



Interstate  
**BRIDGE**  
*Replacement Program*



# IBR Program Progress

October 27, 2021

[www.interstatebridge.org](http://www.interstatebridge.org)

# IBR Program Progress

- ▶ **Program updates**
  - Timeline and workplan progress
  - Overview of current program expenditures
- ▶ **Update and feedback on screening process that will be used to inform the evaluation of options**
- ▶ **Update and feedback on preliminary list of design options**
- ▶ **Next steps**
  - Proposed future meeting topics
  - Next steps beyond March 2022



# Program Update

Greg Johnson, Program Administrator

Frank Green, Assistant Program Administrator

Ray Mabey, Assistant Program Administrator

# Moving towards an IBR Solution

July – Sept 2021

Oct 2021

Nov – Dec 2021

Early 2022

**Link Desired Outcomes  
to Program-Level  
Performance Measures  
and Design Option  
Screening Criteria**

**Develop Preliminary  
Design Options that  
Respond to Changes  
since Prior Work**

**Reach Concurrence on  
Desired Outcomes,  
Screening Criteria  
Process, and  
Preliminary List of  
Design Options**

**Screen  
Developed  
Design  
Options**

**Identify IBR  
Solution**

# Recap of Recent Engagement

## ▶ Executive Steering Group

- Received Concurrence to move forward on the IBR Desired Outcomes, Screening Criteria Process, and Preliminary List of Design Options

## ▶ Equity Advisory Group

### – Recent Work:

- *Continued creation of the Equity Framework*
- *Supported development of equity-focused screening criteria for Design Options*
- *Informing the links between climate and equity*

### – Coming Up:

- *Completing the Equity Framework*
- *Beginning to develop equity performance measures*

## ▶ Community Working Groups

### – September/October

- *Discussion on existing conditions, user experience, and priorities for the program*

### – November

- *Feedback on preliminary list of design options*

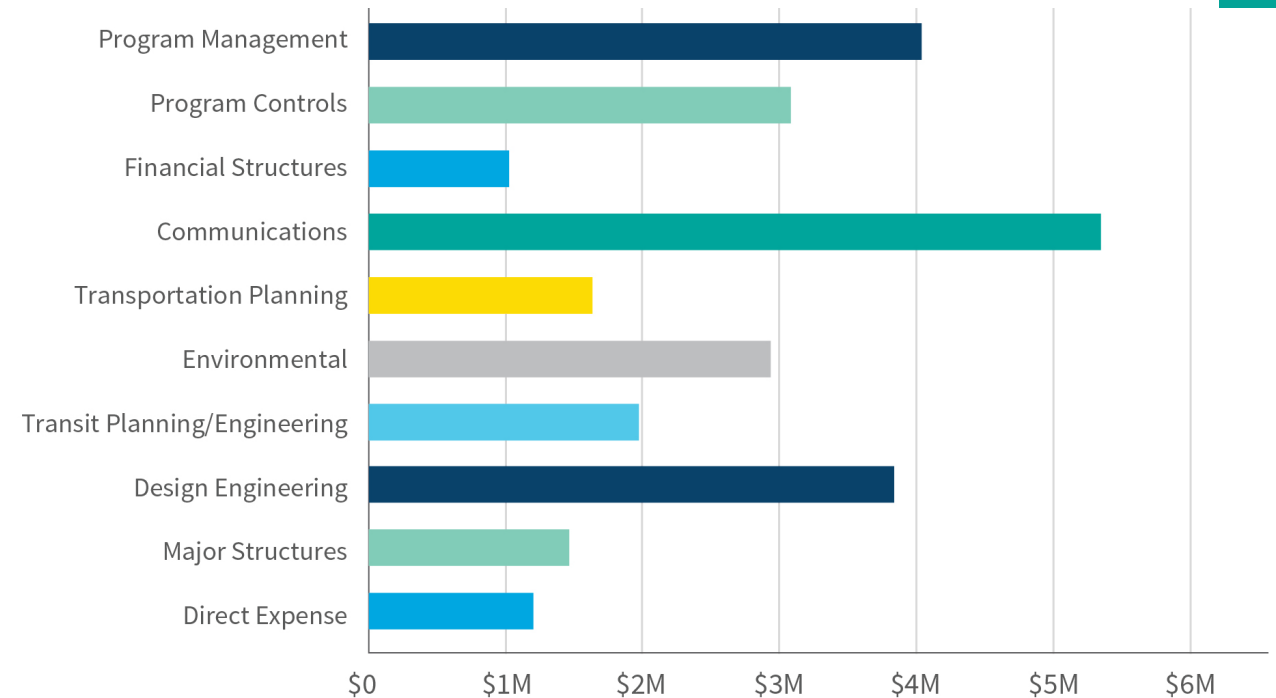
# Overview of Current Program Expenditures

## Current Expenditures

IBR PROGRAM WORK	Spent through August 2021
WSDOT	\$1,772,621
ODOT	\$609,410
General Engineering Consultant	\$18,438,628
Intergovernmental Agreements	\$155,760
<b>TOTAL</b>	<b>\$20,976,419*</b>

\*Spending reflects all costs associated with program work since efforts reinitiated in July 2019, including labor, equipment, and expenses

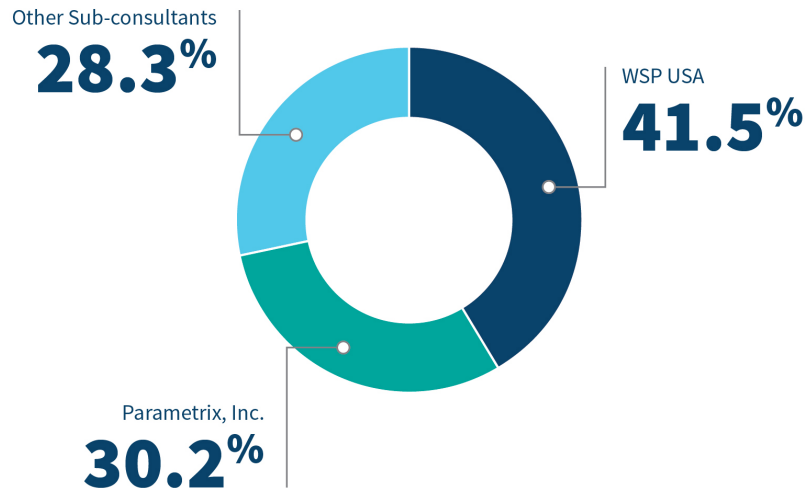
## Expenditure Breakdown by Current Areas of Work\*\*



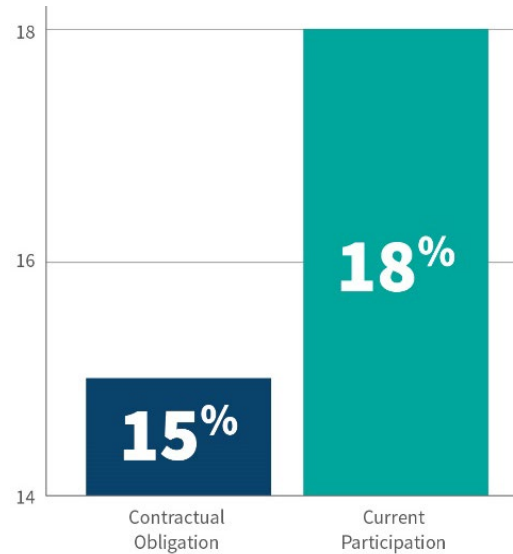
\*\*GEC Authorized Budget through October 2021

