

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

Orange County Transportation Infrastructure Construction Cost Pressure Index, Fall 2020

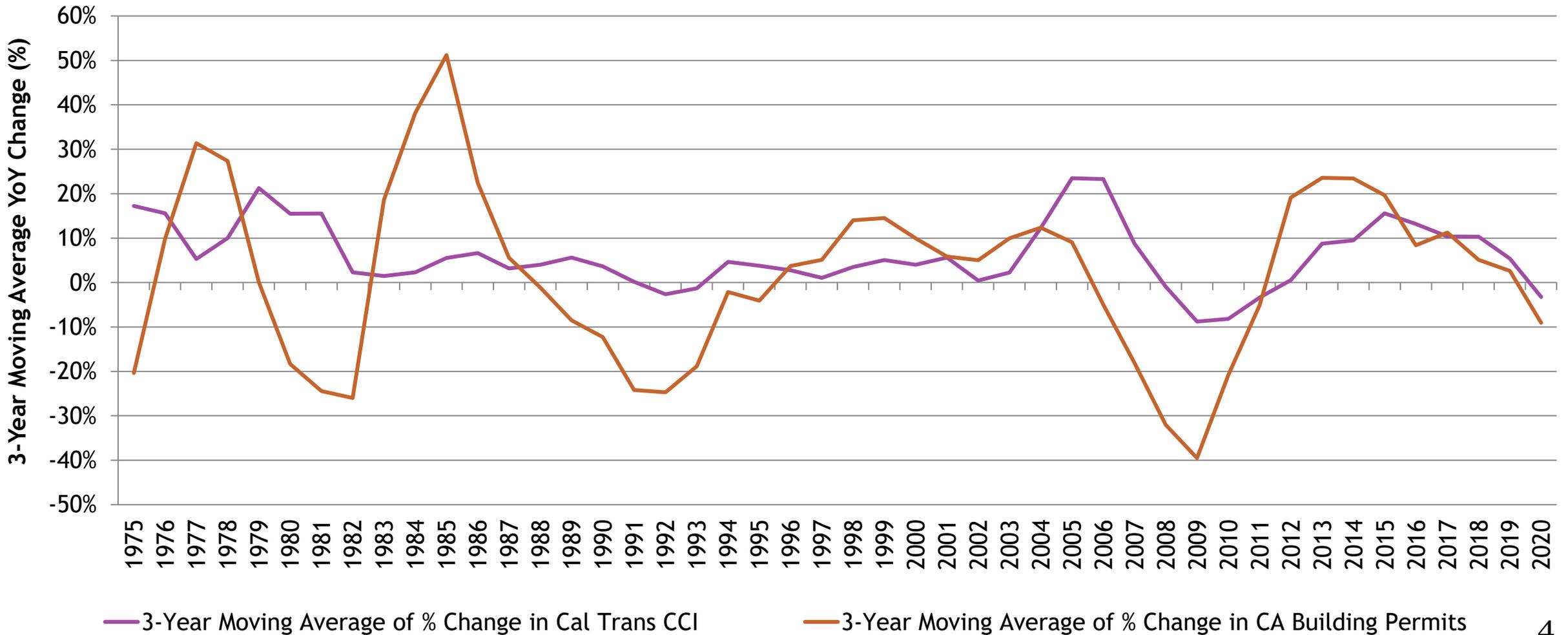
Orange County Business Council

September 2020

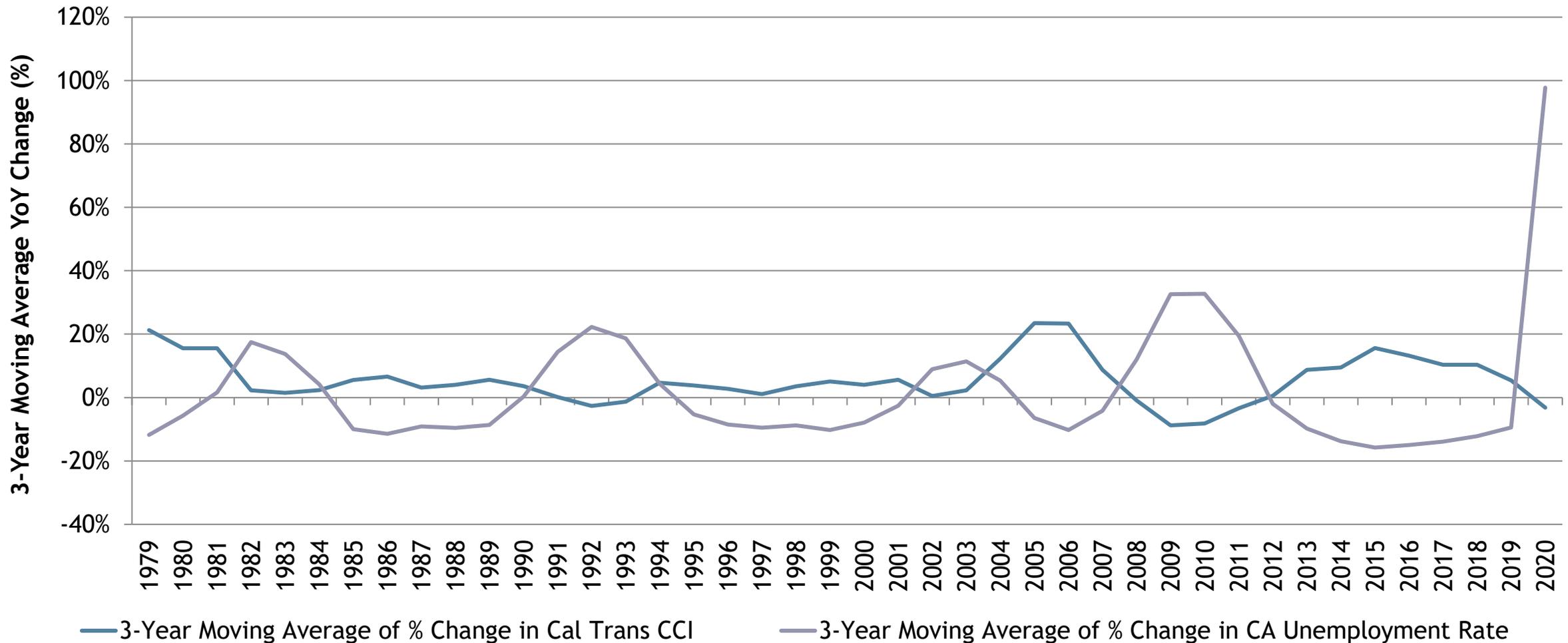
Orange County Transportation Infrastructure Construction Cost Pressure Index Model Components

- 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 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

- 2020 - Forecasted Index Value: 0
- 2021 - Forecasted Index Value: 1
- 2022 - Forecasted Index Value: 1
- 2023 - Forecasted Index Value: 3

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%

Cost Pressures Have Shifted, Both Structurally and Due to COVID-19

- Statewide building permit issuance continues to decline;
- California unemployment rate quadrupled in Q2 2020 relative to Q2 2019 (4% to 16.6%);
- Increasing, yet uncertain Orange County construction labor costs; and
- Building material costs have nearly all declined.

Year-over-Year Changes in California Building Permits, California Unemployment Rate and Orange County Construction Labor Costs, 2016-2019

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%	-12.1%	\$74,669	4.5%
2019	109,904	-3.2%	4.0%	-4.8%	\$77,289	4.5%
2020*	84,707	-23%	16.6%	315%	\$80,743 **	3.7%

* 2020 values projected from year-on-year changes in quarterly data, 2nd quarter 2019 to 2nd quarter 2020.

** Based on 1st quarter 2020 data.

OCBC Infrastructure Construction Cost Forecast

- Systematic Risks - currently experiencing large fluctuations due to COVID-19
 - Construction/building environment
 - State’s economy influencing demand and cost
 - Direct measures of labor and materials cost

OCBC OC Transportation Infrastructure Construction Cost Index Score, 2020-2023		
Year	Index Score	Range of Cost Fluctuation
2020	0	-17% to 2%
2021	1	-2% to 1%
2022	1	-2% to 1%
2023	3	2% to 6%

- Idiosyncratic Risks - not predictable and therefore not in model
 - Tariffs and associated effects on cost of materials, from changing trade policy
 - Regulatory requirements/changes creating additional hurdles to the bidding process
 - Future potential economic shutdowns related to COVID-19 spread/second wave

Questions