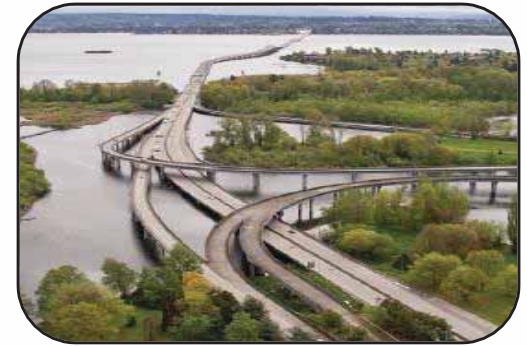
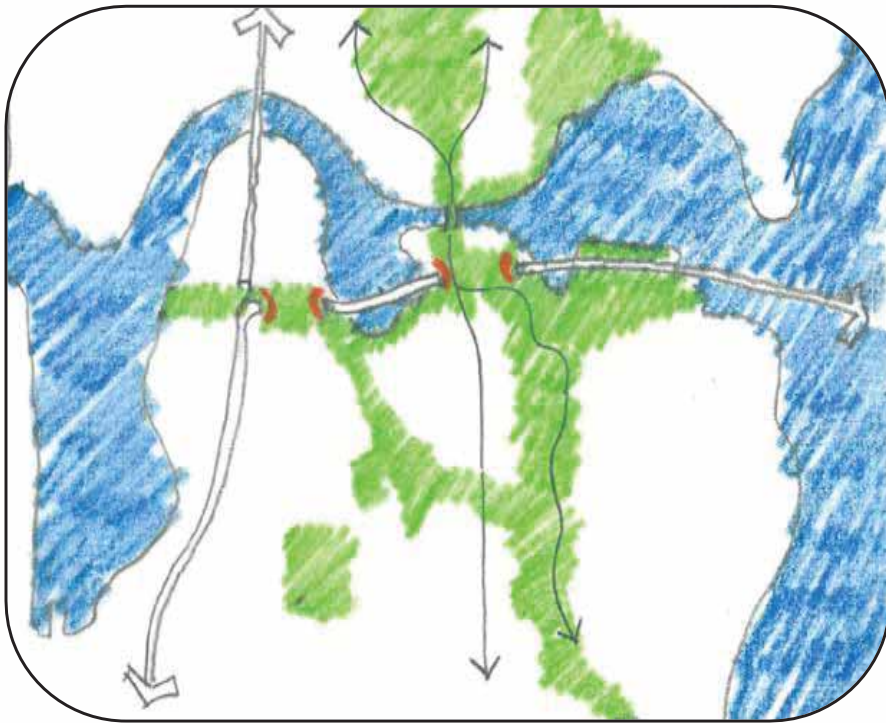


# SR 520 Program

## West Side Design Development Process

### Montlake Lid Area

September 4, 2014



**Julie Meredith**  
SR 520 Program Director

**Lynn Peterson**  
Secretary of Transportation

**SR 520 Seattle Design Commission**  
Seattle City Hall  
September 4, 2014

# Safety and Mobility Improvements

The SR 520 Bridge Replacement and HOV Program is a \$4.3 billion investment in the regional transportation system. The program is enhancing a vital connection from Seattle to the Eastside via Lake Washington, resulting in major improvements for drivers, transit riders, bicyclists and pedestrians.

## Replacing vulnerable structures



## Enhancing mobility



**The SR 520 program is improving safety by:**

- Replacing aging and vulnerable bridge structures currently at risk of failure
- Adding full outside shoulders
- Adding safer, smoother merges and sightlines
- Improving bicycle and pedestrian connectivity

**The SR 520 program is enhancing mobility by:**

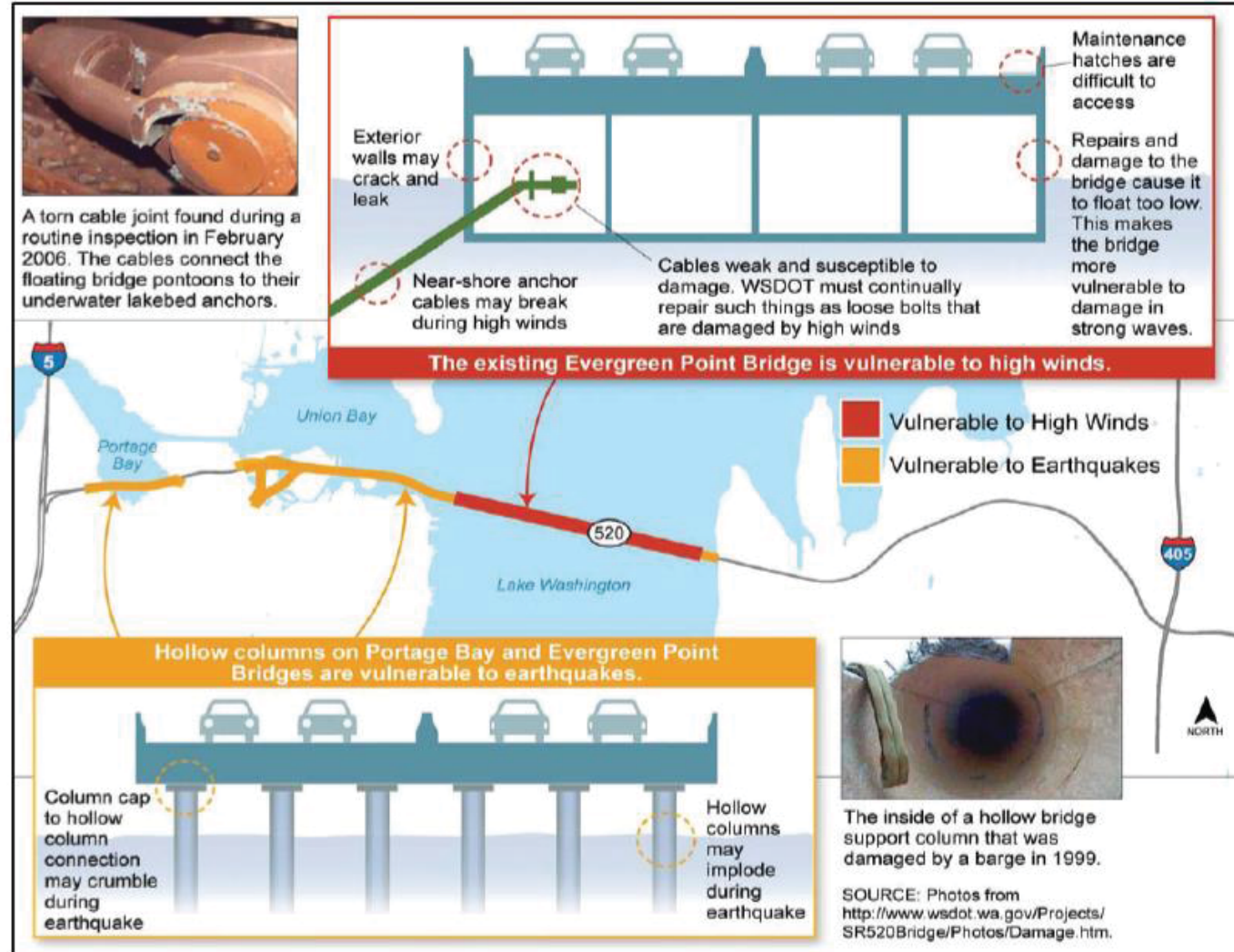
- Adding new transit/HOV lanes for better bus and carpool trip reliability
- Building a new 14-foot-wide bicycle and pedestrian path
- Adding new median transit stops and direct-access ramps along the corridor

# SR 520 Structural Vulnerability

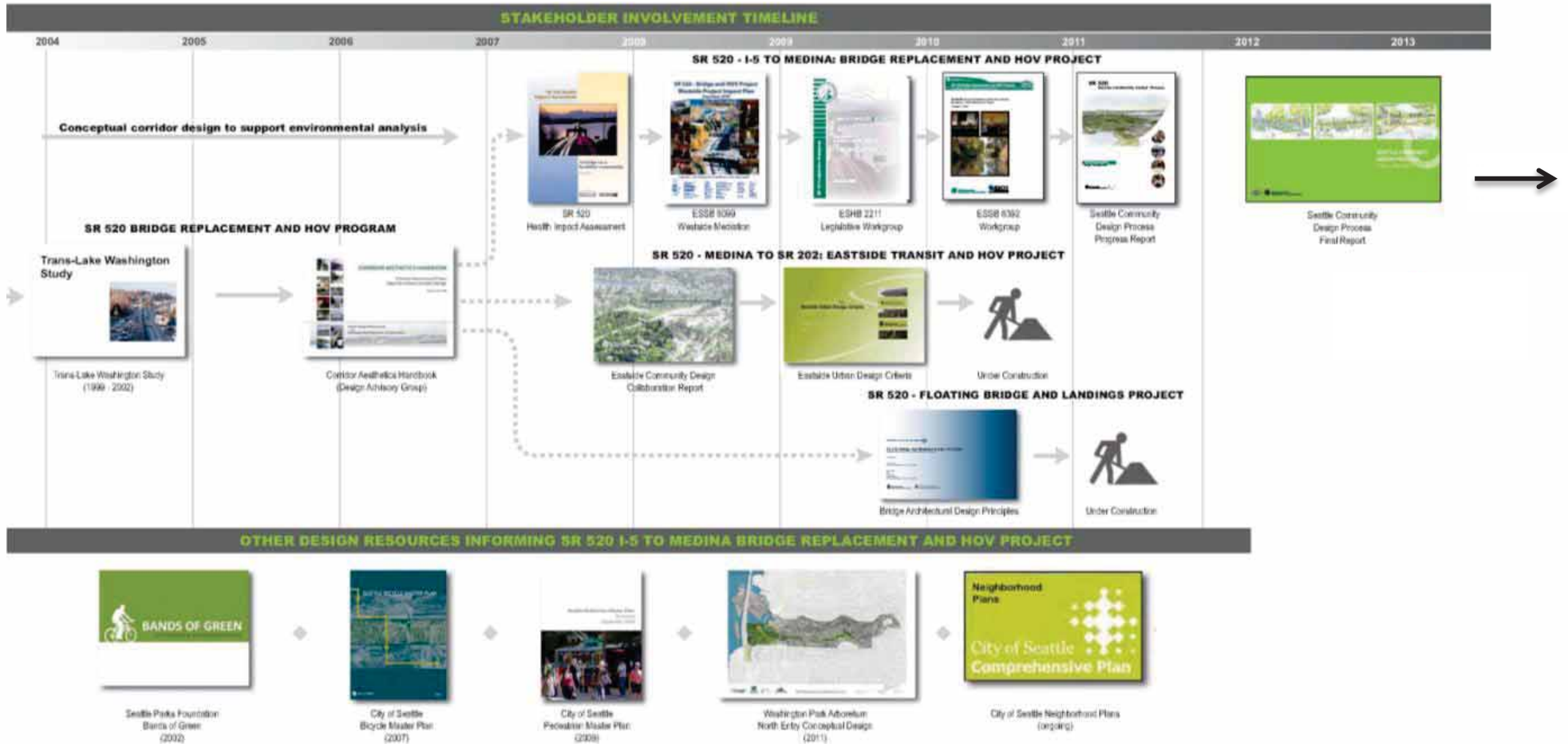
Today, the SR 520 floating bridge on Lake Washington and fixed bridges in Seattle could fail in an earthquake or windstorm. The west approach bridge and Portage Bay Bridge are built on hollow concrete columns that do not meet modern standards.

The new floating bridge has a 75-year design life and will be able to withstand heavy windstorms, and the new fixed bridges will feature seismically safe columns.

## Map of currently vulnerable SR 520 bridges



# SR 520 Corridor Design History



# Where We Are Today

- **October 2011: WSDOT / city of Seattle Memorandum of Understanding**  
WSDOT and city of Seattle's commitment to work together to find funding, refine the design and construct the Preferred Alternative
- **Fall 2011 – Fall 2012: Seattle Community Design Process (SCDP)**  
Public process to refine the Seattle side of the SR 520 corridor
- **February 2013: Seattle Resolution 31427**  
Council resolution regarding design preferences identified during the SCDP
- **April 2014: ESSB 6001**  
Requires WSDOT to continue working with the city of Seattle on the design of key elements of the Seattle corridor
- **Summer 2014: Where we are today**  
WSDOT, city of Seattle and design professionals further refine key elements of the Seattle side of the corridor

# Montlake Lid Area

## 2012 Seattle Community Design Process Goals



UTILITY...

SUSTAINABILITY...

EXPRESSION...

# Montlake Lid Area

## 2014 Refinements



UTILITY...

*Better Connections*

SUSTAINABILITY...

*Less Is More*

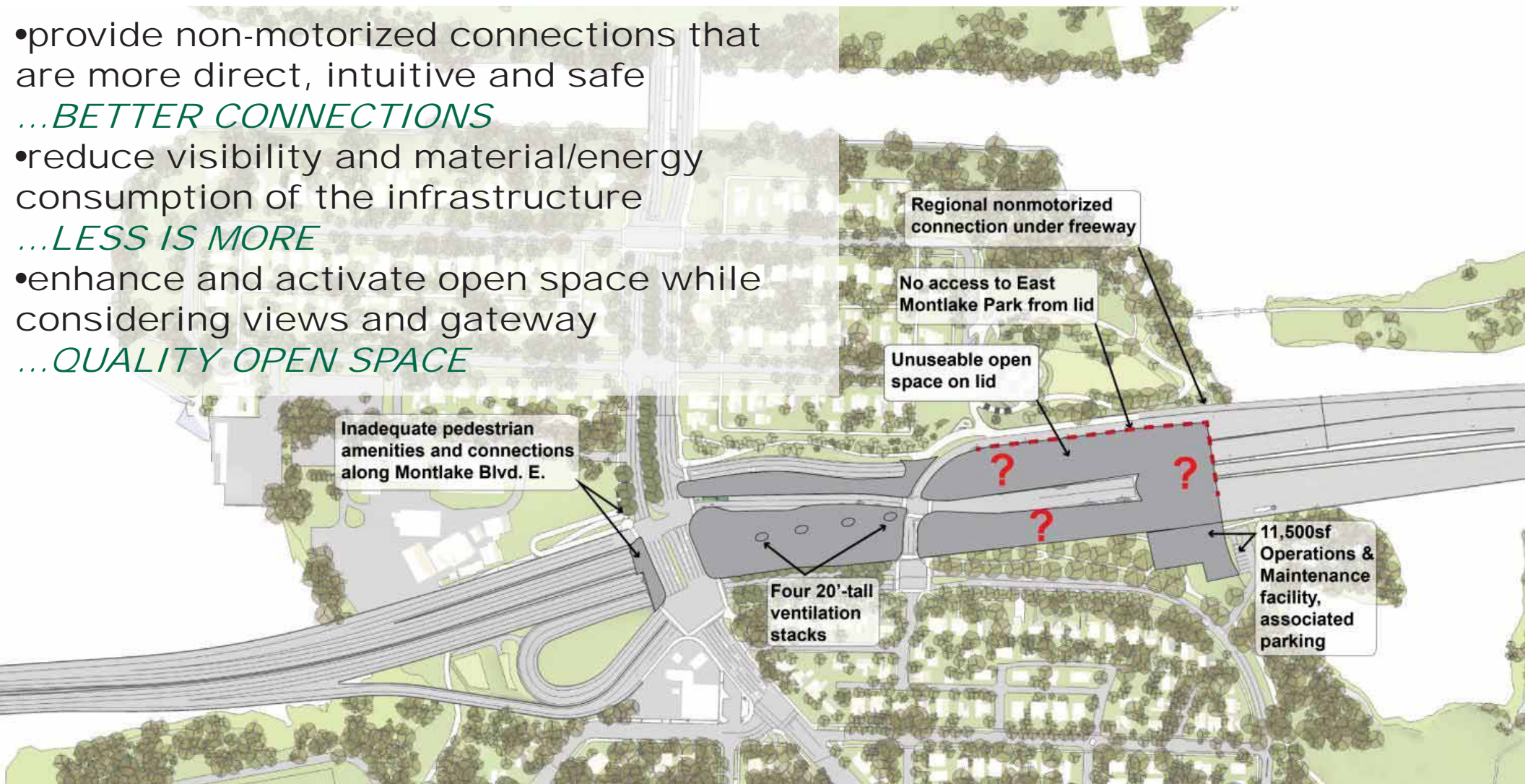
EXPRESSION...

