

Executive and Technical Advisory Committees

July 24, 2013

Welcome!

Today's Agenda

- Purpose & Need
- Study
- Screening
- Preferred Alternative
- Prioritization
- August Open House
- Next Steps

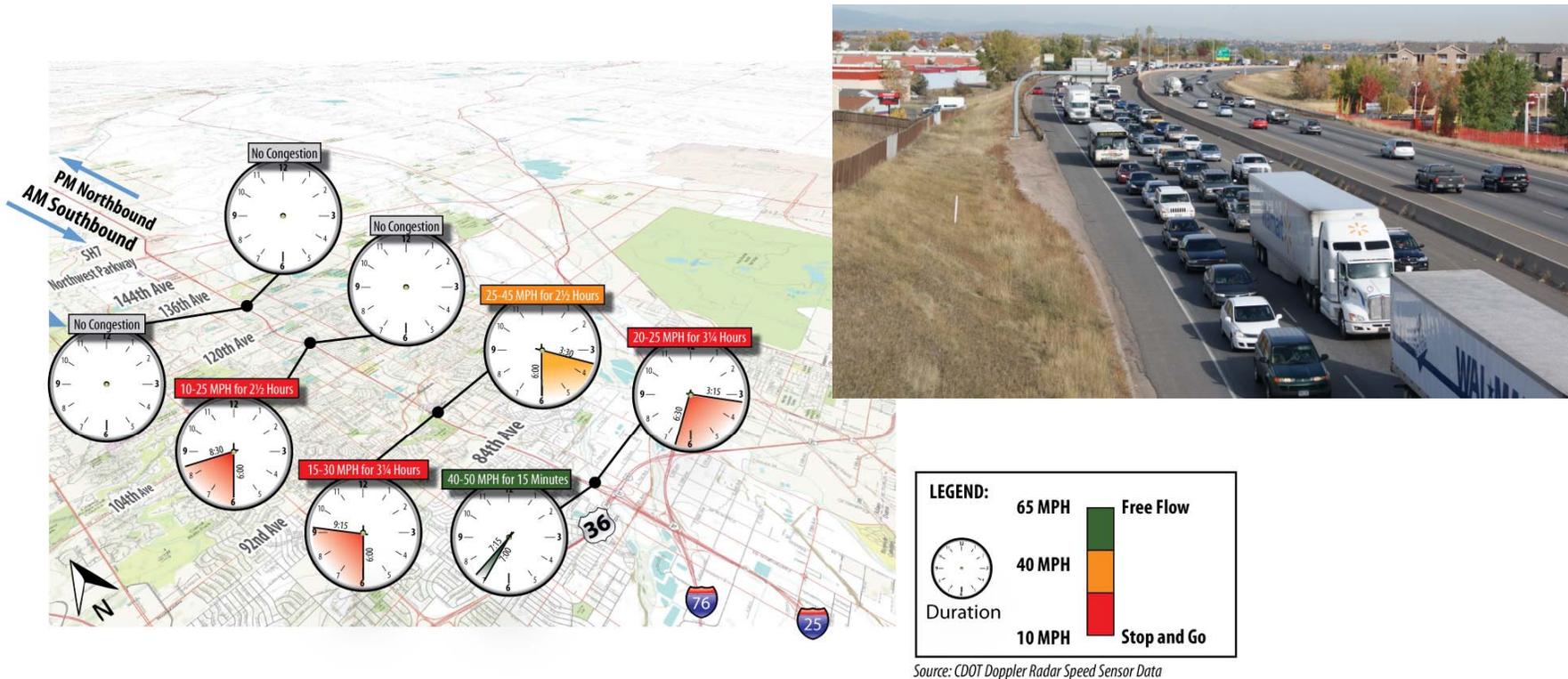
Project Purpose

- To reduce congestion and improve safety on I-25 between US 36 and SH 7
- Implement near-term, multi-modal, and cost-effective transportation improvements that are compatible with recently constructed interchange structures

Project Needs

- Mobility Problem: Traffic congestion resulting from high traffic volumes and incidents
- Safety Problem: Higher than expected crashes due to traffic congestion
- Multimodal Problem: Over capacity multimodal facilities

Mobility Problem

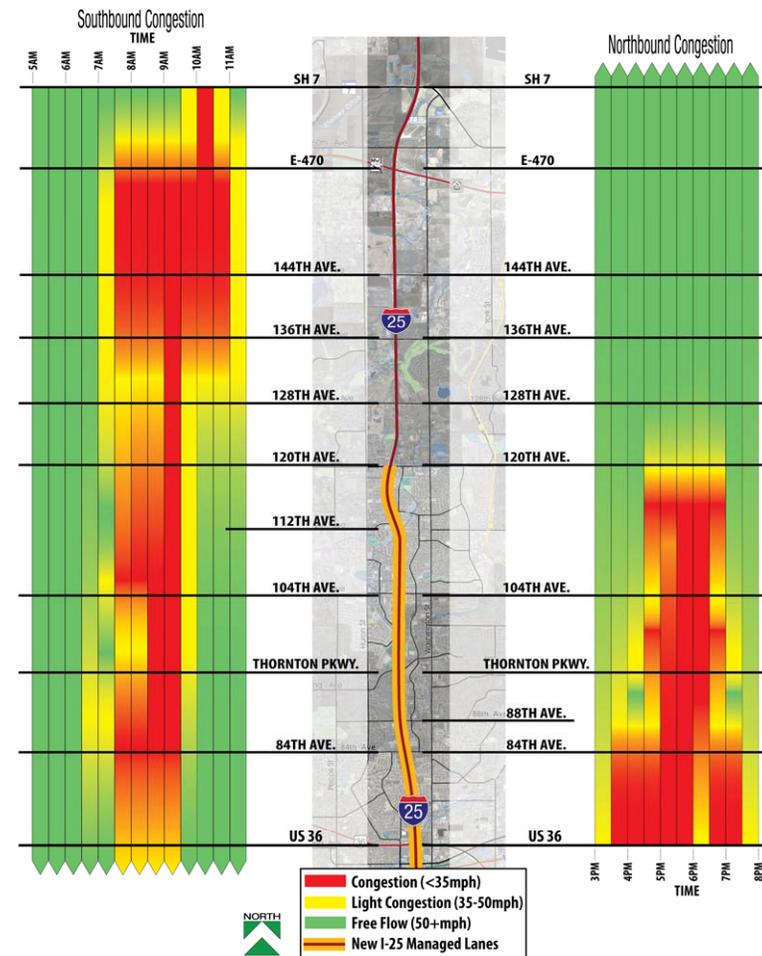
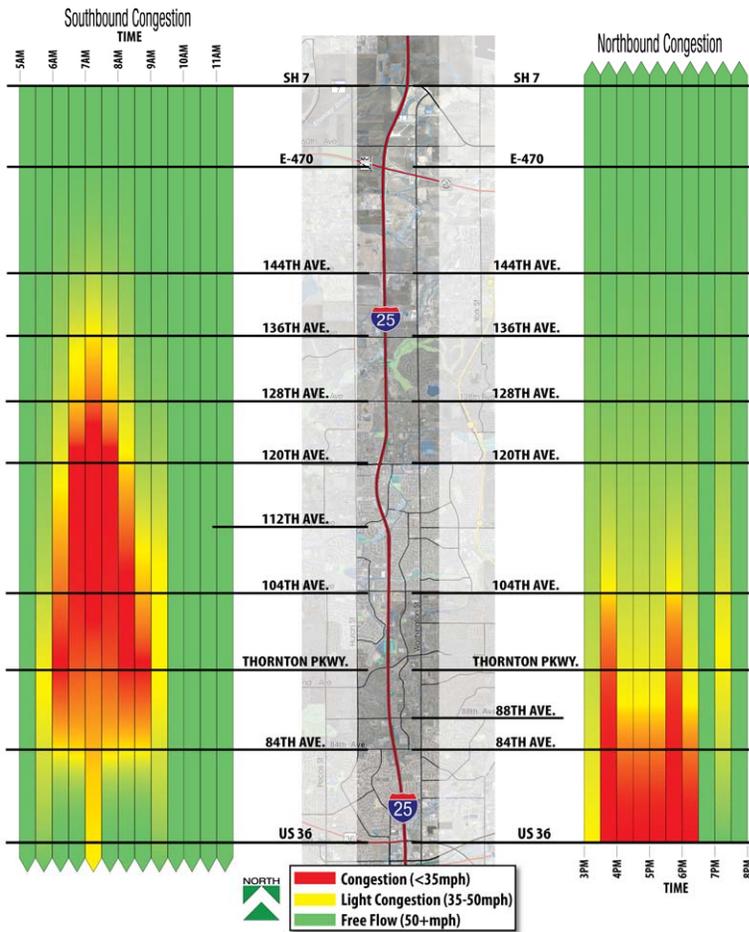


