K CIRCLE
MORRISSEY BLVD
CORRIDOR STUDY

Morrissey Boulevard Commission Meeting #7

Holiday Inn Boston Express &
Virtual via Zoom

November 21, 2024

Meeting Notes and Procedures

Notification of recording

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Important notes

- Your microphone and webcam are automatically disabled upon entering the meeting.
- The meeting will be open to questions and answers at the end of the presentation.

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Agenda

- Call to Order
- Introduction of Commission Members
- Presentation on Study
  - Review of Previous Feedback
  - Alternatives Review
  - Final Alternatives Analysis
  - Draft Findings and Recommendations
- Commission Discussion
- Public Comment
- Next Steps

Commission Introductions

Planning Department

*Please note the responsibilities of the Boston Planning & Development Agency have moved to the City of Boston Planning Department as of July 1, 2024

Morrissey Commission Legislation

•The commission shall: (i) evaluate and recommend transportation and infrastructure improvements to: (A) **improve mobility for pedestrians, transit users, cyclists and motorists**; and (B) **strengthen climate resiliency at Kosciuszko circle** in the Dorchester section of the city of Boston **and along Morrissey boulevard** in the city; (ii) **develop a comprehensive plan for the Morrissey boulevard corridor**; and (iii) **identify short-term investments to improve mobility** for pedestrians, transit users, cyclists and motorists along the Morrissey boulevard corridor.

•In making its recommendations, the commission shall prioritize infrastructure designs that contribute to meeting statewide greenhouse gas emissions limits and the city's carbon-neutral goals, including, but not limited to, **maximizing opportunities for sustainable transportation, including walking, bicycling and transit use, and public realm designs that serve open space needs.**

Commission Goals

Improve mobility for pedestrians, transit users, cyclists, and motorists

Strengthen **climate resiliency** in the Dorchester section of the City of Boston and along Morrissey Boulevard in the city

Develop a comprehensive plan and **design concept alternatives** for the Morrissey Boulevard corridor

Identify **short-term investments** to improve mobility for pedestrians, transit users, cyclists, and motorists along the Morrissey Boulevard corridor

Please note:

The charge of the Morrissey Boulevard Commission is to evaluate and recommend transportation and infrastructure improvements

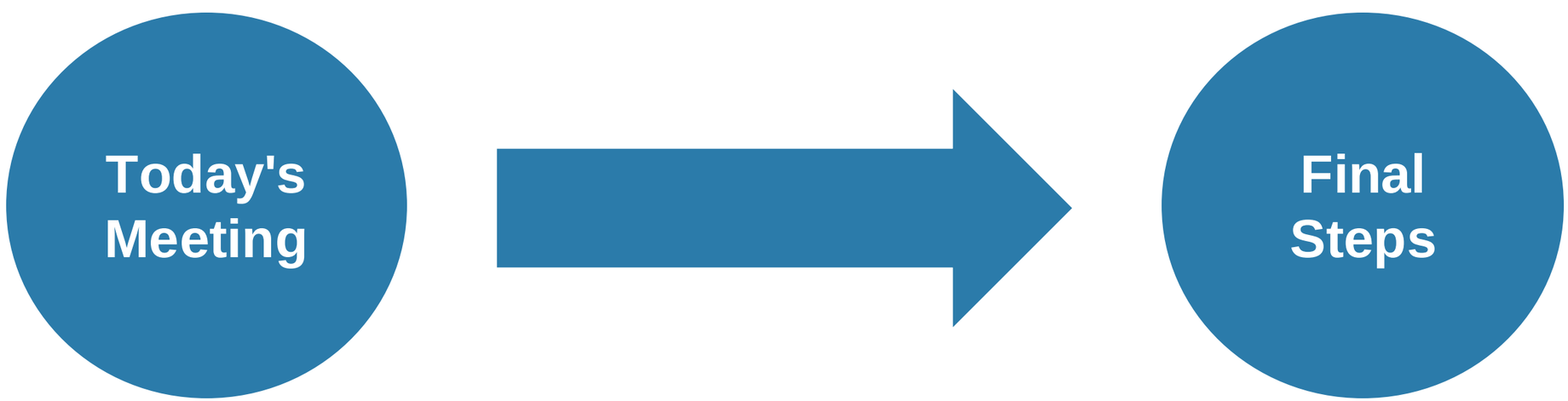
The study team's support role is limited to presenting relevant background information and developing and evaluating transportation resiliency improvements

This presentation includes content outside the scope of the Morrissey Boulevard Commission

This additional content is intended to provide regional context for the corridor and facilitate broader public discussion and input

Presentation on Study

Upcoming Topics



Final Analysis, Draft Findings, and Recommendations

Final Report approval and submission

Review of Feedback Received

Summary of Feedback Received

Examples of roadway reconfiguration efforts

U-Turns and cross-corridor access points

Need for improved connectivity to/from neighborhoods, services, and amenities

Concerns about reduced roadway capacity and emergency vehicle access

Potential improvements at Kosciuszko Circle

Future project development considerations – utilities, plantings, signage, speeds

Environmental considerations – noise, pollution, visual barriers, coastal resilience

Roadway Reconfiguration Example – Knoxville, TN

Roadway reconfiguration aims to increase safety, mobility, and accessibility for all

Cumberland Avenue Knoxville, TN

Context
4-lane roadway with two lanes in each direction
Approximately 19,000 vehicles per day

Goal
Improve safety and connectivity
Enhance multimodal mobility

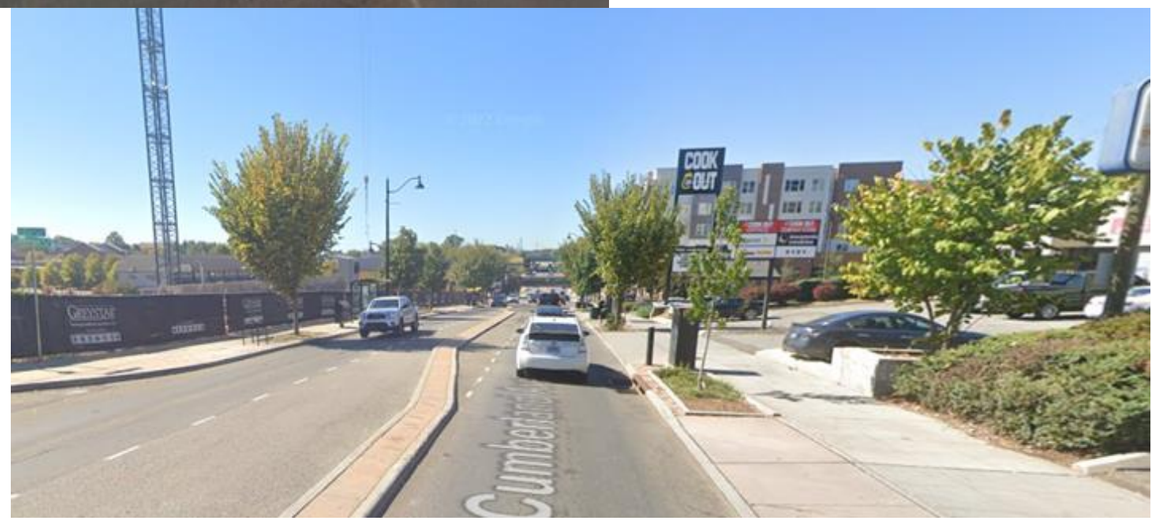
Opportunity
Address concerns about speeding

Result
3-lane roadway with median-divided travel lanes and wider sidewalks with space for trees and plantings

Source: University of Tennessee, Knoxville

Google Street View:
Cumberland Avenue
August 2014
(top left image)

Google Street View:
Cumberland Avenue
October 2022
(bottom right image)



Roadway Reconfiguration Example – Richfield, MN

Roadway reconfiguration aims to increase safety, mobility, and accessibility for all

Google Street View:
Portland Avenue
September 2007
(top left image)

Google Street View:
Portland Avenue
July 2023
(bottom right image)

Portland Avenue Richfield, MN

Context
4-lane roadway with two lanes in each direction
Approximately 12,000 vehicles per day

Goal
Improve safety and connectivity
Improve stormwater management

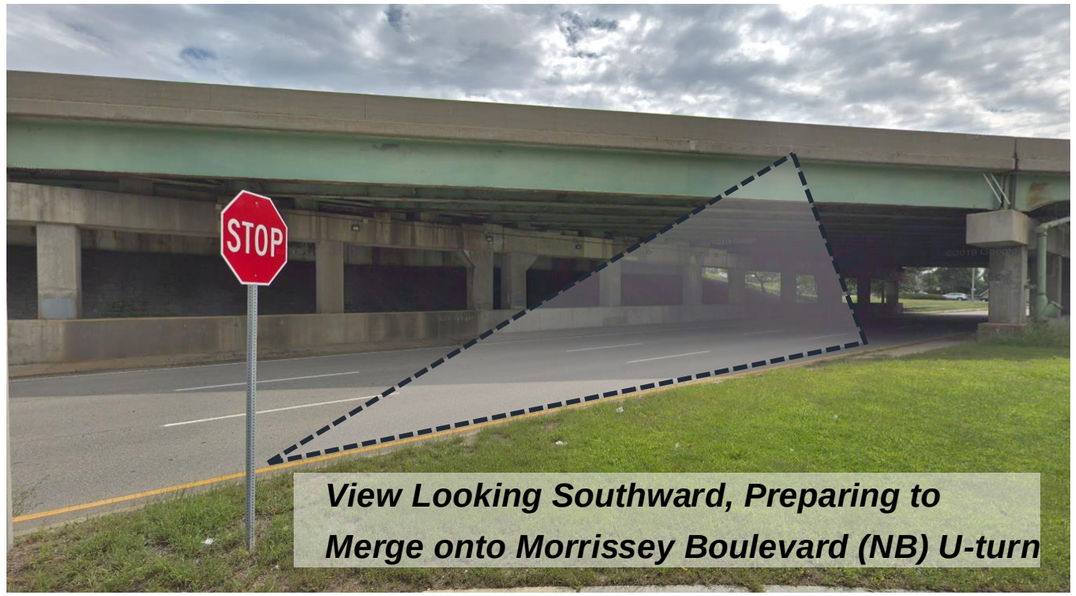
Opportunity
Address multimodal mobility

Result
New lane configurations
Multimodal improvements
Fewer crashes

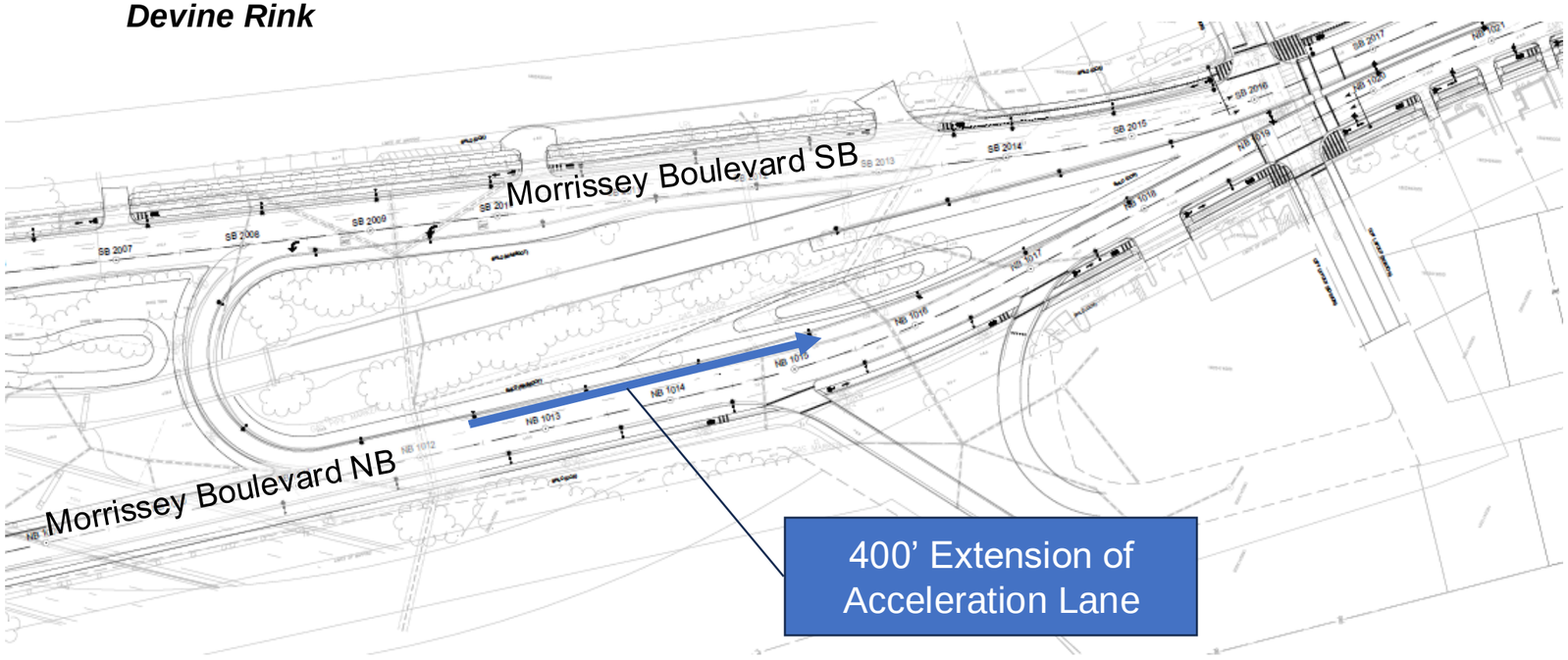
Source: MNDOT

Devine Rink U-Turn

- Existing sightlines for drivers making the southbound to northbound U-turn movement are poor
- Propose to add extended acceleration lane (short-term) for additional merge distance
- Modified design gives additional time and space for drivers to merge onto Morrissey Boulevard northbound
- Allows vehicles to accelerate to match speed with adjacent vehicles