# Program Team Details

## Consultant Budget Composition

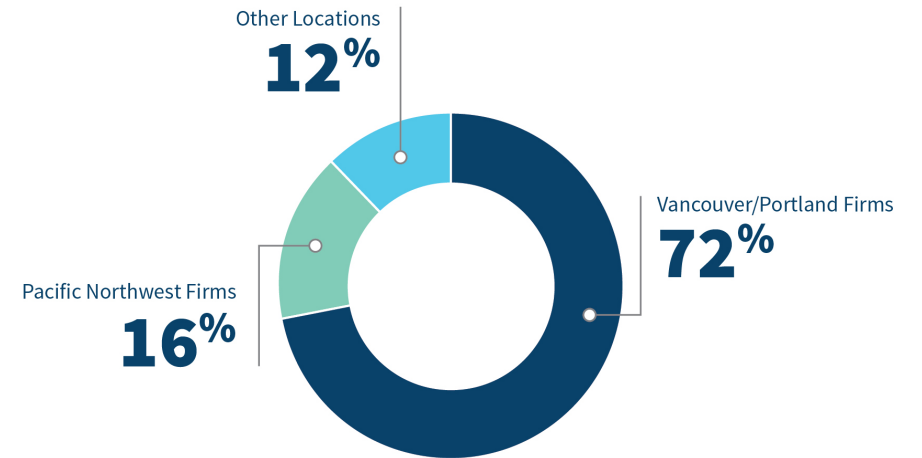


## GEC DBE Participation



June - August 2021

## Consultant Representation by Geographic Area



**List of current subconsultants with expenditures (as of August 2021):** PointNorth Consulting, Espousal Strategies, Kearns & West, GKM dba/Amico Public Relations, Triunity, Inc., Emerio Design, LLC, Zimmer Gunsul Frasca Architects LLP, Willamette Cultural Resources Associates, Ltd, IML Services LLC, Group AGB, LTD, Shannon & Wilson, Inc, Alta Planning + Design, Inc., Wolf Water Resources: Cooper Zietz Engineers, Steven M. Siegel, Thuy Tu Consulting, LLC, Knight Architects Limited, Ott-Sakai & Associates, LLC, Epic Land Solutions, Inc., Armeni Consulting Services, LLC