- There is a need to reduce the duration and extent of peak period congestion along the corridor.

Mobility Needs

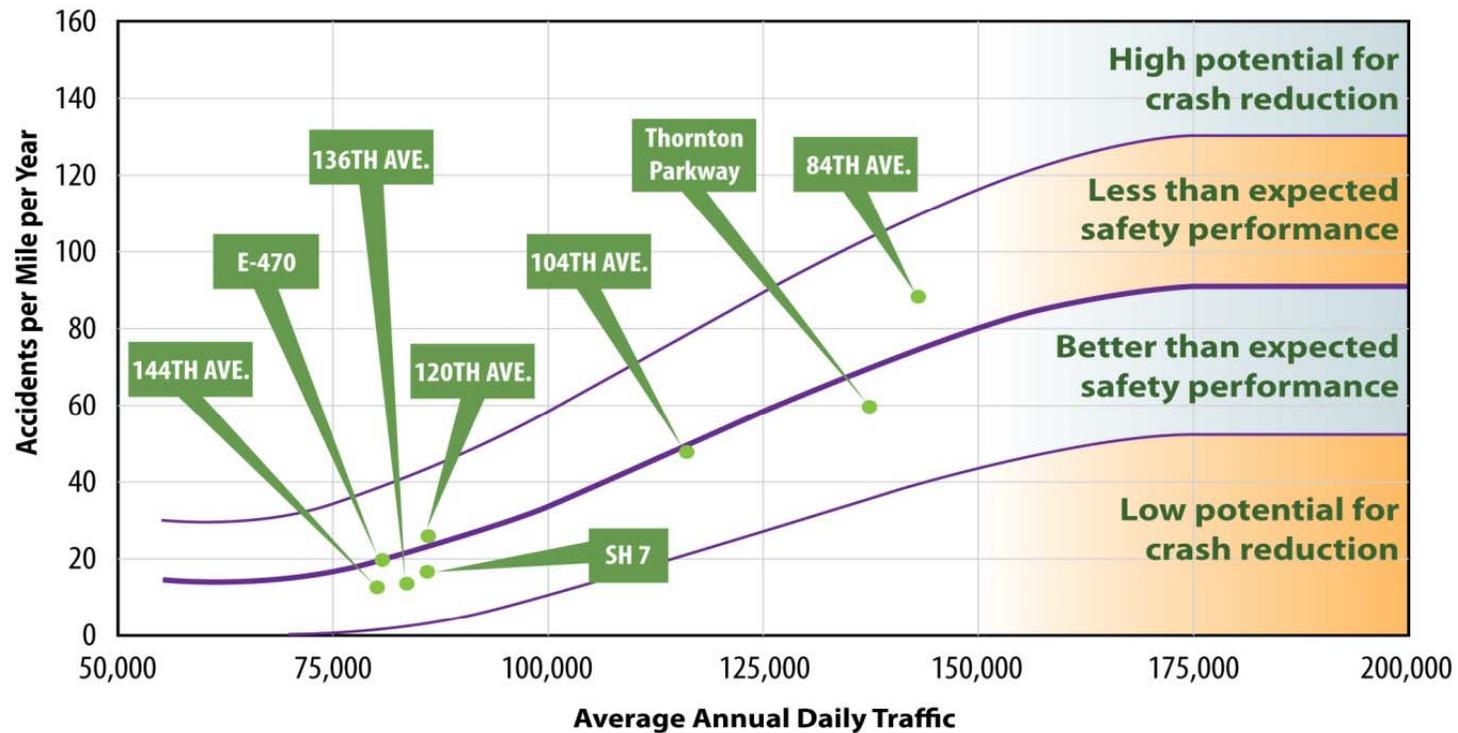
Existing Conditions

2035 No Action



Safety Problem

- Higher than expected crashes due to traffic congestion

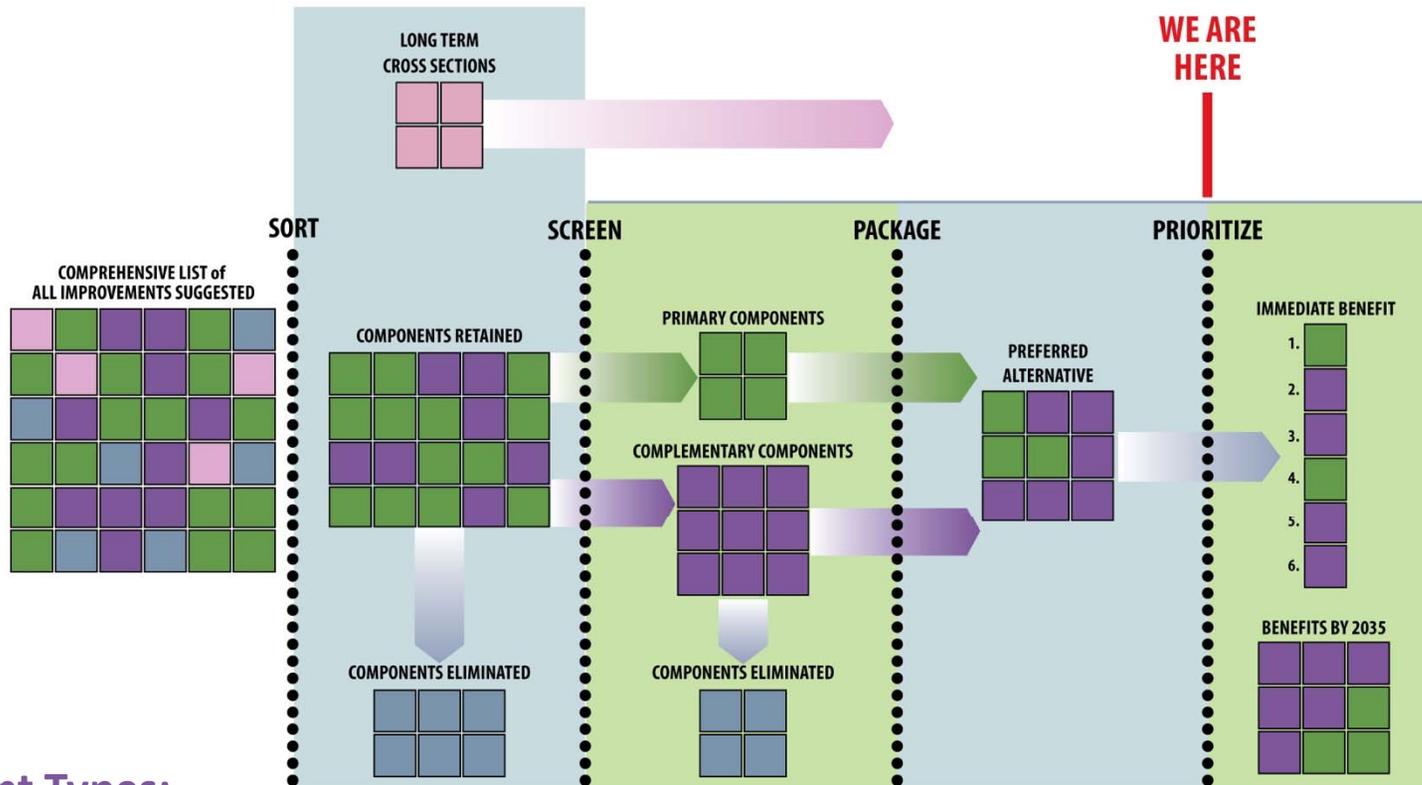


Multimodal Problem

- Over capacity multimodal facilities
 - Wagon Road park-n-Ride
