



Interstate
BRIDGE
Replacement Program



Equity Advisory Group

June 26, 2023

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Reminders

- ▶ We encourage EAG members to turn on your video.
- ▶ Please say your name when you begin to speak.
- ▶ If you experience technical difficulties, please contact program staff at: **(360) 329-6744**

Public Input Instructions

- ▶ There will be an opportunity to provide brief public input later in the meeting today.
- ▶ To submit input after the meeting:
 - Email comments to info@interstatebridge.org with “EAG Public Comment” in the subject line
 - Call 888-503-6735 and state “EAG Public Comment” in your message



Today's agenda

- ▶ Program Update
- ▶ Design: Aerial Roll Map, Bridge Design goals
- ▶ Letter of support
- ▶ Public comment
- ▶ Close out

Program Update

Greg Johnson, Program Administrator

Recent Program Updates

- ▶ **Neighborhood Forums**
 - Vancouver, 5/31
 - Portland, 6/6
- ▶ **Federal Grants**
- ▶ **Permitting**
- ▶ **Presentations & Briefings**

Single-level Bridge - Extradosed

Vancouver Renaissance Trail, east of bridge



Single-level Bridge - Finback

Vancouver Renaissance Trail, east of bridge



Single-level Bridge - Concrete

Vancouver Renaissance Trail, east of bridge



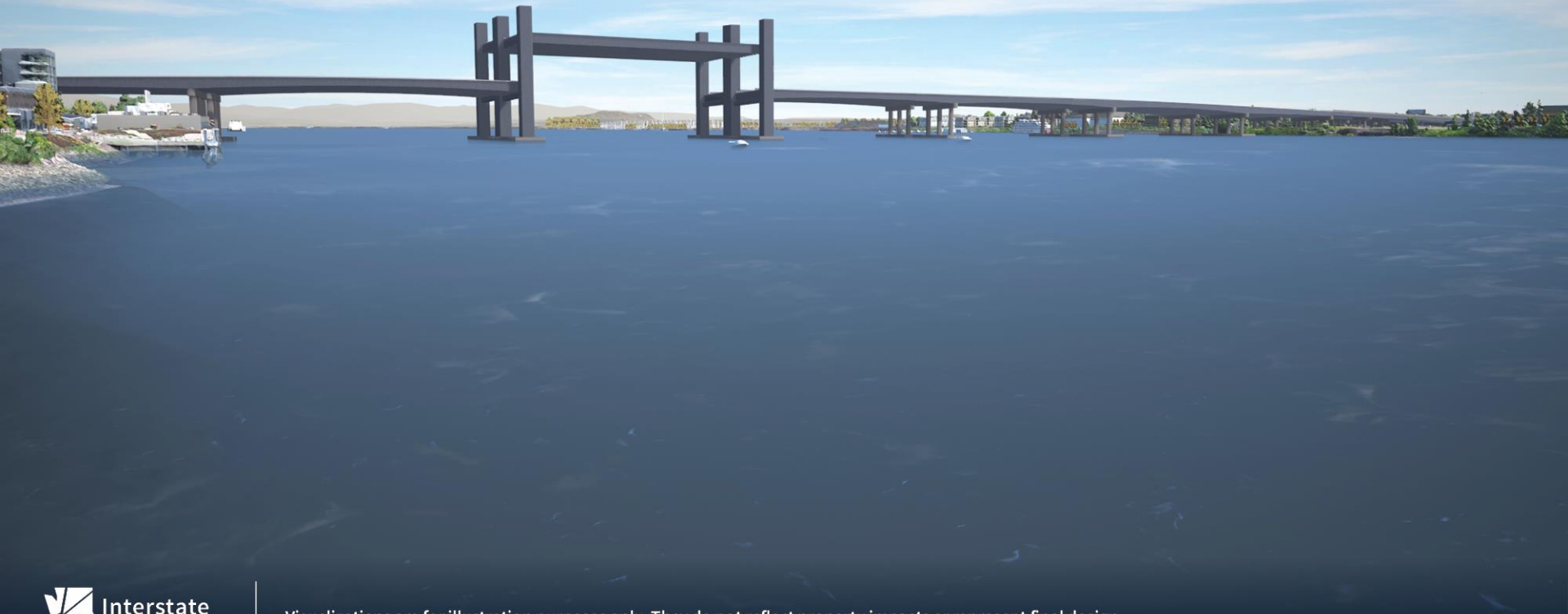
Single-level Bridge - Steel Girder

Vancouver Renaissance Trail, east of bridge



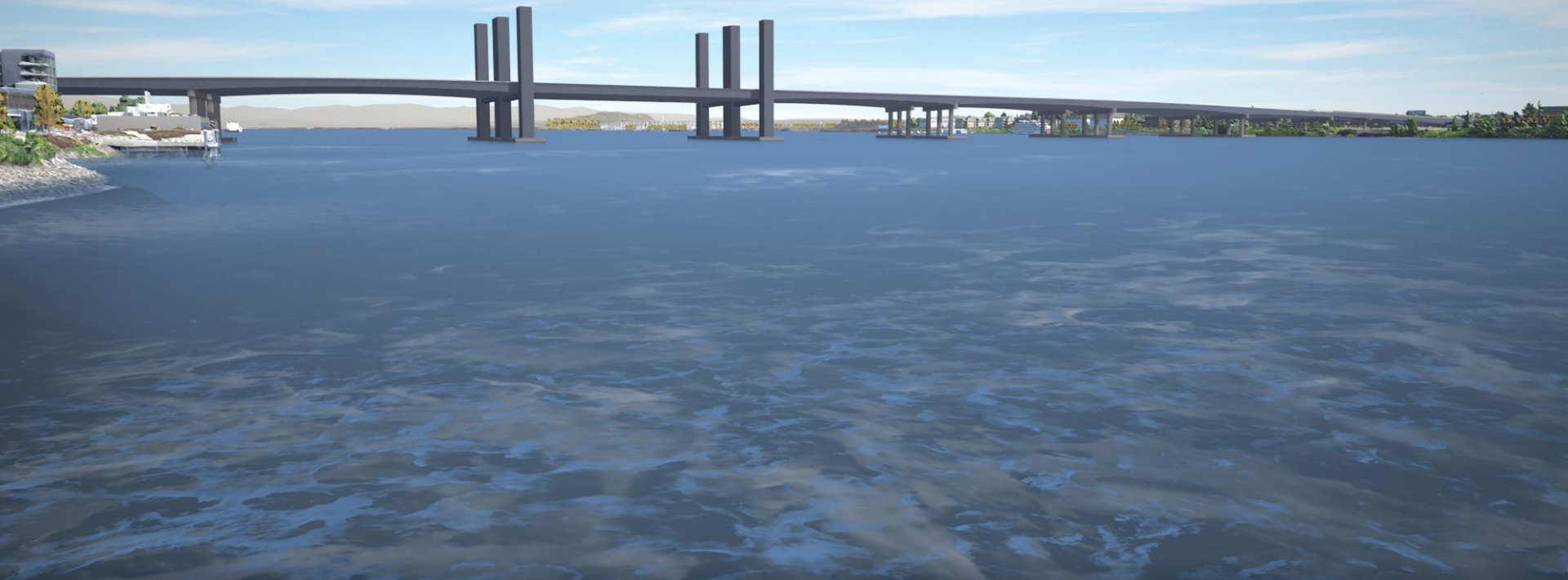
Movable Bridge - Steel Girder - Open

Vancouver Grant Street Pier, west of bridge



Movable Bridge - Steel Girder - Closed

Vancouver Grant Street Pier, west of bridge



Double-level Bridge - Truss

Vancouver Renaissance Trail, east of bridge





Program area investments & aerial roll map

Casey Liles, Design Manager



Bridge Design Goals

Introduction to design process and
setting design goals

Tom Osborne and
Laura Langridge
IBR Bridge Design Team

26 June 2023

Meeting Topics

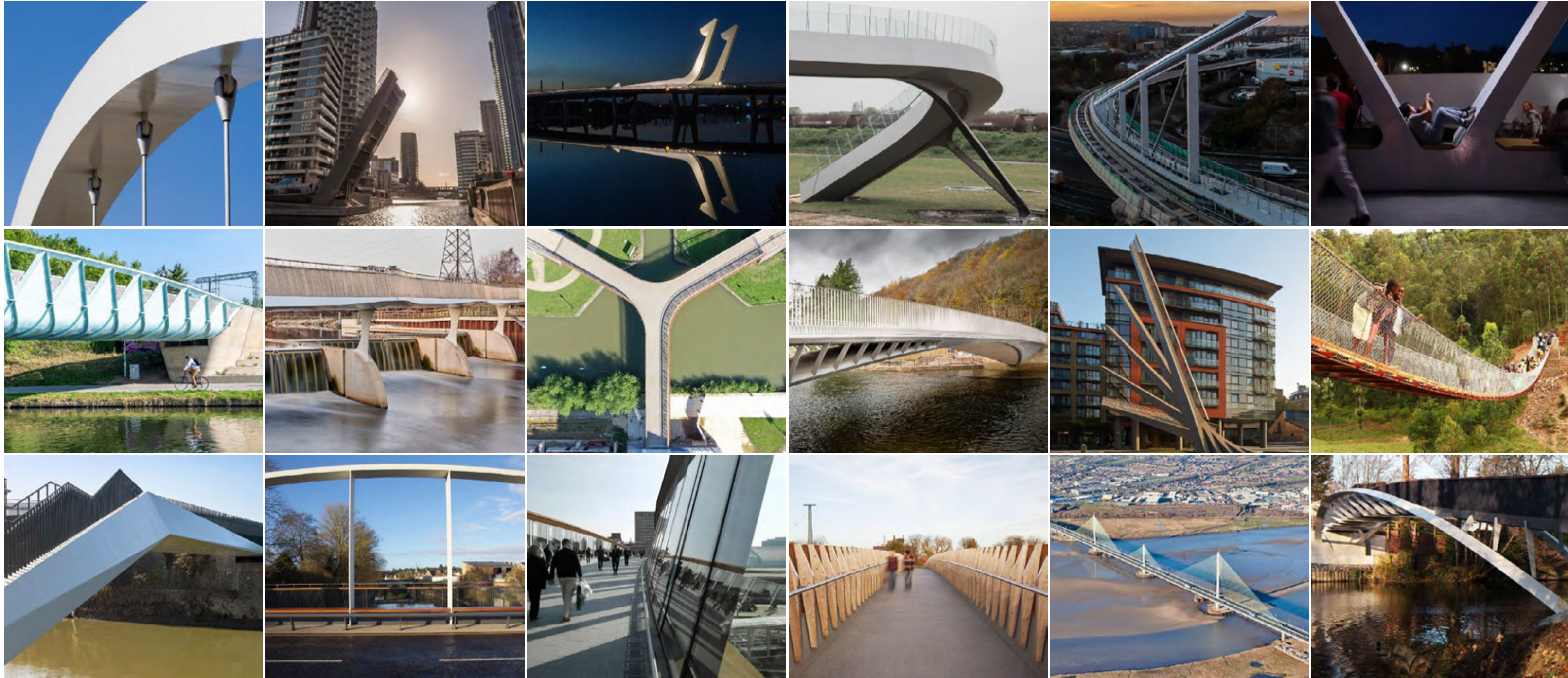
- Who are we?
- How will we get to a good design?
- Why and Who
- Exploring design goals for bridge users
- What is important to you as an individual?

Who are we?



Bridges are in our DNA...

We are responsible for bridge design of all types and scales, including innovative modular structures, unique moveable bridges, record-breaking crossings and city-changing active travel infrastructure.



How do we get to a good design for IBR?

We want to arrive at the right design for IBR. To do that we need to establish what “good design” looks like for this site. This needs to be deliberate, clear and collectively understood.