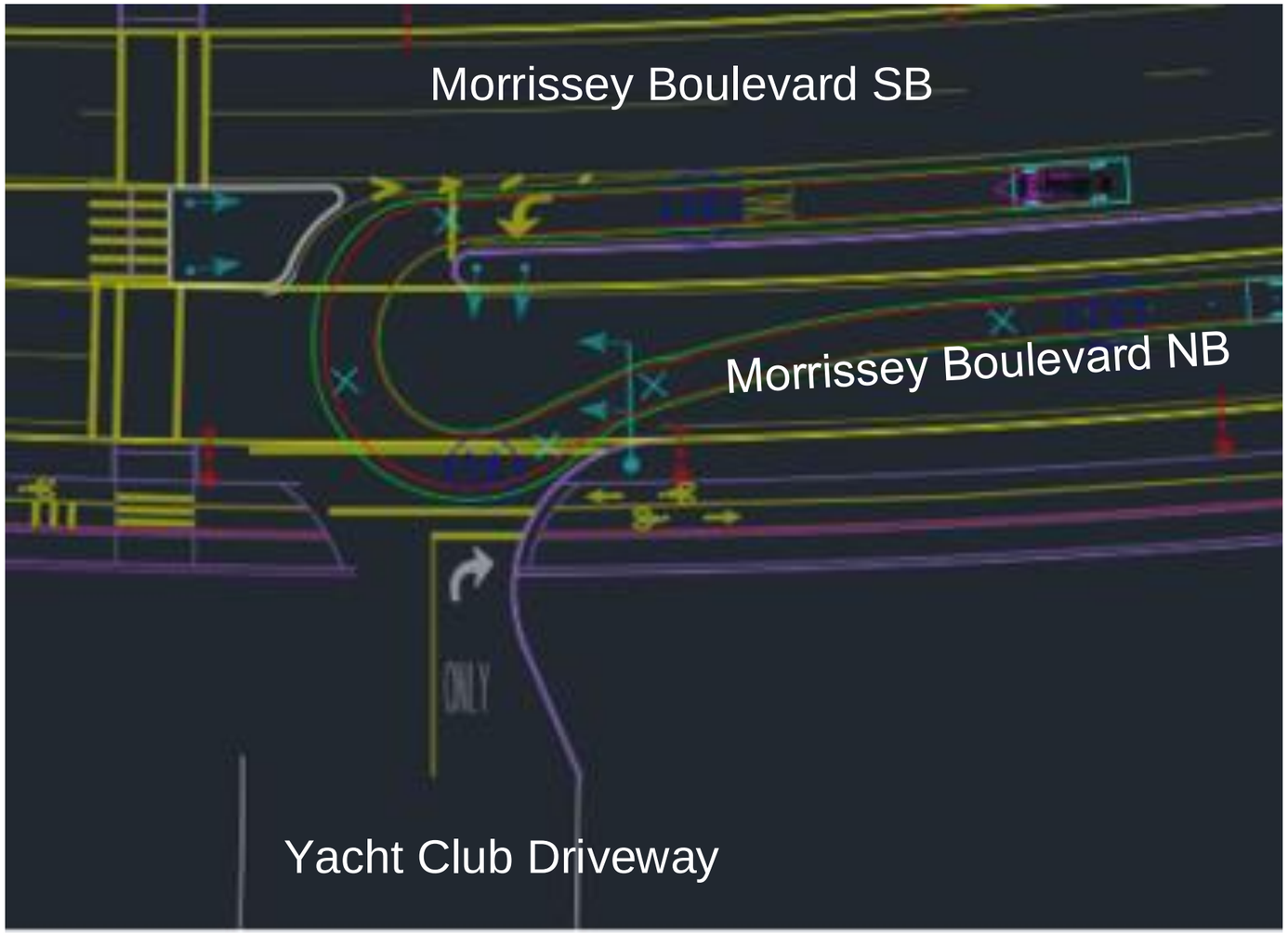
Devine Rink



Savin Hill Yacht Club Turn

- Passenger vehicles turning movements and radius were evaluated

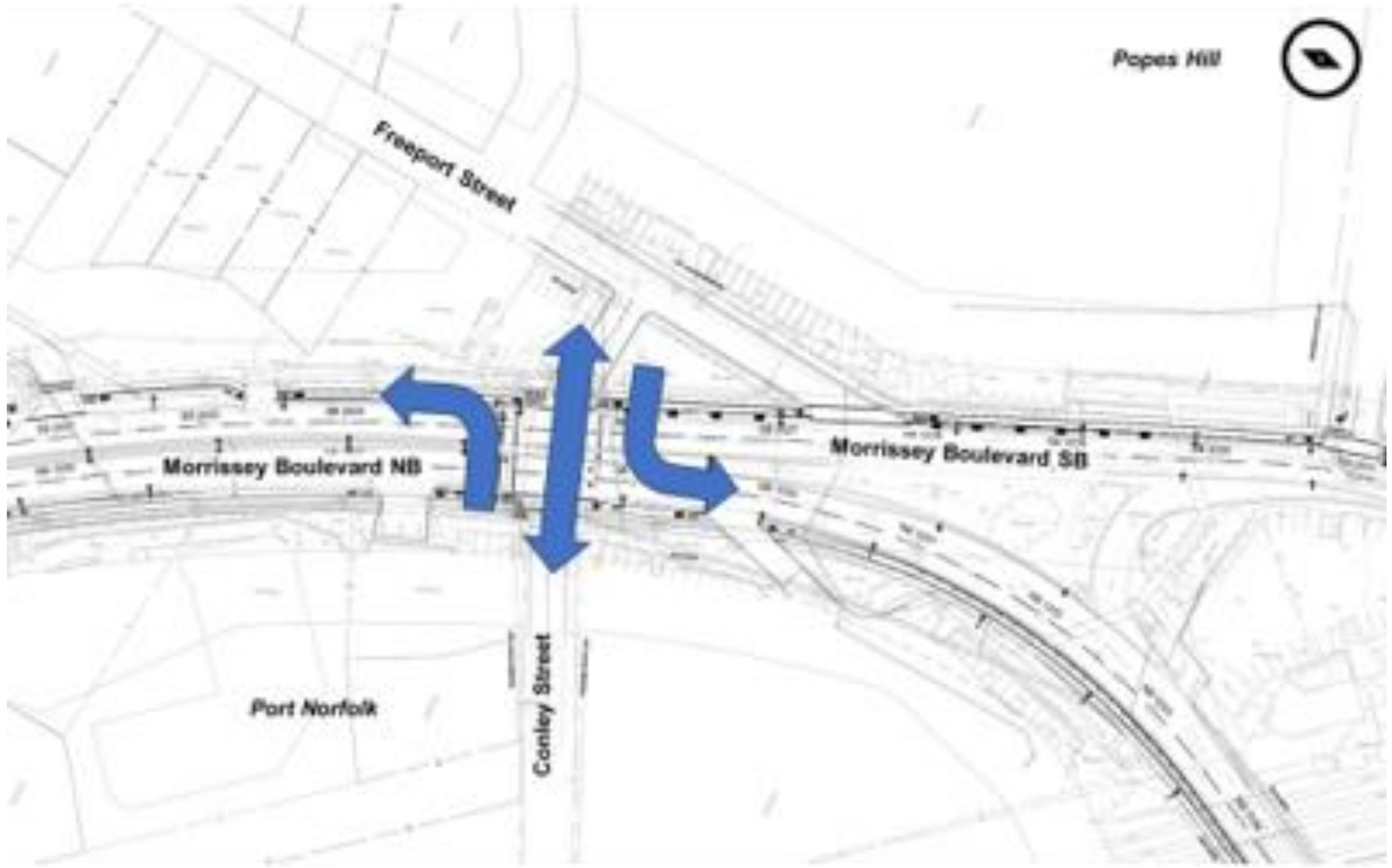
- Proposed geometry does not permit legal U-turns, as they would encroach on the existing driveway
  - Outlined on visual to the right



Conley Street Intersection

Considerations/Next Steps

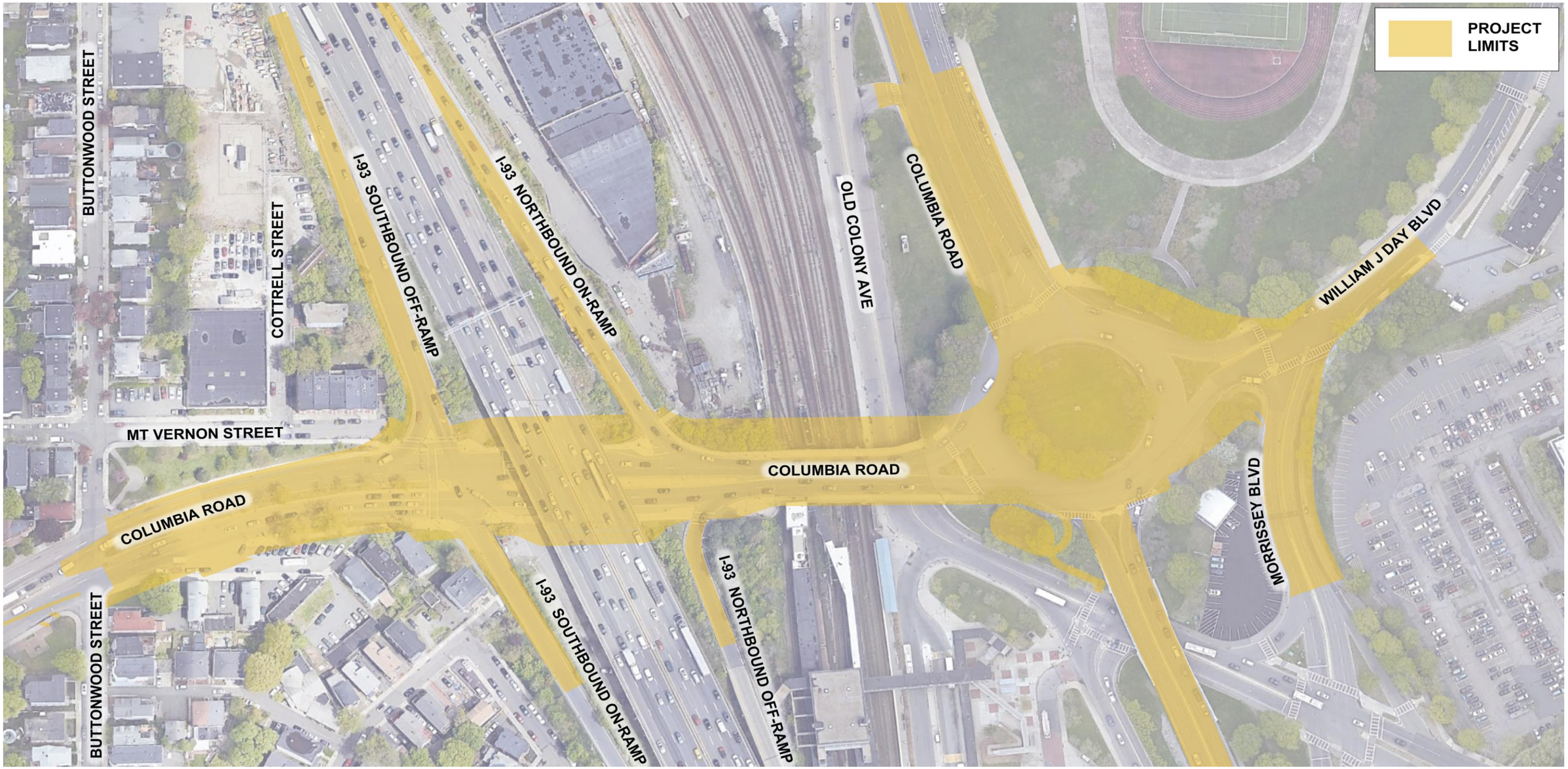
- Review the potential for access improvements to the neighborhoods
- Could increase east-west vehicle mobility
- Identify potential traffic redistribution from this change
- Calculate impact on modified traffic safety and operations



MassDOT Status Update - Kosciuszko Circle and Columbia Road Interchange Project

Kosciuszko Circle and I-93 Columbia Road Interchange (1)

Project Limits



Kosciuszko Circle and I-93 Columbia Rd Interchange (MassDOT)

MassDOT Project Goals (2)

- Enhance and improve safety
- Improve access and mobility for all modes (pedestrians, cyclists, etc.)
- Reduce congestion and support economic development
- Support land use
- Ensure smart investments in the transportation system through cost-effective solutions
- Coordination with anticipated private development parcels within the project area

Kosciuszko Circle and I-93 Columbia Rd Interchange (MassDOT)

MassDOT Project Status (3)

- Baseline traffic counts have been completed at various locations
- Currently processing the baseline traffic data
- Developing initial screening of transit access improvements
- Design Year 2050 traffic model for consistency with Morrissey Boulevard Planning Study
- Concept development advancement is aligned with Morrissey Study
- Multimodal full network will then be developed for all alternatives listed

Kosciuszko Circle and I-93 Columbia Rd Interchange (MassDOT)

MassDOT Project Status (4)

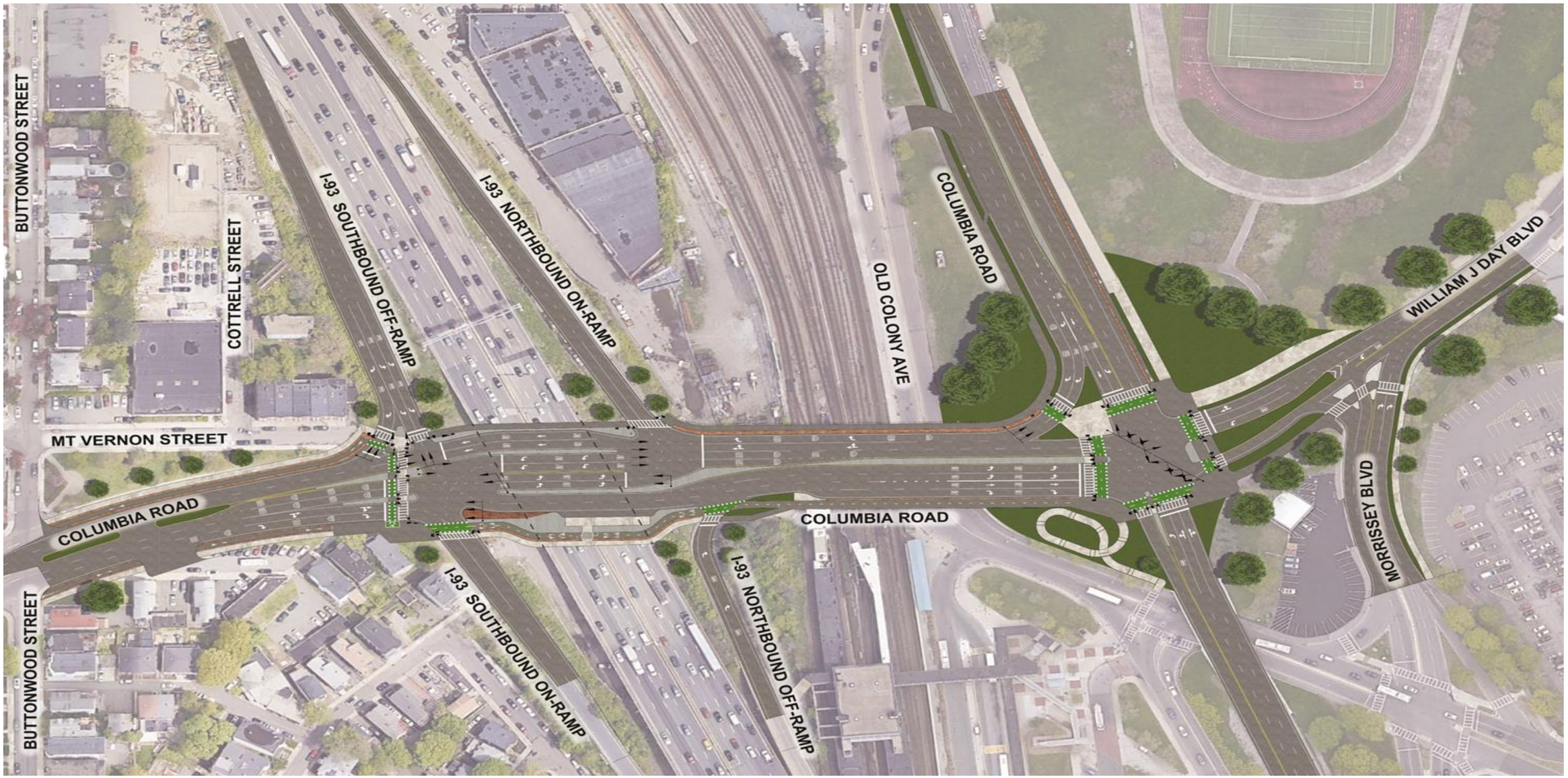
- K-Circle coordination with City of Boston, DCR, MBTA regarding the current demand and capacity needs and projected design year 2050

