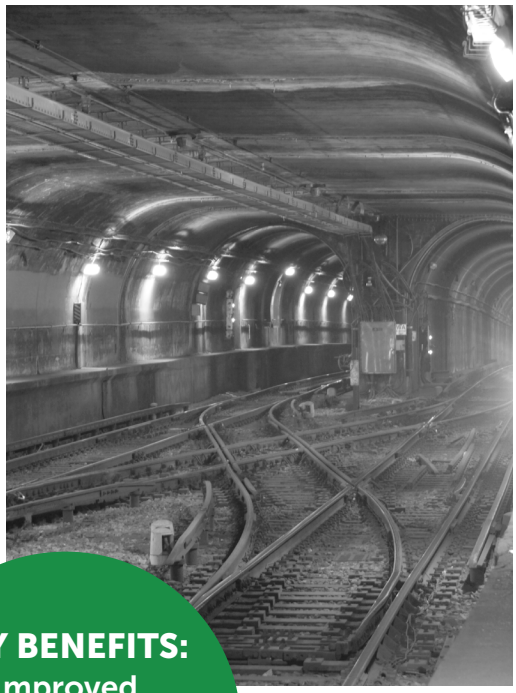
$16 Million Funding Included in Capital Program

Funding
In Planning but not started due to funding limitations

Infrastructure
Facilities
Rolling Stock
Equipment

SUBWAY LIFE SAFETY IMPROVEMENTS

Upgrade to existing subway ventilation equipment



Subway ventilation improvements needed

This project would upgrade existing subway ventilation equipment in the most critical locations of the tunnel systems. It would replace fan assemblies including motors, upgrade non-reversible fans with fully reversible fans and add new fan plants in critical locations. These improvements would increase subway ventilation capacity to the maximum extent possible and increase the overall ventilation system reliability. Increased ventilation will provide for better emergency-response and increased customer comfort.

KEY BENEFITS:
Improved emergency response and increased customer comfort

10-Year Project Cost
$120 Million

$120 Million Unfunded Need

$0 Funding Included in Capital Program

Funding

In Planning but not started due to funding limitations

Infrastructure
Facilities
Rolling Stock
Equipment

RADIO SYSTEM UPGRADE

Replacement of obsolete radio system

KEY BENEFITS:

Fully modernizes obsolete system

This project provides for the comprehensive overhaul of CTA's rail and bus radio system to upgrade obsolete analog technology to modern digital technology, with disaster recovery/business continuity solutions, increased capacity and compliance with FCC regulations. The CTA radio system is critical to life safety and coordination on the bus and rail system. It allows for communication between employees or contractors in the field, the CTA control center and headquarters.

4500+ CTA rail radios and 1800+ bus radios will be replaced. The radio system infrastructure of transmitters, receivers, voter comparators, antennae, towers, and ancillary physical infrastructure will be upgraded.

6,300+
radios needed in the CTA system

10-Year Project Cost
$35 Million

Funding
In Planning but not started due to funding limitations

Infrastructure
Facilities
Rolling Stock
Equipment

TACTICAL SIGNAL IMPROVEMENTS (SYSTEMWIDE)

State of Good Repair projects and replacing obsolete equipment on CTA rail signal system

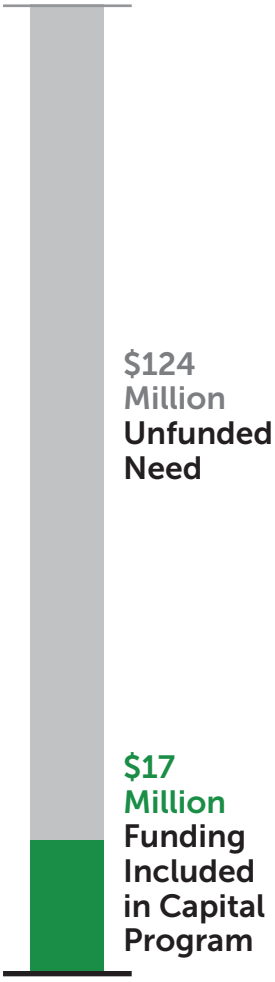
Red, Purple, and Brown line signals

KEY BENEFITS:
Upgrades to existing signal system and improved reliability

This project would upgrade aged and obsolete signal equipment on multiple lines throughout the system, including on the South Green Line, the Purple Line, the Yellow Line, the Orange Line and the Brown Line. This is a near-term tactical approach, limited to upgrading components of the track signals (rather than a full redesign and replacement). The existing signal systems were originally installed between 25 and 40 years ago. It is difficult to obtain parts for these systems, for their continued maintenance. Providing these tactical upgrades will help maintain system reliability, which impacts travel times and customer experience.

2,276
train trips daily are controlled by CTA's signal system

10-Year Project Cost
$141 Million



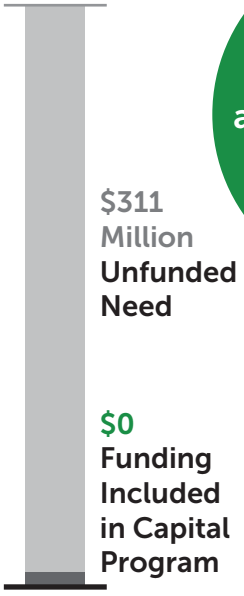
Funding
In Planning but not started due to funding limitations

SYSTEMWIDE STATION PROGRAM

Rail station accessibility systemwide

Improving accessibility of the rail system is a priority for CTA. Recent projects in the Loop, on the North and South Red Line and on the Blue Line have increased accessible rail stations to 103 of 145. This project would add accessibility at 5 priority stations. It would also include replacement of elevators in currently-accessible rail stations, which are approaching the end of their service life, in order to maintain accessibility at existing accessible stations.

10-Year Project Cost
$311 Million



KEY BENEFITS: Improved ADA accessibility across rail system

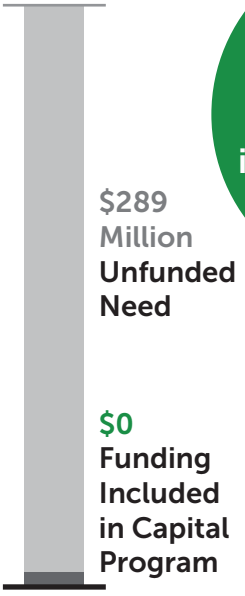
Funding

Plan is complete. Projects are being carried out incrementally as funding allows.

Station improvements and construction systemwide

This project balances needs for systemwide upgrades with more limited station modernization. Upgrades and repairs would include roof and stair replacement, station lighting upgrades, escalator rehabilitation, painting and other customer-facing improvements, which would be programmed annually based on need. It also includes limited funding for station modernization or infill stations, to support increased demand on the rail system. Additional modernization or infill station locations would be coordinated based on development patterns and the potential to increase or respond to additional ridership.

10-Year Project Cost
$289 Million



KEY BENEFITS: Upgraded stations to improve customer experience

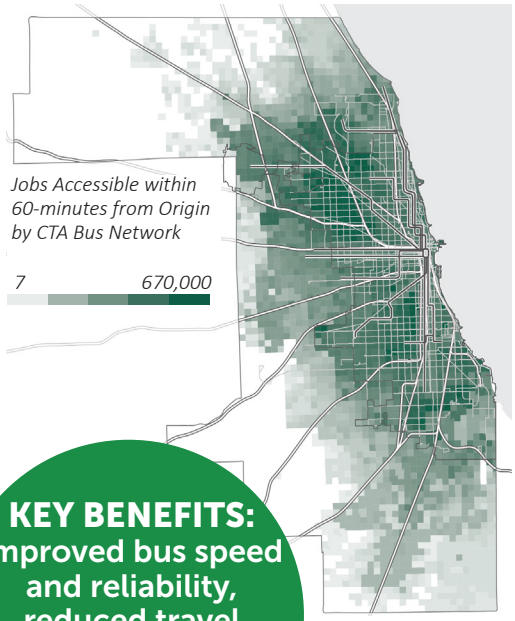
Funding

Related projects currently underway, future phases not started due to funding limitations.

Infrastructure
Facilities
Rolling Stock
Equipment

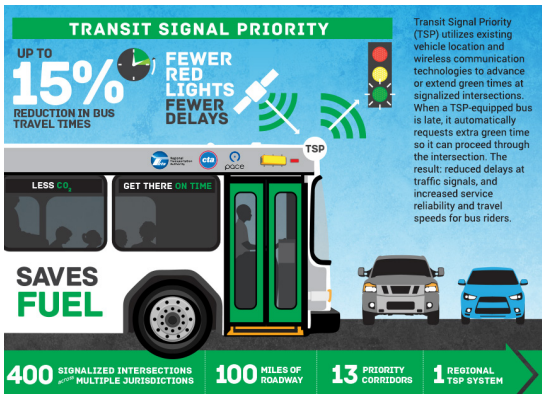
FUTURE BRT/BUS SLOW ZONE REMOVAL/TSP/ DEDICATED LANE PROJECTS

Targeted street and traffic signal improvements to increase bus speeds



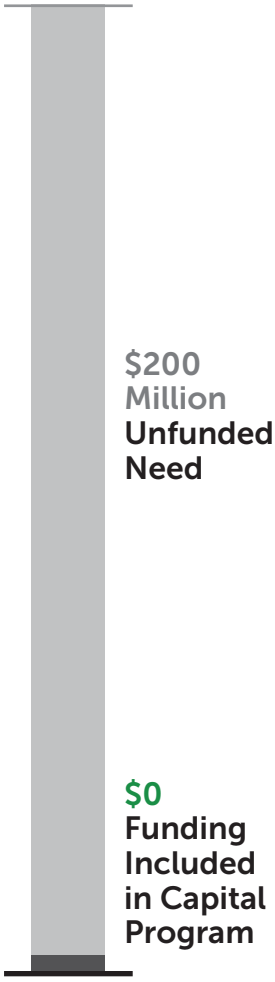
KEY BENEFITS:
Improved bus speed and reliability, reduced travel time, and reduced congestion on rail network

This project would focus resources on the City's street network and traffic signals, in order to provide for transit priority elements on the roadway. Bus service comprises over half of CTA's total ridership, is critical for linking to the rail system and in some neighborhoods, is the only affordable transportation option. A strong bus system can also help alleviate congestion and capacity issues on the rail network. Bus ridership has been declining, a trend which is exacerbated by new competition in the market and additional congestion on the roadways. Providing dedicated transit rights-of-way on the street grid, traffic signal priority (TSP) or queue jumps at traffic lights, and making other targeted improvements can help speed CTA's buses, making them a more attractive option and encouraging ridership growth. This funding would be a set-aside that CTA would use to prioritize projects by its highest ridership routes, and in a geographically equitable manner, in coordination with CDOT.



