

Central Corridor Light Rail Transit

Central Corridor Management
Committee

February 13, 2008



*Improving
mobility*

*Easing
congestion*

*Strengthening
our communities*

Today's Agenda



- Review recent public involvement
- Technical reports
 - Vehicle maintenance facility (VMF)
 - Traffic analysis
 - Bus transit service improvements
 - Response to DCC report
 - Schedule
- Funding commitment and cash flow analysis
- CEI and cost history
- Project scope scenarios



Central Corridor Light Rail Transit



January Informational Meetings and February Listening Sessions

2/13/08 CCMC

Public Update Meetings



- Held 7 meetings at different dates, times & places on corridor
- Presented project overview
- Provided opportunity for public to talk to engineers
- Talked with over 400 people
- Showed video of presentation on cable access & website

Listening Sessions



- 4 listening sessions
- 300+ people attended
- 88 people spoke
- 100 emails and letters received
- 2 petitions submitted

Summary of Comments



- Add stations at Hamline, Victoria, Western
- Don't add additional stations
- UofM East Bank
 - Build a tunnel
 - Run at Grade
 - With auto traffic
 - With transit/pedestrian mall
 - Look at northern alignment



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Vehicle Maintenance Facility

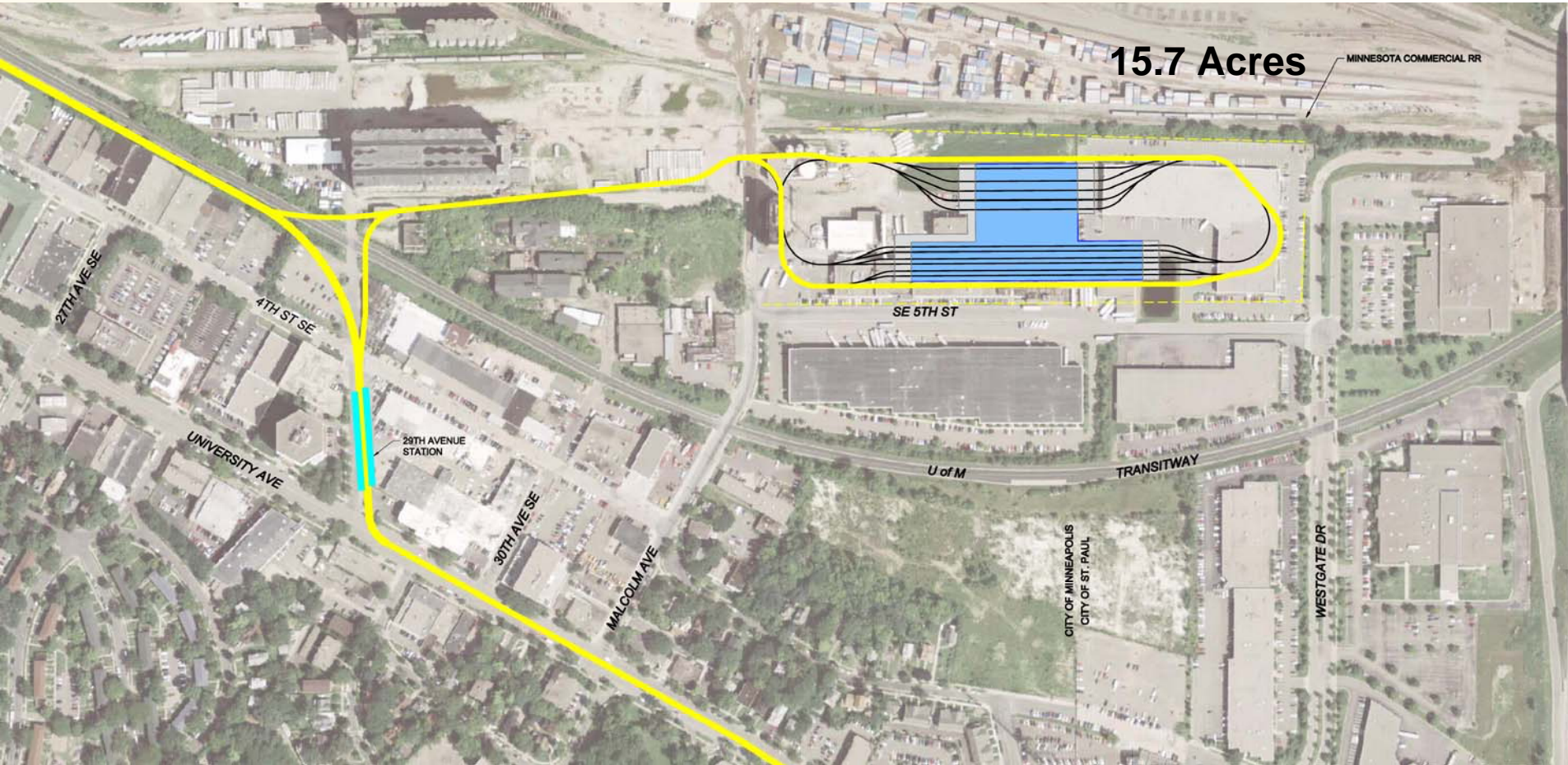
Vehicle Maintenance Facility



- DEIS proposes expanding Franklin O&M Facility
- Franklin O&M expansion needed to accommodate Hiawatha fleet expansion to 3-car trains
- Need Central O&M facility
 - Storage/routine maintenance
 - Need ~15-20 acres
 - Evaluated two potential sites

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Potential Location Minneapolis SEMI



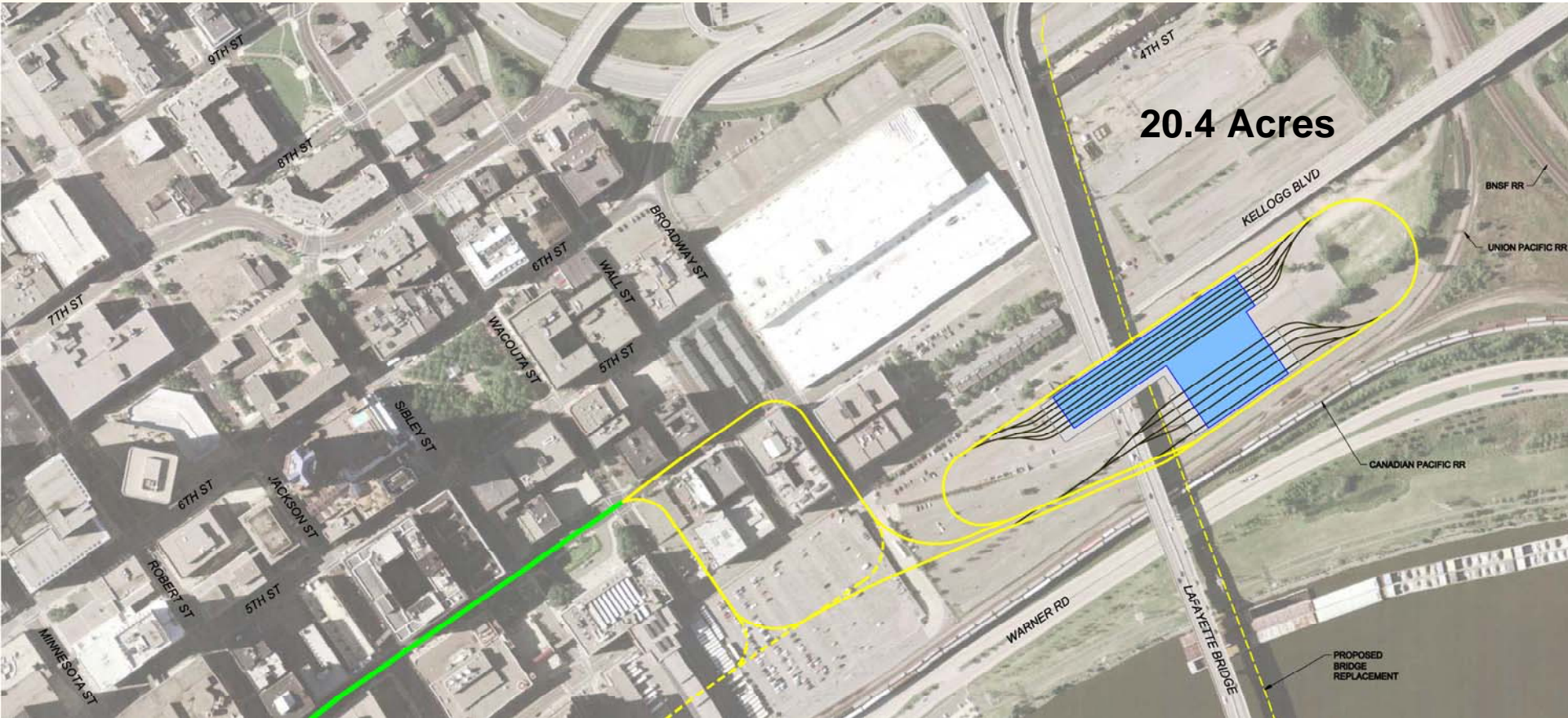
Potential Location Minneapolis SEMI



- Private ownership, would require acquisition
- Current uses include
 - Commercial
 - Warehouse
 - Operating and abandoned railroads
 - Rail yards and maintenance
- Minneapolis SEMI Small Area Plan calls for mixed use redevelopment

