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2021 Annual Infrastructure Construction Cost Inflation Estimate

January 11, 2021

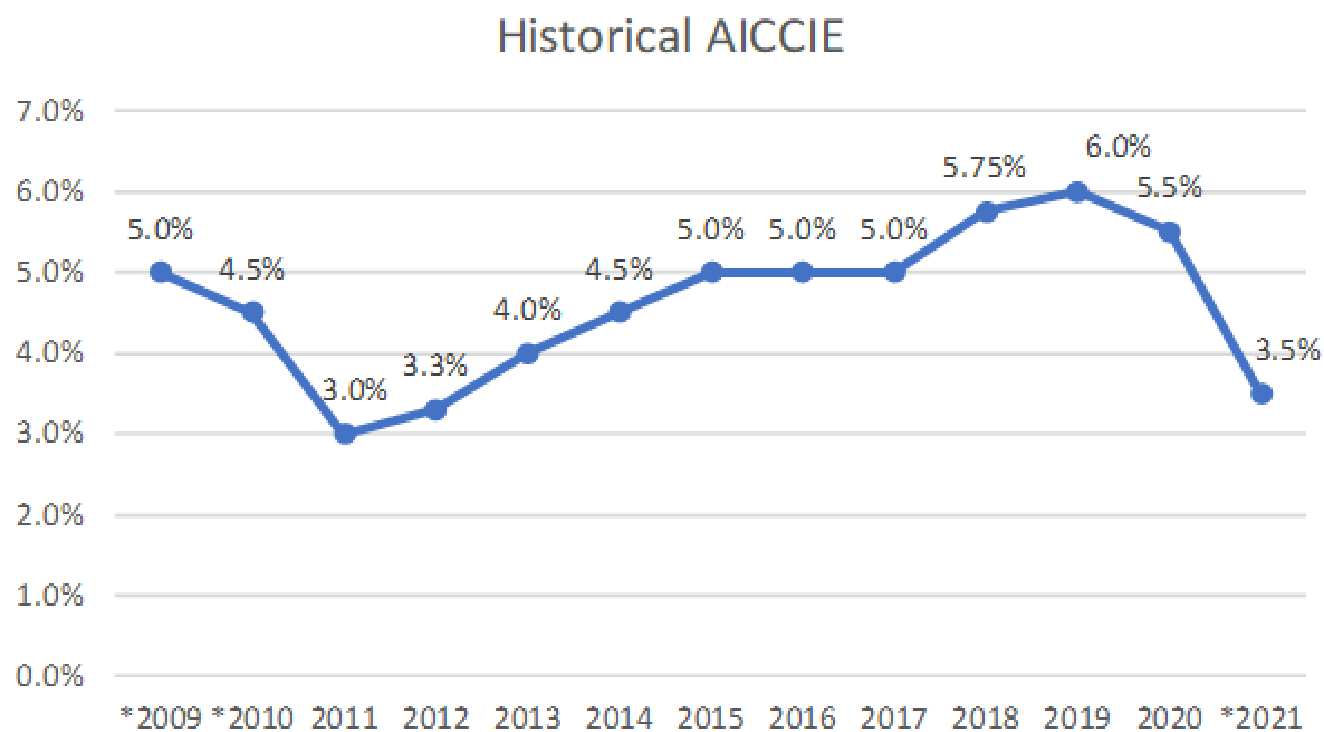
Annual Infrastructure Construction Cost Inflation Estimate (AICCIE)

- Today's action item: Adopt the AICCIE for CY 2021

- AICCIE: projected rate of construction cost escalation for the upcoming calendar year, used to:
  - Forecast costs for the 2-Year Capital Budget & 10-Year Capital Plan
  - Annually adjust developer impact fees
  - Update FRRM and other city forecasting tools
  - Adjusts property tax baseline for Transbay properties

AICCIE Recommendation CY2021

- ORCP recommends an AICCIE of 3.5% for CY 2021
- Construction cools, but COVID impacts keep costs up
- In line with previous recession rates



