CHICAGO DEPARTMENT OF TRANSPORTATION

in partnership with

cta

Central Loop BRT

(East-West Corridor)

Public Meeting and Open House
May 2, 2012
Chicago Architecture Foundation

Agenda

- What is BRT?
- Project Background
- East-West BRT
- Feedback

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Chicago's Approach to BRT

BRT has proven to be transformative in many of the world's greatest cities.

CTA and CDOT are working collaboratively to take the best elements of these systems and focus their approach to create a customized BRT solution for Chicago with a focus on project delivery in the near term while building a foundation for a future network.

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What is BRT?

- Bus-based system that improves speed, reliability and passenger comfort
- Combines stations, vehicles, services, running ways and ITS into an integrated system
- Reliability of rail transit with flexibility of bus transit

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Potential BRT Elements

- Exclusive Traffic Lanes
- Traffic Signal Priority
- Limited Stops
- Boarding Area Canopies
- Real Time Bus Arrival Signs
- Prepaid Boarding
- Streetscaping
- Wide Doors
- Bus Floor Level Boarding
- High Capacity

Metrobus, Mexico City

SBS New York City

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BRT in the U.S.

Cleveland Health Line

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BRT in the U.S.

New York Select Bus – 1st (and 2nd) Ave.

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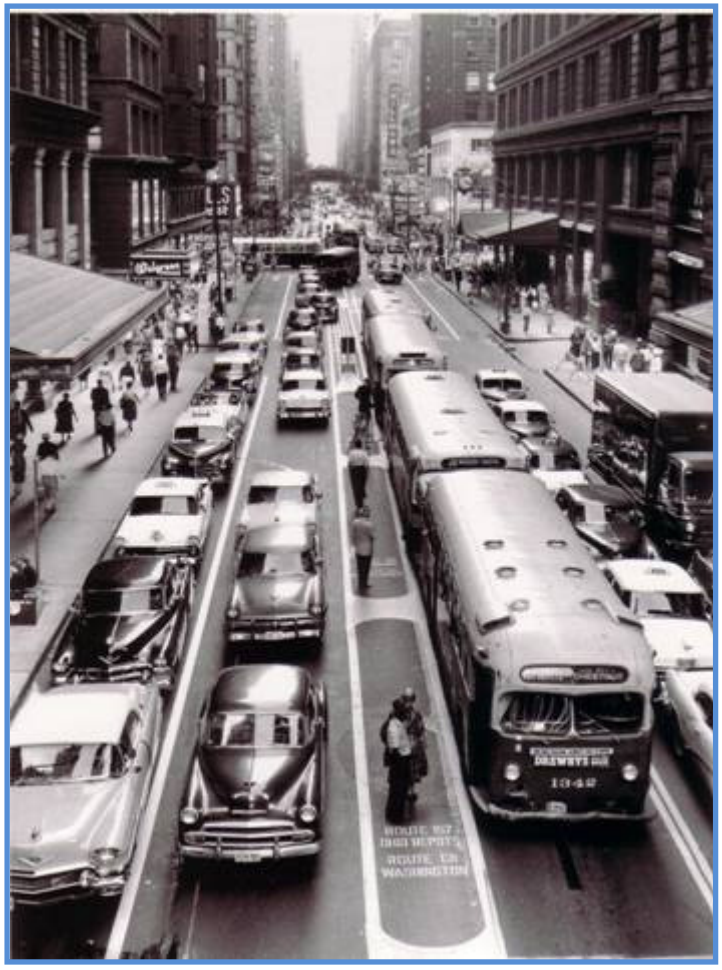
BRT in Chicago

- First exclusive bus lane on Washington in 1939
- Jeffery Blvd. later in 2012
- Western/Ashland study recently begun
- A role between rail and bus levels of service



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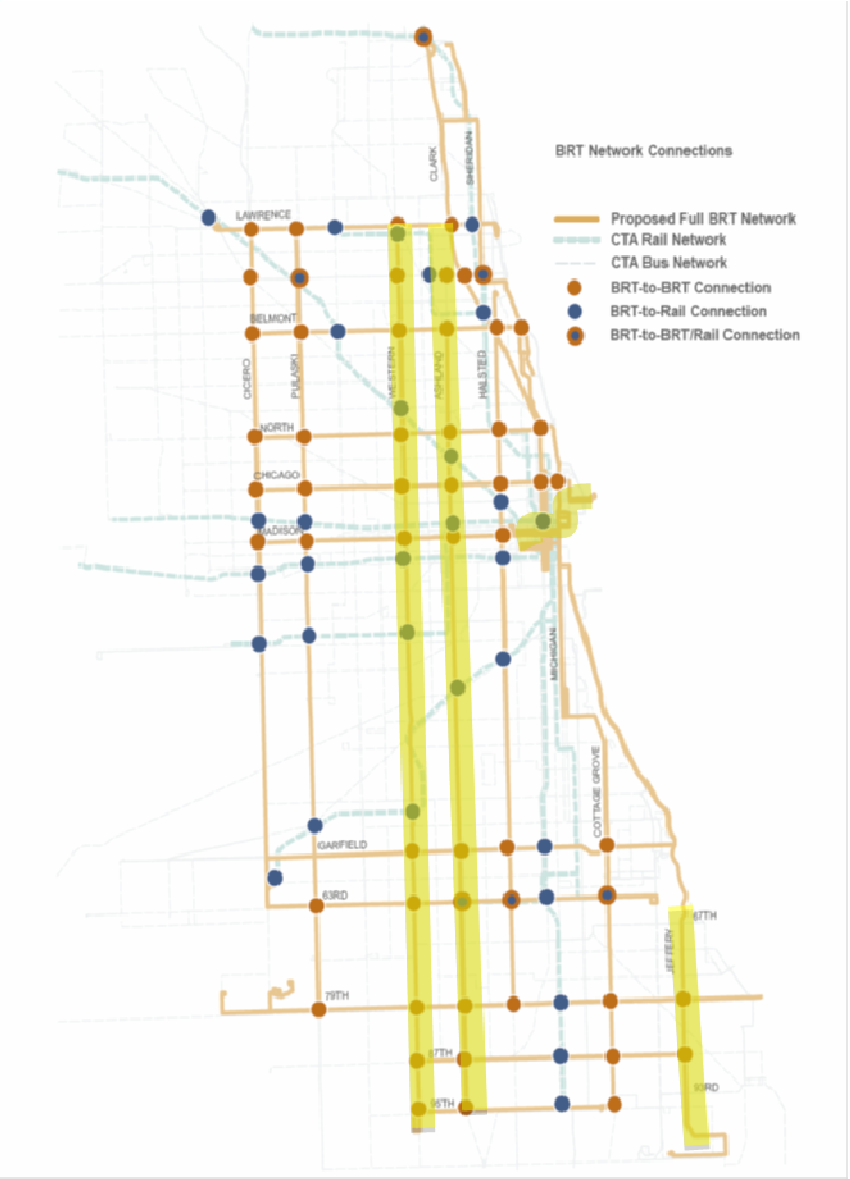
System Planning & Goals