9.1 mph
average CTA bus speed

10-Year Project Cost
$200 Million

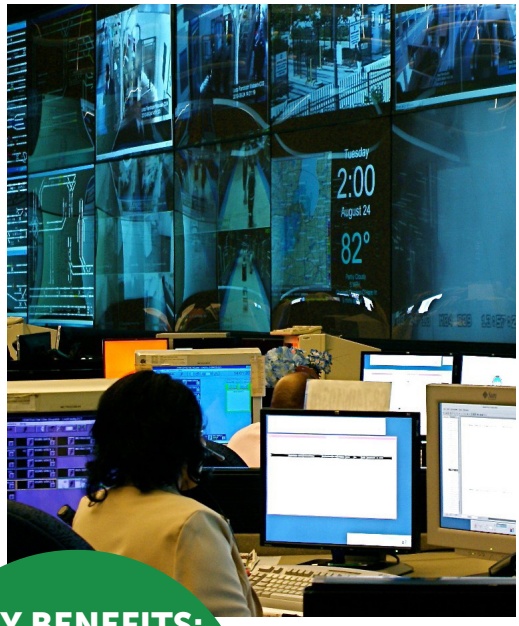


Installation of TSP is underway in 2 corridors. Project cost shown here does not include this first phase of Regional TSP. Additional funding is needed to continue installation to more corridors.

Infrastructure
Facilities
Rolling Stock
Equipment

INFORMATION TECHNOLOGY

Improve business processes and systems



Information technology components need upgrading

This program provides for upgrades to business applications, systems, operations, and hardware, including cameras. If the CTA does not implement the information technology program, employees will continue using the obsolete systems and equipment. New equipment and software will improve productivity and improve efficiency. This also allows CTA to effectively manage its assets, which is an integral part of the CTA's capability to successfully deliver service in a safe and efficient manner.

10,000
CTA employees

KEY BENEFITS:
Improved productivity and efficiency and improved asset management

10-Year Project Cost
$170 Million

$159 Million Unfunded Need

$11 Million Funding Included in Capital Program

Funding
Not started due to funding limitations

Infrastructure
Facilities
Rolling Stock
Equipment

NON-REVENUE VEHICLE REPLACEMENT PROGRAM

Replacement of vehicles needed for maintenance and operations support

Supervisor vehicle

KEY BENEFITS:
Supports continued maintenance and operations

Non-revenue vehicles include cars, trucks and heavy equipment that are not used to provide transit service but provide critical maintenance or operations support. Support vehicles and equipment vary from bus supervisor vehicles (allowing supervisors to monitor service and respond to incidents) to large work trucks that haul ties, rail and other maintenance equipment to job sites. It includes pieces of track maintenance equipment and diesel locomotives that CTA uses to help clear snow from tracks. Currently, 62% of CTA's heavy equipment is beyond its recommended service life. This program will allow for the purchase non-revenue equipment on an annual basis, in order to keep maintenance and operations support fleet in working order.

Rail ballast tamper

10-Year Project Cost
$60 Million

$51 Million Unfunded Need

$9 Million Funding Included in Capital Program

Funding

Selective replacements have been programmed, but the majority of needs remain unfunded

Infrastructure
Facilities
Rolling Stock
Equipment

CRITICAL NEEDS AT CTA FACILITIES

Roof and other upgrades to maintenance facilities

1909 City Railway building now a bus garage

KEY BENEFITS: Targets most urgent repair needs at CTA facilities

Transit service safety and reliability is affected by out-of-date rail, bus, and maintenance facilities. This project would allow CTA to address the most urgent needs at CTA facilities systemwide. This includes roof replacements and building envelope repairs, structural repairs to bridges or buildings, replacement of boilers, air handling units and exhaust fans, plumbing repairs, and replacement of underground storage tanks and generators, among other needs. This would be programmed annually, based on the level of criticality.

Rail Shop roof and mechanical equipment

CTA's West Shop was built by the Chicago Surface Lines to maintain the streetcar system

10-Year Project Cost
$110 Million

$110 Million Unfunded Need

$0 Funding Included in Capital Program

Funding
Project performed as funding becomes available

Infrastructure
Facilities
Rolling Stock
Equipment

RAIL SHOPS IMPROVEMENTS

Provide repair and replacement to worn components at rail maintenance shops

Skokie Rail Shop

KEY BENEFITS:

Improved safety for employees and improved reliability

The Rail Shop Improvements Program provides for much-needed rehabilitation work at existing rail shops and heavy maintenance shops across the CTA system. It will allow CTA to address the deteriorated condition of these facilities, which affects reliability of service to CTA customers and creates safety issues for its employees. Projects include roof replacements, upgrades to mechanical, electrical and plumbing systems, building envelope repairs, air compressor replacements, work equipment replacement and lighting upgrades, among other projects. This project also includes a new rail car washer at one location and associated trackwork in the railyard.

Skokie rail car lifts

10

CTA shop buildings to maintain its 1,492 rail cars on 8 rail lines

10-Year Project Cost
$191 Million

$191 Million Unfunded Need

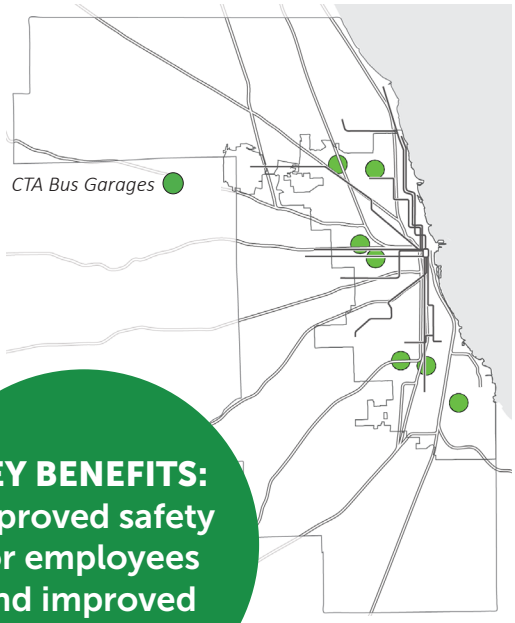
$0 Funding Included in Capital Program

Funding
Not started due to funding limitations

Infrastructure
Facilities
Rolling Stock
Equipment

BUS GARAGE IMPROVEMENTS

Provide repairs at bus maintenance garages and shops



The Bus Garage Improvements Program provides for much-needed rehabilitation work at existing bus garages across the CTA system as well as the CTA major overhaul shop (South Shops) and heavy maintenance garages. It will allow CTA to address the deteriorated condition of these facilities, which affects reliability of service to CTA customers and creates safety issues for its employees. Projects include roof replacements, upgrades to mechanical, electrical and plumbing systems, building envelope repairs, site improvements, air compressor replacements, work equipment replacement and lighting upgrades, among other projects. The CTA's oldest bus facilities are now over 100 years old and the majority are over 50 years old. These facilities are overdue for "mid-life overhaul" and several are candidates for replacement.

KEY BENEFITS:
Improved safety for employees and improved reliability

Garage bay doors

Garage yard

100+ years old

the age of CTA's oldest bus maintenance facility

10-Year Project Cost
$245 Million

$245 Million Unfunded Need

$0 Funding Included in Capital Program

Funding
Not started due to funding limitations

Infrastructure
Facilities
Rolling Stock
Equipment

NEW TRAINING CENTER

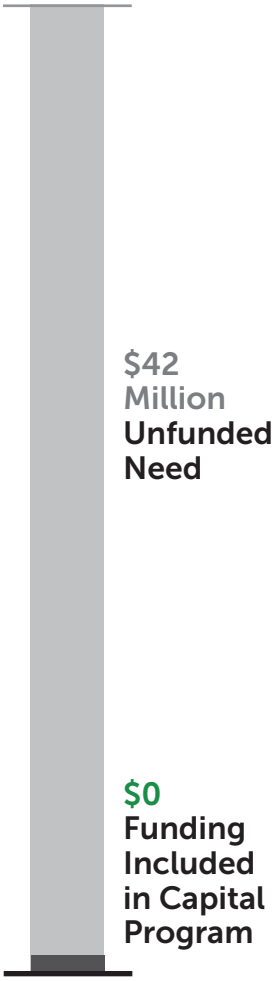
New facility to instruct and train bus and rail operators

CTA's current training center is in a leased facility that does not meet current needs. Due to space limitations, training activities are dispersed to other locations as well. This would allow CTA to provide more comprehensive training to its employees, with modern equipment, and to centralize training activities in one location. It also would allow CTA to potentially to reduce operating costs from discontinuing the lease at the existing facility.

KEY BENEFITS:
More efficient and comprehensive employee training and reduced operating costs

9,000
CTA operating and maintenance employees

10-Year Project Cost
$42 Million

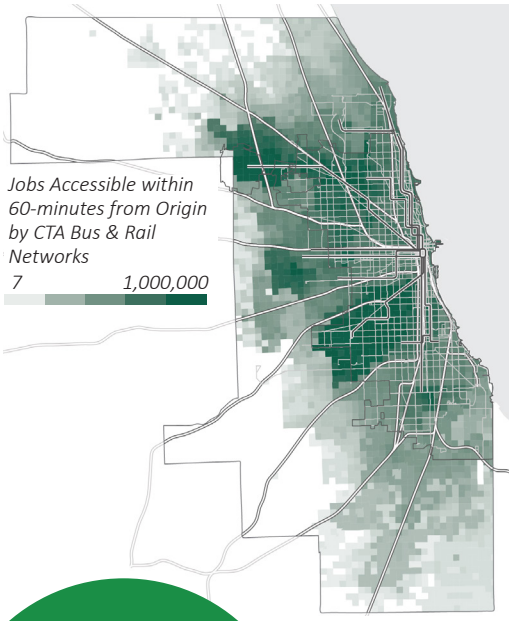


Funding
Not started due to funding limitations

Infrastructure
Facilities
Rolling Stock
Equipment

NEW CONTROL CENTER

Replace obsolete equipment at CTA's Control Center



This project would create a new CTA Control Center, which is the nerve center of CTA operations. Existing equipment is becoming obsolete, and replacement in kind is required, at a minimum. This project could be staged iteratively, beginning with replacing existing equipment with modern equivalents, with future phases adding functionality that will allow for improved safety on the CTA system.