How do we get to a good design for IBR?

Design is subjective, but we **do not** want to present you with solutions and simply ask you which you like best. The current renders simply illustrate a range of typologies, not finished designs.



How do we get to a good design for IBR?

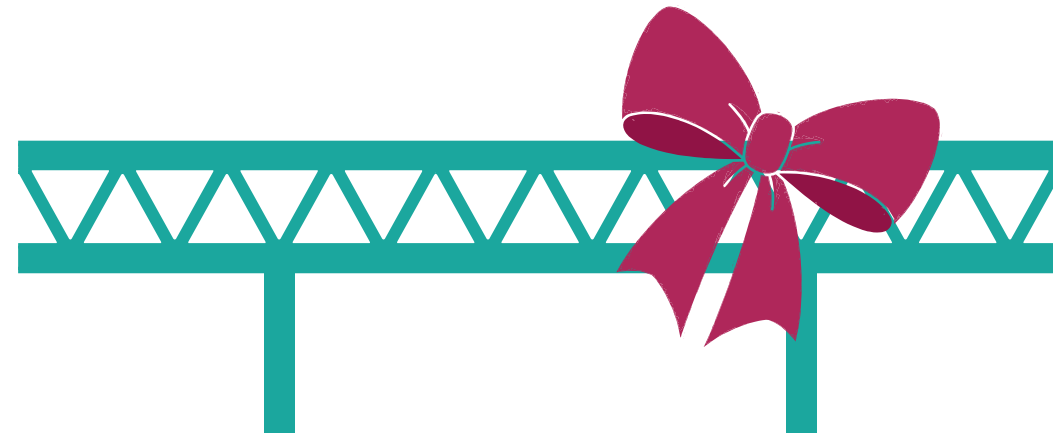
Assessing multiple options against multiple criteria can lead to confusing matrices, and may produce the 'least worst' design, but is unlikely to produce the 'best' design. This is **not the approach** we want to take.



Criteria	✓ ✓	✗	✗	✓	✓	✗
Criteria	✓	✗ ✗	✗ ✗	✓	✓	✗ ✗
Criteria	✓ ✓	✓ ✓	✓ ✓	✗	✓	✓ ✓
Criteria	✗	✓	✓	✗ ✗	✗	✓
Criteria	✗	✓	✓	✓ ✓	✗ ✗	✓
Criteria	✓ ✓	✗	✗	✓	✓ ✓	✗
Criteria	✓	✗	✗ ✗	✓	✓	✗
Criteria	✓	✓ ✓	✓	✗	✓	✓ ✓
Criteria	✗	✓	✓	✗ ✗	✗	✓
Criteria	✗ ✗	✓	✓	✓	✗ ✗	✓

How do we get to a good design for IBR?

We **do not** decorate bridge typologies, we develop site specific, integrated and efficient solutions that respond to their unique context.



Bridge Architecture ≠ Decoration

How do we get to a good design?

We don't yet know what the final design of the Interstate Bridge Replacement program will look like, but we do know how to get there - it involves asking the right questions.

Designers have a tendency to quickly jump to questions focused on the solution – “what does it look like?”, “how will it be built?” But good design must first begin with questions surrounding the challenge – “why is that required?” “who is that for?”

In short, the best solutions come from first thinking of people, and then thinking of the object.





Considering the user in all parts of the design

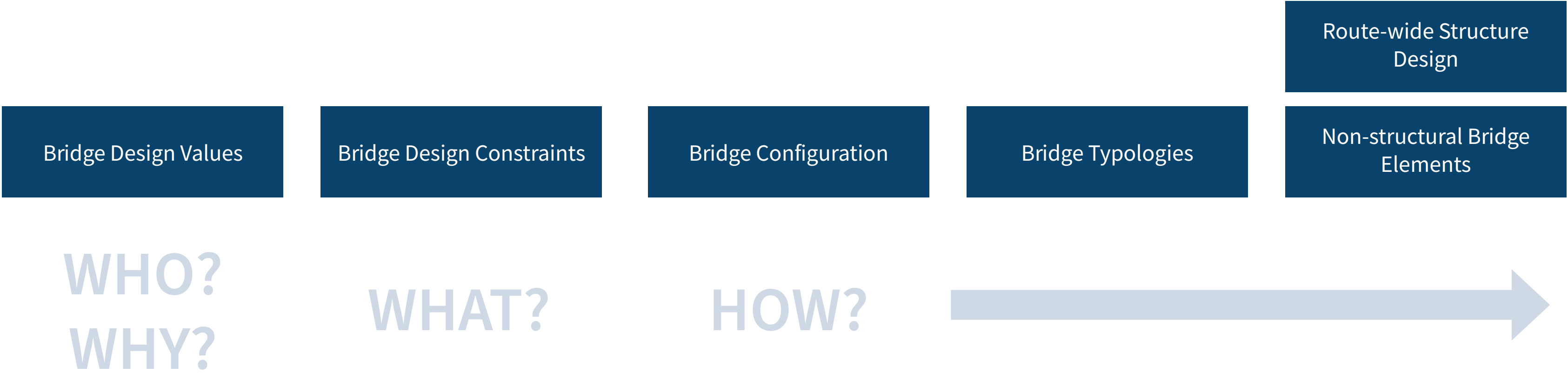


Alignment Design

Structures

Urban/landscape design

Bridge Design Process



Why?

The project Purpose and Need and Desired Outcomes say a lot about the importance and needs of the program as a whole.

They don't tell us what the design of the bridge should be.

Problems we still face



Seismic vulnerability:

In a major earthquake, the bridge would likely be substantially damaged, potentially beyond repair.



Bike & pedestrian paths:

Narrow shared-use paths, low railing heights and proximity to travel lanes impede safe travel.



Public transportation:

Limited transit options and existing bus service can be unreliable due to traffic congestion and/or bridge lifts.



Safety: Narrow lanes, no shoulders, poor sight distances, bridge lifts, and substandard ramp merging and diverging contribute to crashes.



