

One Center City Update on Near-term Projects

Seattle Bicycle Advisory Board

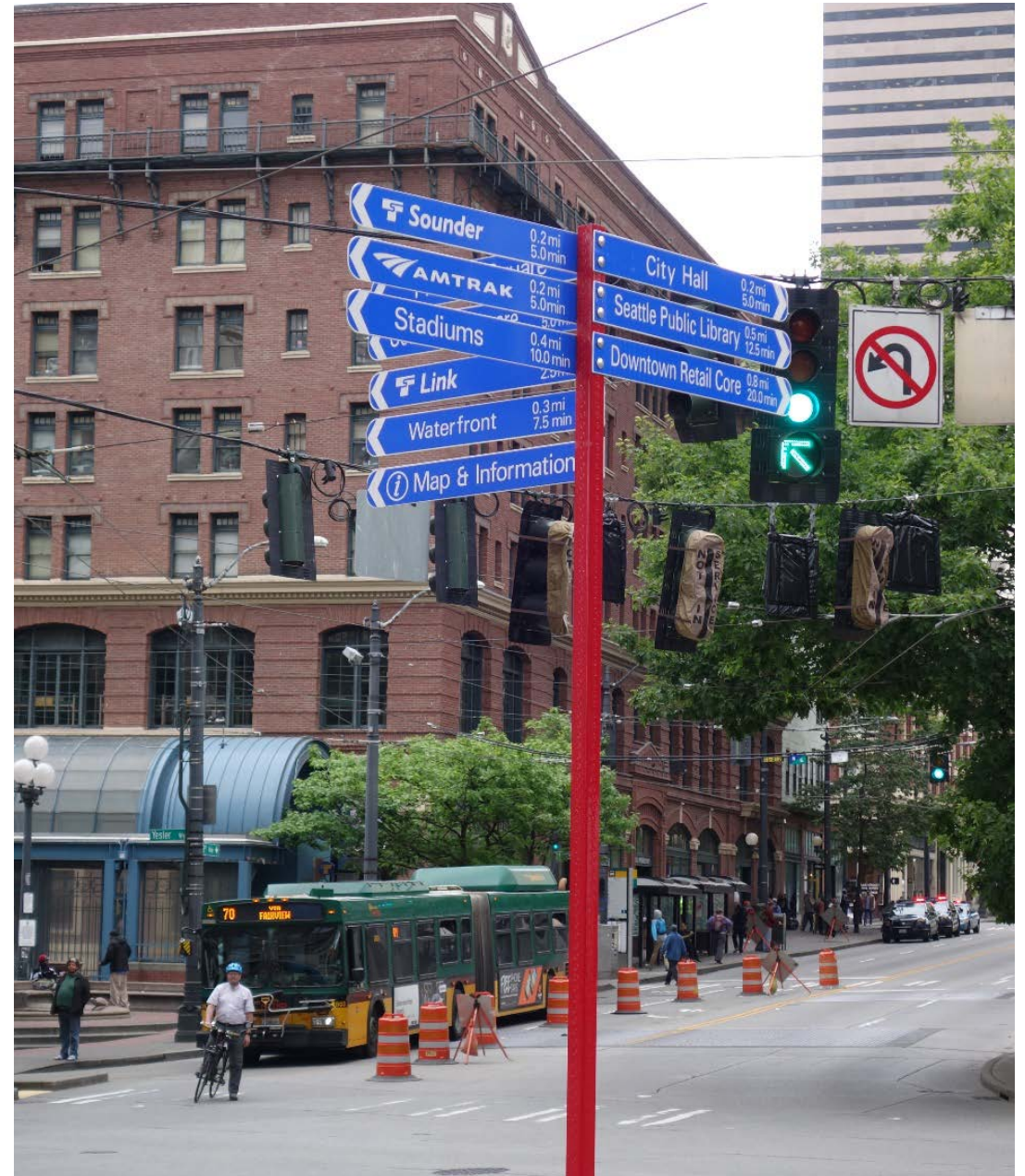
August 2, 2017

41	422
252	424
257	510
268	511
311	512
402	513
405	545
410	
415	
417	



OVERVIEW

- Need for Near-Term Action
- Decision Process
- Recommended Near-Term Projects, Programs, and Strategies





NEED FOR NEAR-TERM ACTION (2017-2023)

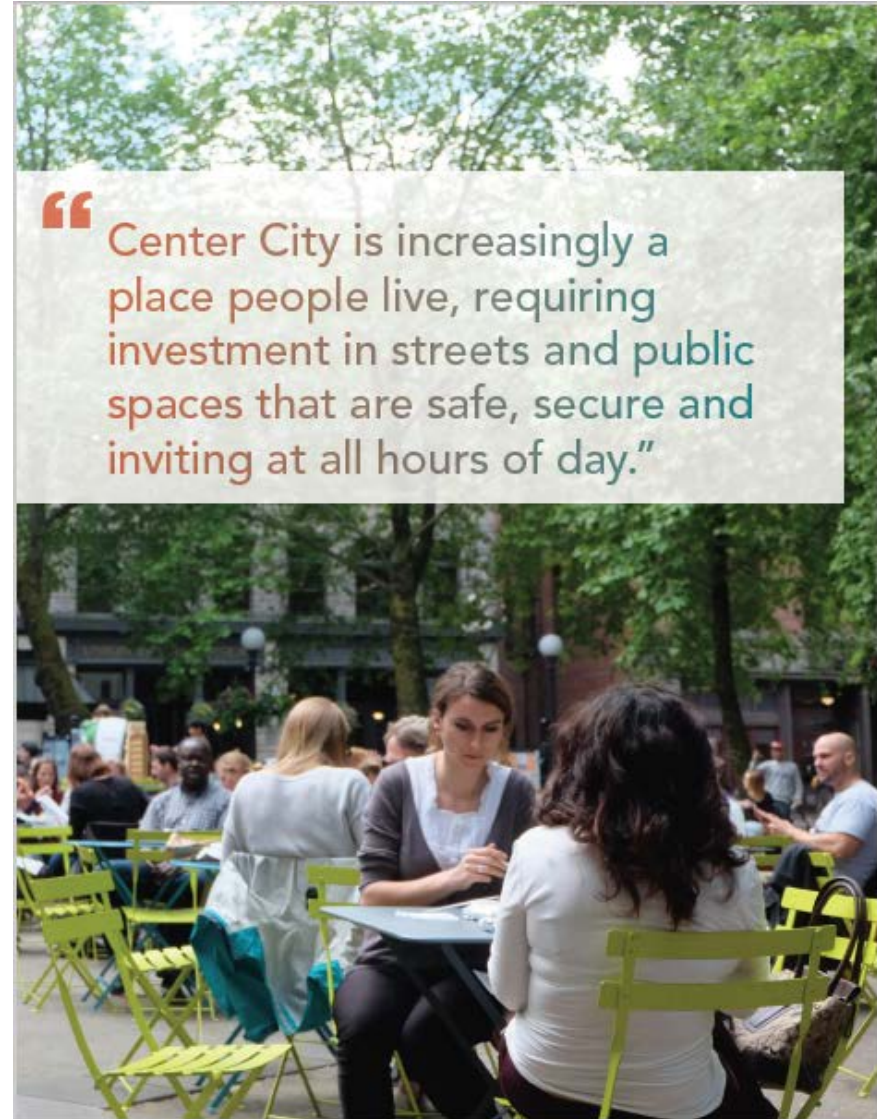
A TIME OF OPPORTUNITY AND CHALLENGE

WE HAVE:

- Rapid growth, including near-term private and public projects
- Regional transit system expansion
- Technological change

WE WANT:

- Safe, affordable, reliable and efficient transportation options
- Inviting and engaging public realms that support social connections and community-building
- Visible and equitable benefit from our public investments



SOLUTION IMPLEMENTATION

PERIOD OF MAXIMUM CONSTRAINT



- OCC Near-Term Plan
- 2nd Ave PBL open
- 1st Ave utility relocations (CCC)