 - over capacity today
 - 140% increase in demand by 2035
 - Thornton park-n-Ride (eastern side)
 - over capacity today
 - 40% increase in demand by 2035



Overall Process

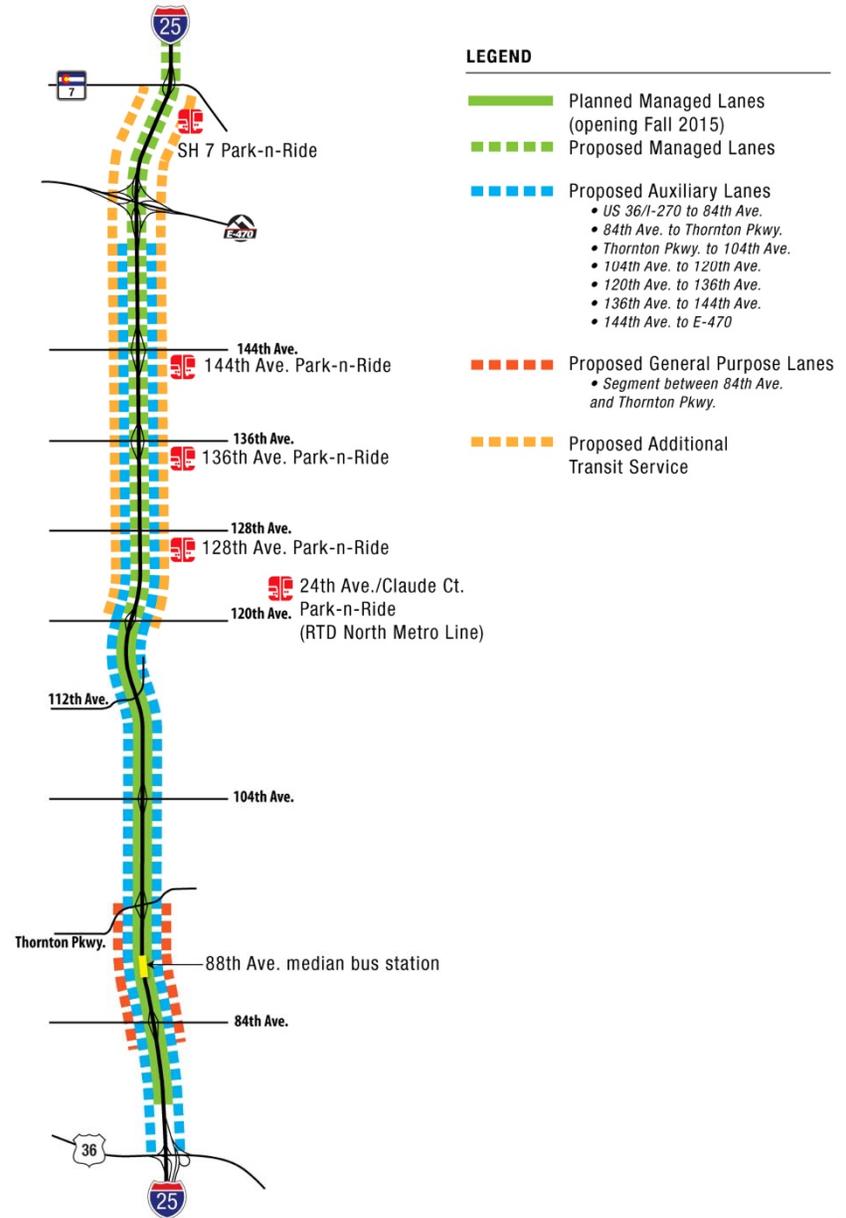


Component Types:

- I-25 Mainline
- Transit Infrastructure
- Park and Ride
- Other Infrastructure
- Intelligent Transportation Systems
- Travel Demand Management
- Transportation Systems Management