*Quality Open Space*

# Montlake Lid Area - Baseline

## Problem Statement

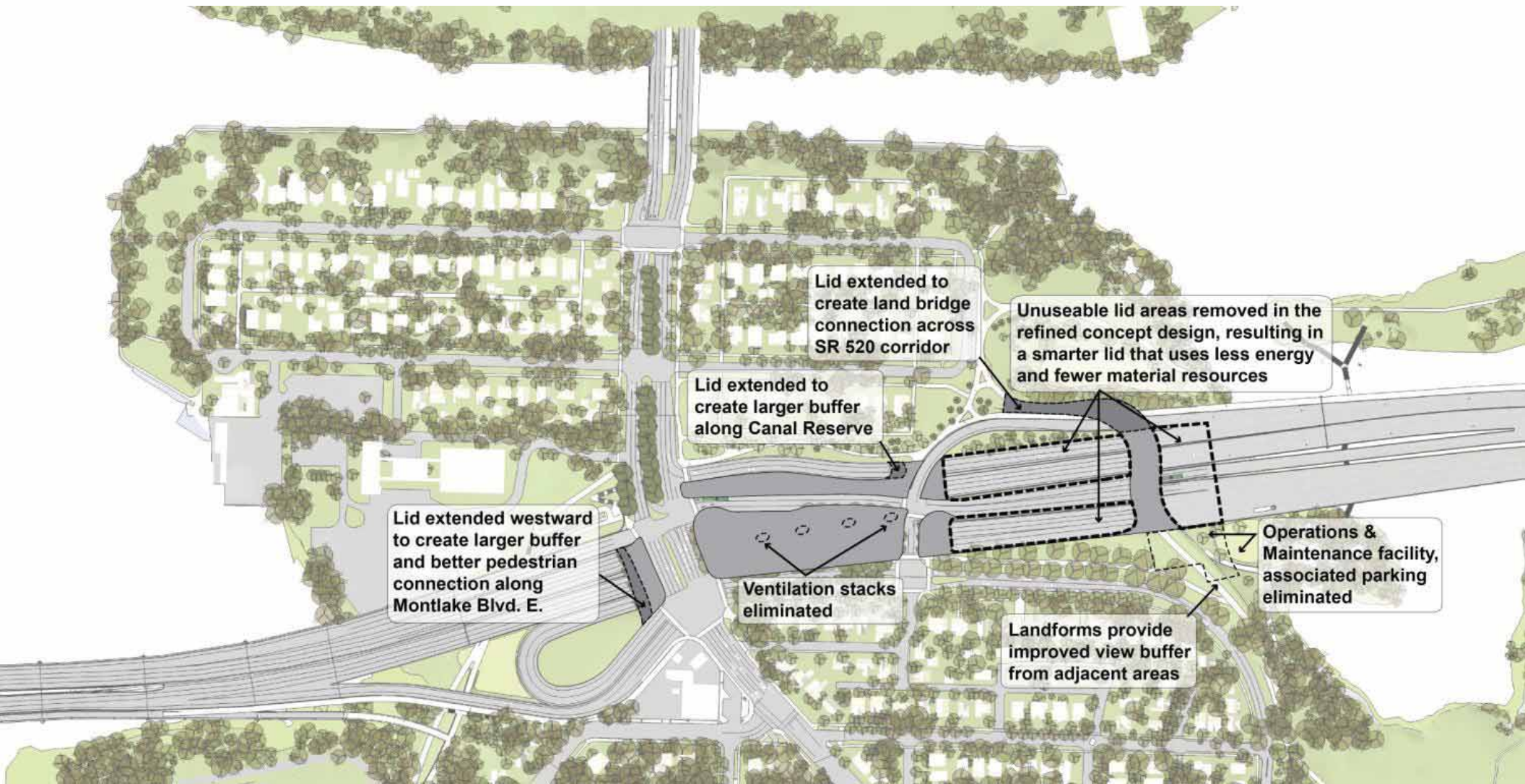
- provide non-motorized connections that are more direct, intuitive and safe  
*...BETTER CONNECTIONS*
- reduce visibility and material/energy consumption of the infrastructure  
*...LESS IS MORE*
- enhance and activate open space while considering views and gateway  
*...QUALITY OPEN SPACE*





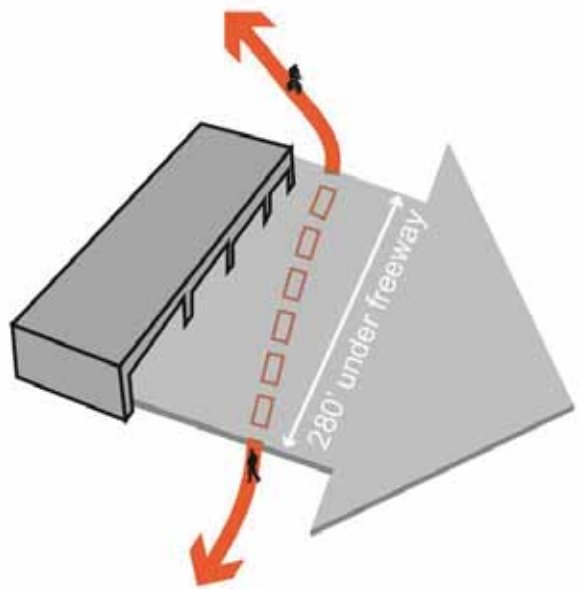
# Montlake Lid Area - Refined

Toward A Smarter Lid



# Montlake Lid Area

Key Benefit 1. Better regional connections



# Montlake Lid Area

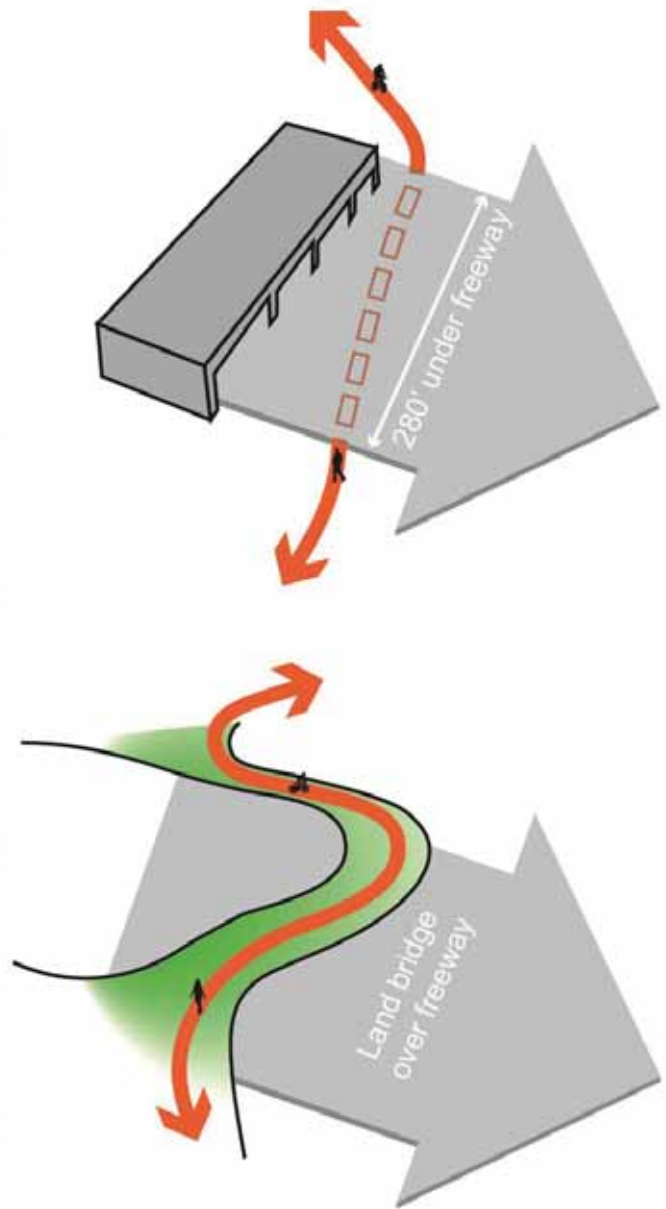
Key Benefit 1. Better regional connections



Baseline



Refined

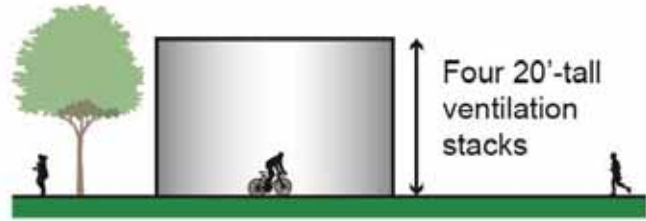


# Montlake Lid Area

Key Benefit 2. More usable open space

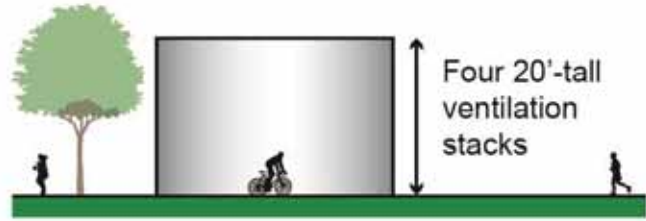
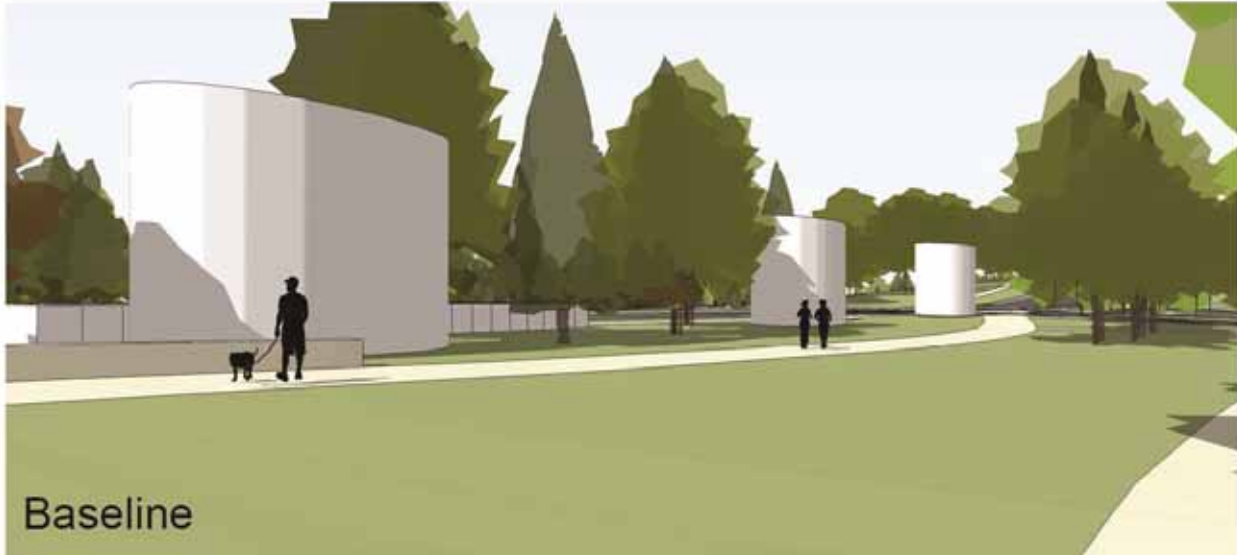


Baseline



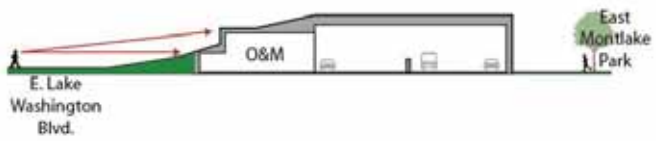
# Montlake Lid Area

## Key Benefit 2. More usable open space



# Montlake Lid Area

Key Benefit 3. Buffered views of the roadway



# Montlake Lid Area

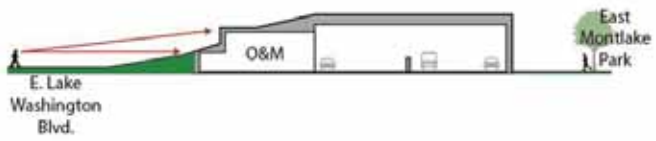
## Key Benefit 3. Buffered views of the roadway



Baseline

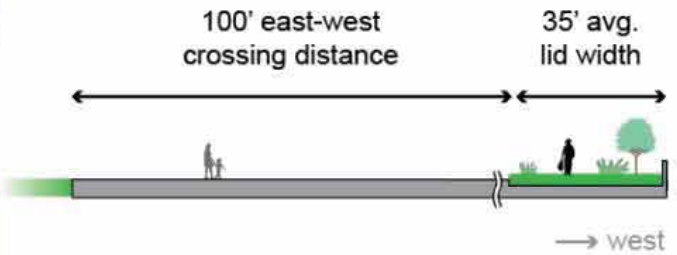


Refined



# Montlake Lid Area

Key Benefit 4. Improved pedestrian experience



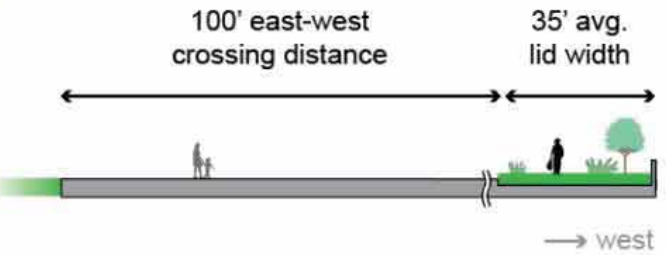


# Montlake Lid Area

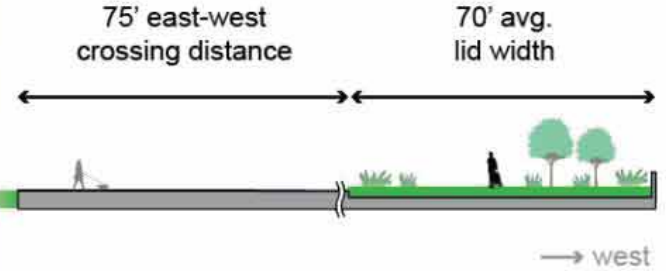
## Key Benefit 4. Improved pedestrian experience



Baseline

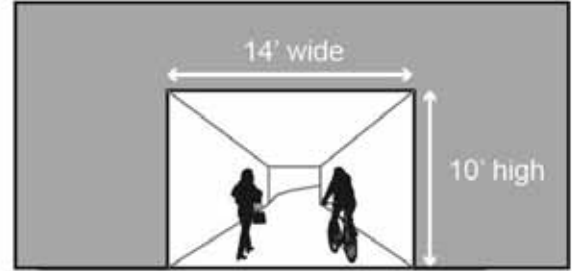


Refined



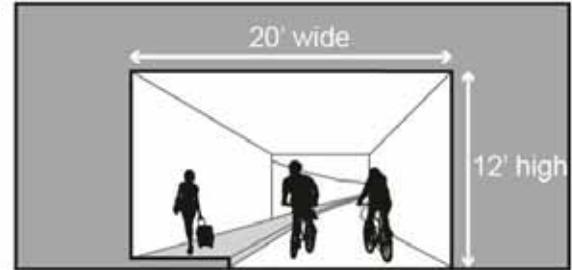
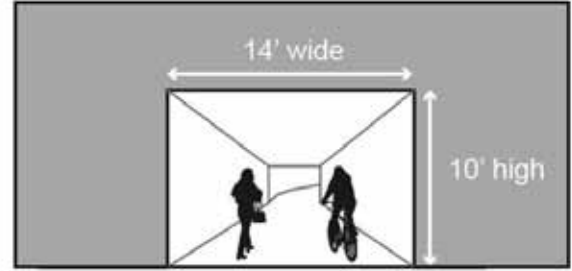
# Montlake Lid Area