- Center City Connector (CCC) construction begins
- D2 Roadway closes

- DSTT closes to buses
- Convention Center construction begins
- Madison BRT open
- SR 99 Tunnel open*
- Alaskan Way Viaduct demolition*
- Alaskan Way construction begins*

- Center City Connector open
- Alaskan Way open to buses*

- Convention Center open
- Northgate Link open
- North Portal streets open*

- Lynnwood & East Link open
- Alaskan Way open to traffic*

* Alaskan Way Viaduct Replacement Program project timelines dependent on completion of the SR 99 Tunnel

NO ACTION IS NOT AN OPTION

Doing nothing impacts:

- Pedestrians
- Transit customers
- Cyclists
- Businesses
- Residents
- Everyone who comes downtown



SLOWER TRAVEL SPEEDS

▼ **23%**

Decrease in PM peak bus speed on 2nd Ave

▼ **43%**

Decrease in PM peak bus speed on 4th Ave



INCREASED TRAVEL TIME

▲ **3.5+**

Minutes per afternoon commute

▲ **2,500**

Hours of additional bus passenger travel time each weekday



INCREASED COST

▲ **\$6-7M***

Additional annual operating cost to maintain current level of service

▲ **15+**

Additional transit vehicles needed to maintain current frequencies

*Estimate does not include all potential cost increases associated with operational changes in downtown such as the D-2 roadway closure



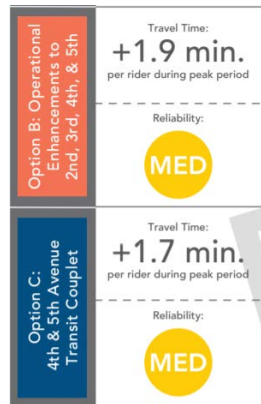
DECISION PROCESS

SELECTING NEAR-TERM PROJECTS, PROGRAMS, AND STRATEGIES

- Value based [support Guiding Principles]
- Data driven
- Outreach informed



IDEA
GENERATION



TECHNICAL
ANALYSIS



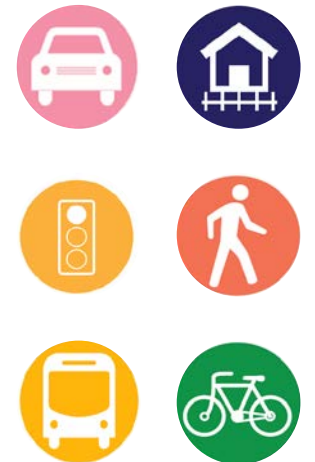
GUIDING
PRINCIPLES



STAKEHOLDER,
PUBLIC INPUT

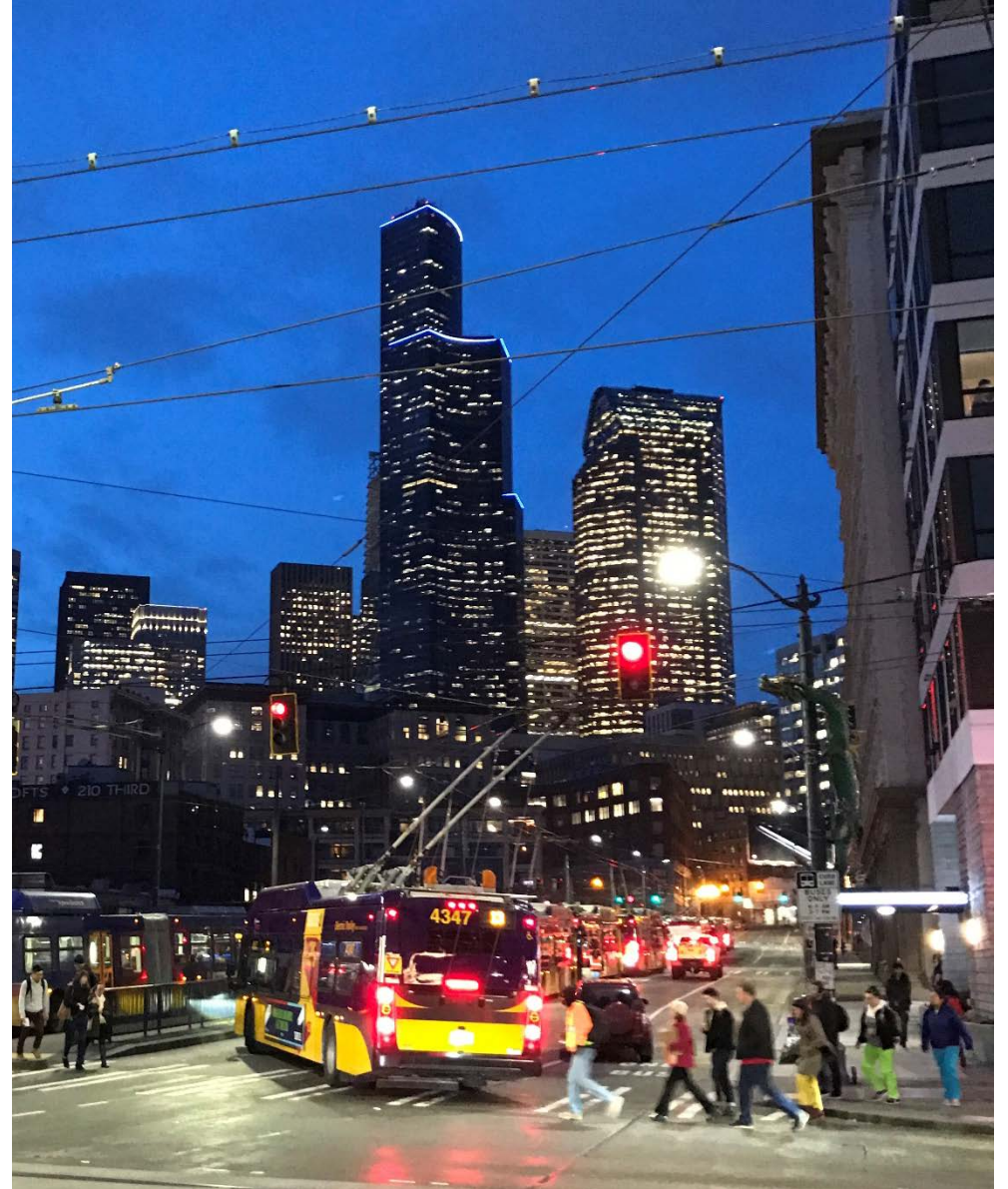


NEAR-TERM PROJECTS, PROGRAMS, & STRATEGIES



WHAT WE HEARD:

- **Prioritize safety**
- **Design for people first**
- **Prioritize and balance the needs of people riding transit, on bikes, and walking**
- **Optimize the transit user experience** (regional commuters, people making transfers, people with disabilities)
- **Prioritize completion of the Center City Bike Network**



WHAT WE HEARD:

- Make the **hub area transfer experience** safe, easy, and comfortable
- Carefully **consider potential impacts to the existing public realm and retail environment**
- Explore **innovative and creative solutions**
- Mitigate impacts to **business access, goods delivery, etc.**
- Consider **impacts to regional travel**



KEY TAKEAWAYS:

- Short timeline favors many targeted interventions
- Near-term challenges should not halt progress on building a complete multimodal system
- Important to advance key elements of the Center City Bike Network
- Near-term actions should maintain flexibility for mid- and long-term improvements



REMOVED FROM NEAR-TERM CONSIDERATION

- Sound Transit 550 Restructure
- New South Downtown Transit Hubs (i.e., @ Stadium or SODO Stations)
- 5th Avenue 2-Way Transit Spine