Preferred Package

- Additional Potential Components:**
- Intelligent Transportation System
 - Travel Demand Management
 - Transportation Systems Management
 - Reversible transit tunnel at Wagon Rd. Park-n-Ride
 - 70th Ave. and Washington St. intersection improvements
 - Two lane exit ramps
 - Physical improvements to ramp merge/diverge
 - Additional I-25 crossings



Prioritization Principles

Prioritize projects that:

- reduce near-term congestion while minimizing adverse operational impacts
- expand and enhance multimodal options
- are more easily delivered
- are cost effective

Proposed Prioritization

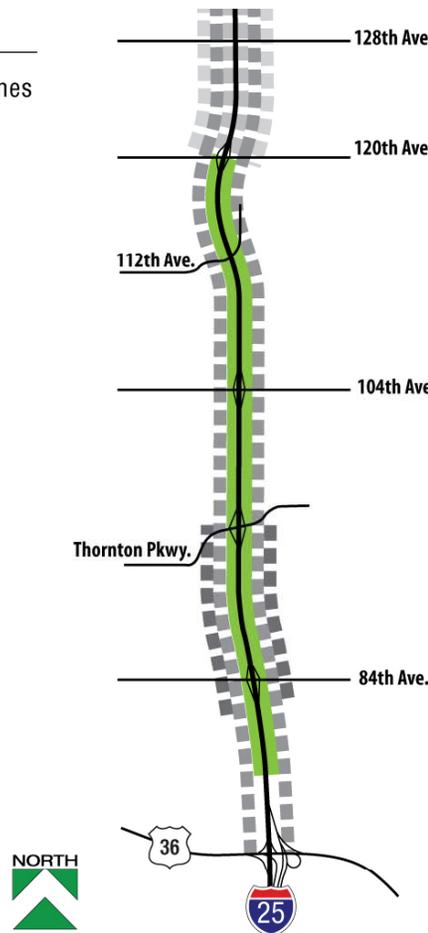
	DRAFT Roadway	Transit	Complementary Strategies
BENEFITS	<ul style="list-style-type: none"> 70th Ave. & Washington St. intersection improvements Additional general purpose lanes segment 84th Ave. to Thornton Pkwy. (NB & SB) [Requires replacement of 88th Ave. bridge] Provide accel/decel lane SB Thornton Pkwy. to 84th Ave. Provide accel/decel lane NB I-270 to 84th Ave. Provide accel/decel lane NB 84th Ave. to Thornton Pkwy. Provide accel/decel lane SB 84th Ave. to US 36 Provide accel/decel lane NB 104th Ave. to 120th Ave. Provide accel/decel lane NB Thornton Pkwy. to 104th Ave. Provide accel/decel lane SB 104th Ave. to Thornton Pkwy. Provide accel/decel lane SB 120th Ave. to 104th Ave. Ramp meters SB at 120th Ave., 136th Ave., 144th Ave., and NB at Thornton Pkwy., 104th Ave., and 120th Ave. <p><i>Extend I-25 managed lane from 120th Ave. to SH 7 (RAMP funding)</i></p>	<ol style="list-style-type: none"> New Park-n-Ride at 124th Ave. and Claude Ct. at Eastlake Convert tunnel at Wagon Road Park-n-Ride to bi-directional tunnel (related to ramp meter SB 120th Ave.) Construct inline median 88th Ave. station (coordinate with additional GP lanes segment between 84th Ave. and Thornton Pkwy.) New Park-n-Ride at 144th Ave. and I-25 New Park-n-Ride at SH 7 and I-25 	<ul style="list-style-type: none"> Bike map Carpool lots Community cash program Corridor transit guide Incident management plan Implement education campaign to instruct drivers on appropriate use of buffer-separated managed lane Peak hour bus-only lanes/transit priority Pool program subsidies Secure bike facilities TDM marketing Transit subsidies
BY 2035	<ul style="list-style-type: none"> Additional I-25 crossings Correct NB 84th Ave. on-ramp superelevation Implement Active Traffic Management 120th Ave. to SH 7 Provide accel/decel lane NB 120th Ave. to 136th Ave.* Provide accel/decel lane NB 136th Ave. to 144th Ave. Provide accel/decel lane NB 144th Ave. to E-470 Provide accel/decel lane SB E-470 to 144th Ave. Provide accel/decel lane SB 144th Ave. to 136th Ave. Provide accel/decel lane SB 136th Ave. to 120th Ave.* Provide ramp meters NB 136th Ave. and 144th Ave., and SB SH 7 	<ul style="list-style-type: none"> New Park-n-Ride at 128th Ave. and I-25 New Park-n-Ride at 136th Ave. and I-25 Shoulder Busway north of 120th Ave.* 	<ul style="list-style-type: none"> Bike share program Employer outreach First or final mile programs Flexible work schedule resources Master Eco-pass contract Telework recognition awards

*Would have immediate benefit without extension of I-25 managed lanes

NEAR-TERM PHASING PLAN

LEGEND

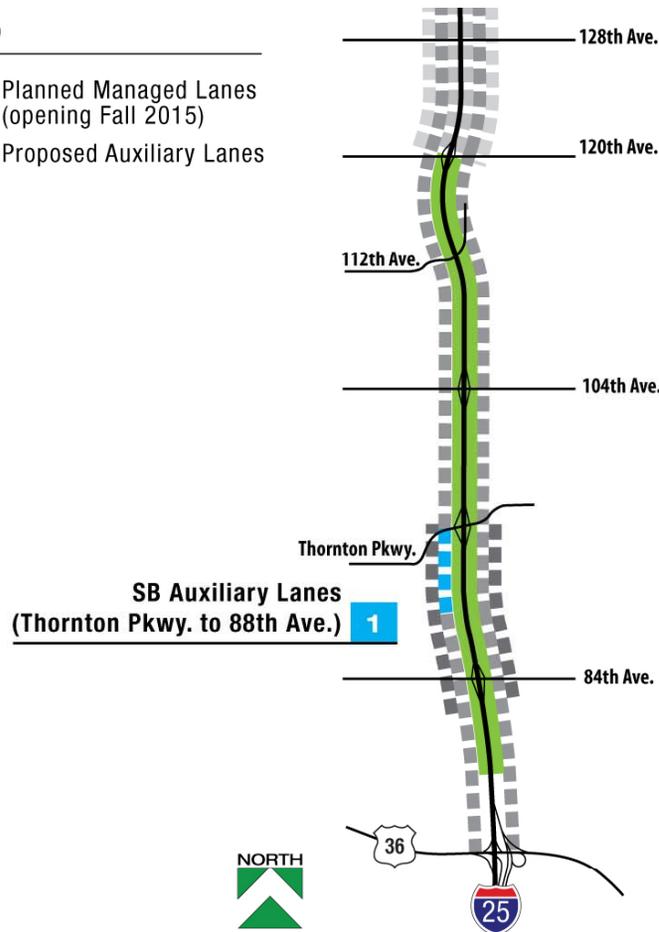
 Planned Managed Lanes
(opening Fall 2015)



Phase 1 SB Auxiliary Lanes Thornton Pkwy. to 88th Ave.