- Several options under consideration for the intersection control include conventional signalized intersections, roundabout, double left-turns and diverging diamond

Kosciuszko Circle and I-93 Columbia Rd Interchange (MassDOT) (5)

Preliminary Concept Considered

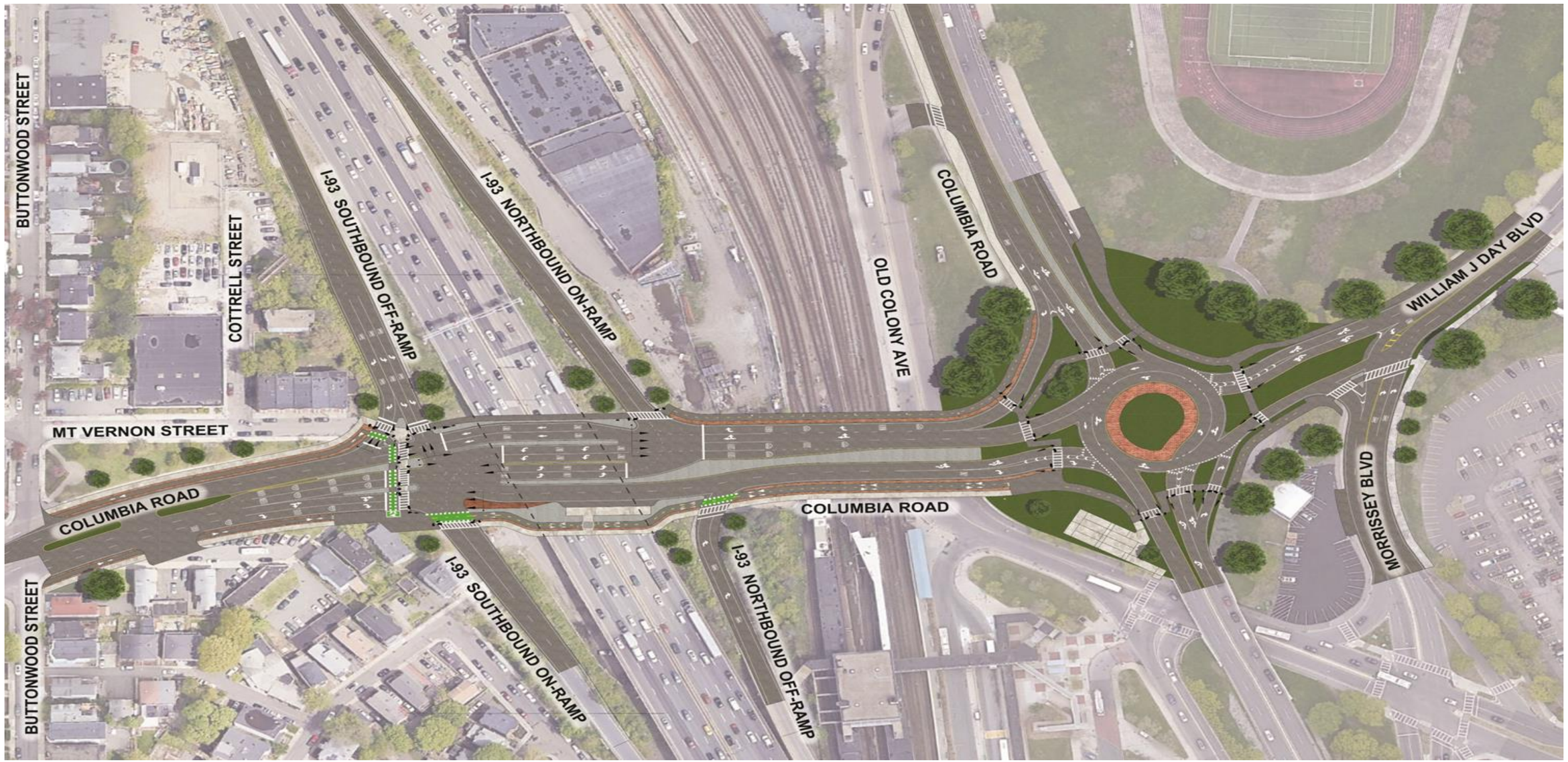
Double Left-Turns with Signalized Intersection (Project Limits)



Kosciuszko Circle and I-93 Columbia Rd Interchange (MassDOT) (6)

Preliminary Concept Considered

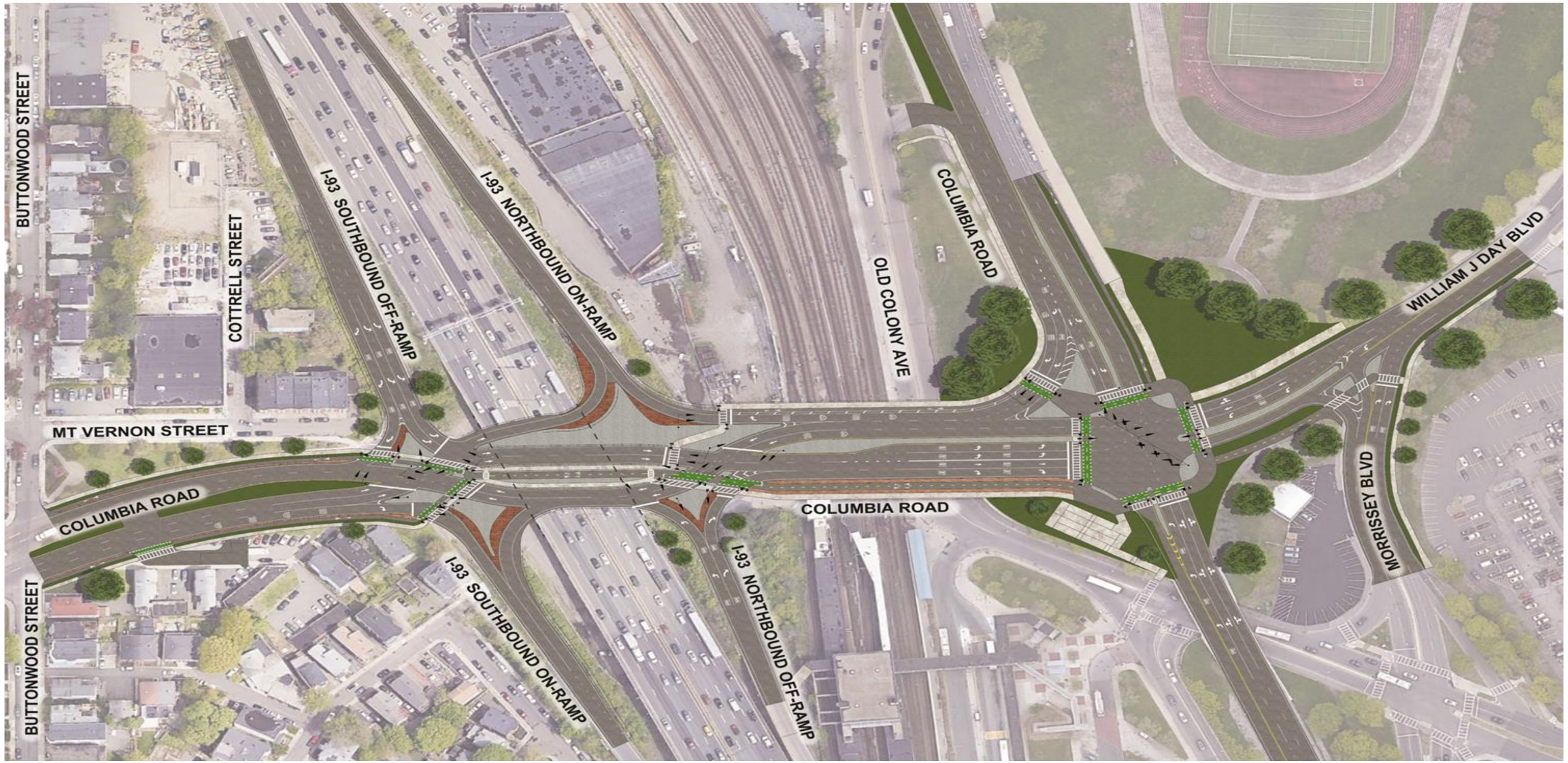
Double Left-Turns with Modern Roundabout (Project Limits)



Kosciuszko Circle and I-93 Columbia Rd Interchange (MassDOT) (7)

Preliminary Concept Considered

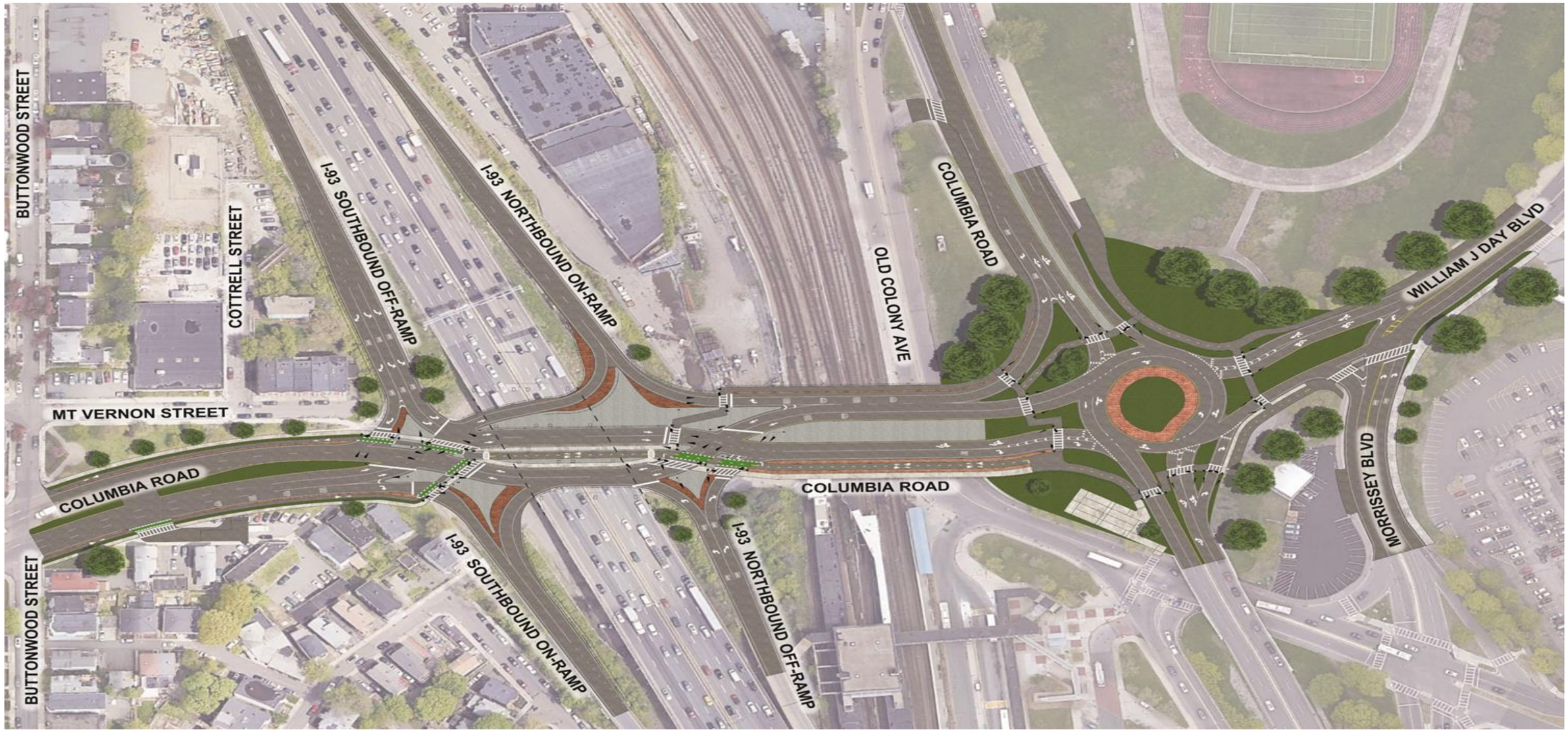
Diverging Diamond with Signalized Intersection (Project Limits)



Kosciuszko Circle and I-93 Columbia Rd Interchange (MassDOT) (8)

Preliminary Concept Considered

Diverging Diamond with Modern Roundabout (Project Limits)



Kosciuszko Circle and I-93 Columbia Rd Interchange (MassDOT)

MassDOT Project Status (9)

- Project scope is being developed

- Initial screening of alternatives using Synchro macrosimulation to model and assess vehicular movement

- Multimodal analysis using VISSIM microsimulation to focus on the interaction between vehicular, bicycle, pedestrian and transit movements

- MassDOT Project Manager is planning a February 2025 meeting to present the deficiencies and potential concepts for the public to offer opinion

Kosciuszko Circle and I-93 Columbia Rd Interchange (MassDOT)

MassDOT Project Status (10)

- K-Circle (and Beades Bridge) projects are progressing through design ahead of this planning study due to current conditions and financial programming

Alternatives Review

Corridor Overview

Options presented for five locations along the corridor:

Neponset Circle
Modified DCR Design

Freeport Street (3)
Modified DCR Design, Quadrant Roadway, Victory Road Full Intersection

Bianculli Boulevard (3)
DCR Design, Continuous Green Tee, Median U-Turn

First Street (2)
Signalized Control, Service Roads

Preble Street (2)
Signalized Control, Modern Roundabout

Concerns about reduced roadway capacity and emergency vehicle access

U-Turns and cross-corridor access points

Environmental considerations

Need for improved connectivity to/from neighborhoods, services, and amenities

- Coastal resiliency options also evaluated
- Based on feedback, these options were refined and evaluated

Corridor Updates

Freeport Street

Removed Median U-Turn option from consideration due to **higher overall vehicular delay, more impervious surface, and limited pedestrian/bicyclist connection** at Victory Road

Preble Circle

Removed modern roundabout option from consideration due to **inability to handle traffic volumes for certain movements**

Bianculli Boulevard

Removed Continuous Green T option from consideration due to **limited number of pedestrian crossing opportunities, high delay for certain movements, and unsafe weaving** to access Old Colony Terrace

Removed Median U-Turn option from consideration due to **higher vehicular delay, wider right-of-way needs, and stakeholder feedback**

Evaluated deceleration and acceleration lanes to Old Colony Terrace

Developed Modified DCR Design

Final Alternatives Analysis

Transportation Simulation Process

- **SYNCHRO** used initially to test individual intersection alternatives to identify operational constraints or "fatal flaws"
  - Using 2050 Build Model traffic volumes
- **VISSIM** was then used to model subareas of the corridor based on the results of the SYNCHRO testing
- The following slides detail the results of the final VISSIM analysis for the alternatives

What is the difference between SYNCHRO and VISSIM?

