



# Middle Avenue Pedestrian & Bicycle Rail Crossing City Council

**August 27, 2019**

Middle Avenue Pedestrian & Bicycle Rail Crossing Study



# City Council action requested

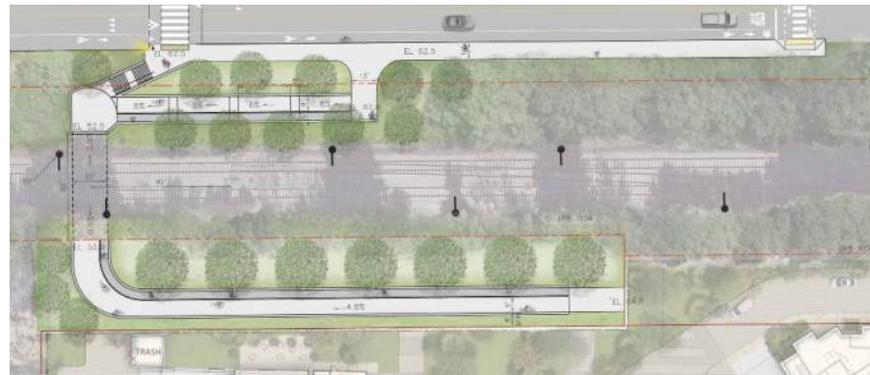
- Selection of preferred crossing concept



Concept 1



Concept 2



Concept 3

Middle Avenue Pedestrian & Bicycle Rail Crossing Study



# Background/History

**2009:** Middle Avenue selected as preferred crossing location

**2012:** Middle Avenue crossing location adopted by City Council in the El Camino Real/Downtown Specific Plan

**2016:** San Mateo County Transportation Authority (SMCTA) programmed funds for the project

**March 14, 2017:** Scope approved by City Council

# Community meeting #1

May 4, 2017

- **Crossing Types**

- Undercrossing
- Overcrossing
- Majority support undercrossing



- **Feedback Received**

- New Crossings on Alma Street
- Bike Lane on Middle Avenue
- Improvements to El Camino Real/ Middle Avenue Intersection



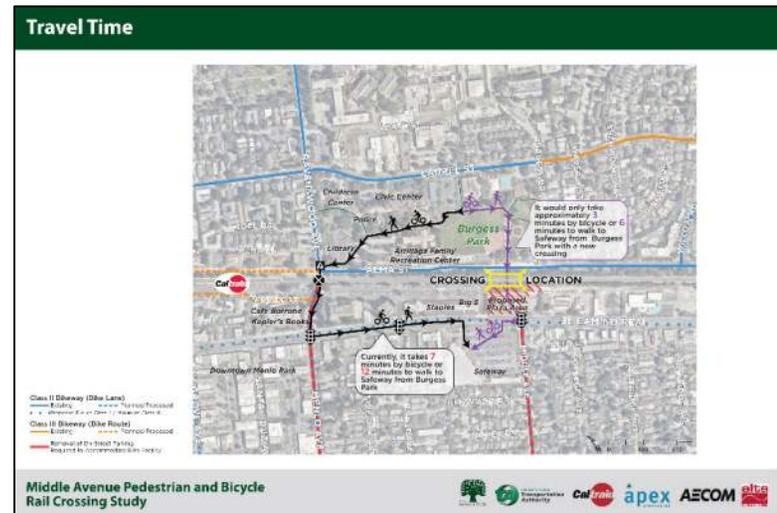
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# Community meeting #2