Potential Location St. Paul Lowertown

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Potential Location St. Paul Lowertown



- In public ownership
- Former tracks for St. Paul Union Depot
- Under Lafayette bridge,
 - Considered for replacement
 - Requires construction coordination w/ MnDOT
- Within St. Paul Airport Runway Protection Zone (RPZ)
- Redevelopment plans to the west
- Portions of site subject to potential flooding, requires mitigation



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Washington Avenue Traffic Analysis

Washington Ave. Traffic Analysis



- Evaluate traffic with & without LRT
- Conduct three traffic analyses
- Identify mitigation measures
- Design and estimate cost of mitigation
- Determine what improvements are responsibility of project, city, county



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Traffic Analyses Overview



- Study 1: Operation of Wash Ave with LRT and traffic, 2014
- Study 2: Impacts due to shortened tunnel, 2014
- Study 3: Small area study, function of 48 intersections, 2030
 - LRT at grade, Washington Ave. open to traffic
 - LRT at grade, transit/pedestrian mall, closed to auto traffic

Traffic Study 1

Operation of Washington with LRT and vehicles, 2014

Study to determine impacts to Washington Ave. with LRT operating at-grade or in tunnel



Traffic Study 1

LRT in Realigned Tunnel



Level of Service E, 2014

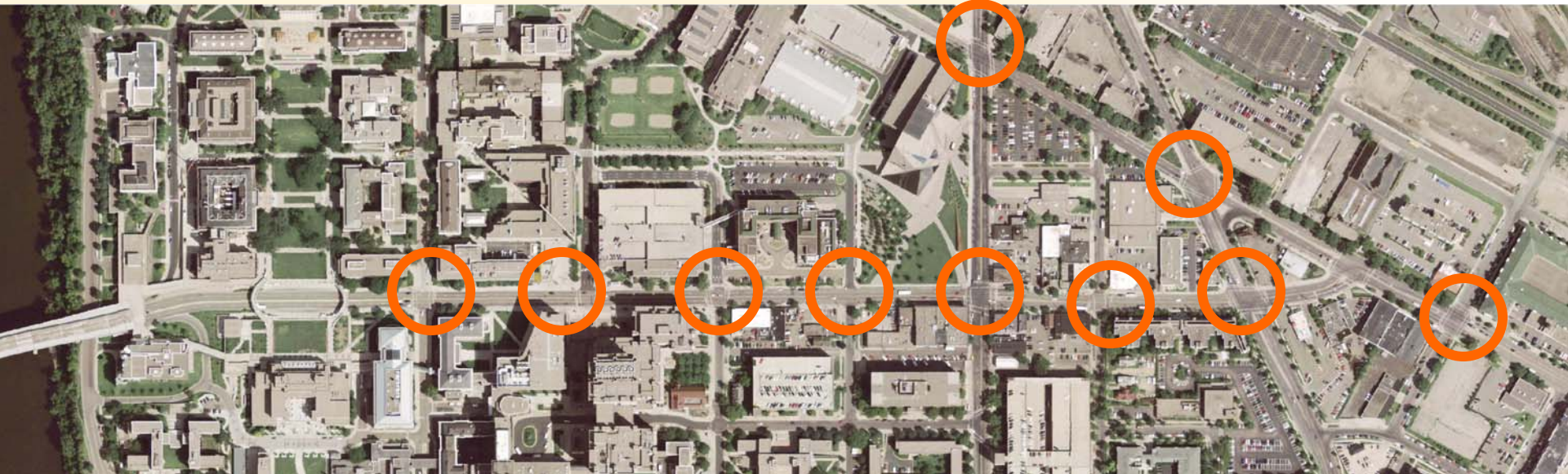


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Traffic Study 1

Initial Analysis, LRT At-Grade

December 2007

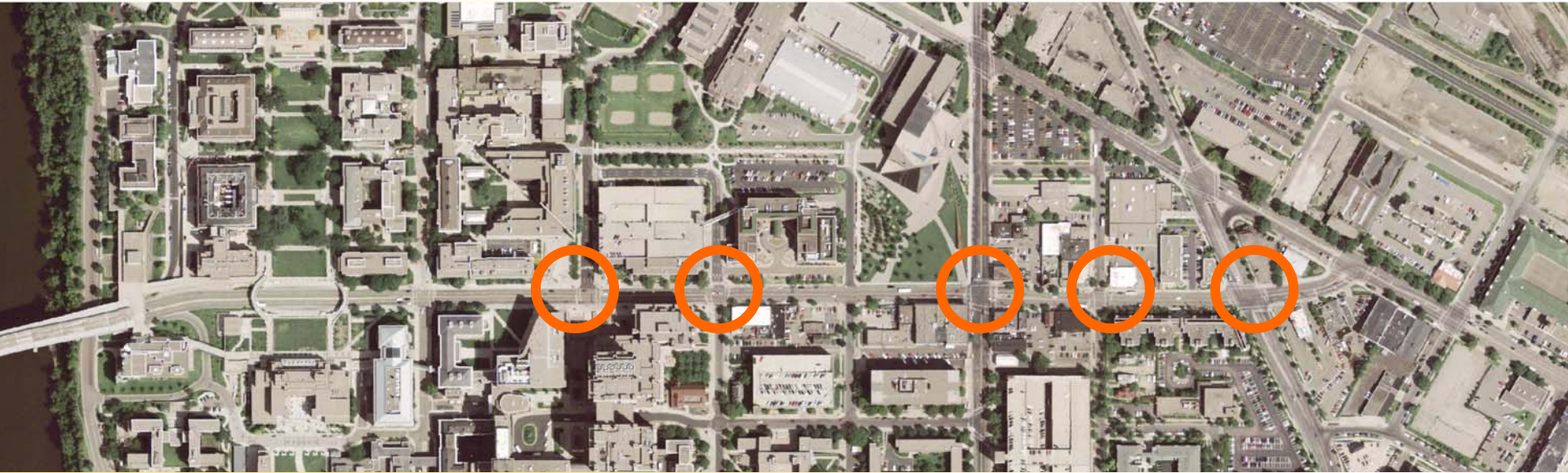


Level of Service E or F, 2014

Traffic Study 1

Revised Analysis, LRT At-Grade

January 2008



Mitigation strategies

- Left turn lanes at Harvard, Walnut, Oak, and Huron.
- Conversion of Walnut to one-way southbound.
- New bus stops at Walnut with pullouts



Level of Service E or F, 2014

Traffic Study 1

Revised Analysis, LRT At-Grade

February 2008



Additional mitigation strategies

- Closure of Union St. access to Washington Ave.
- Redistribution of parking ramp traffic
- Longer west bound left turn lane at Oak St.
- Prohibit east bound left turn lane at Huron



Level of Service E or F, 2014

Traffic Study 1

Next Steps



- Develop additional recommendations
- Goal of having all Washington Ave. intersections operating at level of service D or better in 2014 and 2030

Traffic Study 2

Value Engineered (Short) Tunnel Traffic Impacts



- Study to determine impacts to nearby intersections resulting from:
 - Option #1: Closure of Washington Ave. between Oak and Huron
 - Option #2: One way east bound traffic between Oak and Huron
 - Option #3: Two lanes, one eastbound, one westbound between Oak and Huron