## Key Benefit 5. Better Undercrossings



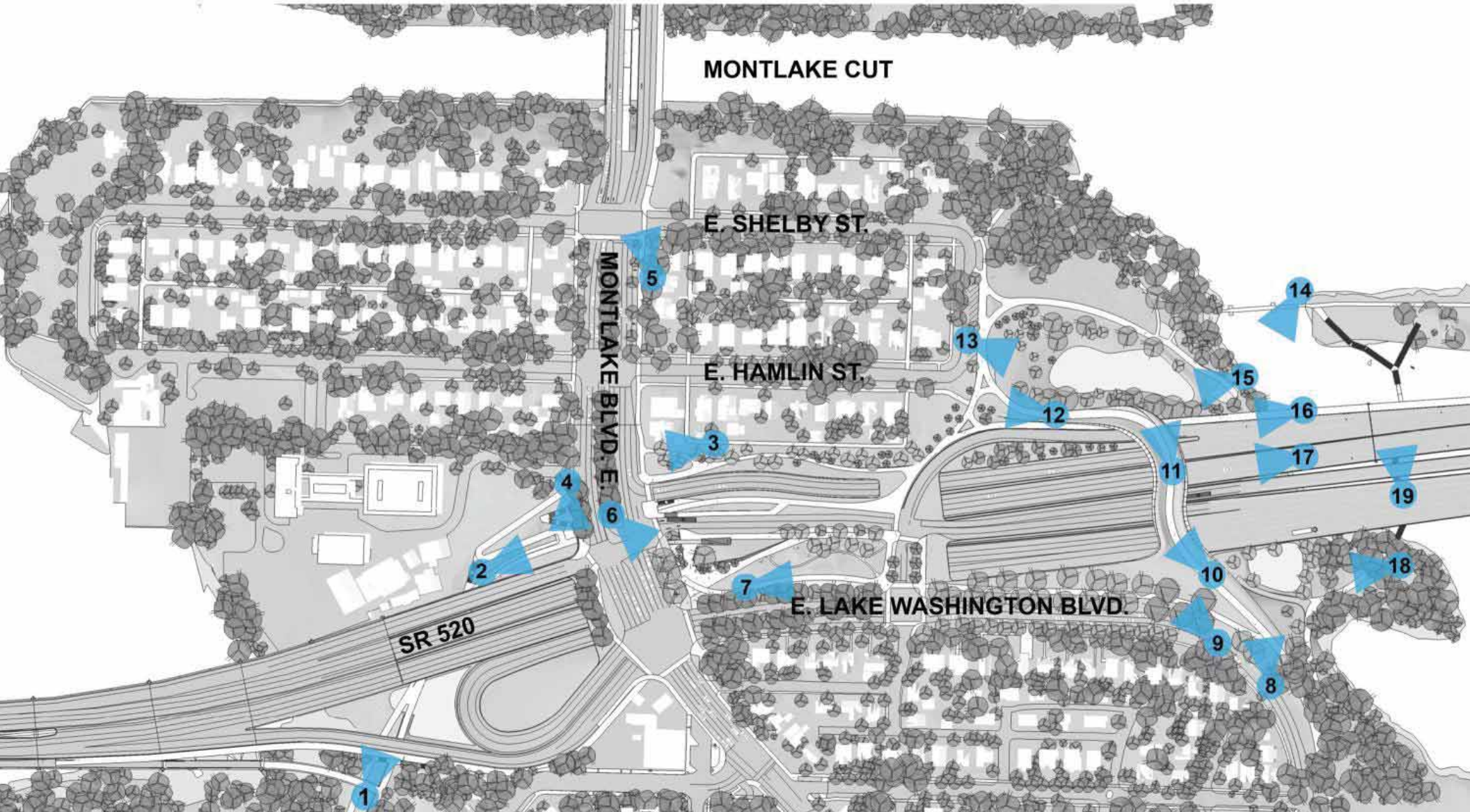
# Montlake Lid Area

## Key Benefit 5. Better Undercrossings



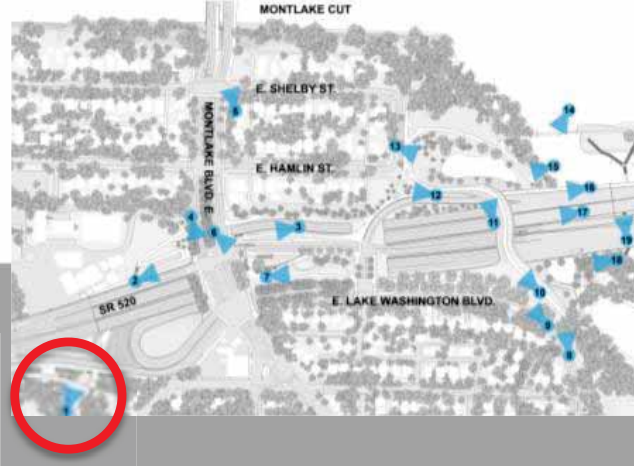
# Montlake Lid Area

## View Location Key



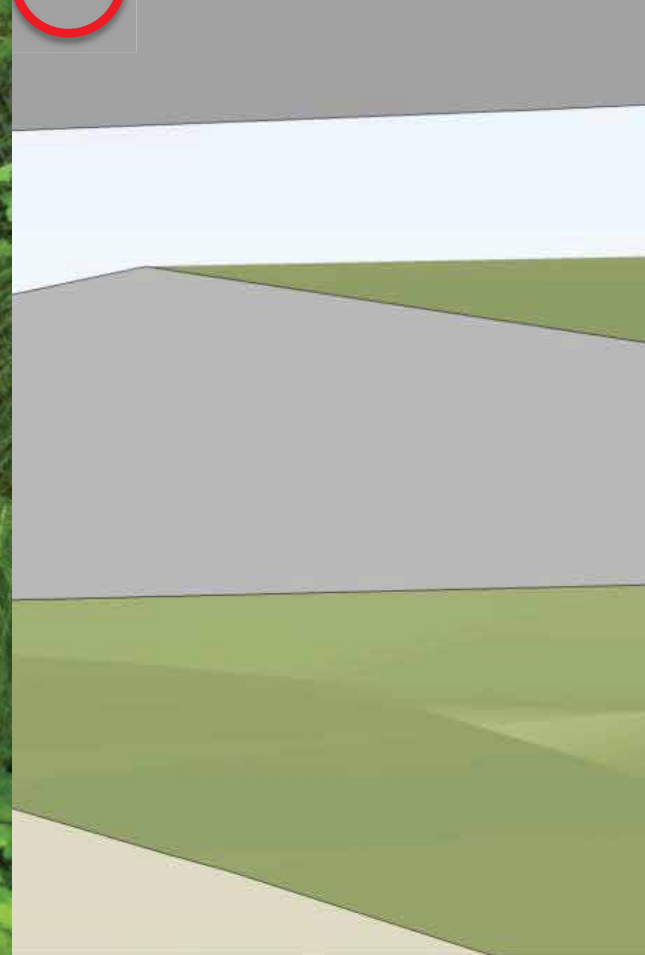
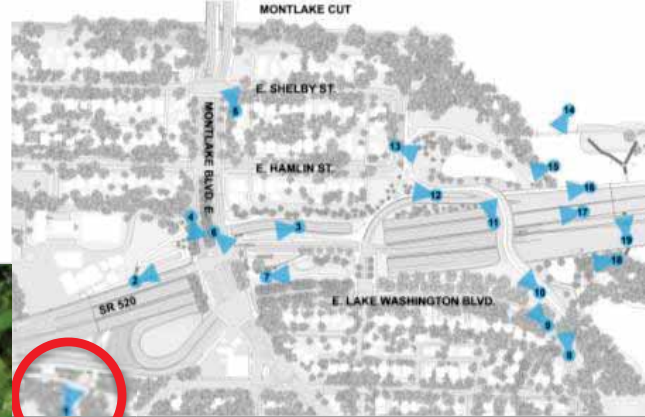
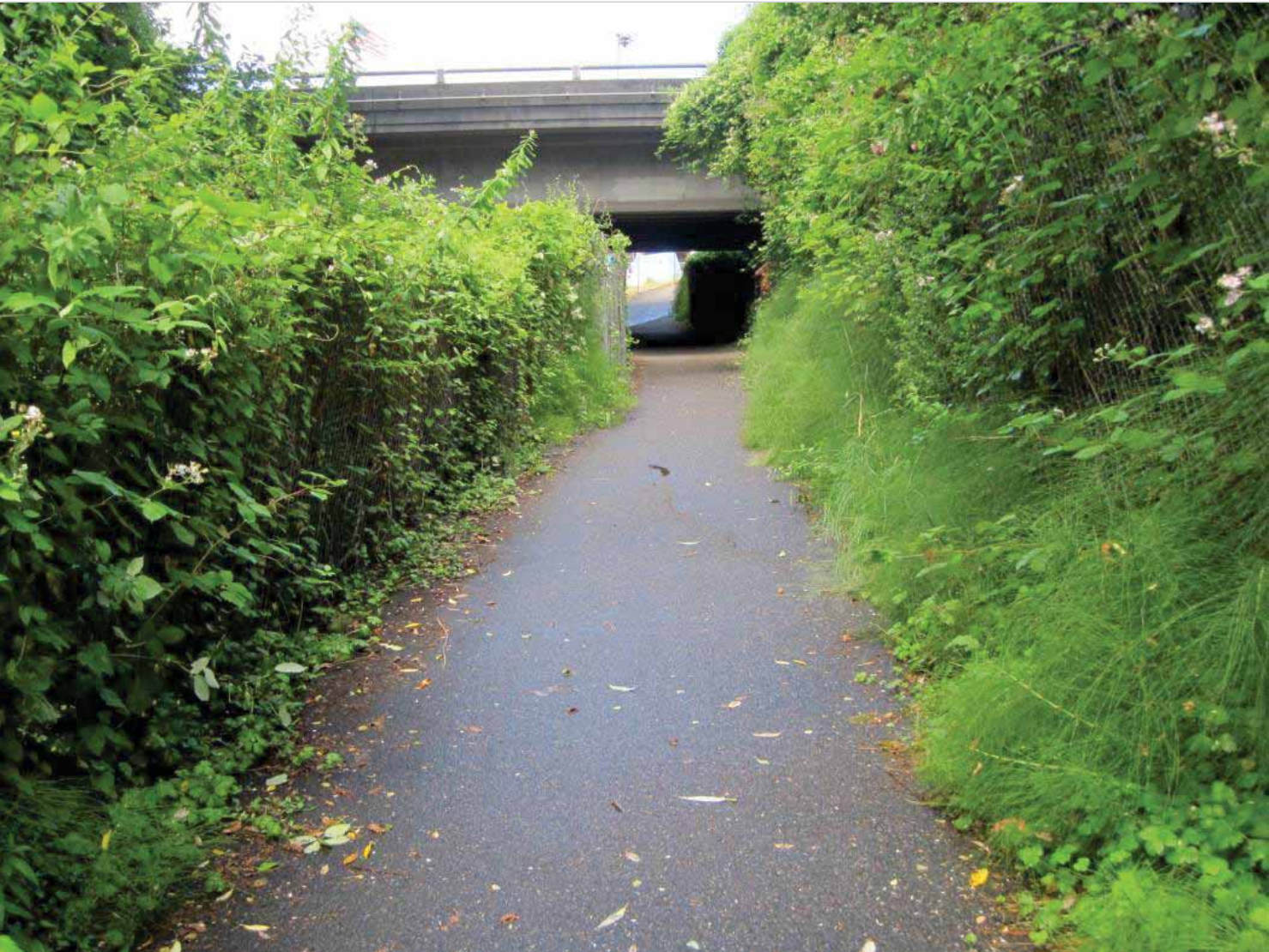
# Montlake Lid Area - Baseline

1. View from Dawson Trail Under SR 520 Mainline (looking north)



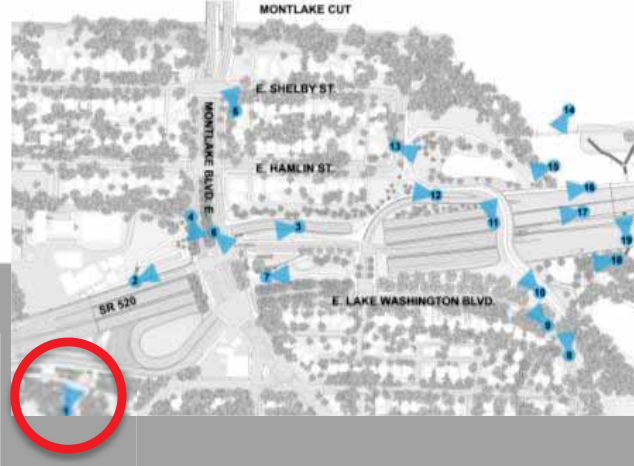
# Montlake Lid Area - Existing

1. View from Dawson Trail Under SR 520 Mainline (looking north)



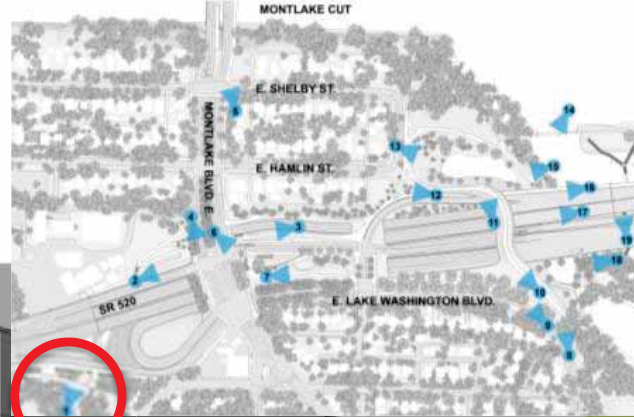
# Montlake Lid Area - Baseline

1. View from Dawson Trail Under SR 520 Mainline (looking north)

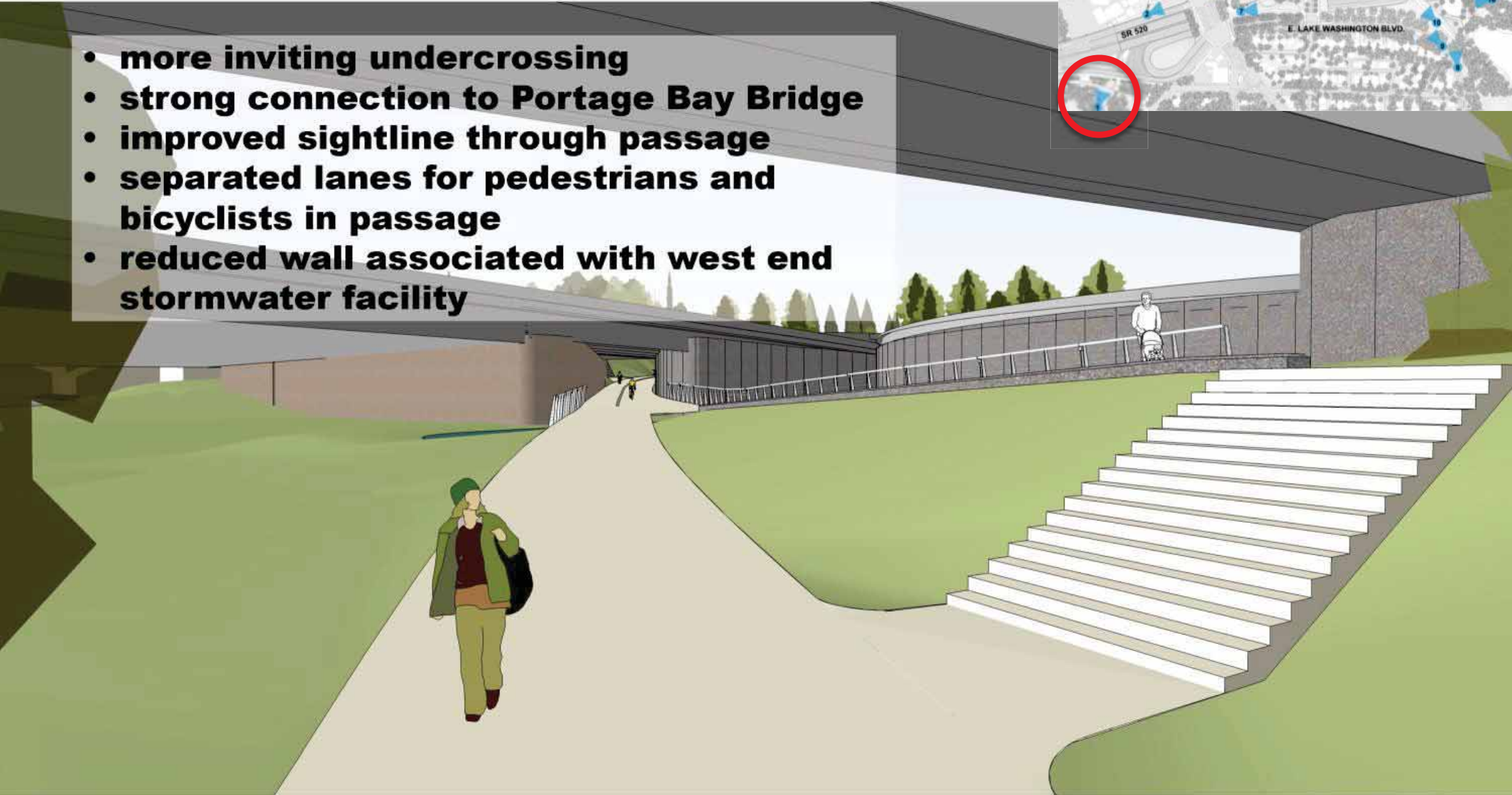


# Montlake Lid Area - Refined

1. View from Dawson Trail Under SR 520 Mainline (looking north)



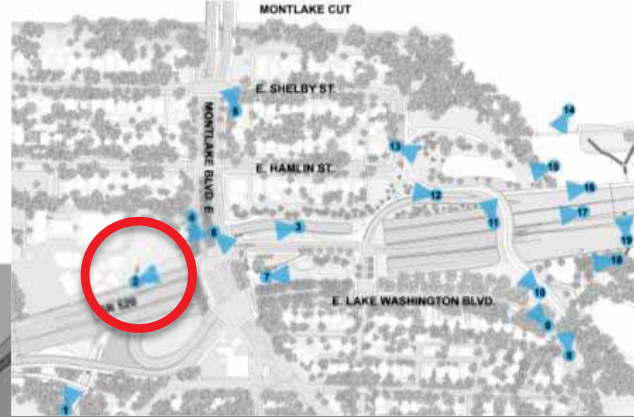
- **more inviting undercrossing**
- **strong connection to Portage Bay Bridge**
- **improved sightline through passage**
- **separated lanes for pedestrians and bicyclists in passage**
- **reduced wall associated with west end stormwater facility**





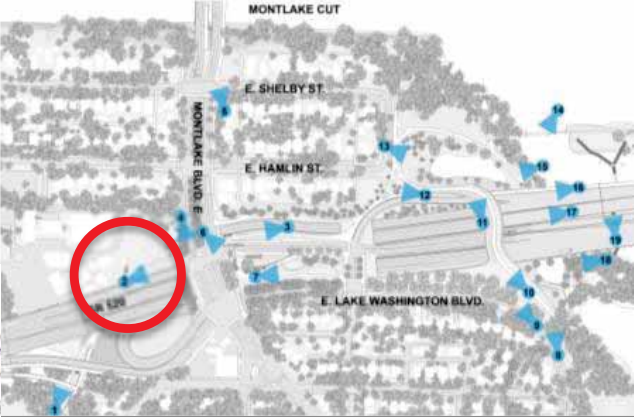
# Montlake Lid Area - Baseline

2. View from Dawson Trail at Montlake Boulevard (looking east)



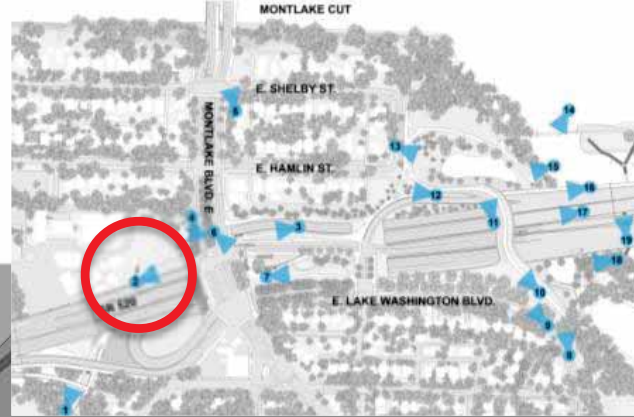
# Montlake Lid Area - Existing

2. View from Dawson Trail at Montlake Boulevard (looking east)



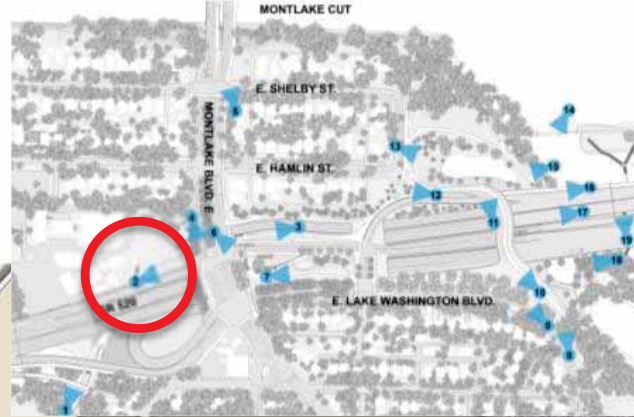
# Montlake Lid Area - Baseline

2. View from Dawson Trail at Montlake Boulevard (looking east)



# Montlake Lid Area - Refined

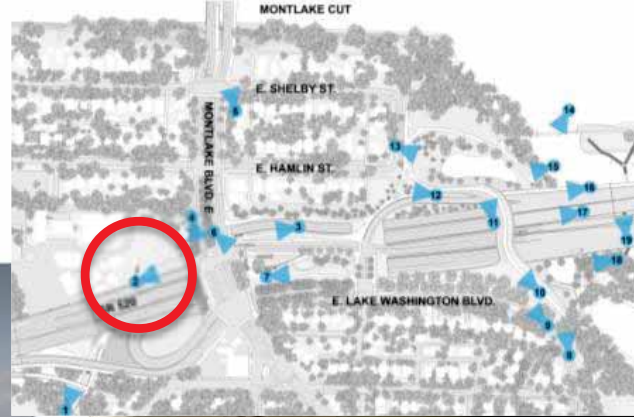
2. View from Dawson Trail at Montlake Boulevard (looking east)