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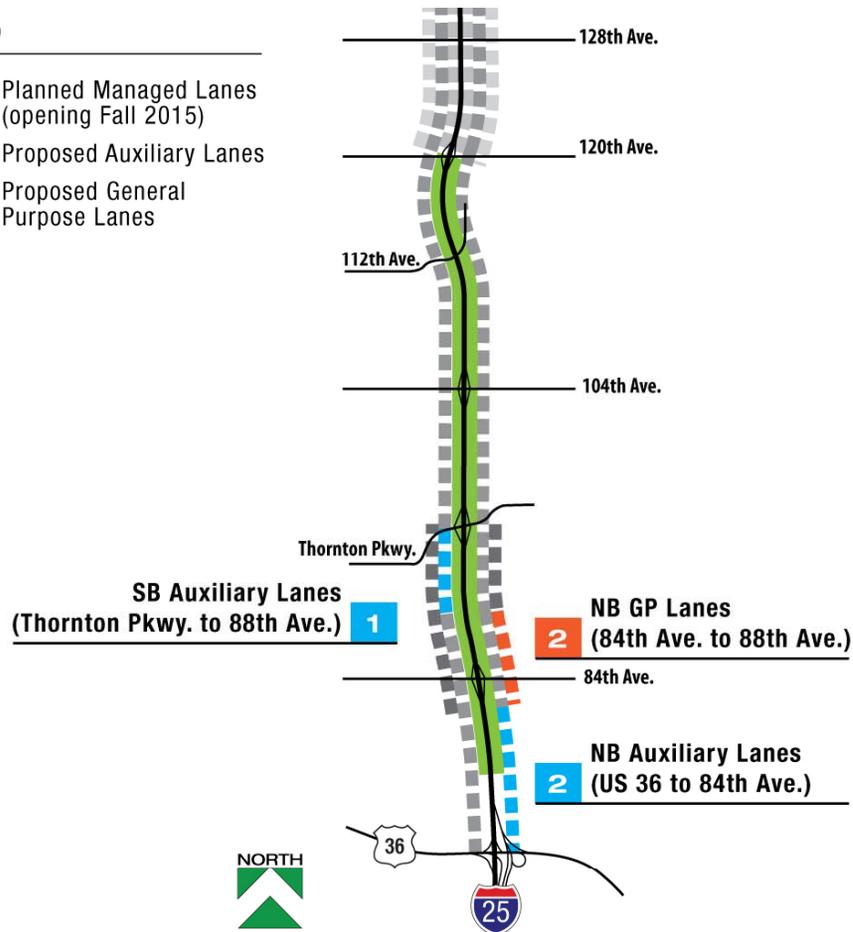
-  Planned Managed Lanes (opening Fall 2015)
-  Proposed Auxiliary Lanes



Phase 2 NB GP Lanes (84th Ave. to 88th Ave.) and NB Auxiliary Lanes (US 36 to 84th Ave.)

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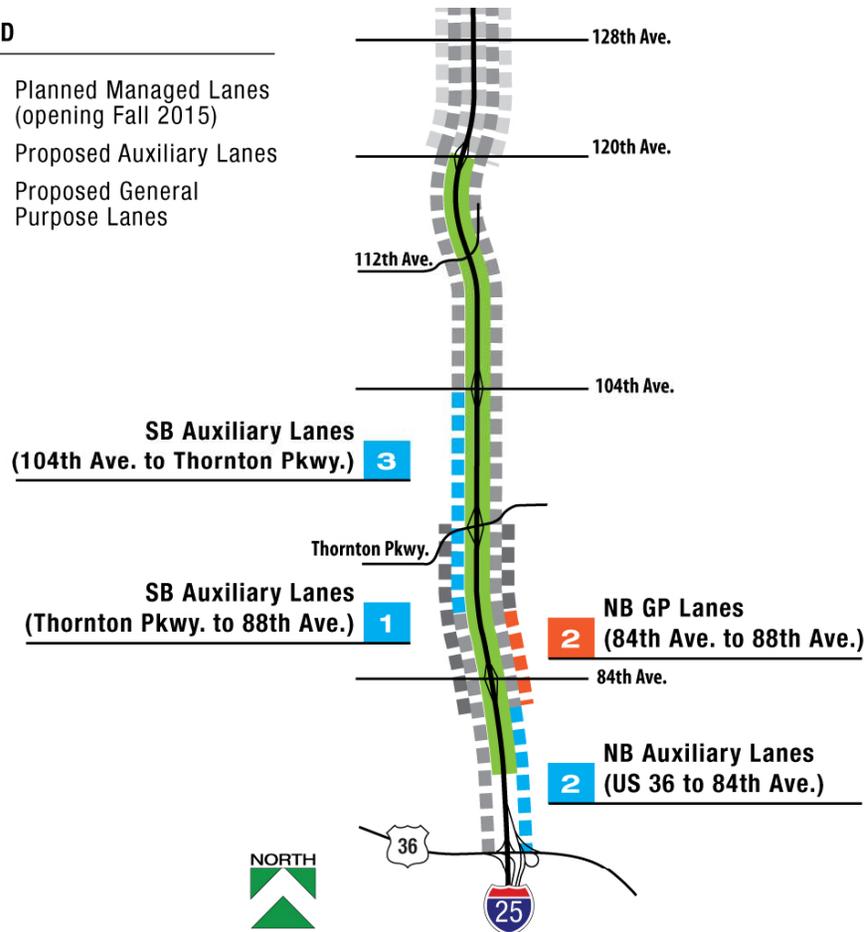
- Planned Managed Lanes (opening Fall 2015)
- Proposed Auxiliary Lanes
- Proposed General Purpose Lanes



Phase 3 SB Auxiliary Lanes 104th Ave. to Thornton Pkwy.