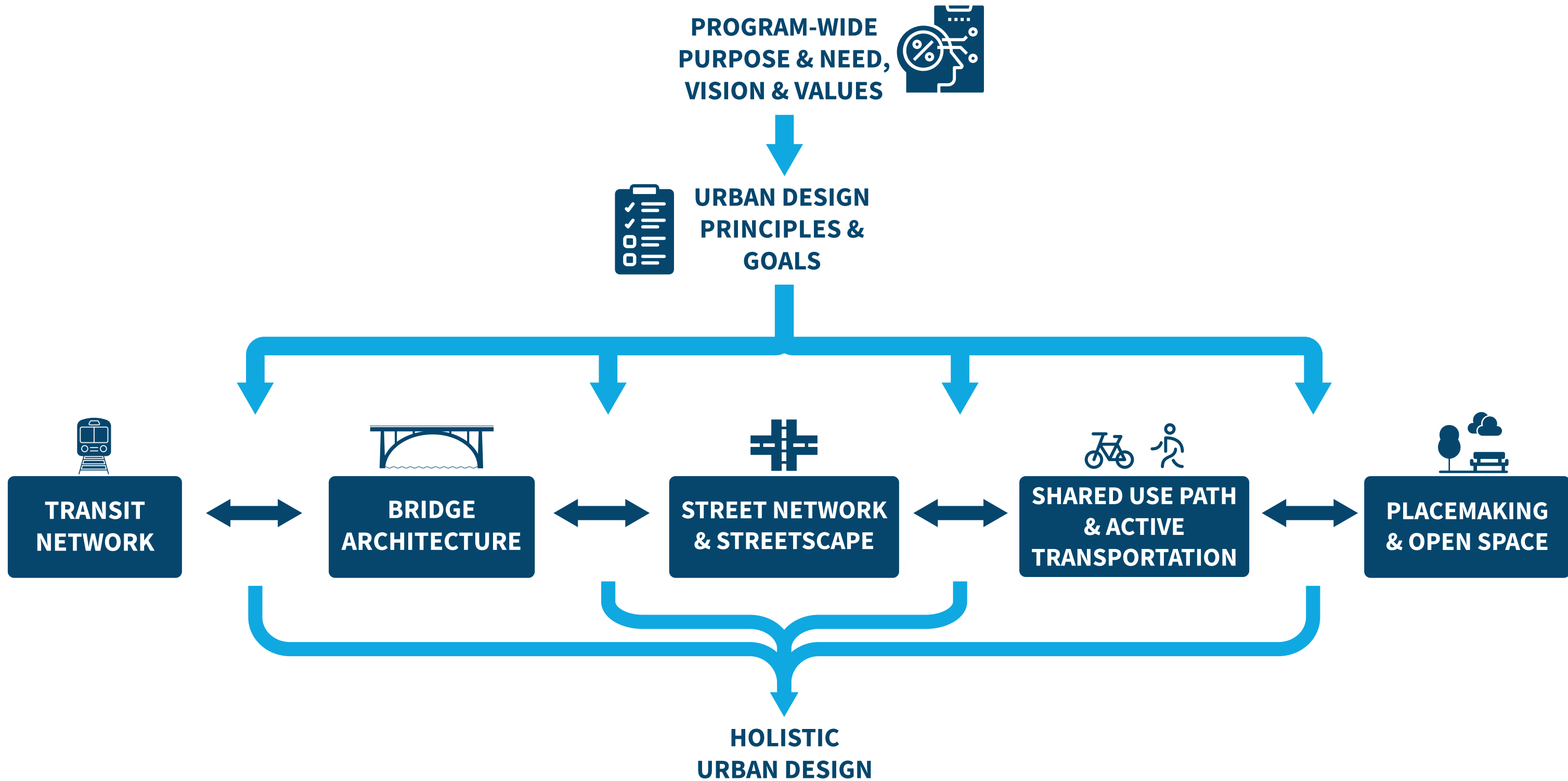
Freight movement:

Congestion and bridge lifts slow down freight carrying goods to and from Ports and along I-5, a critical economic trade route on the west coast.



Congestion: Over 138,000 vehicles crossed the Interstate Bridge each week day in 2018, resulting in 7 to 10 hours of congestion during peak travel times.

Developing Principles and Goals



IBR Desired Outcomes

Purpose and Need for IBR	Desired Outcomes
Growing travel demand and congestion	<p>More people can move through the program area.</p> <p>People of all ages, abilities, and incomes have access to move through the program area, regardless of mode.</p> <p>Regional trips stay on I-5.</p> <p>Travel times through the program area are faster and more predictable.</p> <p>Increase transportation choices and efficient travel patterns through coordinated land use and transportation planning.</p>
Impaired freight movement	<p>Freight travel through the program area is more reliable.</p> <p>Freight travel times through the program area are faster.</p> <p>Accommodate high, wide, and heavy cargo in existing and future routes.</p>
Limited public transportation operations, connectivity, and reliability	<p>More people have access to high-quality, affordable, and reliable transit.</p> <p>Transit connects people to their origins and destinations.</p> <p>Travel by transit is competitive with other modes.</p> <p>More people use transit.</p> <p>Travel by transit is predictable, reliable, and consistent.</p>
Safety and vulnerability to accidents	<p>Reduce overall crashes on I-5, including severe injury and fatal crashes.</p> <p>Reduce overall crashes, including severe injury and fatal crashes, on I-5 ramps, local streets, and active transportation networks in the program area.</p> <p>Safety is reflected in the design of all modes.</p> <p>Fewer diverted trips from I-5 to local streets.</p>
Substandard bicycle and pedestrian facilities	<p>Active transportation is an attractive mode, and more people walk and cycle, both to access transit and instead of traveling by autos.</p> <p>More people have access to high-quality active transportation facilities.</p> <p>Traveling by walking, biking, and rolling feels safe because facilities are separated from moving vehicles and the shared-use path environment is visible and connected.</p> <p>The high-quality networks for walking/biking/rolling are convenient and connect destinations that are important for most trips.</p>
Seismic	<p>Bridges will be designed and constructed so that they will not collapse and will remain operable in a Cascadia subduction zone earthquake.</p>

What Does this Mean Relative to Urban and Bridge Design?

Some Desired Outcomes will be met by all design options being studied.

IBR Desired Outcomes

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Some Desired Outcomes will be met by all design options being studied.

Some Desired Outcomes will be addressed in coordination with other disciplines

IBR Desired Outcomes

What Does this Mean Relative to Urban and Bridge Design?

Some Desired Outcomes will be met by all design options being studied.

Some Desired Outcomes will be addressed by other disciplines

Some Desired Outcomes are directly linked to the design of the bridges and urban realm.

Purpose and Need for IBR	Desired Outcomes
Growing travel demand and congestion	More people can move through the program area.
	People of all ages, abilities, and incomes have access to move through the program area, regardless of mode.
	Regional trips stay on I-5.
	Travel times through the program area are faster and more predictable.
Impaired freight movement	Increase transportation choices and efficient travel patterns through coordinated land use and transportation planning.
	Freight travel through the program area is more reliable.
	Freight travel times through the program area are faster.
	Accommodate high, wide, and heavy cargo in existing and future routes.
Limited public transportation operations, connectivity, and reliability	More people have access to high-quality, affordable, and reliable transit.
	Transit connects people to their origins and destinations.
	Travel by transit is competitive with other modes.
	More people use transit.
Safety and vulnerability to accidents	Travel by transit is predictable, reliable, and consistent.
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Substandard bicycle and pedestrian facilities	Fewer diverted trips from I-5 to local streets.
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	Traveling by walking, biking, and rolling feels safe because facilities are separated from moving vehicles and the shared-use path environment is visible and connected.
Seismic	The high-quality networks for walking/biking/rolling are convenient and connect destinations that are important for most trips.
	Bridges will be designed and constructed so that they will not collapse and will remain operable in a Cascadia subduction zone earthquake.

Equity Objectives

Mobility & Accessibility

Improve mobility, accessibility, and connectivity, especially for lower income travelers, people with disabilities, and historically underserved communities who experience transportation barriers.

Physical Design

Integrate equity, area history, and culture into the physical design elements of the program, including bridge aesthetics, artwork, amenities, and impacts on adjacent land uses.

Community Benefits

Find opportunities for and implement local community improvements, in addition to required mitigations.

Economic opportunity

Ensure that economic opportunities generated by the program benefit minority and women owned firms, BIPOC workers, workers with disabilities, and young people.

Decision-making processes

Prioritize access, influence, and decision-making power for underserved communities throughout the program in establishing objectives, design, implementation, and evaluation of success

Avoiding further harm

Actively seek out options with a harm-reduction priority, rather than simply mitigate disproportionate impacts on historically impacted and underserved communities and populations.

Formulating the Design Goals

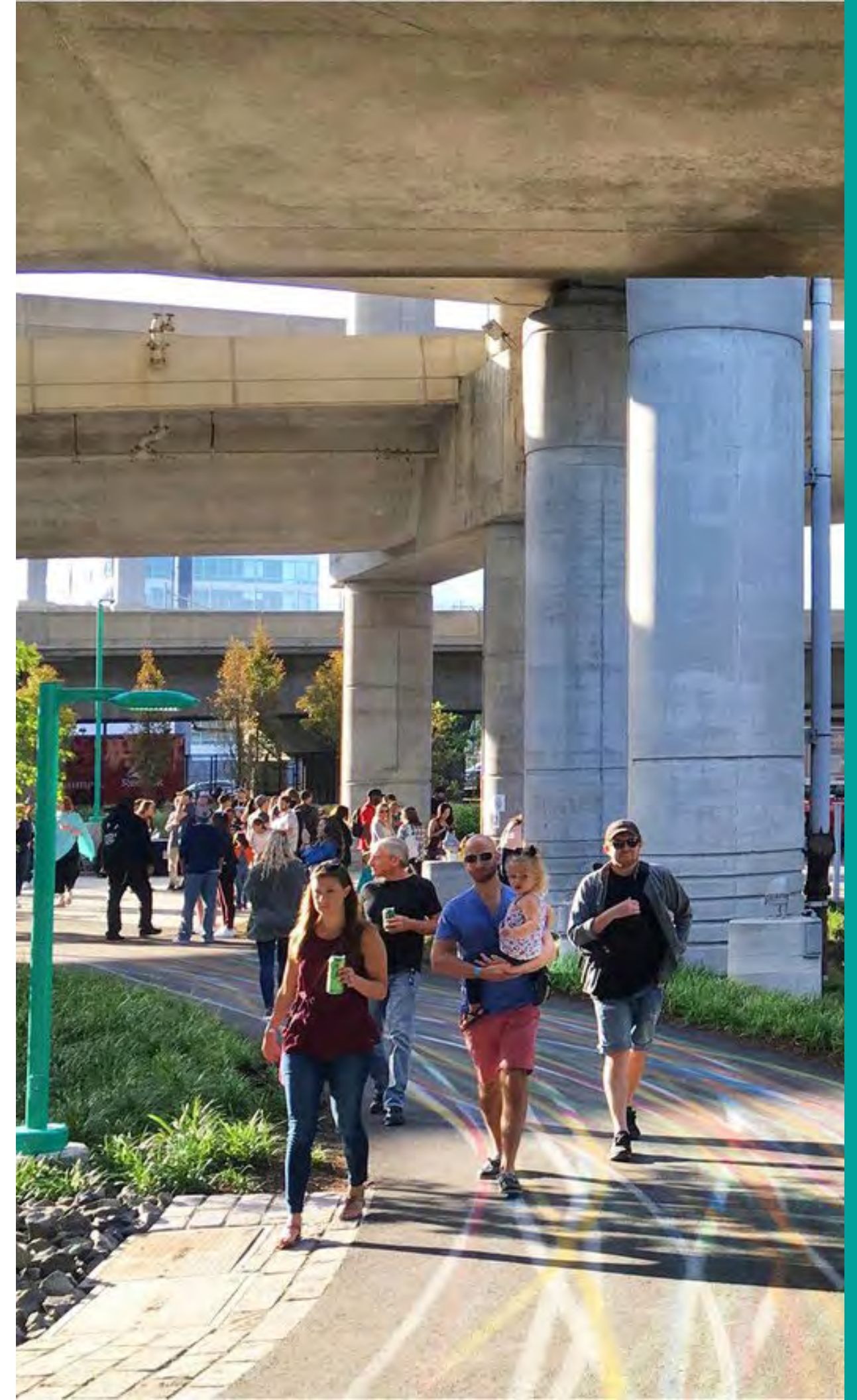
Some of the Desired Outcomes are so broad, it is difficult to respond to them specifically with design.

