

# Measure M2 Next 10 Delivery Plan: Market Conditions Key Indicators Analysis and Forecast

# Orange County Transportation Infrastructure Construction Cost Pressure Index, Fall 2021

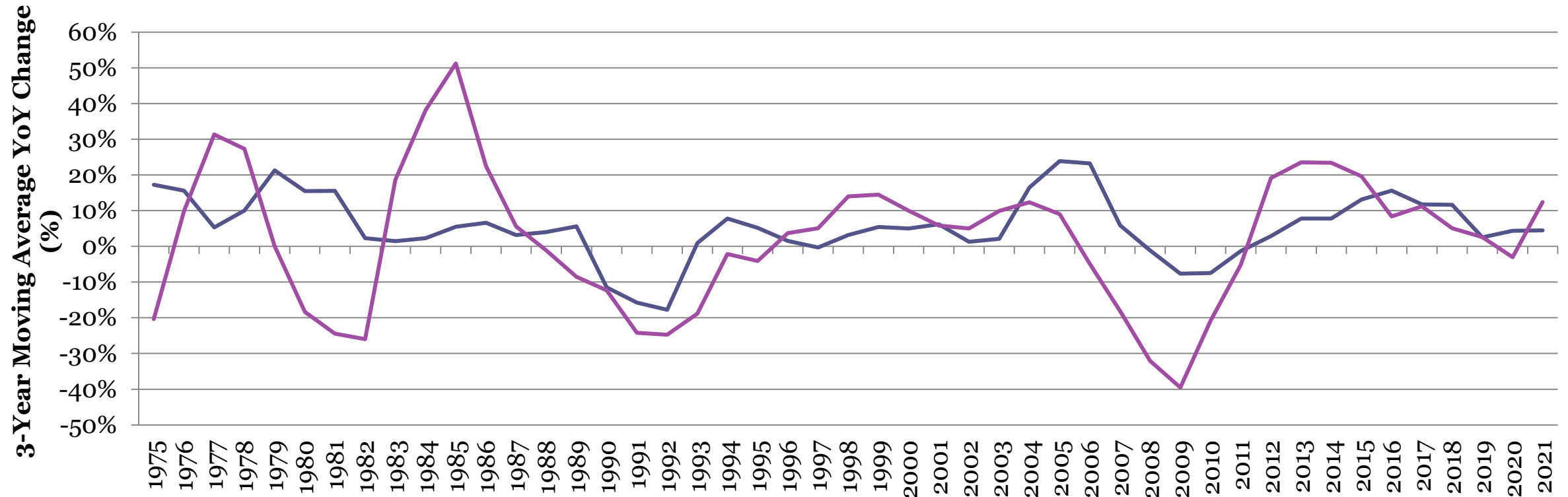
Orange County Business Council (OCBC)

September 2021

# Orange County Transportation Infrastructure Construction Cost Pressure Index Model Components

- Economic Trends - State-level building permits and unemployment rate (Census and California Employment Development Department {EDD}).
- Material Costs - Construction aggregate, PCC pavement, PCC structural concrete, structural steel and bar steel (Caltrans).
- Labor Costs - Localized construction wages of NAICS defined sectors provided by Bureau of Labor Statistics (BLS).
- Economic Conditions - Tight economy in 2002-2005 and slack economy in 2007-2011.