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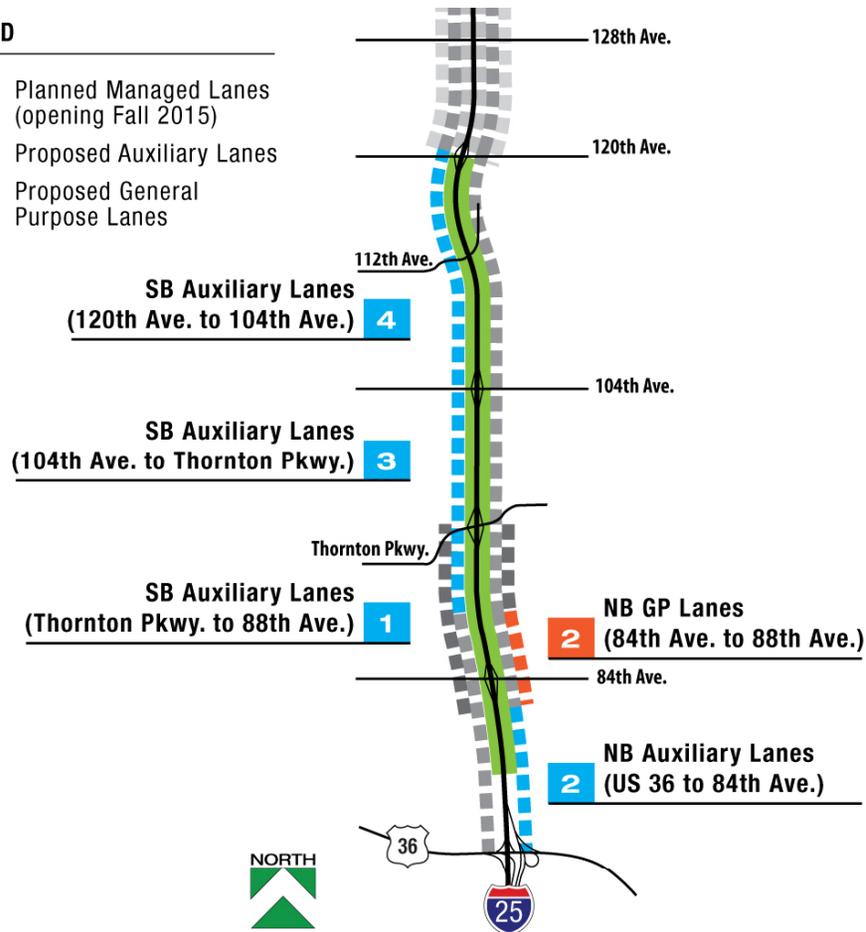
- Planned Managed Lanes (opening Fall 2015)
- Proposed Auxiliary Lanes
- Proposed General Purpose Lanes



Phase 4 SB Auxiliary Lanes 120th Ave. to 104th Ave.

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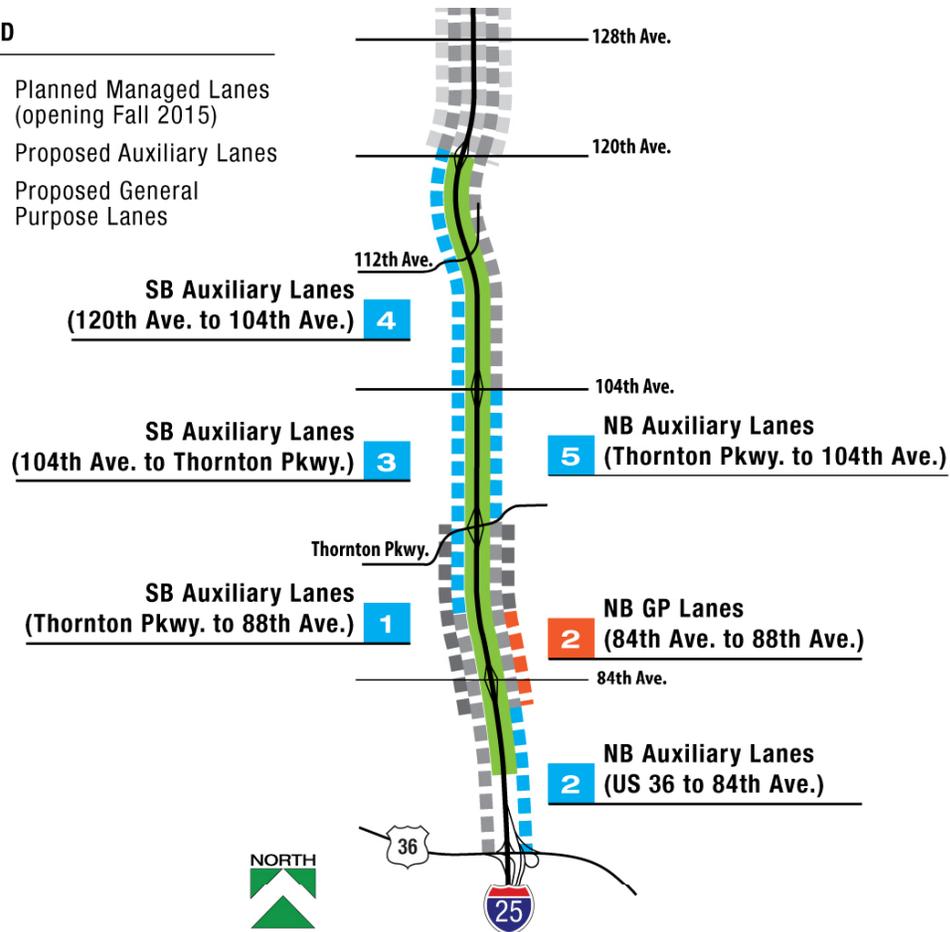
- Planned Managed Lanes (opening Fall 2015)
- Proposed Auxiliary Lanes
- Proposed General Purpose Lanes



Phase 5 NB Auxiliary Lanes Thornton Pkwy. to 104th Ave.