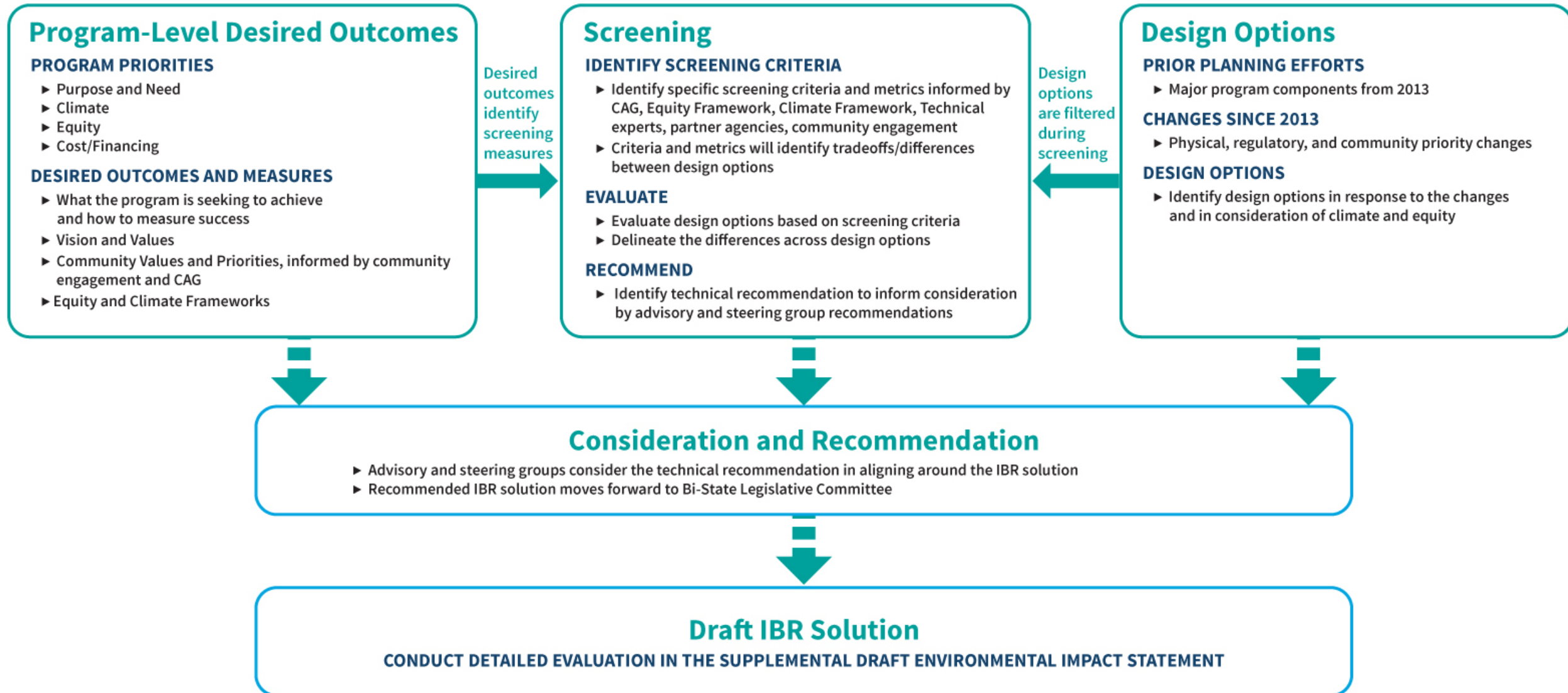


# Screening Process to Evaluate Options

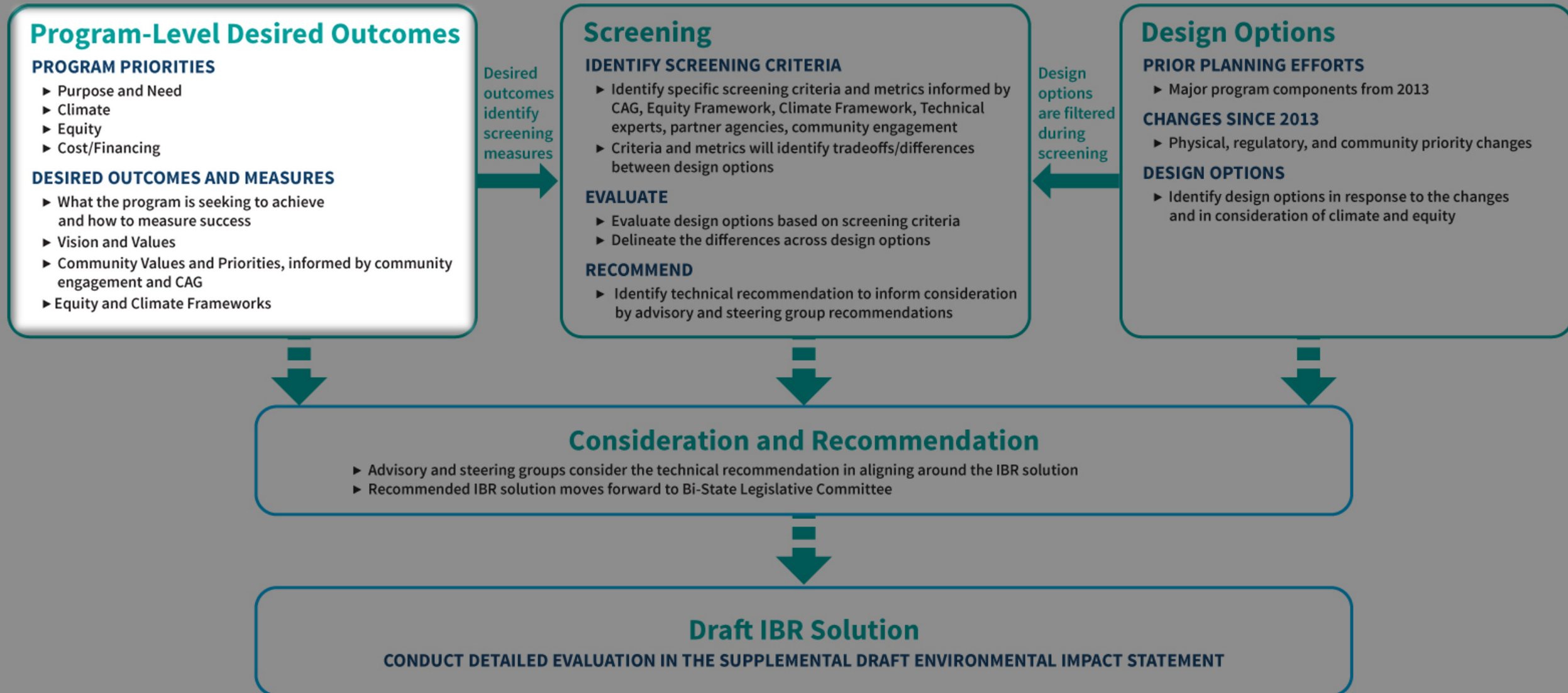
Chris Regan, Environmental Manager



# Moving towards an IBR Solution



# Moving towards an IBR Solution



# IBR Desired Outcomes

## PURPOSE AND NEED ELEMENTS

## DESIRED OUTCOMES

### 1. Travel demand and congestion

More people can move through the program area.

Travel times through the program area are faster and more predictable.

People of all ages, abilities, and incomes have access to move through the program area, regardless of mode.

Regional trips stay on I-5.

### 2. Freight movement

Freight travel through the program area is more reliable.

Freight travel times through the program area are faster.

Accommodates high, wide, and heavy cargo in existing and future routes.

### 3. Public transportation

More people use transit.

Travel by transit is competitive with other modes.

Transit connects people to their origins and destinations.

Travel by transit is predictable, reliable, and consistent.

More people have access to high-quality, affordable, and reliable transit.

# IBR Desired Outcomes

PURPOSE AND NEED ELEMENTS	DESIRED OUTCOMES
<b>4. Safety</b>	Reduce overall crashes on I-5, including severe injury and fatal crashes.
	Reduce overall crashes, including severe injury and fatal crashes, on I-5 ramps, local streets, and active transportation networks in the program area.
	Fewer diverted trips from I-5 to local streets.
	Safety is reflected in designs for all modes.
<b>5. Bicycle and Pedestrian</b>	Active transportation is an attractive mode, and more people walk and cycle, both to access transit and instead of travelling by autos.
	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.
	The high-quality networks for walking/biking/rolling are convenient and connect destinations that are important for most trips.
	More people have access to high-quality active transportation facilities.
<b>6. Seismic</b>	Bridges will be designed and constructed so that they will not collapse and will remain operable in a Cascadia subduction zone earthquake.

# IBR Desired Outcomes

## CLIMATE CHANGE & RESILIENCY

Reduce GHG emissions in support of state climate goals.

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Minimize operational and embodied carbon during construction.

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All structures are resilient to and operable following anticipated climate disruptions (e.g., heat events, flooding, sea level rise).

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Program limits other environmental impacts that exacerbate effects of climate change (e.g., heat island, runoff).

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# IBR Desired Outcomes

## **EQUITY** (as excerpted from the Equity Framework and to be refined by EAG)

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

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Fewer identity-based disparities in travel time, access, transportation costs, and exposure to air pollution, road noise, and traffic crashes.

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Local community improvements are implemented in addition to required mitigations.

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

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Equity priority communities have access, influence, and decision-making power throughout the program in establishing objectives, design, implementation, and evaluation of success.

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Disproportionate impacts on equity priority communities are avoided rather than simply mitigated.

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# IBR Desired Outcomes

## COST EFFECTIVENESS AND FINANCIAL RESOURCES

Pursue and leverage any and all federal, state, and other funding sources that support all modes and address long-term needs.

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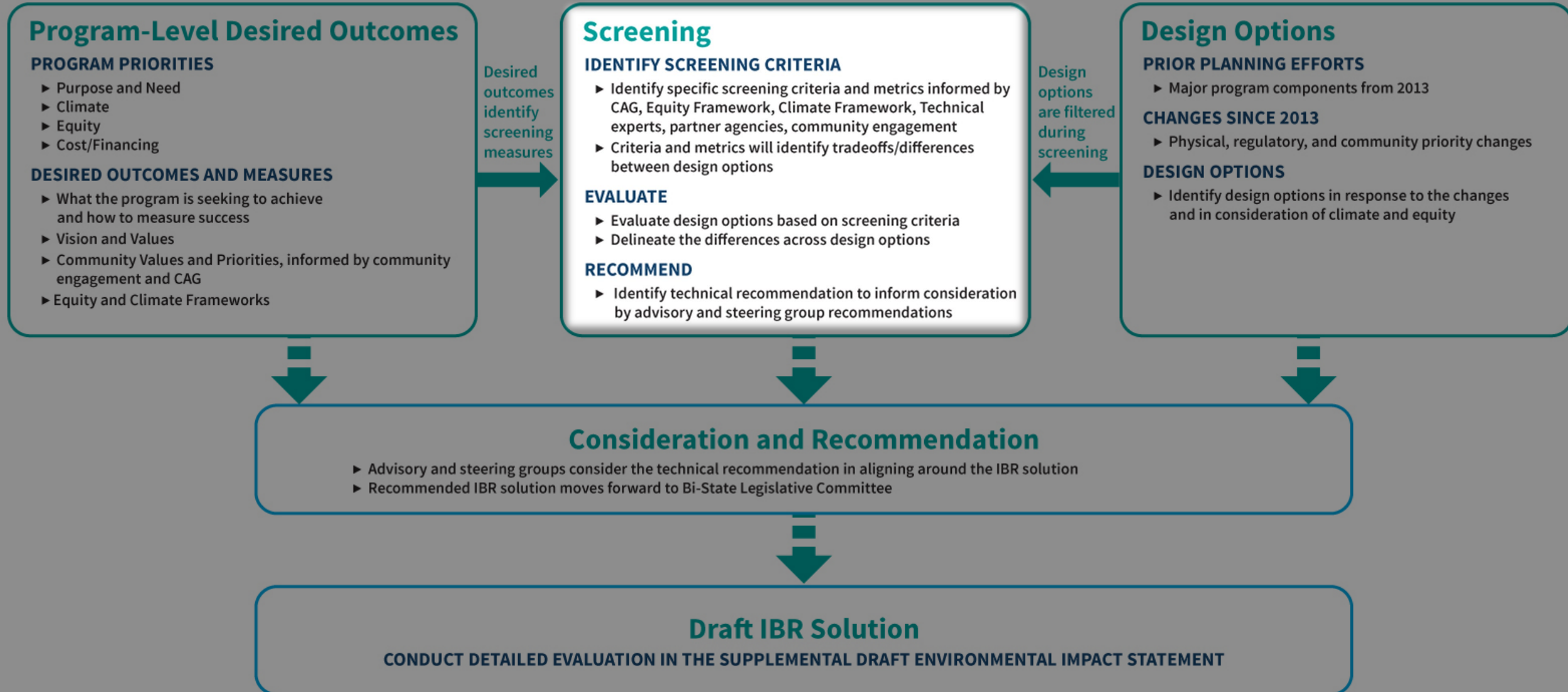
Identify equitable tolling and pricing strategies supporting multimodal construction costs and improved operations and access, in coordination with statewide tolling programs and in support of each state's climate goals.

