

Technical Advisory Committee Meeting

Date: June 14, 2013
Time: 1:30 PM – 3:30 PM
Location: Adams County Economic Development
12200 Pecos Street
Westminster, CO 80234 Suite 100

AGENDA

Meeting goal: Present Level 1 screening results.

- i) Introductions
- ii) April recap
- iii) Level 1 evaluation results
- iv) Proposed package
- v) Prioritization principles
- vi) RAMP projects in corridor
- vii) Next meeting – Mid to late July with EC

Technical Advisory Committee

June 14, 2013

Welcome!

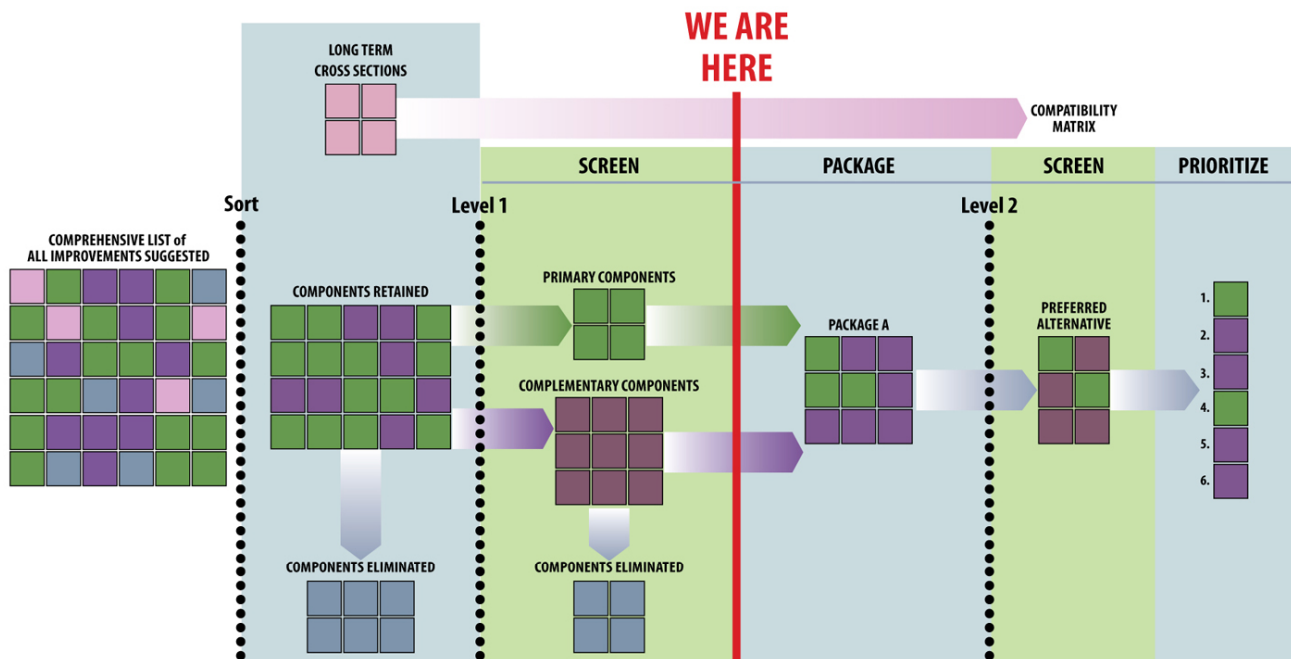
Agenda

Meeting goal: Present Level 1
Screening Results

- Introductions
- April Recap
- Level 1 Evaluation Results
- Proposed Package
- RAMP Projects
- Next Meeting: Prioritization

April Meeting Recap

- Overall process



Level 1 Evaluation

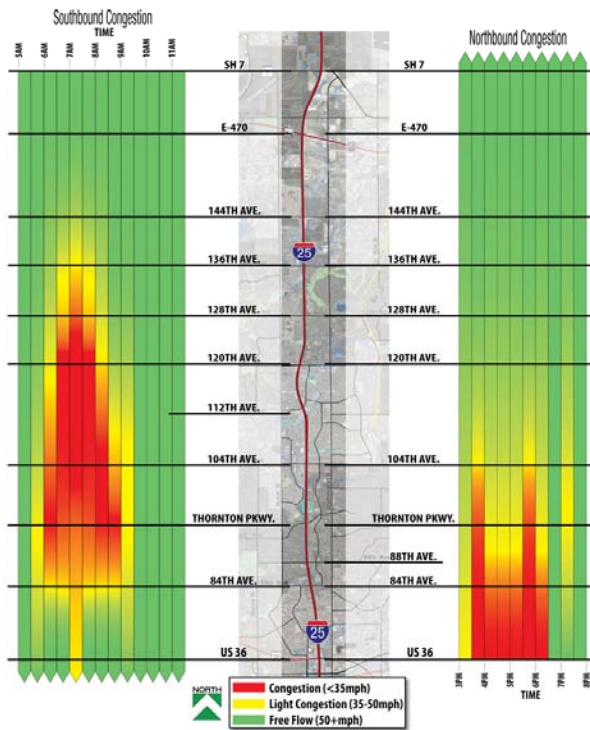
- Prescreen
 - Physical improvements to ramp merge and diverge sections southbound – no deficiencies identified
 - Articulated buses – already implemented
 - ITS improvements – completed as part of I-25 managed lanes
 - Upgrade ramp meters at specific locations – equipment up to date
 - Thornton pnR – Expansion underway by RTD with FASTER funds