*prior to or pending CPC acceptance

Historical Retrospective Escalation Indices

Construction Index	Description	2015	2016	2017	2018	2019	Sept 2020	Nov 2020
Turner Building Cost Index	Change in costs of non-residential building construction nationwide	4.5%	4.8%	4.2%	5.6%	5.5%	5.5%	0.8%
BLS New Construction PPI	Change in output price of new non-residential construction	1.7%	0.6%	3.5%	3.3%	5.6%	2.1%	1.3%
BLS Maintenance Contractor PPI	Change in costs of price for work done to maintain and repair non-residential buildings	2.0%	1.3%	3.1%	2.7%	5.0%	1.3%	1.5%
BLS SF Metro CPI	Change in cost of local consumer goods	2.6%	3.1%	3.4%	4.3%	2.7%	1.6%	0.7%
BLS SF Metro Employment Cost Index	Change in employment cost (averages Total Compensation and Wages/Salaries)	2.2%	2.2%	5.8%	6.2%	2.6%	2.9%	3.5%
ENR CCI – San Francisco	Change in SF *common* labor and materials	2.4%	3.6%	4.2%	0.3%	2.4%	5.2%	3.2%
ENR BCI – San Francisco	Change in SF *skilled* labor and materials	2.6%	3.7%	4.8%	0.5%	4.2%	6.0%	5.3%
TBD Consultants Bid Index	Change in construction bid cost for an indexed simple new construction project in SF	12.5%	11.9%	2.7%	0.2%	9.8%	2.8%	2.6%
AICCIE	City of SF projected estimate for escalation in the calendar year listed (prepared the previous October)	5.0%	5.0%	5.0%	5.75%	6.0%	5.5%	5.5%

- 2020 average across all listed indices: 2.4% (3.4% in October & 4.6% in 2019)
- 2020 average across all local indices in shaded rows: 3.0% (3.7% in October & 4.3% in 2019)

2021 SF Experts Projected Escalation

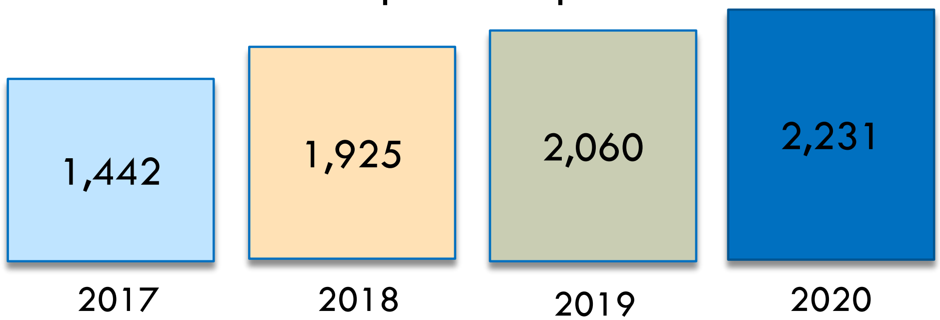
Organization	2021 Estimate
Stanford	3
UCSF	5
Sightlines (academic institutions)	3.6
SFO	2-3
SFPUC	4-5
Port	3.5
TBD Construction Consultants	1
M. Lee Corporation	5
Pankow	3-4
Cumming Construction	3
Saylor Consulting Group	4
Average	***3.5***

City Agencies & local academic institutions are using an avg rate of 3.69% for 2021

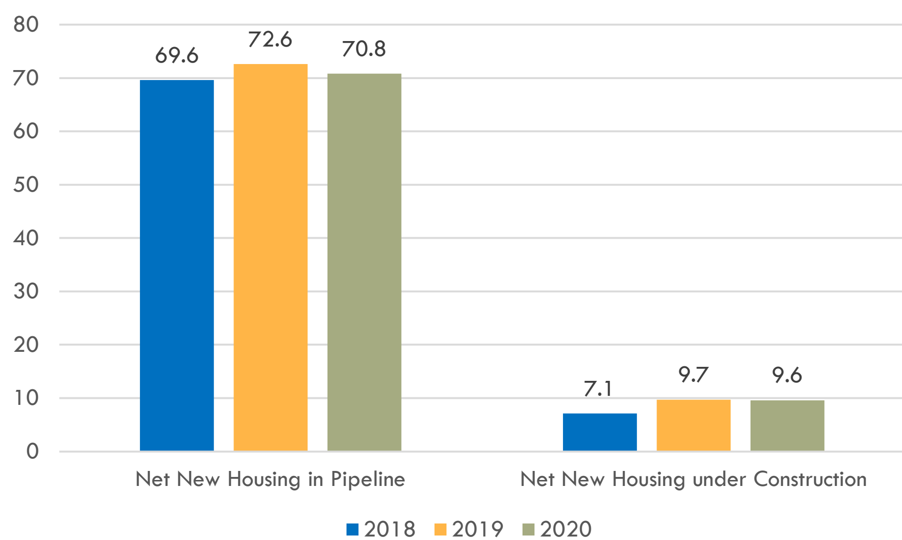
Industry experts are estimating SF 2021 escalation in the range of 1% to 5%