SYNCHRO is a tool used to assess signalized and unsignalized intersections, with a focus on vehicular movement

VISSIM is a tool used to assess signalized and unsignalized intersections, with a focus on the interaction between vehicular, bicycle, pedestrian, and transit movements

Transportation Simulation Process

Initially assess how the alternatives impact vehicular movement and identify issues (or "fatal flaws")

Then incorporate bicyclists, pedestrians, and transit users, and identify "fatal flaws"

Alternatives with limited to no "fatal flaws" advanced for additional analysis

Evaluation Criteria Review

Commission Goals

Improve mobility

Strengthen **climate resiliency**

Develop a comprehensive plan and **design concept alternatives**

Identify **short-term investments**

Evaluation Criteria

Corridor Mobility

Resiliency & Ecology

Placemaking

Constructability

Evaluation Criteria Components Review

Each of the alternatives was evaluated for its potential benefits and impacts in the following areas:

Corridor Mobility

- Delay – Intersection Level of Service
- Delay - Total Vehicle Hours of Delay
- Queueing
- Vehicle Access
- Transit Access
- Pedestrian Crossing Comfort
- Pedestrian Gaps
- Bicycle Crossing Stress
- Potential Safety Effects

Resiliency & Ecology

- Effects on Environmental Resources
- Impervious Surface

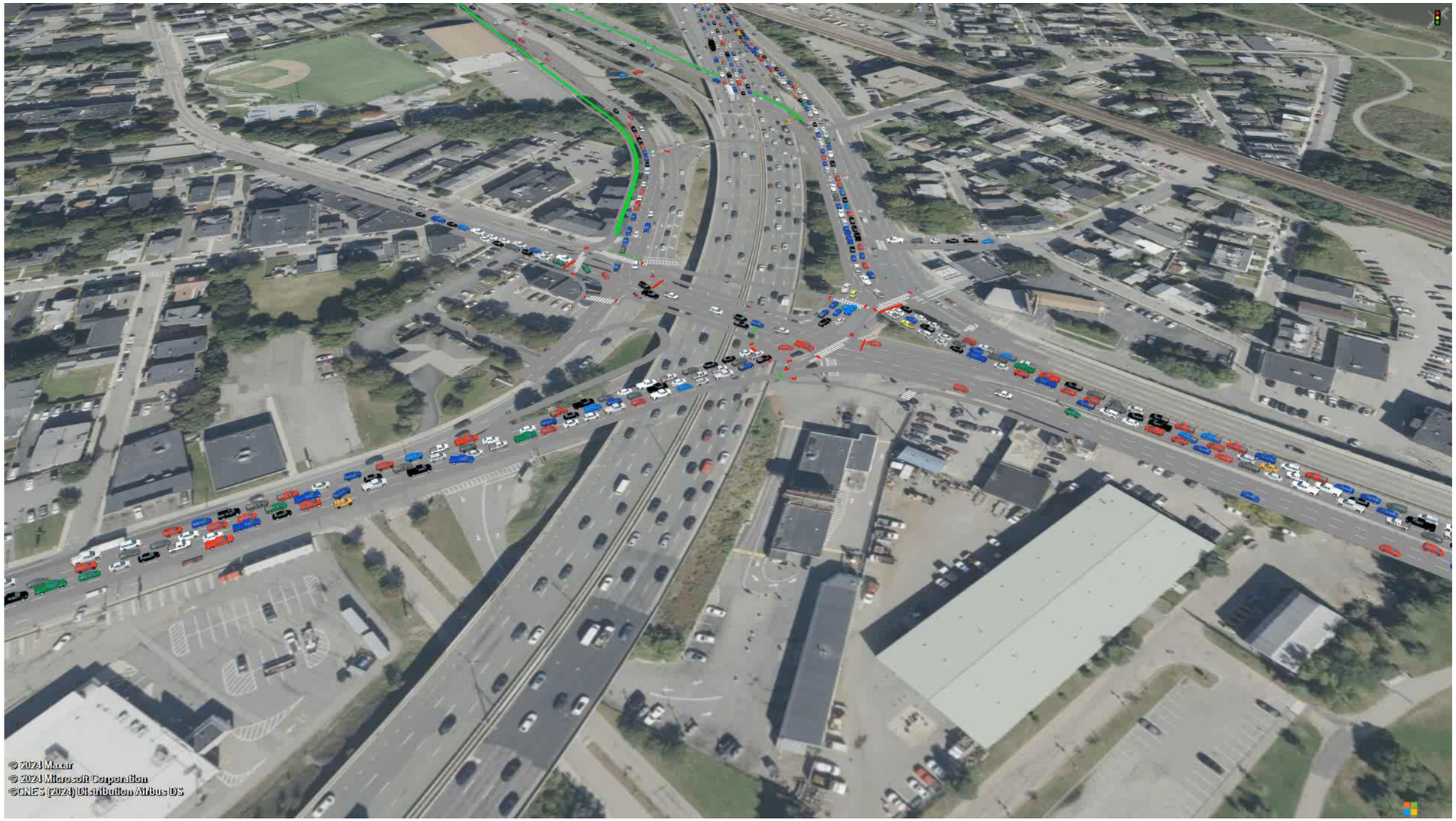
Placemaking

- Placemaking/Open Space
- Visual Effects
- Consistency with Plans
- Disruptions to Neighborhoods
- Recreational Access
- Shade Trees

Constructability

- Construction Cost
- Constructability
- Maintenance Concerns
- Environmental Permits/Complexity

Neponset Circle Modified DCR Design
VISSIM Model Run Animation

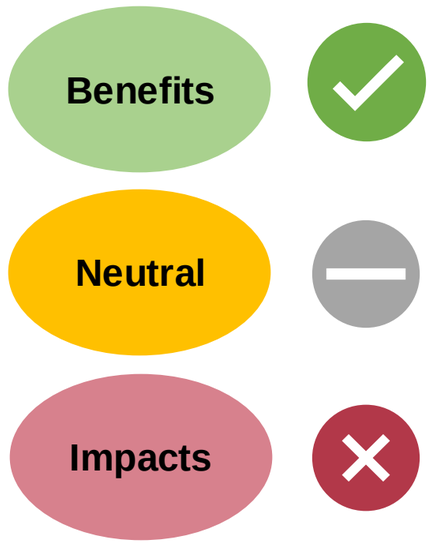


The model simulates multimodal movements through Neponset Circle

Final Alternatives Analysis – Neponset Circle (1)

Corridor Mobility Criteria	Existing Infrastructure	Modified DCR Design
Delay – Intersection Level of Service	✗	✗
Delay - Total Vehicle Hours of Delay	–	✗
Queueing	–	✗
Vehicle Access	–	✓
Transit Access	–	✓
Pedestrian Crossing Comfort	–	✓
Sidewalk Gaps (North-South)	–	✓
Pedestrian Delay	N/A	N/A
Bicycle Level of Traffic Stress	✗	✓
Potential Safety Effects	–	✓
Quality of East-West Connections	✗	✓

Compared to the existing infrastructure, the **Modified DCR Design reduces** overall vehicular **weaving**, and **improves** multimodal **accessibility and safety**



Final Alternatives Analysis – Neponset Circle (2)

Resiliency and Ecology Criteria	Existing Infrastructure	Modified DCR Design
Effects on Environmental Resources	–	✓
2070 Coastal Flooding	✗	✓
2070 Stormwater Flooding	✗	✓
Impervious Surface	–	✓

Placemaking Criteria	Existing Infrastructure	Modified DCR Design
Placemaking/ Open Space	✗	✓
Visual Effects	✗	✓
Consistency with Plans	–	✓
Disruption to Neighborhoods	✗	–
Recreational Access	–	✓
Shade Trees	✓	✓

Compared to the existing infrastructure, the **Modified DCR Design** may have **environmental benefits**, **less impervious surface**, and some **placemaking opportunities**

Benefits ✓ **Neutral** – **Impacts** ✗

Final Alternatives Analysis – Neponset Circle (3)

Constructability Criteria	Existing Infrastructure	Modified DCR Design
Construction Cost	N/A	⊖
Constructability	N/A	✓
Maintenance Concerns	✗	✓
Environmental Permits/Complexity	N/A	⊖

Compared to the existing infrastructure, the **Modified DCR Design** would have **high constructability** and **low maintenance concerns**, with some **cost** and/or **permitting considerations**

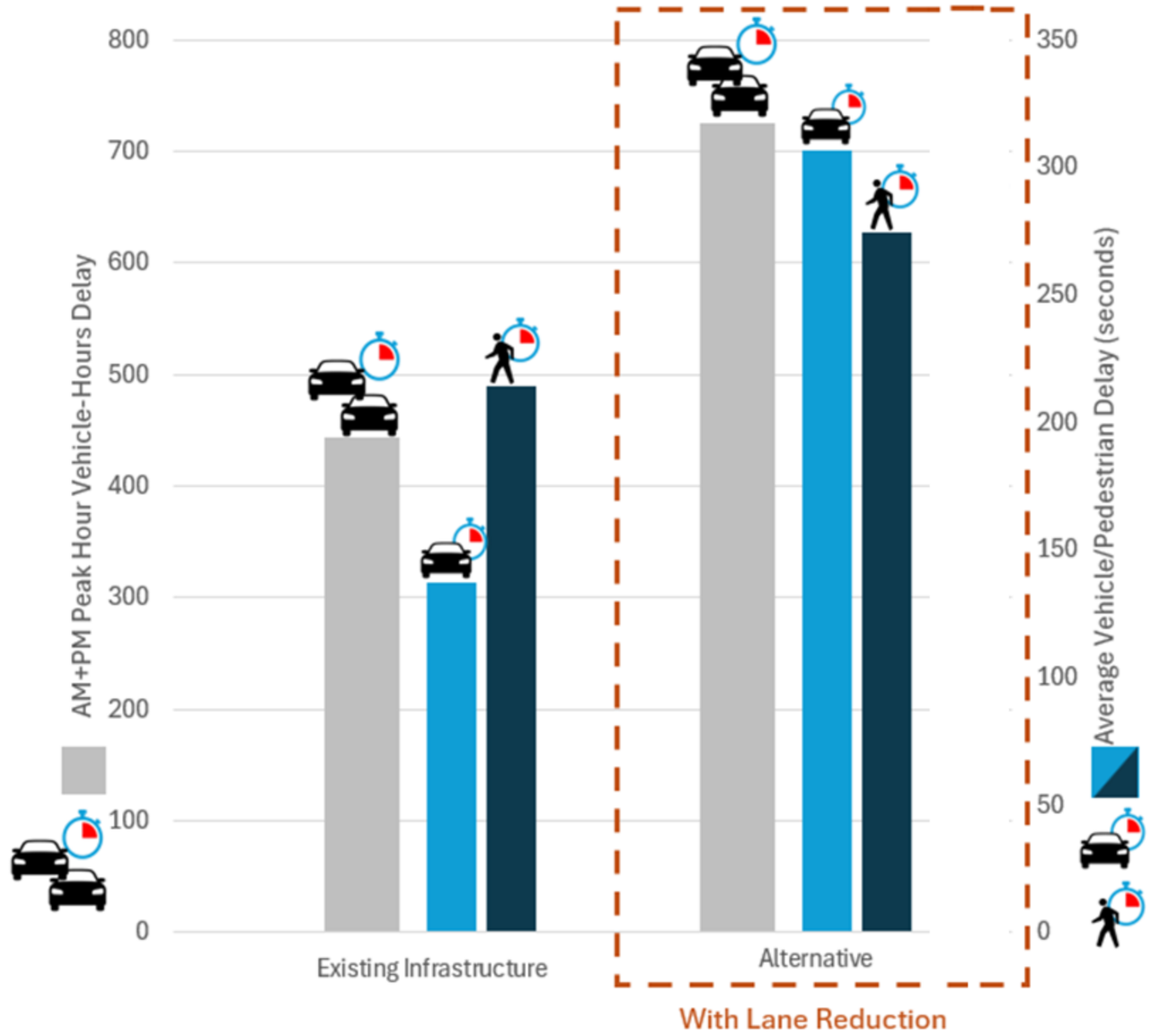
Benefits ✓

Neutral ⊖

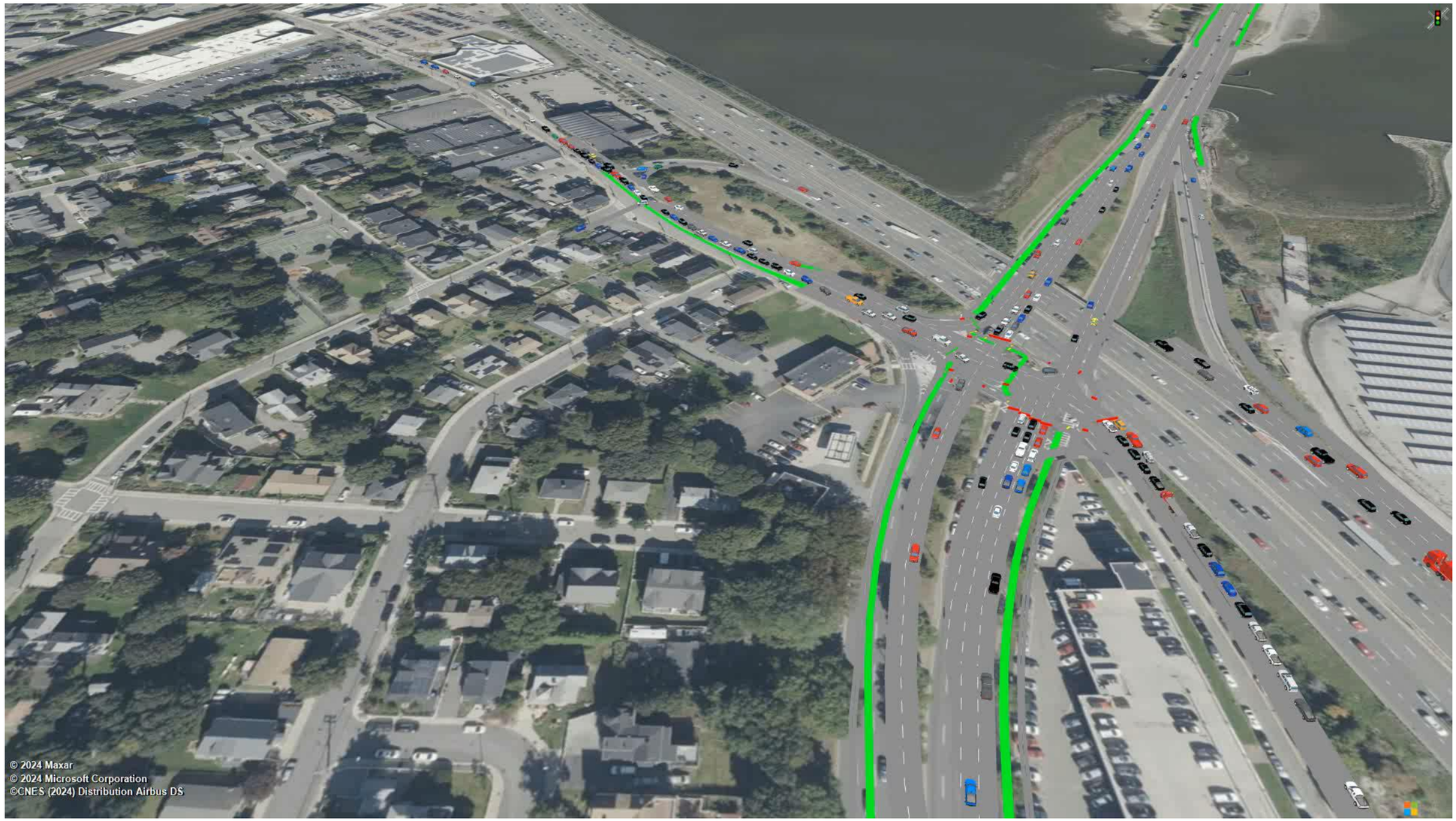
Impacts ✗

Neponset Circle Alternatives Analysis (4)