Level 1 Evaluation Component Categories

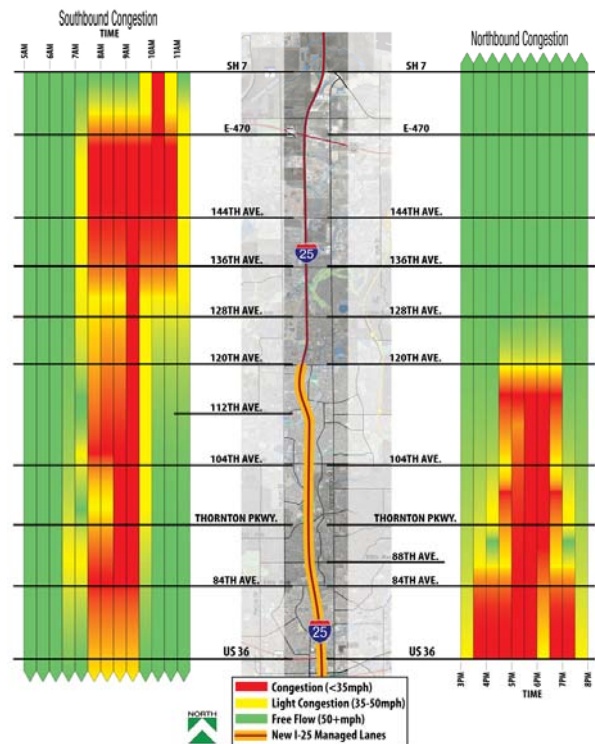
- I-25 Mainline
- Transit Infrastructure
- Park and Ride
- Other Infrastructure
- Intelligent Transportation Systems
- Travel Demand Management
- Transportation Systems Management

Mobility Needs

Existing Conditions



2035 No Action



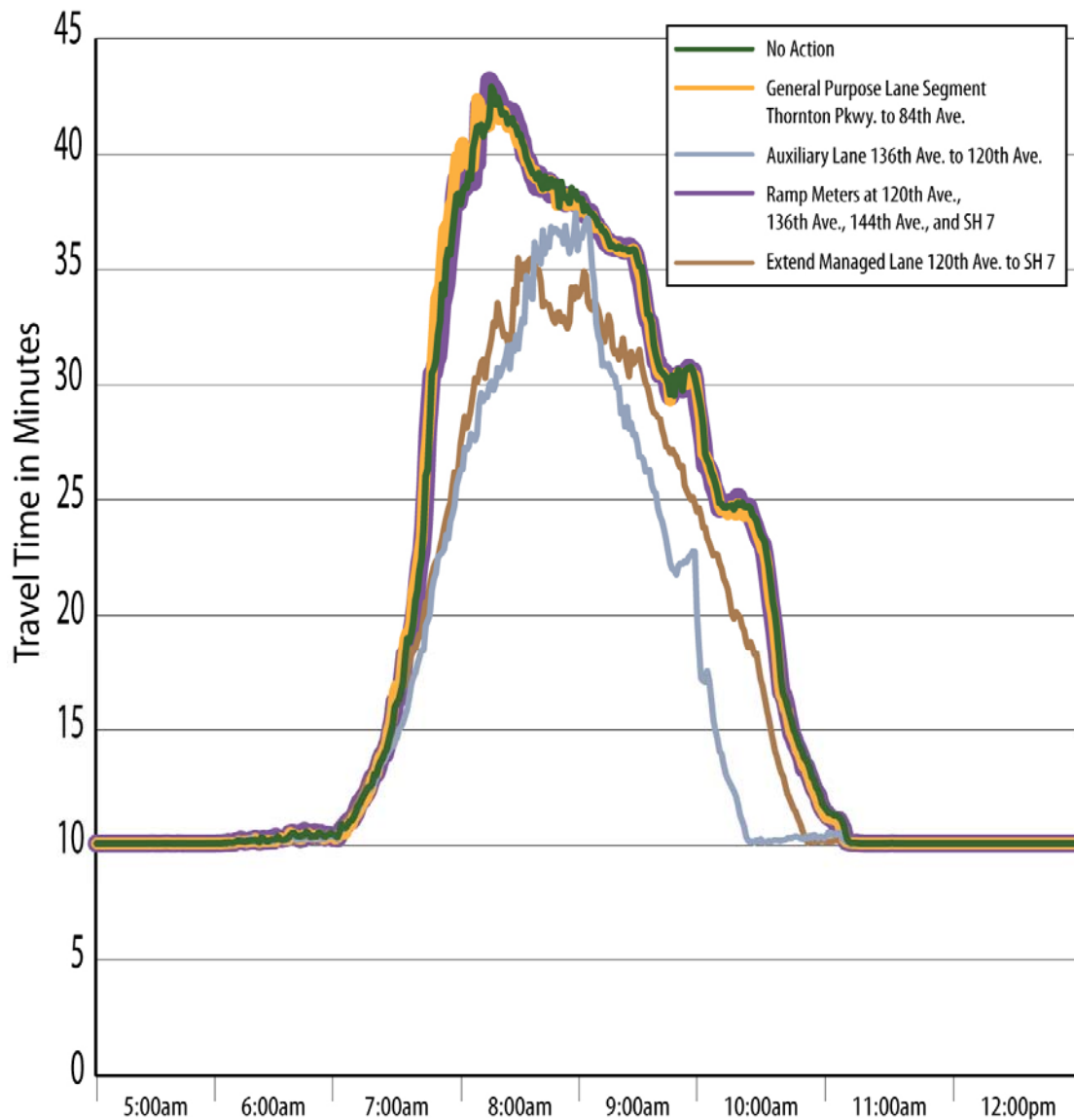
2035 DynusT Findings

- SB Components
 - No Action travel time: 43 min
 - Most Beneficial (5-7 min)
 - Auxiliary lane 136th Ave to 120th Ave
 - Managed lanes extension (SH 7 to 120th Ave)
- NB Components
 - No Action travel time: 24 min
 - Most Beneficial (5-8 min)
 - Auxiliary lanes between interchanges
 - General purpose lane segment 84th Ave to Thornton Pkwy
 - Managed lanes extension (120th Ave to SH 7)
 - Ramp meters at 104th and 120th Aves

Level 1 Evaluation

Travel Time Plot (SH7 to US 36)

