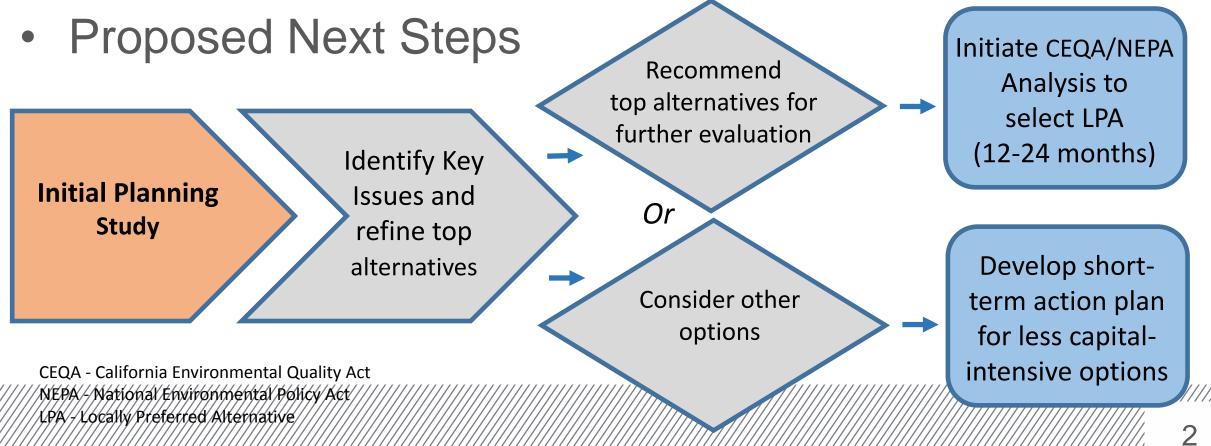
# Central Harbor Boulevard Transit Corridor Study



## Today's Update

- Performance Results for the 12 Alternatives
- City and Community Input Received to Date



## Study Phases and Schedule

- Purpose and Need
- Outreach 1
- Alternatives Development
- Outreach 2
- Alternatives Evaluation
- Draft Final Report
- Final Report

August 2015 - December 2016 February - April 2016 February 2016 - April 2017 February - April 2017 April - September 2017 December 2017 Early 2018

## Mode/Feature Options

#### **Enhanced Bus**



- Shares lanes with other cars
- Receives priority at traffic signals and uses bypass lanes at intersections
- Includes state-of-the art stops with ticket machines
- Carries around 70 people
- Project Cost: \$

#### **Bus Rapid Transit**



- Includes all Enhanced Bus features, but travels on a dedicated bus-only lane
- Carries around 120 people in a longer, 60-foot bus
- Project Cost: \$\$

#### Streetcar



- Shares lanes with cars but travels on its own track embedded in the road
- Powered by overhead wires
- Includes modern stops with ticket machines and allows riders to board from front or rear doors
- Carries up to 150 people (3x as much as regular buses)
- Project Cost: \$\$\$

#### "Rapid" Streetcar



- Includes all Streetcar features, but uses a dedicated streetcar-only lane
- Faster than a regular streetcar or bus
- Project Cost: \$\$\$\$



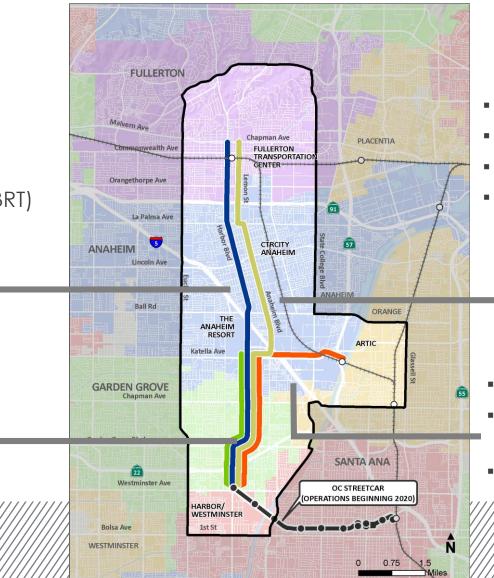
## 12 Conceptual Alternatives

### HARBOR LONG

- H-2: Harbor Long Streetcar
- H-3: Harbor Rapid Streetcar
- H-4: Harbor Enhanced Bus
- H-5: Harbor Bus Rapid Transit (BRT)