- Increase in vehicle-hours of delay and average delay due to queues from I-93 northbound on-ramp blocking three-lane northbound Morrissey Boulevard
- May be improved by retaining four northbound lanes on Morrissey, improvements on I-93
- Increase in pedestrian delay

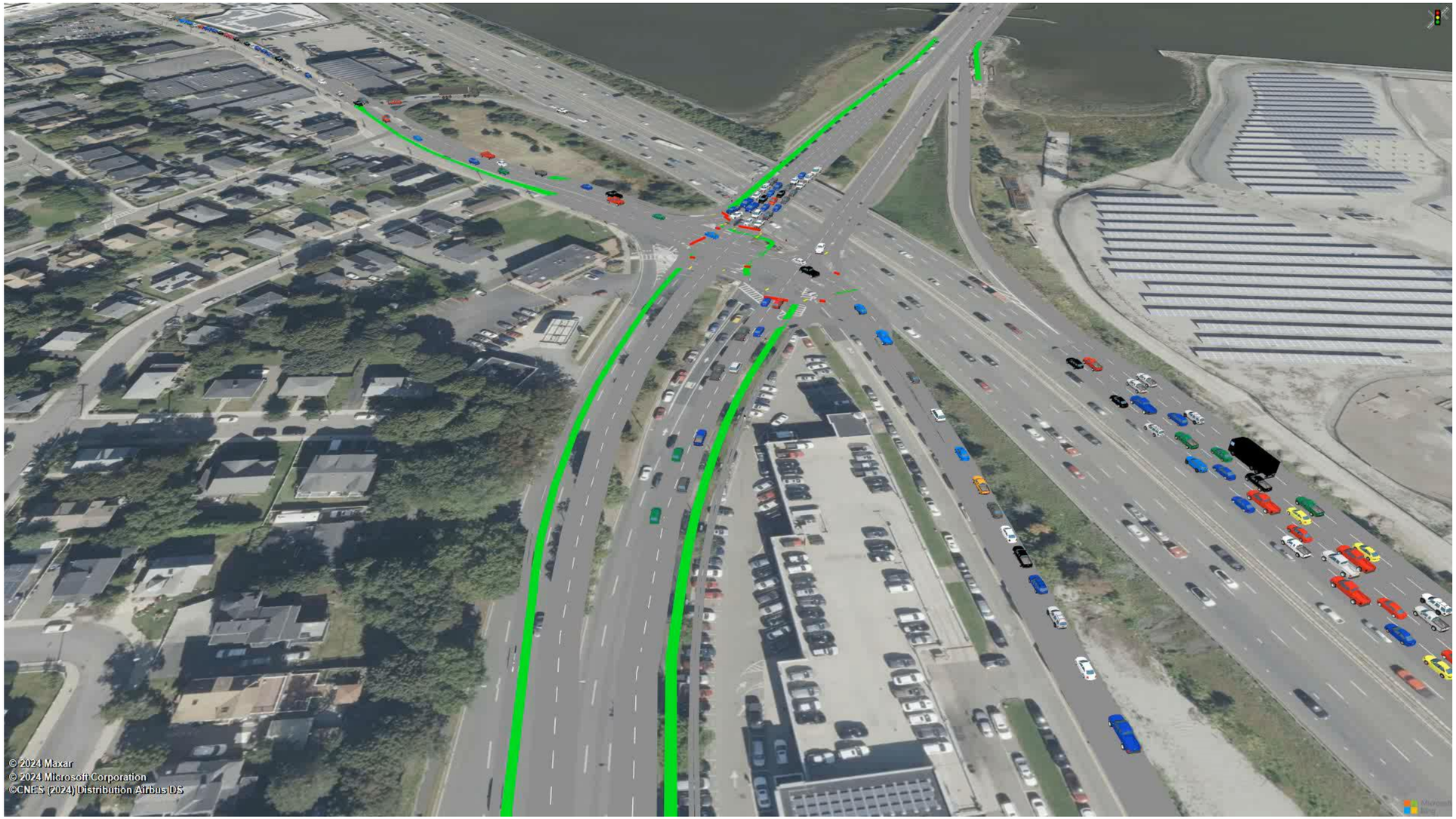


Freeport Street – Modified DCR Design
VISSIM Model Run Animation



The model simulates multimodal movements through Freeport Street for the Modified DCR Design option

Freeport Street – Victory Road Full Intersection
VISSIM Model Run Animation

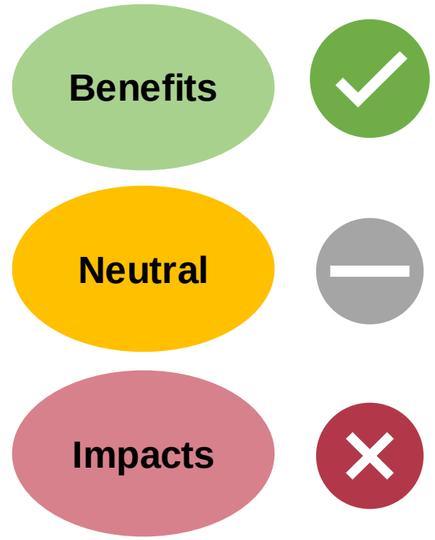


The model simulates multimodal movements through Freeport Street for the Victory Road Full Intersection option

Final Alternatives Analysis – Freeport Street (1)

Corridor Mobility Criteria	Existing Infrastructure	Modified DCR Design	Victory Road Full Intersection
Delay – Intersection Level of Service	✗	–	✓
Delay - Total Vehicle Hours of Delay	✗	✓	✓
Queueing	✗	✓	✓
Vehicle Access	✗	–	✓
Transit Access	–	✓	✓
Pedestrian Crossing Comfort	–	✓	✓
Sidewalk Gaps (North-South)	–	✓	✓
Pedestrian Delay	–	✓	✓
Bicycle Level of Traffic Stress	✗	✓	N/A
Potential Safety Effects	–	✓	✓
Quality of East-West Connections	✗	–	✓

Compared to the existing infrastructure, each alternative would have **safety and mobility benefits overall**, with moderate pedestrian crossing comfort



Final Alternatives Analysis – Freeport Street (2)

Resiliency and Ecology Criteria	Existing Infrastructure	Modified DCR Design	Victory Road Full Intersection
Effects on Environmental Resources	➖	✓	✓
2070 Coastal Flooding	✗	✓	✓
2070 Stormwater Flooding	✗	✓	✓
Impervious Surface	✗	✓	✓

Placemaking Criteria	Existing Infrastructure	Modified DCR Design	Victory Road Full Intersection
Placemaking/Open Space	➖	✓	✓
Visual Effects	➖	➖	✓
Consistency with Plans	✗	✓	✓
Disruption to Neighborhoods	➖	✗	✗
Recreational Access	✗	✓	✓
Shade Trees	➖	✓	✓

Compared to the existing infrastructure, each alternative would have **environmental and resiliency benefits**; the **Victory Road Full Intersection** would have the most **placemaking benefits**

Benefits ✓ **Neutral** ➖ **Impacts** ✗

Final Alternatives Analysis – Freeport Street (3)

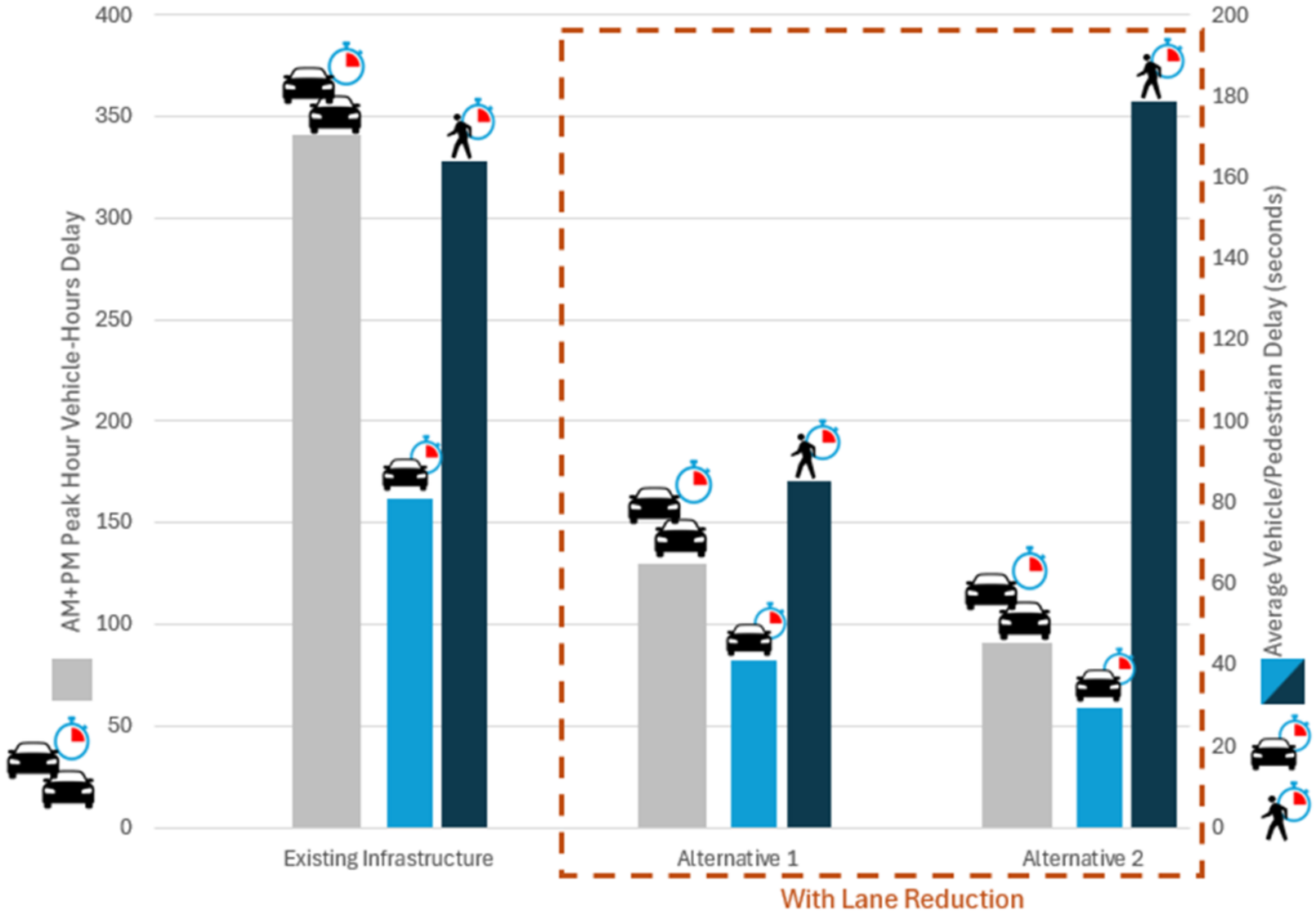
Constructability Criteria	Existing Infrastructure	Modified DCR Design	Victory Road Full Intersection
Construction Cost	N/A	✓	–
Constructability	N/A	✓	–
Maintenance Concerns	✗	✓	✓
Environmental Permits/Complexity	✓	✓	✓

Compared to the existing infrastructure, each alternative would have some cost, constructability, and/or permitting considerations; the **Victory Road Full Intersection** would have **low maintenance concerns**

Benefits ✓ **Neutral** – **Impacts** ✗

Freeport Street & Victory Road Alternatives Analysis (4)

- Total hours of delay and average vehicle delay reduced in Alternative 1 (Modified DCR Design) and Alternative 2 (Victory Road Full Intersection)
- Reduced pedestrian delay in Alternative 1 (Modified DCR Design)
- Increased pedestrian delay in Alternative 2 (Victory Road Full Intersection)



Bianculli Boulevard - DCR Design
VISSIM Model Run Animation

The model simulates multimodal movements through Bianculli Boulevard for the DCR Design option

Final Alternatives Analysis – Bianculli Boulevard (1)

Corridor Mobility Criteria	Existing Infrastructure	Modified DCR Design	DCR Design
Delay – Intersection Level of Service	✗	✗	✗
Delay - Total Vehicle Hours of Delay	✗	–	✓
Queueing	✗	–	✓
Vehicle Access	–	✓	–
Transit Access	–	✓	✓
Pedestrian Crossing Comfort	–	✓	✓
Sidewalk Gaps (North-South)	–	✓	✓
Pedestrian Delay	–	✓	–
Bicycle Level of Traffic Stress	✗	✓	✓
Potential Safety Effects	–	✓	✓
Quality of East-West Connections	✗	✓	✓

Compared to the existing infrastructure, the **DCR Design** has the most **benefits to corridor mobility**, with consideration for intersection delays

Benefits ✓

Neutral –

Impacts ✗

Final Alternatives Analysis – Bianculli Boulevard (2)

Resiliency and Ecology Criteria	Existing Infrastructure	Modified DCR Design	DCR Design
Effects on Environmental Resources	–	✓	✓
2070 Coastal Flooding	✗	✓	✓
2070 Stormwater Flooding	✗	✓	✓
Impervious Surface	✗	✓	✓

Placemaking Criteria	Existing Infrastructure	Modified DCR Design	DCR Design
Placemaking/Open Space	✗	–	✓
Visual Effects	✗	–	✓
Consistency with Plans	–	✓	✓
Disruption to Neighborhoods	✗	–	–
Recreational Access	–	✓	✓
Shade Trees	✗	✓	✓

Compared to the existing infrastructure, the **Modified DCR Design and DCR Design** would have **resiliency benefits** and **less impervious surface,** with some consideration to placemaking opportunities

Benefits ✓ **Neutral** – **Impacts** ✗

Final Alternatives Analysis – Bianculli Boulevard (3)

Constructability Criteria	Existing Infrastructure	Modified DCR Design	DCR Design
Construction Cost	N/A	—	—
Constructability	N/A	✓	✓
Maintenance Concerns	✗	✓	✓
Environmental Permits/Complexity	N/A	✓	✓