2035 Southbound AM Travel Time

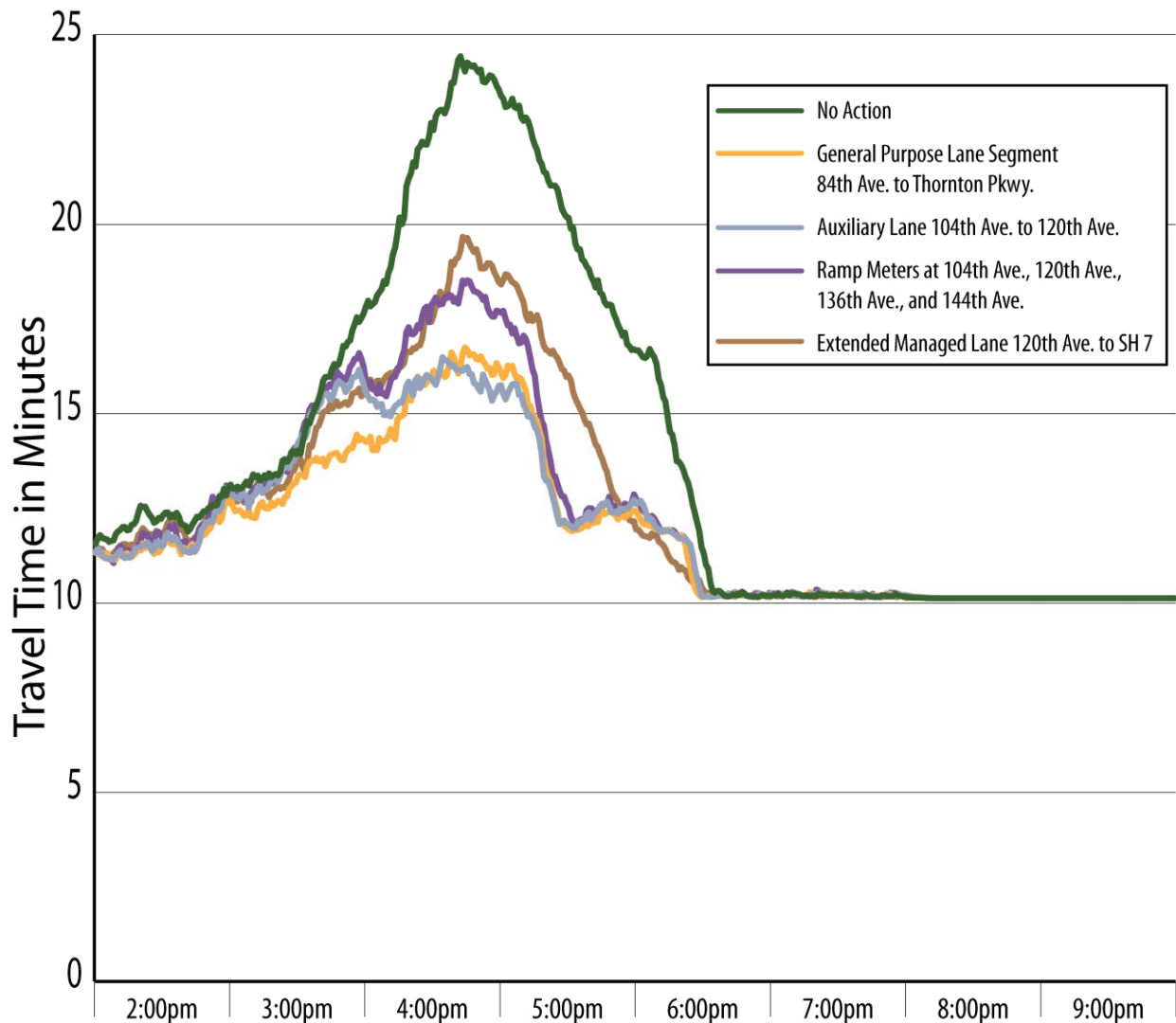


NOTE: Travel time is measured in general purpose lanes. No Action includes construction of I-25 managed lanes (US 36 to 120th Ave.). Best performing auxiliary lane project is shown above.

Level 1 Evaluation

Travel Time Plot (US 36 to SH 7)