We need to establish specific design goals to guide us, build consensus and to evaluate options against.

These design goals are being built together with the Urban Design Team (Urban design Principles & Goals) and we have started building on these at the March CAG.

This is a very large program with big goals. So far, we have discussed the zoomed out high level program investments. We want to focus attention today to the small scale people centered goals which are equally critical to the success of the program.

Think at a human scale.



Who?



Who?

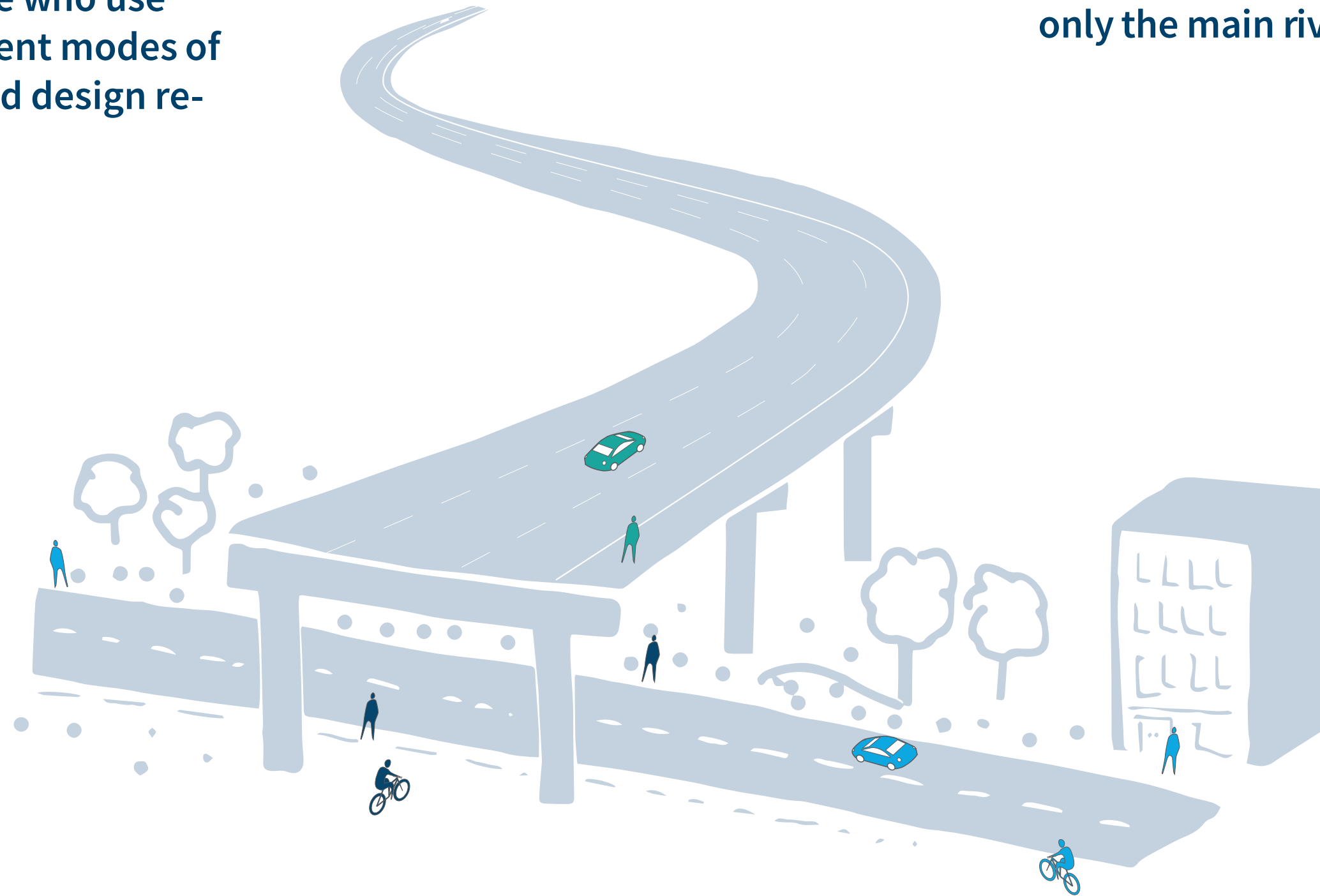
There will be a wide variety of people who use this program; different needs, different modes of transport, different viewpoints. Good design responds to them all.

On

Under

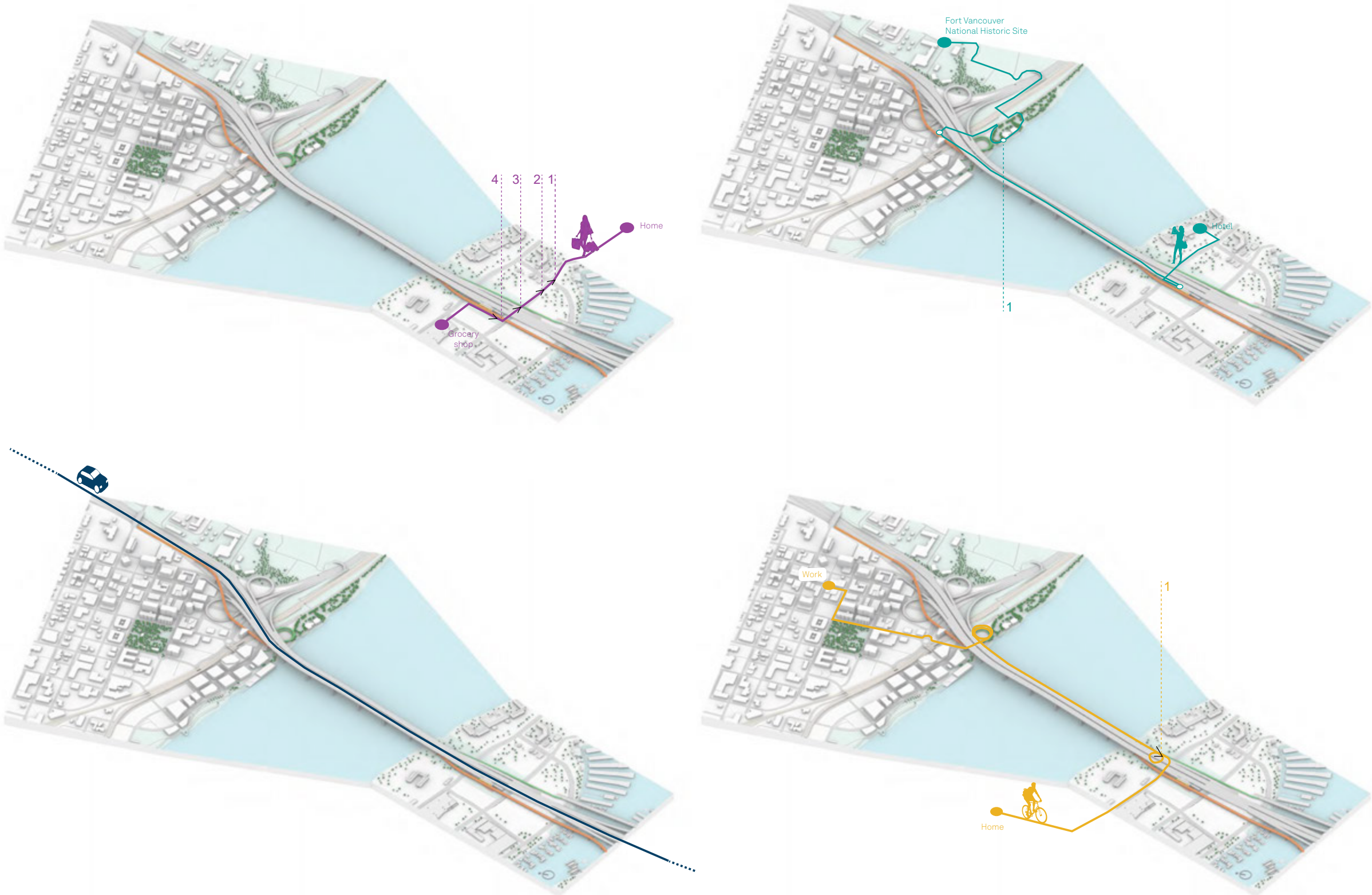
Around

Across the whole program and not only the main river crossing.