KEY BENEFITS:
Modernization of obsolete equipment and improved system safety and operations

CTA Control Center

380,000+
miles traveled daily by CTA's buses and trains and monitored by the control center

10-Year Project Cost
$150 Million

$150 Million Unfunded Need

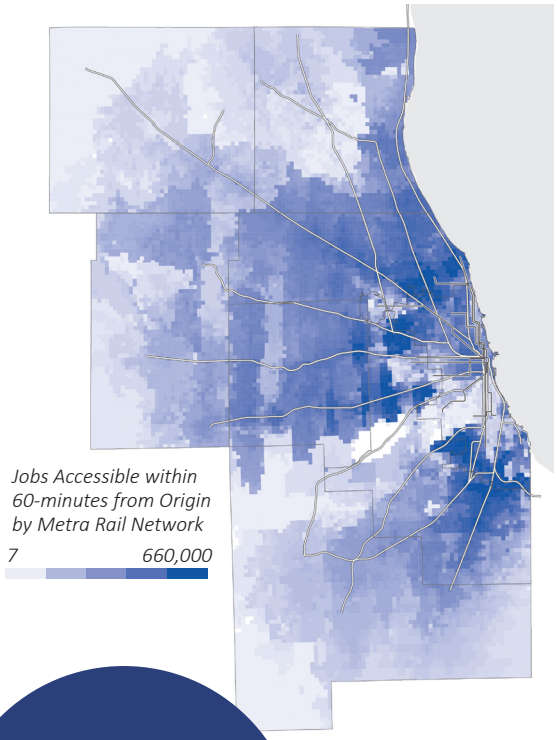
$0 Funding Included in Capital Program

Funding
Not started due to funding limitations

Infrastructure
Facilities
Rolling Stock
Equipment

FLEET MODERNIZATION PLAN

Replace and repair aging commuter rail cars and locomotives



KEY BENEFITS:
Reliable and greener locomotives and a more comfortable commute

Some Metra cars were built during the Eisenhower Administration

Metra has the lowest vehicle spare ratio in the industry. This causes significant problems when cars must be taken out of service. Some train runs have overcrowding. Also, many railcars are over 50 years old. They have high maintenance costs and need to be replaced. They are beyond their useful life. Metra's locomotives are experiencing mechanical failures and need to be rehabbed and replaced.

Metra currently has an aggressive rehab program for both cars and locomotives, with work performed at the existing 49th Street Yard facility and Kensington Yard. Funding the 10-year modern plan will allow for Metra rolling stock to be modernized with better seating, lighting, climate control, bathroom facilities and electrical outlets for customers to charge their electronic items, and are critical in maintaining the service performance standards on which our customer depend. Metra must also replace and rehabilitate locomotives on a consistent basis. Diesel locomotives must be rehabilitated every 10 years to maintain a State of Good Repair. Remanufacturing locomotives provides a significant cost savings for Metra while extending the life of this equipment by an estimated 25 years. Like rail cars, remanufacturing is cost-effective in the short term; however, replacement at some point becomes necessary.

29
years is the average age of a Metra commuter car

10-Year Project Cost
$2.1 Billion

$1.5 Billion Unfunded Need

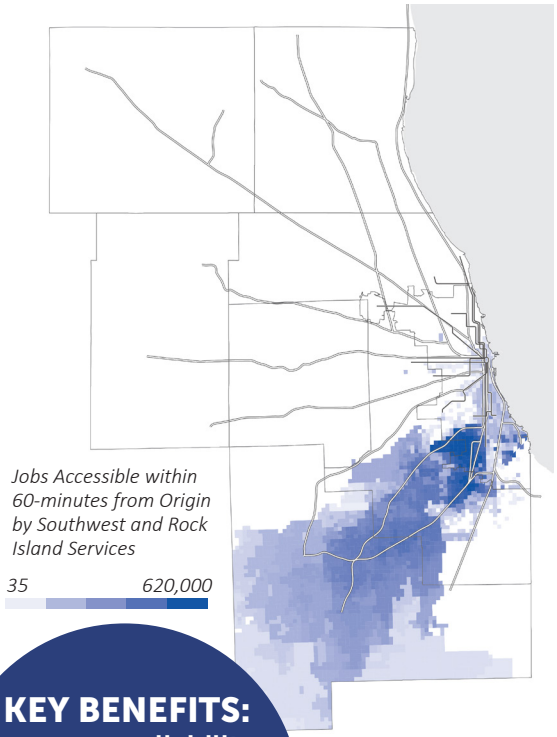
$603 Million Funding Included in Capital Program

Funding
Underway but limited by funding availability

Infrastructure
Facilities
Rolling Stock
Equipment

75TH STREET CORRIDOR

Reconfigure track shared by Metra, Amtrak, and freight trains



KEY BENEFITS:
Improves reliability, provides faster service for Southwest Service trains and increases system capacity

Artist's rendering of flyover (location will differ) Source: IDOT 75th Street Corridor Improvement Program

Metra's 75th Street Corridor Improvement Project is a major project to fix a tangle of railroad tracks just north of 75th Street where three railroad crossings cause significant delays for Metra and Amtrak passenger trains and the freight railroads. The project includes a combination of track reconfiguration, new track, and flyovers to improve the fluidity of Metra Southwest Service (SWS) and freight and Amtrak traffic in the area estimated to cost $1.0 billion.

The project will require additional improvements on the Rock Island Line. The Rock Island Line will be triple tracked from Gresham to 16th Street. Additional terminal tracks must be installed at LaSalle Street Station. The waiting rooms and crew facilities at LaSalle Street will be improved. The 51st Street Coach yard will be improved to accommodate the servicing of Southwest Service equipment. These combined Rock Island Improvements are estimated to cost $500 million.

Southwest Service now experiences delays due to the freight train conflicts and congestion through the 75th Street Corridor. This project will eliminate those conflicts, and by bringing Southwest Service into LaSalle Street Station, will relieve congestion at Union Station and create capacity for additional trains into the future.

90

freight trains conflict with 30 Metra trains and two Amtrak trains

10-Year Project Cost

$1.5 Billion

$1.5 Billion Unfunded Need

$0 Funding Included in Capital Program

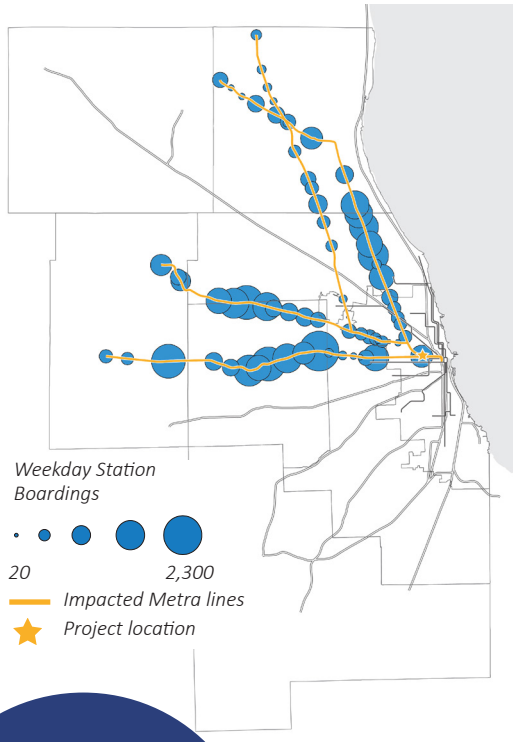
Funding

Environmental work completed, but engineering and construction not started due to funding limitations

Infrastructure
Facilities
Rolling Stock
Equipment

A-2 INTERLOCKING REPLACEMENT

Separate tracks at busiest switching location on Metra system



KEY BENEFITS:
Relieves a bottleneck on the Metra system through which 350 trains pass each day

A-2 Interlocking near Western
Source: Nearmap US, Inc

With over 350 Metra and Amtrak trains daily, the A-2 interlocking is one of the busiest and most complicated rail intersections in North America. The intersection is controlled by 31-switches, and those switches are controlled by the Metra employees who staff Tower A-2 night and day. All MD-N, MD-W, UP-W, North Central Line, and Amtrak trains, travel through the interlocking-- the railroad term for the switching complex-- on their scheduled runs to Union Station or Ogilvie. In addition, trains on three other Metra lines (UP-N, UP-NW and the Heritage Corridor) pass through A-2 on their way to and from the Western Avenue or California Avenue Yard. The tower is responsible for arranging and rearranging the switches for more than 350 trains each day.

The flyover project would create a new bridge to allow trains from Union Station to "flyover" trains from Ogilvie Transportation Center significantly increasing capacity and improving reliability. Trains would also be able to travel at higher speeds as they approach and cross A-2. Switch failures at the current location cause delays on multiple Metra lines and Amtrak.

Metra will conduct a $1 million study to determine the costs to build a flyover at A-2, estimated at $500 million.

79,300
weekday passenger trips on four lines

10-Year Project Cost
$500 Million

Funding
Not started due to funding limitations

Infrastructure
Facilities
Rolling Stock
Equipment

BRIDGE REPLACEMENT AND REPAIR

Replace and repair 61 bridges systemwide

Aging infrastructure

Metra has 823 bridges throughout the system and more of them are in need of replacement than can be addressed in the next 10 years. Metra has identified the 61 bridges in greatest need of replacement or repair over the next 10 years, as well as several others which require more modest improvements. In many cases, rehabilitation projects can extend the useful life of bridges with deteriorated elements, but bridges that can no longer be economically repaired or maintained should be replaced with new structures built to modern design. Timber bridges throughout the Metra system are targeted for replacement due to their elevated risk for fire.

KEY BENEFITS:
Rehabbing and replacing bridges will reduce operating and maintenance costs

Milwaukee District-West Line bridge over Fox River (replacement currently underway)

823
bridges on the Metra system

10-Year Project Cost
$2.0 Billion

$1.9 Billion Unfunded Need

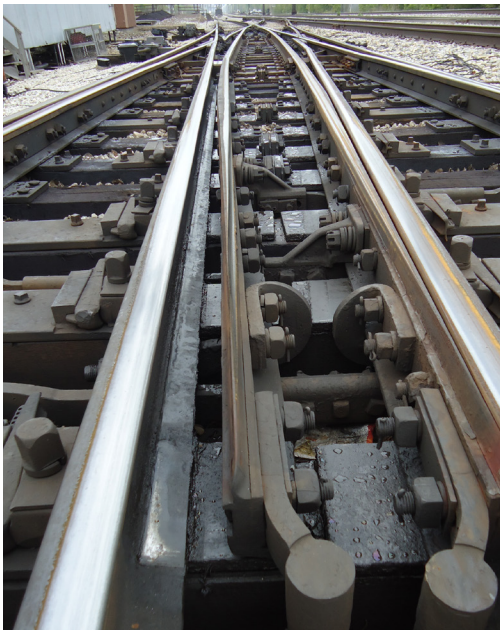
$66 Million Funding Included in Capital Program

Funding
Underway but limited by funding availability

Infrastructure
Facilities
Rolling Stock
Equipment

TRACK IMPROVEMENTS

Replace and repair trackwork components



Switch components need continual care

Track is the foundation of the Metra system. Without continual renewal of track components, Metra's reliable on-time service would deteriorate and the wear and tear on railcars and locomotives would increase.

To maintain safe and smooth track, Metra has established a continual cycle of inspection and renewal for its track system. Ballast and track resurfacing is performed on a four-year cycle. To achieve a state of good repair, Metra would need to replace 111,000 ties and replace 105 grade crossings annually.