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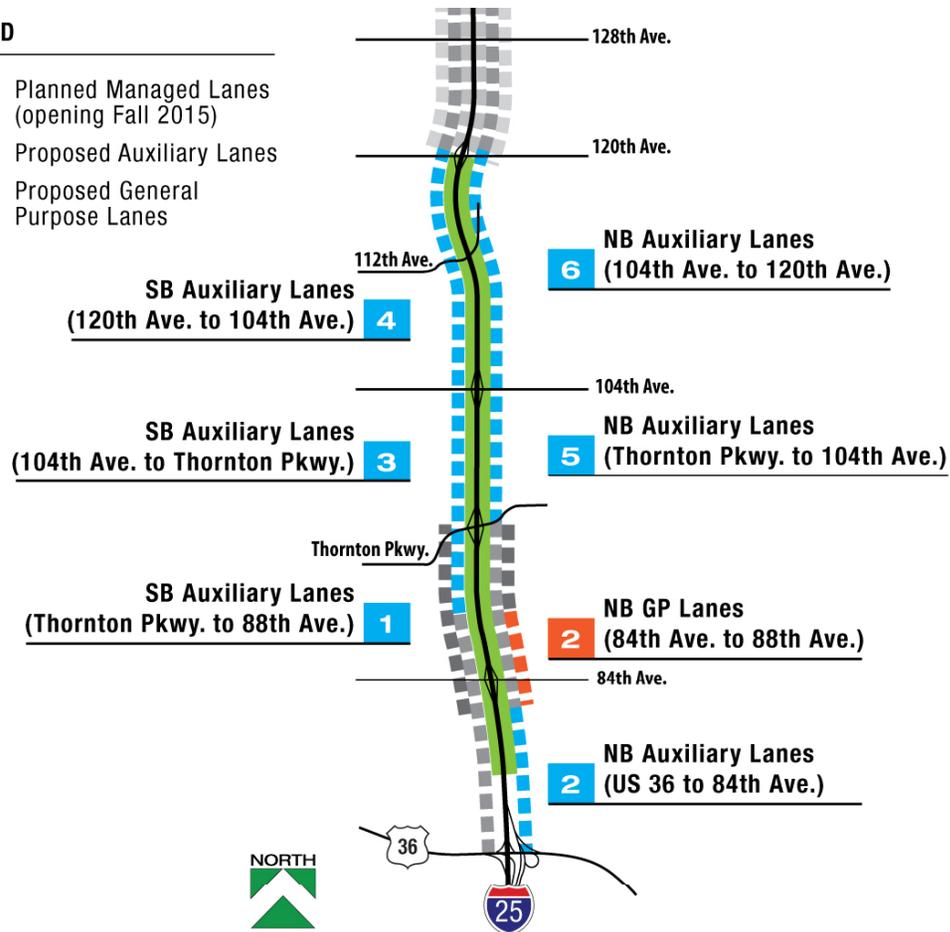
- Planned Managed Lanes (opening Fall 2015)
- Proposed Auxiliary Lanes
- Proposed General Purpose Lanes



Phase 6 NB Auxiliary Lanes 104th Ave. to 120th Ave.

LEGEND

-  Planned Managed Lanes (opening Fall 2015)
-  Proposed Auxiliary Lanes
-  Proposed General Purpose Lanes



Roadway Project Cost Effectiveness

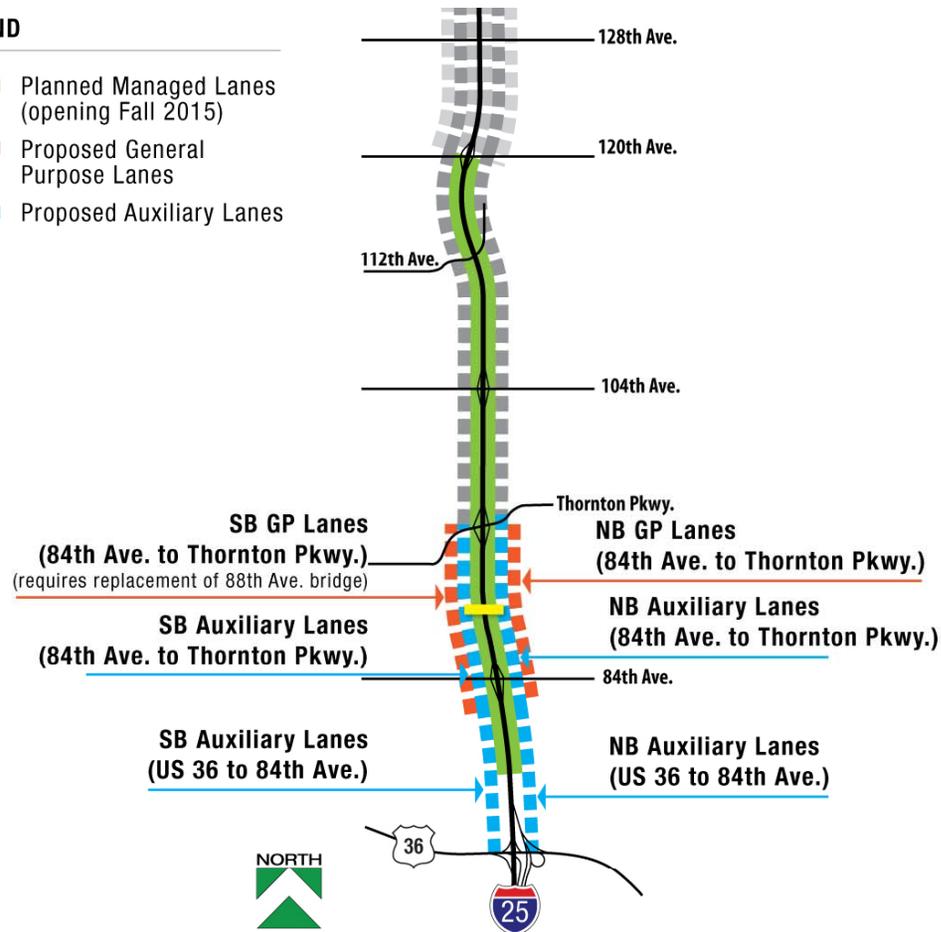
	No Action	Near-Term Phasing Plan	
SOUTHBOUND AM	PEAK TRAVEL TIME: (SH 7 to US 36)	21 min.	17 min.
	VEHICLE HOURS DELAY:	1,440	695
	LIFETIME COST EFFECTIVENESS: (\$ per vehicle hour of delay saved)	NA	2.78
	COST	NA	\$9.2 M
NORTHBOUND PM	PEAK TRAVEL TIME: (US 36 TO SH 7)	21 min.	16 min.
	VEHICLE HOURS DELAY:	1,970	1,430
	LIFETIME COST EFFECTIVENESS: (\$ per vehicle hour of delay saved)	NA	5.93
	COST	NA	\$14.3 M
TOTAL	PEAK TRAVEL TIME: (US 36 TO SH 7)	21 min.	16-17 min.
	VEHICLE HOURS DELAY:	3,410	2,125
	LIFETIME COST EFFECTIVENESS: (\$ per vehicle hour of delay saved)	NA	4.10
	COST	NA	\$23.5 M

Costs do not include right-of-way or NEPA clearances.