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Ensure fiscal responsibility across the program and into the future, including new technology to solve future problems.

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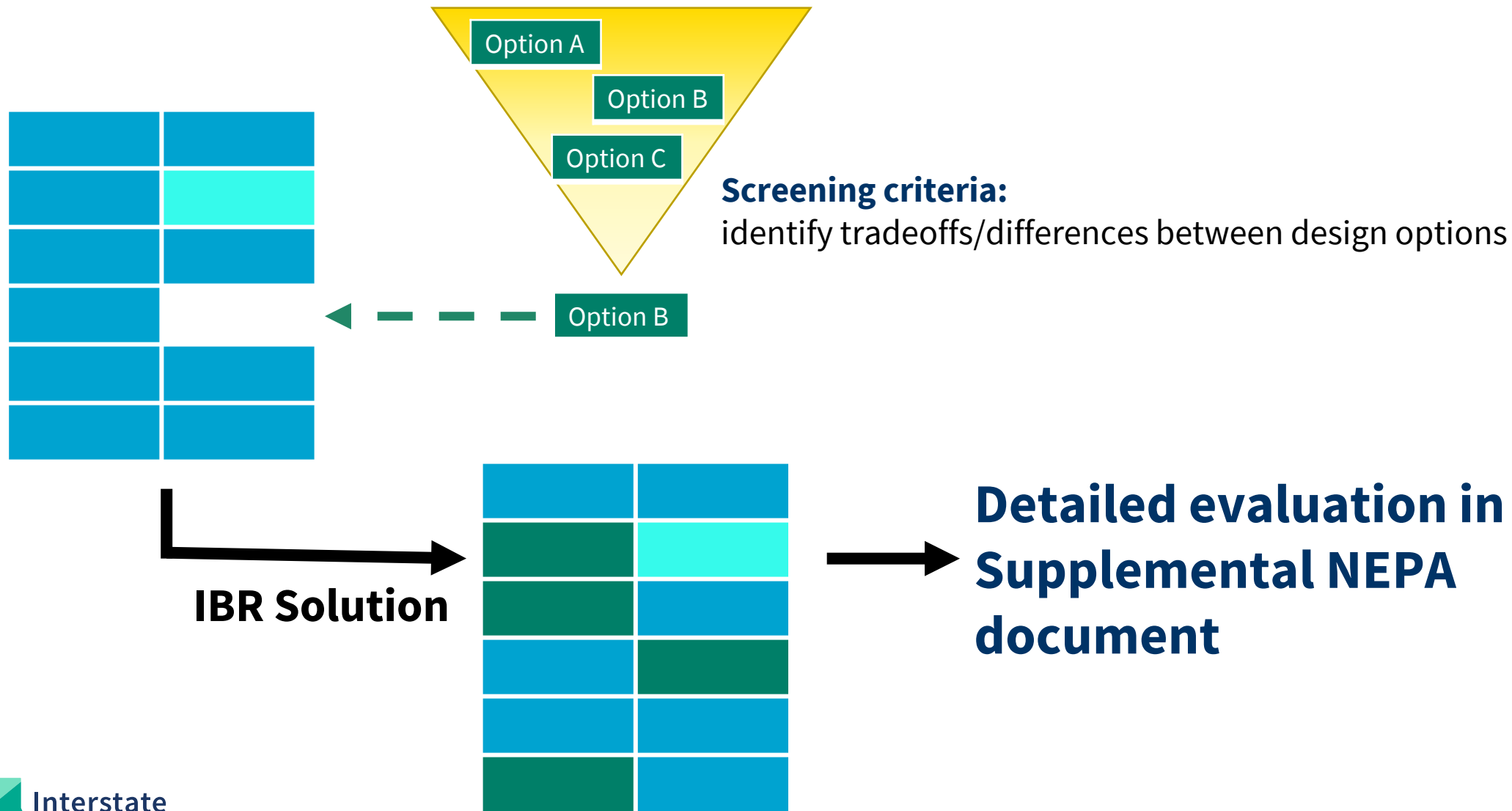
# Moving towards an IBR Solution















# Screening Process

**Screening criteria and metrics informed by:**  
CAG, EAG, Equity Framework, Climate Framework, technical experts, partner agencies, community engagement