KEY BENEFITS:
Reliable and smooth ride

Mainline track on Rock Island for 79 mph operation

80,000
ties and 25 rail crossings replaced annually

10-Year Project Cost
$1.9 Billion

$1.8 Billion Unfunded Need

$109 Million Funding Included in Capital Program

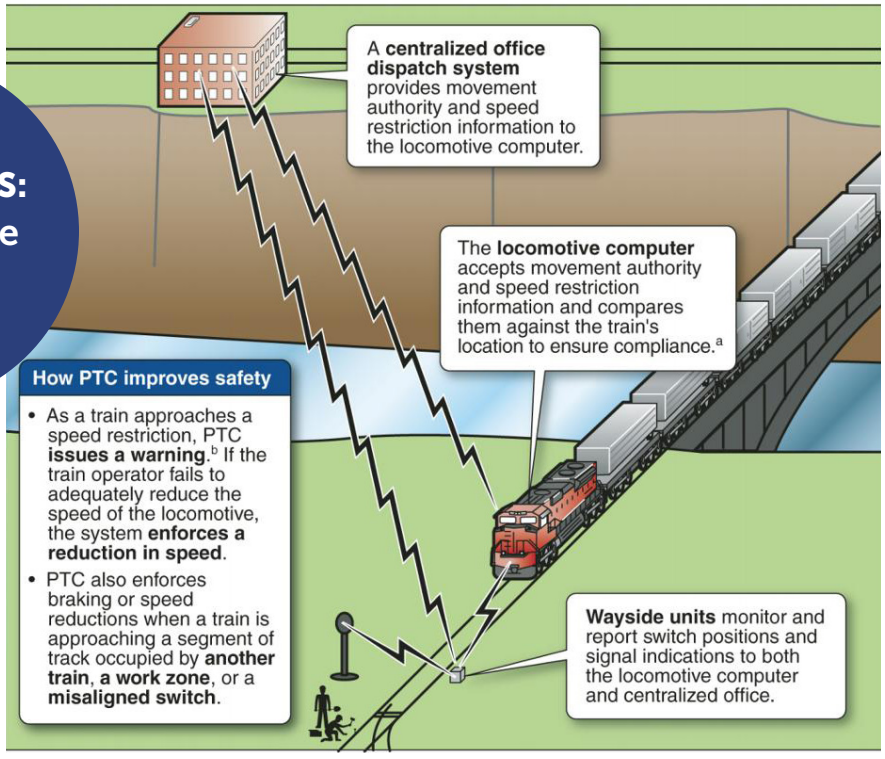
Funding
Underway but limited by funding availability

PTC SYSTEMWIDE

Install federally-mandated rail operational safety system

Positive Train Control (PTC) is a global positioning system (GPS)-based operational safety system that integrates new technology with existing train control and operating systems to enhance operations and provide an added level of safety. The Rail Safety Improvement Act of 2008 requires implementation of PTC on all passenger rail routes and on lines carrying hazardous materials by December 31, 2015, a date which has been extended to 2018 for Metra and several other railroads. Although the purchase and installation of PTC equipment comes at a high cost, no source of funding has been provided by the federal government, making it a perpetual unfunded federal mandate.

KEY BENEFITS:
Safety will be enhanced



How Positive Train Control works
Source: GAO

219
locations needed for communications with Metra rolling stock and centralized office dispatching system

While this project is shown as fully funded, this is due to the federal mandate to complete PTC implementation on a specific schedule. This mandate has caused capital funds to be diverted from other pressing needs to this project. Also, it is unclear at this time what the ongoing capital needs for this new system will be once it is implemented

10-Year Project Cost
$385 Million

May be additional costs yet to be determined

$385 Million Funding Included in Capital Program

Funding

Infrastructure
Facilities
Rolling Stock
Equipment

SIGNAL & ELECTRICAL IMPROVEMENTS

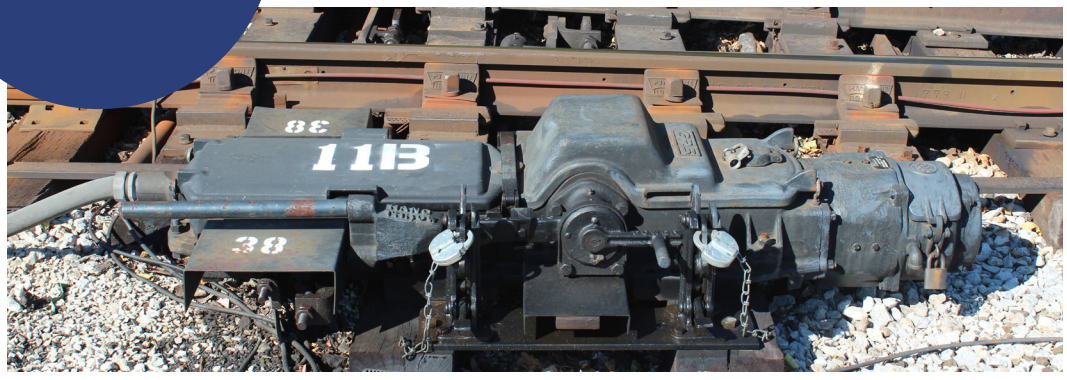
Replace and upgrade train control and grade crossing signals and systems

Remote controlled switch machine

The safety of employees, passengers and the general public is Metra's number one priority. A modern, reliable and fail-safe signal system is vital for safe and dependable service. Metra not only operates and maintains its own train control and signal system, but is also responsible for the highway and pedestrian crossing warning lights and gates.

Beyond the installation of the federally-mandated Positive Train Control (PTC) system, funding is needed to replace and upgrade track switching controls and interlockings, signal control equipment and systems, as well as communications and electrical systems.

KEY BENEFITS:
Safety will be enhanced



Mainline signal

566
highway grade crossings on Metra system require reliable signals

10-Year Project Cost
$1.2 Billion

$1.1 Billion Unfunded Need

$90 Million Funding Included in Capital Program

Funding
Underway but limited by funding availability

Infrastructure
Facilities
Rolling Stock
Equipment

YARDS, FACILITIES, AND EQUIPMENT IMPROVEMENTS

Modernize Metra's railcar and locomotive repair shops and yards

Metra's yards and shops provide facilities for light and heavy repairs needed to keep Metra's railcars and locomotives safe, reliable, clean and comfortable for commuters. Interior cleaning and light maintenance on car running gear, air conditioning and heating, door operations, wheelchair lefts, and electrical systems are performed at Metra's railcar yards, as well as fueling and servicing Metra's locomotives between runs. At Metra's shops, heavier repair work is done on the fleet, including replacing components on scheduled intervals.

The outdoor yard facilities operate every day, in all weather conditions. To continue to maintain rolling stock on a daily basis which meet customer expectations and reduce mechanical failures, upgrades to obsolete facilities are needed.

The 49th Street Yard Facility is Metra's system heavy maintenance and repair facility for all of Metra's diesel-hauled commuter car fleet. Metra plans to rehabilitate about 30 cars annually at the existing 49th Street Yard facility. In order to allow for increased throughput in the short-term, new investment is needed under this modernization proposal in the 49th Street facility.

To support all of the service that passengers see each day, there are also significant numbers of non-revenue vehicles and back of house systems that are needed. Upgrading Metra's financial system brings it into compliance with best practices and standards, and replacing aging non-revenue vehicles allows repairs and inspections to be made in a timely fashion.

Inside of Metra railcar repair shop

Inside of Metra locomotive repair shop

KEY BENEFITS:

More rolling stock rehabbed more efficiently

10-Year Project Cost

$664 Million

$572 Million Unfunded Need

$92 Million Funding Included in Capital Program

Funding

Underway but limited by funding availability

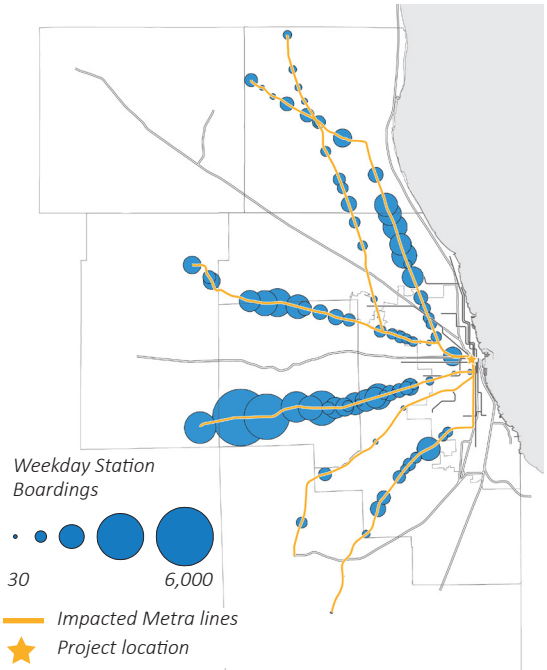
24

rail yards to maintain 848 diesel rail cars, 186 electric railcars, and 150 locomotives

Infrastructure
Facilities
Rolling Stock
Equipment

CHICAGO UNION STATION IMPROVEMENTS

Implementation of key projects benefiting commuters using Chicago Union Station



The Chicago Union Station Master Plan was an initiative of regional partners to identify a strategy to expand Union Station to improve the function and aesthetics for passengers while attracting new economic development. The Master Plan recommended projects that would specifically benefit Metra commuters, including expanded entrances, widened and additional platform access and track, signal and interlocking improvements for better train operations. Funding is necessary to complete the planning, design and construction for these improvements.

10-Year Project Cost
$500 Million

$500 Million Unfunded Need

$0 Funding Included in Capital Program

Funding
Underway but limited by funding availability

KEY BENEFITS:
Added train and pedestrian capacity

Union Station platform, access to be expanded

54,400
weekday passengers board affected line

Infrastructure
Facilities
Rolling Stock
Equipment

RAIL STATION IMPROVEMENTS

Rehabilitation and upgrades to station buildings, platforms, and parking lots

Passenger canopy

KEY BENEFITS:
Improved access, information systems, and waiting environment

All of Metra's riders start and end their trip at a station, and funding is needed for the continual upgrades and modernizations of these stations. Upgrades to station roofs, and structures, platforms, walkways, parking lots, lighting, benches, shelters, and information signs and systems are needed. Importantly work also will be performed to upgrade access to comply with Americans with Disabilities Act (ADA) standards.

241
rail stations served
80.4 million passenger trips in 2016

10-Year Project Cost
$853 Million

$790 Million Unfunded Need

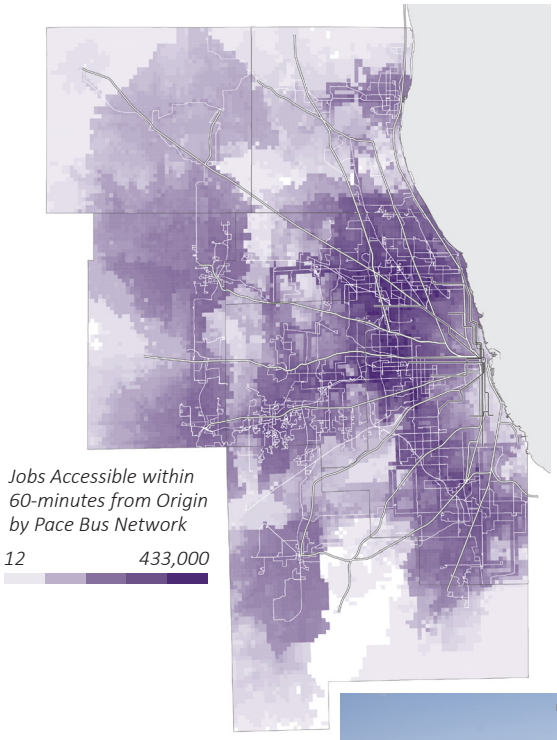
$63 Million Funding Included in Capital Program

Funding
Underway but limited by funding availability

Infrastructure
Facilities
Rolling Stock
Equipment

FIXED ROUTE BUSES-REPLACEMENT

Replacement of buses reaching their useful life



Purchase up to 412 replacement buses including 229 30' buses, 161 40' buses, and 22 Over-the-Road Coach buses (40'). Project activities include the purchase of buses and any associated equipment (cameras, destination signs, etc.) and service (Buy American audit and inspections).