RECOMMENDED PROJECTS, PROGRAMS, AND STRATEGIES

EVERY PARTNER TAKING ACTIONS



Downtown
Seattle
Association



Seattle
Department of
Transportation



King County
METRO



Seattle
Office of Planning &
Community Development

TYPES OF NEAR-TERM SOLUTIONS



Traffic Operations



Transit Speed, Reliability, & Customer Experience



Bus Service Restructures



Hub Area Improvements



Pedestrian Experience and Accessibility



Center City Bike Network Connections



Management Strategies



MANAGEMENT STRATEGIES

EXPAND COMMUTE TRIP REDUCTION PROGRAMS	MOBILITY AS A SERVICE	URBAN GOODS DELIVERY PROGRAMS
<ul style="list-style-type: none"> Build on recent success in reducing drive alone mode share to Center City Expand reach of programs to new Center City markets such as small employers Develop more effective technology platform to allow access to employer programs 	<ul style="list-style-type: none"> Create a unified technology platform allowing travelers to plan and purchase travel across multiple modes Unify access and payment for public and private mobility services Address digital equity issues 	<ul style="list-style-type: none"> Provide new options for urban goods delivery that use less curbspace and shift demand to off peak times Design pilot projects for e-bike delivery, off-hours delivery and common goods delivery

WASHINGTON STATE CONVENTION CENTER ADDITION

IMPLEMENT 2-WAY TRAFFIC OPERATIONS ON 6TH AVE

- Provide additional southbound capacity to I-5 ramps from rapidly growing SLU and Denny Triangle neighborhoods
- Mitigate construction lane closures on 5th Avenue (Rainier Tower)
- Improve circulation opportunities in retail district
- Reduce conflicts with traffic turning from 5th to EB streets

DELIVER ALL-DOOR BOARDING AND OFF-BOARD FARE PAYMENT ON 3RD AVE

- Speed transit boarding
- Could allow buses traveling on 2nd and 4th Avenues to relocate to 3rd Avenue with no travel time impacts for 3rd Avenue service (up to 20 buses per peak / direction)
- Enhance passenger experience
- Reduce conflicts between waiting transit passengers and through pedestrians
- Reduce delay from lift deployments

SHARED MOBILITY HUBS AND MANAGEMENT STRATEGIES

- Enhance connections between transit and shared mobility options - TNCs, bike share, car share, etc.
- Increase off street bike parking and electric vehicle charging stations
- Develop TNC access and congestion pricing strategy to mitigate impacts of single rider travel

IMPLEMENT PIKE/PINE PBL ONE-WAY COUPLER

- Improve safety outcomes (2-way not recommended on grades)
- Eliminate bike/bus conflicts
- Provide most direct, efficient connection between 2nd Ave and Broadway PBLs

PIKE PINE RENAISSANCE: ACT ONE PEDESTRIAN IMPROVEMENTS

- Waterfront Seattle funded project being coordinated with One Center City
- Improve pedestrian experience
- Connect Pike Place Market, Westlake Park, the Washington State Convention Center and Westlake Station

PARKING AND CURBSPACE MANAGEMENT

- Mitigate loss of curbside parking and loading
- Expand e-Park facilities along 4th and 6th Aves and in the Pike/Pine corridor
- Streamline commercial parking permit program

Options Still Under Consideration / Further Study

LINK TRAIN CAPACITY

- Sound Transit will increase capacity for passengers traveling to and from downtown Seattle via the Downtown Transit Tunnel

IMPROVE CHINATOWN/INTERNATIONAL DISTRICT STATION HUB OPERATIONS

- Improve safety and accessibility for pedestrians at hubs, stations, and bus zones
- Manage projected increases in transit boarding and transfer activity resulting from growth, DSTI buses coming to surface, and service interventions
- Increase curb space to mitigate congested bus zones

UNION/PIKE STREET BUS STOP INVESTMENTS

- Develop bus zones for new Route 41 pathway
- Implement treatments such as all-door boarding to speed boarding and reduce impacts on the pedestrian environments
- Could be on Union Pike or alternative pathways

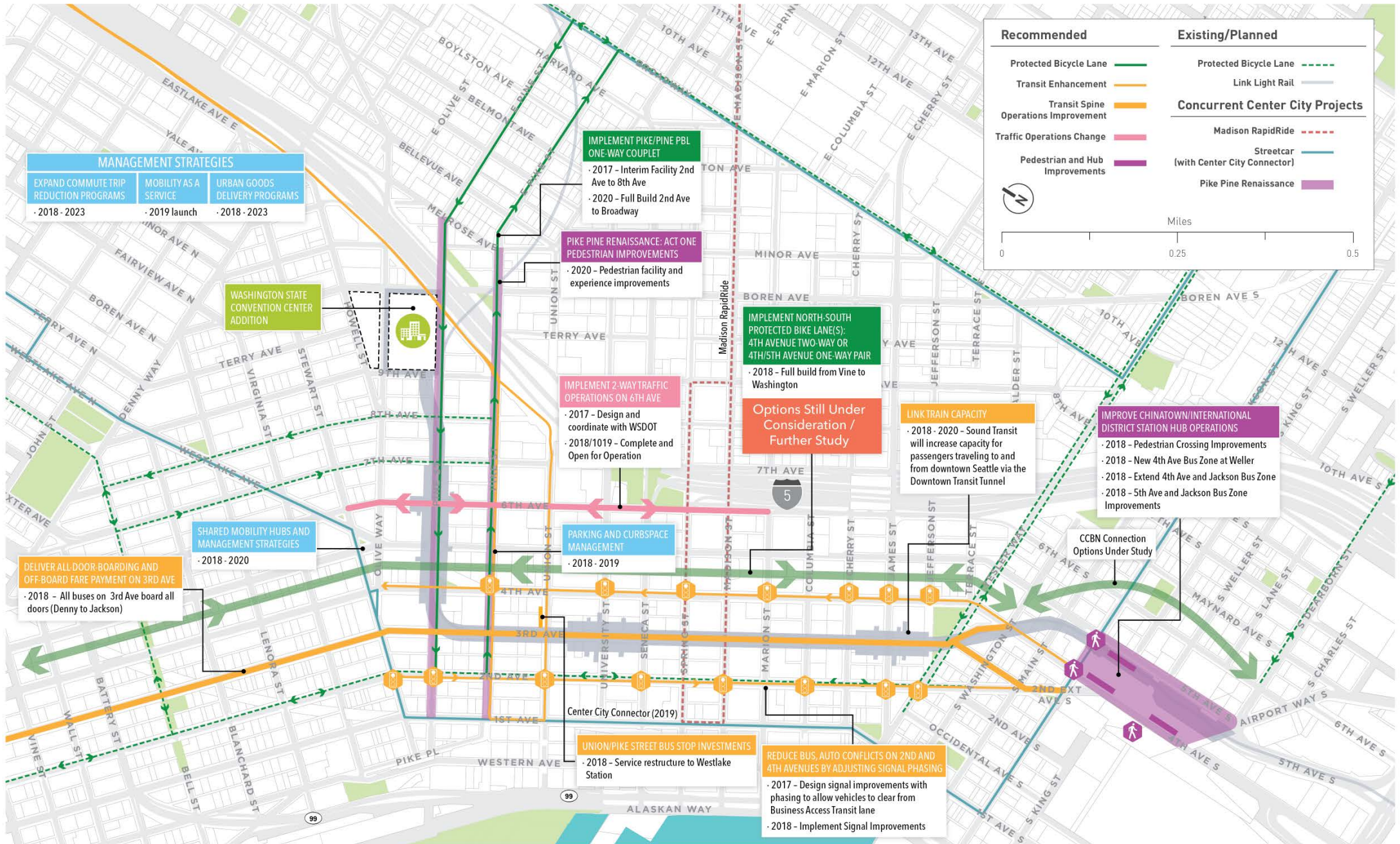
REDUCE BUS, AUTO CONFLICTS ON 2ND AND 4TH AVENUES BY ADJUSTING SIGNAL PHASING

- Improve pedestrian safety as lagging signal provides more intuitive crossing
- Reduce transit delay by clearing right-turning vehicle traffic from Business Access Transit lanes on 2nd and 4th Avenues (Peak-period transit on 2nd and 4th Avenues expected to slow to walking speed without intervention)
- Proven effective where piloted (4th Ave and Pike)

2ND TO DEARBORN PROTECTED BIKE LANE CONNECTION

- Develop critical link in the Center City Bike Network
- Create safe, all ages bike pathway from SE Seattle to Center City
- Determine best pathway for connecting the 2nd Ave PBL, 4th Ave PBL, and the Dearborn PBL