### HARBOR SHORT

H-1: Harbor Short Streetcar



### ANAHEIM/LEMON

- L-1: Anaheim/Lemon Streetcar
- L-2: Anaheim/Lemon Rapid Streetcar
- L-3: Anaheim/Lemon Enhanced Bus
- L-4: Anaheim/Lemon BRT

### KATELLA

- K-1: Katella Streetcar
- K-2: Katella+ Anaheim/Lemon Enhanced Bus
- K-3: Katella + Harbor Hybrid

## **Evaluation Criteria**

- Transit Performance (20%)
- Land Use (15%)
- Connectivity (18%)
- Constraints (15%)
- Mode Choices/User Experience (17%)
- Cost-Effectiveness (15%)
- City and Community Input (Qualitative)

## **Evaluation Scores**

	DESCRIPTION	Average Score						
ALTERNATIVE		Transit Performance	Land Use	Connectivity	Constraints	Choice/User Experience	Cost Effectiveness	Total Score <sup>2</sup>
H3	Harbor Rapid Streetcar <sup>1</sup>	18	11	14	7	14	11	74
H2	Harbor Long Streetcar	17	11	12	10	14	10	73
H5	Harbor BRT <sup>1</sup> *	17	11	12	8	12	14	73
L1	Anaheim-Lemon Streetcar	17	10	12	8	13	8	68
L4	Anaheim-Lemon BRT <sup>1</sup> *	14	11	12	6	12	12	66
L2	Anaheim-Lemon Rapid Streetcar <sup>1</sup>	15	10	14	5	14	8	65
K1	Harbor-Katella Streetcar*	16	11	10	11	12	6	65
H1	Harbor Short Streetcar*	17	9	8	13	10	8	64
К2	Katella + Anheim-Lem Enhanced Bus	7	11	11	11	7	11	57
L3	Anaheim-Lemon Enhanced Bus*	10	10	9	11	5	11	56
К3	Katella + Harbor Hybrid	9	11	11	10	9	7	56
H4	Harbor Enhanced Bus*	9	10	10	13	4	9	55
Operates in a de	dicated transit lane for at least 50% of th	e alignment.						
Due to rounding	, the total scores may not equal the sum	of the category s	scores.					
Extends to MacA	rthur Boulevard, consistent with existing	g Bravo! Route 54	43 service ar	ea.				

## **Technical Evaluation Summary**

- Higher-capacity, higher-visibility modes offer significant ridership benefits and travel time improvements
  - Rapid streetcar, streetcar, and bus rapid transit
- Top five scoring alternatives:
  - H3 Harbor Rapid Streetcar
  - H2 Harbor Long Streetcar
  - H5 Harbor BRT
  - L1 Anaheim-Lemon Streetcar
  - L4 Anaheim-Lemon BRT

## **Technical Input on Alternatives**

Key technical issues identified by city staff:

- Dedicated transit lanes
- Current and future street capacity (Master Plan of Arterial Highways)
- Center-running alignments with center stations not supported
- Anaheim-Lemon as a viable transit corridor
- Underlying changes to bus service south of Westminster Avenue
- Consideration of complete streets concepts/avoidance of impacts to bike lanes