SF Planning Pipeline Statistics

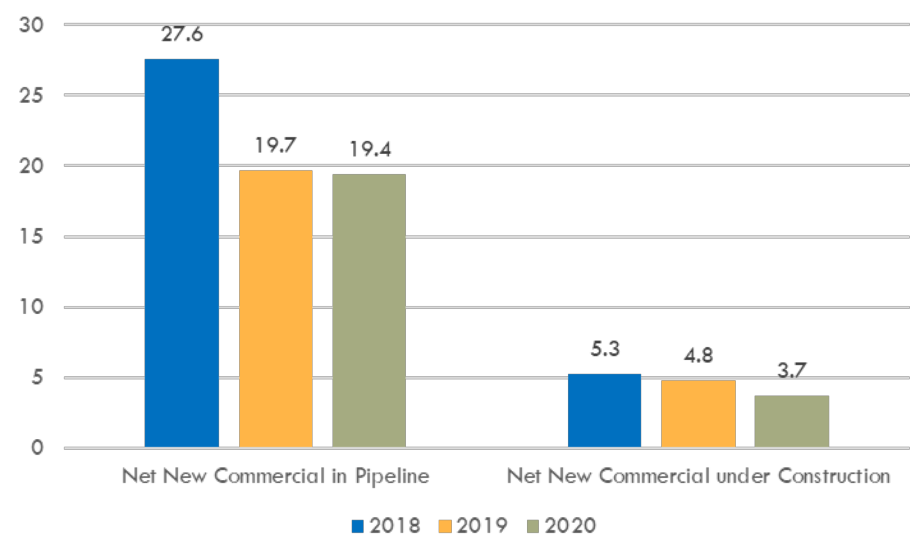
Projects in Pipeline



YOY Housing Construction Growth
(K Units)