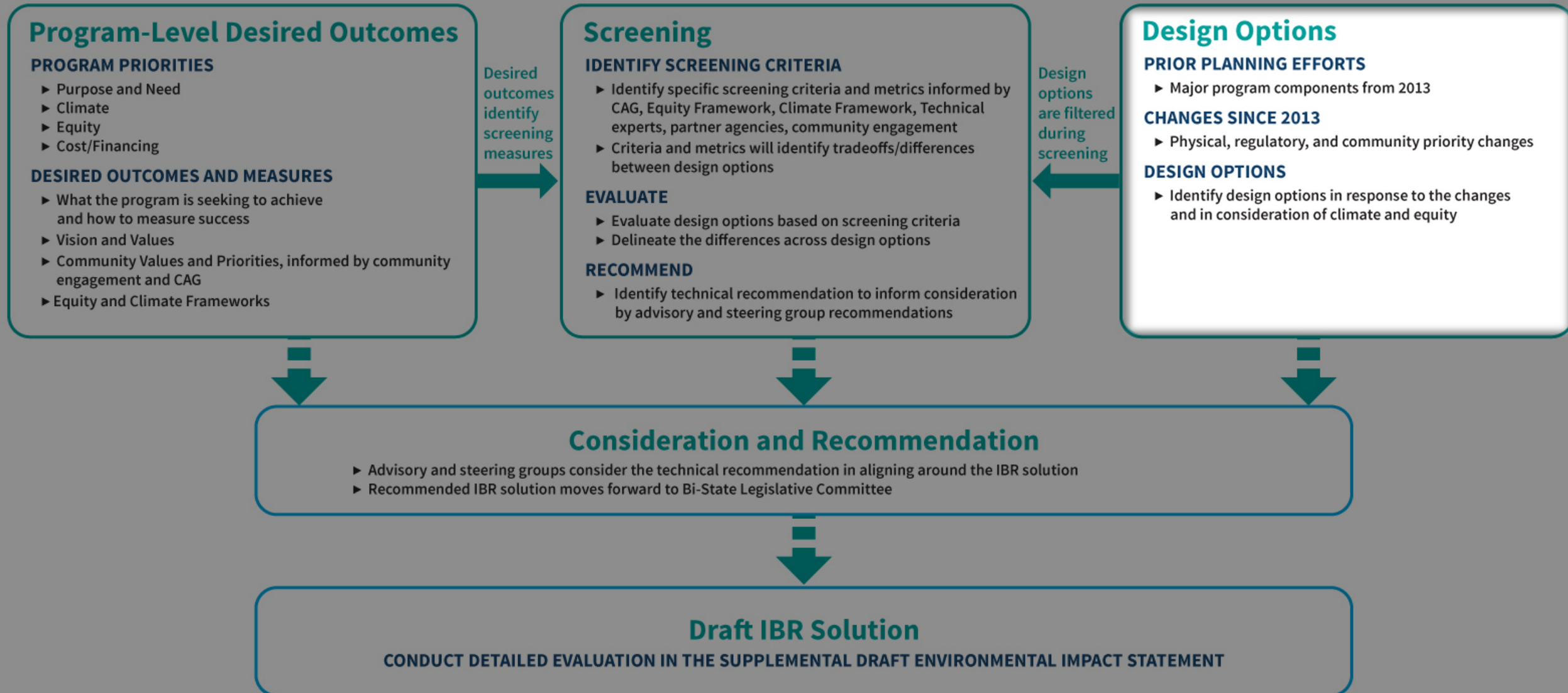


# Screening Criteria Process: Example Matrix

Screening Criteria	Design Option 1	Design Option 2	Design Option 3
<b>Environment and Community Health</b>			
Environmental impacts  			
<b>Efficient Movement of People and Goods</b>			
Diversion  			
Mobility  			
Modal Choice  			
Safety  			
<b>Cost/Financing</b>			
Construction cost			
<b>Recommendation</b>			



# Moving towards an IBR Solution





## Feedback and Guidance:

Does this process seem sufficient to meet your expectations? Is there anything additional that the program should consider?



# Preliminary Design Options

John Willis, Deputy Program Manager

# Changes in the Program Area

In the years since the previous planning efforts, the baseline conditions, regulatory and policy context, and community priorities have changed.

These changes include:

- ▶ Regional, state, and local equity policies and priorities
- ▶ Regional, state, and local climate goals and priorities
- ▶ Oregon tolling/congestion pricing programs being studied
- ▶ Demographics along the I-5 corridor and nearby neighborhoods
- ▶ COVID-19 impacts on transportation
- ▶ Environmental regulations
- ▶ Expanded transit service in the corridor (i.e., VINE BRT and bus-on-shoulder on I-5 in Vancouver)
- ▶ Current Regional Transportation Plans and City Comprehensive Plans
- ▶ Updates to USACE, USCG and FAA requirements
- ▶ Land use policies, planned development, and zoning changes
- ▶ Federal transit funding requirements
- ▶ Freight/industrial activity

# Design Options in Response to Changes

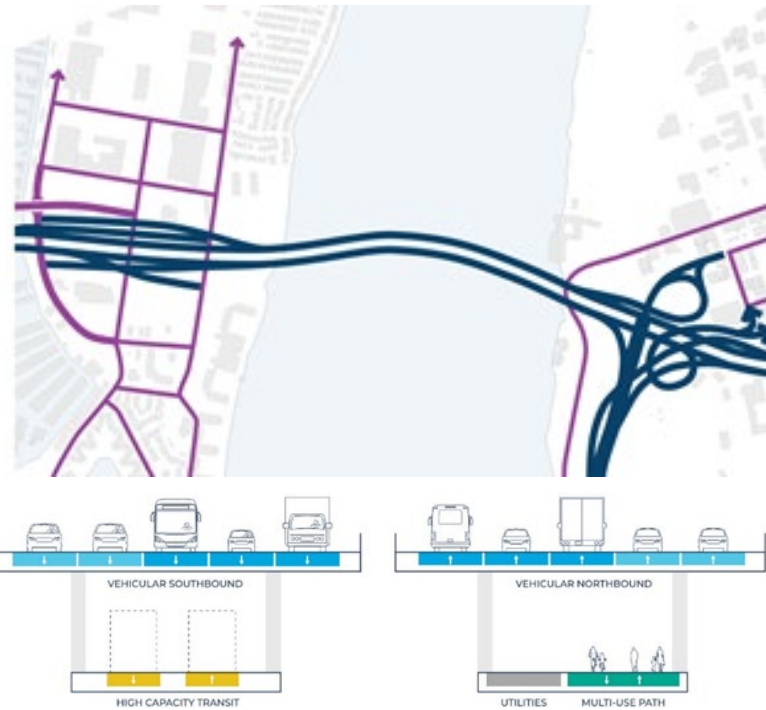
- ▶ The program, in collaboration with agency partners, developed high-level design options to respond to changes while incorporating current regional values and priorities into the IBR Solution.
- ▶ The design options pertain to the following program areas:
  - Bridge Crossing over the Columbia and Alignment
  - Downtown Vancouver
  - Vancouver Interchanges
  - Hayden Island and Marine Drive Interchanges
  - Transit
  - Bike and pedestrian improvements are integrated into design options for all the above areas



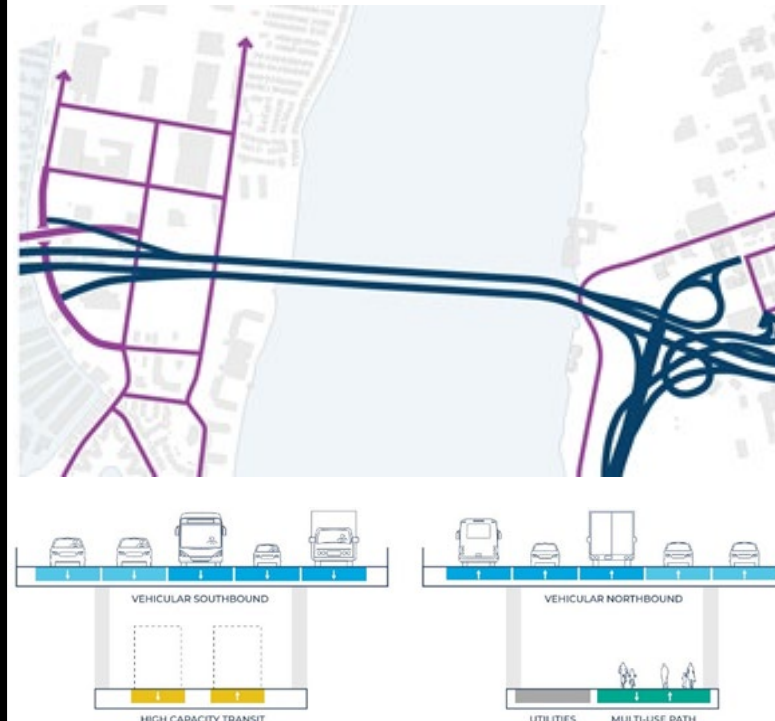
# Bridge Crossing over the Columbia and Alignment

