

Pennsylvania Avenue Extension (PAX)

Pre-Environmental Study Update



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Agenda Item 12

May 26, 2021

Project Background



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- **2018: Railyard Alignments & Benefits (RAB) Study, led by SF Planning Dept.**
 - PAX Alignment Selected as preferred
- **2020-2021: PAX Pre-Environmental Study (SFCTA lead)**
 - Prop K Funding Appropriation
 - Technical Consultant Contract Award

Project History: RAB Study



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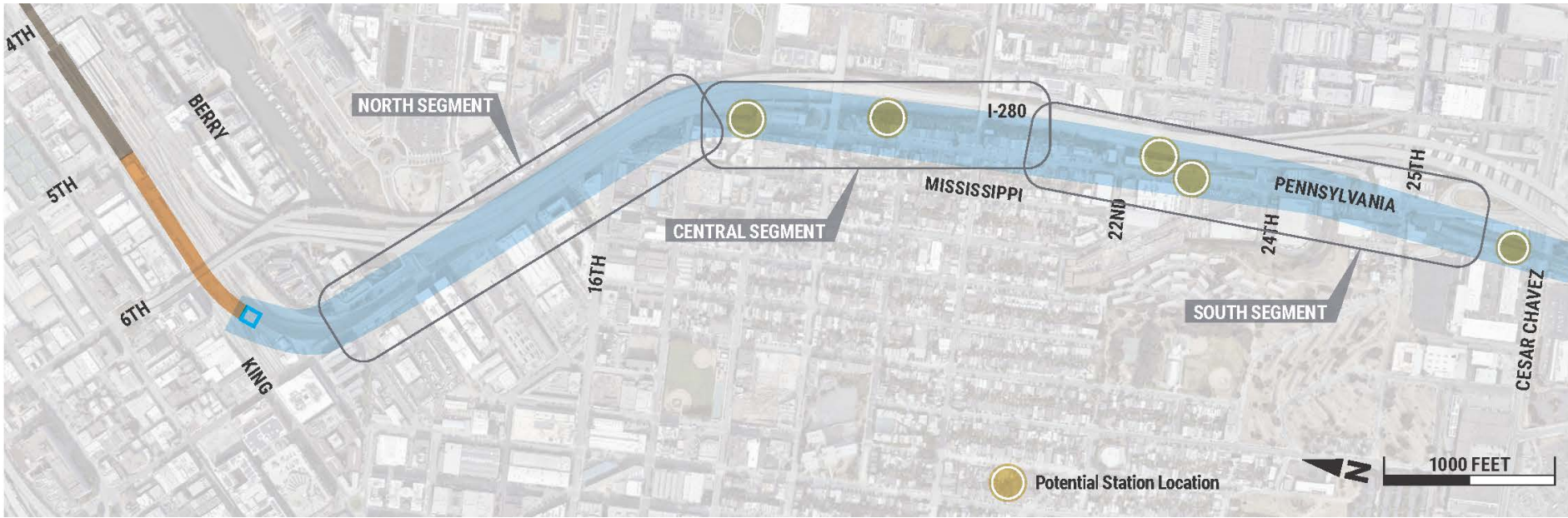


Project Study Area



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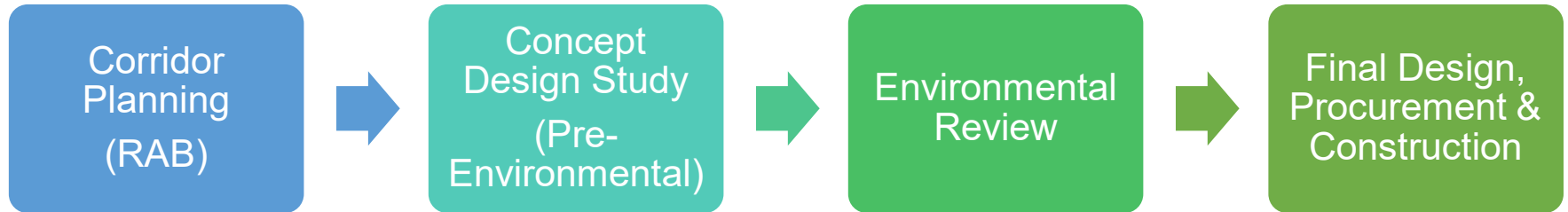
Inclusive of Potential Station Locations



PAX Development Process



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1. Downtown Extension (DTX)

- 2019 Record of Decision (ROD) from Federal Transit Administration (FTA)
- Peninsula Rail Memorandum of Understanding (MOU)

2. 4th and King Railyard Development

- Railyard MOU
- Multi-agency planning Process

3. Southeast Stations Study (SF Planning Dept.)

- 22nd Street Station options
- Infill station options in the Bayview

Schedule: Pre-Environmental Study



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Task	Aug '20	Sep '20	Oct '20	Nov '20	Dec '20	Jan '21	Feb '21	Mar '21	Apr '21	May '21	Jun '21	Jul '21	Aug '21	Sep '21
Evaluation Framework														
Alignment Alternatives														
Environmental Constraints														
Constructability Planning														
Cost and Risk														
Final Report														