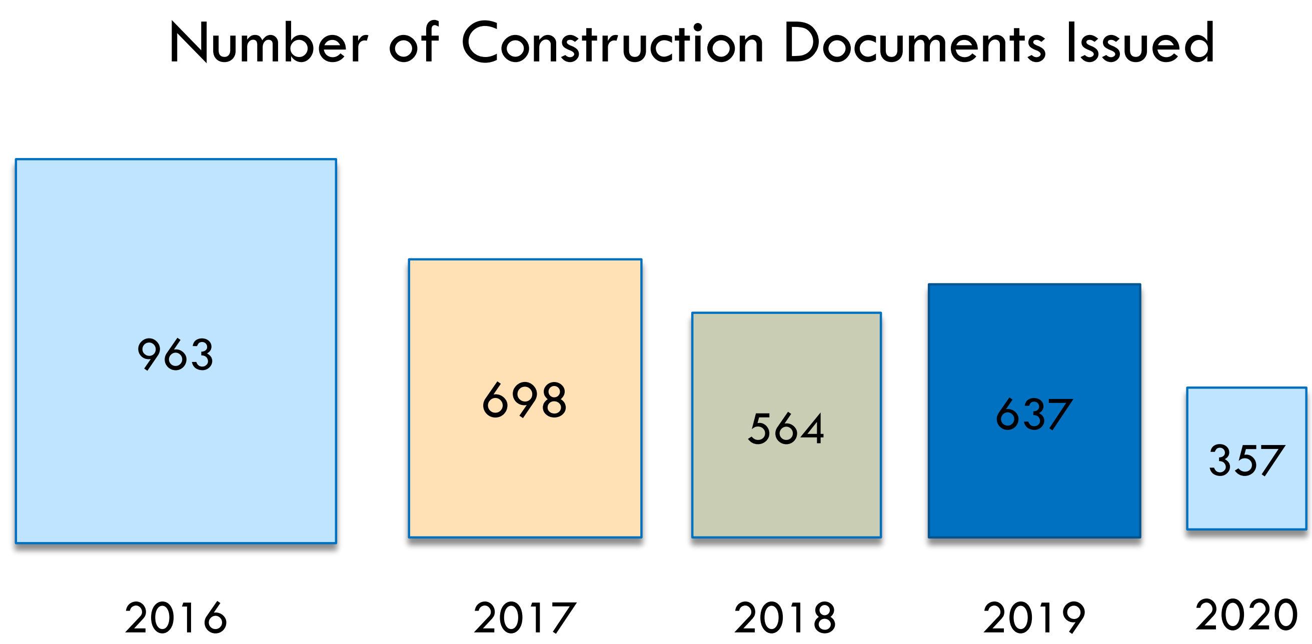


YOY Commercial Construction Growth
(M sqft)



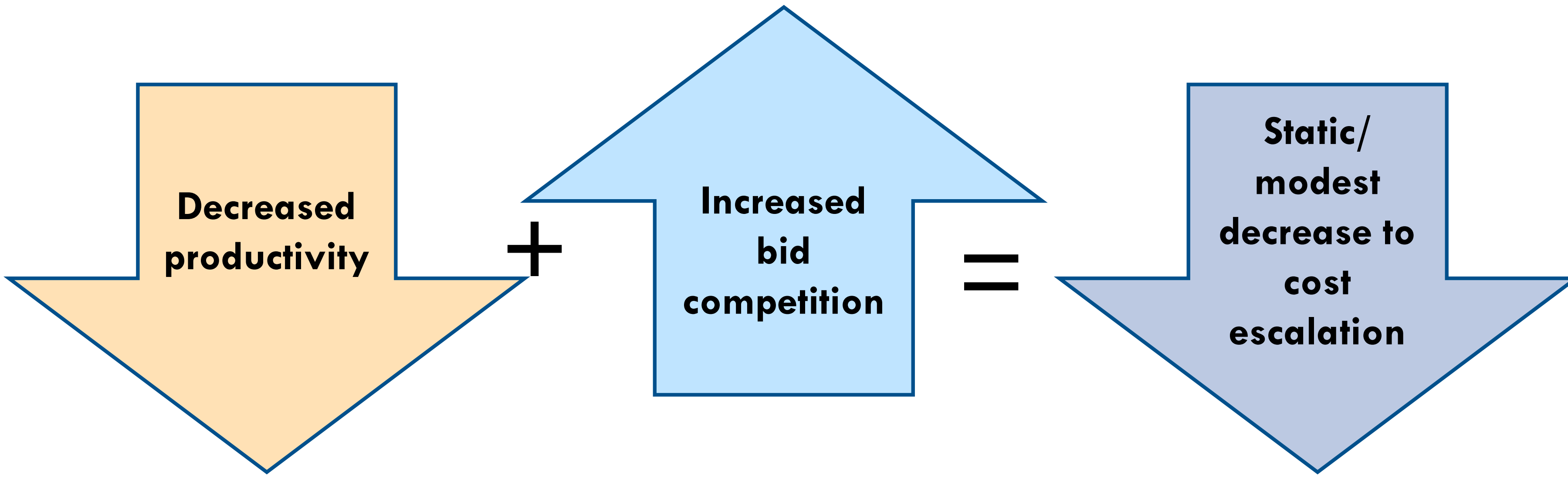
Source: SF Planning Department Statistics, received 10/9/20

SF Construction Document Statistics



Source: SF Planning Department Statistics, received 10/9/20

Local Labor Considerations



- SF unemployment: 6.1% (Nov 2020) Down from 8.4% in Sept 2020
- SF area construction employment numbers down -9.2% from last year.
  - Improved from -12% drop in September
  - SF average hourly construction wages are still 43% higher than national average

Sources: TBD Consultants 2020, BLS SF Area Economic Summary, BLS Employment Cost Index by Area, California Employment Development Department *and BLS Labor Force Statistics from the Current Population Survey*

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Impact of # of Bids on Costs

- Slight increase in the last year to 3.9 average bids per construction project, 4.9 since April reopening.