- more inviting undercrossing
- improved visibility between Dawson Trail and Montlake
- improved sightline through passage
- separated lanes for pedestrians and bicyclists in passage

# Montlake Lid Area - Rendered

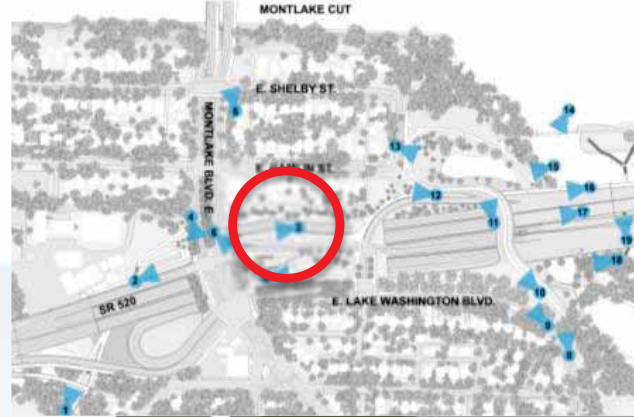
2. View from Dawson Trail at Montlake Boulevard (looking east)



- **increased light and visibility at Dawson Trail level**
- **wall and portal treatments give structure a lighter expression**
- **inviting connections up and down**

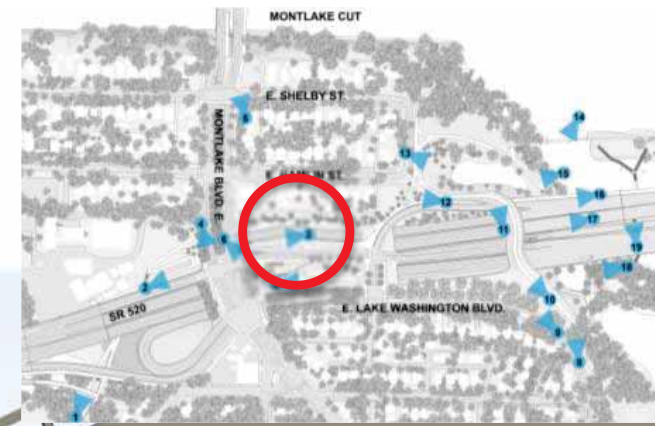
# Montlake Lid Area - Baseline

3. View from Dawson Trail at Lid  
(looking west)



# Montlake Lid Area - Refined

## 3. View from Dawson Trail at Lid (looking west)

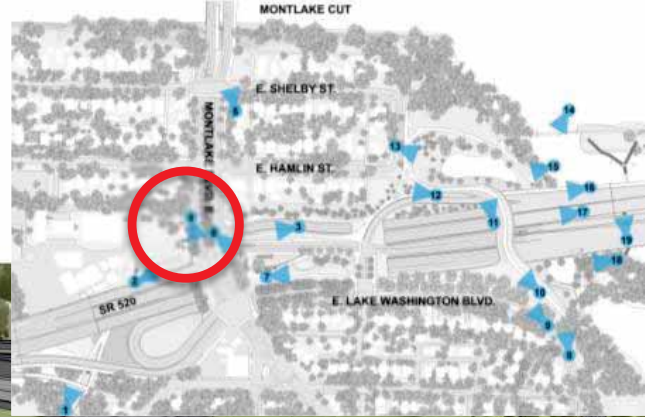


- **better regional connection and undercrossing**
- **improved visibility between trail and lid area**
- **improved sightline through passage**
- **separated lanes for peds and bikes in passage**



# Montlake Lid Area - Baseline

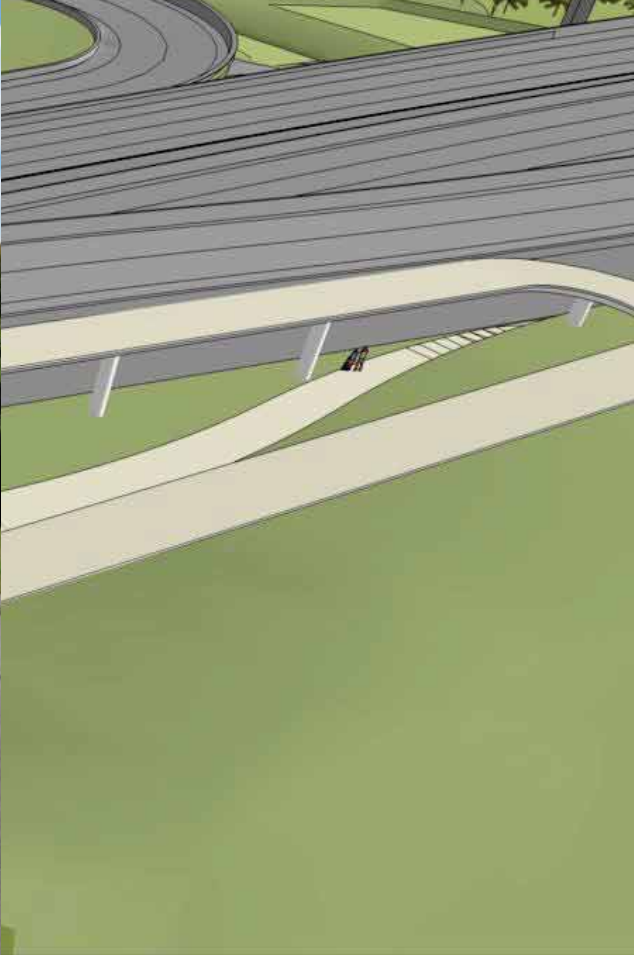
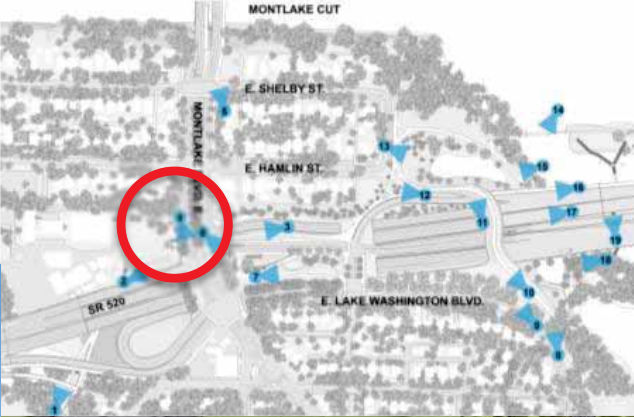
4. View of Montlake Boulevard Crossings at Lid (looking south)





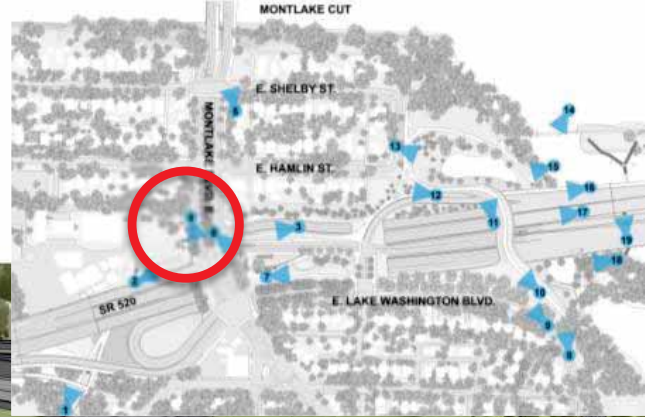
# Montlake Lid Area - Existing

4. View of Montlake Boulevard Crossings at Lid (looking south)



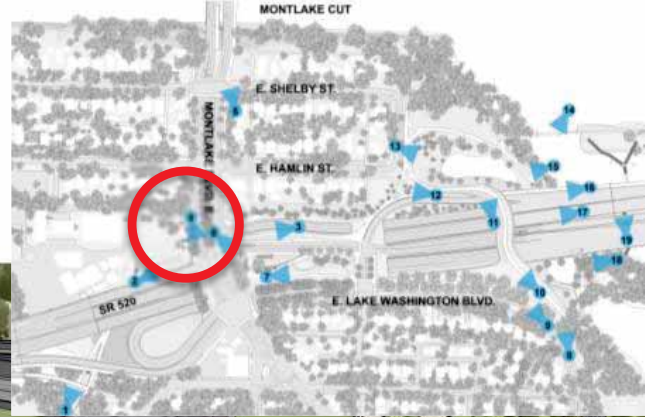
# Montlake Lid Area - Baseline

4. View of Montlake Boulevard Crossings at Lid (looking south)



# Montlake Lid Area - Refined

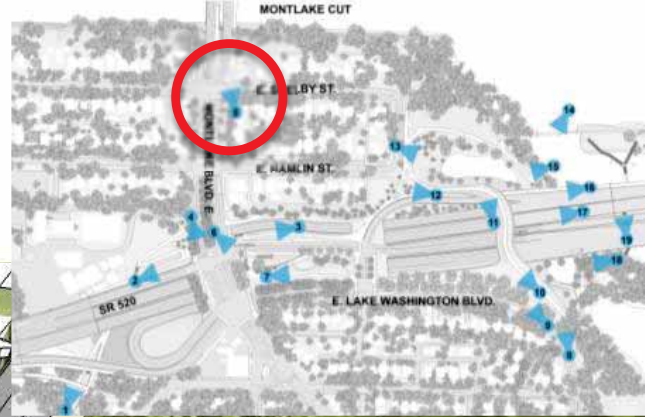
## 4. View of Montlake Boulevard Crossings at Lid (looking south)



- **improved pedestrian experience**
- **improved buffers between shared use path and Montlake Blvd curb**
- **improved buffer between shared use path and mainline beyond lid to west**
- **shortened Montlake surface crossing**

# Montlake Lid Area - Baseline

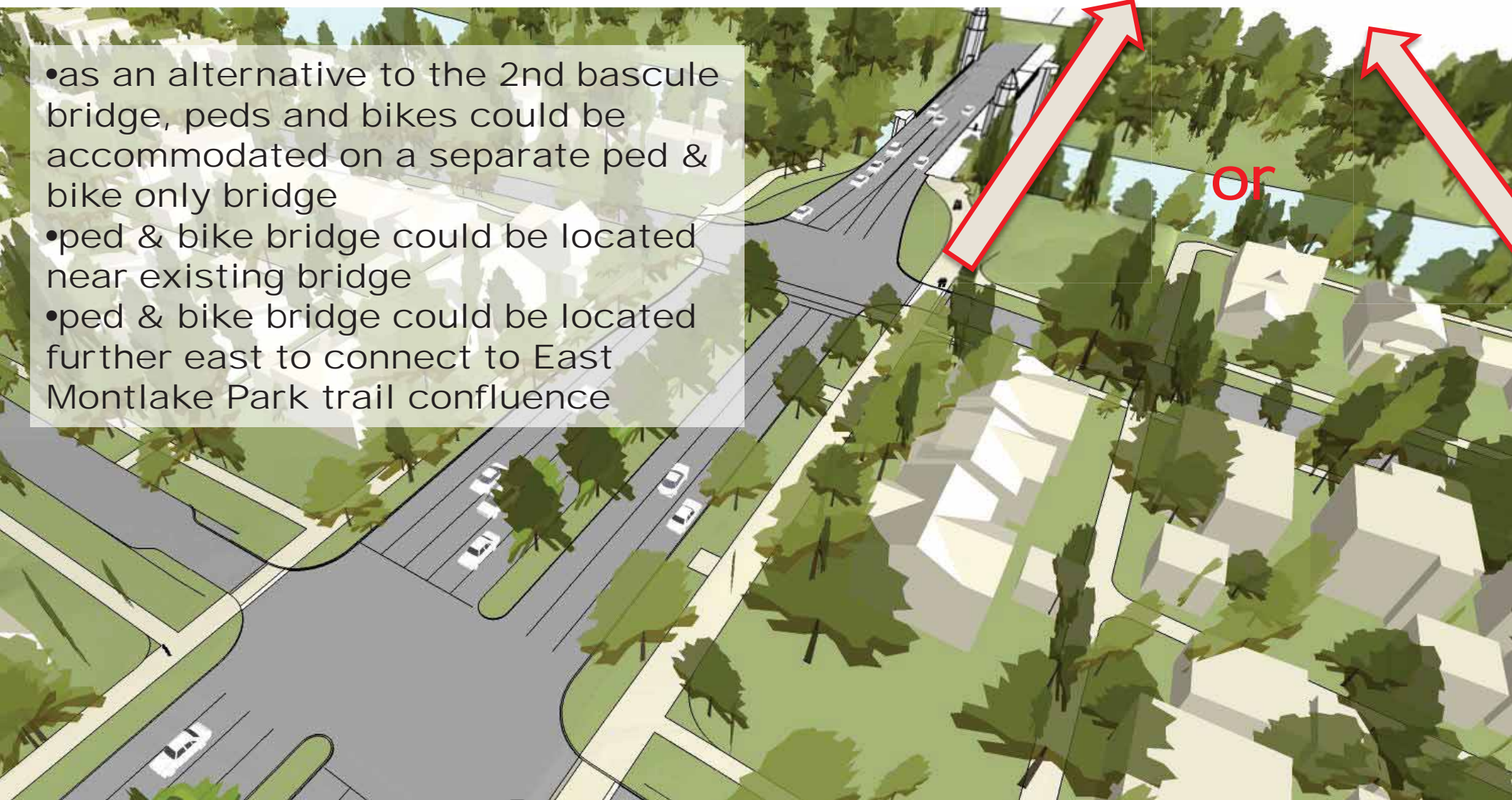
5. View of Montlake Crossing  
(looking northwest)



# Montlake Lid Area - Alternatives

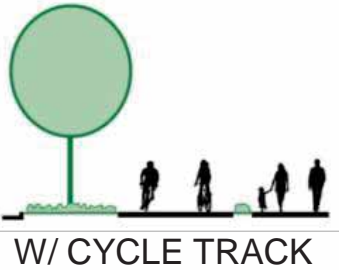
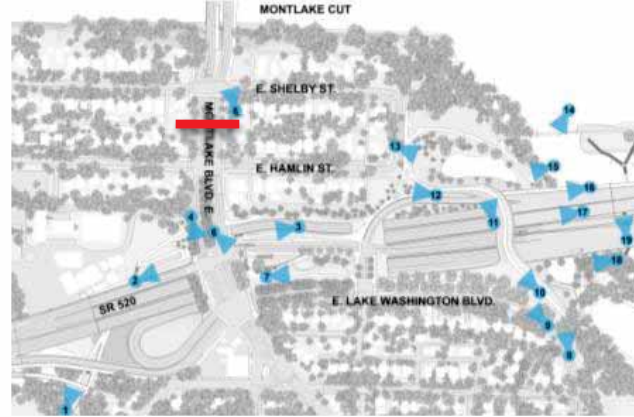
## 5. View of Montlake Crossing (looking northwest)

- as an alternative to the 2nd bascule bridge, peds and bikes could be accommodated on a separate ped & bike only bridge
- ped & bike bridge could be located near existing bridge
- ped & bike bridge could be located further east to connect to East Montlake Park trail confluence



# Montlake Lid Area - Sections

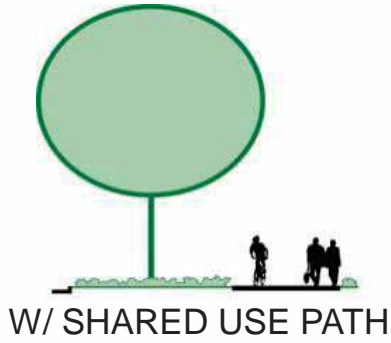
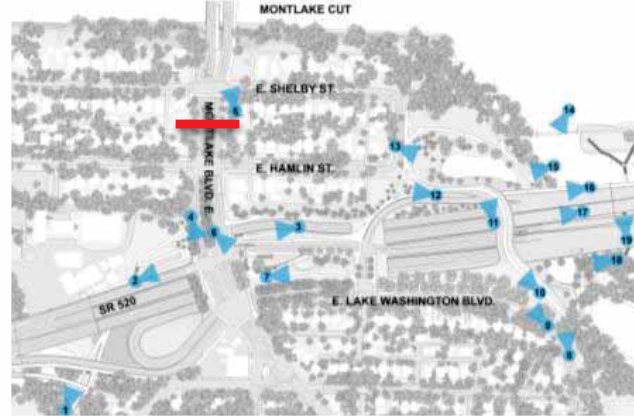
5. Section with Second Bascule Bridge or a Ped/Bike Bridge Adjacent to Existing Bridge (looking north)



## Montlake Boulevard (looking north)

# Montlake Lid Area - Sections

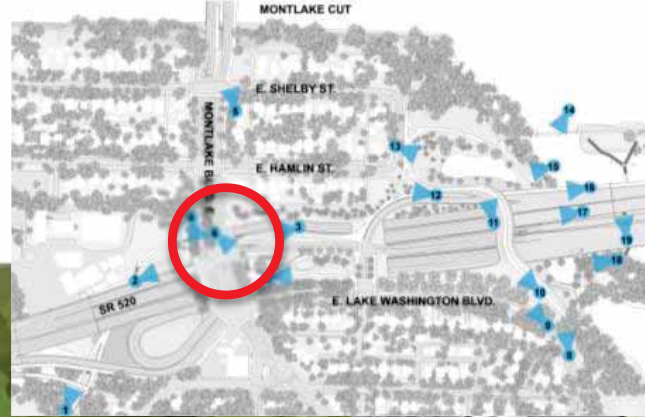
5. Section with Ped/Bike Bridge Further East (looking north)