2035 Northbound PM Travel Time

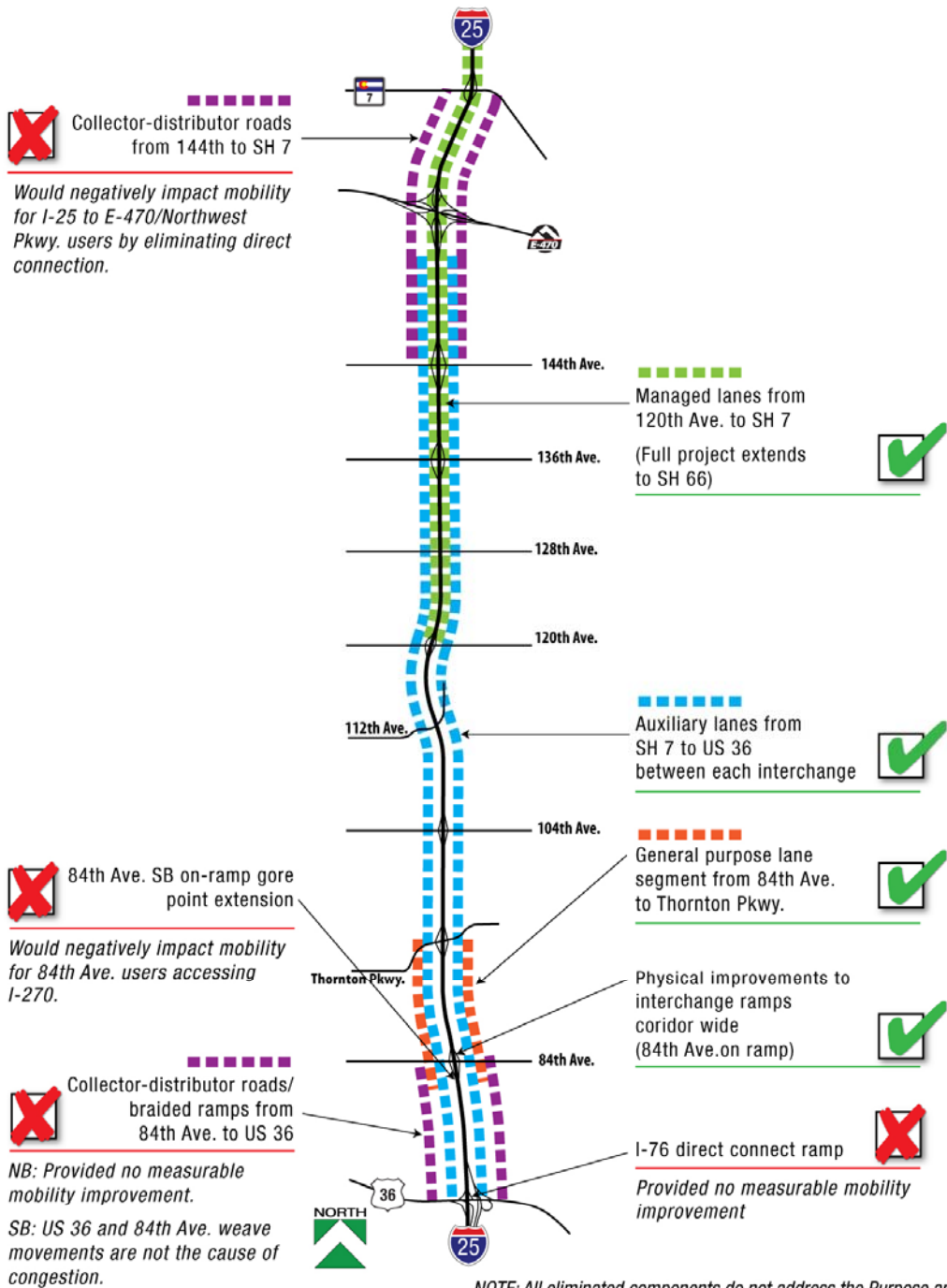


NOTE: Travel time is measured in general purpose lanes. No Action includes construction of I-25 managed lanes (US 36 to 120th Ave.). Best performing auxiliary lane project is shown above.

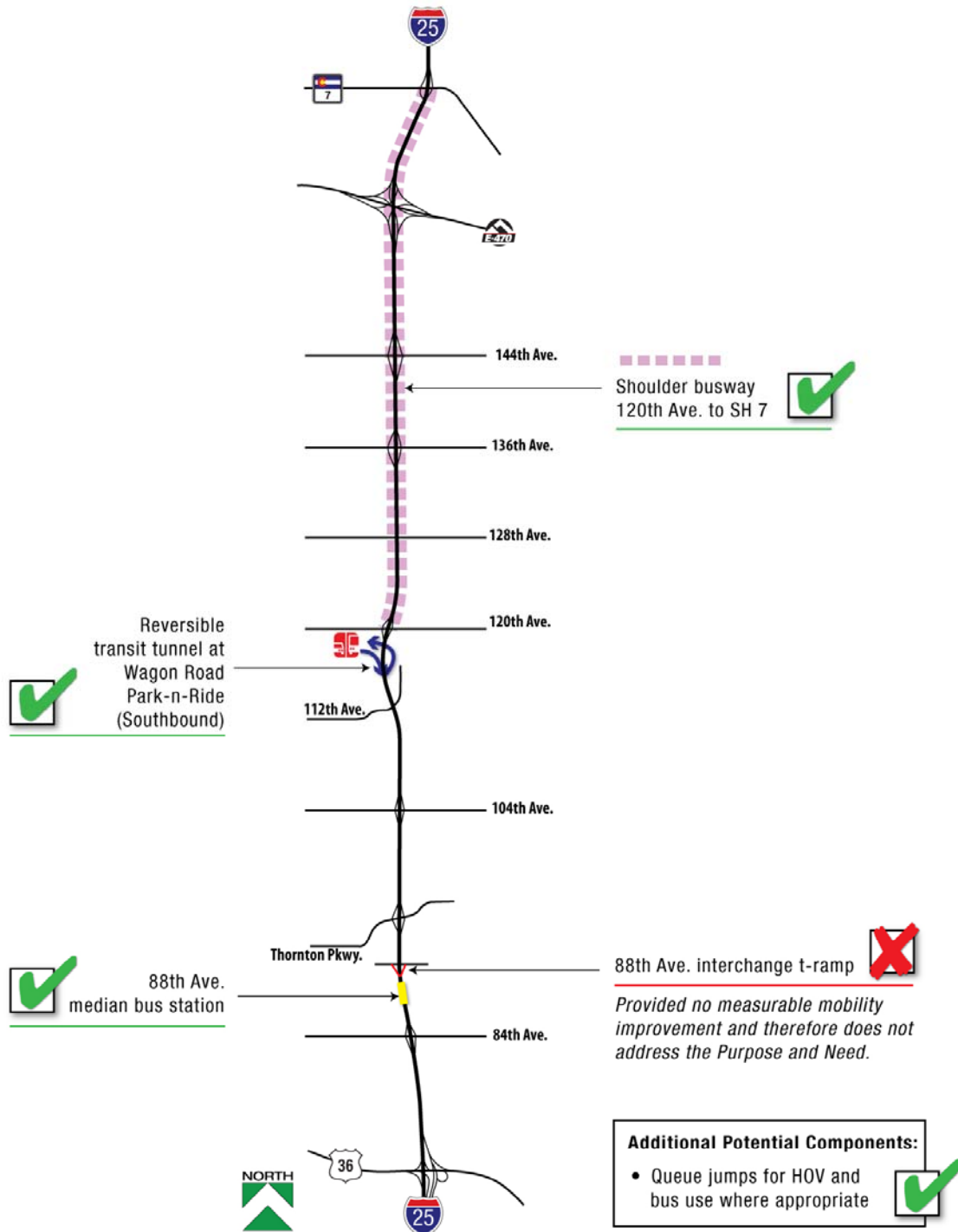
2015 DynusT Findings

- SB Components
 - Existing: 23 min, No Action: 20 min
 - Most Beneficial (4-6 min)
 - Auxiliary lane 136th Ave to US 36
 - General purpose lane segment Thornton Pkwy to 84th Ave
 - Ramp Meters at 144th, 136th, and 120th Aves
- NB Components
 - Existing: 20 min, No Action: 21 min
 - Most Beneficial (4 min)
 - Auxiliary lanes US 36 to 136th Ave
 - General purpose lane segment 84th Ave to Thornton Pkwy
 - Ramp meters at 104th and 120th Aves