Traffic Study 2

(Short) Tunnel Traffic Impacts

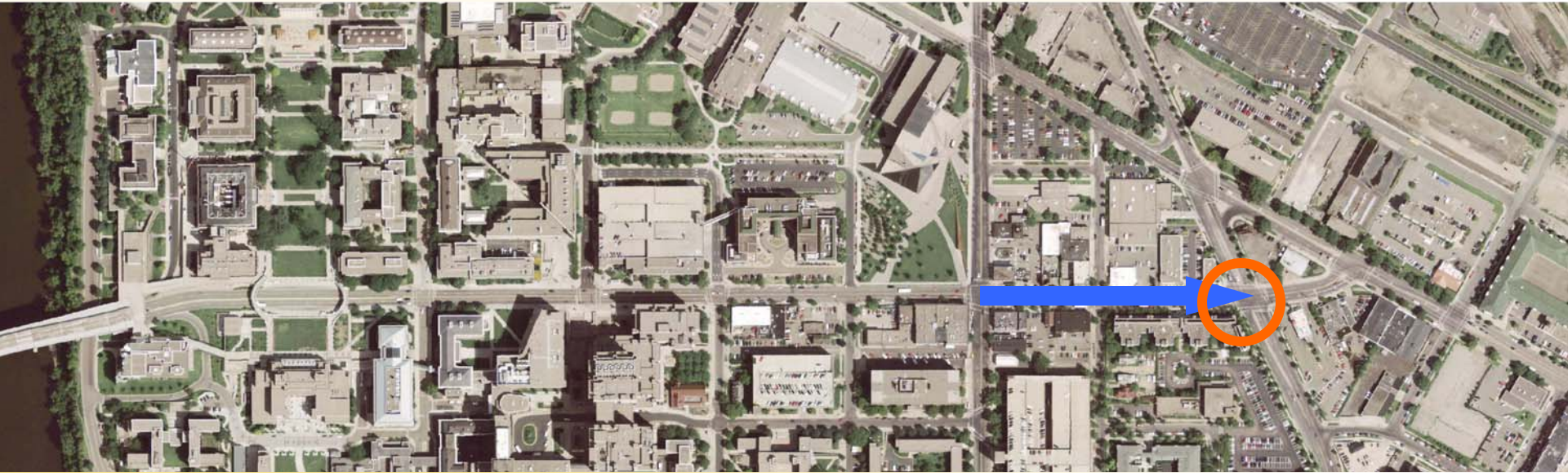


Option #1: Washington Ave. closed between Oak and Huron



Traffic Study 2

(Short) Tunnel Traffic Impacts



Option #2: One way east bound traffic between Oak and Huron

Traffic Study 2

(Short) Tunnel Traffic Impacts



Option #3: Two lanes, one eastbound and one westbound, between Oak and Huron

All intersections operate at an acceptable level of service (D or Better)

Traffic Study 3

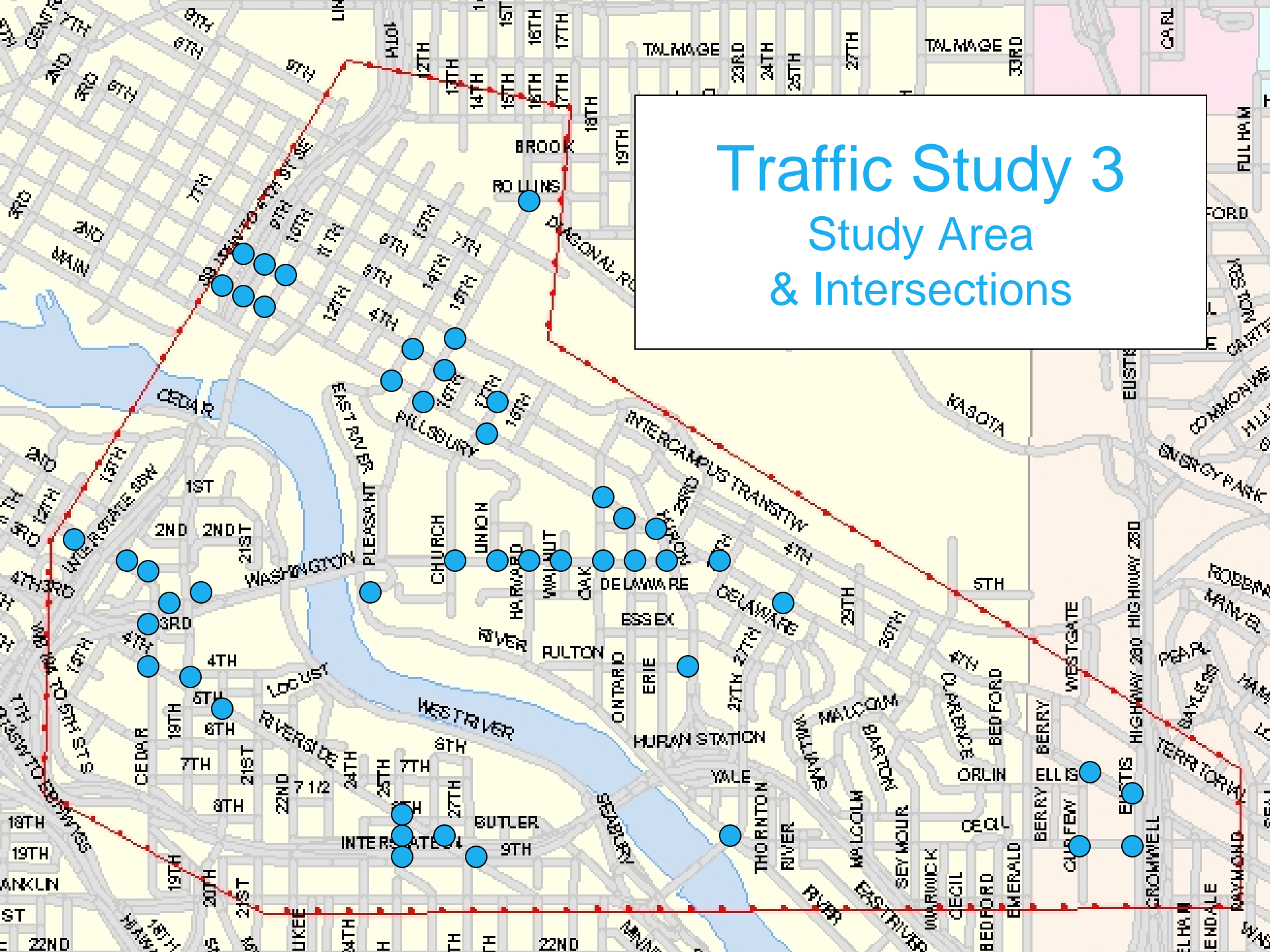
East Bank Area Traffic Study



- Study to determine impacts at 48 major intersections
- Study area covers 2.9 square miles
- Vicinity of the East Bank and West Bank
- Assumes a portion of Washington Ave. is closed and transit/ pedestrian mall is created