## Montlake Boulevard (looking north)

# Montlake Lid Area - Baseline

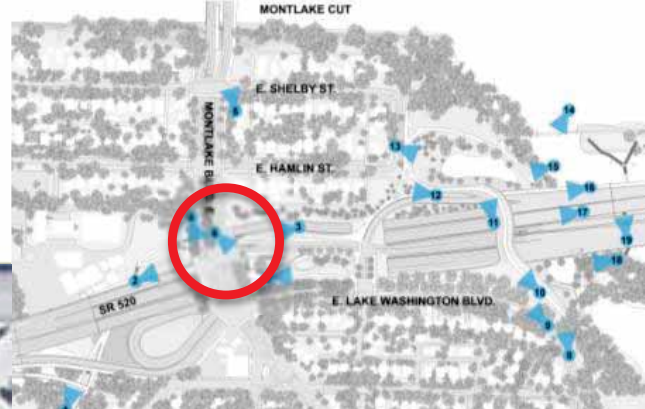
6. View of West Lid at Transit Plaza  
(looking southeast)





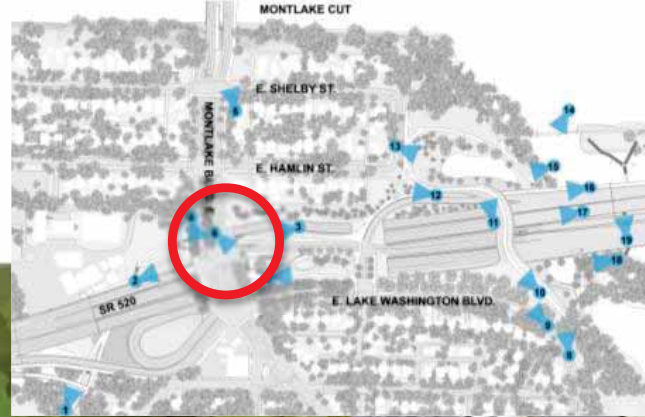
# Montlake Lid Area - Existing

6. View of West Lid at Transit Plaza  
(looking southeast)



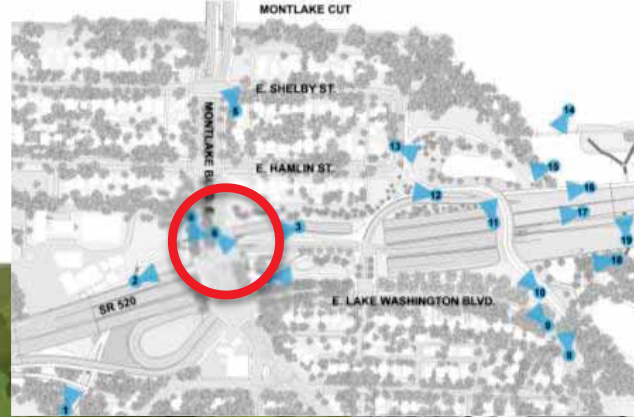
# Montlake Lid Area - Baseline

6. View of West Lid at Transit Plaza  
(looking southeast)



# Montlake Lid Area - Refined

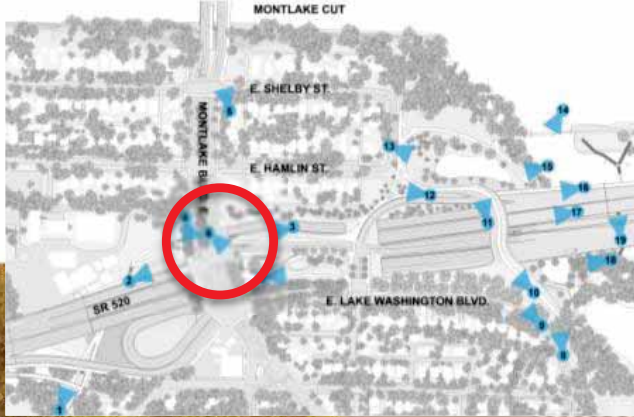
6. View of West Lid at "Urban Trailhead"  
(looking southeast)



- **more useable open space**
- **the lid is an urban trailhead linking to many outstanding open space and institutional destinations**
- **lid programming geared toward movement and discovery**

# Montlake Lid Area - Rendered

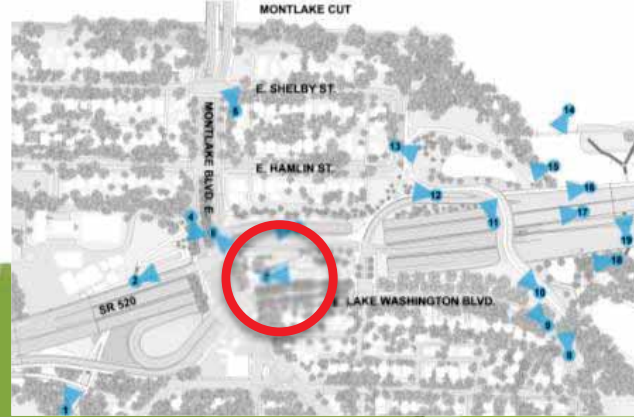
6. View of West Lid at "Urban Trailhead"  
(looking southeast)



- trees and other landscape elements on west lid support Olmsted greenway vision from Arboretum around E Lake Washington Blvd to Montlake Blvd E
- hardscape materials support intuitive wayfinding and signal pedestrian activity

# Montlake Lid Area - Baseline

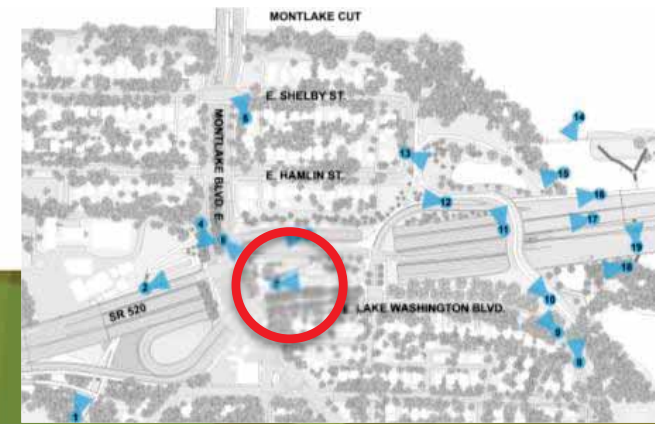
7. View of West Lid  
(looking east)



# Montlake Lid Area - Refined

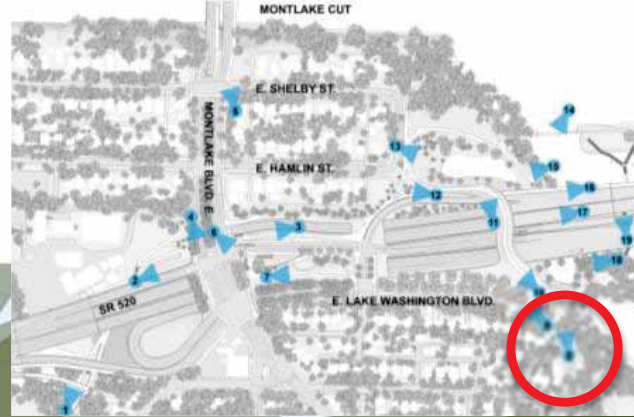
## 7. View of West Lid (looking east)

- **more useable open space**
- **ventilation stacks and other fire, life and safety systems removed, improving views and security on the lid**



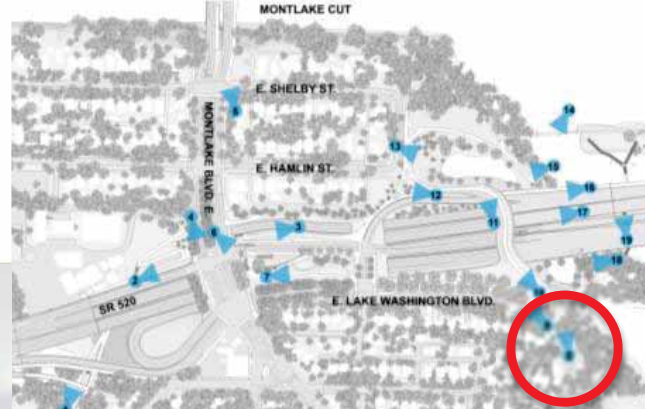
# Montlake Lid Area - Baseline

8. View of East Portal from Lake Wash Blvd (looking north)



# Montlake Lid Area - Existing

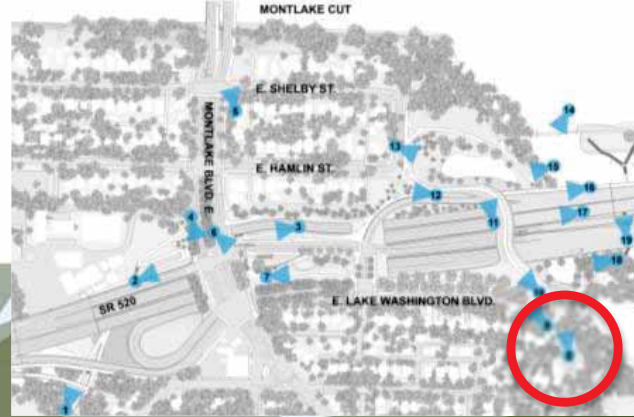
8. View of East Portal from Lake Wash Blvd (looking north)





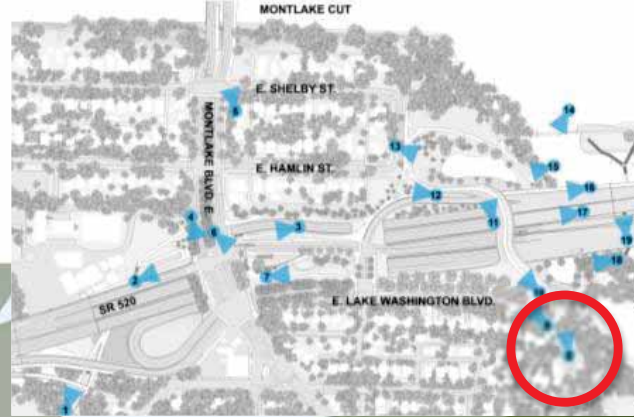
# Montlake Lid Area - Baseline

8. View of East Portal from Lake Wash Blvd (looking north)



# Montlake Lid Area - Refined

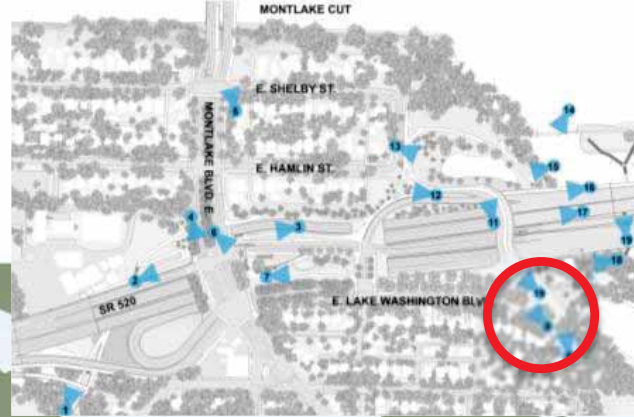
8. View of Land Bridge from Lake Wash Blvd (looking north)



- maintains buffer of highway and extends buffer further along Lake Washington Boulevard

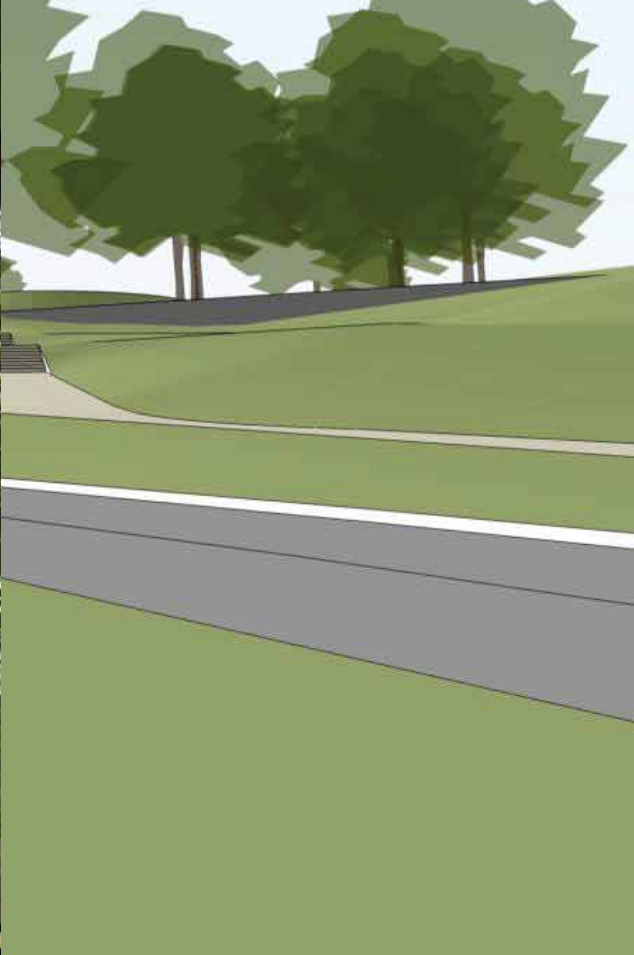
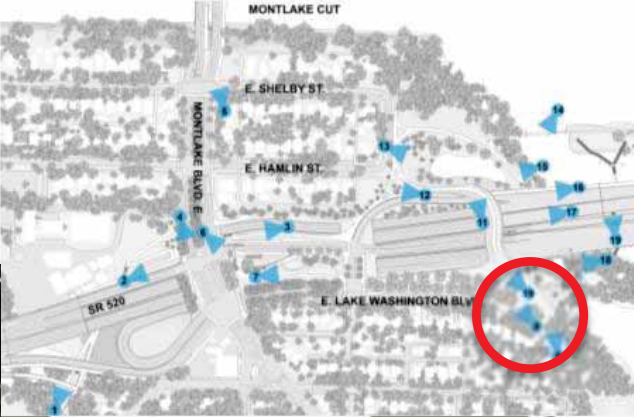
# Montlake Lid Area - Baseline

9. View of East Lid from Lake Wash Blvd (looking northwest)



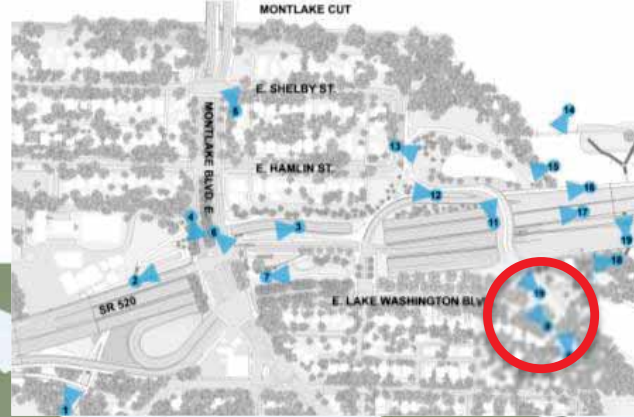
# Montlake Lid Area - Existing

9. View of East Lid from Lake Wash Blvd (looking northwest)



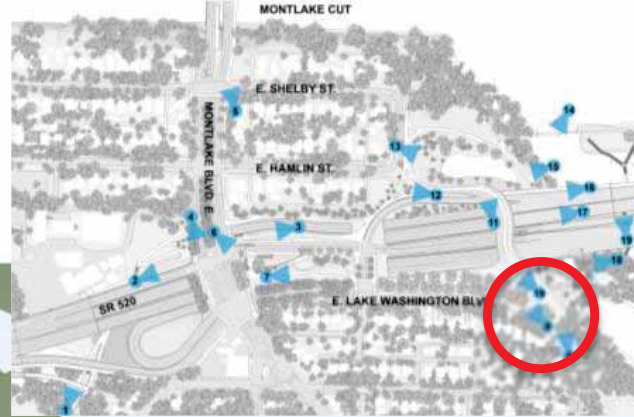
# Montlake Lid Area - Baseline

9. View of East Lid from Lake Wash Blvd (looking northwest)



# Montlake Lid Area - Refined

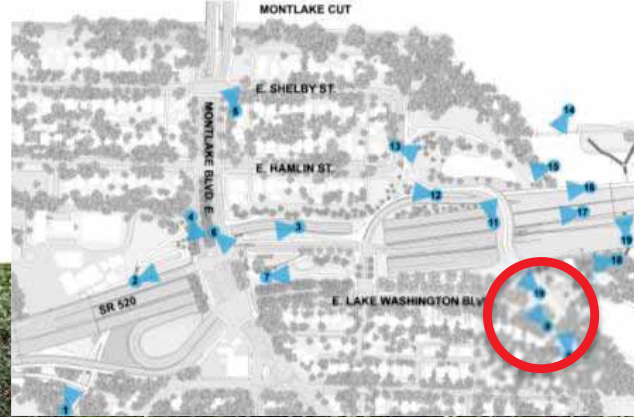
9. View of Land Bridge from Lake Wash Blvd (looking northwest)



- maintains buffer of highway and increases visibility of sky and landscape beyond 520
- lid and 520 become less of a barrier

# Montlake Lid Area - Rendered

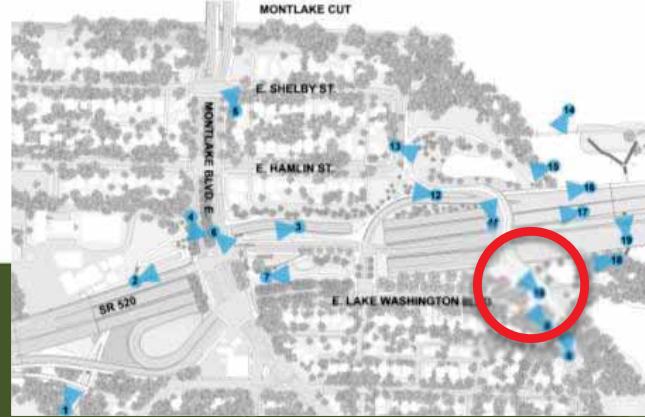
9. View of East Lid from Lake Wash Blvd (looking northwest)



- **Olmsted legacy is more than historic details and viewsheds...it is about an urban system of green connections that supports a healthy community**