Journal of Construction Engineering & Management (National, 2005)	
# of Bids	Low Bid Deviation From Estimate
1	1.15
2	1.11
3	1.07
4	1.01
5	0.95
6	0.91
7	0.89
8	0.88

Saylor Consulting (Bay Area, 2015)	
# of Bids	% Differential (estimate vs. bid)
1	+25% to 50%
2-3	+10% to 25%
4-5	0% to 10%
6-7	0% to -10%
8 – 10	-10% to -20%

Current SF Market

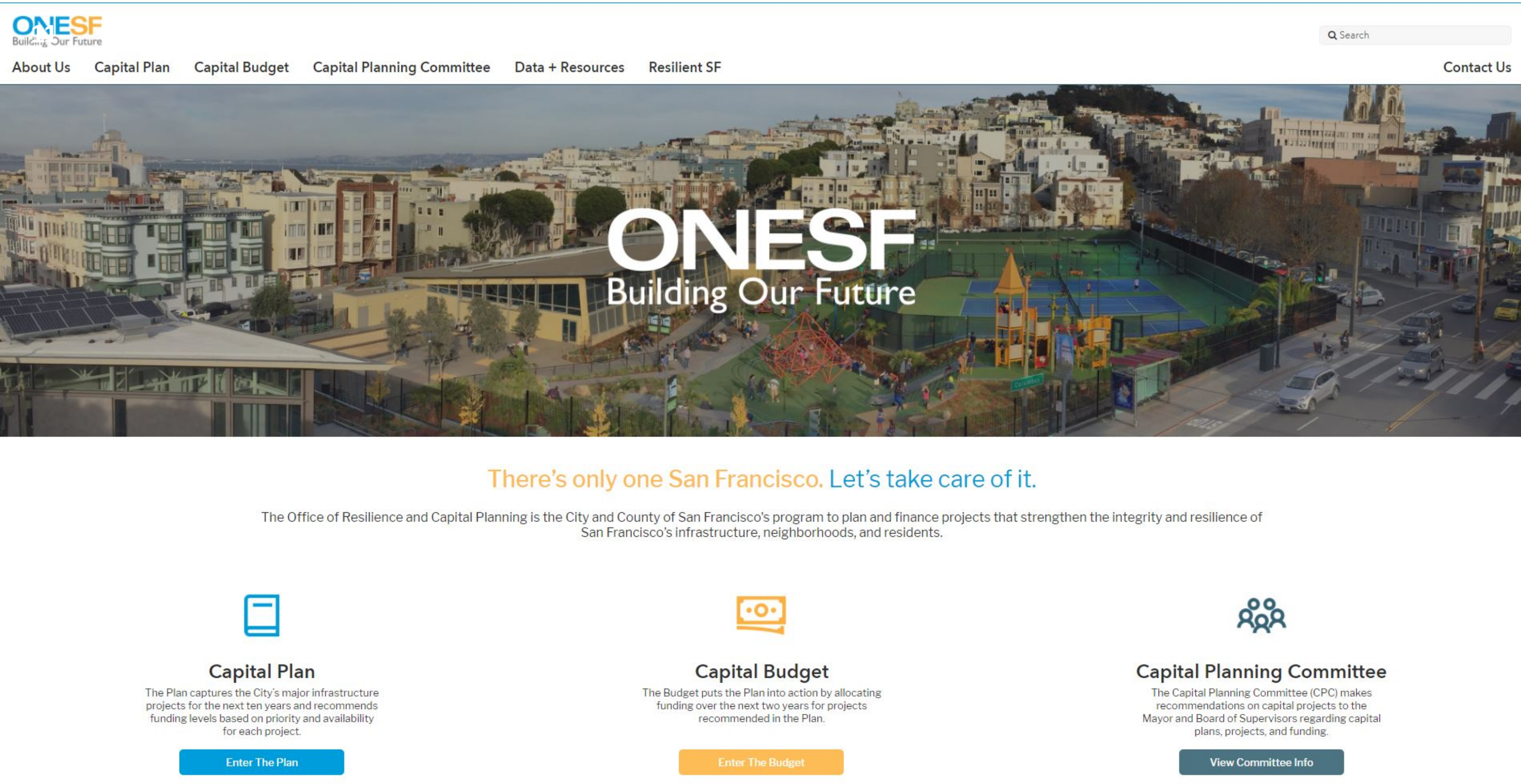
Source: Saylor Consulting Market Trends 2015 Construction Forecast