- BRT is a very cost-effective way to increase service quality for all regardless of economic status.
- Shifting commuters from car to bus increases capacity of congested arterials and downtown streets
- Need to identify long-term investments in high-quality/high-capacity transit
- Serve new trips that are not currently served by the L
  - 26% of Chicago households do not own a car (transit dependent)
- Provide capacity relief to rail system by provide inter-line connections
- Solutions may vary to meet needs of each corridor
- CDOT recently secured UWP funds for detailed system plan to begin in late 2012

Jeffery BRT

Chicago's First BRT Route

- **Project Need:** Faster, more reliable service on local leg of well-used route that runs express to CBD via Lake Shore Drive
- **Status:** Construction this Summer-Fall 2012.
- **Funding:** $11 million FTA Bus and Bus Facilities (5309) grant
- **Key Elements:**
  - Rush Hour Bus Lanes from 67th to 83rd Street
    - 7-9 AM Northbound and 4-6 PM Southbound
    - First dedicated bus lane outside the Central Area
  - Transit Signal Priority (TSP) between 73rd–84th Streets (the longest section in Chicago)
  - Bus queue jump at 84th Street and Jeffery Boulevard (first queue jump in Chicago)
  - Enhanced CTA buses with unique branding and internal LED Bus Tracker screens
  - New and upgraded bus shelters with lighting and LED Bus Tracker screens
  - New street furniture and signage

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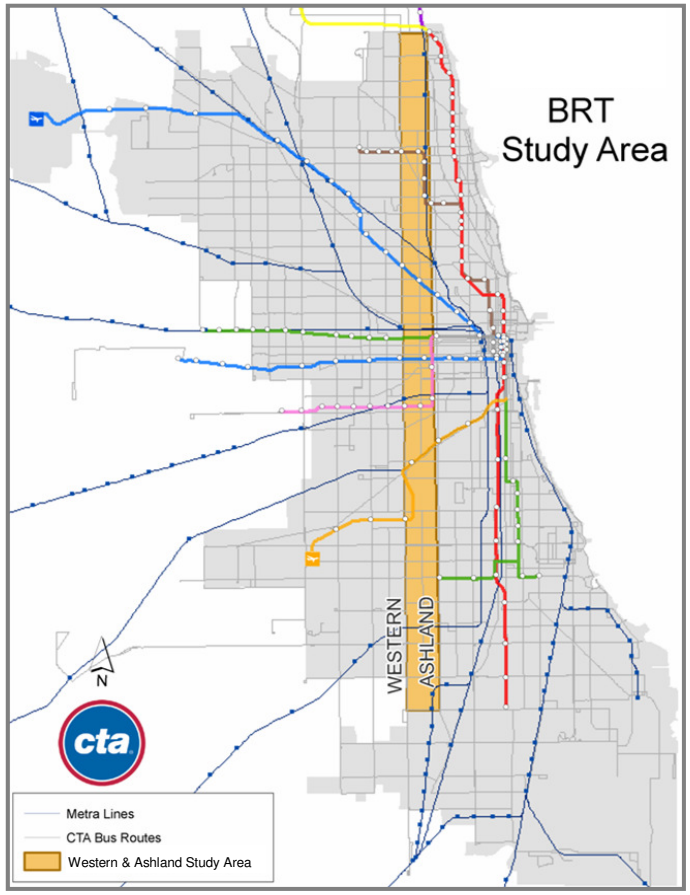
www.transitchicago.com/jefferybrt

Western and Ashland Corridors BRT



- **Project Need:** Improve service on 2 of 3 highest-ridership bus corridors in system, opportunity to implement new substantial cross-town, north-south transitways west of the central business district
- **Status:** Alternatives Analysis
- **Funding Sources:** $1.6 Million FTA Bus Livability Alt. Analysis
- **Schedule:** Alternatives Analysis through 2012, future phases dependent on funding availability
- **Key Elements:**
  - Includes a 21-mile linear corridor on Western and/or Ashland
  - Wide ROW corridor provides potential to implement substantial improvements
  - Design to be determined

Concept illustration - actual project location and details TBD

transitchicago.com/westernbrt

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Central Loop BRT Project Genesis

- A larger downtown has created the need for improved service on short trips.
- Increased rail ridership to West Loop terminals and travel growth to East Loop/Streeterville – need for connections
- Prior efforts stalled due to cost
  - CUTD subway (1968)
  - Circulator light rail (1995)

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Central Area Plan

- Transit Recommendations
  - Increase CTA and Metra Rail and Bus Capacity into Downtown
  - Provide improved transit distribution around downtown
  - Improve intermodal connections including rail-to-rail and rail-to-bus
  - Provide express rail service to the airports