# Montlake Lid Area - Baseline

10. View of East Lid Approach  
(looking northwest)

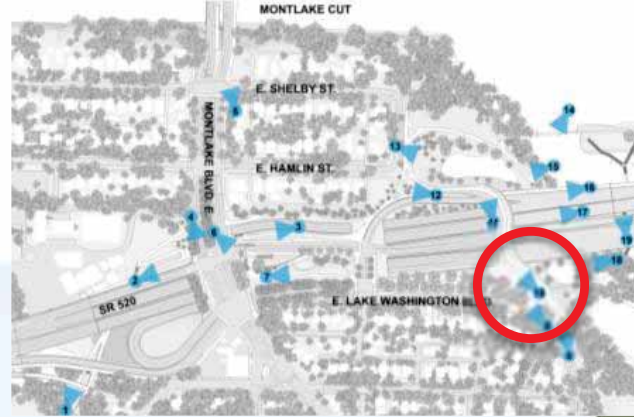




# Montlake Lid Area - Refined

## 10. View of Land Bridge Approach (looking northwest)

Fix location of notes

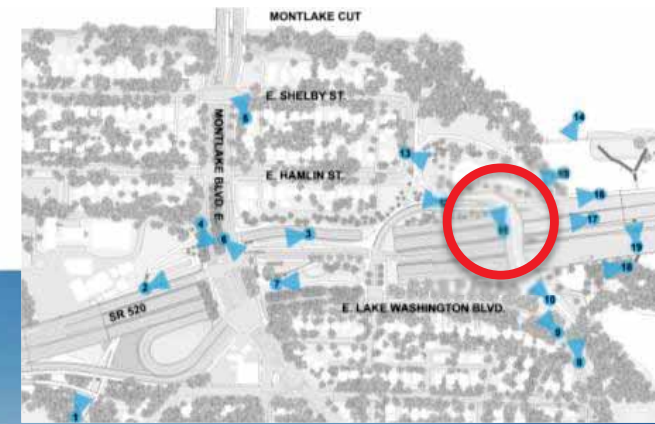


- **better regional connection**
- **visibility of land bridge allows intuitive wayfinding and enhanced sense of security**
- **trail slope under 5% encourages users of all ages and abilities**

# Montlake Lid Area - Rendered

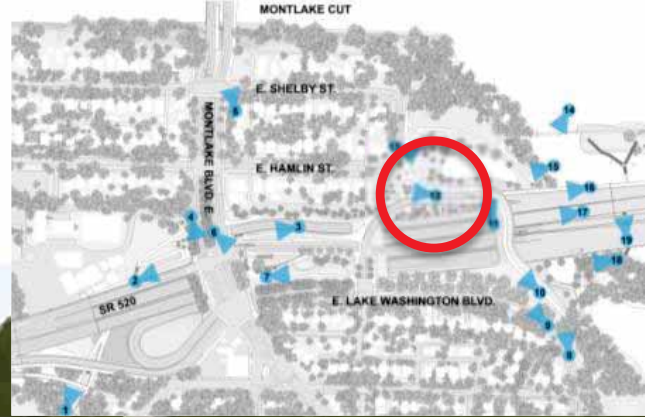
## 11. View on Land Bridge (looking north)

- **more useable open space, including potential for viewpoints or pause places in visible locations**
- **vegetation suitable to rooftop condition could complement University of Washington Botanic Gardens collections**
- **Husky Stadium provides landmark for views north**



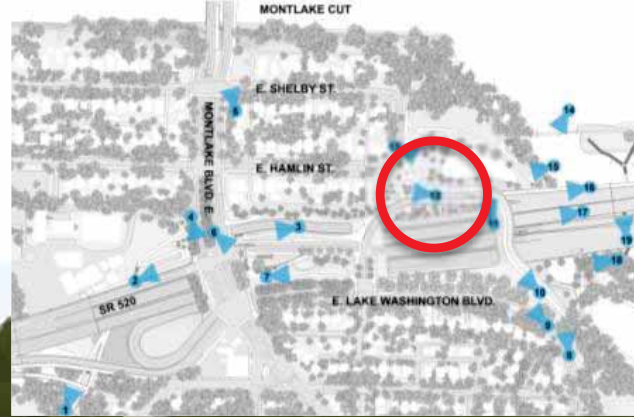
# Montlake Lid Area - Baseline

12. View of Trail Confluence at Shelby Hamlin (looking west)



# Montlake Lid Area - Refined

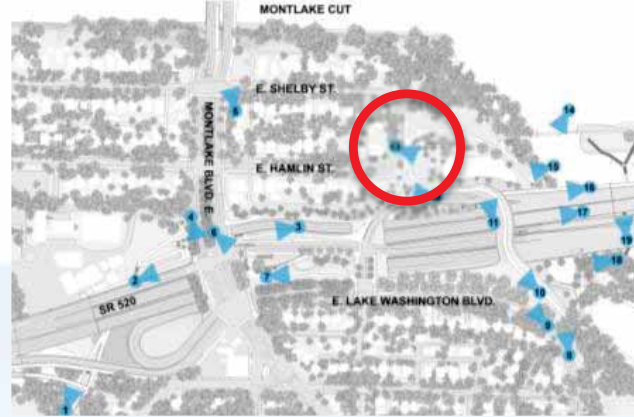
12. View of Trail Confluence at Shelby Hamlin (looking west)



- **better regional connections and more useable open space**
- **trail confluence north of lid activates place to pause and enjoy view over park**

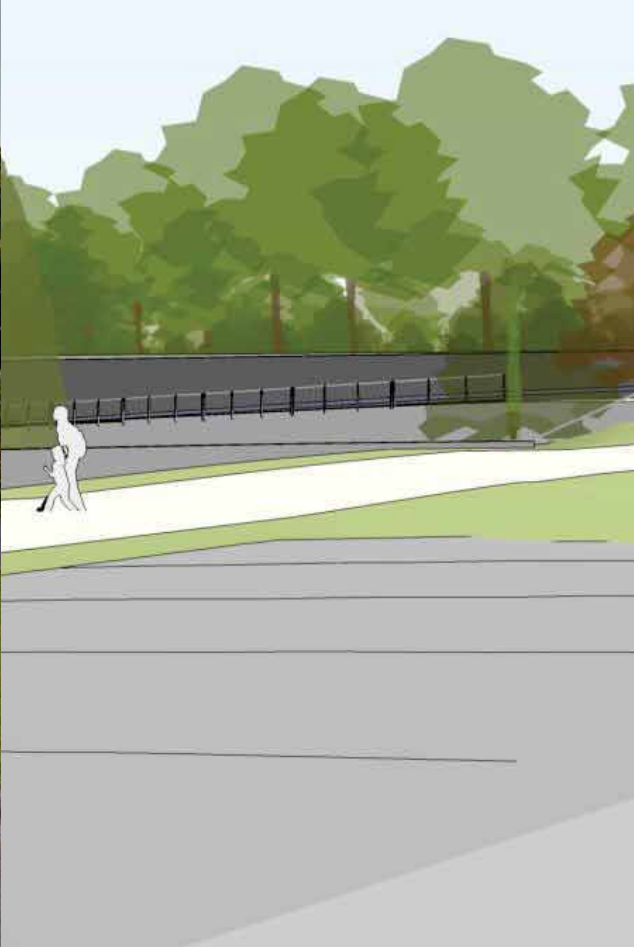
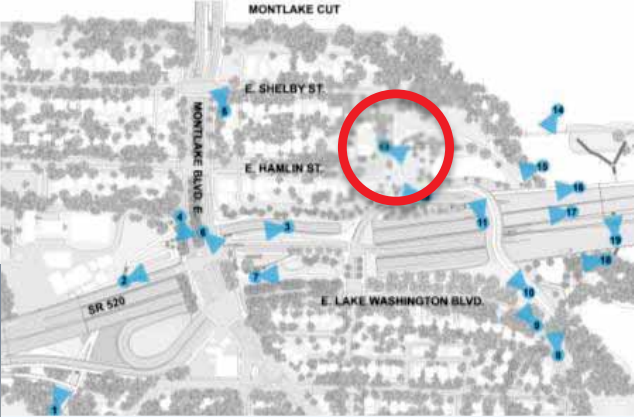
# Montlake Lid Area - Baseline

13. View of East Lid from Shelby Hamlin (looking southeast)



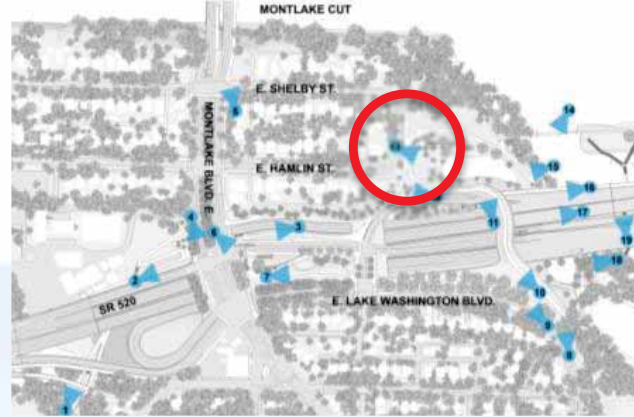
# Montlake Lid Area - Existing

13. View of East Lid from Shelby Hamlin (looking southeast)



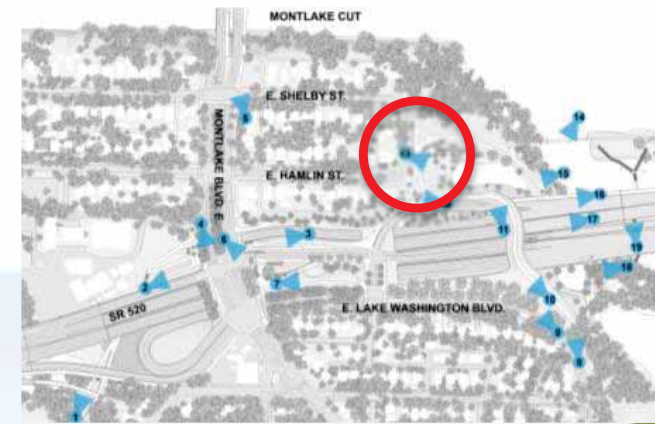
# Montlake Lid Area - Baseline

13. View of East Lid from Shelby Hamlin (looking southeast)



# Montlake Lid Area - Refined

13. View of Land Bridge from Shelby Hamlin  
(looking southeast)

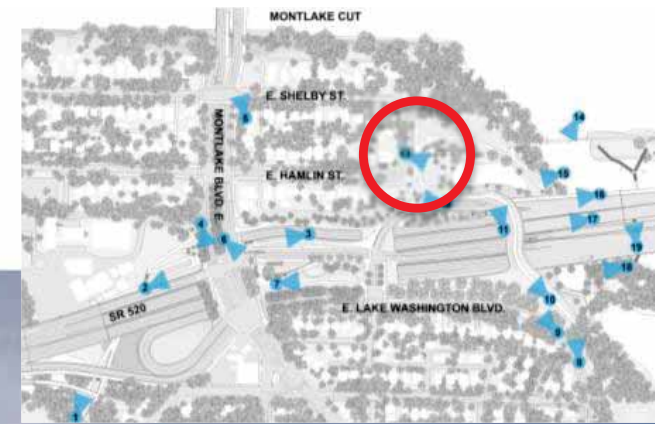


- **view of freeway remains buffered**
- **view of lid wall is reduced**
- **more useable open space with viewpoint near active trail confluence**

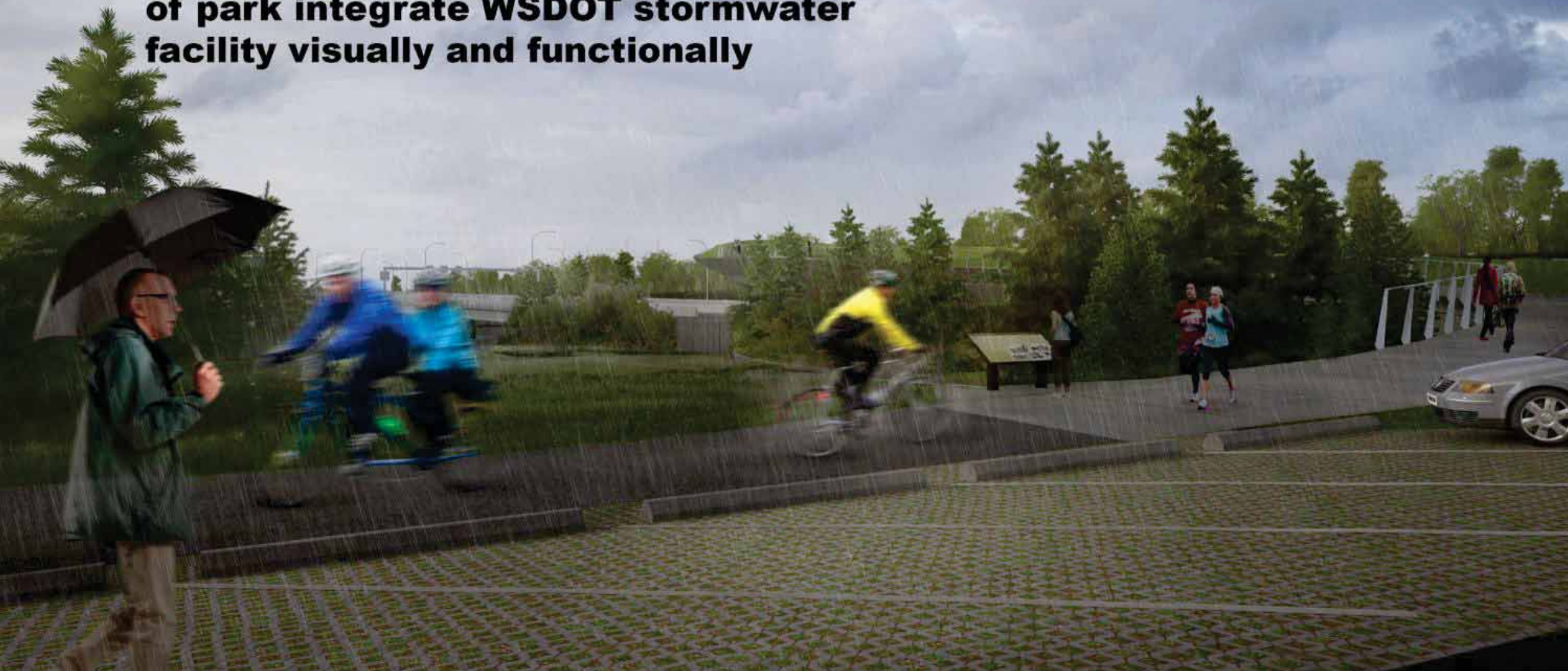


# Montlake Lid Area - Rendered

13. View of Land Bridge from Shelby Hamlin (looking southeast)

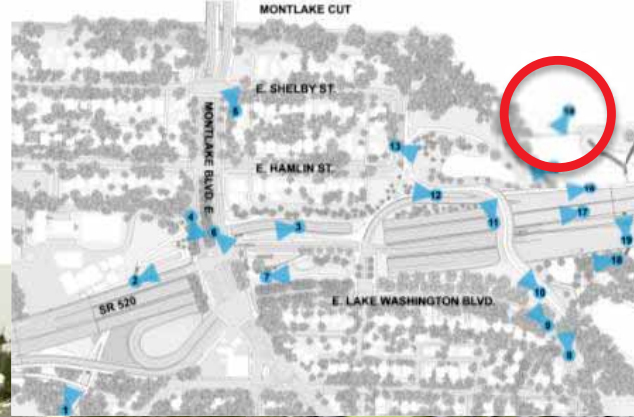


- **better regional connections encourage positive activity in all seasons**
- **sustainable stormwater strategies in rest of park integrate WSDOT stormwater facility visually and functionally**



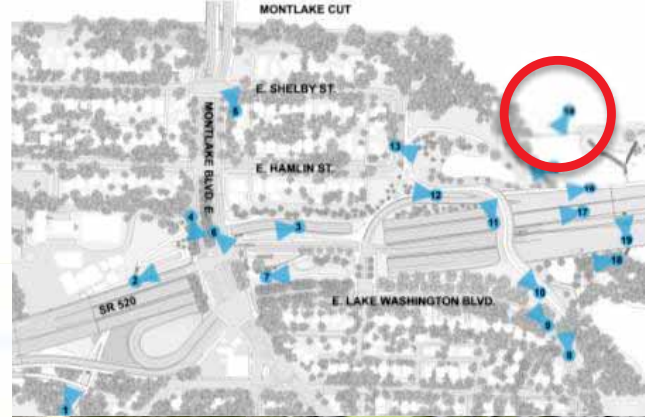
# Montlake Lid Area - Baseline

14. View of East Lid from over Lake Washington (looking southwest)



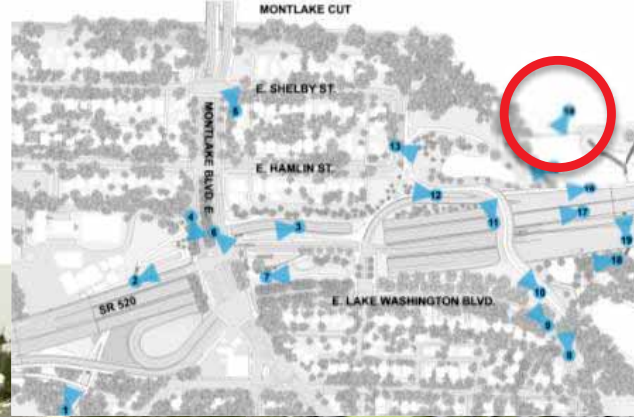
# Montlake Lid Area - Existing

14. View of East Lid from over Lake Washington (looking southwest)



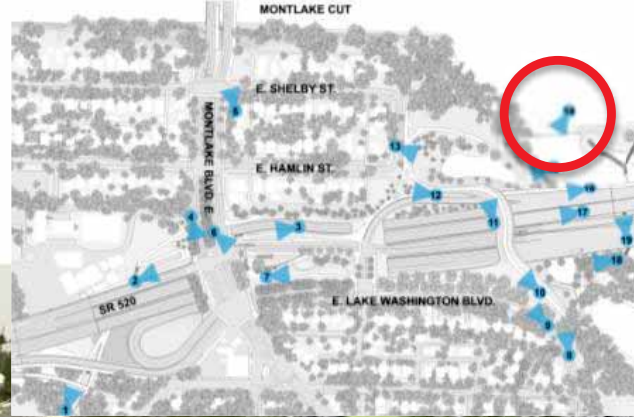
# Montlake Lid Area - Baseline

14. View of East Lid from over Lake Washington (looking southwest)



# Montlake Lid Area - Refined

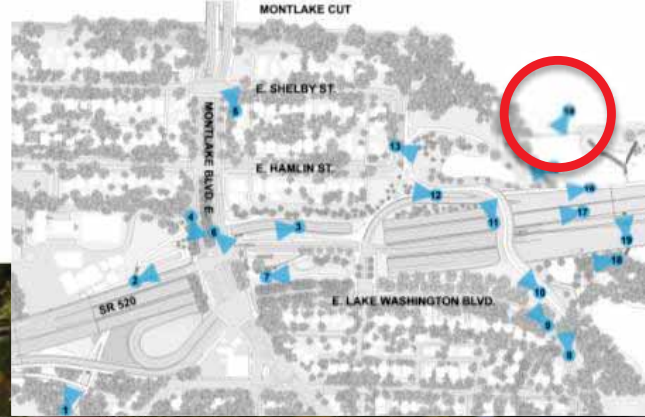
14. View of East Lid from over Lake Washington (looking southwest)