- ▶ Variety of options that differ in constructability and bridge footprint
- ▶ All options provide dedicated transit guideway and wide multi-use path
- ▶ Future design work, informed by data, partners, and community engagement, will determine the bridge height and bridge type

Option 1: 2013 LPA



Option 2: Straight Alignment



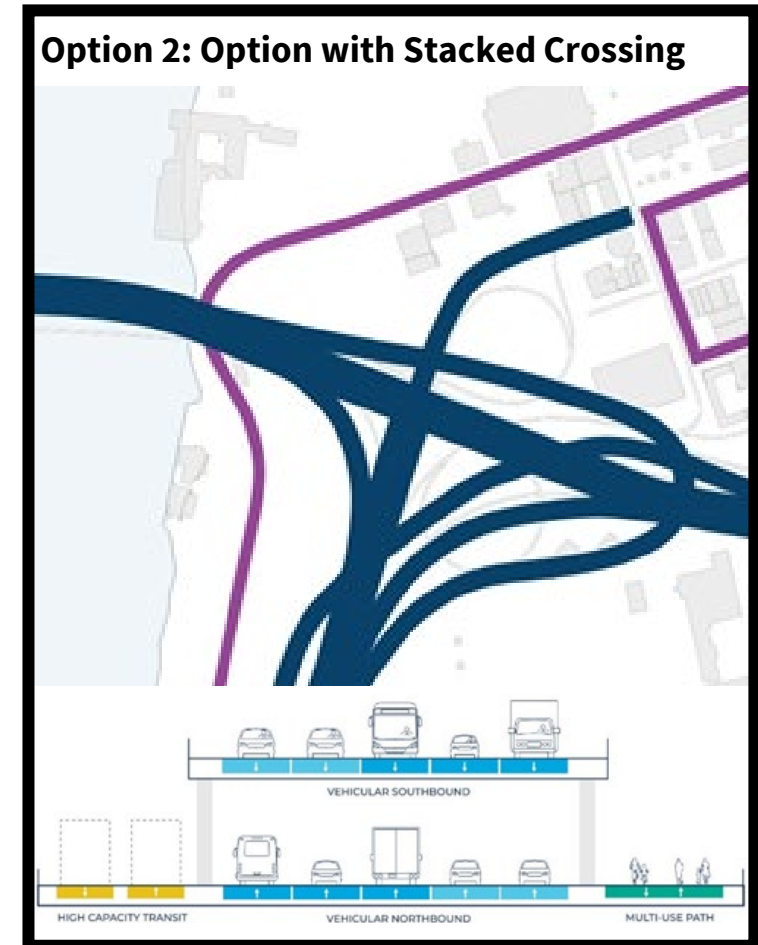
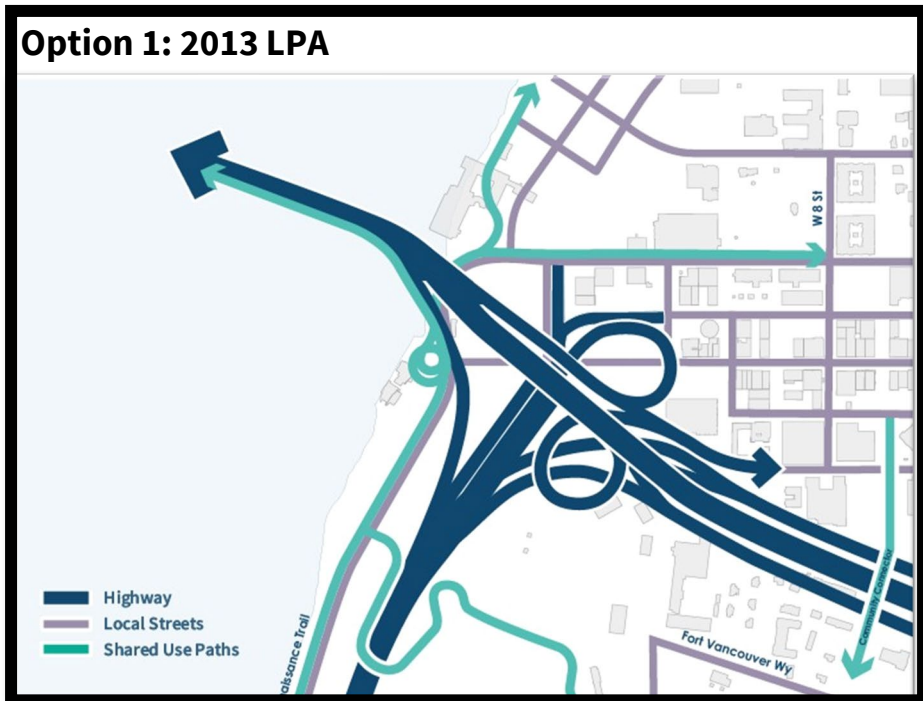
Option 3: Stacked Alignment





# Downtown Vancouver

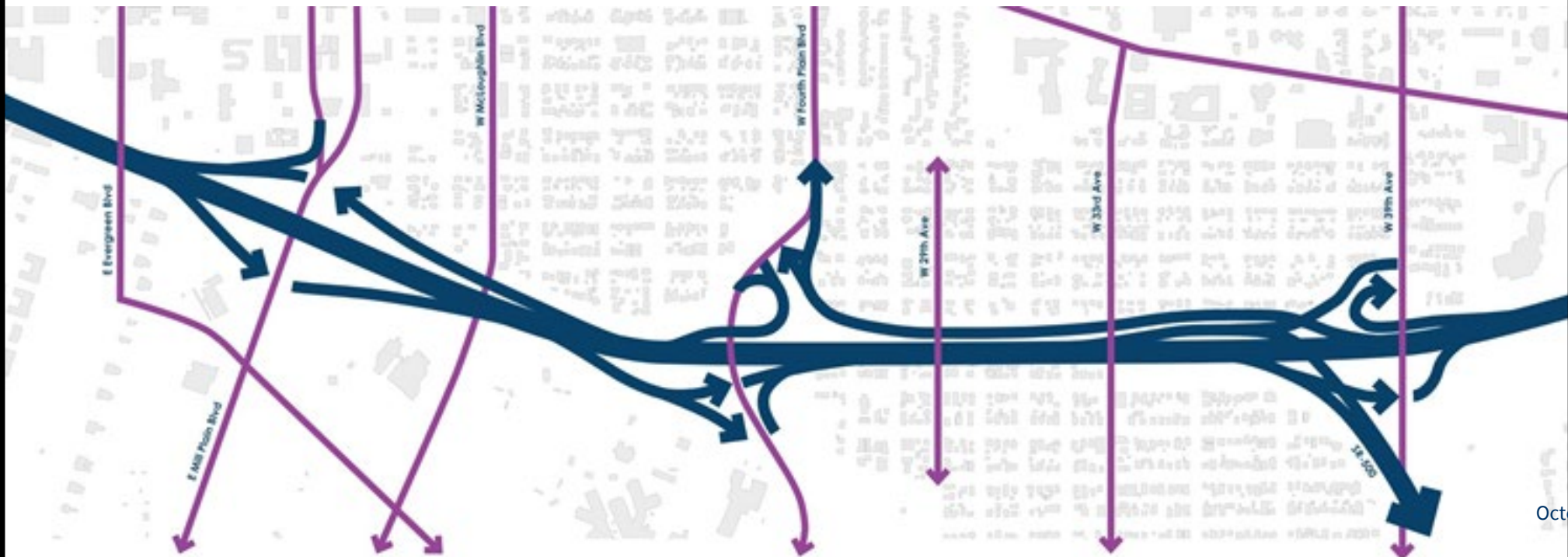
- ▶ Options consider ways to connect downtown into a higher I-5 corridor, necessary for bridge replacement options
- ▶ All design options connect the transit and multi-use path to downtown Vancouver
- ▶ Additional analysis is needed to identify how to connect from downtown into the river crossing options