NEAR-TERM MOBILITY CAPITAL PROJECTS (JUSTIFICATION)



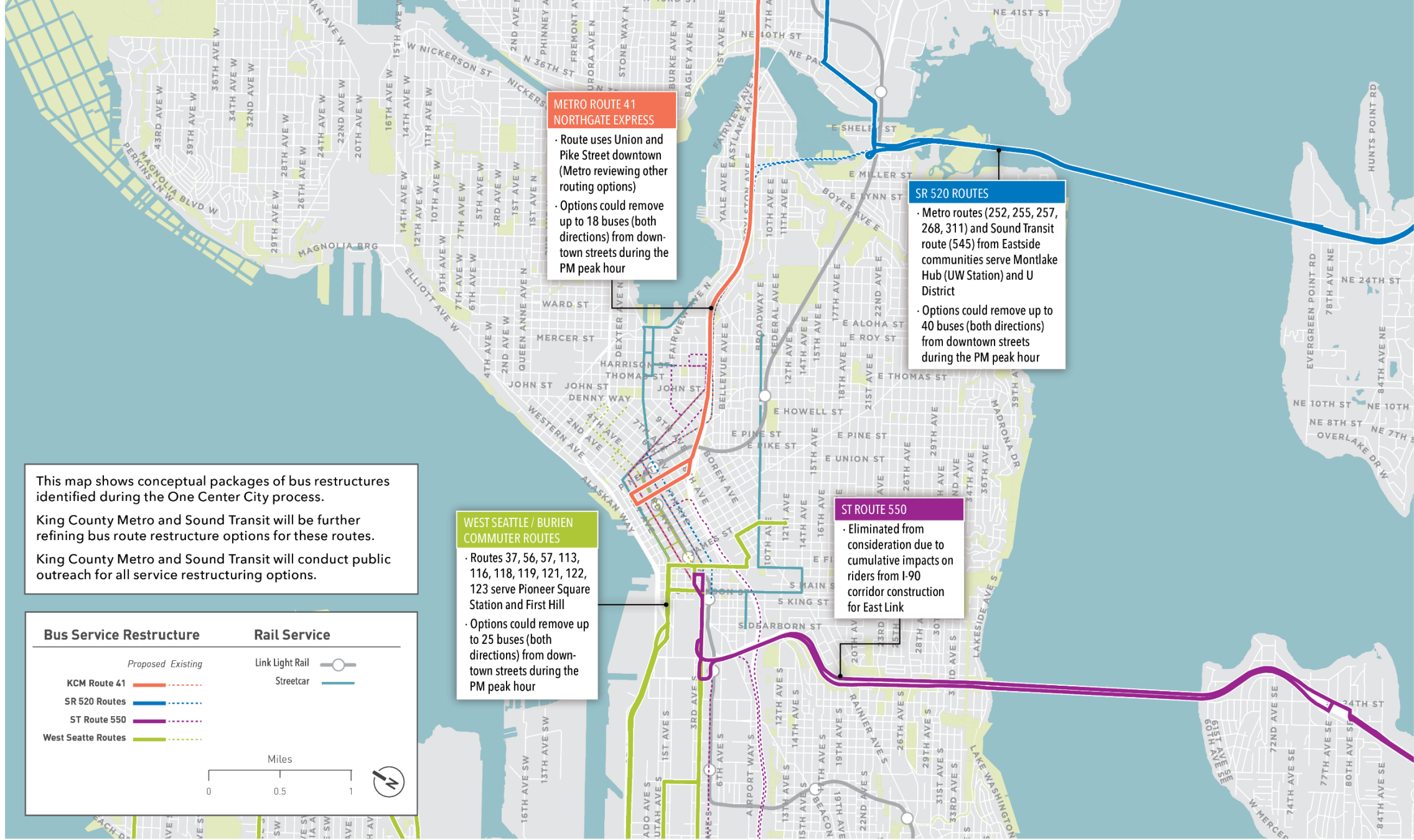
NEAR-TERM MOBILITY CAPITAL PROJECTS (SCHEDULE)



TRANSIT SPEED, RELIABILITY, & CUSTOMER EXPERIENCE

- **Keep buses moving on 2nd Ave and 4th Ave** by reducing conflicts with turning traffic and maintaining capacity
- Improve 3rd Ave bus speed, reliability, and customer experience by providing **all-door boardings for all buses, all times of day**
- **Stop improvements** for proposed service changes (ie. Route 41, SR 520, routes, etc.) including facilities and all-door boarding





**METRO ROUTE 41
NORTHGATE EXPRESS**

- Route uses Union and Pike Street downtown (Metro reviewing other routing options)
- Options could remove up to 18 buses (both directions) from downtown streets during the PM peak hour

SR 520 ROUTES

- Metro routes (252, 255, 257, 268, 311) and Sound Transit route (545) from Eastside communities serve Montlake Hub (UW Station) and U District
- Options could remove up to 40 buses (both directions) from downtown streets during the PM peak hour

**WEST SEATTLE / BURIEN
COMMUTER ROUTES**

- Routes 37, 56, 57, 113, 116, 118, 119, 121, 122, 123 serve Pioneer Square Station and First Hill
- Options could remove up to 25 buses (both directions) from downtown streets during the PM peak hour

ST ROUTE 550

- Eliminated from consideration due to cumulative impacts on riders from I-90 corridor construction for East Link

This map shows conceptual packages of bus restructures identified during the One Center City process. King County Metro and Sound Transit will be further refining bus route restructure options for these routes. King County Metro and Sound Transit will conduct public outreach for all service restructuring options.

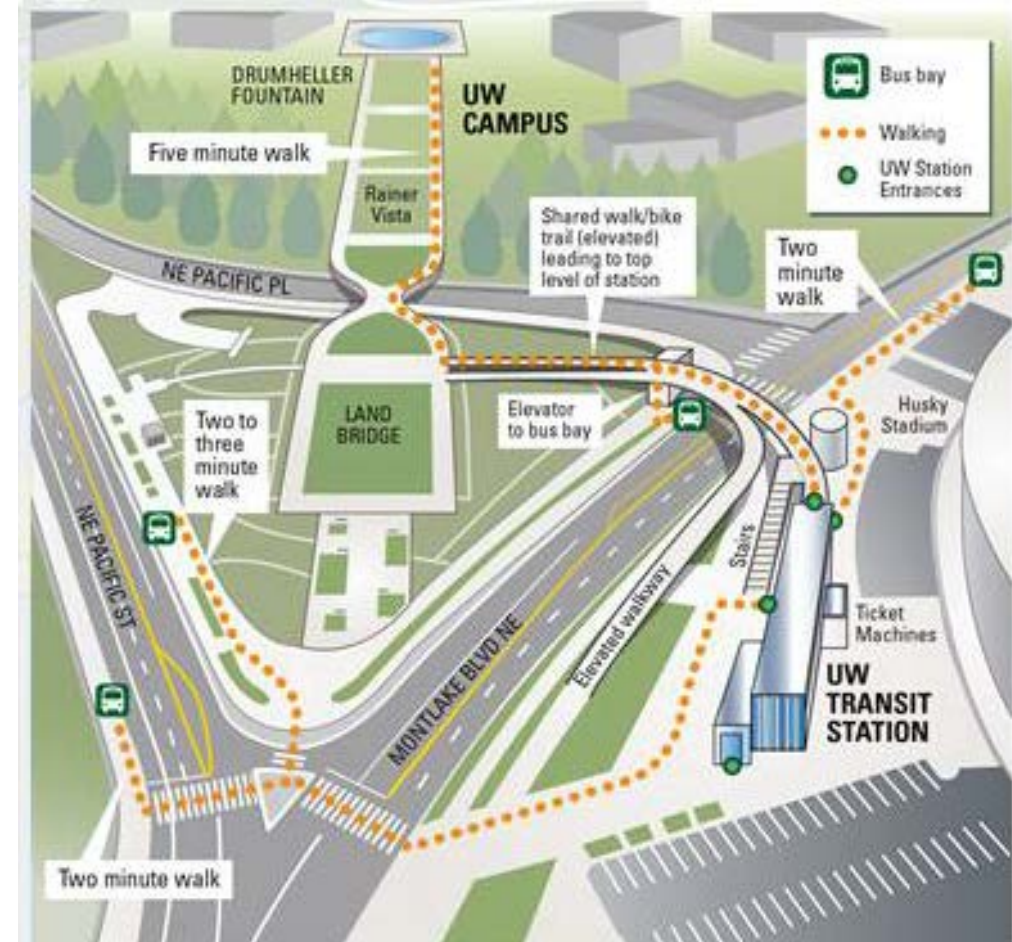
Bus Service Restructure		Rail Service	
<i>Proposed</i>	<i>Existing</i>	Link Light Rail	Streetcar
KCM Route 41	SR 520 Routes	ST Route 550	West Seattle Routes
Miles 0 0.5 1			