May 13, 2019

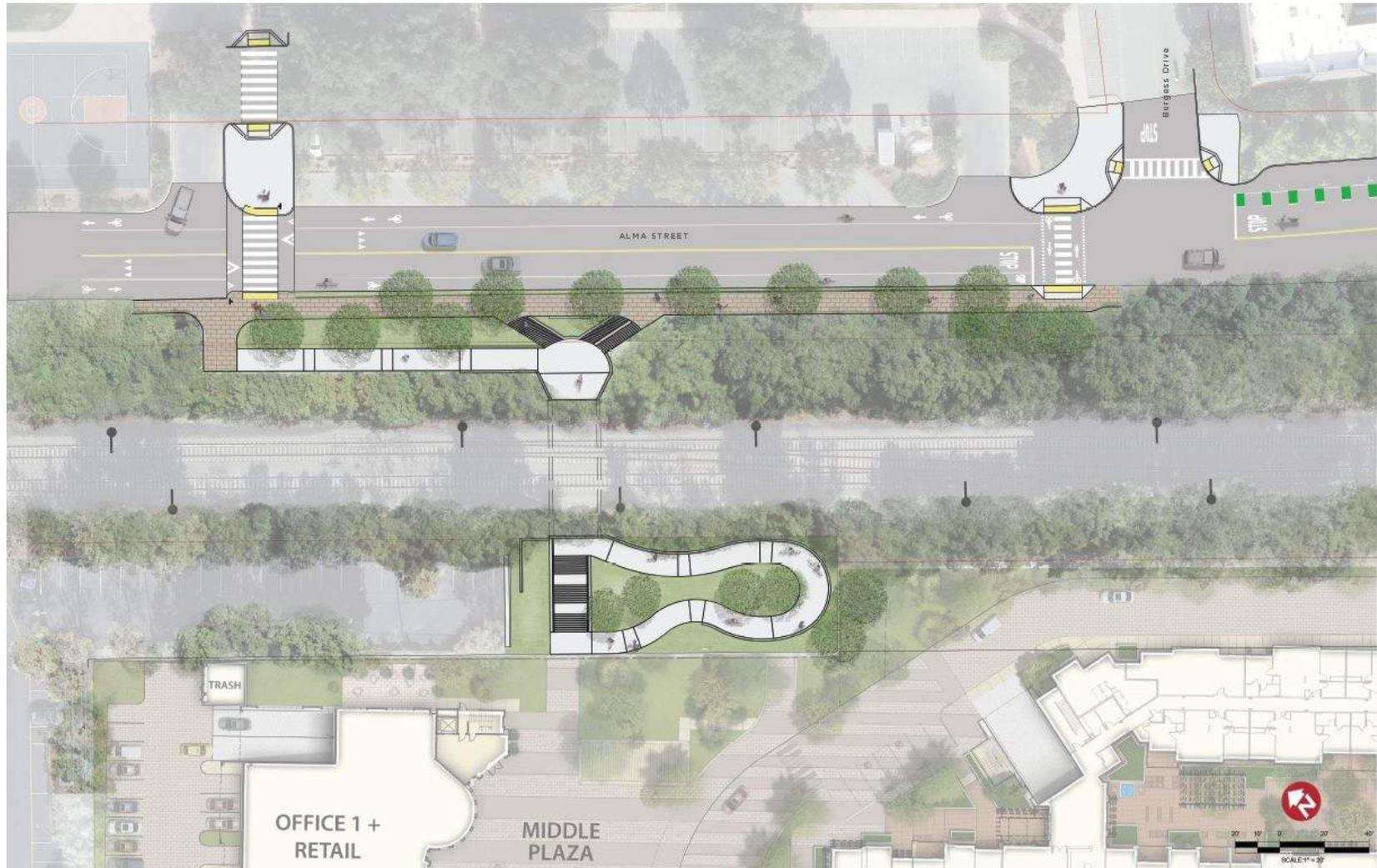
- **Undercrossing concepts**
  - Construction methods
  - Tunnel location
  - Stair and ramp layouts
- **Feedback Received**
  - Preference for shallower tunnel
  - Ensure bike and pedestrian safety on ramps
  - Connections on both sides