A. Long Alignment

- Railyards to Cesar Chavez
- Requires **relocation of existing 22nd St Station**

B. Mid Length Alignment

- Railyards to south of 22nd St Station
- Allows for **reconfiguration of existing 22nd St Station**

C. Short Alignment

- Railyards to north of 22nd St Station
- Requires **no changes to existing 22nd St Station**

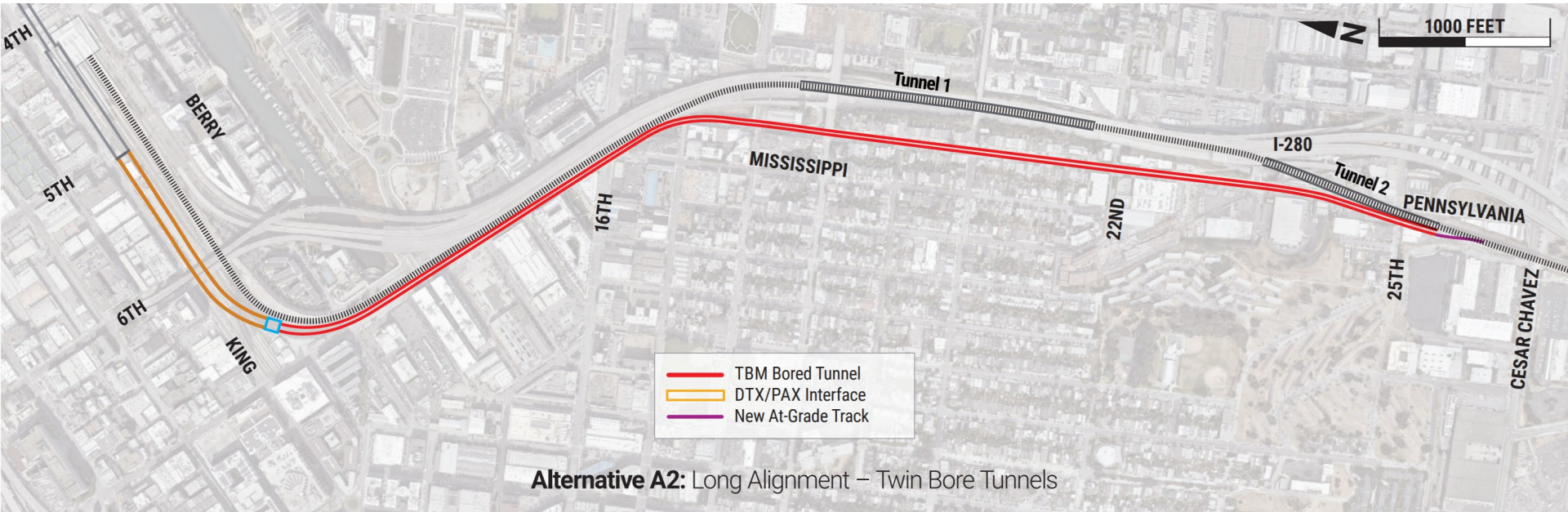
Alternative A: Long Alignment



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A1 - Single Bore Tunnel

A2 - Twin Bore Tunnel (shown)