- **better regional connection from Arboretum and points south to East Montlake Park and UW**
- **dramatic reduction in concrete, steel and other construction materials (30%)**
- **reduced O&M costs**
- **land bridge elevation 15' lower than lid**
- **more room for trees and wetlands at sides of roadway**

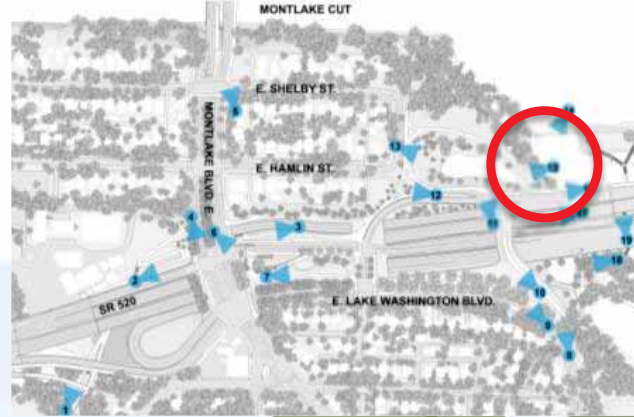
# Montlake Lid Area - Rendered

14. View of East Lid from over Lake Washington (looking southwest)



# Montlake Lid Area - Baseline

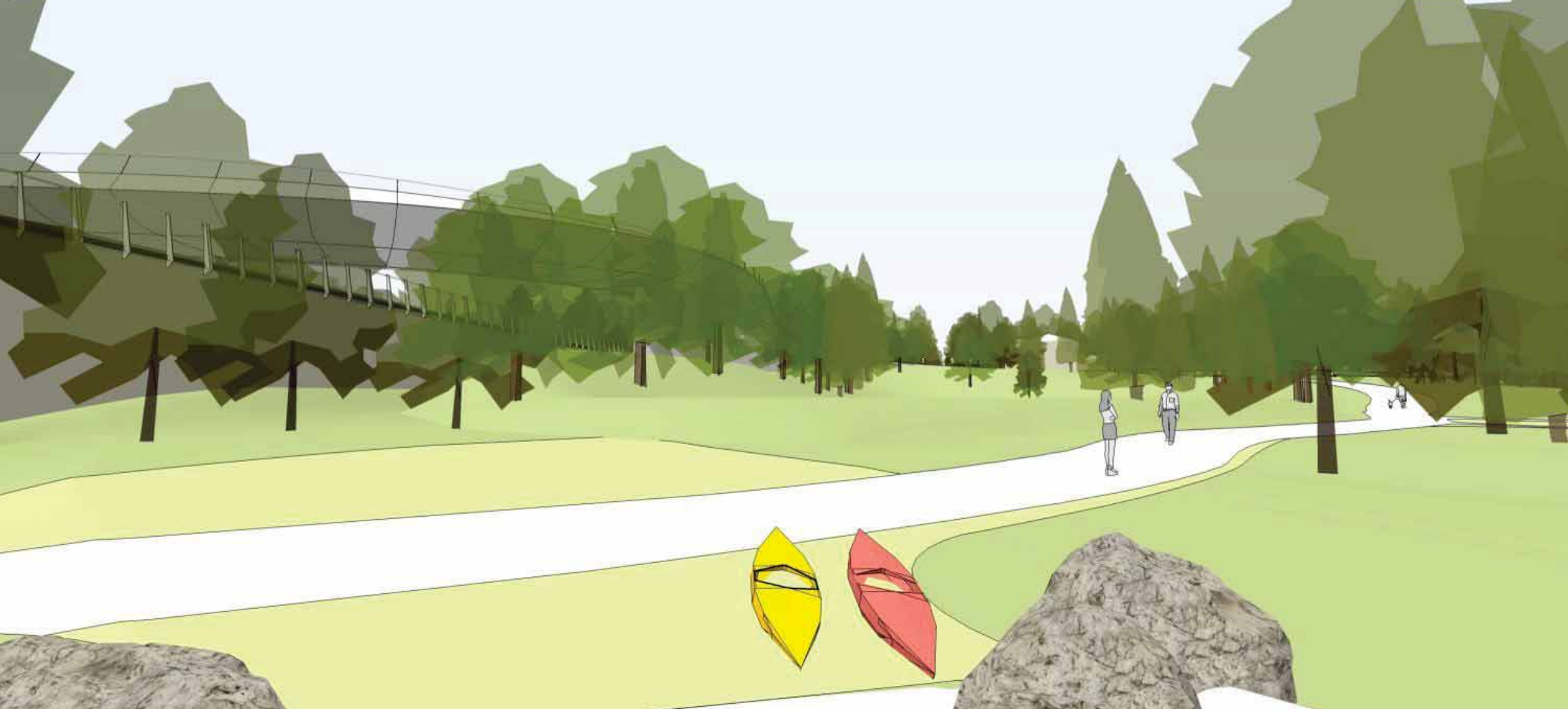
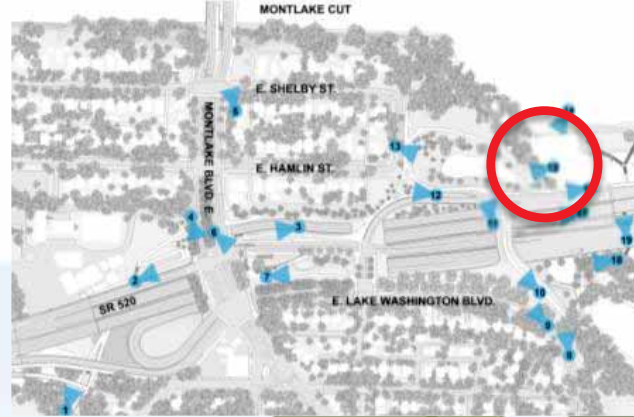
15. View of East Lid from Shoreline  
(looking southwest)



# Montlake Lid Area - Refined

15. View of Land Bridge from Shoreline (looking southwest)

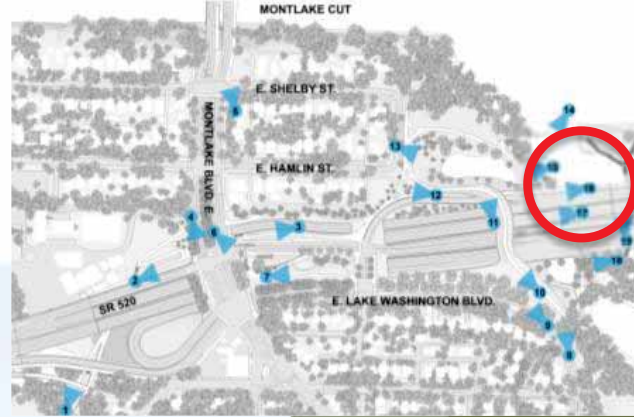
- **view of freeway remains buffered**
- **view of lid wall is reduced**





# Montlake Lid Area - Baseline

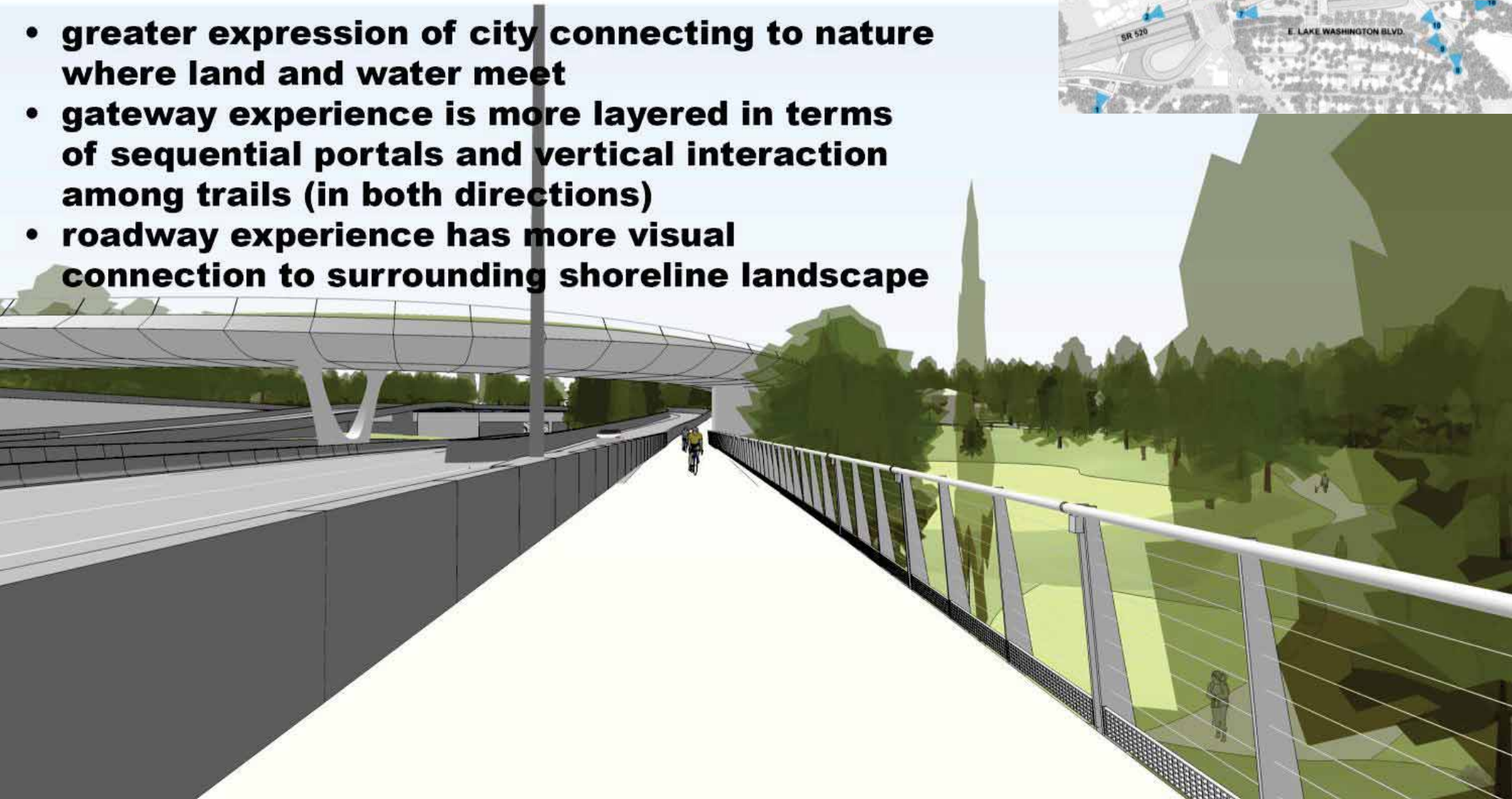
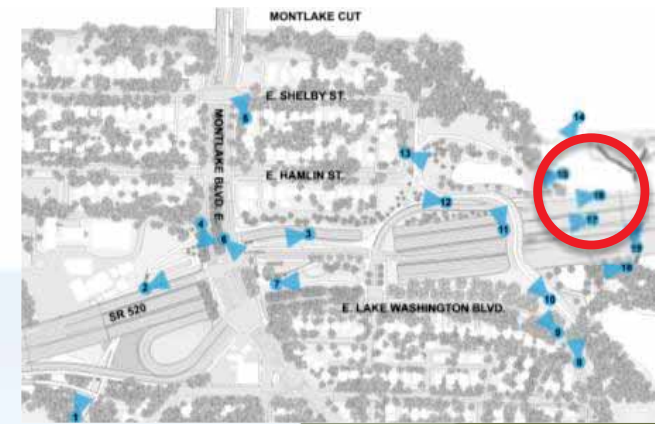
16. View of East Lid from Bridge Trail (looking west)



# Montlake Lid Area - Refined

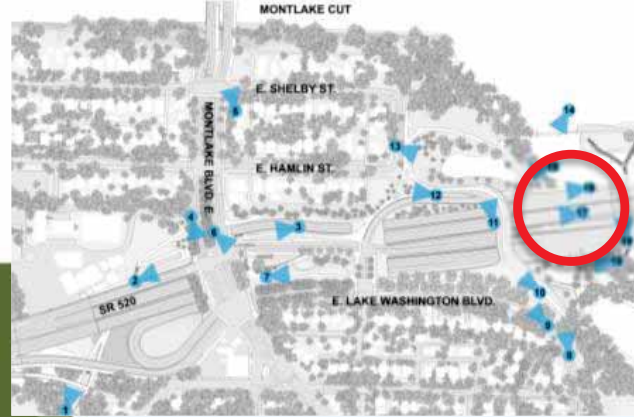
## 16. View of Land Bridge from Bridge Trail (looking west)

- **greater expression of city connecting to nature where land and water meet**
- **gateway experience is more layered in terms of sequential portals and vertical interaction among trails (in both directions)**
- **roadway experience has more visual connection to surrounding shoreline landscape**



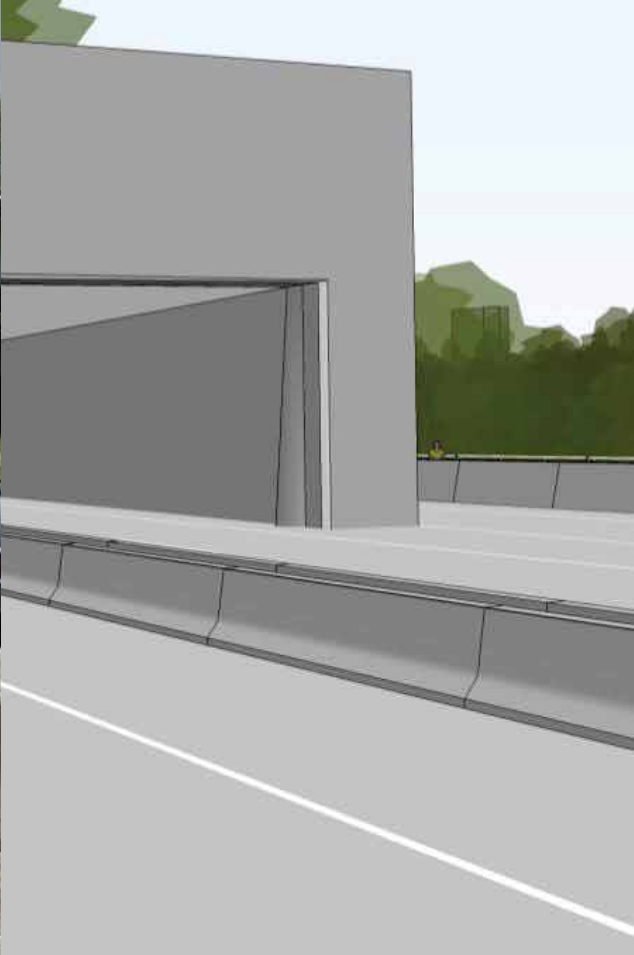
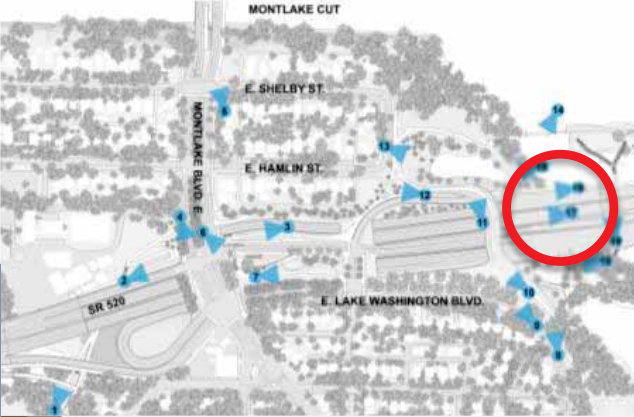
# Montlake Lid Area - Baseline

17. View of East Portal from Mainline (looking west)



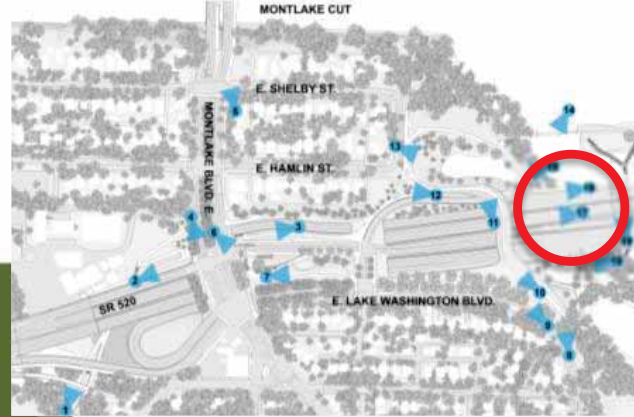
# Montlake Lid Area - Existing

17. View of East Portal from Mainline (looking west)



# Montlake Lid Area - Baseline

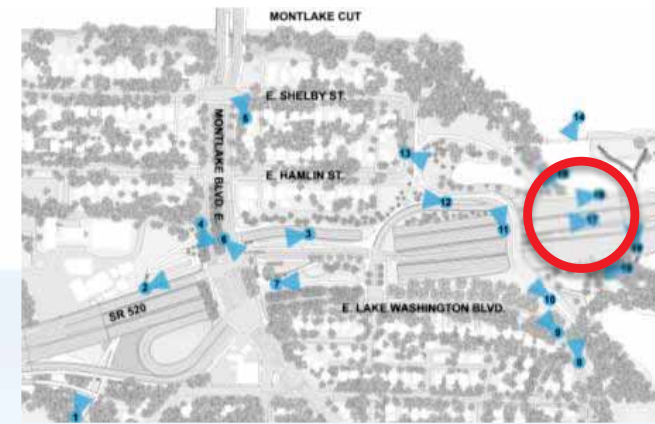
17. View of East Portal from Mainline (looking west)