TRANSIT SERVICE RESTRUCTURE OPTIONS



HUB AREA IMPROVEMENTS

- Enhanced bus stops and passenger amenities
- Improved transfer environment
- Treatments to speed boarding
- Pedestrian safety and accessibility
- Traffic operations to manage additional bus volumes



Metro is developing pre-design plans for improved bus connections to UW Station at the Montlake Hub



CHINATOWN / INTERNATIONAL DISTRICT HUB

- OPCD, SDOT, Sound Transit, DSA, and Metro participation
- Agencies will coordinate with C/ID and Pioneer Square stakeholders in design process
- Potential capital improvements include:
 - Pedestrian safety improvements
 - Remove 4th Avenue railing to extend bus zone
 - Add new 4th Avenue northbound bus zone south of Weller
 - Improve 5th Avenue southbound bus zone at Jackson
 - Remove abandoned trolley stop at 5th Avenue
 - Wayfinding and public realm improvements



Conceptual improvements at the Chinatown/International District Hub Area



PEDESTRIAN EXPERIENCE AND ACCESSIBILITY

- **Improve** pedestrian connections, legibility and wayfinding in Center City, at transit hubs and major bus zones
- **Activate** public realm and hub areas with existing and new programs
- **Provide** age-friendly improvements including updating curb ramps and installing benches
- **Implement** near-term opportunities identified in street concept plans



Many Center City projects and programs are improving the public realm



PROGRAMS & MANGEMENT STRATEGIES

Expand Commute Planning and Mobility

- **Expand CTR outreach to new Center City markets** and broaden suite of personalized commute planning and tax benefit consultation
- Promote **Mobility as a Service** to provide tailor-made mobility solutions
- Create network of **Shared Mobility Hubs** that provide seamless transfers between transit and alternative travel modes



+31,385 peak trips



+9,016 peak trips



+2,344 peak trips



+2,255 peak trips

Since 2010 the majority of net new commute trips are on transit and by walk/bike





PROGRAMS & MANGEMENT STRATEGIES

Proactively Manage Parking and Curbspace Impacts

- Continued investment in successful **e-Park** and **Downtown Seattle Parking** programs
- Explore off-street opportunities to co-locate TNC staging areas, bike storage and charging stations, and goods delivery staging

Find Parking Faster

E-PARK IS SEATTLE'S ELECTRONIC PARKING GUIDANCE SYSTEM that helps you find parking faster at participating garages.

GET WHERE YOU NEED TO GO— whether it's your favorite restaurants, theatre shows, or downtown shops.

SNAP THE CODE for real-time parking availability or visit seattle.gov/epark

Location	Open Spaces
← Pacific Place	248
↑ 3rd & Stewart	137
↑ Pike Place Market	88
← Convention Center	656

seattle.gov/epark

Minimize impacts to dwindling curbspace availability



PROGRAMS & MANGEMENT STRATEGIES

Innovate Urban Goods Delivery

- Reduce curbside conflicts
- Partner with UW Urban Freight Lab and design pilot projects such as:
 - E-bike delivery
 - Off-hours delivery
 - Common delivery lockers
- Analyze Commercial Parking Permit Program



Cities from Portland to Paris are using electric tricycles for urban goods delivery



CENTER CITY BICYCLE NETWORK

- Connect the **Center City Bike Network**
- Implement interim protected bike lanes on Pike – Pine operating as one-way couplet
- Continue analysis of north-south PBL options on 4th Ave and 5th Ave
- Interim facilities by 2018

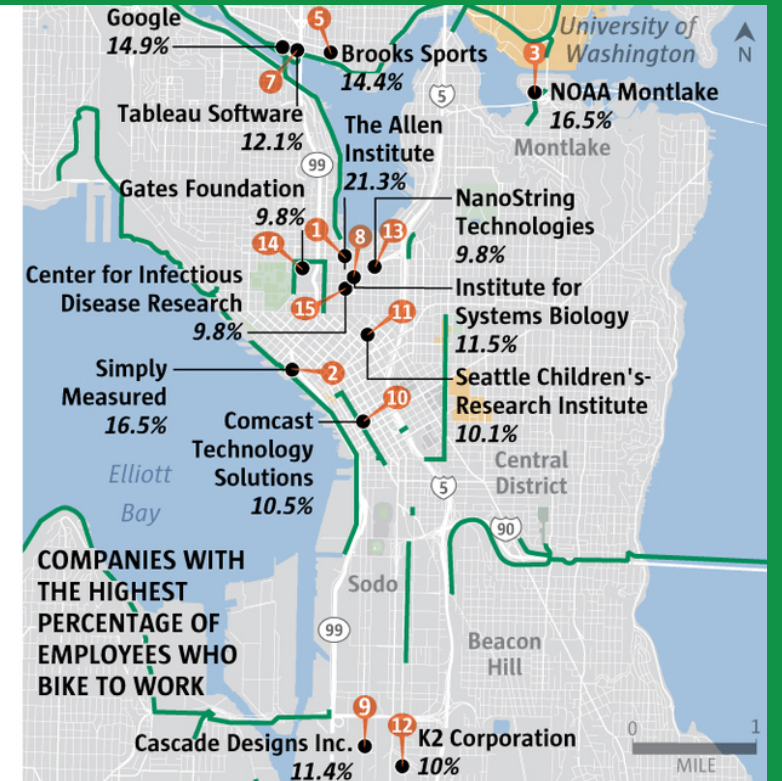
Do bike lanes promote bike commuting?

Large Seattle employers with the highest rates of bike commuters are all located within blocks of a protected-bike lane.