Compared to the existing infrastructure, the **Modified DCR Design** and **DCR Design** would have **high constructability**, **low maintenance concerns**, and **fewer permitting concerns**

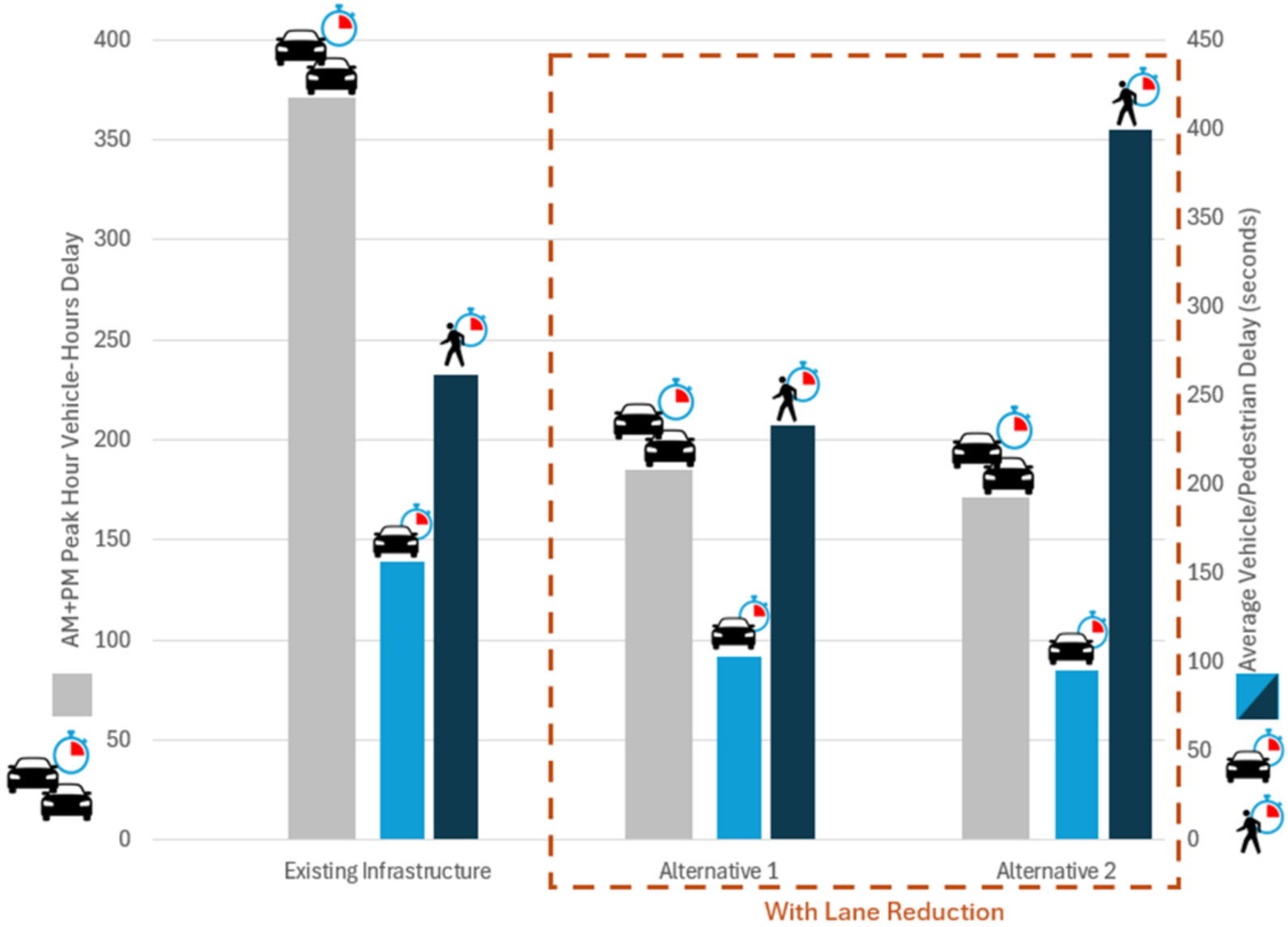
Benefits ✓

Neutral —

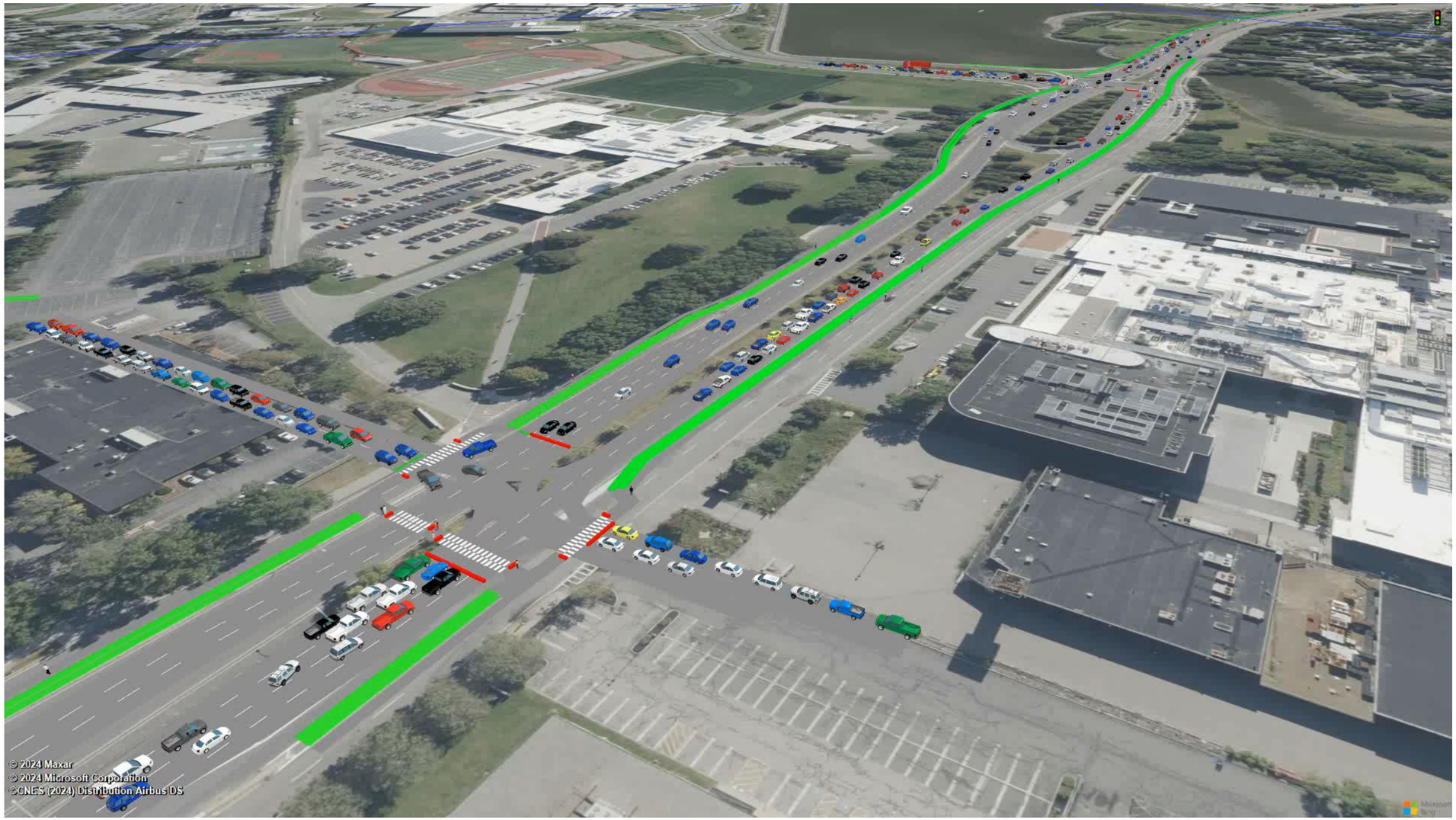
Impacts ✗

Bianculli Boulevard Alternatives Analysis (4)

- Total hours of delay and average vehicle delay reduced in Alternative 1(Modified DCR Design) and Alternative 2 (DCR Design)
- Reduced pedestrian delay in Alternative 1 (Modified DCR Design)
- Increased pedestrian delay in Alternative 2 (DCR Design)



Proposed First Street – Signalized Control
VISSIM Model Run Animation



The model simulates multimodal movements through the proposed First Street for the Signalized Control option

Final Alternatives Analysis – First Street (1)

Corridor Mobility Criteria	Existing Infrastructure	Signalized Control	Service Roads
Delay – Intersection Level of Service	N/A	–	N/A
Delay - Total Vehicle Hours of Delay	✓	–	✓
Queueing	✓	–	✗
Vehicle Access	–	✓	–
Transit Access	–	–	–
Pedestrian Crossing Comfort	–	✓	✓
Sidewalk Gaps (N-S)	–	✓	✓
Pedestrian Delay	✓	N/A	N/A
Bicycle Level of Traffic Stress	–	✓	✓
Potential Safety Effects	–	✓	✓
Quality of E-W Connections	–	✓	✗

Compared to the existing infrastructure, the alternatives would **benefit corridor safety;** the **Signalized Control** alternative could **most benefit accessibility**

Benefits ✓

Neutral –

Impacts ✗

Final Alternatives Analysis – First Street (2)

Resiliency and Ecology Criteria	Existing Infrastructure	Signalized Control	Service Roads
Effects on Environmental Resources	–	✓	✓
2070 Coastal Flooding	✗	✓	–
2070 Stormwater Flooding	✗	✓	✓
Impervious Surface	✗	✓	✓

Placemaking Criteria	Existing Infrastructure	Signalized Control	Service Roads
Placemaking/Open Space	✗	✓	–
Visual Effects	✗	✓	–
Consistency with Plans	✗	✓	–
Disruption to Neighborhoods	–	✓	✓
Recreational Access	–	✓	✓
Shade Trees	–	✓	✓

Compared to the existing infrastructure, the **Signalized Control** alternative would have the most **resilience benefits** and **placemaking opportunities**

Benefits ✓ **Neutral** – **Impacts** ✗

Final Alternatives Analysis – First Street (3)

Constructability Criteria	Existing Infrastructure	Signalized Control	Service Roads
Construction Cost	N/A	—	✓
Constructability	N/A	—	✓
Maintenance Concerns	✗	✓	✓
Environmental Permits/Complexity	N/A	✗	✓

Compared to the existing infrastructure, each alternatives would have **some cost, constructability, and maintenance considerations**; the **Service Roads** alternative would **improve permitting**

Benefits ✓

Neutral —

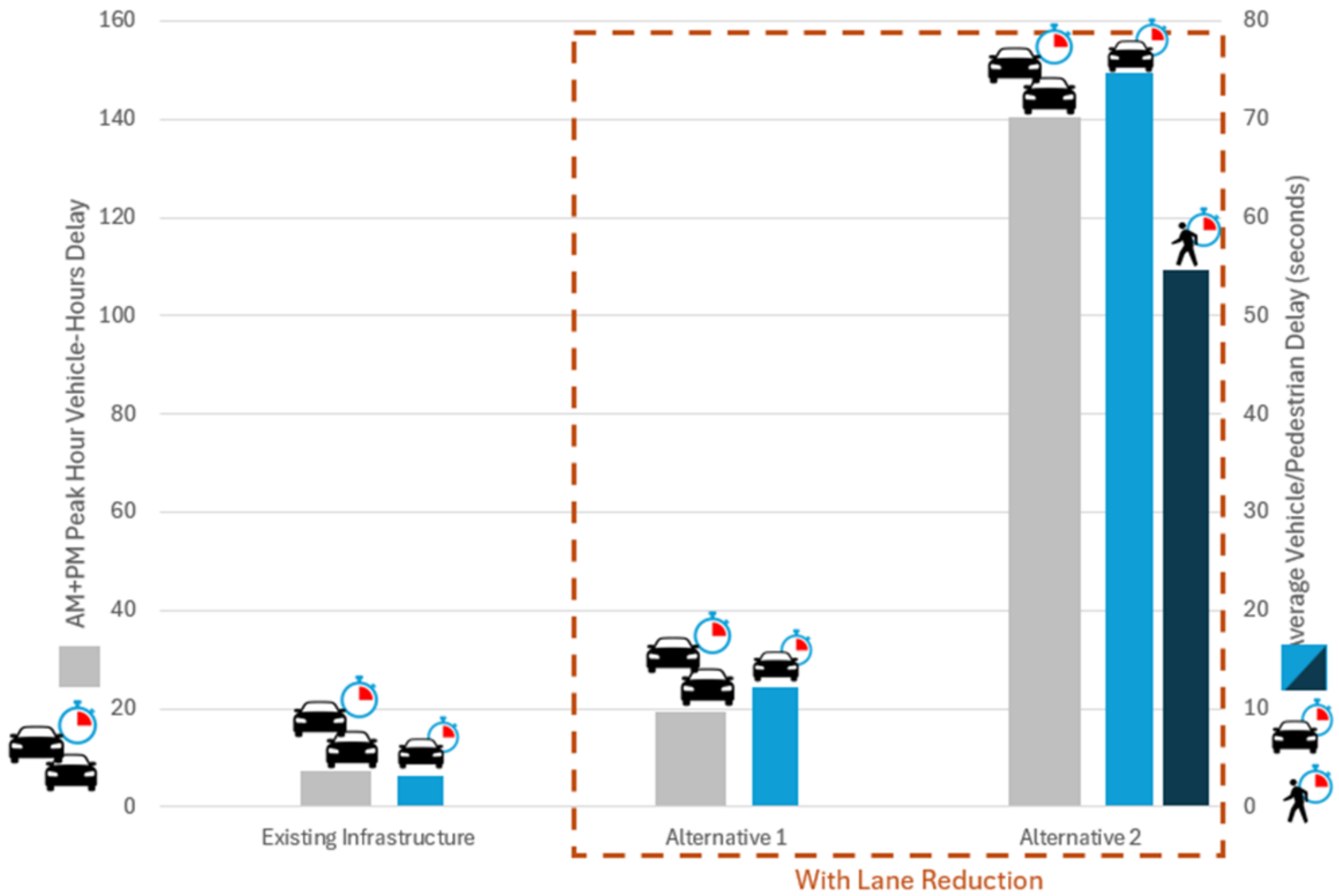
Impacts ✗

First Street Alternatives Analysis (4)

- Unsignalized right-in/ right-out from service roads with Existing Infrastructure and Alternative 1 (Signalized Control) – no delay for Morrissey Boulevard thru movements

- No pedestrian crossing with Existing Infrastructure and Alternative 1 (Signalized Control)

- Full signalized intersection with Alternative 2 (Service Roads)



Preble Circle - Signalized Control
VISSIM Model Run Animation

The model simulates multimodal movements through Preble Circle for the Signalized Control option

Final Alternatives Analysis – Preble Circle (1)