10-Year Project Cost
$177 Million

$101 Million Unfunded Need

$76 Million Funding Included in Capital Program

KEY BENEFITS:
Improved reliability, reduce maintenance costs, and better customer experience

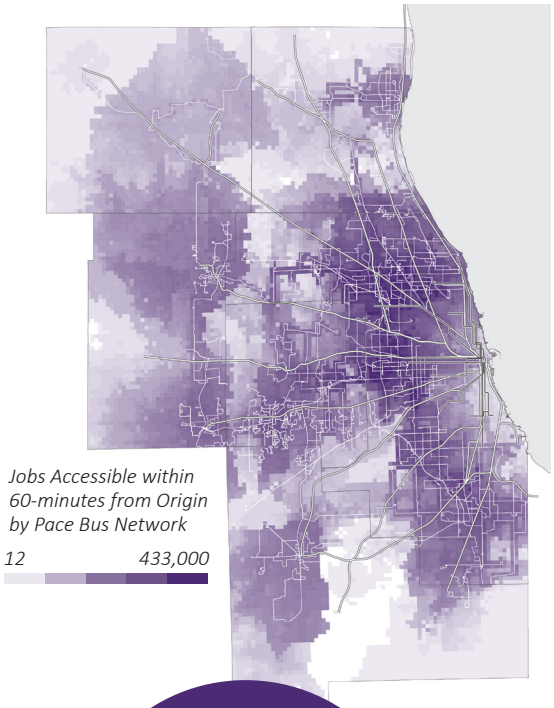
7.2 years
average age for Pace fixed route bus fleet

Funding
With a useful life of 12 years, the Capital Improvement Program must continually fund bus replacements.

Infrastructure
Facilities
Rolling Stock
Equipment

FIXED ROUTE BUSES-EXPANSION

Buses for new services



Purchase up to 168 expansion buses, including 70 40' buses for systemwide service, 68 40' buses for Pace's Pulse Arterial Rapid Transit Network, and 30 Over-The-Road Coach 40' buses for Bus on Shoulder. Project activities include the purchase of buses and any associated equipment (cameras, destination signs, etc.) and services (Buy America audit and inspections).

Service expansion will provide commuters access to more destinations, improve connectivity with the regional system, and increase ridership. The Pulse network will improve travel times and these buses will be outfitted with enhanced customer amenities. The enhancements to the existing I-55 Bus on Shoulder will alleviate overcrowding, while expansion to other expressways will tap into new market opportunities.

KEY BENEFITS:
Access to more destinations, improved connectivity, and increased ridership

168 buses for new services

10-Year Project Cost
$94 Million

$94 Million Unfunded Need

$0 Funding Included in Capital Program

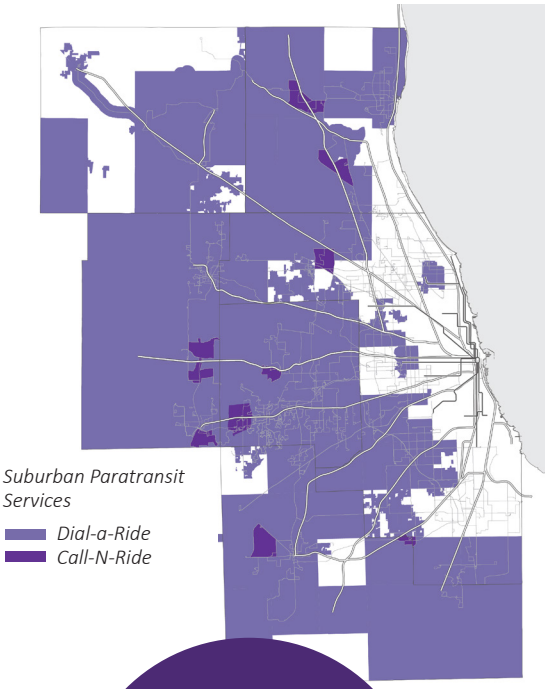
Funding

No funding for expansion of fleet in current program

Infrastructure
Facilities
Rolling Stock
Equipment

PARATRANSIT VEHICLES-REPLACEMENT

Replacement of vehicles reaching their useful life



Purchase up to 884 replacement accessible paratransit vehicles for suburban Dial-a-Ride and ADA service. Project activities include the purchase of vehicles and any associated equipment (cameras, destination signs, etc.) and services (Buy America audit and inspections). In 2016 5.2 million trips were made on Dial-a-Ride and ADA service.

KEY BENEFITS: Improved reliability, reduced maintenance costs, and better customer experience

Paratransit vehicle

10-Year Project Cost
$57 Million

Funding

The Capital Improvement Program must continually fund replacement vehicles

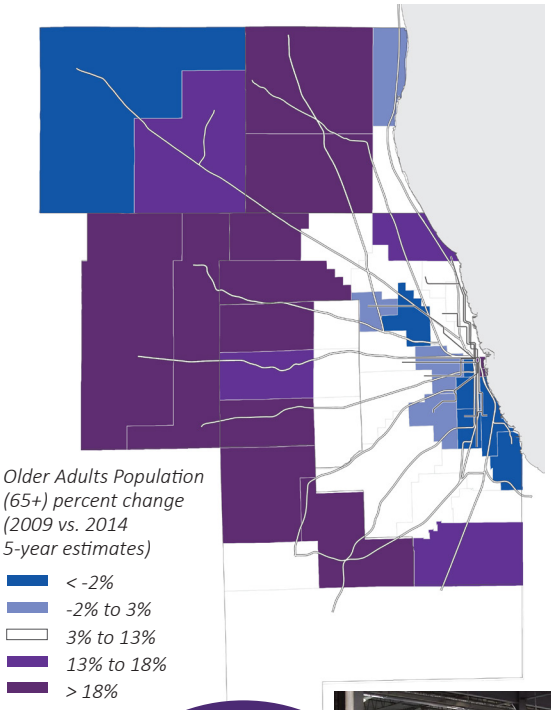
4.5 years

current average age for Pace Paratransit/Call-n-Ride vehicles, which have only a 4-year life expectancy

Infrastructure
Facilities
Rolling Stock
Equipment

PARATRANSIT VEHICLES-EXPANSION

New Dial-a-Ride and ADA vehicles for aging population



Demand for Pace's paratransit services is expected to grow. Purchase up to 200 accessible paratransit vehicles for suburban Dial-a-Ride and ADA service. Project activities include the purchase of vehicles and any associated equipment (cameras, destination signs, etc.) and services (Buy America audit and inspections).

KEY BENEFITS:
More Dial-A-Ride and ADA service

Paratransit vehicle

75%
increase in older adults is expected in the region between now and 2050

10-Year Project Cost
$13 Million

$13 Million Unfunded Need

$0 Funding Included in Capital Program

Funding
No funding for expansion of fleet in current program

Infrastructure
Facilities
Rolling Stock
Equipment

COMMUNITY VEHICLES-REPLACEMENT

Replacement of vehicles reaching useful life

Call-n-ride vehicle

KEY BENEFITS:
Improved reliability, reduce maintenance costs, and better customer experience

Purchase up to 264 replacement vehicles for the Community Transit and Call-n-Ride programs. Project activities include the purchase of accessible, under 30' vehicles and any associated equipment or services (Buy America audit and inspections).

4 years
current average age for Pace Community/Call-n-Ride vehicles, which have only a 4-year life expectancy

10-Year Project Cost
$20 Million

$10 Million Unfunded Need

$10 Million Funding Included in Capital Program

Funding

The Capital Improvement Program must continually fund replacement vehicles

Infrastructure
Facilities
Rolling Stock
Equipment

COMMUNITY VEHICLES-EXPANSION

New Community and Call-n-Ride vehicles

Community vehicle

KEY BENEFITS:
Access to more destinations, improved connectivity, and increased ridership

Purchase up to 40 expansion vehicles for the Community Vehicle and Call-n-Ride programs. Project activities include the purchase of accessible, under 30' vehicles and any associated equipment or services (Buy America audit and inspections).

Service expansion will provide commuters access to more destinations, improve connectivity with the regional system, and increase ridership.

40 buses
to support new local service

10-Year Project Cost
$3 Million

$3 Million Unfunded Need

$0 Funding Included in Capital Program

Funding

No funding for expansion of fleet in current program

Infrastructure
Facilities
Rolling Stock
Equipment

VANPOOL VEHICLES-REPLACEMENT

Replacement of vans reaching their useful life

Vanpool van

KEY BENEFITS:
Improved reliability, reduce maintenance costs, and better customer experience

Purchase up to 1,264 replacement vehicles for the Vanpool program. Project activities include the purchase of vans, conversion costs, and other related equipment and services (Buy America audit and inspections).

Replacing vans which have met their useful life will reduce maintenance costs, improve reliability, and provide better customer experience.

The Vanpool program provides transit options where fixed route service may not be available and is a cost-effective means of providing congestion mitigation and air quality benefits for the region.

4.1 years
current average age for Pace Vanpool vans, which have only a 4-year life expectancy

10-Year Project Cost
$51 Million

$39 Million Unfunded Need

$12 Million Funding Included in Capital Program

Funding

With a useful life of 4-years, the Capital Improvement Program must continually fund replacement vehicles.

Infrastructure
Facilities
Rolling Stock
Equipment

ASSOCIATED CAPITAL MAINTENANCE ITEMS

Capital costs associated with the maintenance of buses

KEY BENEFITS:
Enables Pace vehicles to reach their full life, reduced operating costs, and reduced maintenance costs

Capital costs associated with the maintenance of buses and other vehicles, including parts and engine/transmission retrofits.

Maintenance of revenue vehicles and engine/transmission retrofits for bus mid-life are essential in order to maintain Pace's fleet in proper operating condition, reach full useful life, and comply with EPA regulations.