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# Concept 1 – Plan View



Middle Avenue Pedestrian & Bicycle Rail Crossing Study



# Concept 1 – 3D Rendering

(West side - looking south)



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# Concept 1 – 3D Rendering

(East side - looking west)



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# Concept 2 – Plan View



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# Concept 2 – 3D Rendering

(West side - looking north)



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# Concept 2 – 3D Rendering

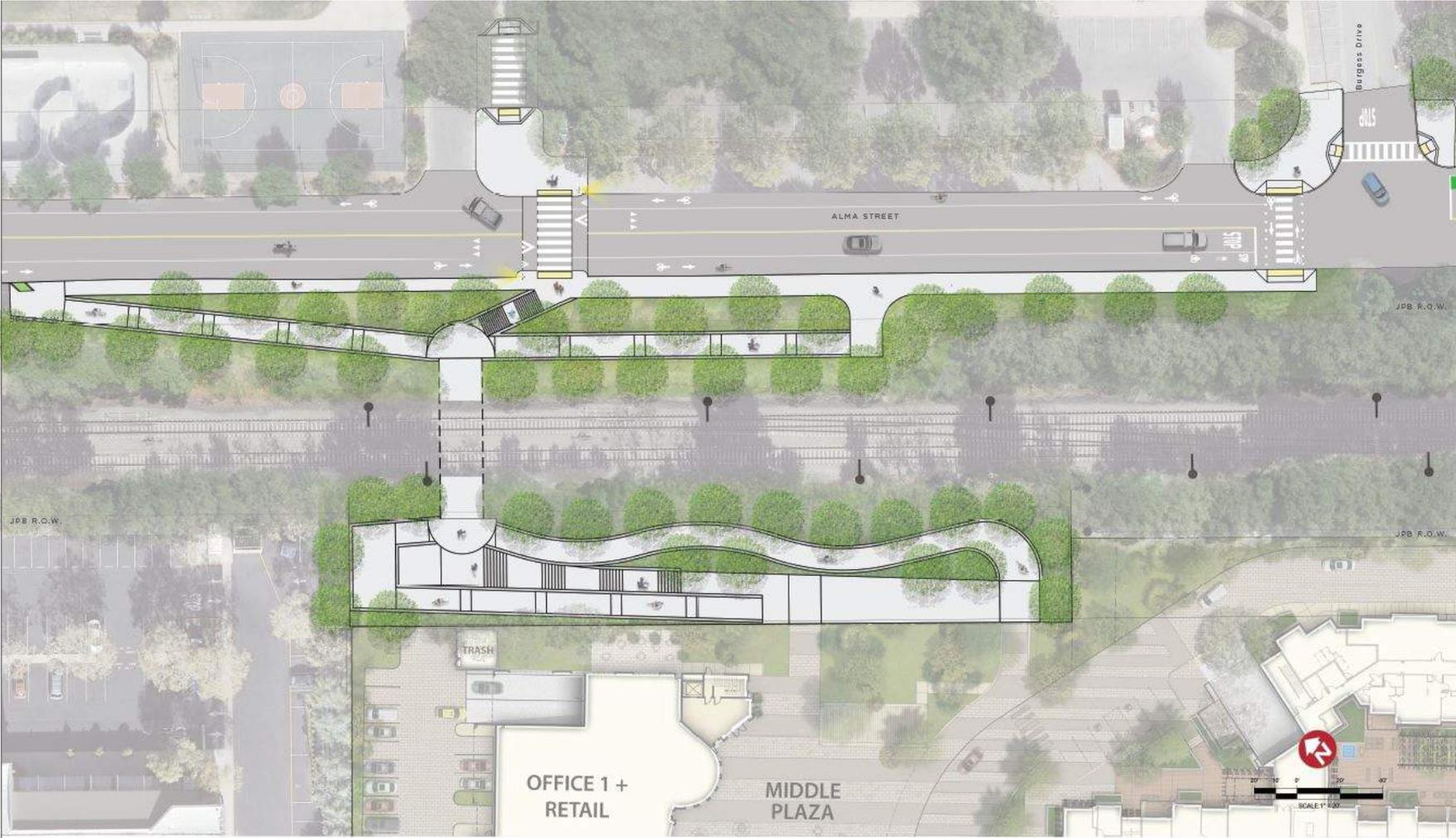
(West side – looking south)