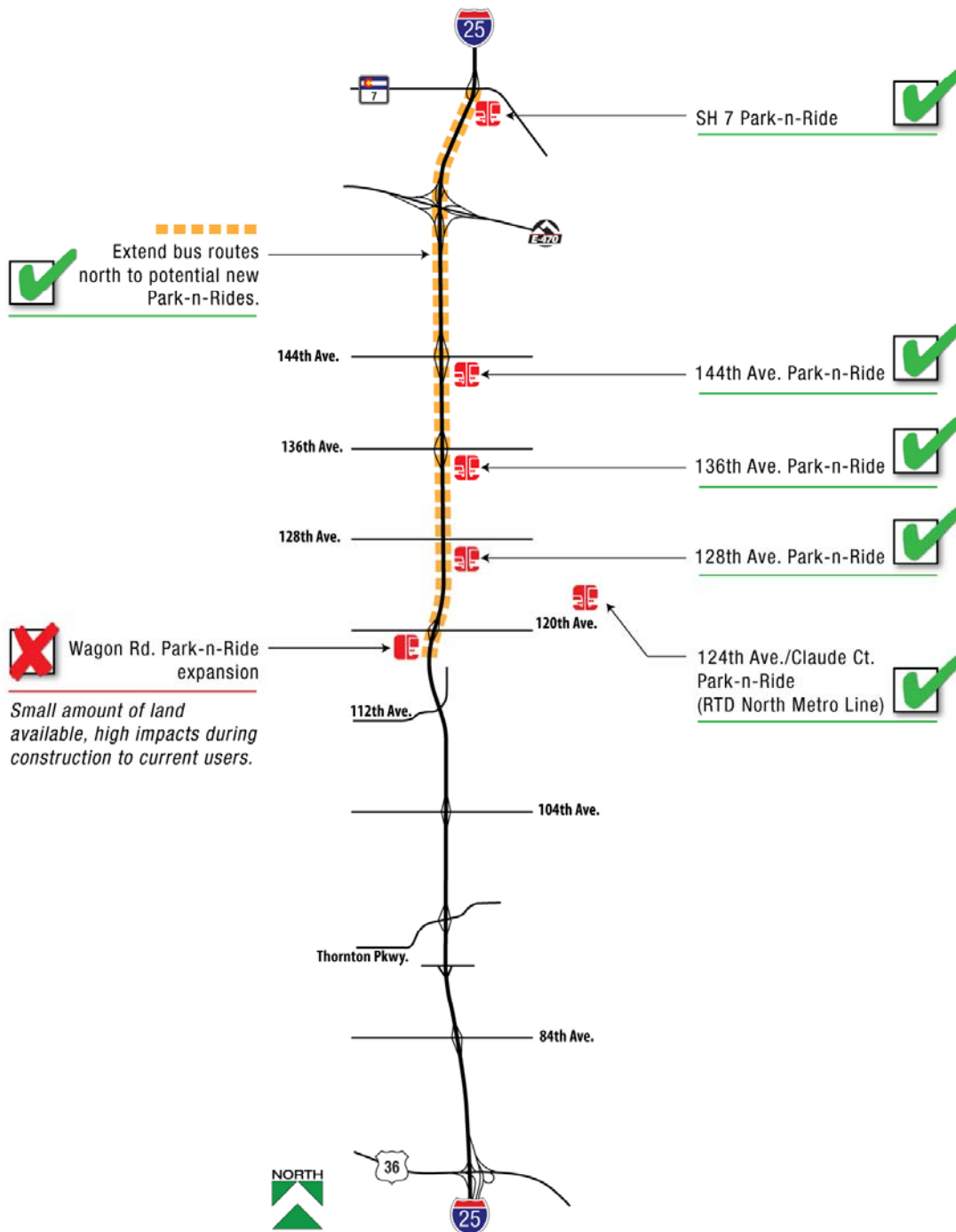
I-25 Mainline Components



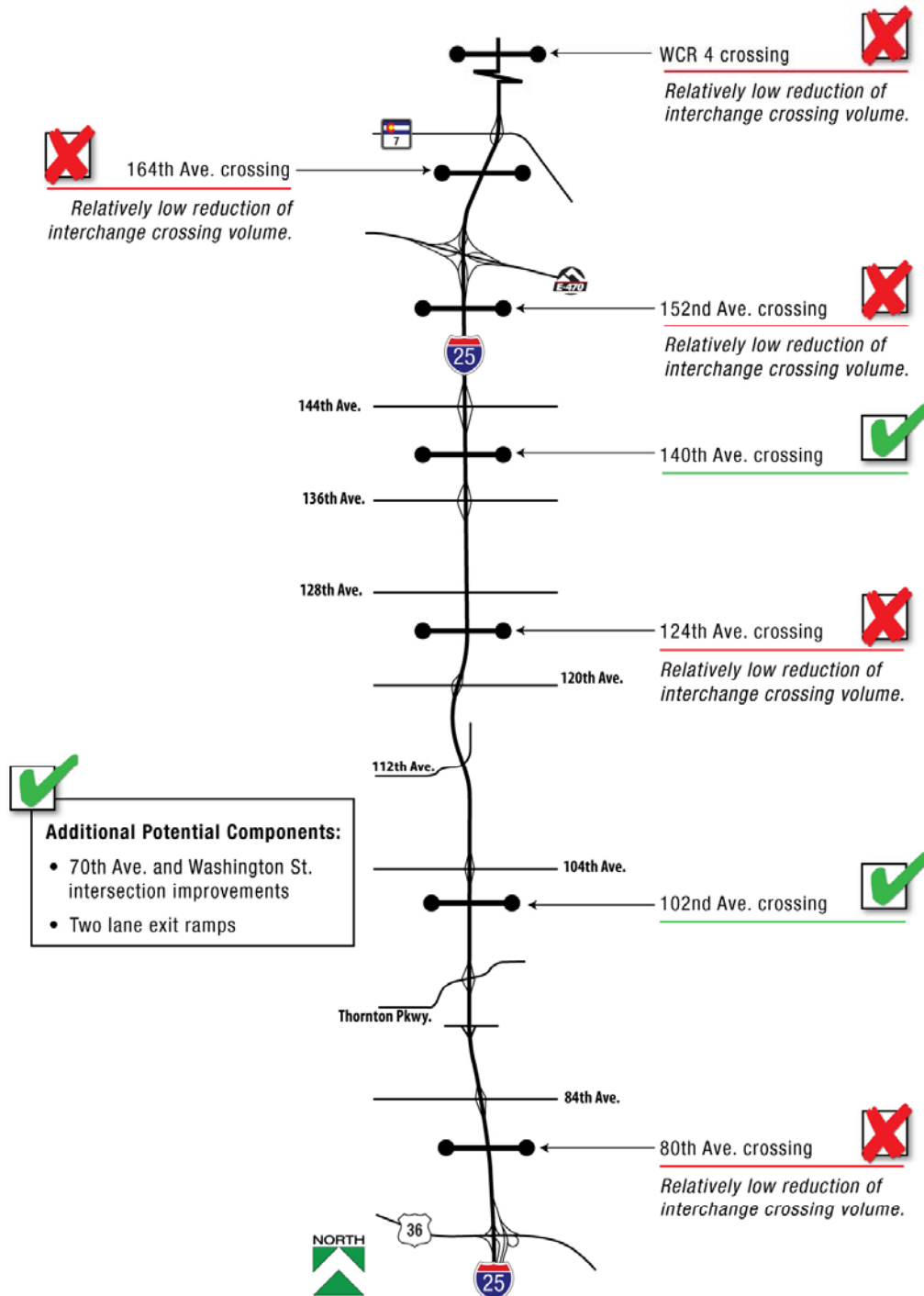
Transit Infrastructure Components



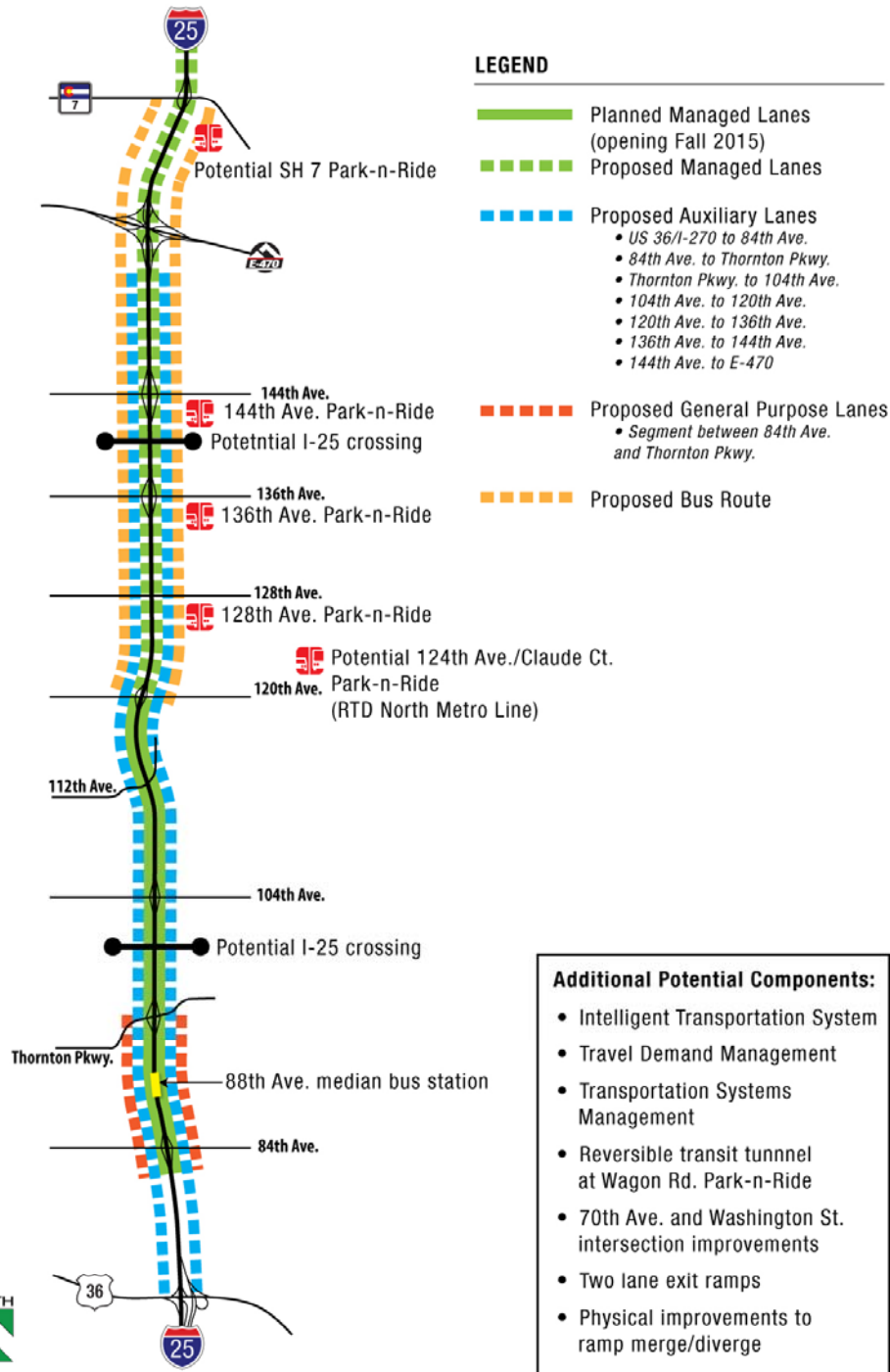
Bus & Park and Ride Components



Other Infrastructure Components



Draft Proposed Package



Draft Prioritization Principles

Prioritize projects that:

- reduce near-term congestion
- minimize adverse operational impacts
- expand transportation options
- are more easily delivered

RAMP Projects

- I-25 Permanent Soundwall Project (Adams County)
- North Metro Rail Corridor (RTD)
- Managed Lane Project between 120th Ave and SH 66 (CDOT R4)

Next Steps

2-week review period for Level 1
Screening, Proposed Package, and
Prioritization Principles

Reminder: Please coordinate with
your Executive Committee reps!