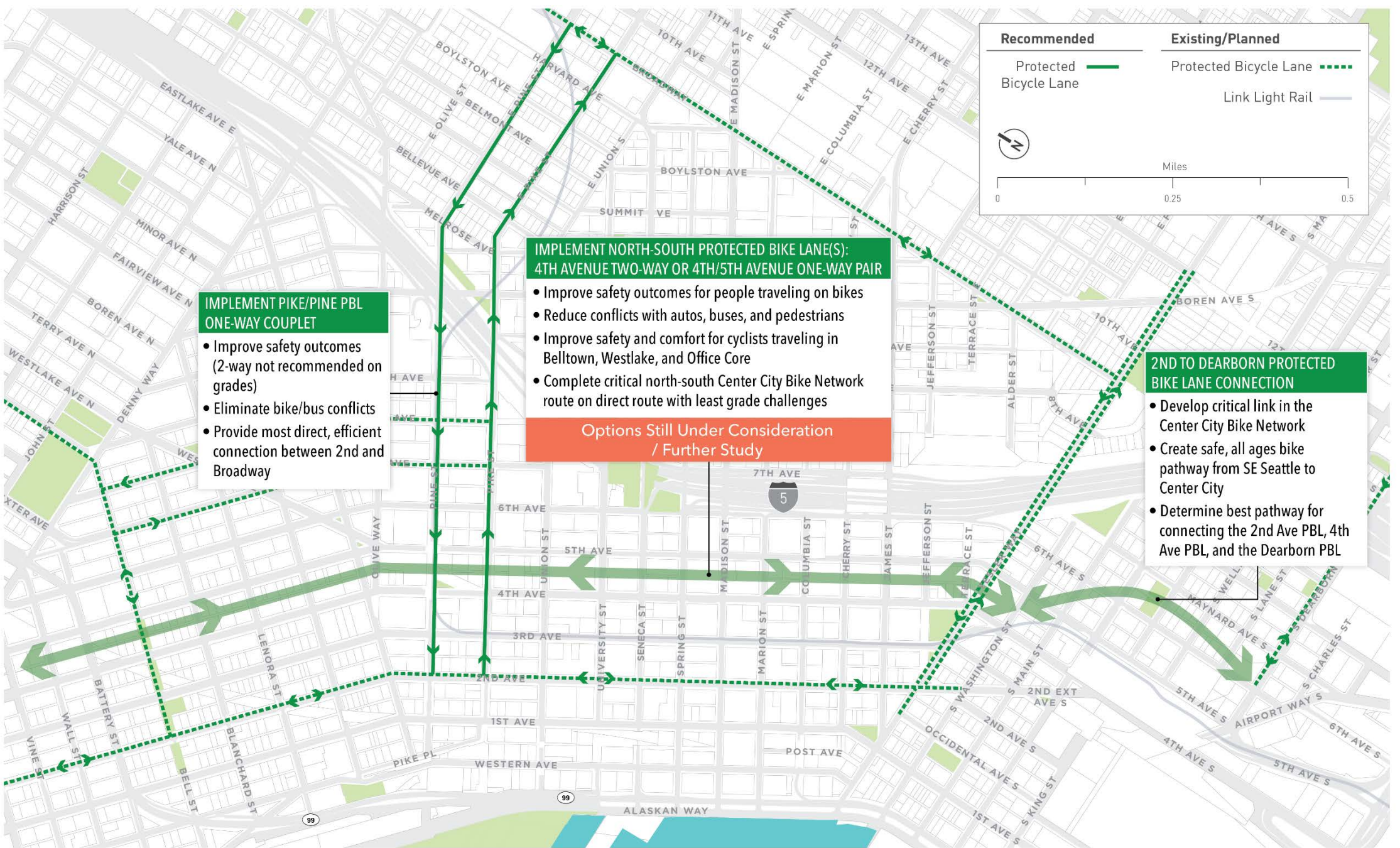
Protected-bike lane

Sources: Commute Seattle, SDOT

EMILY M. ENG /
THE SEATTLE TIMES



Recent survey work by Commute Seattle shows large employers near protected bike facilities have much higher than average rates of bicycle commuting



Recommended	Existing/Planned
Protected Bicycle Lane	Protected Bicycle Lane
Link Light Rail	Link Light Rail

Miles
0 0.25 0.5

IMPLEMENT PIKE/PINE PBL ONE-WAY COUPLET

- Improve safety outcomes (2-way not recommended on grades)
- Eliminate bike/bus conflicts
- Provide most direct, efficient connection between 2nd and Broadway

IMPLEMENT NORTH-SOUTH PROTECTED BIKE LANE(S): 4TH AVENUE TWO-WAY OR 4TH/5TH AVENUE ONE-WAY PAIR

- Improve safety outcomes for people traveling on bikes
- Reduce conflicts with autos, buses, and pedestrians
- Improve safety and comfort for cyclists traveling in Belltown, Westlake, and Office Core
- Complete critical north-south Center City Bike Network route on direct route with least grade challenges

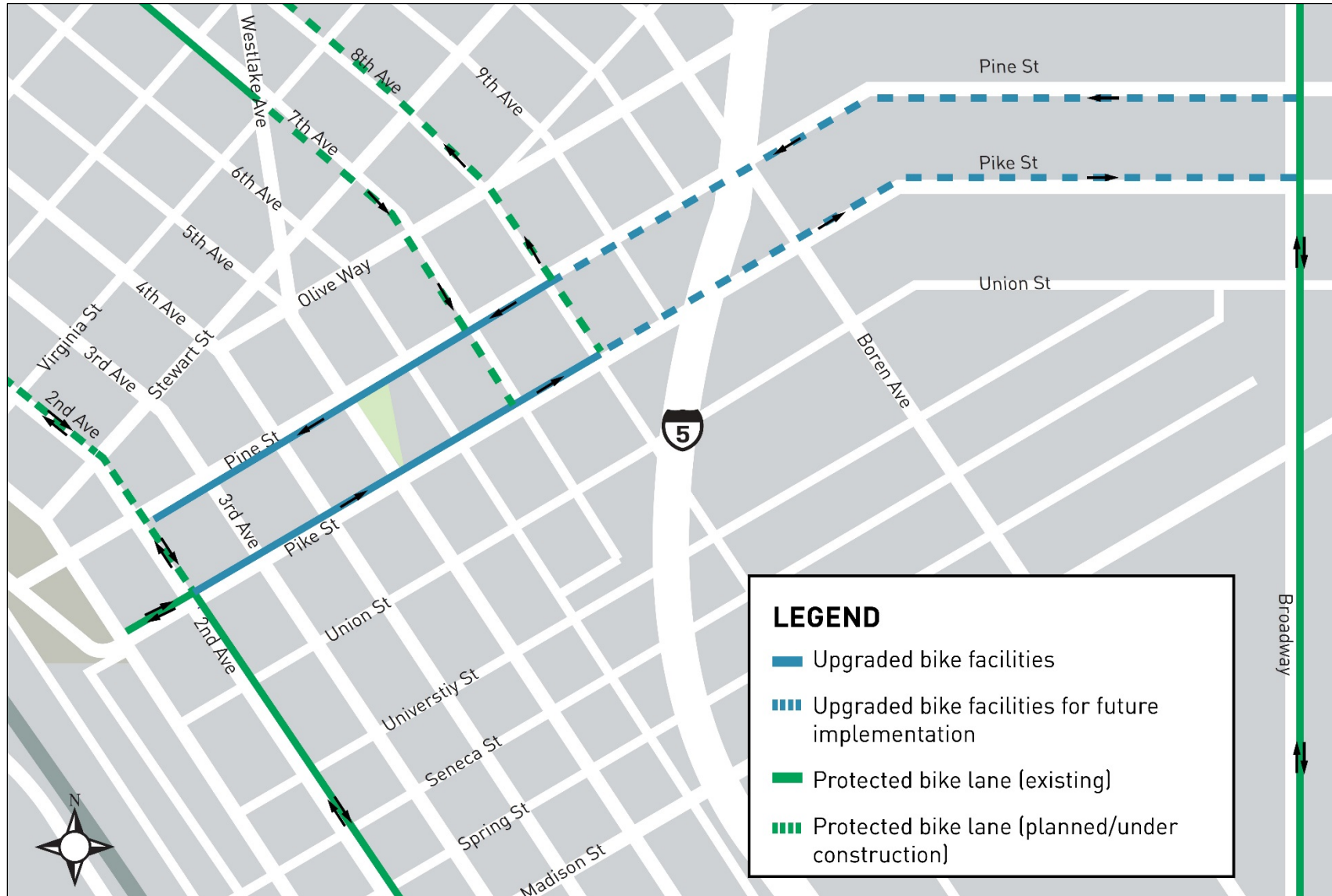
Options Still Under Consideration / Further Study

2ND TO DEARBORN PROTECTED BIKE LANE CONNECTION

- Develop critical link in the Center City Bike Network
- Create safe, all ages bike pathway from SE Seattle to Center City
- Determine best pathway for connecting the 2nd Ave PBL, 4th Ave PBL, and the Dearborn PBL

NEAR-TERM MOBILITY CAPITAL PROJECTS (BICYCLE)