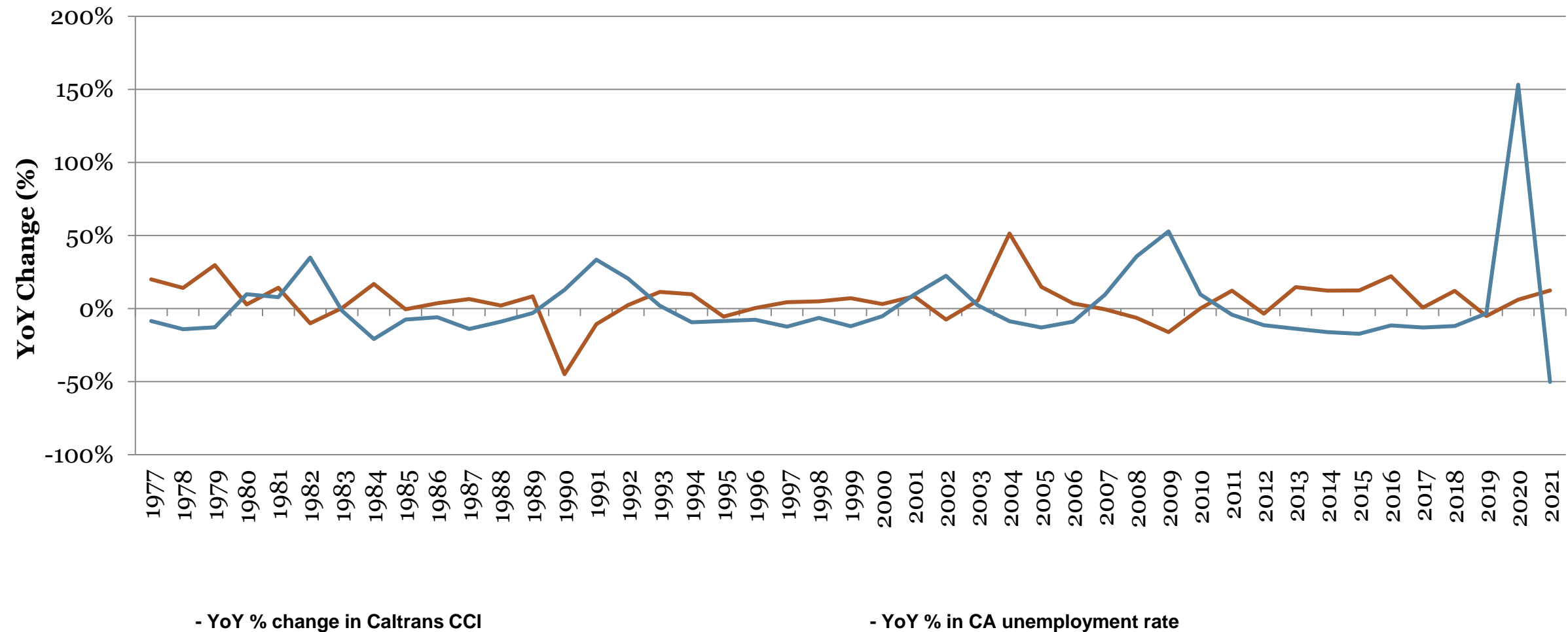
# 3-Year Moving Average of Year-Over-Year Percent Change in Caltrans CCI and Building Permits



- 3-year moving average of % of change in Caltrans CCI

- 3-year moving average of % of change in CA building permits

# Year-Over-Year Percent Change in Caltrans CCI and CA Unemployment Rates



# Forecast and Range of Orange County Transportation Infrastructure Cost Increases by Index Value

- 2021 - Forecasted Index Value: 5
- 2022 - Forecasted Index Value: 4
- 2023 - Forecasted Index Value: 4
- 2024 - Forecasted Index Value: 4

Range of Cost Fluctuations by Index Score			
Index	Low	Medium	High
0	-17%	-9.5%	-2%
1	-2%	-0.5%	1%
2	1%	1.5%	2%
3	2%	4%	6%
4	6%	8.5%	11%
5	11%	25.5%	40%

# Impacts of the Pandemic Become Apparent

- Significant building permit issuance in Q1 2021 causes spike in estimate full-year building permits;
- California unemployment rates expected to continue to decline, sees slight jump in Q1 2021;
- Labor shortages push annual wages higher at the end of 2020; and
- Building materials (PCC structure and steel structure) see price jumps in 2021.

## Year-over-Year Changes in California Building Permits, California Unemployment Rate and Orange County Construction Labor Costs, 2016-2021

Year	California Building Permits	% change year-on-year	California Unemployment Rate	% change year-on-year	OC Construction Labor Costs (avg. annual wage)	% change year-on-year
2016	102,350	4.2%	5.5%	-11.6%	\$67,179	3.8%
2017	114,780	12.1%	4.8%	-12.9%	\$71,474	6.4%
2018	113,502	-1.1%	4.2%	-12.0%	\$74,669	4.5%
2019	109,904	-3.2%	4.1%	-3.4%	\$77,289	3.5%
2020	104,554	-4.9%	10.3%	+153%	\$81,460	5.4%
2021*	151,850	45.2%	5.1%	-50.2%	\$81,656**	<1%

\*2021 values projected from year-on-year changes in quarterly data, 2<sup>nd</sup> quarter 2020 to 2<sup>nd</sup> quarter 2021

\*\* 2021 values projected from year-on-year changes in quarterly data, 1<sup>st</sup> quarter 2020 to 1<sup>st</sup> quarter 2021

Q1 – Quarter 1

# OCBC Infrastructure Construction Cost Forecast

- Systematic Risks - currently experiencing large fluctuations due to COVID-19
  - Supply chain constraints
  - Direct measures of labor and materials cost continuing to fluctuate

## OCBC OC Transportation Infrastructure Construction Cost Index Score, 2020-2024

Year	Index Score	Range of Cost Fluctuation
2021	5	11% to 40%
2022	4	6% to 11%
2023	4	6% to 11%
2024	4	6% to 11%

- Idiosyncratic Risks - not predictable and therefore not in model
  - Pent up demand may continue to drive costs higher
  - Shifting regulatory environment due to COVID-19
  - Future potential economic shutdowns related to COVID-19 spread/delta variant



# Questions