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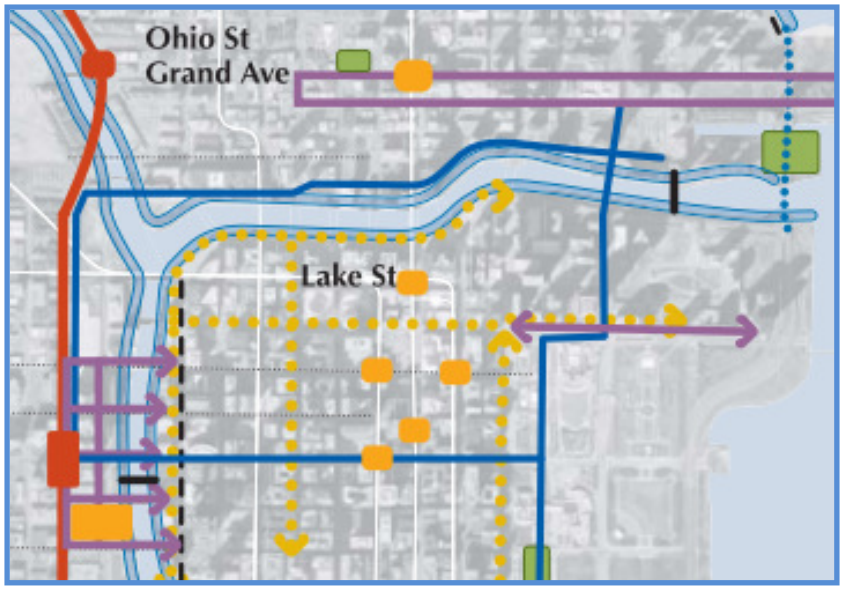
Central Area Plan

- Central Area Plan of 2003, was updated in 2009 as the Action Plan
- New system of transitways to allow faster transit connections
  - Carroll Ave
  - Clinton Corridor
  - Monroe Busway

    -> Central Loop BRT



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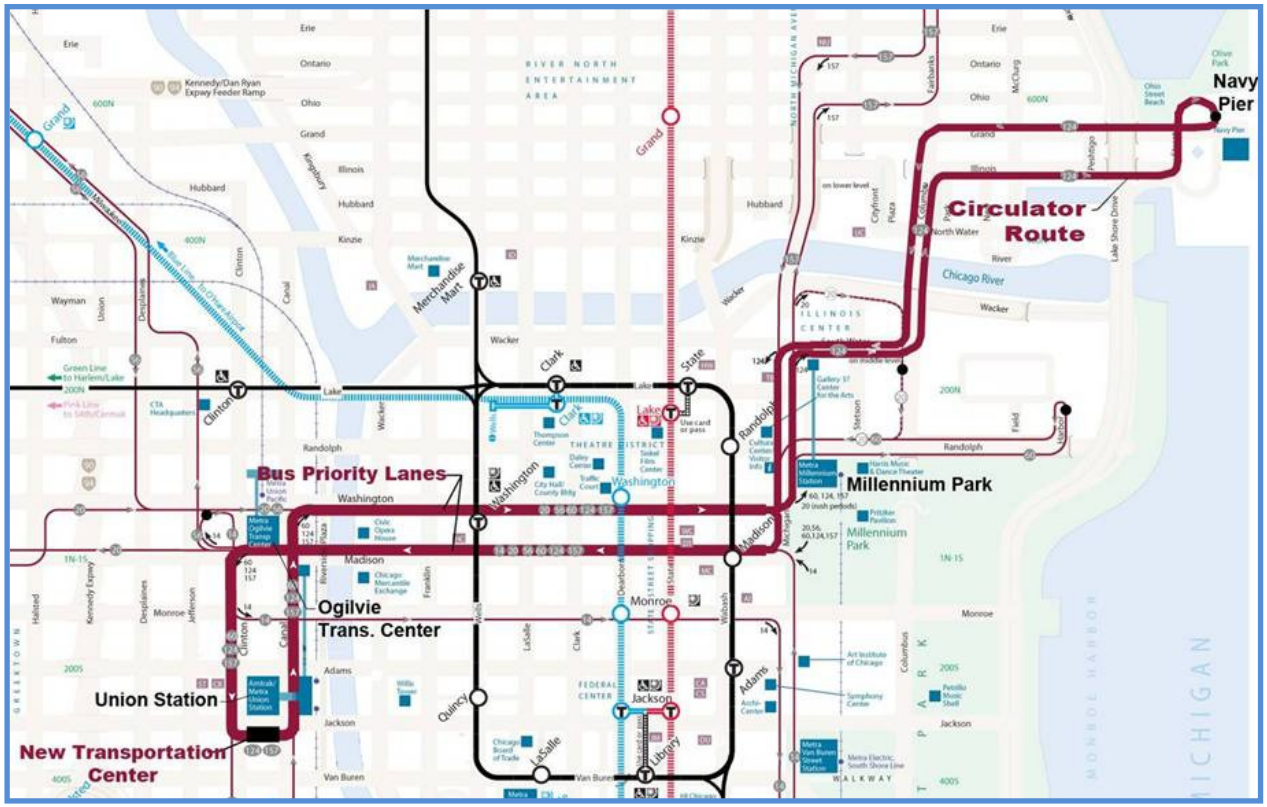
FTA Grant

- Union Station Transportation Center (Const.)
- Central Loop (East-West) BRT Lanes
- Branded “Urban Circulator” route to Navy Pier



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Project Purpose

- Improve mobility in Central Area for residents, employees and businesses
- Provide faster, more reliable bus service
- Accommodate projected growth in trips
- Manage congestion
- Transit that is easy to use and understand
- Allow incremental improvements to service
- Build off of existing infrastructure
- Intermodal connections including rail-to-rail and rail-to-bus

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Needs to be met

- Downtown has grown beyond the original Loop: River East, Streeterville, Navy Pier, Michigan Avenue, West Loop.
- More travel within Central Area due to more jobs and residences
- Congestion (USTC due to congestion on Canal)
- High demand – 1000 daily buses, 28,000 trips
- Access to Ogilvie/Union mostly on foot
  - Metra mode share drops outside walking distance from stations
- No CTA rail to Streeterville, Illinois Center
- Speed: Bus can be as slow as walking (3-5mph)
- Reliability: 16% of peak hour buses delayed
- Complex service poorly understood

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Civic Benefits

- Convenient, expanded access to more downtown businesses and major destinations
- Connects workers to jobs in a reliable and timely manner
- Generates pedestrian traffic to businesses along the way
- Easier for nearby residents to get to work and conveniently conduct day-to-day affairs
- Can reduce need for privately contracted rail shuttles
- Demonstrates commitment to sustainable transport
- Could reduce auto-bus crashes

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Central Loop BRT Work Plan

- Bus Priority Lanes
  - Tinted pavement on Madison, Washington, Canal, Clinton
  - BRT Stations for level boarding
  - Enhanced Enforceability
- Union Station Transit Center
  - Sheltered boarding platforms for at least 6 CTA routes
  - Connects to existing pedway under Jackson (by Track 2)
- Branded, Enhanced Bus Service
  - Ogilvie & Union Station to N. Michigan Ave. & Navy Pier
- Video screens with Bus Tracker and other travel info
- Improvements for Pedestrians & Cyclists