PIKE-PINE PBL PROJECT AREA

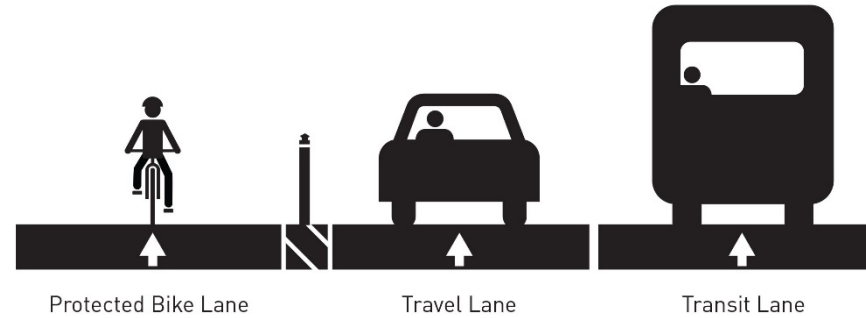


2ND TO 8TH AVENUES: PROPOSAL

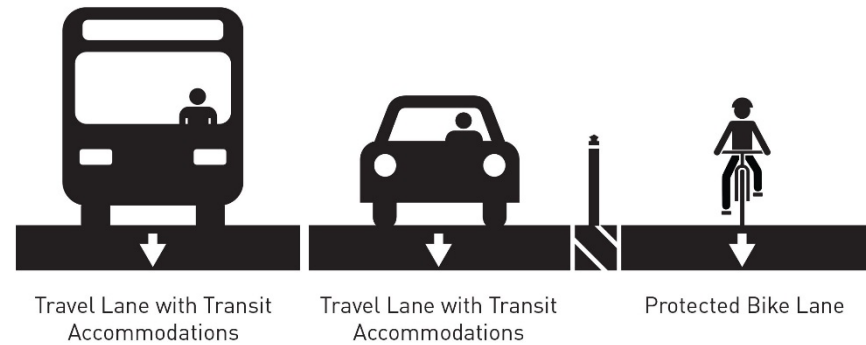
Updated street design:

- Adds a protected bike lane on most blocks
- Maintains the transit lane where needed
- Adds turn pockets, signal upgrades, business access, and loading where possible

PIKE ST



PINE ST



WHAT WE'RE HEARING

- Concern about more construction and associated impacts
- Excitement about better connections between Capitol Hill and Downtown
- Questions about whether upgraded bike lanes on Pike/Pine would be used at a rate justifying changes to on-street parking and deliveries
- Support for east-west protected bike lanes
- Interest in connecting bus routes to the light rail spine and improvements to Route 8



PROJECT DEVELOPMENT AND IMPLEMENTATION

- SDOT, King County Metro, and Sound Transit are moving forward with planning, pre-design, and project development activities
- Now: outreach begins on proposed projects and service changes

Project	Project Development Lead(S)	Current Actions	Implementation Date (Target)
TRANSIT SPEED, RELIABILITY, AND CUSTOMER EXPERIENCE			
Bus Layover Bays (10 Additional)	KCM	• Dependent of service restructures	Q3 2018
2nd Avenue Signal Improvements	SDOT	• SDOT leading project development and design	Q2 2018
4th Avenue Signal Improvements	SDOT	• SDOT leading project development and design	Q2 2018
3rd Avenue - All Door Boarding	KCM	• King County Metro leading project development and procurement of equipment	Q3/Q4 2018
Additional Capital Improvements to Support Service Restructures	KCM/ ST/ SDOT	• TBD depending on needs	As Needed
BUS SERVICE RESTRUCTURING			
SR 520 Service Restructure (SR 520 Link Connections)	KCM/ST	• KCM and ST conducting joint public outreach process (SR 520 Link Connections)	2018
West Seattle - Burien Service Restructure	KCM	• KCM to commence public outreach process in 2017	2018
Route 41 Service Restructure	KCM	• KCM to commence public outreach process in 2017	2018
Route 550 Service Restructure	ST	• ??	2018
TRANSIT OPERATIONS AND MAINTENANCE			
Link Capacity Operating & Maintenance	ST	• KCM and ST conducting joint public outreach process (SR 520 Link Connections)	2018 - (As needed)
Additional Fare Enforcement	ST and KCM	• KCM preparing fare enforcement strategy for 3rd Ave and service restructures • ST budgeting for additional fare enforcement with expanded LRT capacity and service restructures	2018 -
Net New Bus Operating & Maintenance Costs	ST and KCM	• KCM and ST have budget in anticipation of increased operating costs to maintain service levels in downtown	2018 -
TRAFFIC OPERATIONS			
6th Avenue - Two-Way Operations	SDOT	• SDOT leading project development and design	2018/2019

Project	Project Development Lead(S)	Current Actions	Implementation Date (Target)
HUB AREA AND STOP IMPROVEMENTS			
Chinatown / International District Hub Improvements	SDOT/OPCD/ ST/DSA	• SDOT leading project development and design • OPCD providing coordination with Chinatown/International District Neighborhood interests • DSA coordinating on activation opportunities	Q3/Q4 2018
5th Ave Trolley Stop Removal (C/ IDS)	SDOT/ST	• ????	Q2 2018
Montlake Hub Improvements	KCM	• King County Metro currently conducting pre-design study	Q3 2018
KCM Route 41 Stop Improvements	KCM	• King County Metro leading project development and procurement of equipment	Q3 2018
CENTER CITY BICYCLE NETWORK CONNECTIONS			
4th Avenue - Protected Bike Lane	SDOT	• SDOT leading project development and design	2017/2018
Pike - Pine Protected Bike Lanes (2nd - Bellevue)	SDOT	• SDOT leading project development and design • Coordinating with Pike Pine Renaissance and Washington State Convention Center Addition	2018
Pike - Protected Bike Lane (Bellevue - Broadway)	SDOT	• SDOT leading project development and design	2020
PROGRAMS AND MANAGEMENT STRATEGIES			
Expanded CTR Programming	SDOT/ Commute Seattle	• SDOT and Commute Seattle developing CTR strategy that will guide most effective investments	2018 - 2023
Shared Mobility Hubs	SDOT	• SDOT developing Shared Mobility Hub designs and coordinating with transit agency and shared mobility companies	2018 - 2020
Urban Goods Delivery	SDOT	• SDOT developing pilot programs in consultation with University of Washington	2018 -
Parking and Curbspace Management	SDOT	• SDOT and DSA would lead program expansions	2018 - 2019
Mobility as a Service	SDOT/KCM	• SDOT leading regional partnership to develop	2019 -