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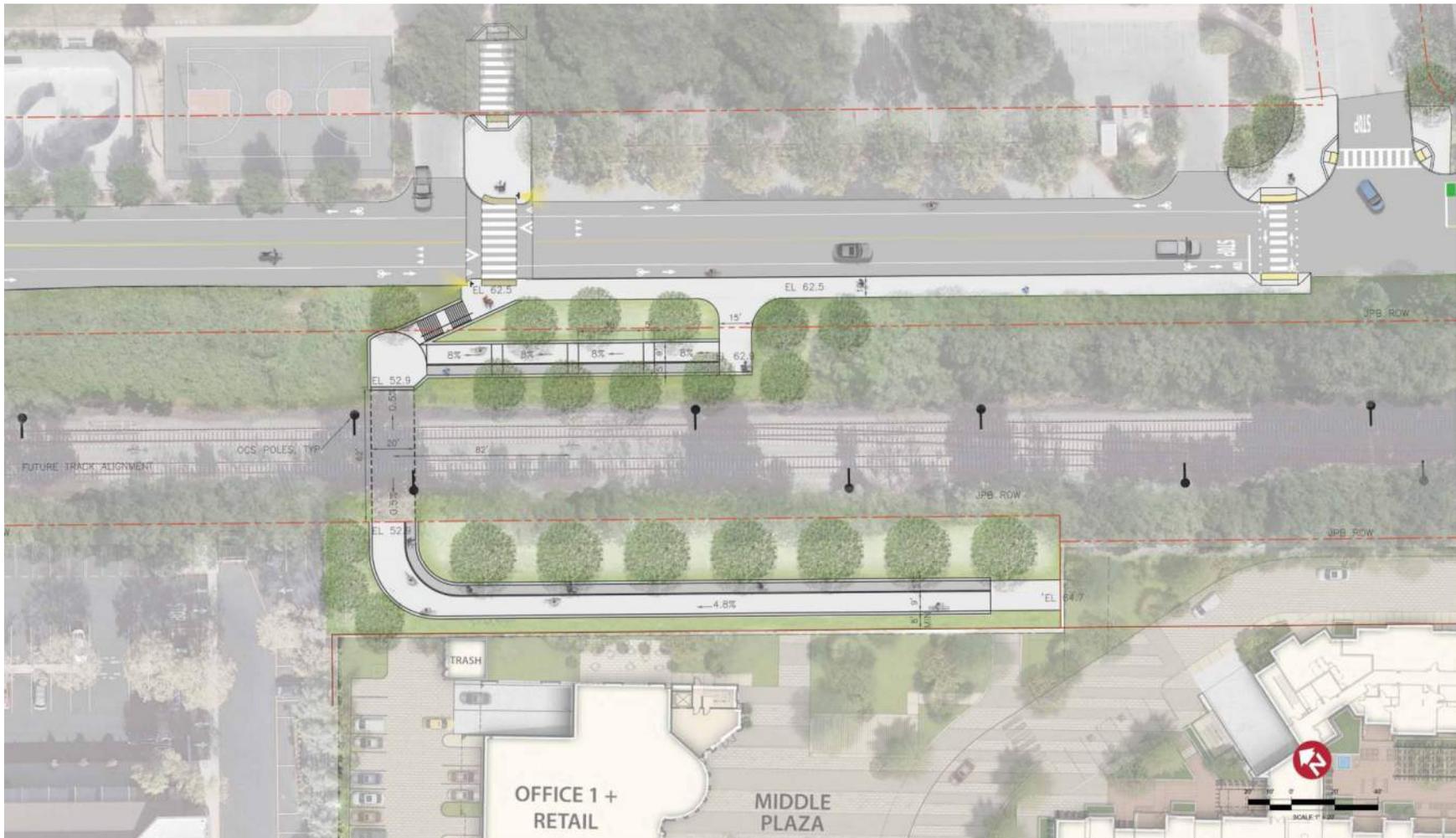
# Concept 3 – Plan View