Who?

Rather than simply zooming around a 3D model, considering typical journeys can help to understand how the program impacts different users at the human scale





Thank You!



Breakout Groups

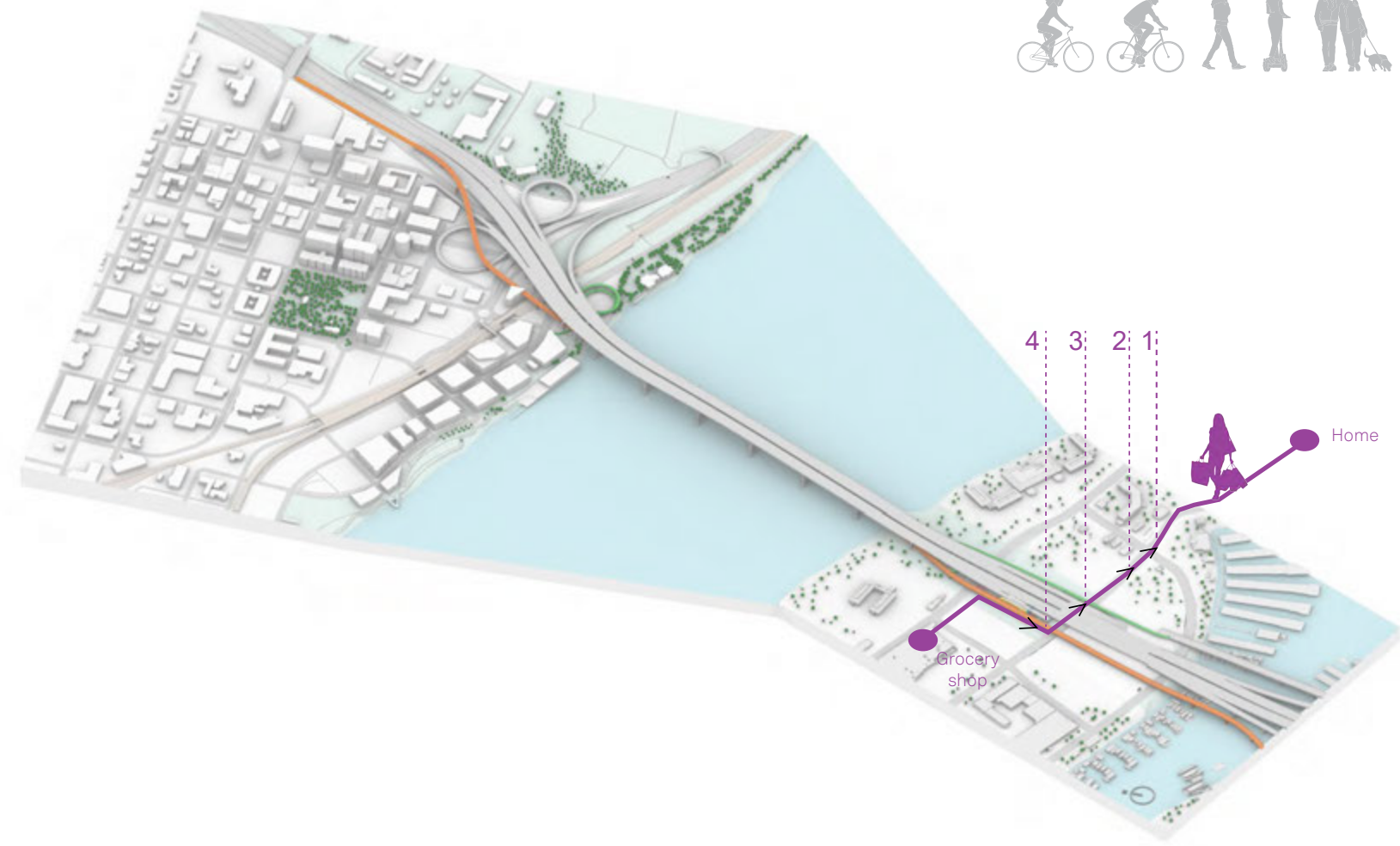
Trip to the grocery



Who: Lizzy and her nephew, residents

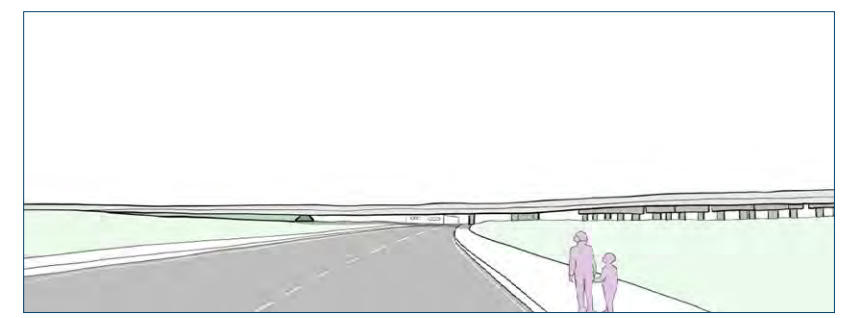
10 mins

On the bridge	
Under the bridge	██████████
Around the bridge	████████████████████

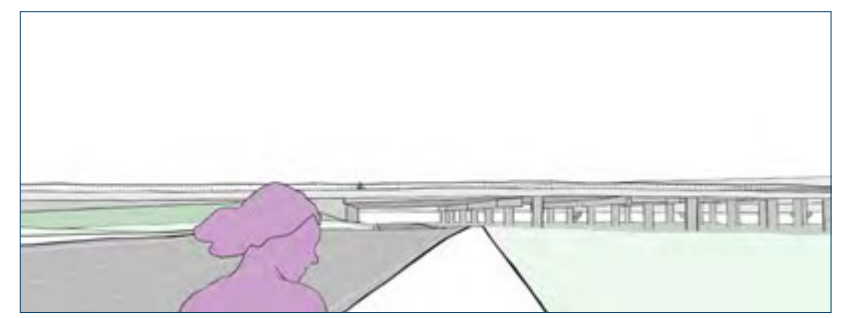


What is important for Lizzy at these points along the route?