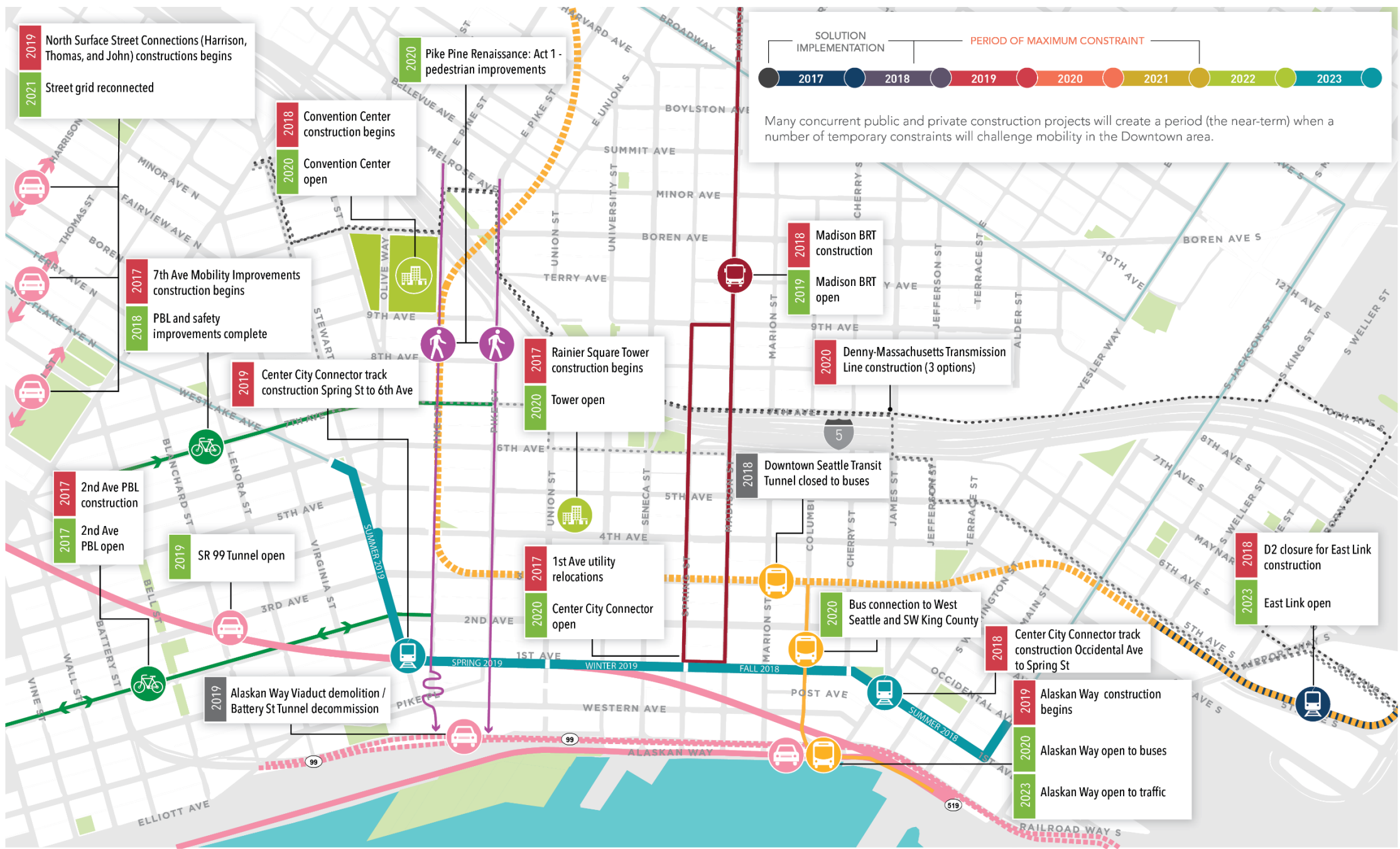
One Center City agencies are moving forward planning, pre-design, and project development activities



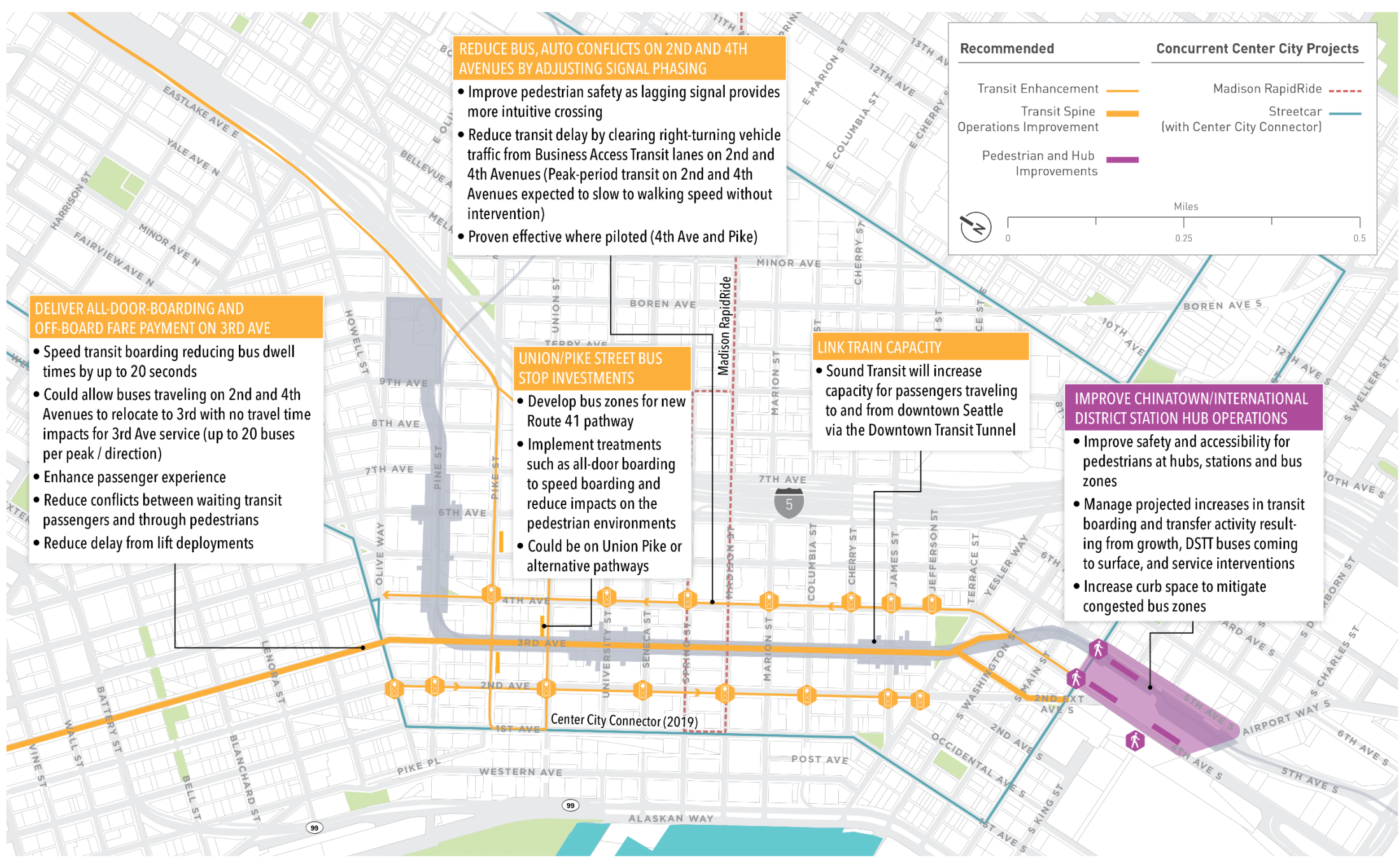
THANK YOU

Jonathan Lewis – SDOT

Jonathan.Lewis@seattle.gov



CENTER CITY PROJECTS (2017 - 2023)



REDUCE BUS, AUTO CONFLICTS ON 2ND AND 4TH AVENUES BY ADJUSTING SIGNAL PHASING

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LINK TRAIN CAPACITY

- Sound Transit will increase capacity for passengers traveling to and from downtown Seattle via the Downtown Transit Tunnel

IMPROVE CHINATOWN/INTERNATIONAL DISTRICT STATION HUB OPERATIONS

- Improve safety and accessibility for pedestrians at hubs, stations and bus zones
- Manage projected increases in transit boarding and transfer activity resulting from growth, DSTT buses coming to surface, and service interventions
- Increase curb space to mitigate congested bus zones

Recommended	Concurrent Center City Projects
Transit Enhancement	Madison RapidRide
Transit Spine	Streetcar
Operations Improvement	(with Center City Connector)
Pedestrian and Hub Improvements	

Miles: 0, 0.25, 0.5

NEAR-TERM MOBILITY CAPITAL PROJECTS (TRANSIT)



BUS SERVICE RESTRUCTURES

- **Changes** to bus services to reduce number of trips going through key “points of constraint”
- **Optimize** use of transit hubs and light rail capacity
- **Tier 1 Bus Service Restructure options** being carried through public process by King County Metro and Sound Transit



Metro and Sound Transit are already reaching out to transit riders and communities to get input on transit service in the State Route 520 corridor.

SR 520 LINK CONNECTIONS

- King County Metro & Sound Transit joint outreach and service planning effort
- ST Express routes: **540, 541, 542, 545**
- King County Metro routes: **252, 255, 257, 268, 277, 311**
- 24,500 riders per weekday



SERVICE PLANNING APPROACH

- Public feedback drives service planning concepts organized into three themes:
 - Option A: Future Conditions, **Existing Service**
 - Option B: Structure changes, re-investments focus on **Frequency**
 - Option C: Structure changes, re-investments focus on **New Connections**
- Input will help develop a single service change proposal for another round of outreach in the fall