Alternative A2: Long Alignment – Twin Bore Tunnels

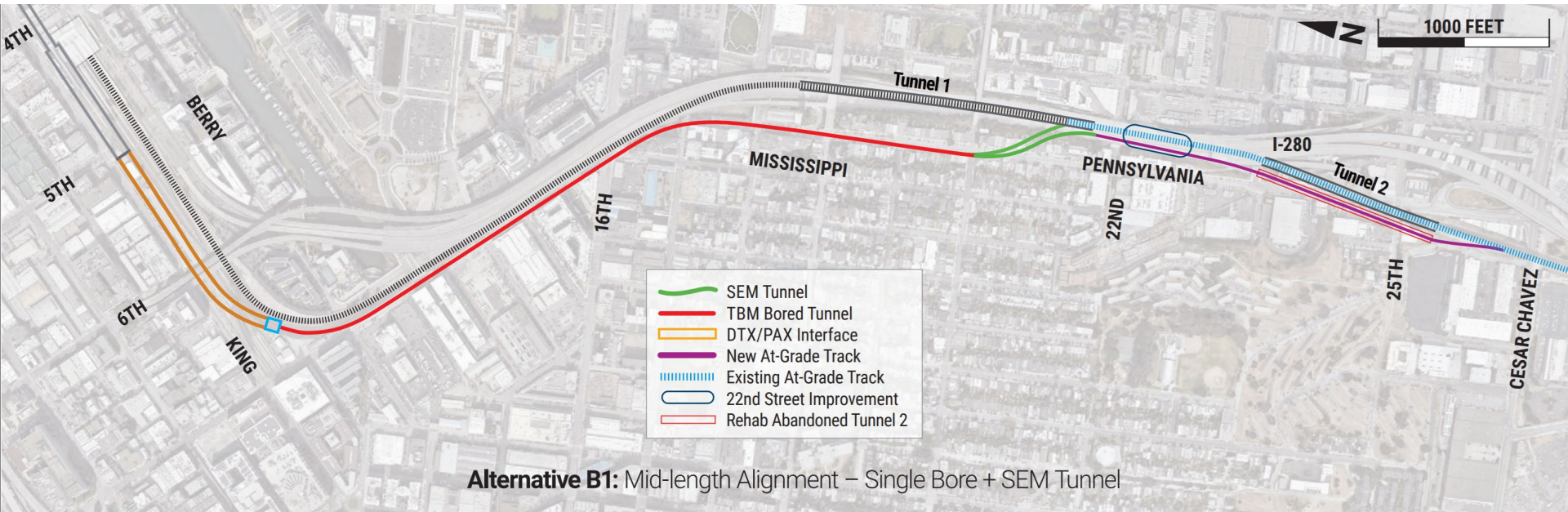
Alternative B: Mid - length Alignment



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B1 - Single Bore Tunnel with SEM (shown)

B2 - Twin Bore Tunnel with SEM

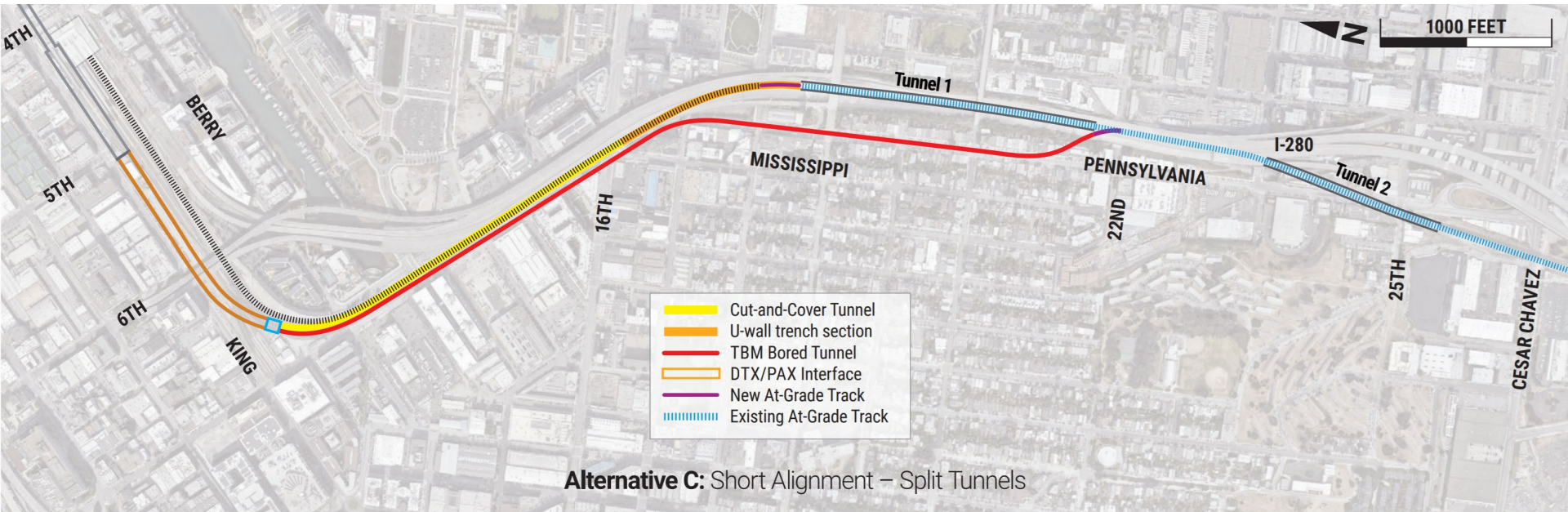


Alternative C: Short Alignment



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Split Tunnel with Cut-and-Cover northbound



Alternative C: Short Alignment – Split Tunnels

Evaluation Criteria



CATEGORY	CRITERIA
Project Goals	Improves Street Connectivity
	Improves Seismic Performance
	Improves Rail Operations
	Improves Surface Safety
Interfaces	DTX and Railyards Projects
	22nd Street Station Project
	ROW Impacts
	Infrastructure Conflicts
Construction Process	Constructability
	Geologic Profile
	Disruption to Rail Operations
	Access and Laydown Areas
Environmental Impact	Traffic and Transit
	Air Quality
	Noise and Vibration: Construction
	Noise and Vibration: Operational
	Cultural Resources: Archaeology
	Cultural Resources: Historic Properties
Cost, Schedule, Risk	Community
	Cost
	Schedule
	Risk

Next Steps



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- **Refinement of Concept Designs**
 - Interfaces: DTX/Railyards and Stations Study
 - Operations: Crossovers/Exits/Vent Zones
 - Capital Cost Estimates
 - Development and Construction Timelines
- **Outreach**
 - Preliminary Public Engagement (Summer)
- **Project Report**
 - Draft Review by agency partners (Summer)
 - Final Draft (September)

Thank you.



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