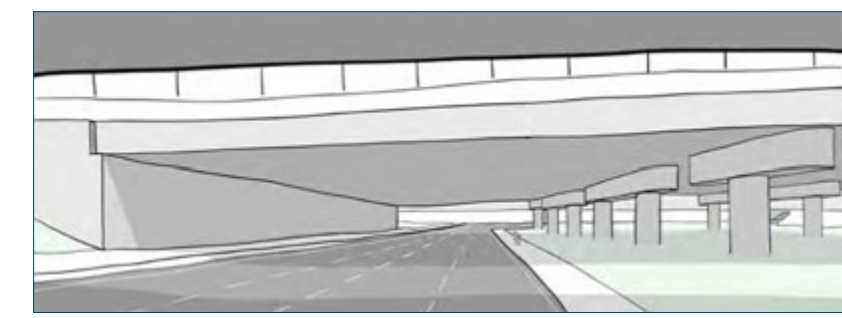
1. I-5 visible in distance



2. Near the threshold



3. Underbridge crossing



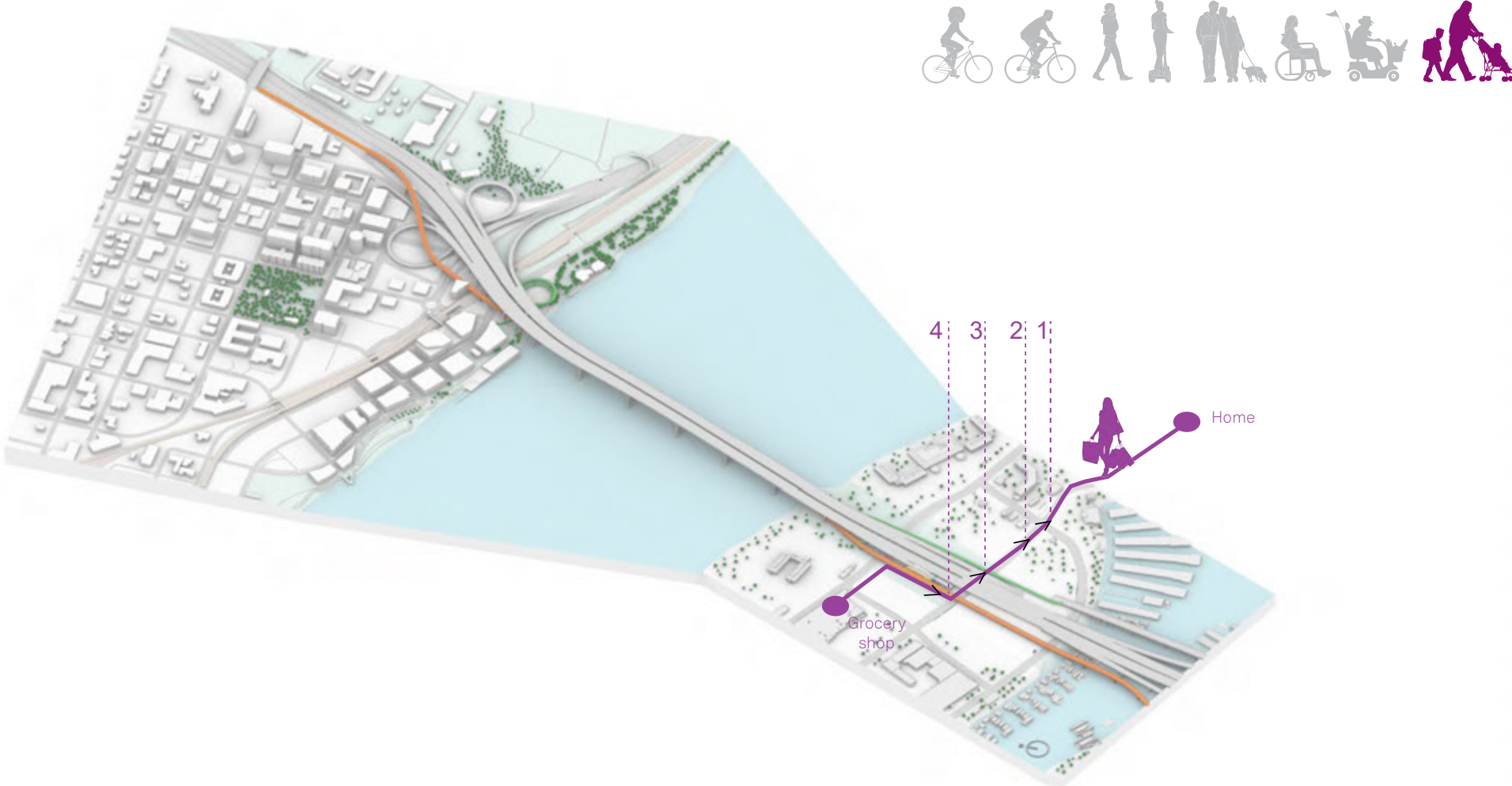
4. Walking alongside the structure



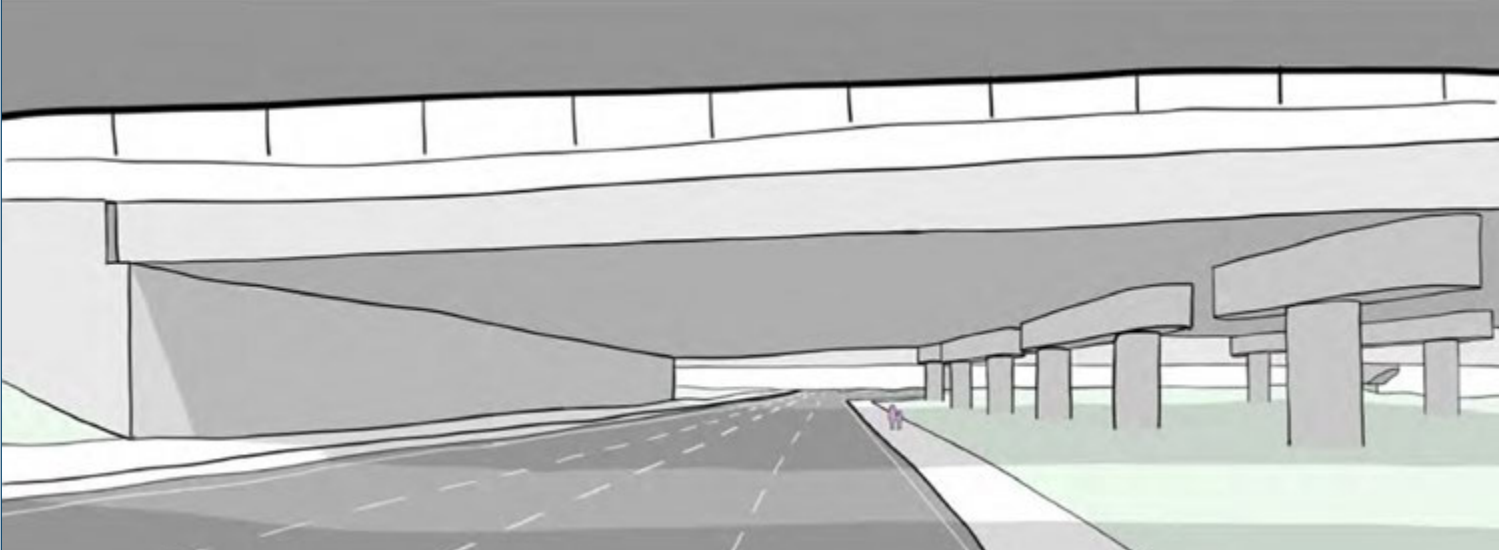
Trip to the grocery

Who: Lizzy and her nephew, residents

10 mins 🕒



3. Underbridge crossing



What is important to Lizzy at this undercrossing?
How can the structure design support equity?

Trip to the grocery

What might be important at underbridge crossings?



- Lighting
- Clear view of whole route to other side
- Clearly defined pedestrian zone
- No unprogrammed space

- Shape of abutments
- Profile of edge of deck

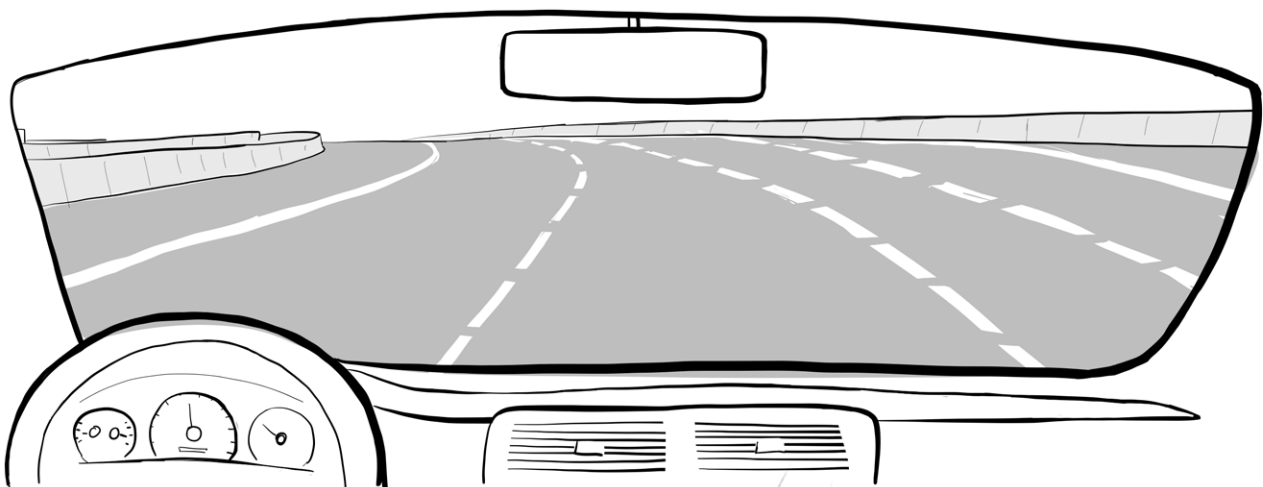
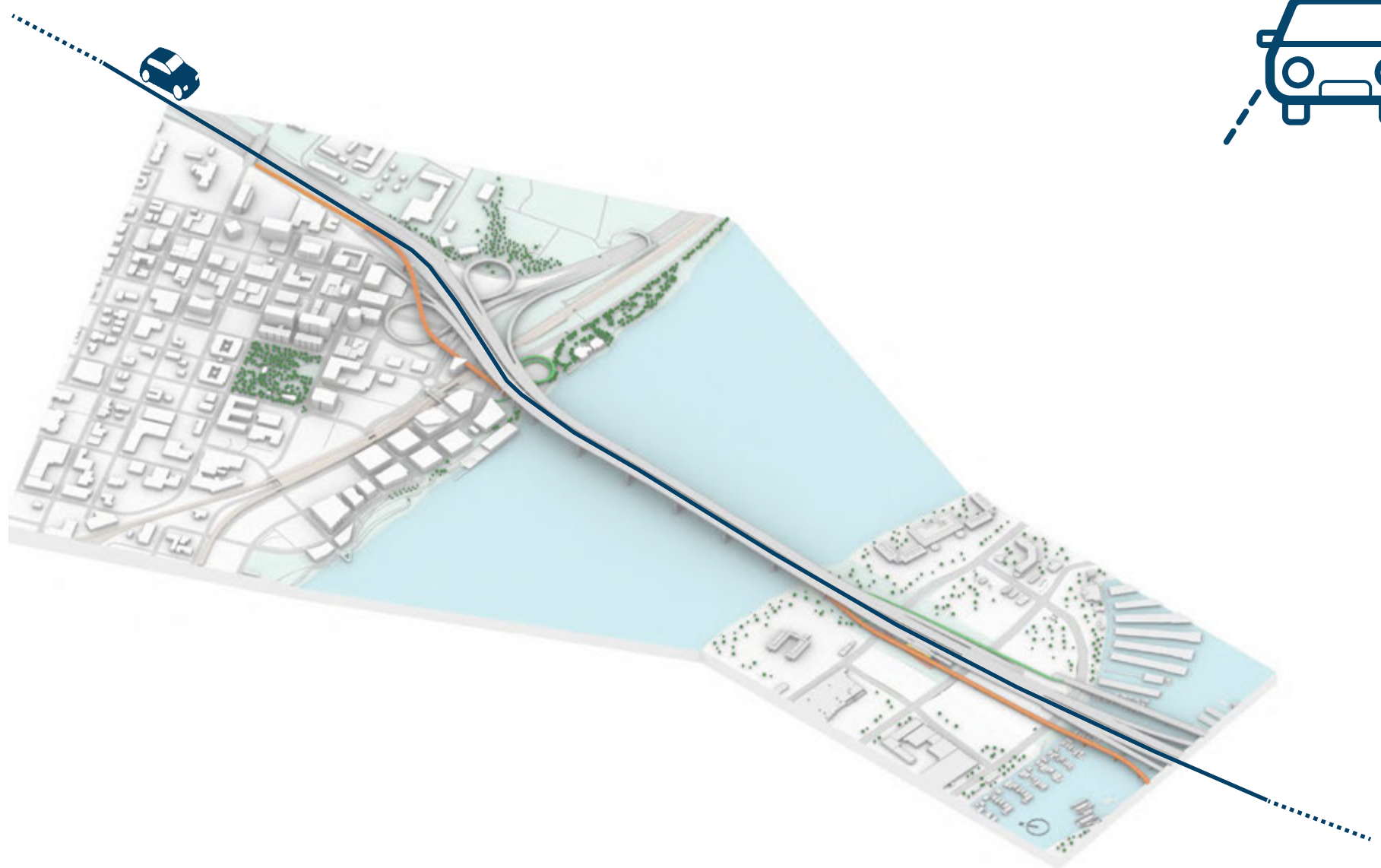
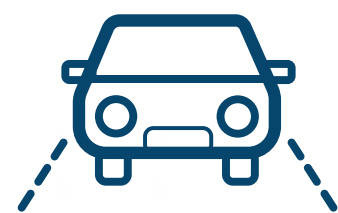