Corridor Mobility Criteria	Existing Infrastructure	Signalized Control
Delay – Intersection LOS	✗	✗
Delay - Total Vehicle Hours of Delay	–	✗
Queueing	–	✗
Vehicle Access	–	✓
Transit Access	✗	–
Pedestrian Crossing Comfort	–	✓
Sidewalk Gaps (N-S)	–	✓
Pedestrian Delay	✓	–
Bicycle Level of Traffic Stress	–	✓
Potential Safety Effects	–	✓
Quality of E-W Connections	✗	✓

Compared to the existing infrastructure, **Signalized Control** would **improve accessibility and safety**; with consideration to delays and queuing

Benefits ✓

Neutral –

Impacts ✗

Final Alternatives Analysis – Preble Circle (2)

Resiliency and Ecology Criteria	Existing Infrastructure	Signalized Control
Effects on Environmental Resources	–	✓
2070 Coastal Flooding	✗	–
2070 Stormwater Flooding	✗	✓
Impervious Surface	✗	✓

Placemaking Criteria	Existing Infrastructure	Signalized Control
Placemaking/Open Space	–	✓
Visual Effects	–	✓
Consistency with Plans	–	–
Disruption to Neighborhoods	✓	–
Recreational Access	–	✓
Shade Trees	–	✓

Compared to the existing infrastructure, **Signalized Control** would **benefit resiliency and have less impervious surface,** with some consideration to placemaking and consistency

Benefits ✓ **Neutral** – **Impacts** ✗

Final Alternatives Analysis – Preble Circle (3)

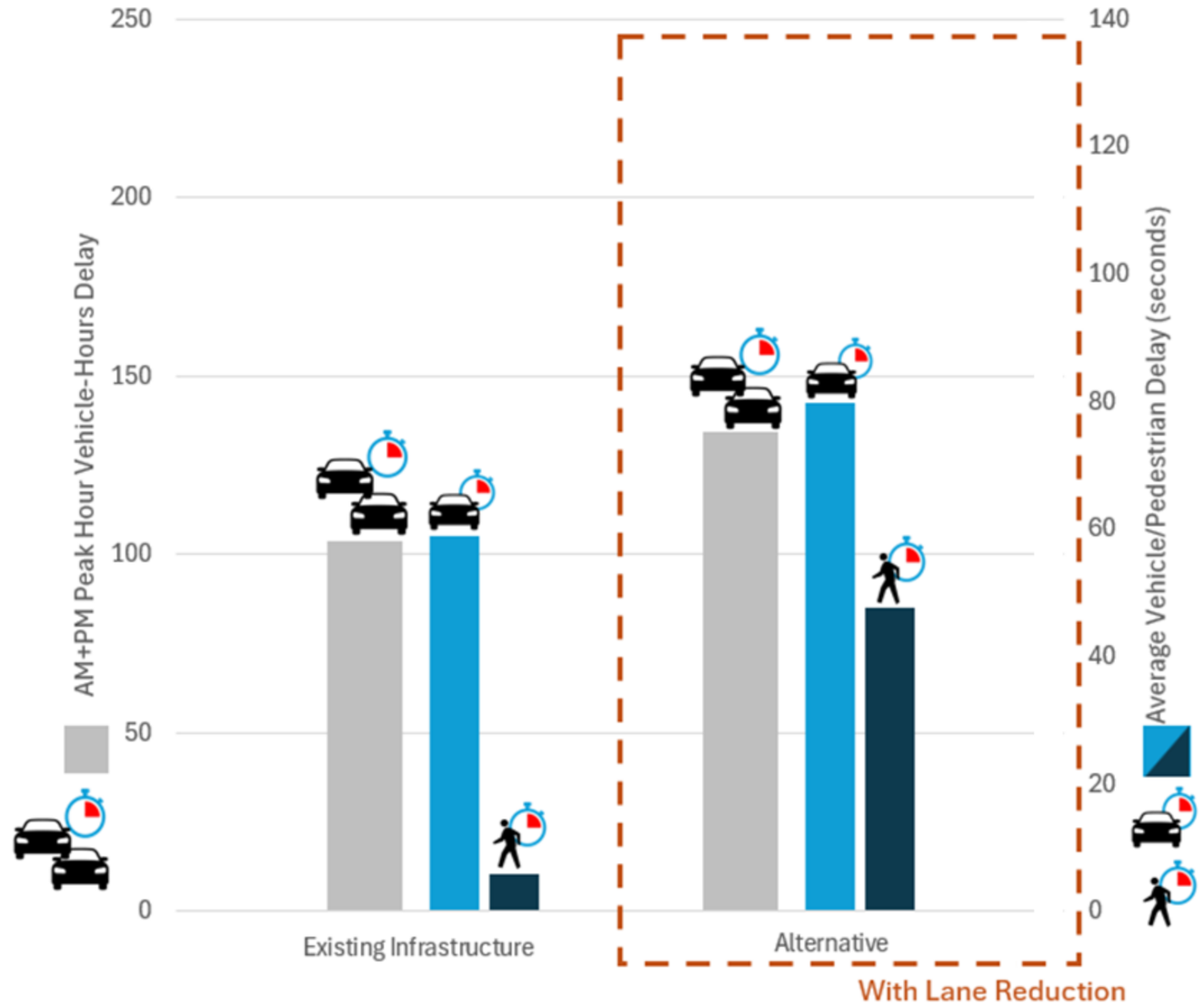
Constructability Criteria	Existing Infrastructure	Signalized Control
Construction Cost	N/A	⊖
Constructability	N/A	✓
Maintenance Concerns	⊖	✓
Environmental Permits/Complexity	N/A	✓

Compared to the existing infrastructure, **Signalized control** may have **fewer constructability and permit concerns**; with some consideration to **cost**

Benefits ✓ **Neutral** ⊖ **Impacts** ✗

Preble Circle Alternatives Analysis (4)

- Total hours of delay and overall average vehicle delay increase in the Alternative (Signalized Control)
- Reduced delay on southbound and westbound approaches
- Increased pedestrian delay due to addition of signal control



Resilience Flood Gate Options – Assumptions

Alternative 01 – High Profile

- Harborside wall at 2070 height
- *No flood gate*
- *Malibu beach raised to 2070 height*
- *Roadway at 2070 height*

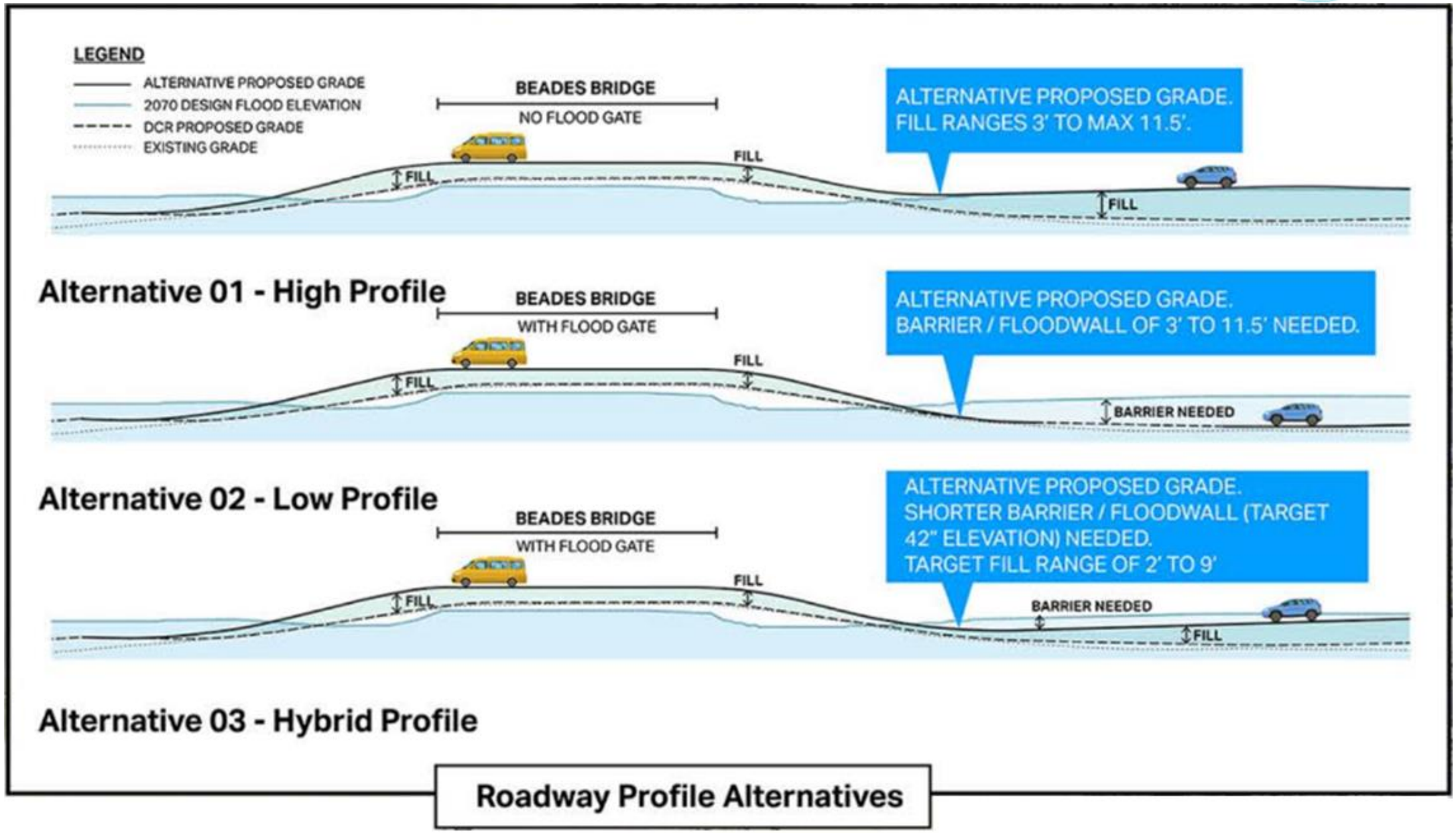
Alternative 02 – Low Profile

- Harborside wall at 2070 height
- *Flood gate closes with each storm*
- *Malibu beach not raised*
- *Roadway at current elevation*

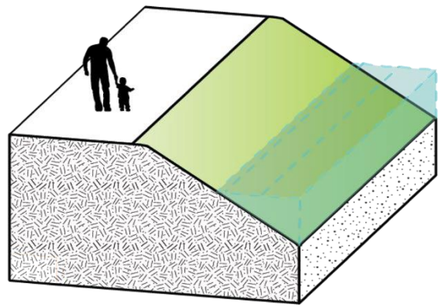
Alternative 03 – Hybrid Profile

- Harborside wall at 2070 height
- *Flood gate only closes with major storms*
- *Malibu beach raised to low storm level*
- *Roadway at low storm level*

Resilience Review – Flood Gate Options

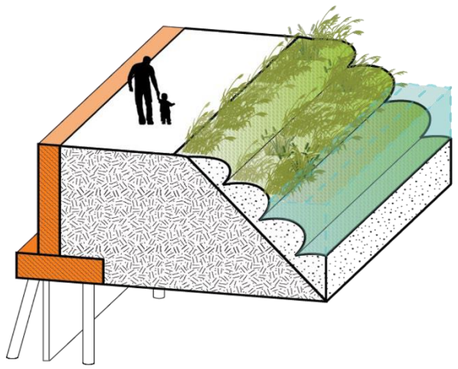


Resilience Review – Harborside Options



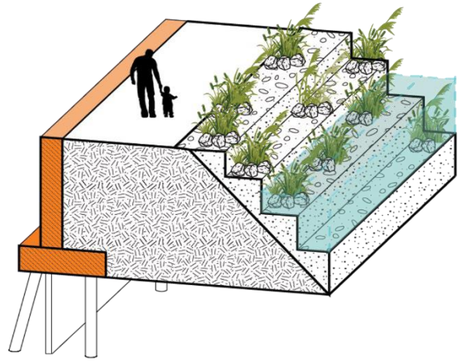
LANDSCAPE BERM

Natural elevation change to reduce impacts of coastal flooding.



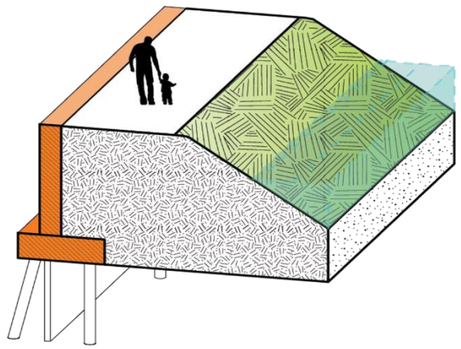
VEGETATED GEOLIFTS

Compacted soil layers stabilize banks and support vegetation establishment in constrained conditions.



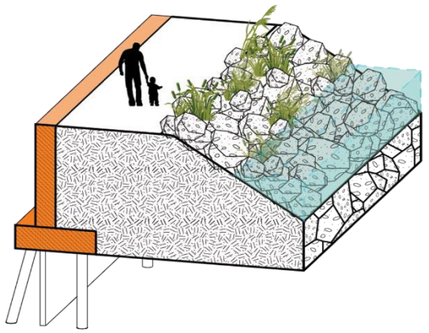
GABIONS

Woven wire cages can provide ecological benefit and shoreline stabilization in a permanent gravity retaining wall.



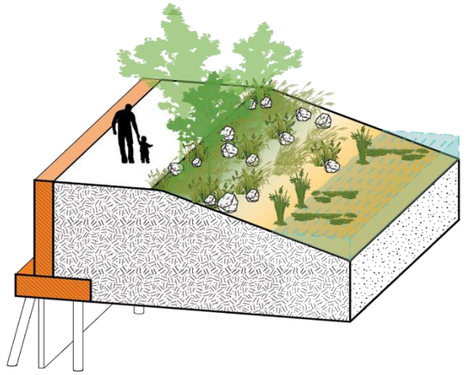
EROSION CONTROL NETTING WITH SEEDING

Erosion control netting is used to stabilize slopes while establishment of vegetation occurs.



RIPRAP

Riprap can be used alone or in combination with other toolkit measures to reduce erosion or create “steps” to lower elevations.



WETLAND

Wetland planting, encompassing many wetland types and areas, is best applied where horizontal space allows for shallow slopes adjacent to the water’s edge.