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# Concept 3 – Plan View



## Middle Avenue Pedestrian & Bicycle Rail Crossing Study



# Concept 3 – 3D Rendering

(West side - looking north)



Middle Avenue Pedestrian & Bicycle Rail Crossing Study



# Concept 3 – 3D Rendering

(East side - looking north)



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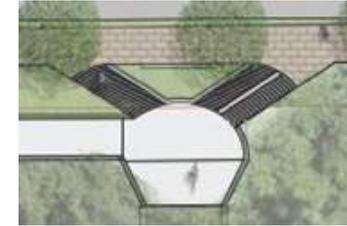
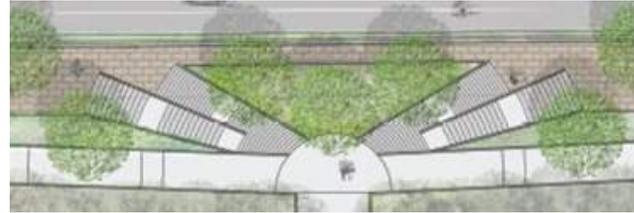
# Summary of Concepts

- Concept 1
  - Trench method, ~10-11 feet deep
  - Tunnel aligns with Middle Plaza
  - Tunnel coincides with crossover tracks
  - Construction requires full track closure
- Concept 2
  - Jack and bore method, ~20 feet deep
  - Tunnel aligns with Middle Plaza
  - Tunnel coincides with crossover tracks
  - Construction does not require track closure
  - Most costly construction
- Concept 3
  - Trench method, ~10-11 feet deep
  - Tunnel aligns with crosswalk to Burgess Park
  - Tunnel is outside crossover tracks
  - Construction requires closure of one set of track, allows flexibility

# Stair and Ramp Options

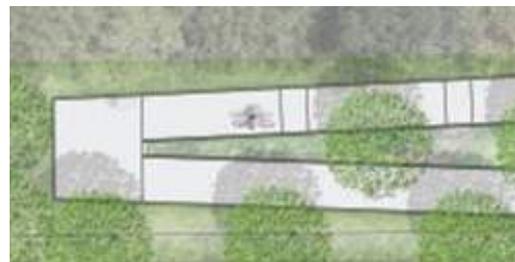
## Stairs

- On Diagonal
- Straight
- 90 or 180 degree Turns



## Ramps

- Curvilinear
- Straight
- 90 or 180 degree Turns



# Cost Estimate Summary

Concept	Cost
1	\$20-25M (\$14-18M)
2	\$35-40M
3	\$20-25M (\$15-20M)

## Cost Includes:

- Construction
- Utility Relocations
- Right-of-Way Acquisition
- Support Costs for:  
Design Services & Construction Management
- Escalation to 2022
- **Red** costs are after Value Engineering