Source: Cumming Construction Economic Forecast; from: Carr, Paul G., P.E., M.ASCE, "Investigation of Bid Price Competition Measured through Prebid Project Estimates, Actual Bid Prices, and Number of Bidders", Journal of Construction Engineering and Management, 2005

Conclusion

- Pandemic has cooled construction activity, but the market remains busy
- Shift in bidding environment contingent on contractors & suppliers staying afloat
  - Labor eager to be competitive and build portfolio
  - Bids are coming in close to estimate
- Local experts are using 2021 escalation rates of 1% to 5%.
- ORCP's recommendation of **3.5%** is in line with experts' predictions.

Questions or Comments?



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Methodology

- Reviewed cost inflation data, market trend analyses, employment data, and a variety of national, state and local commercial and institutional construction cost inflation indices to:
  - Understand economic conditions
  - Identify inflation trends for construction related materials and services
  - Gauge San Francisco's current construction market
- Resources Used:
  - Major construction and construction-related cost indices
  - National and local employment data from Bureau of Labor Statistics (BLS)
  - Market reports from industry experts
  - Conversations with project managers, construction consultants/economists, and those working in the field
  - Public reports of local construction activity

Contractor/Project Manager Perspective

"COVID-19 has added costs due to productivity losses…However there is more interest from sub-contractors and more competition in the trades to secure work. These competing factors tend to cancel each other out in the current market "

Source: TBD Consulting, California Current Market Conditions – August 2020

Contractor/Project Manager Perspective

Majority of General Contractors and subcontractors have enough of a backlog to last 15-18 months.

Competition is lowering the cost of construction on some trades. If trade businesses begin to fail over the next year, competition will be lost.

Material supply chain interruptions due to global manufacturing shutdowns and transportation limitations

Do not expect a big drop in labor cost, only in the margins and contingencies in bid pricing.

For projects bidding today, most contractors are absorbing the added costs to secure backlog.

Local Sector Forecast

CURRENT MAJOR BAY AREA PROJECTS ($1+B)

Delta Water Tunnel
San Jose BART Extension
City Place Mixed-Use Development
Potrero Power Plant
Vallco Town Shopping Center
Mission Point Mixed-Use
Seawall Lot 337/Mission Rock
Flower Mart
UCSF Hospital Replacement
India Basin Mixed Use

Source: *Cumming Quarterly Construction Market Report Q2 2020*

- Uncertainty in office development
  - Empty offices in the short-term, speculative long-term impacts
  - SF office space subleasing up more than 65%
- Construction spending still far above national average, top 10 projects valued over $1B

Source: *Cumming Quarterly Construction Market Report Q2 2020*

State Economy

- Deep budget cuts
- Postponed climate infrastructure funds
- Double blow of COVID and wildfires
- Some improvement from historic low employment numbers, new business creation, and consumer spending