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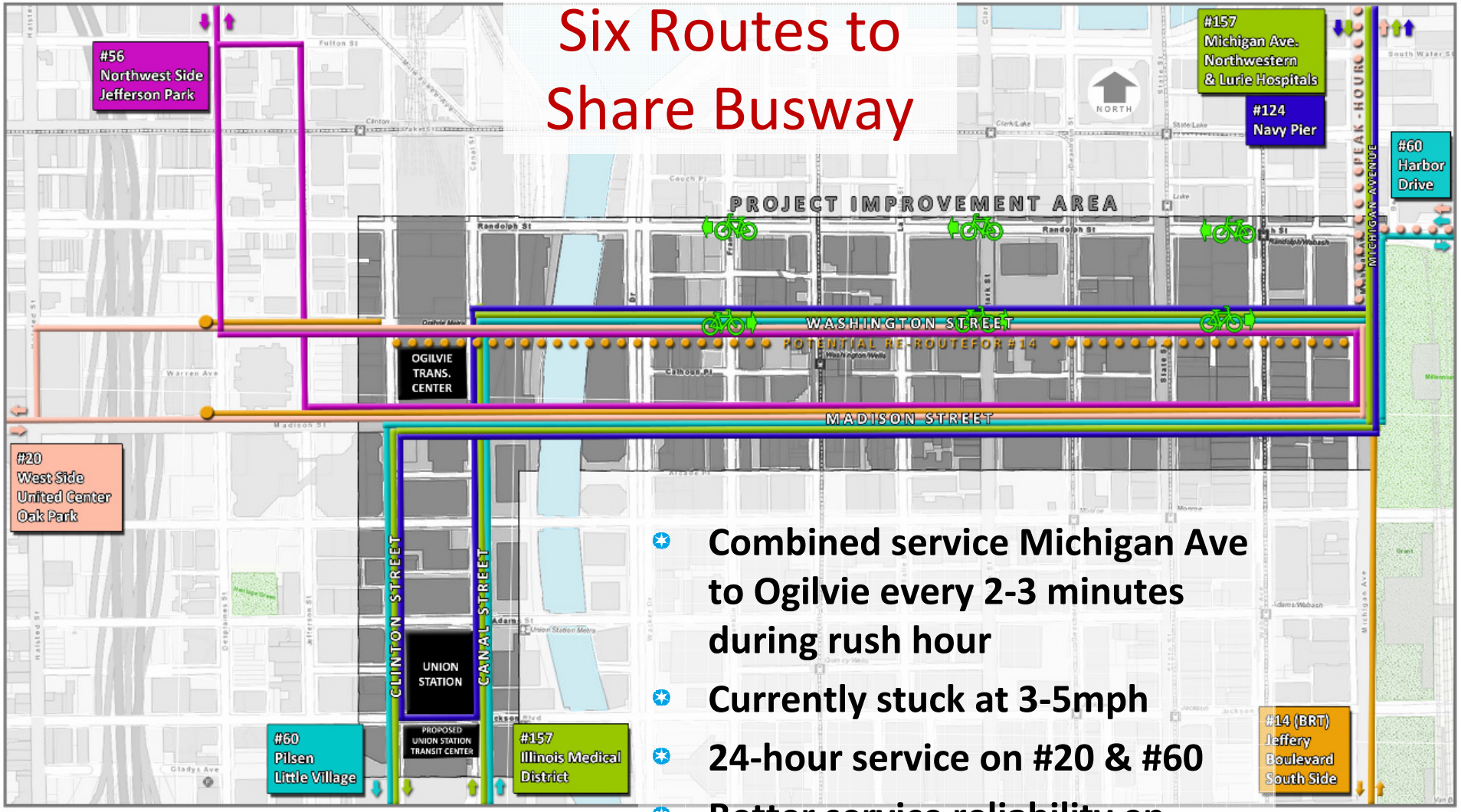
Six Routes to Share Busway



- **Combined service Michigan Ave to Ogilvie every 2-3 minutes during rush hour**
- **Currently stuck at 3-5mph**
- **24-hour service on #20 & #60**
- **Better service reliability en route to destinations citywide**
- **Also used by United Center Exp. and parts of other routes**

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Project Status

- Finishing required Federal environmental documentation (NEPA-DCE) for Busway and Bike Lanes
  - Must complete by June to meet 9/30 deadline for $24M+ grant for 80% of costs
  - Process focuses on identification of negative impacts, not benefits
    - Traffic, Construction, Environmental, Historic, etc.
  - Design work to date targeted to requirements of NEPA analyses
    - Lane configurations, traffic signals, types of construction needed, etc.
    - More design engineering work to follow after grant award
- Design just begun for Union Station Transportation Center
- Anticipated construction of both in 2014

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Design Concepts

- 3 design concepts under consideration with varying degrees of separation between buses, bikes and regular traffic lanes:
  - Option 1 - Basic
  - Option 2 - Balanced
  - Option 3 - Focused
- Final design may combine elements of different options
- Decisions on architecture, amenities, and landscaping come later - **ALL ILLUSTRATIONS TONIGHT ARE PRELIMINARY !**

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Option 1 - Basic

On Washington & Madison:

- Bus Lane on right curb
- Left turns cross Bike Lane
- Right turns enter Bus Lane
- Queue Jump signals at selected intersections
- Protected Bike Lane on **Washington,** regular Bike Lane on **Madison**

Example - Washington

Example - Madison

Option 2 – Balanced

On Washington:

- Bus Lane adjacent to Bike
- Island Boarding Platforms
- Buffered from Auto Lanes
- 2-Thru Auto Lanes with Turn Lane Pockets
- Curbside Protected Bike Lane

On Madison:

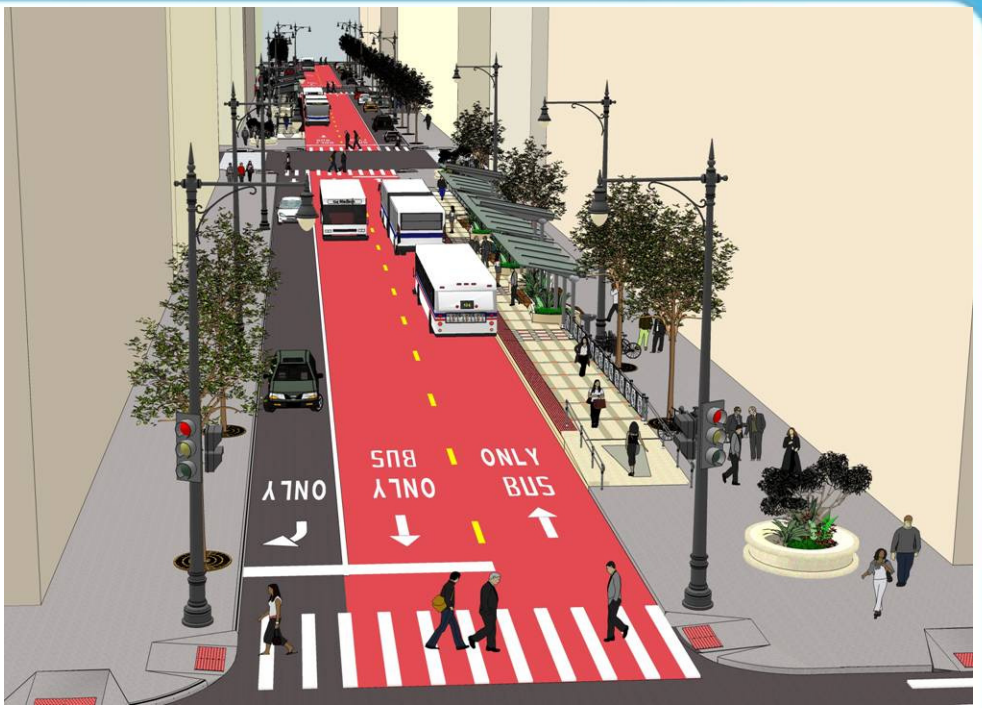
- Bus and Auto Lanes similar to existing
- Curb Extension Boarding Platforms
- 2-Thru Auto Lanes with Turn Lane Pockets
- Bikes relocated to Protected Bike Lane on **Randolph**

Example - Washington

Example - Madison

Option 3 - Focused

- Bi-directional Busway on **Madison**
- No Thru Vehicular Traffic (moves to Randolph & Adams)
- Single, Intermittent Access Lane to Alleys and Garages
- Block-long Curb extensions for Boarding Platforms and public open space
- Protected bike lanes on **Washington** and **Randolph**
- ***NOTE:*** *Requires outside funding beyond current grant.*



Example - Madison

Example – Washington/Randolph

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Evaluation of Options:

Factors to consider

- Travel time savings of bus service
- Traffic Impacts
- Parking and Curb Use Impacts
- Benefits or Impacts for Pedestrians
- Capital Cost
- Ridership
- Stakeholder and civic acceptance

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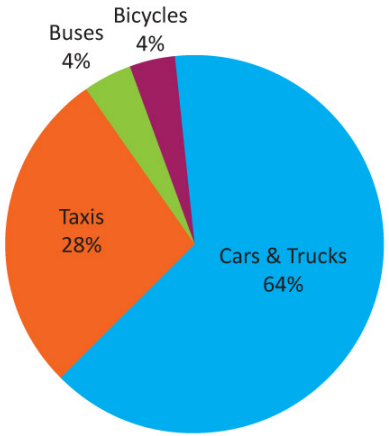
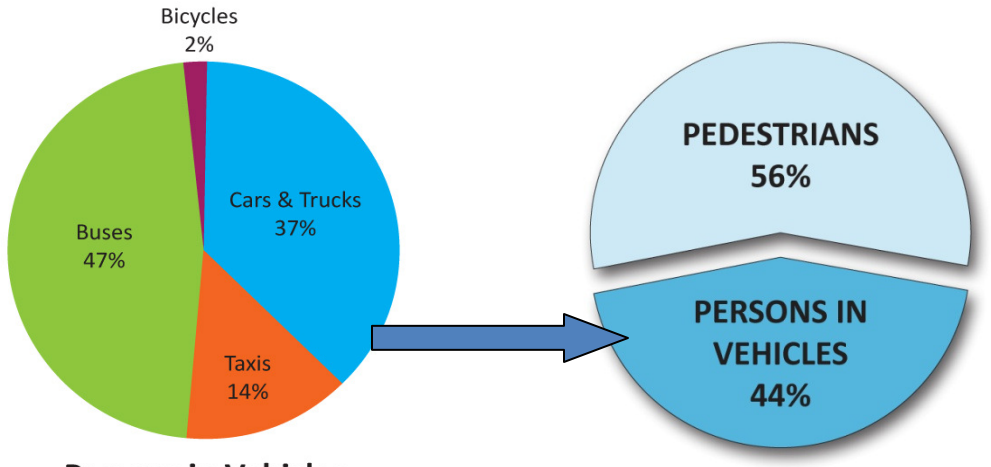
Traffic Stats



Vehicles

Traffic on Washington & Madison between Clark & LaSalle



Persons in Vehicles

On Washington & Madison between Clark & LaSalle

Daily Volumes

	Vehicles	Pedestrians
Washington	14,000	27,000
Madison	11,000	16,000
Canal	11,000	5,000
Clinton	4,000	5,000