Next meeting:
late July combined TAC/EC

Public meeting August

DRAFT N & S Level 1 Screening Matrix			MOBILITY	MULTIMODAL	SAFETY	COST	ENVIRO RESOURCE IMPACTS	GOALS					RECOMMENDATION	
								Expand Transportation Options	Maximize Use of Existing Infrastructure	Complement TMO	Maximize Sustained Mobility Benefits	Minimize Throw-Away	Recommend for Level 2	Comments
Northbound PM														
N.2	C-D system - US 36 to 84th	Consolidate all NB weaving movements on side parallel facility	○	NR	NR	NR	NR	NR	NR	NR	NR	NR	No	Provided no measurable mobility improvement and therefore does not address the Purpose and Need.
N.3	Auxiliary Lane - I-270 to 84th	Provide lane add via northbound I-270/US 36/I-76 ramp	●	NA	●	●	●	○	●	○	●	○	Yes	
N.4	I-76 direct connection to I-25	Slip ramp to mainline I-25 upstream of current connection	○	NR	NR	NR	NR	NR	NR	NR	NR	NR	No	Provided no measurable mobility improvement and therefore does not address the Purpose and Need.
N.6	84th to Thornton Parkway - NB	Construct a continuous acceleration/deceleration lane between interchanges; requires replacement of 88th Ave bridge	●	NA	●	○	○	○	●	○	●	●	Yes	
N.7	Thornton Pkwy to 104th - NB	Construct a continuous acceleration/deceleration lane between interchanges	●	NA	●	●	○	○	●	○	●	○	Yes	
N.8	104th to 120th - NB	Construct a continuous acceleration/deceleration lane between interchanges	●	NA	●	●	○	○	●	○	●	○	Yes	
N.9	120th to 136th - NB	Construct a continuous acceleration/deceleration lane between interchanges	●	NA	●	●	○	○	●	○	●	○	Yes	
N.10	136th to 144th - NB	Construct a continuous acceleration/deceleration lane between interchanges	●	NA	●	●	○	○	●	○	●	○	Yes	
N.11	144th to E-470 - NB	Construct a continuous acceleration/deceleration lane between interchanges	●	NA	●	●	○	○	●	○	●	○	Yes	
N.12	Physical improvements to ramp merge and diverge sections - NB	NB on-ramp superelevation correction	NA	NA	●	●	○	○	●	○	NA	○	Yes	
N.14	144th to SH 7 C-D system	Construct parallel C-D system along I-25 between 144th Avenue and SH 7	○	NA	NR	NR	NR	NR	NR	NR	NR	NR	No	Would negatively impact mobility for I-25 to E-470/Northwest Parkway users by eliminating direct connection and therefore would not address the Purpose and Need.
N.15	General Purpose Lane - 84th to Thornton Pkwy	Extend 4th travel lane north to Thornton Pkwy Interchange and replace 88th Ave bridge	●	NA	●	○	○	○	●	○	●	●	Yes	
I.1 (NB)	Extend Managed Lanes north from 120th Ave to SH 7	Extend managed lanes from 120th Ave to SH 7	●	NA	●	○	TBD	●	●	●	●	○	Yes	

Southbound AM														
S.1	Braided ramps - 84th Avenue to US 36	Physical grade separation to eliminate some weaving movements	○	NR	NR	NR	NR	NR	NR	NR	NR	NR	No	US 36 and 84th Ave weave movements are not the cause of congestion in the I-25 corridor, therefore this component would not address Purpose and Need.
S.2	C-D system - 84th Avenue to US 36	Consolidate all SB weaving movements on side parallel facility	○	NR	NR	NR	NR	NR	NR	NR	NR	NR	No	US 36 and 84th Ave weave movements are not the cause of congestion in the I-25 corridor, therefore this component would not address Purpose and Need.
S.3	84th Avenue on-ramp gore point extension	Restrict SB entering traffic from reaching I-270 flyover and eliminate tight right-to-left weaving movement	○	NR	NR	NR	NR	NR	NR	NR	NR	NR	No	Would negatively impact mobility for 84th Ave users accessing I-270 and therefore would not address the Purpose and Need.
S.4	Auxiliary Lane - 84th to US 36	Widen I-25 to provide 5 southbound travel lanes between 84th and US 36	●	NA	●	●	●	○	●	○	○	○	Yes	
S.5	E-470 to 144th - SB	Construct a continuous acceleration/deceleration lane between interchanges	●	NA	●	●	○	○	●	○	○	○	Yes	
S.6	144th to 136th - SB	Construct a continuous acceleration/deceleration lane between interchanges	●	NA	●	●	○	○	●	○	○	○	Yes	
S.7	136th to 120th - SB	Construct a continuous acceleration/deceleration lane between interchanges	●	NA	●	●	○	○	●	○	○	○	Yes	
S.8	120th to 104th - SB	Construct a continuous acceleration/deceleration lane between interchanges	●	NA	●	●	○	○	●	○	○	○	Yes	
S.9	104th to Thornton Pkwy - SB	Construct a continuous acceleration/deceleration lane between interchanges	●	NA	●	●	○	○	●	○	○	○	Yes	
S.10	Thornton Parkway to 84th - SB	Construct a continuous acceleration/deceleration lane between interchanges; requires replacement of 88th Ave bridge	●	NA	●	○	○	○	●	○	○	●	Yes	
S.13	SH 7 to 144th C-D system	Construct parallel C-D system along I-25 between SH 7 and 144th Avenue	○	NA	NR	NR	NR	NR	NR	NR	NR	NR	No	Would negatively impact mobility for I-25 to E-470/Northwest Parkway users by eliminating direct connection and therefore would not address the Purpose and Need.
S.15	General Purpose Lane - Thornton Pkwy to 84th	Extend 4th travel lane north to Thornton Pkwy Interchange and replace 88th Ave bridge	●	NA	●	○	○	○	●	○	○	●	Yes	
I.1 (SB)	Extend Managed Lanes north from 120th Ave to SH 7	Extend managed lanes from 120th Ave to SH 7	●	NA	●	○	TBD	●	●	●	●	○	Yes	

NA	Not Applicable.
NR	Not Rated.
○	No Benefit/Adverse Impacts
●	Moderate Benefit
●	Significant Benefit