National Economic and Sector Growth

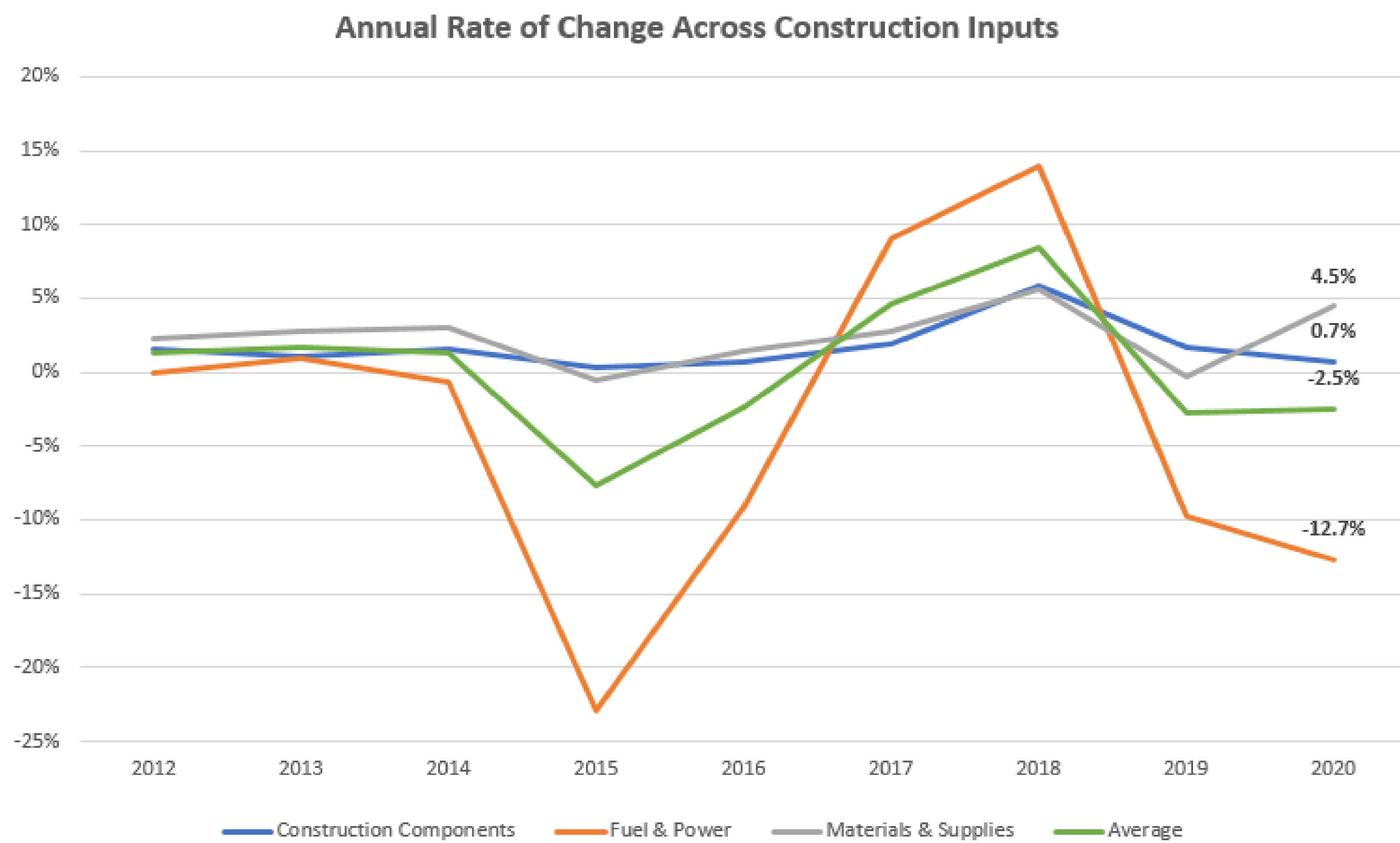
- **Economic recession continues with signs of recovery**
- -31.7% GDP decrease in Q2 2020, the 2nd quarter of recession after 23 consecutive quarters of growth
- Overall US unemployment: 8.4% in August 2020 (3.9% last year), down from historic peak of 14.7% in April

- **Modest recovery in construction after steep declines**
- National construction industry unemployment: 7.6% (3.4% last year)
- Construction spending down -.1% YOY, less of a decrease than the -2.7% dip last year.
- Nonresidential spending down -4.3% YOY
- Dodge Momentum Index down -8.2% YOY.
- Residential construction drives modest recovery

- **Heightened volatility**
- Pandemic response, future economic closures, disruptions to supply chain, natural disasters, Presidential election

Materials Costs – Combined Categories

- Negative change in Fuel & Power, modest increase across other inputs



Source: Bureau of Labor Statistics http://data.bls.gov/data, Industry and Commodity Data

Relevant Legislation

- Health and Recovery Bond (November 2020 ballot)
- Prop F, Business and Tax Regulations Charter Amendment (November 2020 ballot)
- Earthquake Safety & Emergency Response Bond (approved March 2020)
- SF Affordable Housing Bond (approved November 2019)
- Central SOMA Plan (approved December 2018)
- Seawall Bond (approved November 2018)
- State Affordable Housing Bond (approved November 2018)
- Public Health & Safety Bond (approved June 2016)