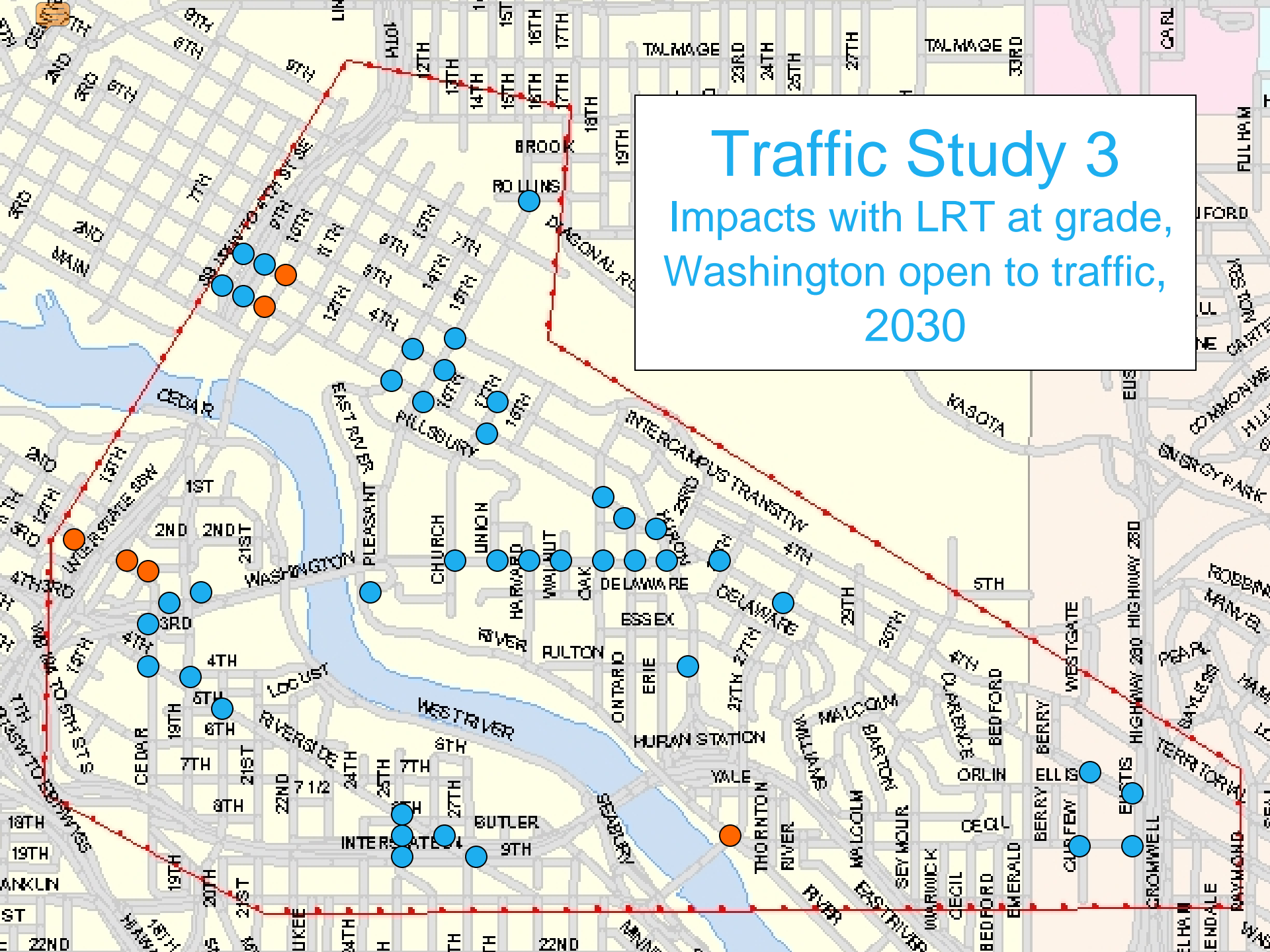
Traffic Study 3

Study Area & Intersections



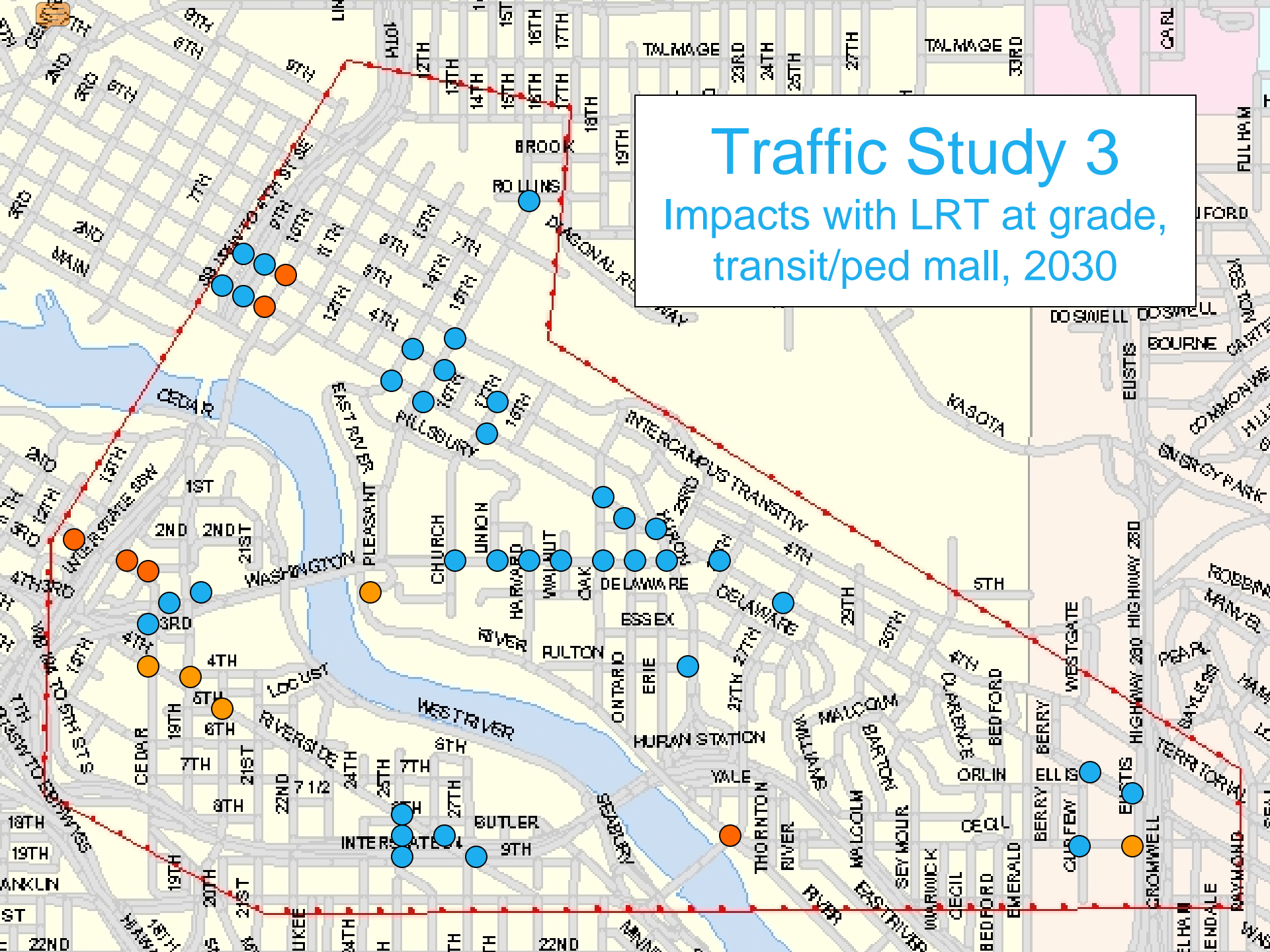
Traffic Study 3

Impacts with LRT at grade,
Washington open to traffic,
2030



Traffic Study 3

Impacts with LRT at grade,
transit/ped mall, 2030





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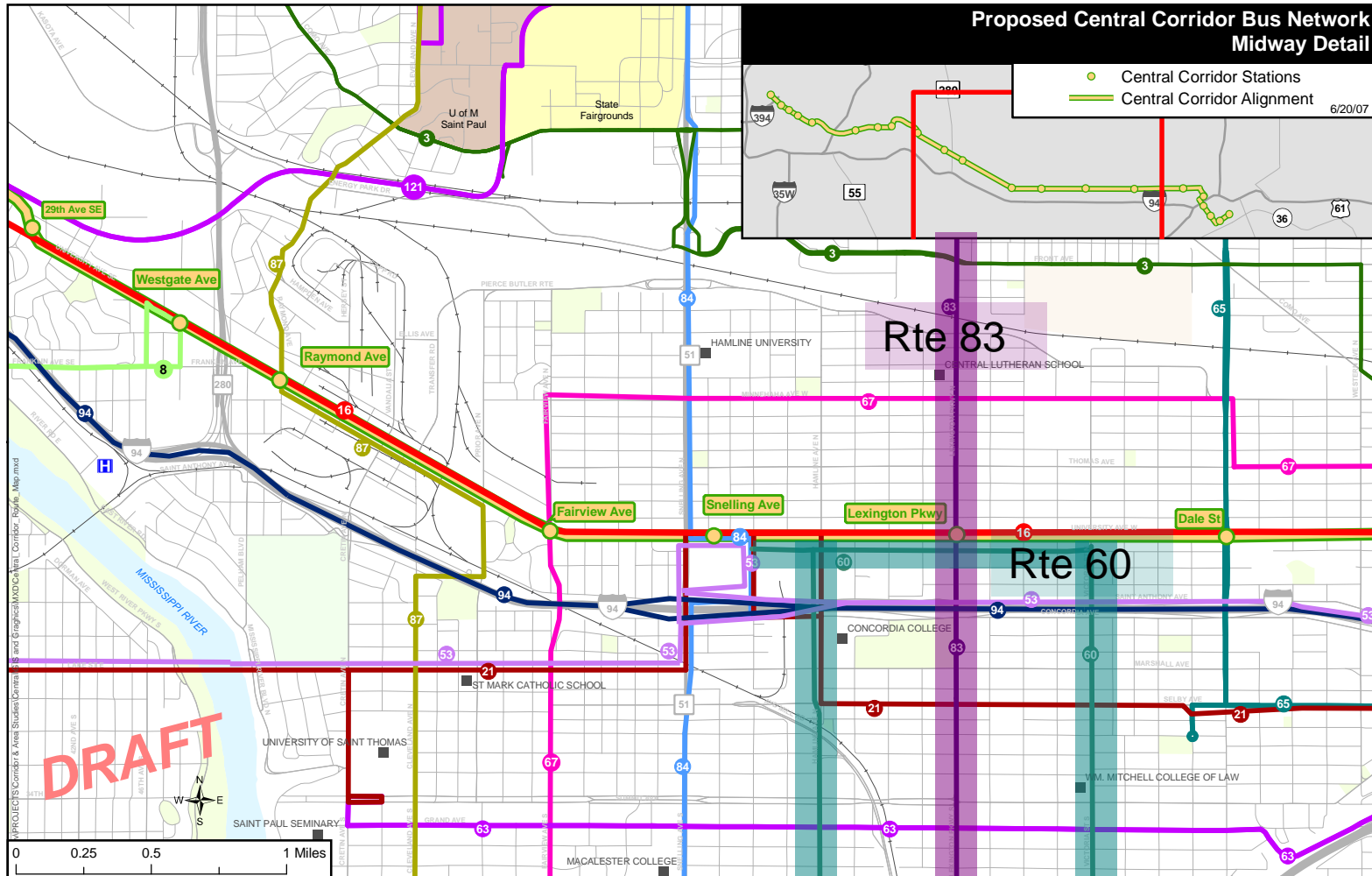