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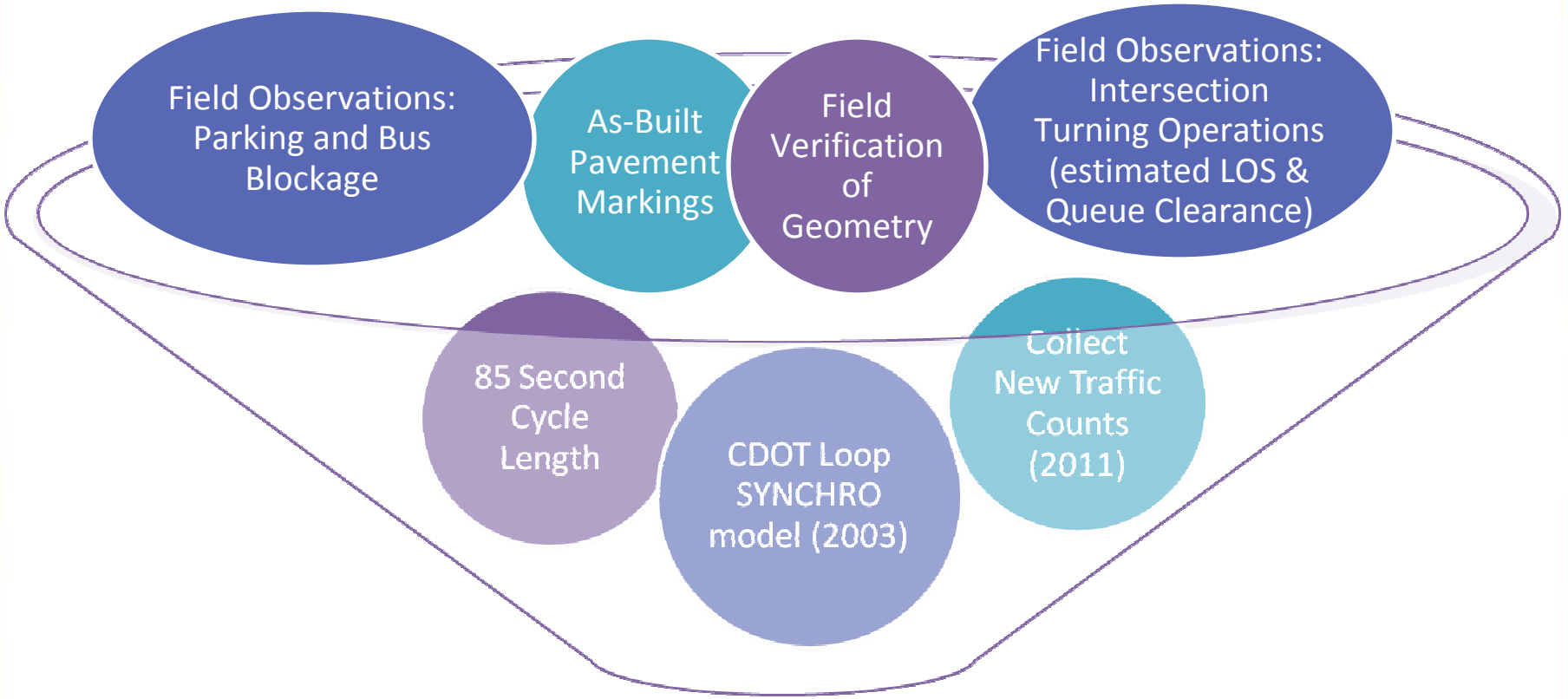
Traffic Facts

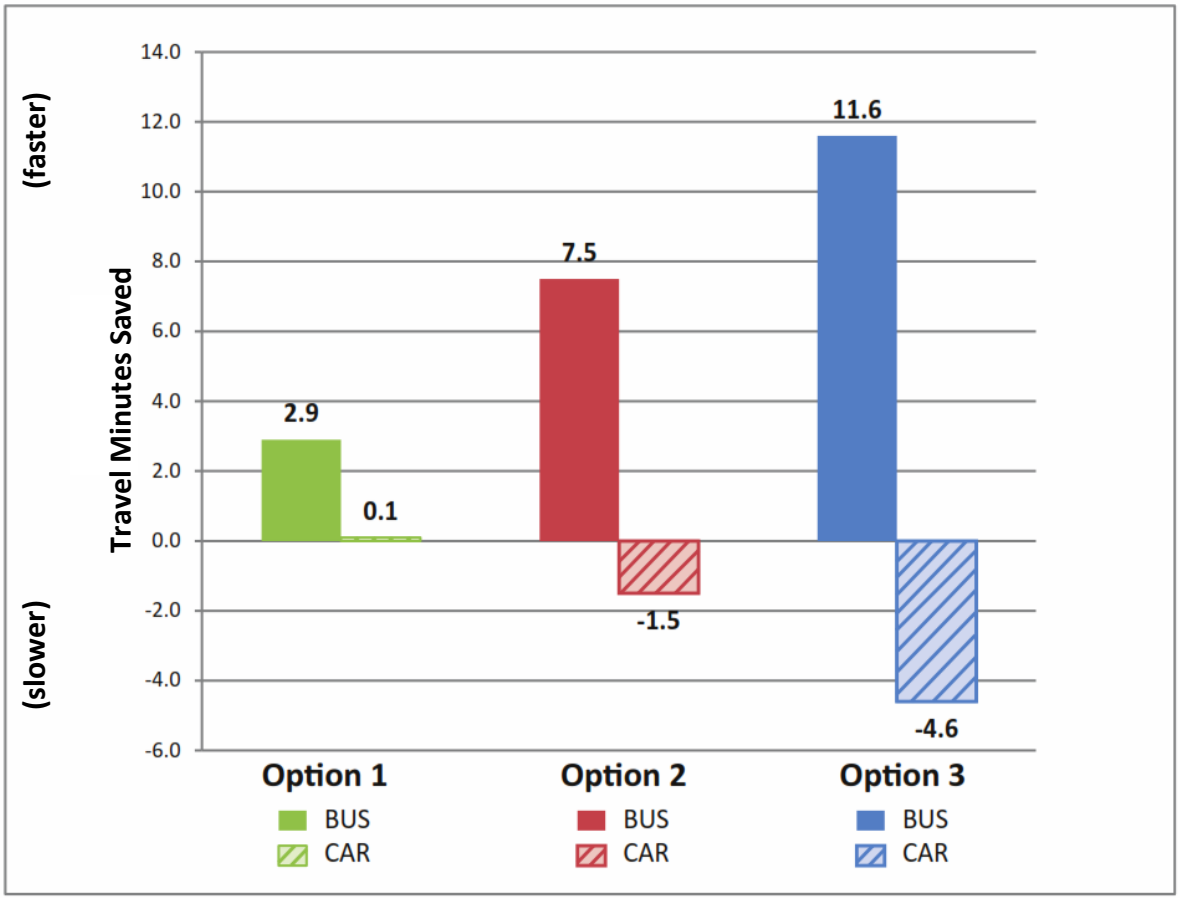
- Cars and trucks represent 64% of the traffic mix but only carry 37% of the total trips made by people across the Loop. Taxicabs are similar, being 28% of the traffic mix while carrying only 14% of trips.
- Because a single bus can carry so many people, while buses are only 4% of the total traffic mix they carry 47% of the trips made by people across the Loop in vehicles – a much more efficient means of travel.
- BRT improvements could improve overall bus travel times through the Central Loop corridor roadways by 3 to 9 minutes.
- BRT improvements such as dedicated lanes could reduce bus-related crashes by over 50%.