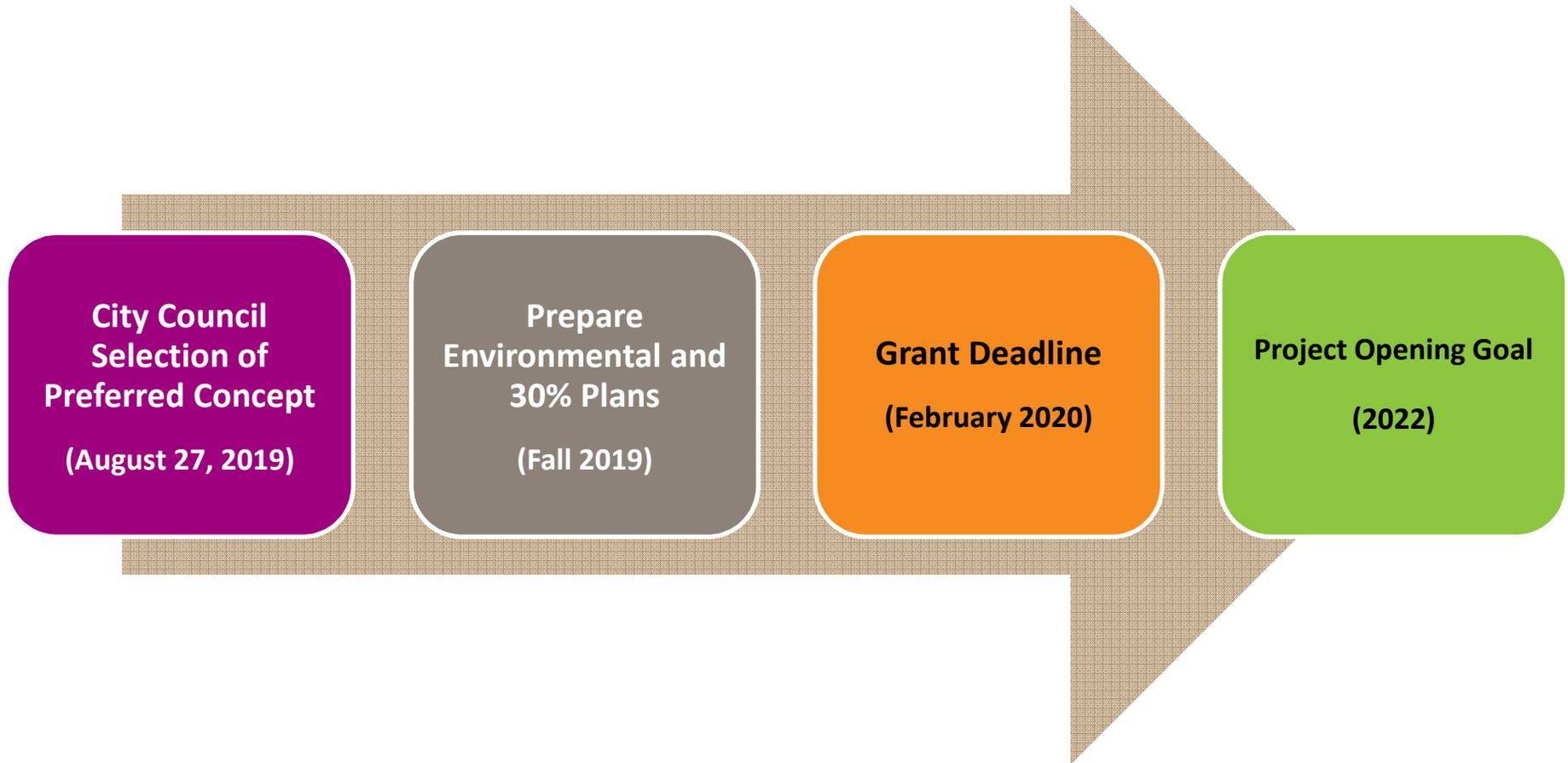
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# Complete Streets Commission

- Recommend concepts 1 and 3 to advance
- Additional feedback
  - Cargo and trailer bicycles
  - Safety: sightlines and dark areas
  - Connecting route improvements
  - Construction and utility relocation schedules
  - Parking restrictions on Alma Street
  - Design features

# Next Steps



Middle Avenue Pedestrian & Bicycle Rail Crossing Study



# City Council action requested

- Selection of preferred crossing concept



Concept 1



Concept 2



Concept 3

Staff Recommendation

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