10-Year Project Cost
$28 Million

$16 Million Unfunded Need

$12 Million Funding Included in Capital Program

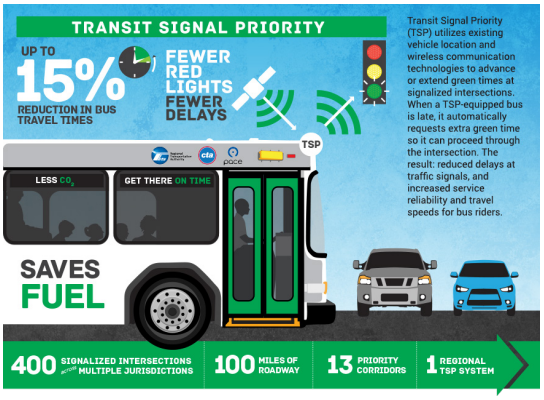
Funding

Parts and equipment for bus repairs must continually be renewed. Current funding levels do not meet the full need.

Infrastructure
Facilities
Rolling Stock
Equipment

REGIONAL TRANSIT SIGNAL PRIORITY (RTSP)

Expand Transit Signal Priority installations region-wide



KEY BENEFITS:
Improves on-time performance

The current Regional Transit Signal Priority (RTSP) program funded through the CMAQ program involves 13 priority transit corridors (2 CTA, 11 Pace) spanning about 100 miles of roadway and 400 signalized intersections across multiple jurisdictions in the six-county northeastern Illinois region. Components include program management, design engineering, and implementation. Pace has identified 24 regional TSP corridors in the TSP program. The current regional program includes TSP installation for CTA and Pace routes, but does not cover all corridors. This funding will continue the regional deployment of TSP.

TSP facilitates the movement of transit vehicles through traffic-signal controlled intersections, giving the bus priority by extending a green, shortening a red, or providing queue jumps. TSP improves schedule adherence and reduces travel times along busy arterial routes.

Up to 15%
reduction in bus travel times can be achieved by TSP

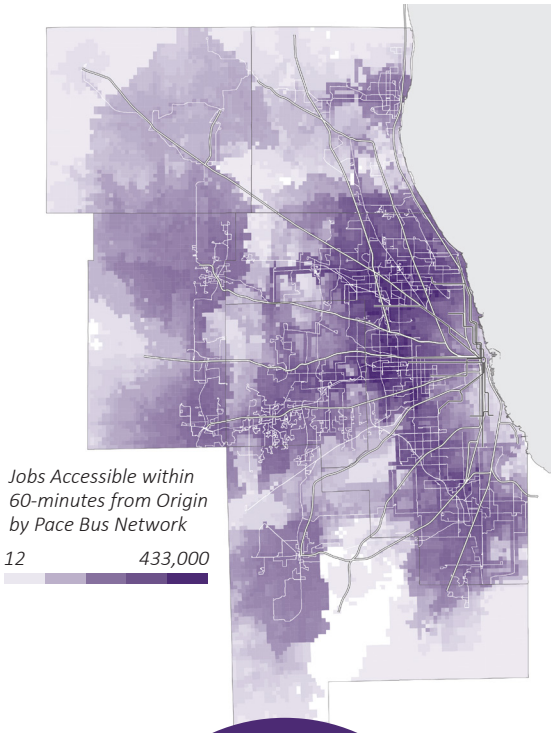
10-Year Project Cost
$10 Million

Installation of TSP is underway on 13 corridors. Project cost shown here does not include this first phase of Regional TSP. Additional funding is needed to continue installation to more corridors.

Infrastructure
Facilities
Rolling Stock
Equipment

INTELLIGENT BUS SYSTEM (IBS) REPLACEMENT

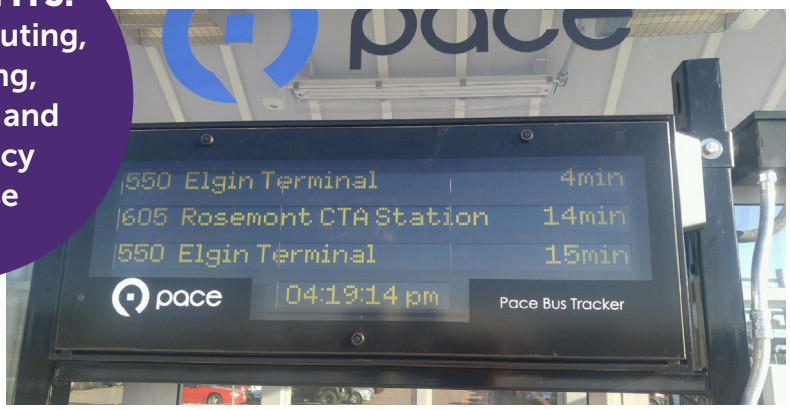
Equipment for bus tracking, communications, and data



Replacement of Intelligent Vehicle Logic Units (IVLU), Mobile Data Terminals (MDT), antennas, interface cabling, adapter cables, radio cables, installation & conversion kits, access points, dispatch radios, and Automatic Passenger Counters (APC). The scope also includes the continuation of back office support, installation, software licensing, training, field support, and warranty.

Within the next ten years, Pace's current IBS equipment will again have reached its useful life. Replacement of Pace's IBS equipment will allow for improved and more reliable bus tracking, passenger counts, driver communications, data transfer speeds, and decreased data loss. IBS allows Pace to greatly improve routing and scheduling because of the valuable data generated on ridership and route efficiency and track buses in the event of an emergency.

KEY BENEFITS:
Improved routing, scheduling, efficiency, and emergency response



Bus Tracker display

10-Year Project Cost
$11 Million

$6 Million Unfunded Need

$5 Million Funding Included in Capital Program

Funding

Current funding levels do not meet the full needs

Infrastructure
Facilities
Rolling Stock
Equipment

FAREBOX SYSTEM

Replace fareboxes that are over 20-years old

Functional fareboxes ensure multiple means of payment

KEY BENEFITS:
Continued reliability of fare collection

Replacement of the current farebox system to accommodate Pace riders using cash. The scope also includes maintaining the new equipment during the ten-year period.

Pace is required by law to take cash from passengers. The existing farebox system was installed in 1994 and has surpassed its useful life.

28 million
transactions went through Pace fareboxes in 2016

10-Year Project Cost
$21 Million

$5 Million Unfunded Need

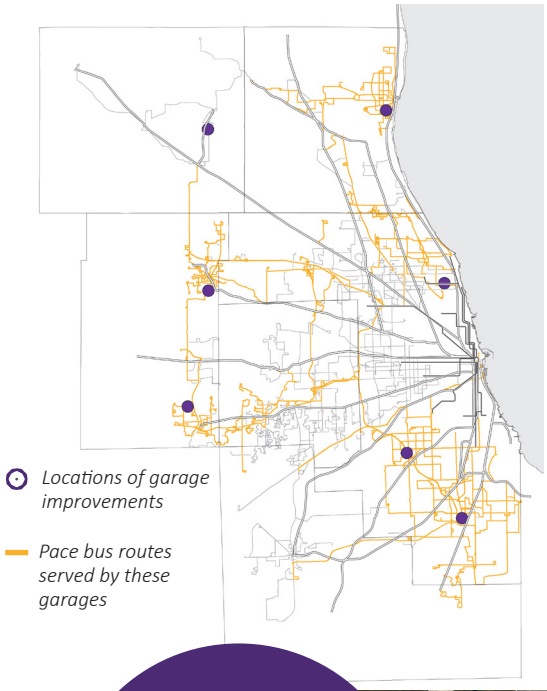
$16 Million Funding Included in Capital Program

Funding
Underway but limited by funding availability

Infrastructure
Facilities
Rolling Stock
Equipment

IMPROVE SUPPORT FACILITIES

Improvements to garage facilities including underground storage tanks



The scope includes location specific improvement campaigns at North Shore, River, North, McHenry, South, Southwest, and Fox Valley Division garages. Also included are environmental consulting and testing services and underground storage tank upgrades.

Pace is expected to maintain its facilities in a State of Good Repair, which necessitates periodic improvement campaigns at specific facilities. Since Pace fuels and services vehicles at its own facilities, the required equipment must be maintained to ensure compliance with federal and state EPA regulations.

KEY BENEFITS:
Garage facilities in a State of Good Repair and compliant to federal and state EPA regulations

Pace South Division Garage with new CNG fueling station (Located in Markham, IL)

Source: Nearmap US, Inc

10-Year Project Cost
$79 Million

$47 Million Unfunded Need

$32 Million Funding Included in Capital Program

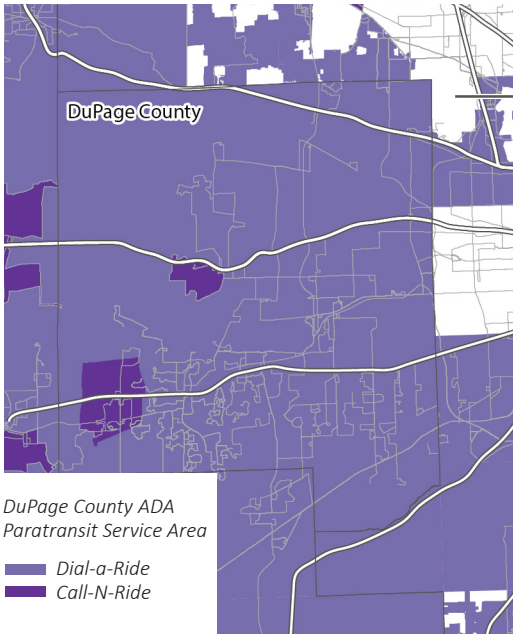
Funding

Current funding levels do not meet the full needs

Infrastructure
Facilities
Rolling Stock
Equipment

CONSTRUCT NEW SUPPORT FACILITIES

Add needed capacity for bus maintenance and storage



DuPage County ADA Paratransit Service Area

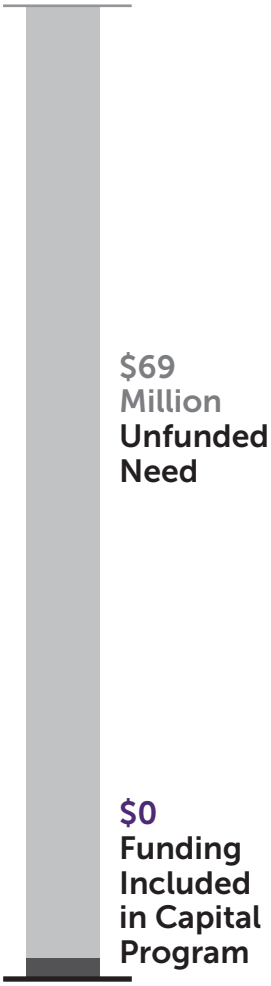
Dial-a-Ride
Call-N-Ride

Pace has outgrown its available footprint to store buses at its existing nine divisions. New support facilities will enable Pace to expand to new markets and optimize resources.

This project will construct up to two support facilities to better serve route demand and increase operational efficiency. These support facilities are identified for use with Bus on Shoulder and Arterial Rapid Transit.

The scope also includes the construction of a DuPage County Paratransit garage.