# Vancouver Interchanges

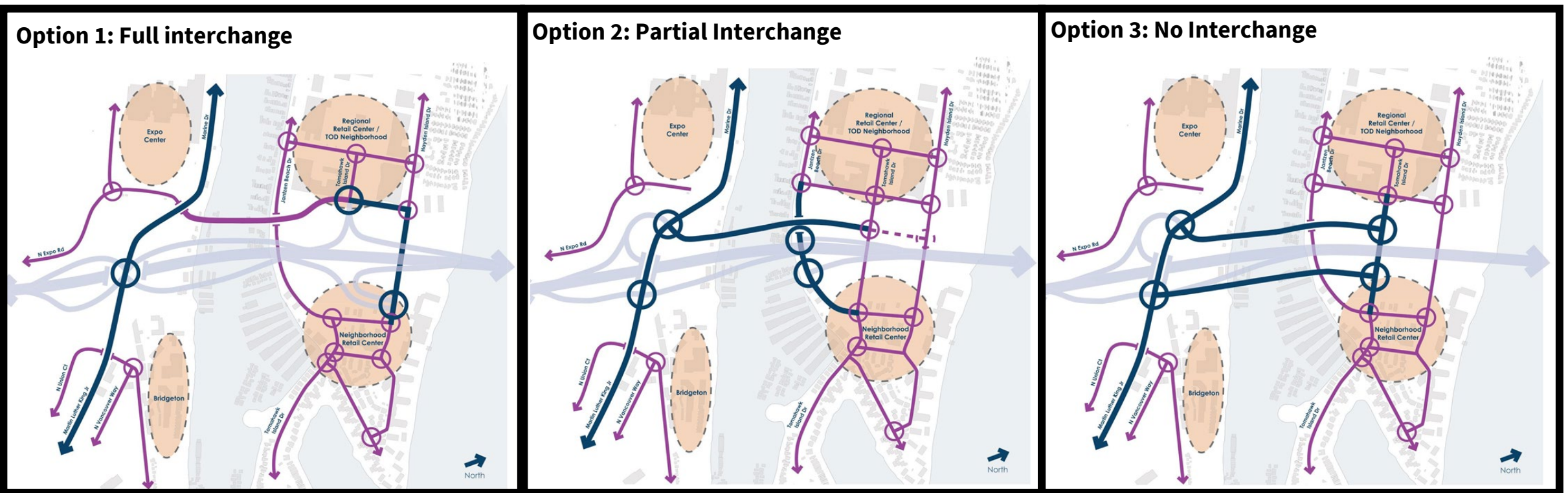
- ▶ Reconstructs the interchanges with braided ramps and auxiliary lanes at Mill Plain and Fourth Plain and replaces overpasses at other locations along I-5 leading up to the river
- ▶ All designs will improve bike and pedestrian connections to support east to west travel
- ▶ Future design work, informed by community engagement, will continue to refine Mill Plain/Fourth Plain intersection improvements and bike/pedestrian connections

Option 1: 2013 LPA



# Hayden Island and Marine Drive Interchanges

- ▶ Options that consider different ways to access Hayden Island by foot, bike, transit, and car
- ▶ All options include replacing the North Portland Harbor Bridge
- ▶ Future design work, informed by community engagement, will develop details for connecting multi-use paths, with the intention to connect to the 40-mile loop trail



*Note: this shows a high-level graphic representation of a variety of concepts being considered with small variations to local roadway connections*

# Transit Options - Overview

- ▶ The IBR program is analyzing ten transit options:

- (1) No-Build Option:

- Assumes no transit improvements from the IBR program but does include other planned transit improvements in the next 25 years. This option is used as a tool for measuring the effects of other options.

- (1) Bus on Shoulder option

- (3) Bus Rapid Transit (BRT) options

- (4) Light Rail Transit (LRT) options

- (1) BRT/LRT option

- ▶ High-Capacity Transit (HCT) options include:

- Dedicated space for HCT between the Expo Center and Hayden Island

- Dedicated space for HCT on the replacement bridge

- Express buses operating on the shoulder of the freeway, where possible in the program area

- ▶ Future design work, informed by data, partners, and community engagement, will inform:

- Specific transit terminus locations

- Transit termini shown in preliminary list of design options are indicative of general locations being studied for current analysis

- Transit station details and specific locations

- Park & Ride size and specific locations



# Transit Options

## ► Bus on Shoulder (BOS)

- Assumes C-TRAN express routes 101 and 105X operate as bus on shoulder in the bridge influence area (both directions). Route 101 operates from downtown Vancouver to downtown Portland, Route 105X operates from Salmon Creek to 99<sup>th</sup> to downtown Portland.