Bus Transit Service Planned Improvements

Connecting Routes



- Integrate existing radial and crosstown routes with LRT
- Restructure bus routes so most residents will be within $\frac{1}{4}$ mile of transit service





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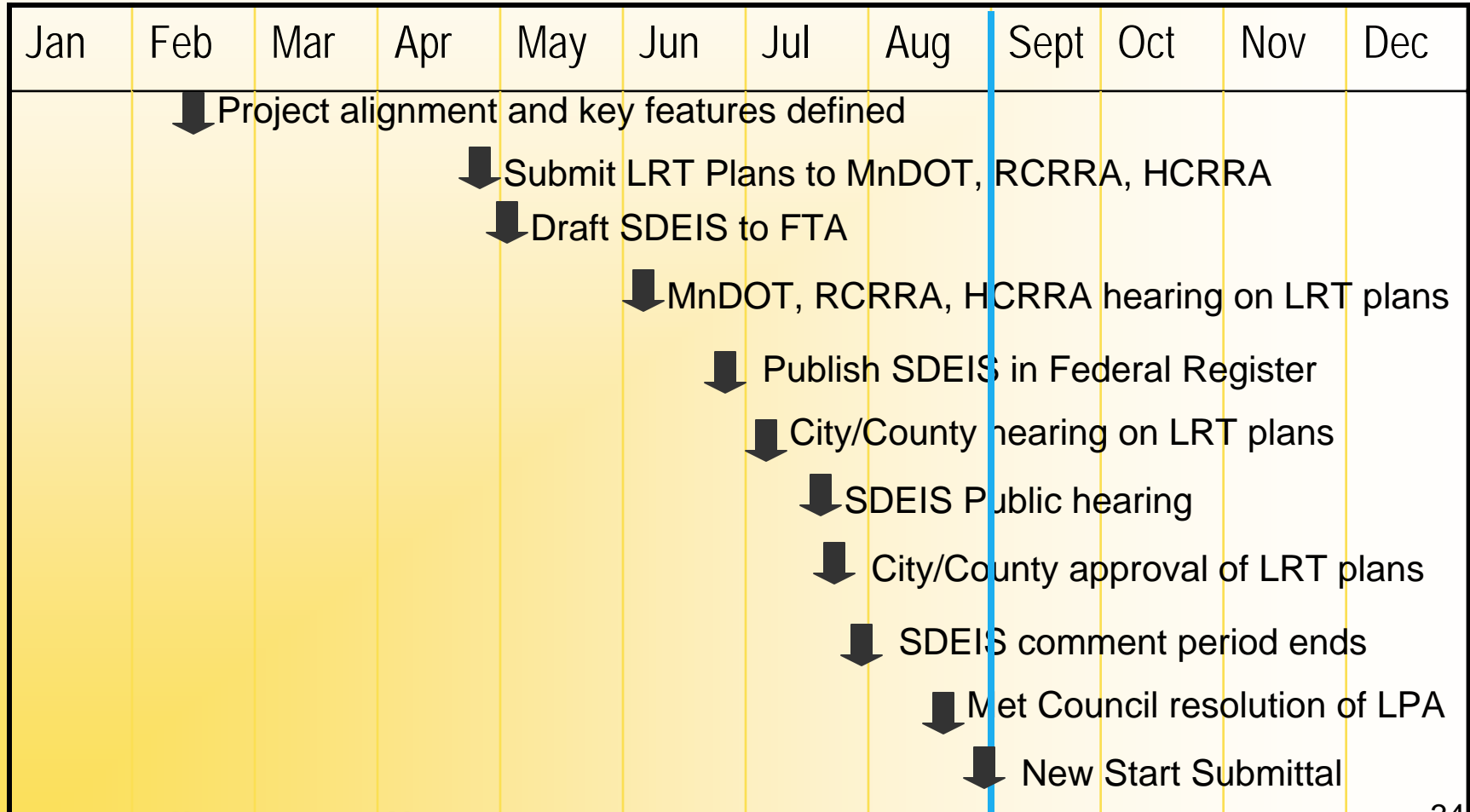


Schedule of Next Steps

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2008 Timeline

FTA
Submittal
Deadline





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Central Corridor Project Office response to the District Councils Collaborative additional station report

Hamline, Victoria and Western Reports



- DCC report suggests using an alternative ridership model to capture
 - Density and land use
 - Closer spacing
 - Weather
 - Feeder bus service
- Response
 - Must use FTA-approved methodology
 - Alternative forecasting requires FTA approval, would result in project delay

Hamline, Victoria and Western Reports



- DCC report discusses
 - Socio-economic impacts
 - Transportation service equity
- Response
 - Almost all residents will be within $\frac{1}{4}$ mile of transit service
 - Hiawatha LRT riders walk an average of 0.45 miles to station

Hamline, Victoria and Western Reports



- DCC report discusses opportunities for economic development and redevelopment
- Response
 - City of St. Paul Central Corridor Development Strategy identifies Hamline station area potential for major reinvestment
 - City of St. Paul would be responsible for planning future land use for Hamline, Victoria and Western station areas

Hamline, Victoria and Western Reports



- DCC report recognizes need to meet CEI of \leq \$23.99
- Response
 - Substructure for infill stations could be constructed as part of project
 - Full station could be constructed later with local and federal funds



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State and Local Funding Commitment & Cash Flow Analysis



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State & Local Funding Commitment & Cash Flow Analysis



- 50% local funding commitment required by August 2008 for Final Design
- 100% local funding commitment required by August 2009 for FFGA
- Minimal federal funding until FFGA
- Project cost estimated @ \$900 million
- Federal funding extends five years to fund four years of construction



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State & Local Funding Commitments In Place