Precedents projects are shown here as relevant examples. Not all of these solutions will be possible exactly as shown, but lessons can be learned and applied for the IBR Program.

Driving on I-5

Who: Matt, driver

- On the bridge
- Under the bridge
- Around the bridge



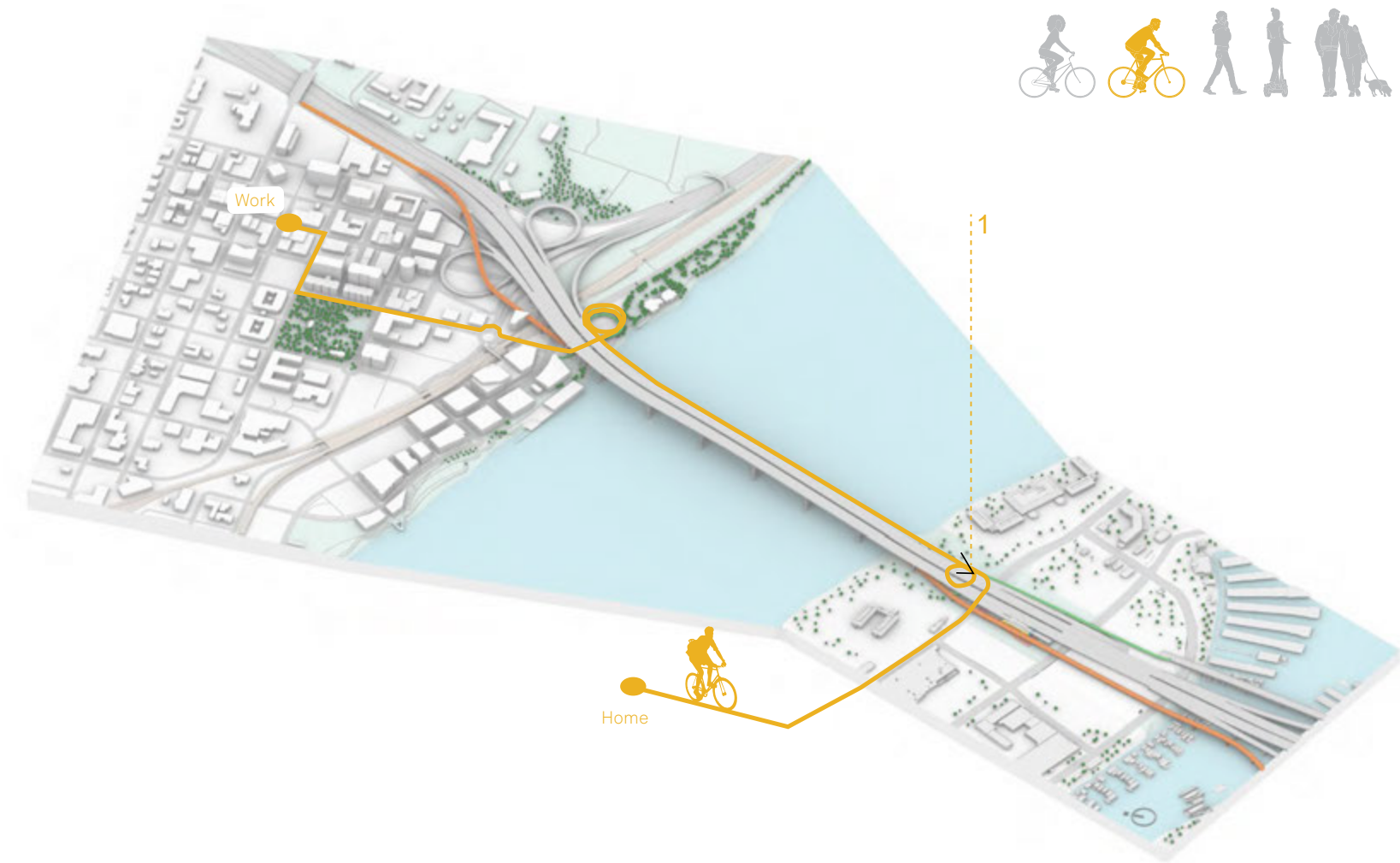
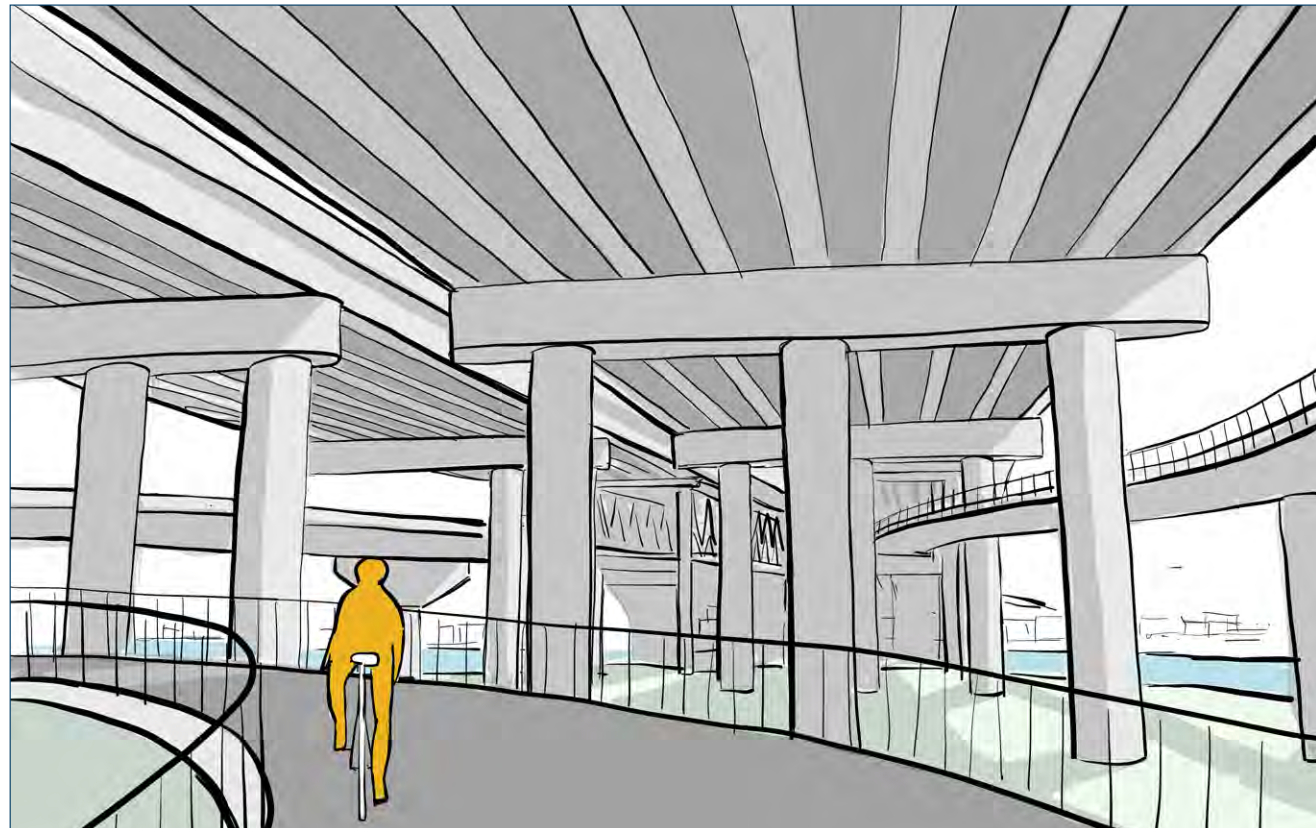
What might be important to Matt when driving across the bridge?

Route to work

Who: Rob, cyclist

On the bridge 
Under the bridge 
Around the bridge 

1. Shared Use Path approach ramp on Hayden Island



What might be important to Rob when climbing the approach ramps on his bike?

We will discuss more about the experience on deck at a later meeting.

Route to work

We will discuss more about the experience on deck at a later meeting.

What might be important to Rob on the main crossing?