10-Year Project Cost
$69 Million



Funding
Current funding levels do not meet the full needs

KEY BENEFITS:
Addresses growing markets, modernizes the system, and increases service reliability

Vehicle support facility

Infrastructure
Facilities
Rolling Stock
Equipment

SECURITY, COMPUTER, SOFTWARE & OFFICE SYSTEMS UPGRADES

Upgrade systems to provide enhanced asset protection and business systems

Security System

The scope includes modernizing the security systems that Pace currently uses to perform daily operations. This includes, but is not limited to site lighting, passway card access, video surveillance, alarm systems, and perimeter gate controls.

Many of Pace's existing systems are over 20 years old and are unable to be upgraded. It is necessary to replace security systems at the Pace garages in order to maintain a secure environment for employee safety and protection of Pace assets.

Computer Systems/ Hardware & Software

Projects include replacement of desktops, servers, projectors, printers, and other hardware to ensure compatibility of all equipment across Pace's system. Also included is the purchase of software and other miscellaneous hardware to support the modernization of Pace's system.

As Pace brings new technologies online to stay current and competitive in the marketplace, it will need backend support hardware and software infrastructure.

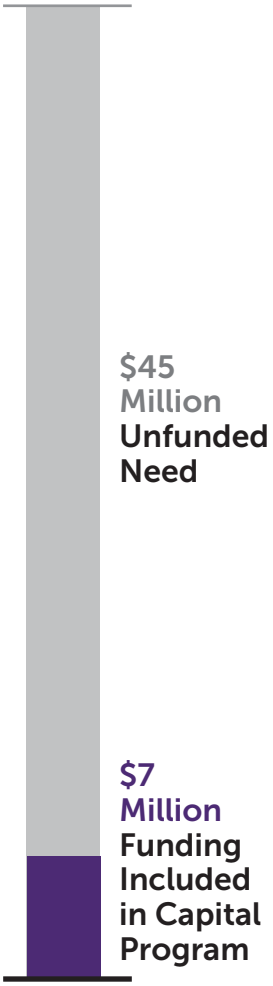
Office Equipment/ Furniture

This project is necessary to replace obsolete or non-functioning equipment for various Pace facility locations and to purchase some new items to meet additional demands and increase staff productivity.

Purchase of office equipment/furniture such as copiers, fax machines, file cabinets, desks, etc. for various divisions and the headquarters building.

KEY BENEFITS:
Protection of Pace facilities and assets, business systems which meet modern needs, and efficient administrative function

10-Year Project Cost
$52 Million



Funding
Underway but limited by funding availability

Infrastructure
Facilities
Rolling Stock
Equipment

SUPPORT EQUIPMENT/ NON-REVENUE VEHICLES

Facility and system maintenance equipment and vehicles

Non-revenue vehicles are critical for maintenance and other support functions

KEY BENEFITS:
Increased operation and maintenance efficiency

Purchase of replacement maintenance equipment for support facilities, such as portable column lifts and ride-on and walk behind floor scrubbers, etc. The scope also includes purchase of various cars, vans, and trucks to replace aging non-revenue vehicles which have currently exceeded their useful life or are projected to in the ten-year period.

The replacement of equipment will increase operational efficiency and result in costs avoidance which would otherwise impact the operating budget. Replacement of non-revenue fleet vehicles will result in lower vehicle maintenance costs. Pace maintains a non-revenue fleet of approximately 160 vehicles that have a useful life range of five to ten years.

160
non-revenue vehicles are needed to support Pace operations

10-Year Project Cost
$25 Million

$18 Million Unfunded Need

$7 Million Funding Included in Capital Program

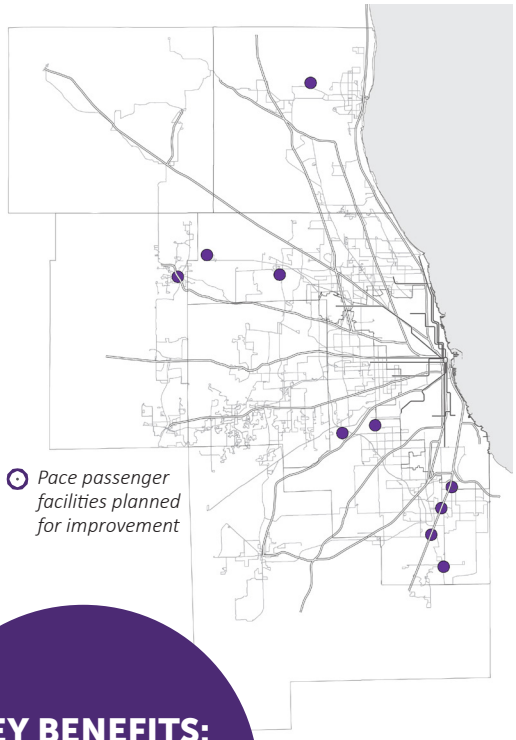
Funding

Current funding levels do not meet the full needs

Infrastructure
Facilities
Rolling Stock
Equipment

IMPROVE PASSENGER FACILITIES-TRANSPORTATION CENTERS

Improvements to transportation and transfer facilities



Pace passenger facilities planned for improvement

KEY BENEFITS:
Improved customer experience

Construction at Elgin Transportation Center

The Pace network includes Transportation Centers and Transfer Centers at key locations throughout the region to facilitate access to Pace services and multi-modal connections between Pace, Metra and CTA as well as local taxi services, shuttle buses and Transportation Network Companies such as Lyft and Uber. These centers also enhance regional access with park-and-ride lots and locations at regional retail malls, suburban downtowns and activity centers. Due to their age, many of the existing Transportation and Transfer Centers need improvements to mitigate future maintenance costs. Improving passenger waiting conditions encourages increased ridership that results in additional farebox revenue.

This project includes updating passenger amenities, sidewalk and pavement replacements, lighting replacements, and building system replacements at locations which will have reached or exceeded their useful life in this ten-year horizon.

Transportation Centers planned for improvement include: Harvey, UPS, Prairie Stone, Buffalo Grove, Elgin, Charles Zettek/ Northwest, and Toyota Park. The scope also includes the relocation of a layover site for Orland Square Mall.

Transfer Centers will be improved at: Chicago Heights, Homewood, Gurnee Mills Mall, and Riverdale

12 **Transportation and Transfer Centers improved**

10-Year Project Cost
$26 Million

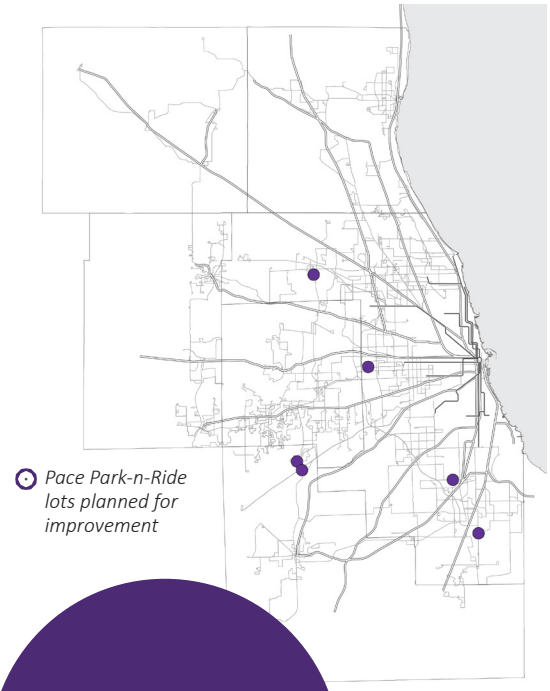
Funding

Current funding levels do not meet the full needs

Infrastructure
Facilities
Rolling Stock
Equipment

IMPROVE PASSENGER FACILITIES- PARK-N-RIDE LOTS

Updates and repairs to Park-n-Ride lots



Pace Park-n-Ride lots planned for improvement

Park-n-Ride lots provide access to the Pace system for those who live far from a bus stop, and provide ability to capture increased ridership for Express and long-haul bus service. Due to their age, many of the existing park-n-ride lots need improvements to mitigate future maintenance costs. Improving passenger waiting conditions encourages increased ridership that results in additional farebox revenue.

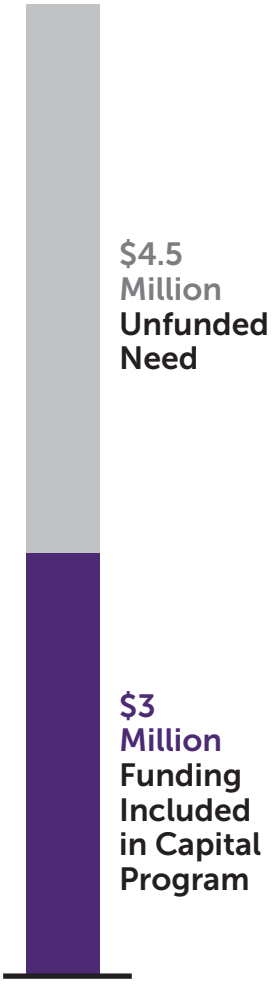
Renovation of park-n-ride lots at the following locations: Blue Island, Bolingbrook-Canterbury Lane, Homewood, Bolingbrook-Old Chicago, Hillside, and Northwest Point/Elk Grove- which will have reached or exceeded their useful life in this ten year horizon. The scope includes updating passenger amenities, sidewalk and pavement replacements, lighting replacements, and building system replacements.

KEY BENEFITS:
Improved customer experience

Park-n-rides provide access to Express services

6 **Park-n-Ride lots improved**

10-Year Project Cost
$7.5 Million



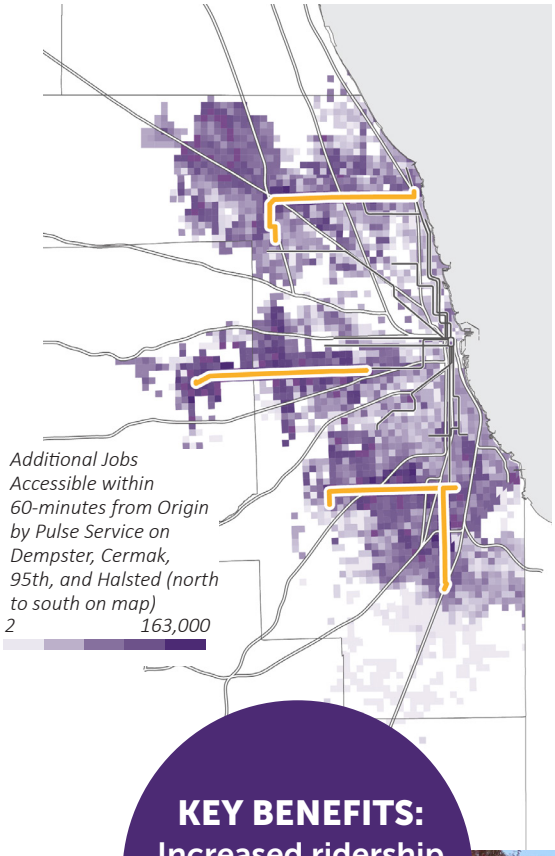
Funding

Current funding levels do not meet the full needs

Infrastructure
Facilities
Rolling Stock
Equipment

PULSE INFRASTRUCTURE

Enhance Pulse service



Pace is planning to continue to introduce new Pulse lines to enhance existing service corridors. These Arterial Rapid Transit (ART) routes will have limited stop express style service to improve travel times. They will also have specially designed stations with passenger amenities such as real time signage and snow melt systems. These Pulse lines will have additional operating costs associated with them, offset by increased farebox revenues.