Traffic Analysis Methodology



Compare results with "No Build" scenario

Total round-trip travel time benefit



Net average user benefit
(47% Bus; 51% Car/Taxi)
Option 1: +1.41 min
Option 2: +2.76 min
Option 3: +3.11 min

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Bus Travel Time Savings are a factor of introducing:

- Dedicated Bus Lanes
- Optimized Traffic Signals
- Queue Jumps for Buses
- Turn Restrictions
- Increased Stop Spacing
- Level Boarding Platforms

Benefits and Drawbacks

- Option 1 - Basic
  - Benefits: Simplest to install, fewest impacts, within grant.
  - Drawbacks: Fewest benefits to transit users
- Option 2 – Balanced
  - Benefits : Most cost-effective, looks like a real improvement without dramatic change to traffic; closest scope to current grant amount.
  - Drawbacks : Greatest amount of curb use impacts to be resolved
- Option 3 – Focused
  - Benefits : Most like rail transit, best separation of bus from auto, creates new pedestrian and public space at corners
  - Drawbacks : Much more expensive, disruptive to westbound motorists, requires additional outside funds beyond current grant

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Union Station Transit Center

- Union Station serves 120,000 per day
  - Twice the volume of Midway Airport
  - Metra, Amtrak and Future High Speed Rail Hub
  - Served by 16 CTA Routes (8 full time, 6 peak, 2 specials)
  - … including three Busway routes: 60, 124 (Navy Pier), and 157
  - At rush by 380 taxis, 60 private shuttles, tens of thousands of peds
- Project Elements
  - Bus terminal with room for 12 buses to layover
  - Sheltered layover boarding
  - Direct access from South Concourse (“Track 0” pedway to garage)
  - On site of existing parking lot
- Already moving
  - Project already had CMAQ $ for design
  - Environmental conditional FTA approval (needs extra soil test before building)

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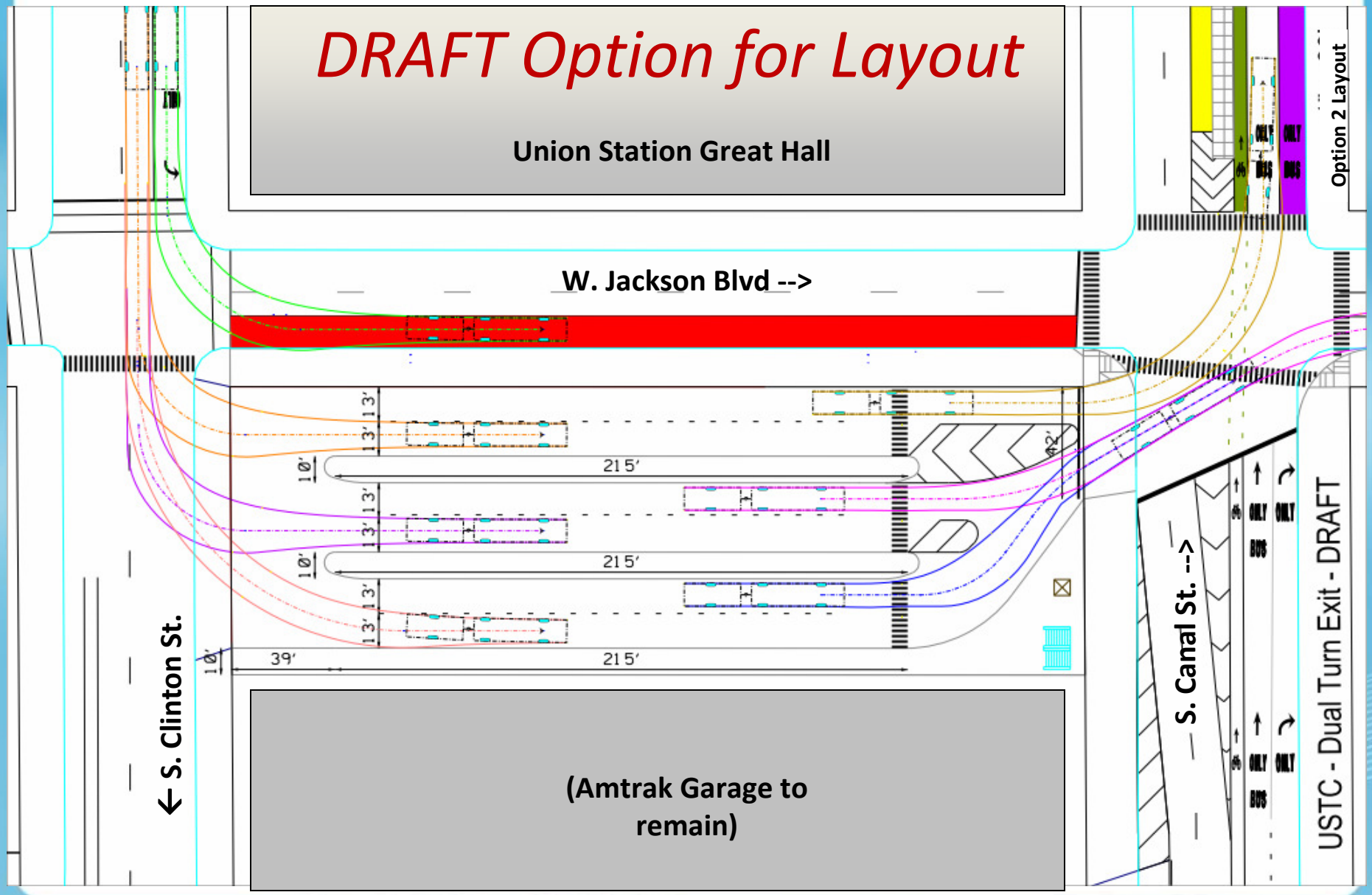
Union Station Transit Center