DRAFT

DRAFT B PNR & TI Level 1 Screening Matrix			MOBILITY	MULTIMODAL	SAFETY	COST	ENVIRO RESOURCE IMPACTS	GOALS					RECOMMENDATION	
								Expand Transportation Options	Maximize Use of Existing Infrastructure	Complement TMO	Maximize Sustained Mobility Benefits	Minimize Throw- Away	Recommend for Level 2	Comments
Title	Description													
PNR.1	Expand Wagon Road Park-n-Ride	Expansion of current Park-n-Ride locations (SURFACE)	NA	○	NA	●	○	○	◐	◐	○	●	No	Small amount of land available; construction impacts likely for current pnr users, less sustainable due to relief after North Metro implementation
PNR.1	Expand Wagon Road Park-n-Ride	Expansion of current Park-n-Ride locations (STRUCTURE)	NA	○	NA	○	●	○	○	◐	○	●	No	Construction impacts likely for current pnr users, less sustainable due to relief after North Metro implementation, high cost
PNR.3	New Park-n-Ride at 136 th Ave and I-25	Construction of new Park-n-Ride locations	NA	◐	NA	●	◐	◐	○	◐	◐	●	Yes	Medium effect on Wagon Road demand (model may under-project) ; available land may be limited
PNR.4	New Park-n-Ride at 144 th Ave and I-25	Construction of new Park-n-Ride locations	NA	◐	NA	●	◐	●	○	◐	◐	●	Yes	Medium effect on Wagon Road demand (model my under-project); available land may be limited
PNR.5	New Park-n-Ride at SH-7 and I-25	Construction of new Park-n-Ride locations	NA	◐	NA	●	●	●	○	◐	◐	●	Yes	Medium effect on Wagon Road demand (model my over-project)
PNR.6	New Park-n-Ride at 124 th Ave and Claude Court at Eastlake	Construction of new Park-n-Ride locations	NA	◐	NA	●	●	◐	○	◐	●	●	Yes	Medium effect on Wagon Road demand (model my under-project)
PNR.7	New Park-n-Ride near 128th Ave and I-25 with median station	Construction of new Park-n-Ride locations, addition of median station	NA	●	NA	NR	NR	◐	○	◐	◐	●	No	This component in conjunction with the full I-25 cross-section would require reconstruction or modification of recently constructed structures and therefore would not meet the project Purpose and Need. This component could be reconsidered as a component of the long term cross-section.
TI.1	Bi-directional tunnel for bus access to the Wagon Road P-n-R from the managed lanes	Convert the tunnel to a reversible bus-only connection	NA	◐	NA	●	●	◐	●	●	●	●	Yes	This component supports ITS.20, 120th Ave SB ramp meter.
TI.3	Build a shoulder busway from 120 th Ave to SH 7	Allows buses only to travel on existing outside shoulder during peak congested conditions. Use of the busway would only be allowed when traffic speeds are less than 35 mph, and busway speed limit would be 35 mph	NA	●	○	●	●	◐	●	●	◐	○	Yes	
TI.4	Bus/HOV queue jump lanes and bus ramps at interchanges	Provide HOV and bus bypass around ramp meter.	◐	◐	NA	●	●	●	◐	●	◐	○	Yes	Component has potential to address mobility issues when paired with other improvements.
TI.6	88th Ave Median Station	Inline station to prevent buses from weaving and replace 88th Ave bridge	NA	●	◐	○	○	◐	○	●	●	●	Yes	
TI.7	88th Ave interchange T-ramp	Add T-ramp to current overpass to serve the managed lane and replace 88th Ave bridge	○	NR	NR	NR	NR	NR	NR	NR	NR	NR	No	Provided no measurable mobility improvement and therefore does not address the Purpose and Need.

NA	Not Applicable.
NR	Not Rated.
○	No Benefit/Adverse Impacts
◐	Moderate Benefit
●	Significant Benefit

DRAFT I Level 1 Screening Matrix			MOBILITY	MULTIMODAL	SAFETY	COST	ENVIRO RESOURCE IMPACTS	GOALS					RECOMMENDATION	
Title	Description	Expand Transportation Options						Maximize Use of Existing Infrastructure	Complement TMO	Maximize Sustained Mobility Benefits	Minimize Throw-Away	Recommend for Level 2	Comments	
I.4	Construct two-lane interchange ramps	Widen single-lane ramps to provide two lane exit from I-25 at all diamond interchanges	●	NA	NA	●	○	○	○	○	●	○	Yes	Component has potential to address mobility issues when paired with auxiliary lane projects. Resource impacts at Thornton Pkwy SB.
I.5	70th/Washington Intersection	Extend eastbound dual left-turn lane to better accommodate evening peak flows	○	NA	○	●	●	○	○	○	●	●	Yes	
I.6a	I-25 Crossing at 80th Ave	Construct additional roadway crossing of I-25	●	●	●	●	●	●	○	●	●	●	No	Relatively low reduction of interchange crossing volume.
I.6b	I-25 Crossing at 102nd Ave	Construct additional roadway crossing of I-25	●	●	●	○	●	●	○	●	●	●	Yes	
I.6c	I-25 Crossing at 124th Ave	Construct additional roadway crossing of I-25	●	●	●	●	●	●	○	●	●	●	No	Relatively low reduction of interchange crossing volume.
I.6d	I-25 Crossing at 140th Ave	Construct additional roadway crossing of I-25	●	●	●	●	●	●	○	●	●	●	Yes	
I.6e	I-25 Crossing at 152nd Ave	Construct additional roadway crossing of I-25	●	●	●	●	●	●	○	●	●	●	No	Relatively low reduction of interchange crossing volume.
I.6f	I-25 Crossing at 164th Ave	Construct additional roadway crossing of I-25	●	●	●	●	●	●	○	●	●	●	No	Relatively low reduction of interchange crossing volume.
I.6g	I-25 Crossing at WCR 4	Construct additional roadway crossing of I-25	○	●	●	●	●	●	○	●	●	●	No	Relatively low reduction of interchange crossing volume.
I.7	Extend toll lane ingress/egress north	Restrict access to I-25 reversible lanes and managed lanes south of 84th Ave and make first point of access north of 84th Ave	○	NR	NR	NR	NR	NR	NR	NR	NR	NR	No	Would negatively impact mobility for 84th Ave users accessing the reversible lanes and managed lanes and therefore would not address the Purpose and Need.

NA	Not Applicable.
NR	Not Rated.
○	No Benefit/Adverse Impacts
●	Moderate Benefit
●	Significant Benefit