Total

\$37,219,800

State/MC

\$13,048,000

RARRA

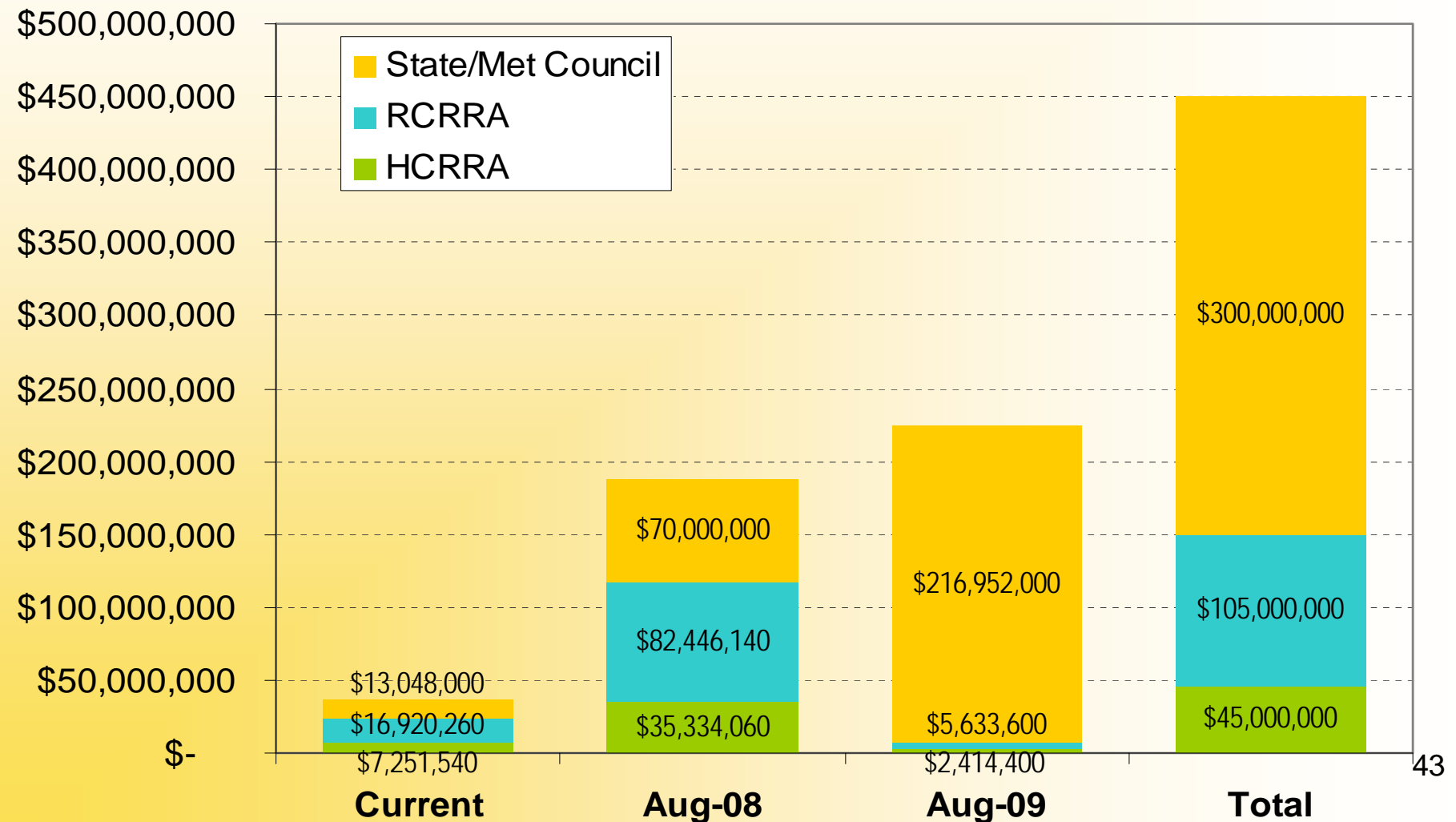
\$16,920,260

HARRA

\$7,251,540

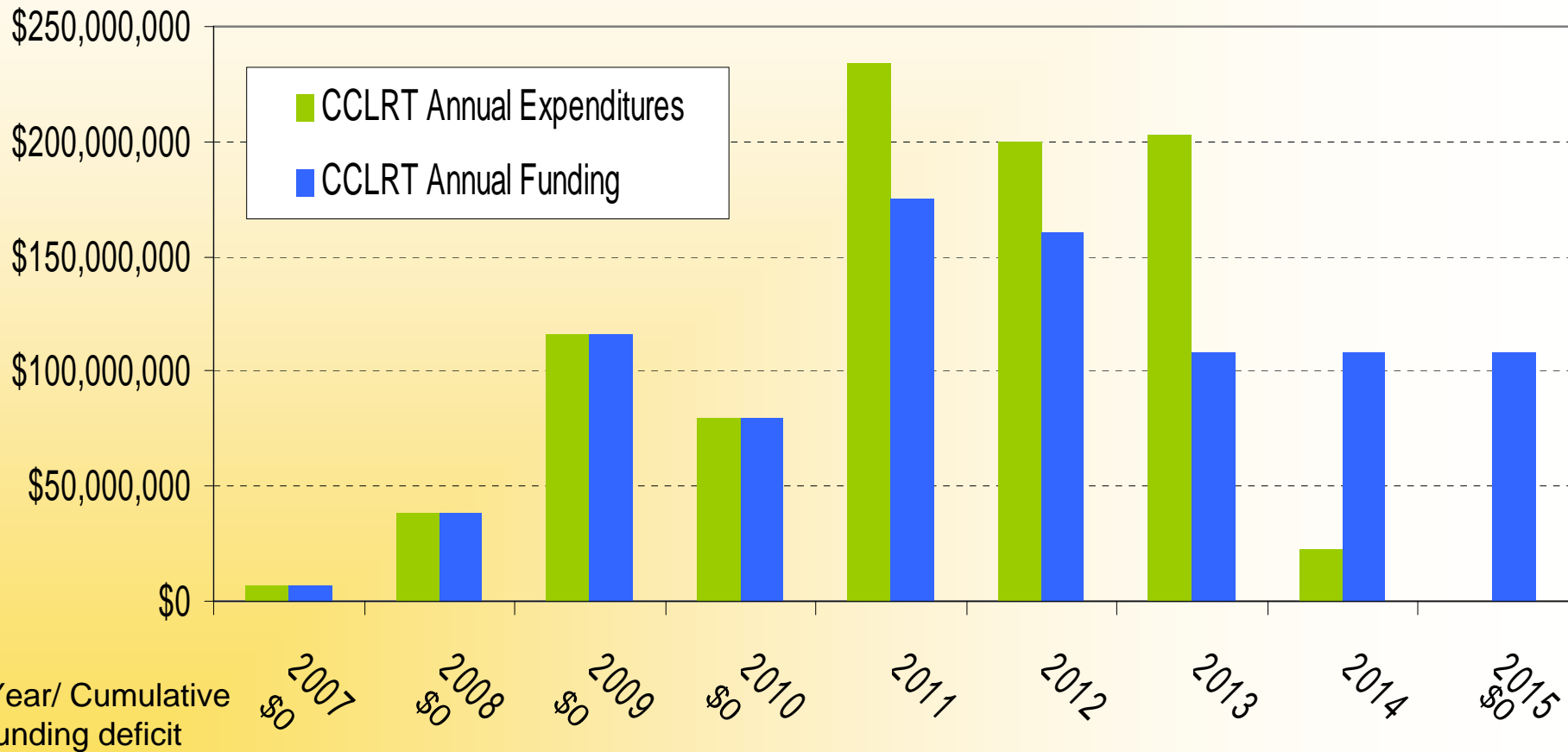
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State & Local Funding Commitments – By year Assuming \$900 MM Project