Original concept design

Union Station Transit Center



Total Project Cost Estimate vs. Grant Budget

(without/with contingency range on Busway estimates)

Option 1	$27.7 - 30.3M
Option 2	$34.2 - 38.1M
Option 3	$38.4 - 43.1 M
80%/20% Federal Grants	*$37.7 M*

- Federal Share of Funding Sources:
  - $24.6 M FTA special “Urban Circulator” fund
  - $5.6 M FTA Congestion Mitigation
  - $7.3 M TIF + $0.2 other match

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Central Loop BRT Project Timeline

Summer 2011- Spring 2012	NEPA (Environmental) Planning Process Develop options, model traffic, estimate capital costs, conduct environmental research
Spring 2012	Public Meeting/Stakeholder Outreach
May 17 2012	Apply to FTA for NEPA Approval
May-June 2012	NEPA Review by FTA
Sept. 30, 2012	FTA Grant Deadline
Fall 2012 to Fall 2013	Design & Engineering
Late 2013	Advertise for & select contractor
2014	Construction

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BRT in Chicago

Civic & non-profit Partners

Chicago Metropolitan
Agency for Planning

Our thanks to CAF who will be hosting "Ticket to Ride: a panel discussion on BRT"

CHICAGO ARCHITECTURE FOUNDATION

Wed, June, 6
6:00 PM - 8:00 PM

Advance reservations are required.

A reception precedes the panel discussion.

Join transportation leaders from across the country to explore how bus rapid transit relates to issues of economic development, urban revitalization, sustainability, and livability.

Panelists:

Joseph Calabrese, Director of Greater Cleveland Regional Transit Authority

Mike Setzer, Vice President, Veolia Transportation

Michael Scwartz, Transportation Planner, San Francisco County Transit

Ted Orosz, Director, Long Range Bus Planning MTA New York City Transit

Gabe Klein, Commissioner, Chicago Department of Transportation

Forrest Claypool, President, Chicago Transit Authority

Moderator:

Peter Skosey, Vice President, Metropolitan Planning Council

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THE CHICAGO COMMUNITY TRUST AND AFFILIATES

This program is made possible through the generous support of The Rockefeller Foundation in partnership with The Chicago Community Trust.

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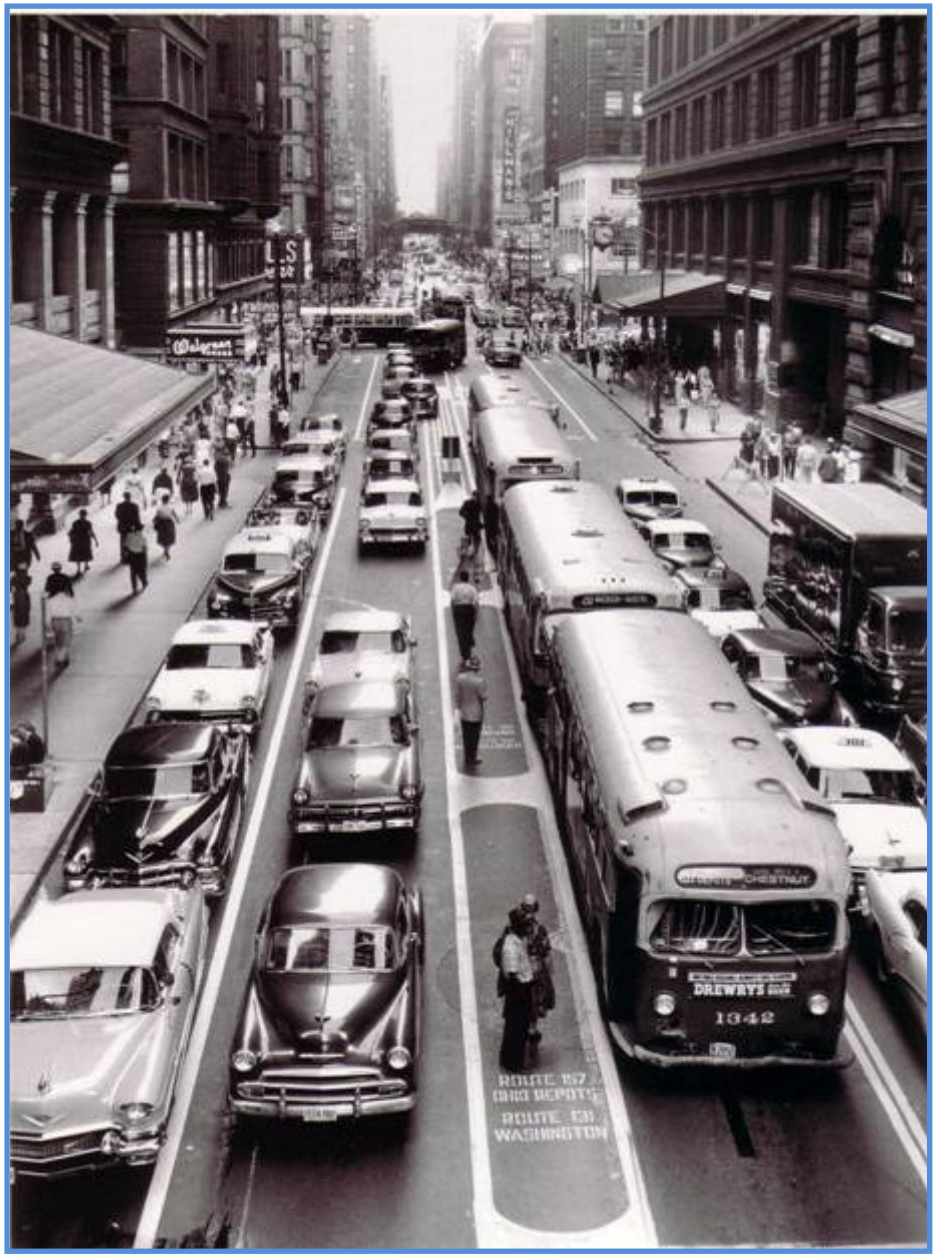
Questions?



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Thanks for coming tonight

Comments

Your comments are welcomed and needed.

Please use the comment box or e-mail CentralLoopBRT@cityofchicago.org in the next week.

Open Session

The project team will stay tonight until 7:30 to discuss options further.

Tonight's Presentation

has been posted at www.chicagodot.org for your convenience

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