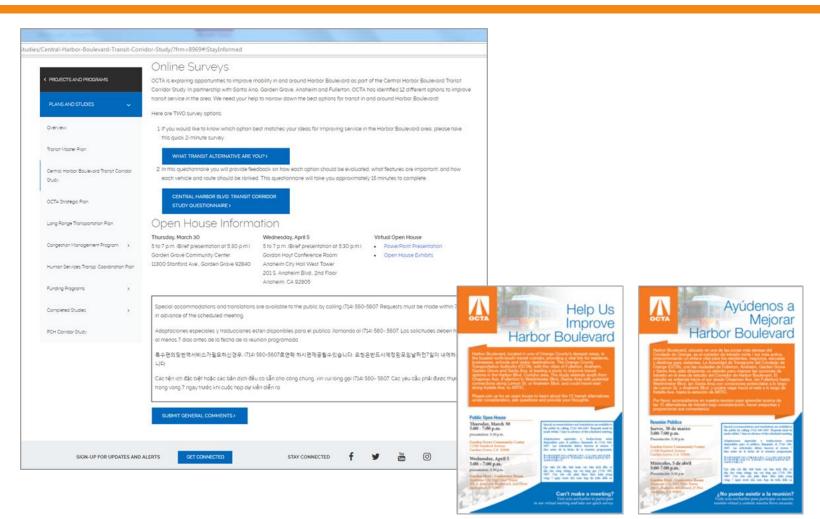
## **Council Input on Alternatives**

- Fullerton Requested a council presentation for January 2018
- Anaheim Adopted Resolution in January 2017 stating opposition to a streetcar system
- Garden Grove Council presentation provided in February, and general support for the study was noted
- Santa Ana Council presentation provided in April, and general support for the study was noted

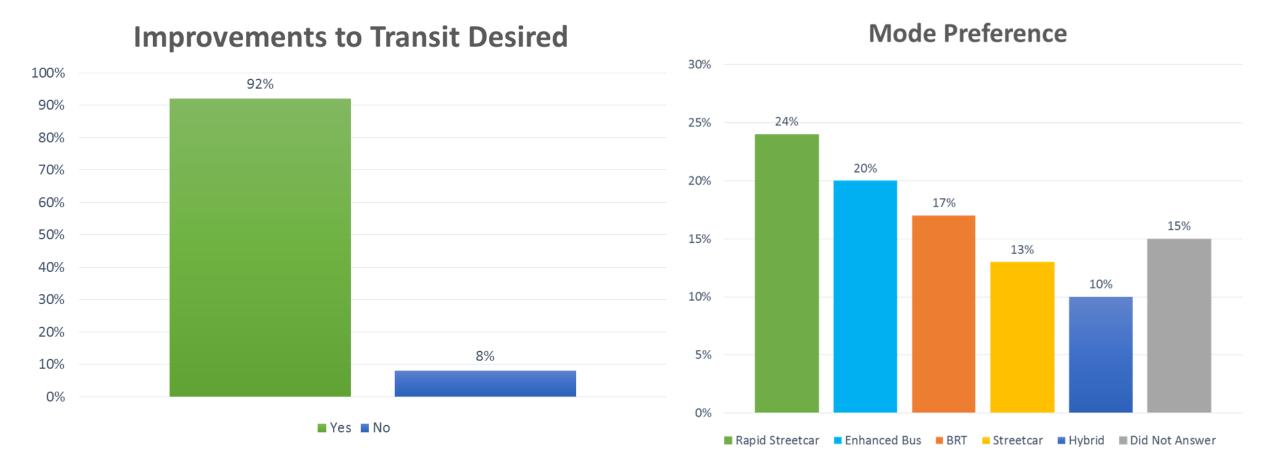
## **Community Input**



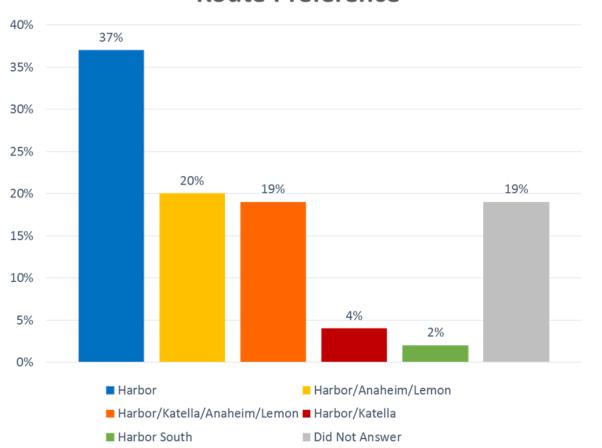




## **Online Survey**



## **Online Survey**



**Route Preference** 

Most Preferred Transit Characteristics

Frequency of Service	(68%)
Hours of Operation	(49%)
Overall Travel Time	(41%)
Stop Locations	(29%)
Cost to Ride	(28%)
<b>Real-Time Information</b>	(24%)



- A. Offer council presentations to each of the corridor cities for further input
- B. Continue to work with corridor cities technical staff to identify key issues for any subsequent efforts
- C. Finalize the report and incorporate feedback received from the cities, stakeholders, and public; and report feedback to the Board of Directors