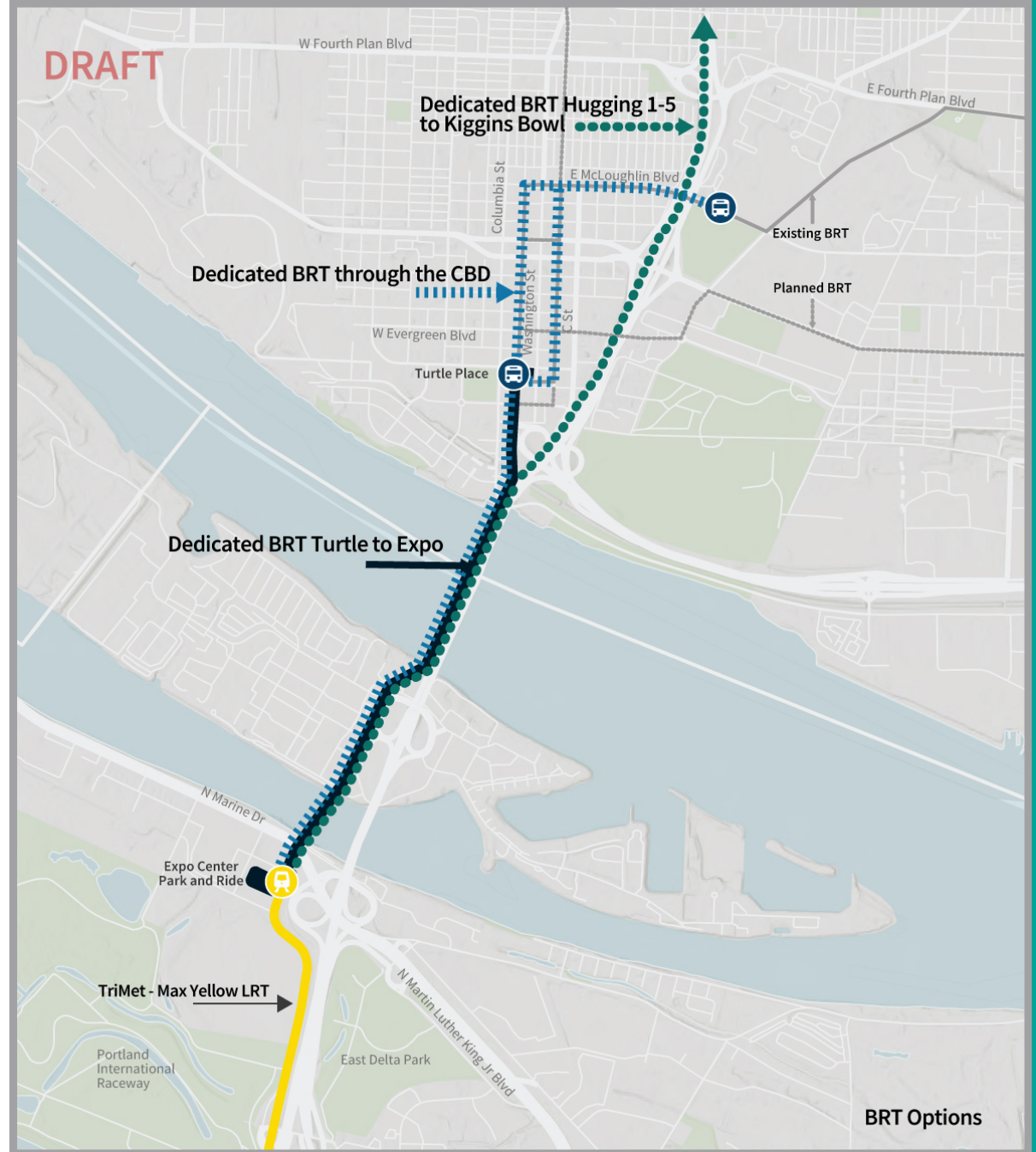


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# Transit Options

## 3 Bus Rapid Transit (BRT) options:

- ▶ **Dedicated BRT Turtle to Expo**
  - Vine BRT lines would extend via dedicated guideway from Turtle Place to a terminus near Expo Center.
- ▶ **Dedicated BRT Hugging I-5**
  - Vine BRT lines would extend from Kiggins Bowl south to MAX Expo Center Station on a dedicated guideway adjacent to I-5.
- ▶ **Dedicated BRT Connection through the Central Business District**
  - Vine BRT lines would extend via dedicated guideway from McLoughlin Boulevard through Vancouver's CBD before crossing the river to Hayden Island with a terminus near Expo Center.





# Transit Options

## 4 Light Rail Transit (LRT) Options:

- ▶ **The 2013 Locally Preferred Alternative**
  - LRT would extend from the Expo Center to a terminus near Clark College.
- ▶ **LRT One Station in Vancouver**
  - LRT would extend from Expo Center to Turtle Place.
- ▶ **LRT Hugging I-5 Near McLoughlin**
  - LRT would extend from Expo Center to McLoughlin in a dedicated guideway adjacent to I-5.
- ▶ **LRT Hugging I-5 to Kiggins Bowl**
  - LRT would extend from Expo Center to Kiggins Bowl in a dedicated guideway adjacent to I-5.



LRT Options

# Transit Options

- ▶ **Dedicated BRT and LRT to Hayden Island**
  - Vine BRT lines would extend via dedicated guideway from a station near Turtle place to a terminus on Hayden Island.
  - MAX Yellow Line would extend from the current terminus at Expo Center to a new terminus on Hayden Island.



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# Community Engagement on Design Options

- ▶ **Community feedback will be considered alongside modeling data and screening results to help differentiate between options**
  - CAG and EAG
  - Online Open House - Starting Late October
  - Community Input Survey - November
    - *Questions will seek feedback on preferences and priorities associated with the user experience and/or attributes of design options, not a ranking between options*
  - Community Briefings - November
    - *Includes program events and listening sessions co-hosted with community-based organizations serving communities of concern*
  - Community Working Groups
    - *Active Transportation, Hayden Island/Marine Drive, Downtown Vancouver, Multimodal Commuter*
  - Freight Focus Group



## Feedback and Guidance:

Do you feel these options provide sufficient space to address changes since the previous project ended?



# Next Steps

Greg Johnson, Program Administrator

Ryan LeProwse, Transportation/Planning Lead

# Upcoming Meeting Topics

## ► Proposed future meeting topics:

### – November

- *Modeling overview*
- *Overview of traffic data, including origin/destination patterns*

### – December

- *Update on governance structures study including examples such as bridge authority, bi-state agreement and interstate compact*
- *Economic Impact Study*

### – Future Meetings

- *Progress in moving toward the IBR Solution*

# Origin / Destination Travel Patterns

- ▶ **License plate information was collected in 2005 during previous planning on I-5 between SR 500 and Columbia Boulevard and all the ramps in between.**
  - Ramp to ramp information was used to determine individual ramp origin/destination patterns
  - It was used to determine if adjacent ramps could be braided and what changes might be needed due to those designs
  - It was used to determine if ramps could be removed
  - The license plate survey was not used to understand regional travel patterns as that level of information was developed using the Metro/RTC regional travel demand model.
- ▶ **The IBR program is collecting cell phone (Big Data) data available from 2016 to 2021.**
  - Big data uses sampled anonymized location records from smart phones and navigation devices in connected vehicles.
  - This data will be analyzed and used to address similar questions as the license plate survey completed during previous planning in 2005 (ramp to ramp movements within the IBR program area).
  - It will also be used to provide regional travel pattern information and to validate the Metro/RTC regional travel demand model.
    - *The regional travel patterns will be summarized by geographical areas*

# Next Steps Beyond March 2022

## ▶ Environmental work and timelines

- IBR solution advances through NEPA in 2022 for additional analysis of impacts and benefits. Current timeline anticipates the Supplemental Final EIS being published in late 2023.

## ▶ Additional development of design details—mid-2022 through mid-2024

- Additional development of design details: ex. bridge type, active transportation facilities and connections, affected local roadways, transit station locations and size, off-site improvements

## ▶ Funding needs and timelines in anticipation of 2023 sessions

- The program will be updating the conceptual finance plan in late 2022 in preparation for the 2023 OR and WA legislative sessions and potential funding conversations

## ▶ Tolling/pricing discussions and timelines– ongoing through 2025

## ▶ Community Workforce Agreement—begin late 2022, through 2024

## ▶ Construction contract requirements, including DBE goals—late 2023 to mid-2025





## Feedback and Guidance:

What other topics would you like to discuss at future meetings?



**For more information contact:**

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