# Montlake Lid Area - Refined

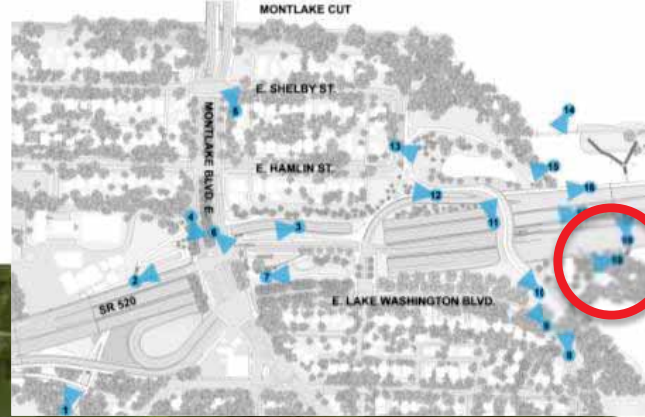
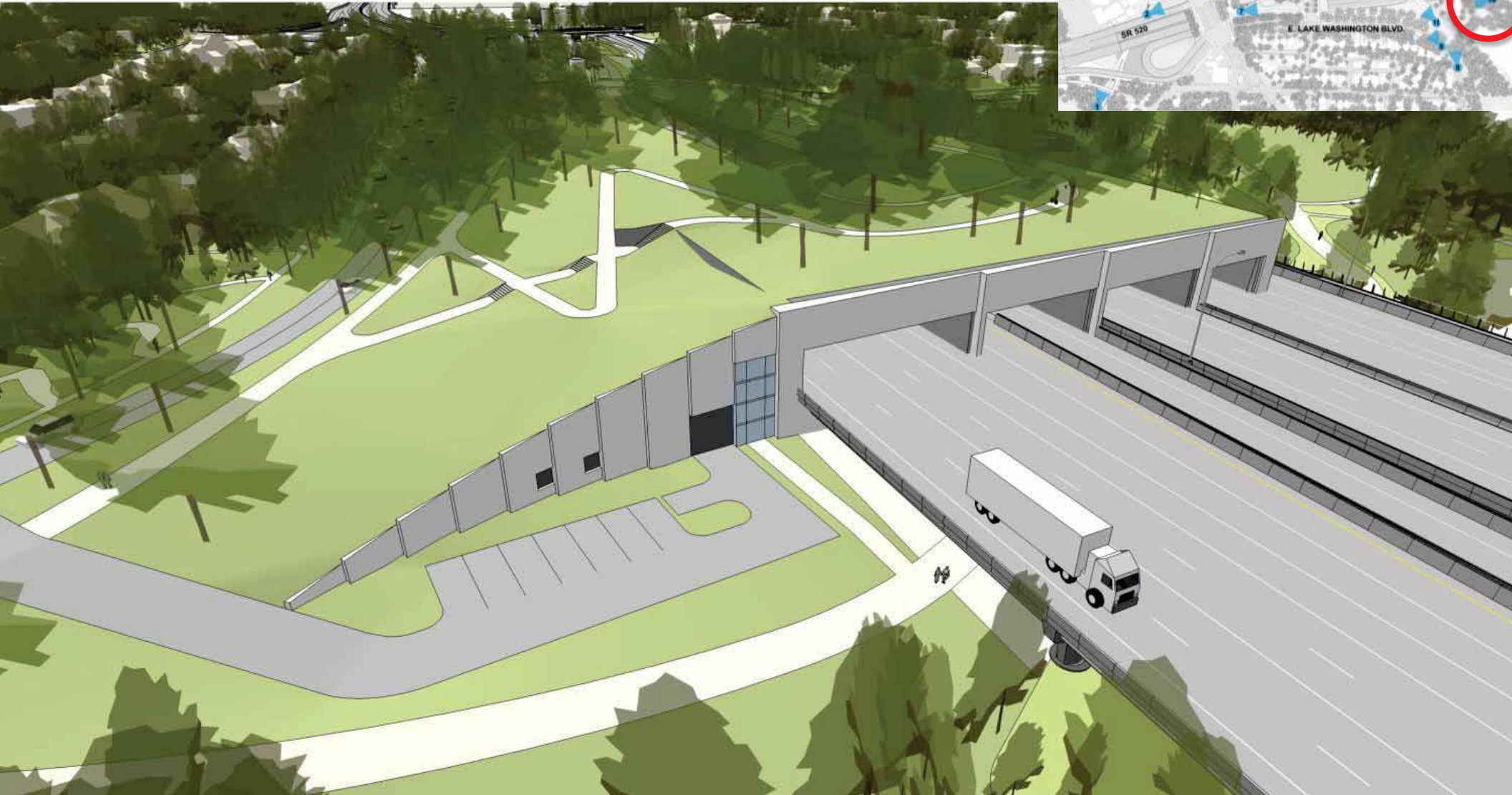
## 17. View of Land Bridge from Mainline (looking west)

- **greater expression of city connecting to nature where land and water meet**
- **gateway experience is more layered in terms of sequential portals and vertical interaction**
- **roadway experience has more visual connection to surrounding shoreline landscape**
- **location in city is more legible to drivers**



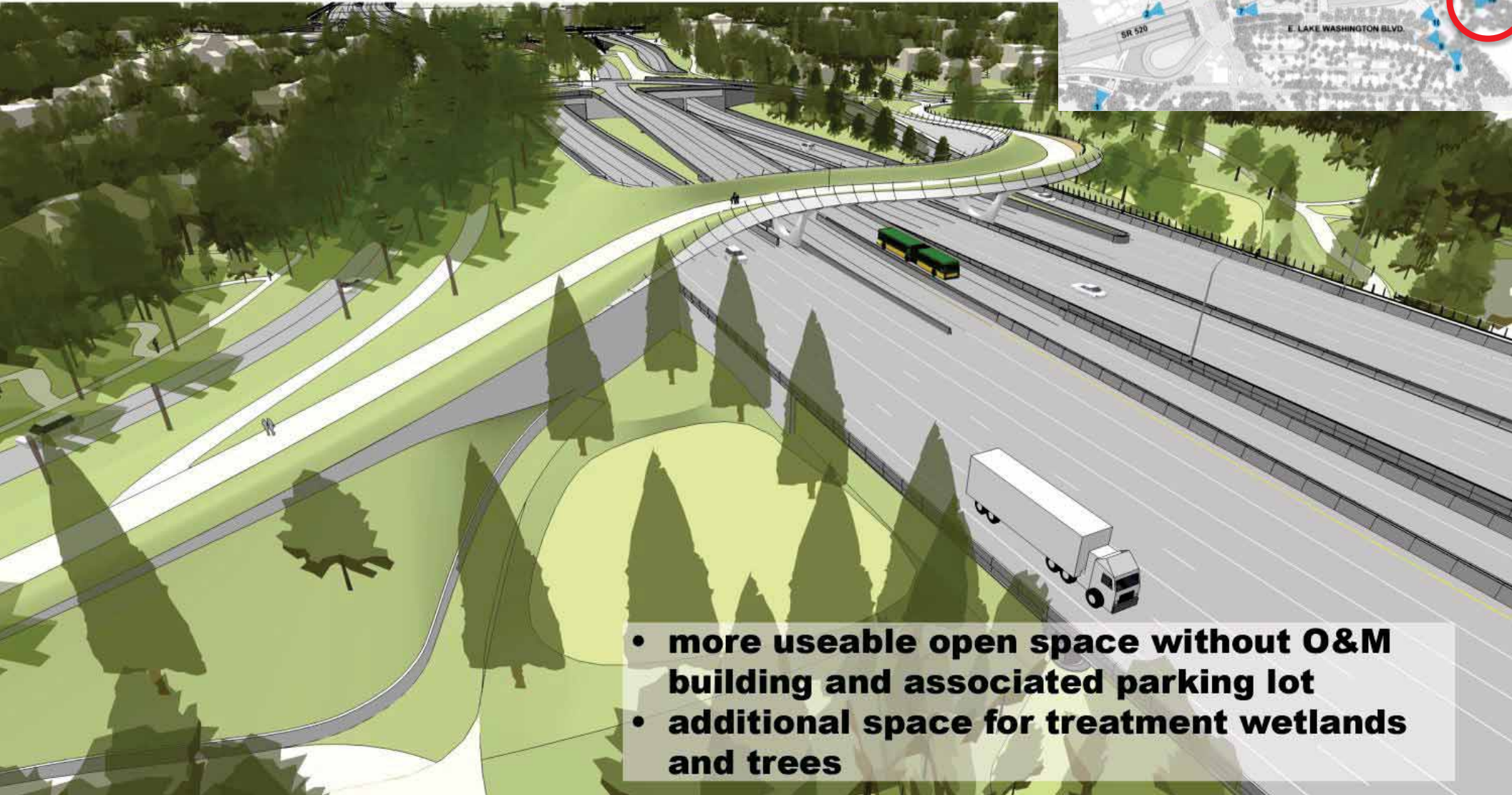
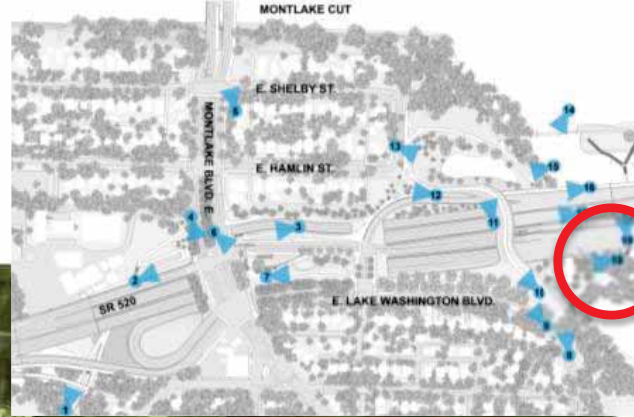
# Montlake Lid Area - Baseline

18. View of O&M Building and Parking (looking west)



# Montlake Lid Area - Refined

18. View of Additional Treatment Wetlands (looking west)

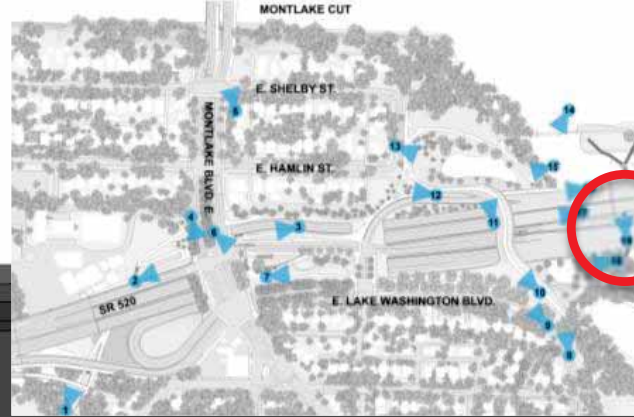


- **more useable open space without O&M building and associated parking lot**
- **additional space for treatment wetlands and trees**



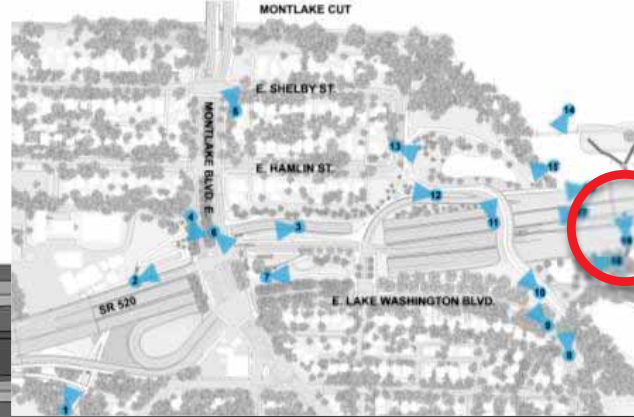
# Montlake Lid Area - Baseline

19. View of Shoreline Trail Under Mainline  
(looking north)



# Montlake Lid Area - Refined

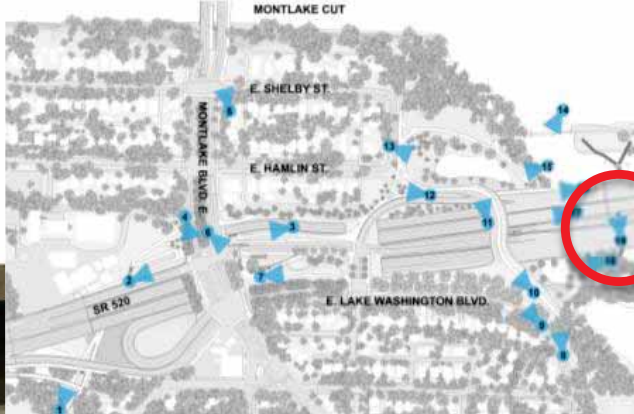
19. View of Boardwalk Trail Under Mainline (looking north)



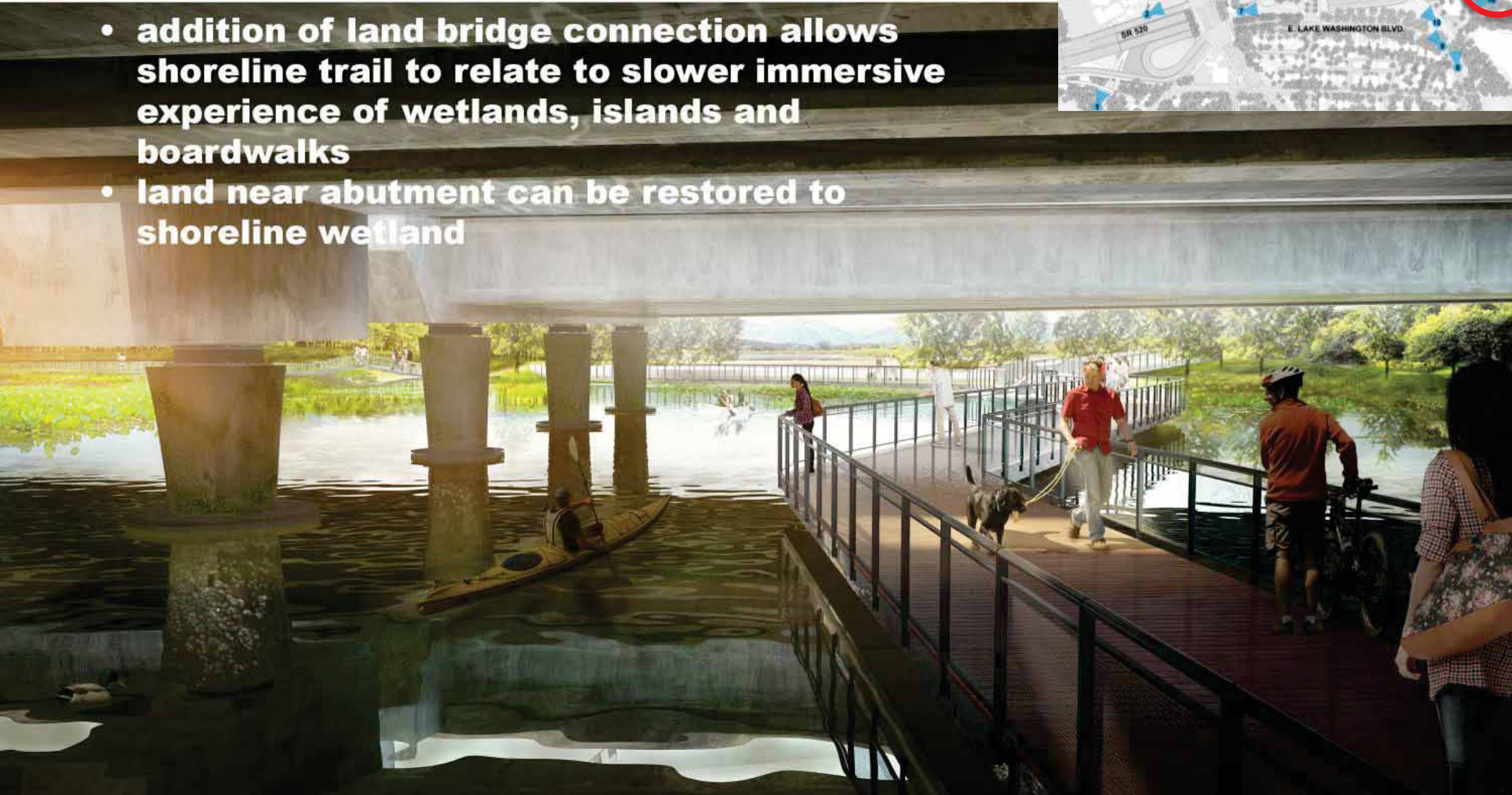
- **improved pedestrian experience**
- **trail on boardwalk increases visibility and discourages nuisance behavior under mainline near abutment**

# Montlake Lid Area - Rendered

19. View of Boardwalk Trail Under Mainline (looking north)



- addition of land bridge connection allows shoreline trail to relate to slower immersive experience of wetlands, islands and boardwalks
- land near abutment can be restored to shoreline wetland



# “Reconnect Nature and City... with a Smarter Lid”



## 2012 SCDP Goals... 2014 Refinements

UTILITY...

*Better Connections*

SUSTAINABILITY...

*Less Is More*

EXPRESSION...

*Quality Open Space*

# “Reconnect Nature and City... with a Smarter Lid”



1. Better regional connections
  2. More useable open space
  3. Buffered views of the roadway
  4. Improved pedestrian experience
  5. Better undercrossings
- AND comparable improvements in noise & air quality