88th Ave. Area Components

LEGEND

- Planned Managed Lanes (opening Fall 2015)
- Proposed General Purpose Lanes
- Proposed Auxiliary Lanes

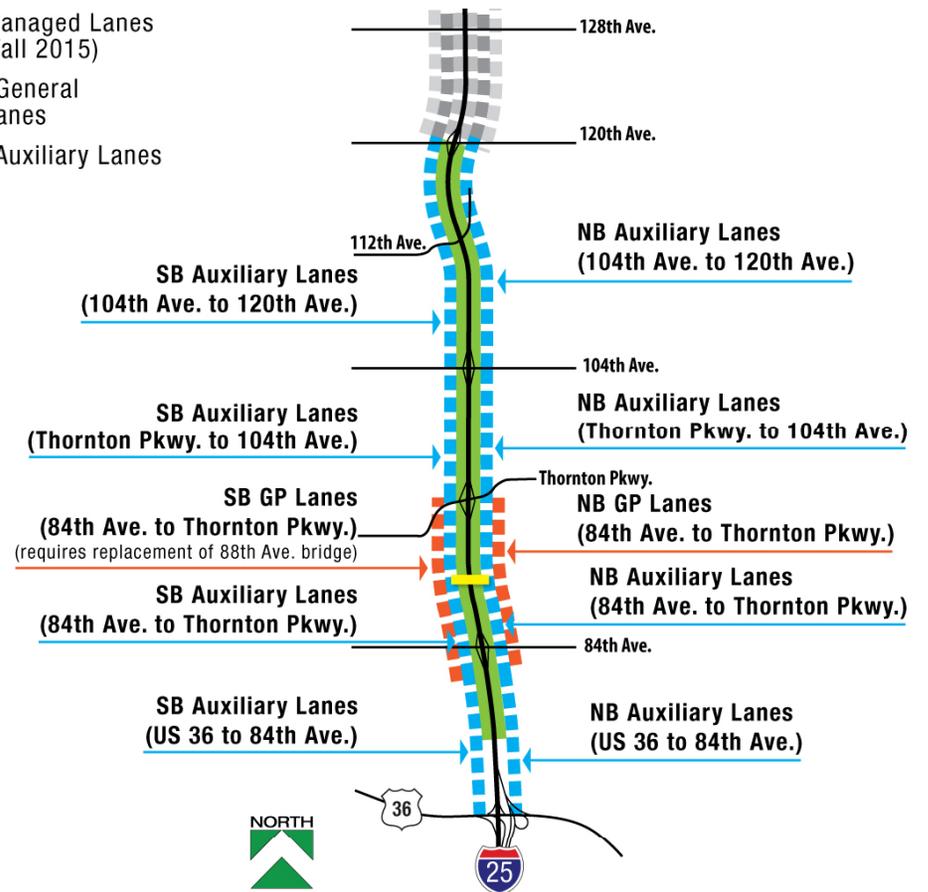
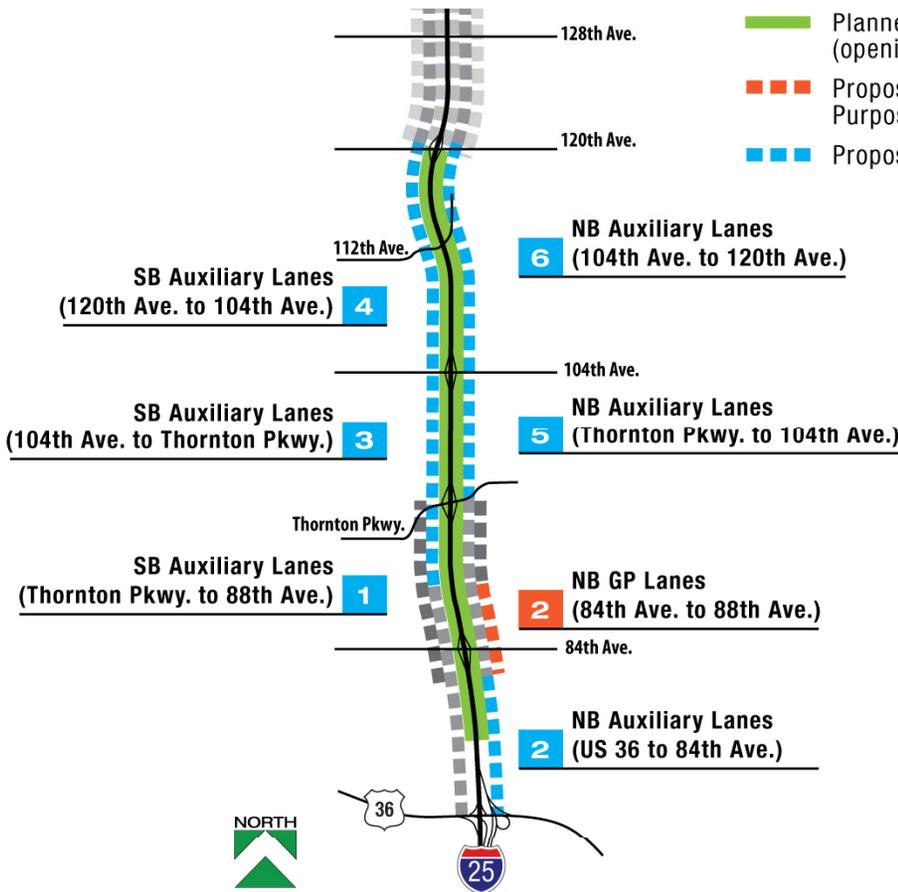


Near-Term Phasing Plan

Complete Phasing Plan

LEGEND

- █ Planned Managed Lanes (opening Fall 2015)
- █ Proposed General Purpose Lanes
- █ Proposed Auxiliary Lanes



Roadway Project Cost Effectiveness

	No Action	Near-Term Phasing Plan	88th Ave. Area Components	Complete Phasing Plan
SOUTHBOUND AM	PEAK TRAVEL TIME: (SH 7 to US 36)	21 min.	17 min.	14 min.
	VEHICLE HOURS DELAY:	1,440	695	210
	LIFETIME COST EFFECTIVENESS: (\$ per vehicle hour of delay saved)	NA	2.78	4.97
	COST	NA	\$9.2 M	\$31.2 M
NORTHBOUND PM	PEAK TRAVEL TIME: (US 36 TO SH 7)	21 min.	16 min.	15 min.
	VEHICLE HOURS DELAY:	1,970	1,430	900
	LIFETIME COST EFFECTIVENESS: (\$ per vehicle hour of delay saved)	NA	5.93	3.81
	COST	NA	\$14.3 M	\$6.7 M*
TOTAL	PEAK TRAVEL TIME: (US 36 TO SH 7)	21 min.	16-17 min.	14-15 min.
	VEHICLE HOURS DELAY:	3,410	2,125	1,110
	LIFETIME COST EFFECTIVENESS: (\$ per vehicle hour of delay saved)	NA	4.10	2.36
	COST	NA	\$23.5 M	\$37.9 M

*Assumes cost of 88th Ave. bridge and pedestrian bridge improvements have been previously included in SB direction.
Costs do not include right-of-way or NEPA clearances.

August Open House

- Background
- Process
- Purpose and Need
- Alternatives Development and Evaluation
- Preferred Alternative
- Prioritization
- Comments

Next Steps

- Public Meeting in August
- Draft Document – For Review Early Fall