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Cash Flow Forecast



Year/ Cumulative
funding deficit

2007
\$0

2008
\$0

2009
\$0

2010
\$0

2011

2012

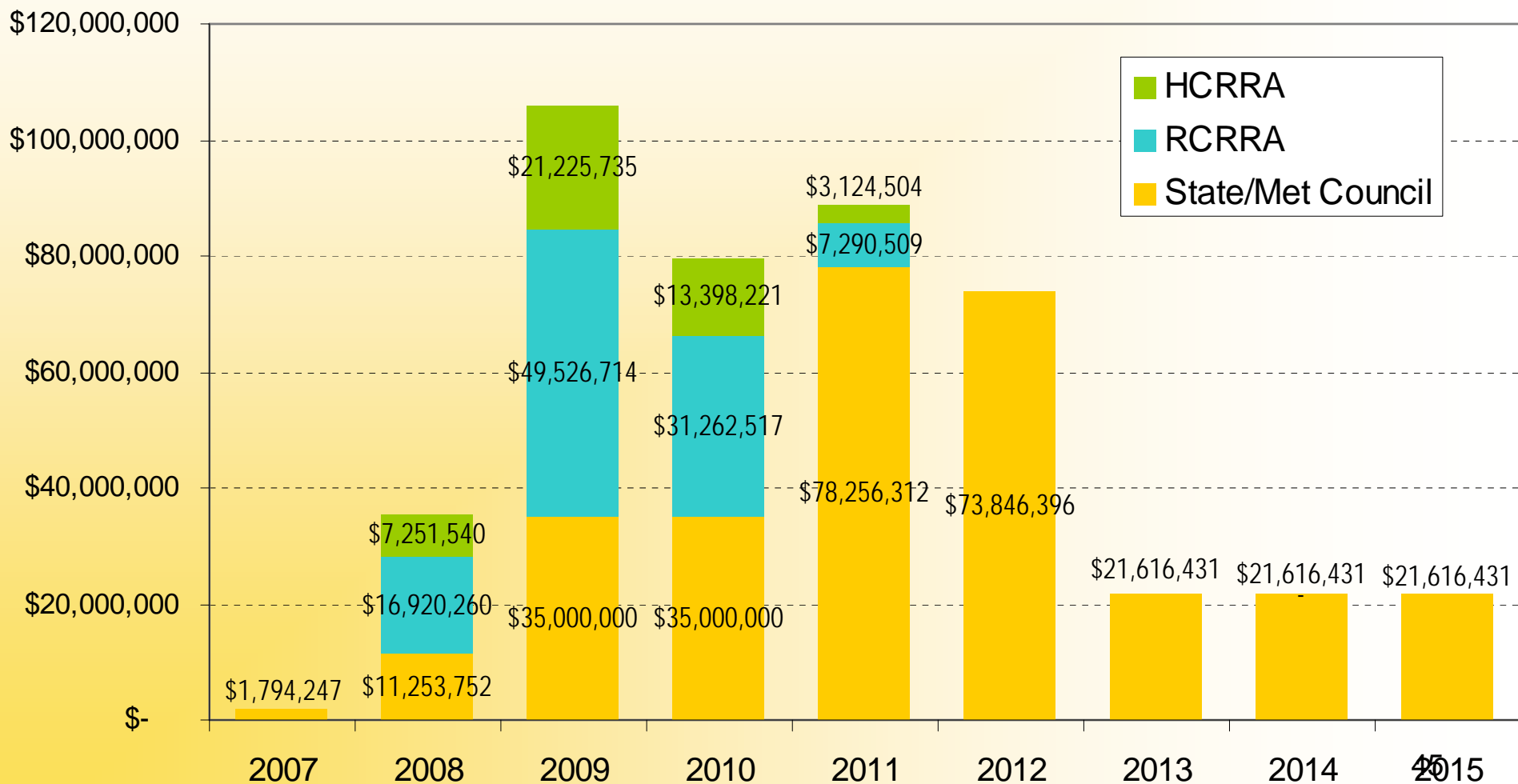
2013

2014

2015
\$0

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State & Local Funding Cash Flow Forecast





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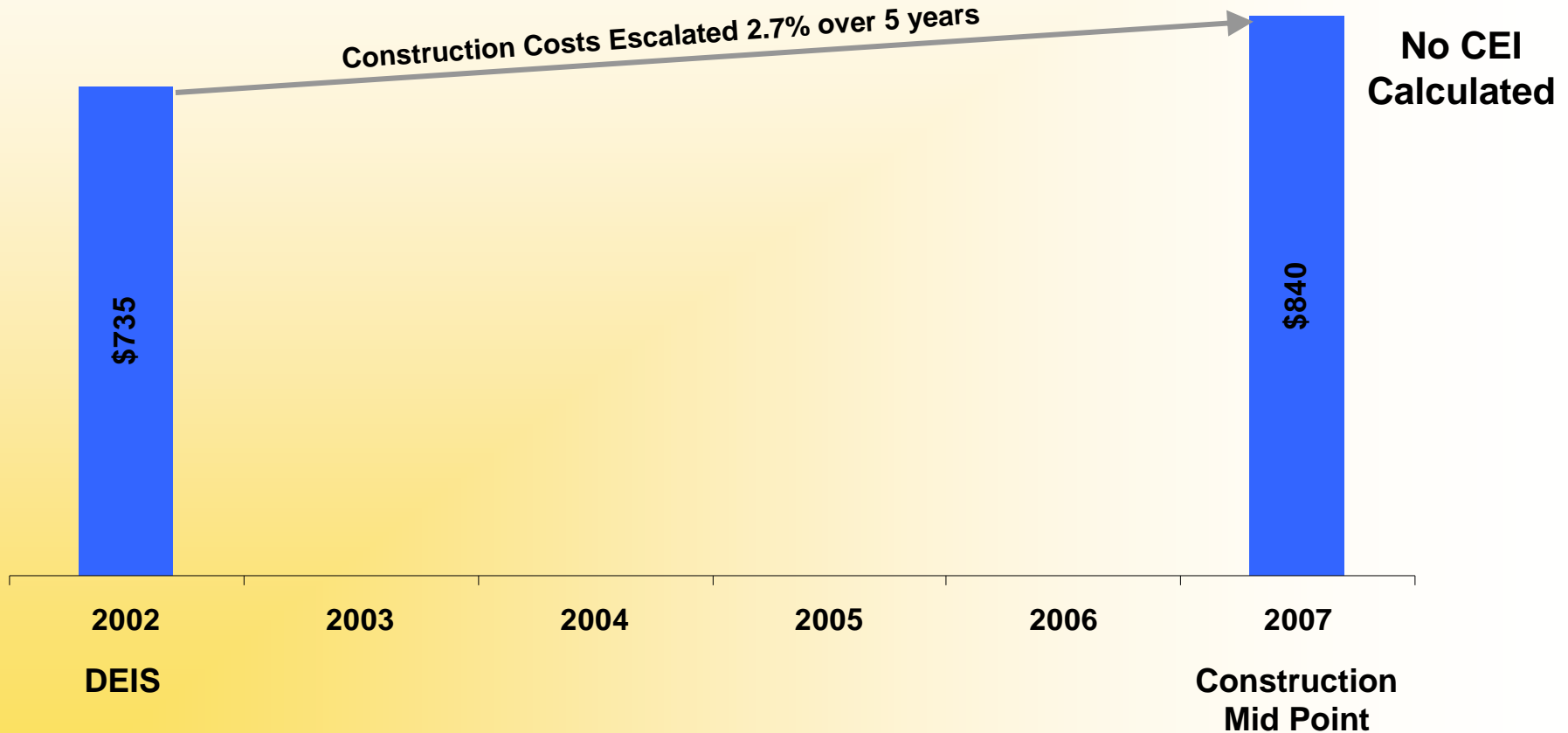


Project Cost/CEI History

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DEIS Capital Cost Est. April 2002

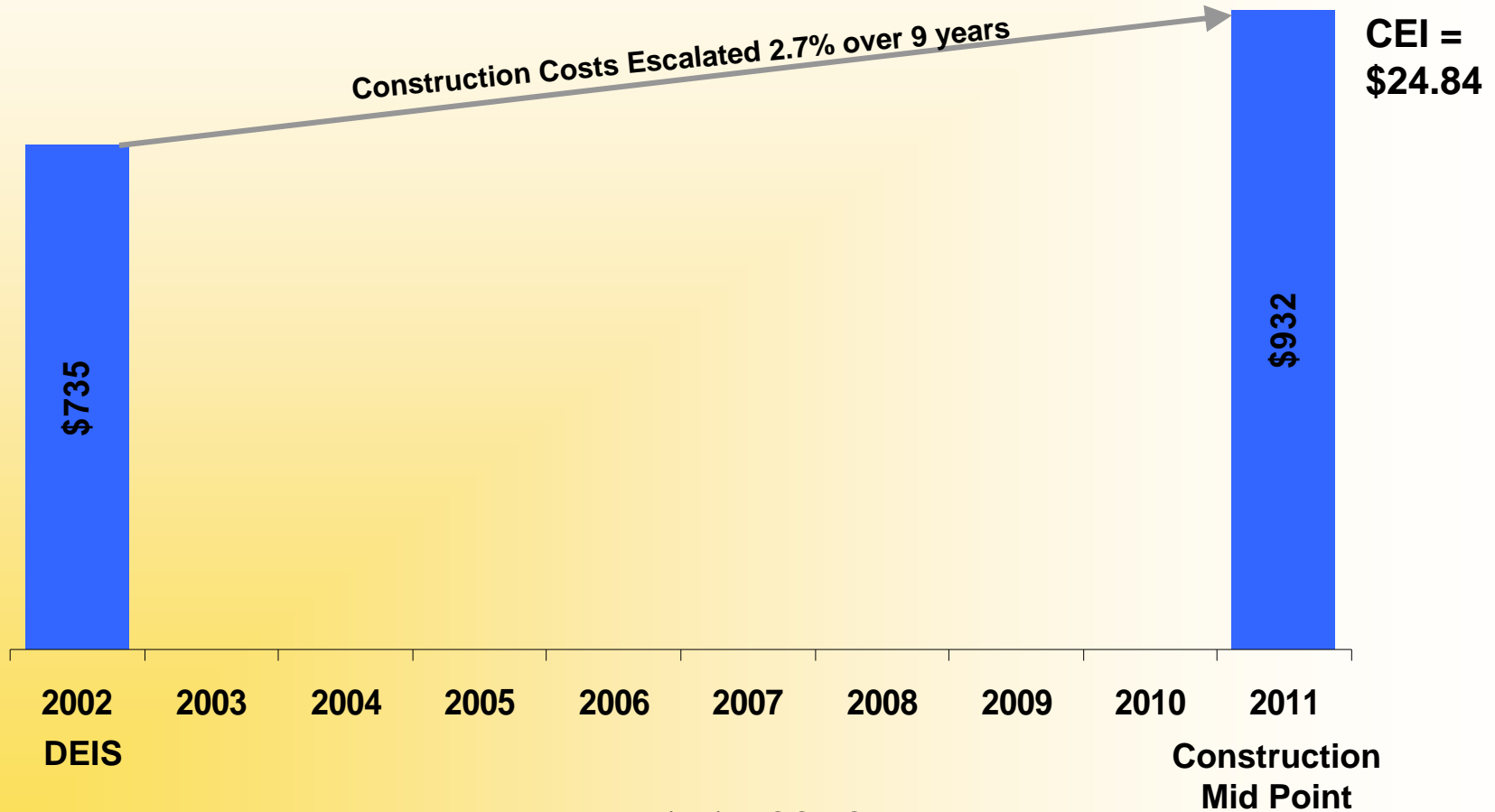
Assumed Midpoint of Construction in 2007