Final Alternatives Analysis – Flood Gate Options (1)

Resiliency and Ecology Criteria	Existing Infrastructure	Tide Gate	No Tide Gate	Hybrid
Effects on Environmental Resources	✗	✗	–	✗
2070 Coastal Flooding	✗	✓	✓	✓
2070 Stormwater Flooding	✗	✓	✗	✓
Impervious Surface	✗	✗	✓	✓
Plant Migration	✗	✗	✓	✓
Wave Mitigation	✗	✓	✓	✓

Compared to the existing infrastructure, the **Hybrid** option would have the **most resiliency benefits**

Benefits ✓

Neutral –

Impacts ✗

Final Alternatives Analysis – Flood Gate Options (2)

Resiliency and Ecology Criteria	Existing Infrastructure	Tide Gate	No Tide Gate	Hybrid
Placemaking/Open Space	✗	–	✓	✓
Visual Effects	N/A	N/A	N/A	N/A
Consistency with Plans	✗	✓	✗	✓
Disruption to Neighborhoods	✓	✓	✓	✓
Recreational Access	–	–	✓	✗
Shade Trees	✗	–	–	✓

Compared to the existing infrastructure, the **Hybrid** option **scores highest for placemaking**

Benefits ✓

Neutral –

Impacts ✗

Final Alternatives Analysis – Flood Gate Options (3)

Constructability Criteria	Existing Infrastructure	Tide Gate	No Tide Gate	Hybrid
Construction Cost	N/A	✗	✓	✗
Constructability	N/A	✗	✓	–
Maintenance Concerns	✗	–	✓	–
Environmental Permits/Complexity	N/A	✗	–	✗

Compared to the existing infrastructure, the **No Tide Gate** option would have the **fewest constructability concerns**

Benefits ✓

Neutral –

Impacts ✗

Final Alternatives Analysis – Harborside Options (1)

Resiliency and Ecology Criteria	Existing Infrastructure	Retaining Wall	Living Shoreline
Effects on Environmental Resources	—	—	✓
2070 Coastal Flooding	✗	N/A	N/A
2070 Stormwater Flooding	✗	N/A	N/A
Impervious Surface	✗	—	✓
Plant Migration	—	✗	✓
Wave Mitigation	✗	✓	✓

Compared to the existing infrastructure, the **Living Shoreline** option has the **most resiliency benefits**

Benefits ✓

Neutral —

Impacts ✗

Final Alternatives Analysis – Harborside Options (2)

Placemaking Criteria	Existing Infrastructure	Retaining Wall	Living Shoreline
Placemaking/Open Space	✗	✗	✓
Visual Effects	✗	✗	✓
Consistency with Plans	–	✓	✓
Disruption to Neighborhoods	✗	✓	✓
Recreational Access	✗	✓	✓
Shade Trees	✗	–	✓

Compared to the existing infrastructure, the **Living Shoreline** option has the greatest **placemaking opportunities**

Benefits ✓ **Neutral** – **Impacts** ✗

Final Alternatives Analysis – Harborside Options (3)

Constructability Criteria	Existing Infrastructure	Retaining Wall	Living Shoreline
Construction Cost	N/A	✓	–
Constructability	N/A	✓	–
Maintenance Concerns	✗	✓	✓
Environmental Permits/Complexity	✓	✗	–

Compared to the existing infrastructure, **Living Shoreline** and **Retaining Wall** options would have **the least maintenance concerns**; with some **considerations to cost, constructability,** and **permitting**

Benefits ✓

Neutral –

Impacts ✗

Alternatives Analysis Summary

Based on the analysis and feedback received, the following are the preferred components for the full Morrissey Boulevard corridor:

Neponset Circle
Modified DCR Design

Freeport Street
Modified DCR Design

Bianculli Boulevard
DCR Design

First Street
Signalized Control

Preble Street
Signalized Control

Preliminary Cost Estimate

- Base (2024$) construction cost range: $182M (low end) to $234M (high end)
- Year-of-Expenditure construction cost range (2036$): $273M (low end) to $352M (high end)
- Contingency ranges from 20-50% depending on category
- **Variance (low end vs. high end) primarily determined by central section options**

Central Section Options

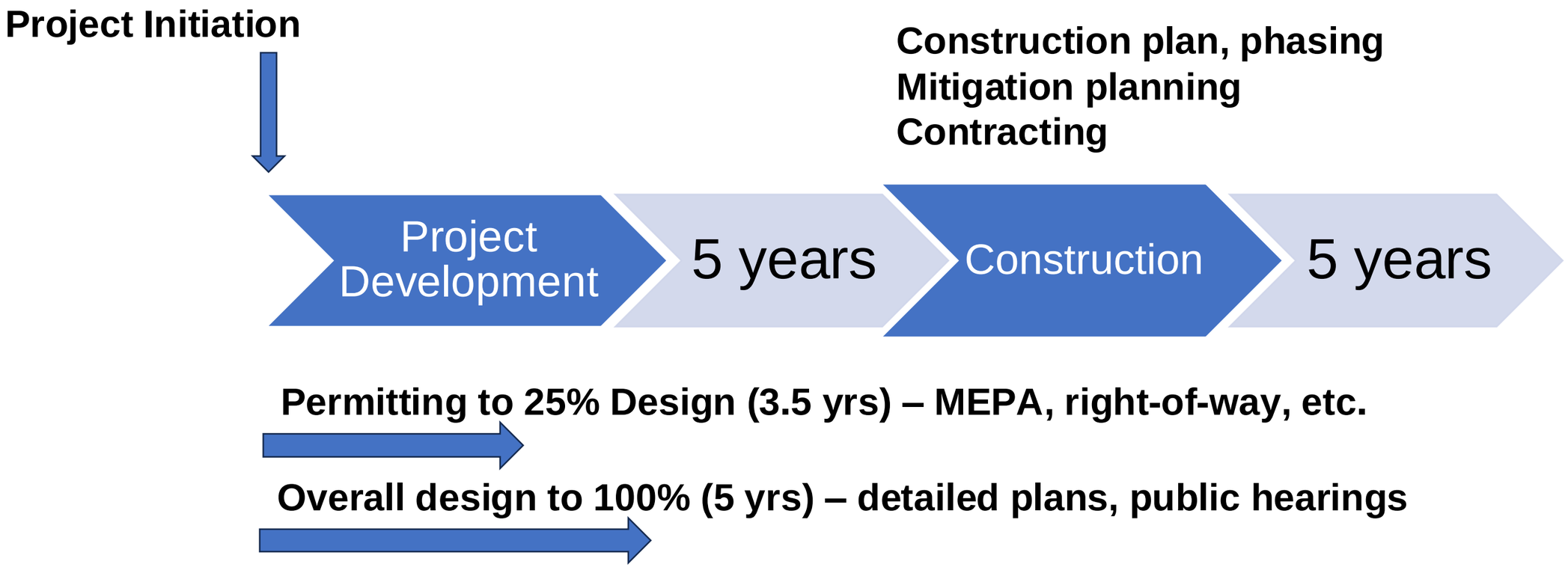
Flood Gate Options
- No Tide Gate
- Tide Gate
- Hybrid

Harborside Options
- Steep slope / riprap wall
- Gradual slope / living shoreline

Construction Cost Range (Year of Expenditure)	Neponset Circle to Freeport Street	Central Section	Bianculli Boulevard to Columbia Road	Total Cost
Low End of Range (2036)	$115,000,000	$65,000,000	$93,000,000	$273,000,000
High End of Range (2036)	$115,000,000	$141,000,000	$96,000,000	$352,000,000

Notes/Assumptions
- Assumes minimum 5-year project development process until construction start
- Assumes 3% yearly escalation year over year
- Assumes 5-year construction duration
- Labor is based on local Davis Bacon wage rates
- No water line or water services construction accounted for
- Does not include K Circle or Beades Bridge projects (with the exception of climate resiliency improvements)

Typical Project Development and Construction Schedule



- A project resulting from this planning study could take approximately ten years from project initiation to the end of construction
- Note: this timeline does not include capital funding and programming processes

Draft Findings and Recommendations

Morrissey Commission Legislation

•The commission shall: (i) evaluate and recommend transportation and infrastructure improvements to: (A) **improve mobility for pedestrians, transit users, cyclists and motorists**; and (B) **strengthen climate resiliency at Kosciuszko circle** in the Dorchester section of the city of Boston **and along Morrissey boulevard** in the city; (ii) **develop a comprehensive plan for the Morrissey boulevard corridor**; and (iii) **identify short-term investments to improve mobility** for pedestrians, transit users, cyclists and motorists along the Morrissey boulevard corridor.

•In making its recommendations, the commission shall prioritize infrastructure designs that contribute to meeting statewide greenhouse gas emissions limits and the city's carbon-neutral goals, including, but not limited to, **maximizing opportunities for sustainable transportation, including walking, bicycling and transit use, and public realm designs that serve open space needs.**

Draft Key Findings

- Morrissey Boulevard would help provide significant **flood mitigation protection measures** against current and future sea level rise and tidal flooding

- Reconfiguring Morrissey Boulevard and modernizing its intersections would provide **multimodal transportation, resiliency, safety, and placemaking improvements and opportunities**

- **Environmental permitting is expected to be complex** and would require additional time in the project development process

- Any project(s) would require **significant coordination across various state and local entities**

- The results of this study process will provide key background technical information to MassDOT's Beades Bridge and K-Circle/Columbia Road Projects

Additional Considerations

Coastal resilience measures should focus on **nature-based solutions** and explore opportunities to re-introduce and improve native ecosystems

Any future design permitting processes for reconstruction of Morrissey Boulevard should **explore options to protect the Savin Hill Yacht Club** from future impacts of climate change

Continue to monitor current and future development projects and projections in alignment with local, regional, and state plans and policies

Early scoping and project coordination with the Boston Water and Sewer Commission

Draft Study Recommendations

Short-Term Recommendations

- **Evaluate the benefits and challenges** of creating a full signalized intersection at Morrissey Boulevard and Conley Street to increase access to the Port Norfolk neighborhood
- **Evaluate and examine** quick-build improvements such as lighting, flex posts at existing curb extensions at key intersections e.g., Preble Circle, Devine Rink U-turn

Long-Term Recommendations

- MassDOT and DCR will coordinate with the City of Boston to **initiate a project or phased projects to reconstruct the Morrissey Boulevard corridor**
- Respective agencies will continue to formally convene following this Commission process to **advance a coordinated approach to corridor investments/projects**

Future project development considerations

– utilities, plantings, signage, vehicle speeds and diversions

What About Implemented/Underway Short-Term Investments?

Resurfacing of Morrissey Boulevard service road from Old Colony Avenue to Bianculli Boulevard (completed Summer 2024)

Sidewalk restoration and curb ramp reconstruction from Southline/former Boston Globe to Malibu Beach (Summer – Fall 2024)

Invasive Species Management: In August 2024, DCR removed invasive plant species from Pleasure Bay, Wollaston Beach, and the Neponset Greenway

2024-2025 construction of Morrissey Boulevard Pump Station to prevent flooding on Morrissey Boulevard from Conley Street and McKone Street to Market Place

Preble Circle pedestrian accessibility improvements at Old Colony Avenue / Columbia Road (Spring 2025)

Potential Funding Sources

Formula Funding Sources

National Highway Performance Program

Regional Transportation Improvement Program, managed by the Boston Metropolitan Planning Organization (MPO)

Surface Transportation Block Grants

Promoting Resilient Operations for Transformative, Efficient, and Cost-saving Transportation [Grant] Program (PROTECT)*

Discretionary and Loan Sources

Building Resilient Infrastructure and Communities

Hazard Mitigation Assistance Grant Program

Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Grant Program

Transportation Infrastructure Finance and Innovation Act (TIFIA)

Municipal Vulnerability Preparedness Action Grant (MVP)

Dams and Seawall Repair or Removal Program

District Improvement Financing (DIF)

National Coastal Resiliency Fund

Coastal Resilience Grants Program

*MassDOT receives a PROTECT formula apportionment and can apply for discretionary funds from a separate funding pool

Next Steps

A **draft report** documenting the study's technical work, the public involvement process, key findings, and draft recommendations will be **released in early December 2024 for a 30-day public comment period**

In mid-January 2025 the eighth and final Morrissey Commission meeting will be held to present a summary of public comments, and approve a report submission to the Legislature

Commission Discussion

Commission Discussion

General comments or questions on the final Alternatives Analysis and Draft Findings and Recommendations?

Public Comment

Share Your Questions and Comments: Hybrid Meeting Process

- In-Person and Virtual moderators will work together to ensure that attendees in both spaces can share their questions and comments
- Moderators will take a few comments at a time in one space and then switch throughout the public comment period
- If multiple people ask the same question, moderators will inform the audience how many asked and answer the question once

Please be advised that all Q&A and comments are subject to disclosure for public records, therefore use these functions for project-related business only

Share Your Questions and Comments: In-Person Attendees

- Use Microphone provided and please line up three (3) at a time to allow for virtual audience to participate

- Please state your name before your question or comment

- Please share only **1** question or comment at a time, limited to **2** minutes, to allow others to participate

Please be advised that all Q&A and comments are subject to disclosure for public records

Share Your Questions and Comments: Virtual Attendees

- Submit your questions and comments using the Q&A button

- “Raise your hand” to be unmuted for verbal questions to raise your hand)

- Please state your name before your question

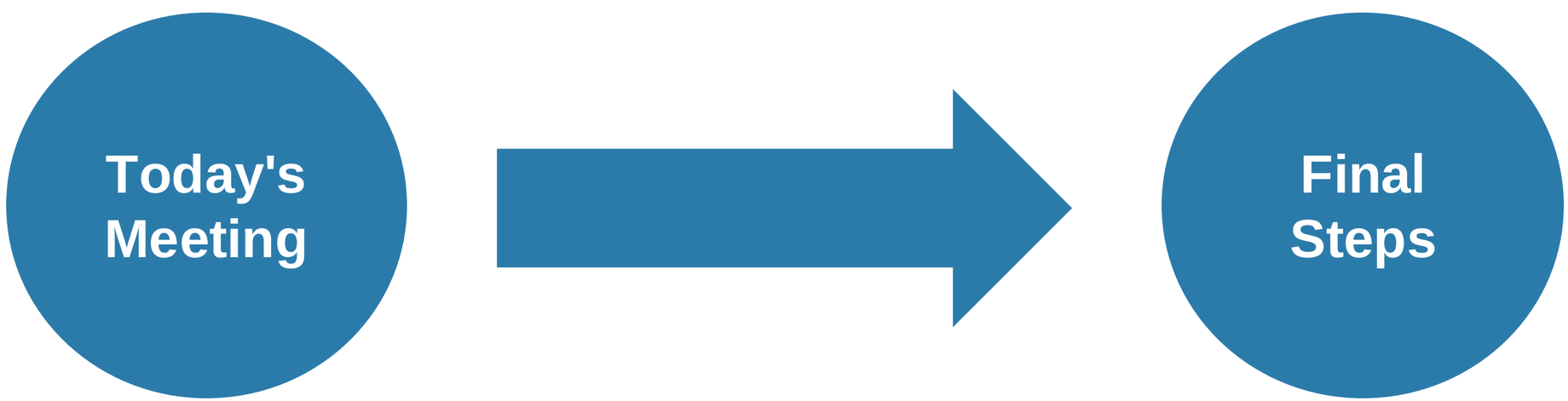
- Please share only **1** question or comment at a time, limited to **2** minutes, to allow others to participate

- To ask a question via phone, dial *9 and the moderator will call out the last digits of your phone number and unmute your audio when it is your turn

Please be advised that all Q&A and comments are subject to disclosure for public records, therefore use these functions for project-related business only

Next Steps

Next Steps



Final Analysis, Draft Findings and Recommendations

Final Report approval and submission

How to Reach Us

Submit written comments to:

Attention: Office of Transportation Planning
10 Park Plaza, Suite 4150
Boston, MA 02116

Submit email comments to:

planning@dot.state.ma.us

For project information, visit the study web site at:

https://www.mass.gov/k-circle-morrissey-study or QR Code:

Study Website QR Code

Thank You!