Development of Pulse infrastructure in the following corridors: Dempster Street, Cermak, 95th Street, and Halsted Street. The scope includes design and construction of passenger stations similar to the Pulse Milwaukee Line. Each line will have a varying amount of associated stations; Dempster-29 stations, Cermak-30 stations, 95th St-28 stations, and Halsted-17 stations. Additional buses for the new service are needed, and included in Pace bus purchase 10-year needs.

KEY BENEFITS:
Increased ridership from additional Pulse routes

Pulse station rendering

2018
Pulse service will be in operation on Milwaukee Avenue

10-Year Project Cost
$51 Million

Funding

The Pulse Milwaukee Line is under construction. New funding is needed to continue the expansion of Pulse Lines throughout the region.

Infrastructure
Facilities
Rolling Stock
Equipment

PEDESTRIAN INFRASTRUCTURE/ SHELTERS/SIGNS

Shelters, pedestrian access, and completion of conversion to posted stops

KEY BENEFITS:
Improved access to stops and better waiting environment

Bus stop shelters are necessary to protect riders from the outside elements while updated signage provides information and improved visibility to facilitate navigating the transit system. The posted stops only conversion process involves selecting stops that maximize safety, ease of access, and bus operational efficiency which will improve Pace's on-time performance.

$3,000,000 is budgeted to complete the conversion of all Pace's bus routes to a posted stops only operation. $30,000,000 is needed over the ten-year period for systemwide pedestrian infrastructure, signage, shelters, pads, and installation.

10-Year Project Cost
$33 Million

$25.5 Million Unfunded Need

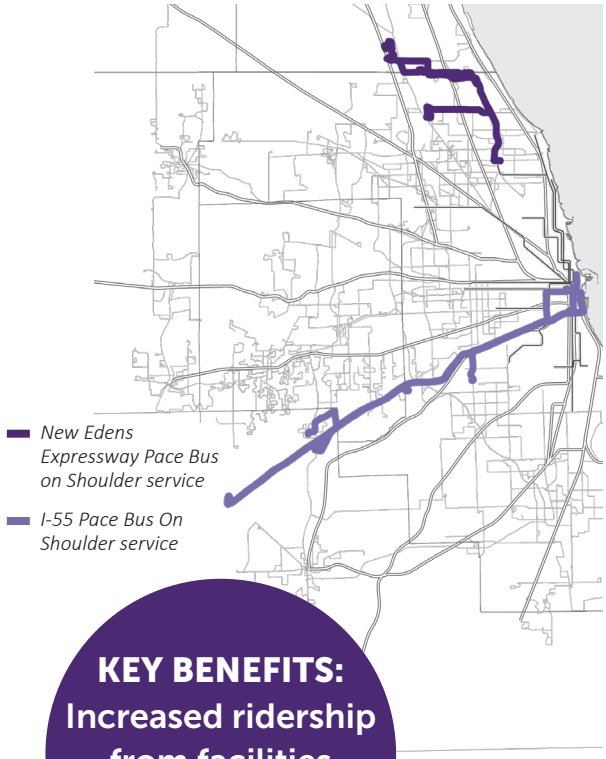
$7.5 Million Funding Included in Capital Program

Funding
Underway but limited by funding availability

Infrastructure
Facilities
Rolling Stock
Equipment

BUS ON SHOULDER (BoS) FACILITIES

Passenger facilities for Bus on Shoulder service

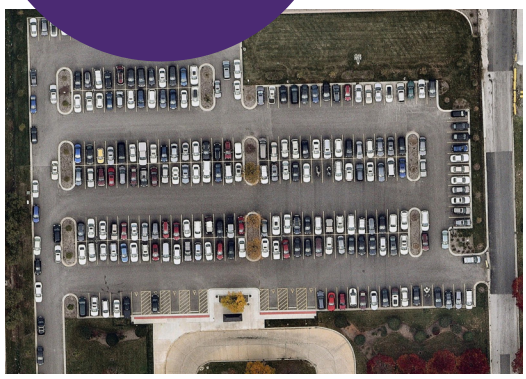


Due to the increased ridership of the successful I-55 BoS corridor, Pace will pursue development of additional passenger facilities. With the expectation that the Eden's corridor will experience similar demand, Pace will need to develop passenger facilities to ensure convenient access to the BoS service.

Design and construction of new passenger facilities, such as boarding areas and park-n-ride lots, along the existing I-55 BoS corridor, in addition to new passenger facilities for the soon to be implemented I-94 Eden's BoS corridor.

460%
increase in ridership on I-55 Bus on Shoulder routes

KEY BENEFITS:
Increased ridership from facilities which support new service



Bolingbrook Park-n-Ride filled beyond capacity
Source: Nearmap US, Inc

Pace bus operating on shoulder of I-55

10-Year Project Cost
$15 Million

$15 Million Unfunded Need

$0 Funding Included in Capital Program

Funding

New funding is needed for parking and passenger facilities to support ridership growth on the Bus on Shoulder network

Infrastructure
Facilities
Rolling Stock
Equipment

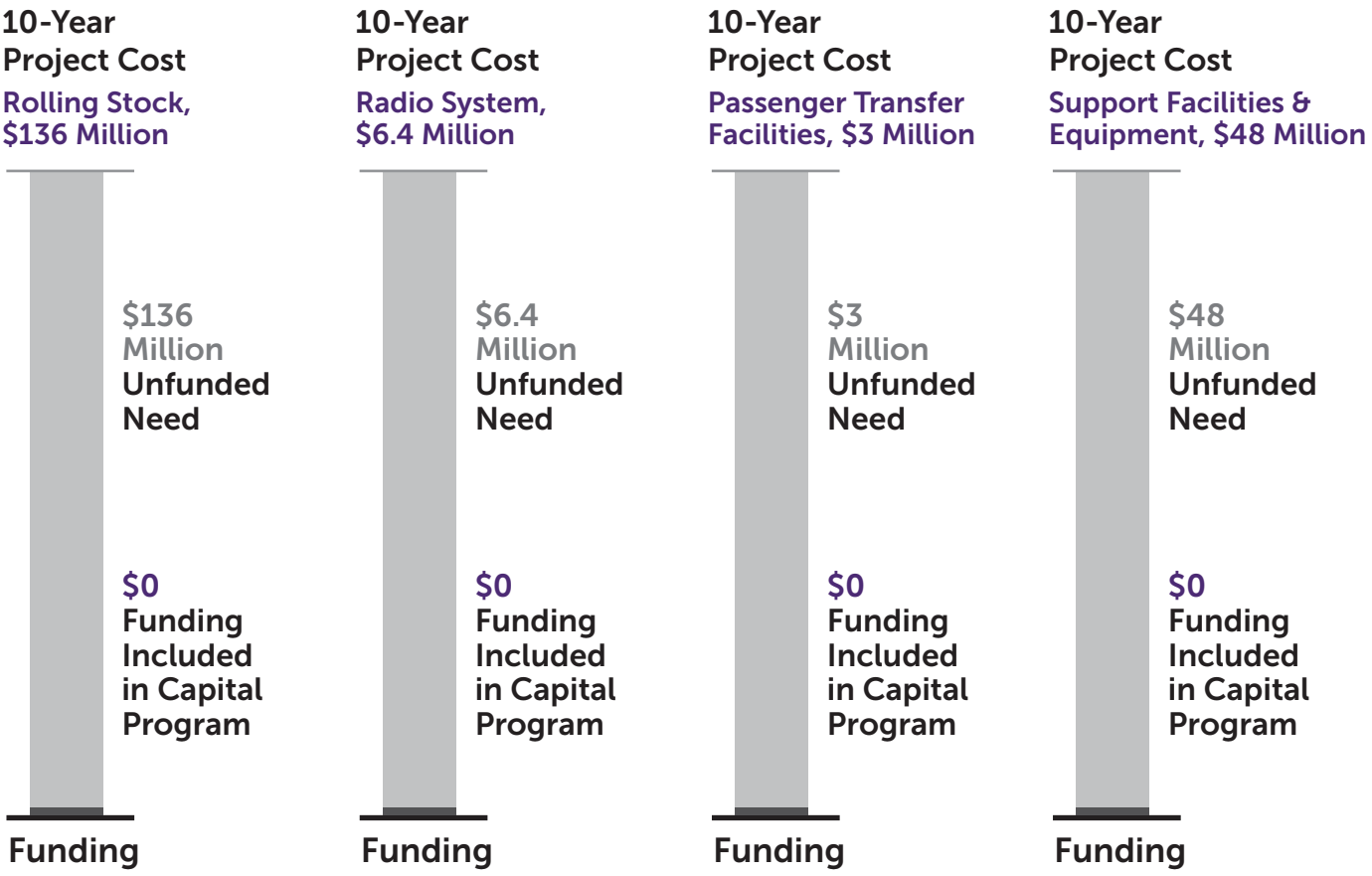
ADA REGIONAL PARATRANSIT PROGRAM

Replacement of vehicles and radio systems for existing program. New vehicles, transfer locations, and maintenance facilities for direct Pace ownership of assets for ADA service within City of Chicago.

KEY BENEFITS:
Provides replacement vehicles for regional ADA paratransit service and reduces operating costs

At the present time for the ADA service in the City of Chicago, Pace utilizes private contractors who own the vehicles and rent or own the garages they operate from. The costs for the depreciation of the vehicles and buildings are built into the hourly rates charged in the service contracts. Pace's plan is to apply the same business model in the City of Chicago that it has in place in the suburbs; specifically, to own the fleet and facilities and to bid out services to the private contractors. This will reduce the hourly service rates substantially as contractors will not have to charge Pace for depreciation of their equipment and facilities. This is also expected to increase competition from private contractors as the bidding will be on a consistent basis of hourly service rates. A long-term funding solution is critical to replace these private contract carrier vehicles and to begin building facilities which support the service.

The 5-Year Capital Improvement Plan includes no funding for Regional ADA capital needs. A predictable capital funding source is necessary to meet growing Regional ADA capital needs



Invest in Transit Priority Projects provides detail on the key projects that the Transit Agencies would like to complete with a stable, dedicated capital investment program.

For more information please see the 2018-2023 Regional Transit Strategic Plan, *Invest in Transit*, which is the region's case for pursuing dependable funding streams that will enable the Transit Agencies to provide vital services for Northeastern Illinois into the future. Also see *Beginning the Discussion*, which describes key findings from research conducted in 2016 as preparation for the 2018-2023 Regional Transit Strategic Plan.

Regional Transportation Authority
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