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DEIS Capital Cost Evaluation June 2006

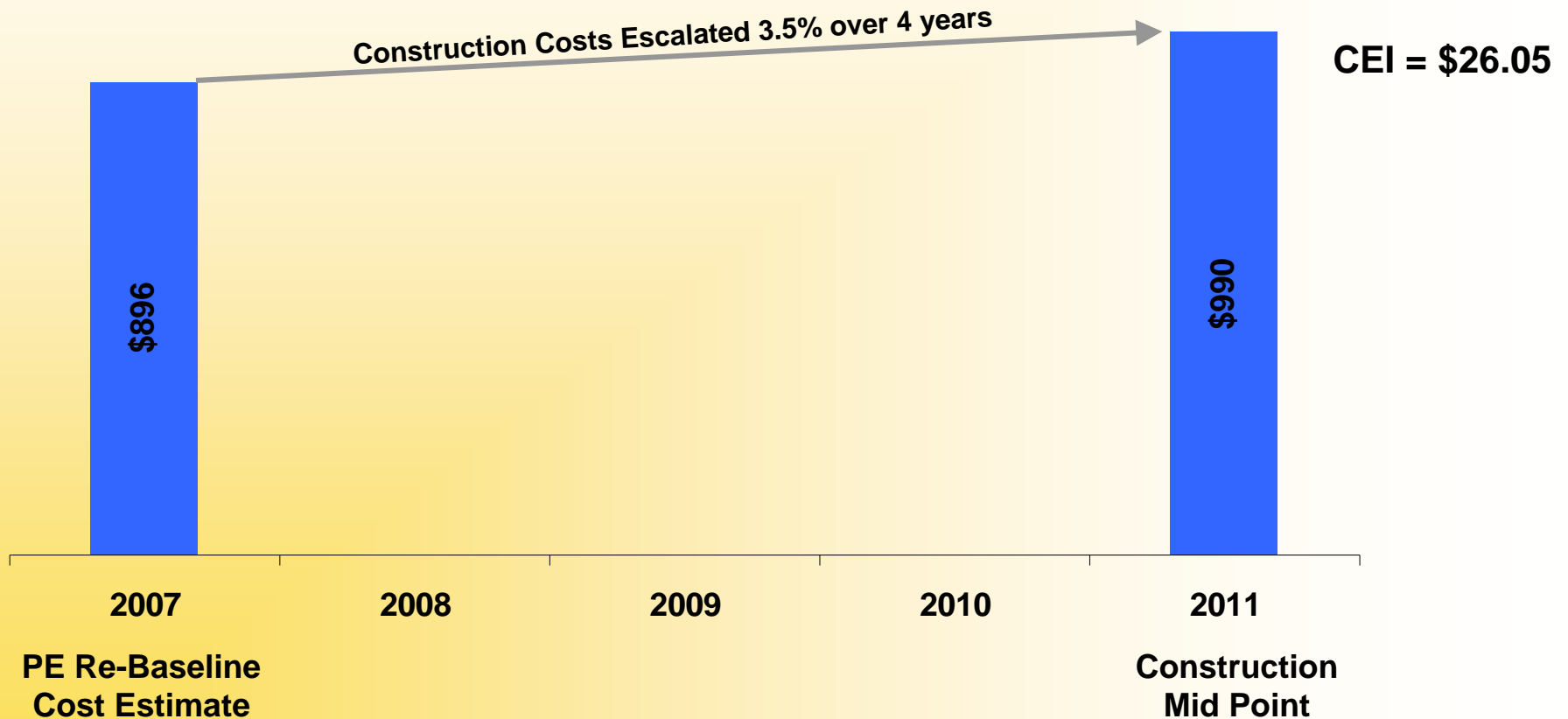
Assumed Midpoint of Construction in 2011



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Re-Baseline DEIS Capital Cost Estimate Dec. 2007

Assumed Midpoint of Construction in 2011



All Adds/All Deducts Decision Elements





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Project Cost/CEI



	<u>Current</u>	<u>Goal</u>
Cost	\$990 MM	~\$900 MM
CEI	\$26.05	≤ \$23.99



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Project Scope Scenarios

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Decision Elements



- East Bank- at grade/tunnel
- Infill stations –Hamline/Victoria/Western
- Union Depot – front/concourse
- Hiawatha connection
- Two track connection to maintenance facility
- Vehicle maintenance facility (VMF)
- Washington Ave. Bridge retrofit
- University Ave. reconstruction savings
- Cedar/4th streets intersection
- Additional mitigation
- 2 or 3-car platforms
- Public Art

Assumptions



- DEIS LRT and bus operating plan
- DEIS LRT train speeds
- Ridership annualization factor of 331
- 30% contingency for construction
- Washington Ave Bridge retrofit based on URS study

Assumptions



- Property donation
 - RCRRA
 - University of Minnesota
 - State of Minnesota
- No property costs for diagonal in St. Paul
- Private utilities, including District Energy, incur relocation costs



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Project Scope Scenario DEIS Baseline

- 2050' tunnel, portal stations on East Bank, Stadium Village
- 16 new stations, no provision for infill stations
- Stop in front of Union Depot
- HLRT connection via Washington Ave./4th Street
- Expansion of Franklin O&M facility
- 90° turn at Cedar/4th Streets
- 2-car platforms
- Public Art

Cost \$990 MM, CEI \$26.05

Project Scope Scenario B

At Grade on Washington

- East Bank at-grade on Washington Ave.
 - Open to traffic, left turns or
 - Conversion to transit/pedestrian mall
- Infrastructure for 3 infill stations, Hamline, Victoria, Western
- Stop in front of Union Depot
- Improved HLRT connection
- Maintenance facility in St. Paul, east of concourse
- Two track connection to maintenance facility
- Washington Ave. Bridge retrofit
- University Ave. reconstruction savings
- Diagonal at Cedar and 4th Streets
- Additional mitigation
- 3-car platforms
- Public Art

Cost \$909 MM, CEI \$23.80

Project Scope Scenario G Value Engineered Tunnel

- Washington Ave. 1900' tunnel, East Bank portal station
- Infrastructure for 3 infill stations, Hamline, Victoria, Western
- Stop in front of Union Depot
- Improved HLRT connection
- Maintenance facility in St. Paul, east of concourse
- Two track connection to maintenance facility
- Washington Ave. Bridge retrofit
- University Ave. reconstruction savings
- Diagonal at Cedar and 4th Streets
- 3-car platforms
- Public Art

Cost \$988.6 MM, CEI \$25.62



Project Scope Scenarios Summary Matrix

	DEIS	At-grade	Tunnel
East Bank tunnel/at grade	2050'	At grade	1900'
Infill stations (H/V/W)	--	Infrastructure	Infrastructure
Union Depot	In front	In front	In front
Hiawatha connection		Improved	Improved
Vehicle maintenance facility	Franklin Exp.	St. Paul	St. Paul
Connection to VMF	--	2-track	2-track
Wash. Ave. Bridge retrofit	--	\$25 MM	\$25 MM
Univ. Ave. reconstruction	\$55 MM	\$30 MM	\$30 MM
Cedar/4 th Sts intersection	On-street	Diagonal	Diagonal
Additional mitigation	--	\$20 MM	--
2 or 3-car platforms	2 car	3 car	3 car
Public Art	\$3.7 MM	\$3.7 MM	\$3.7 MM
Cost	\$990 MM	\$909.1 MM	\$988.6 MM
CEI	\$26.05	\$23.80	\$25.62 ⁵⁹

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More Information

Check out our website:

- www.centralcorridor.org

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