Separation from traffic
Clear views to the landscape
Wind protection
Gentle slopes



Rest points

Precedents projects are shown here as relevant examples. Not all of these solutions will be possible exactly as shown, but lessons can be learned and applied for the IBR Program.

We will discuss more about the experience on deck at a later meeting.

Route to work

What might be important to Rob on the main crossing?



Enclosure (is it a good thing?)
 Eyes on path
 Safe environment

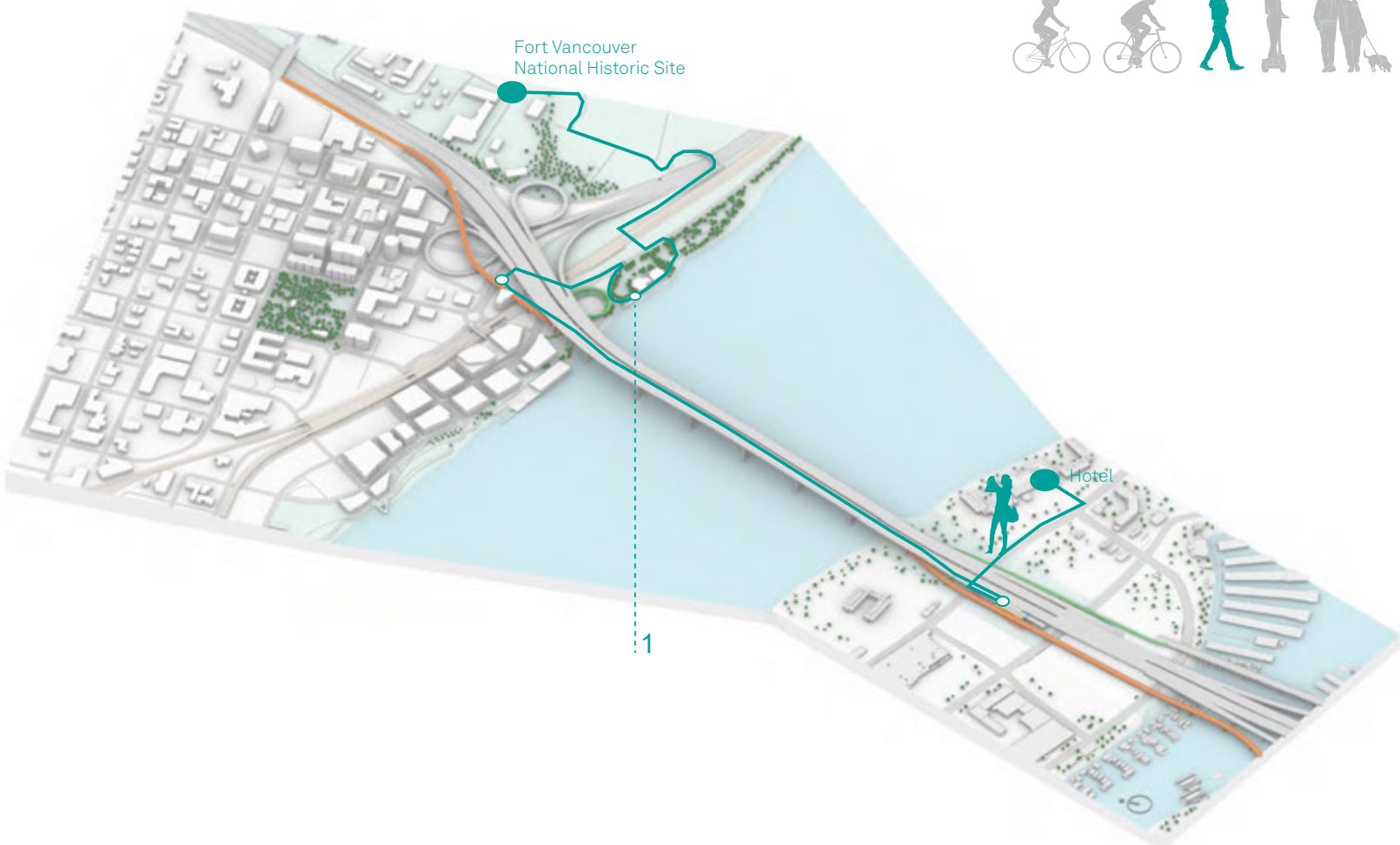
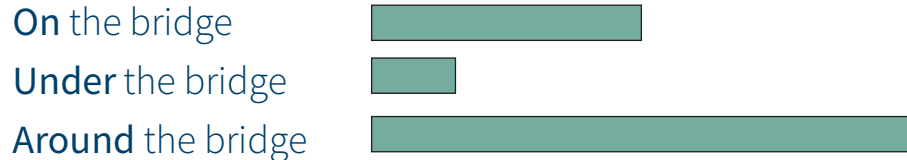
Segregated cycle lanes?
 Rest areas
 Open views through parapet(railing)?

Shade

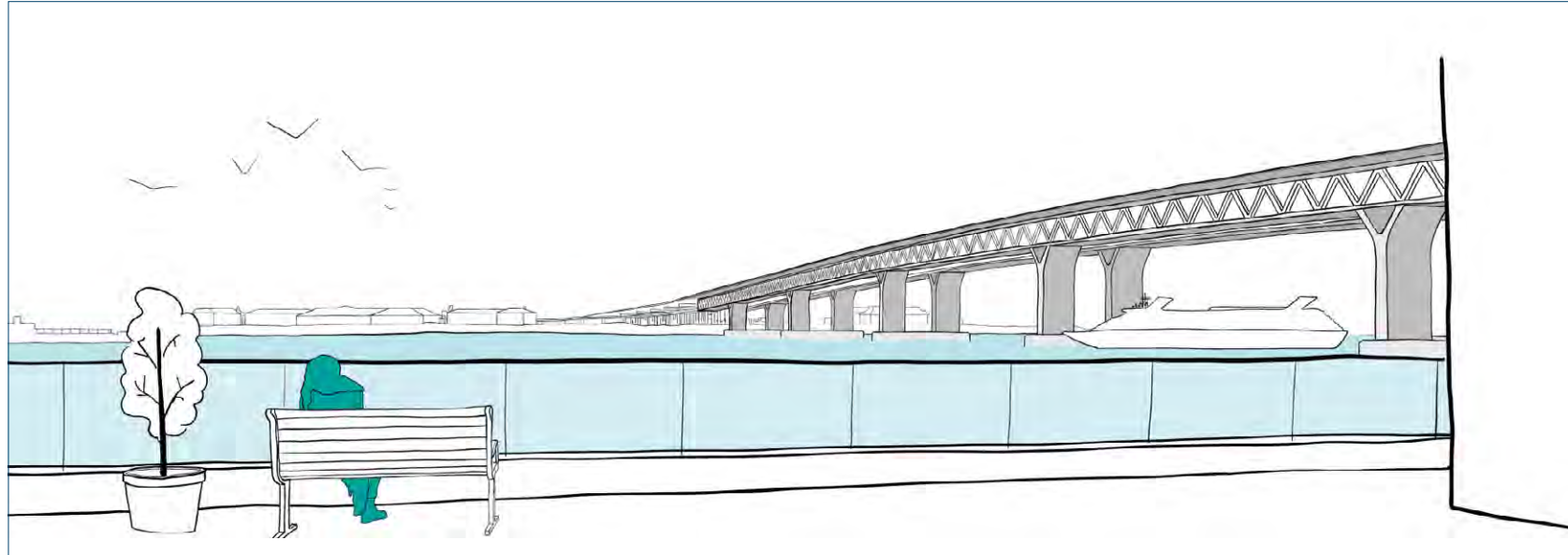
Sightseeing in the area



Who: Silvia, tourist



1. View of Bridge from Vancouver



What might be important to Silvia when sitting with a view of the bridge?

We will discuss more about bridge type at a later meeting.

Letters of support for federal grants

Proposed outline

- ▶ Purpose of the EAG/involvement in the program to date
- ▶ Understanding of the importance and need for the program
- ▶ We are particularly interested in X
- ▶ We look forward to continuing to participate

Discussion

- ▶ Do you agree the EAG should provide letters of support?
- ▶ Would you suggest any modifications the proposed outline?
- ▶ What are key messages you want to make sure the letter includes?

Public Comment

Comment Instructions

- ▶ Through Zoom:
 - ▶ Please use the link located in the meeting description on the YouTube meeting page or on the IBR EAG meeting webpage.
 - ▶ Commenters will be allowed to turn on their webcams, but will not be allowed to share their screens and will be removed from the room once the public comment period concludes.
- ▶ By phone:
 - ▶ Dial 253-215-8782
 - ▶ Meeting ID: 986 0940 5983
 - ▶ Passcode: 701376
 - ▶ Dial *9 to raise your hand
 - ▶ Dial *6 to unmute yourself
- ▶ The facilitator will call on participants to provide comment
- ▶ Please provide your name and affiliation.
- ▶ Commenters will be given 2 minutes to speak.

If we run out of time and you have not had a chance to speak, you can still provide comments after the meeting.



or



Comment Instructions

To submit comment after the meeting:



- ▶ Fill out the comment form on the program website or email your comments to info@interstatebridge.org with “**EAG Public Comment**” in the subject line.



- ▶ Call **888-503-6735** and state “EAG Public Comment” in your message.
- ▶ All written comments must be received prior to 48 hours in advance of each upcoming meeting in order to be distributed to advisory group members. Comments received after that point will be distributed to members in advance of their next meeting.

Wrap up

- Takeaways
- Meeting evaluation
- Next meeting: July 17, 5:30 – 7:30pm