Materials and Trades – Special Concerns

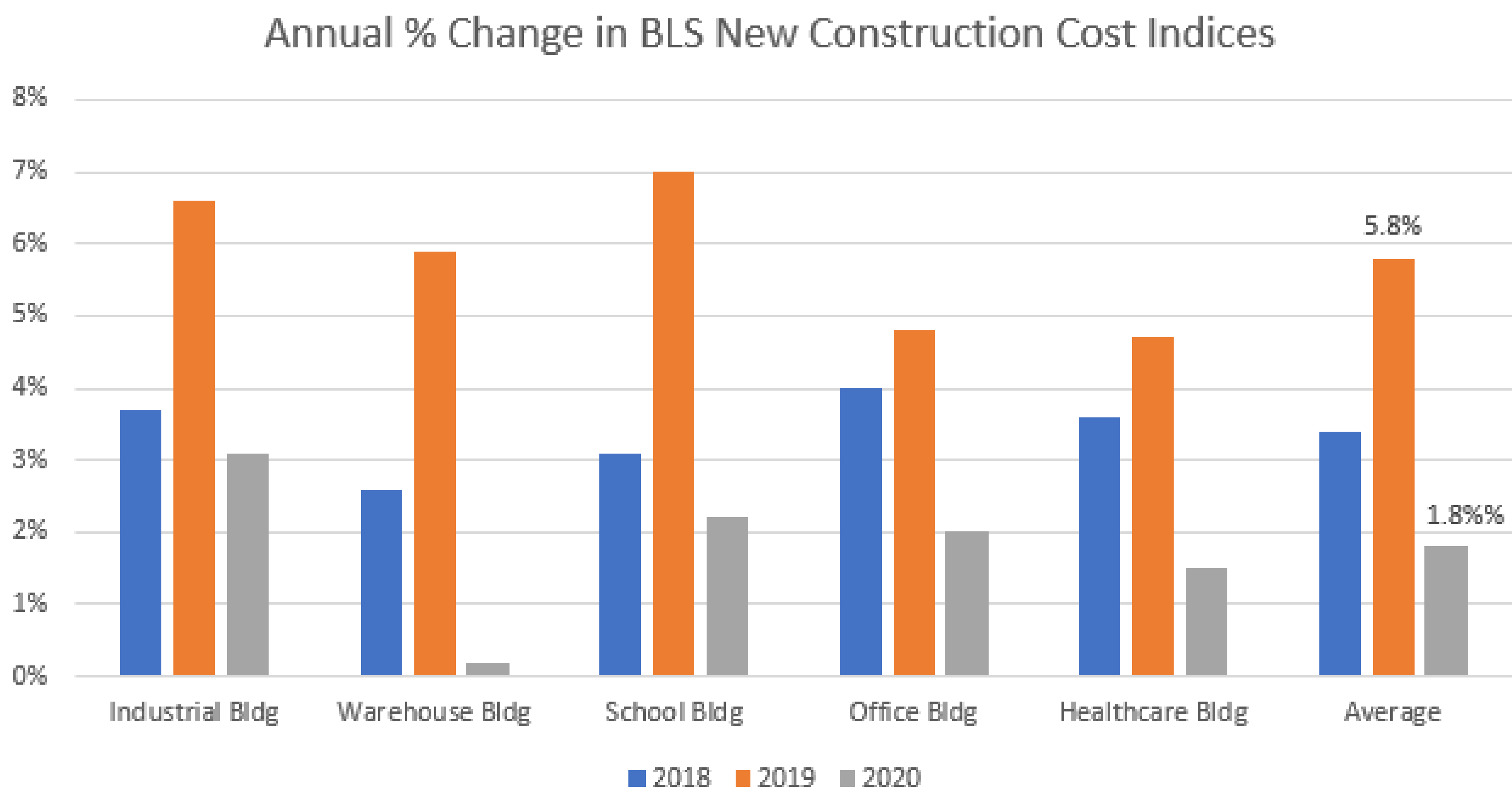
Volatile Materials
Lumber
Steel
Aluminum
Copper
Concrete
Glass
Asphalt
Gypsum

Subtrade Shortages
Mechanical
Electrical
Plumbing
Concrete
Glazing
Drywall

Source: Jacobs BIAF Estimating Cost Impact
Webcor Tariff Increase Impacts, May 2018

National New Construction Cost Indices

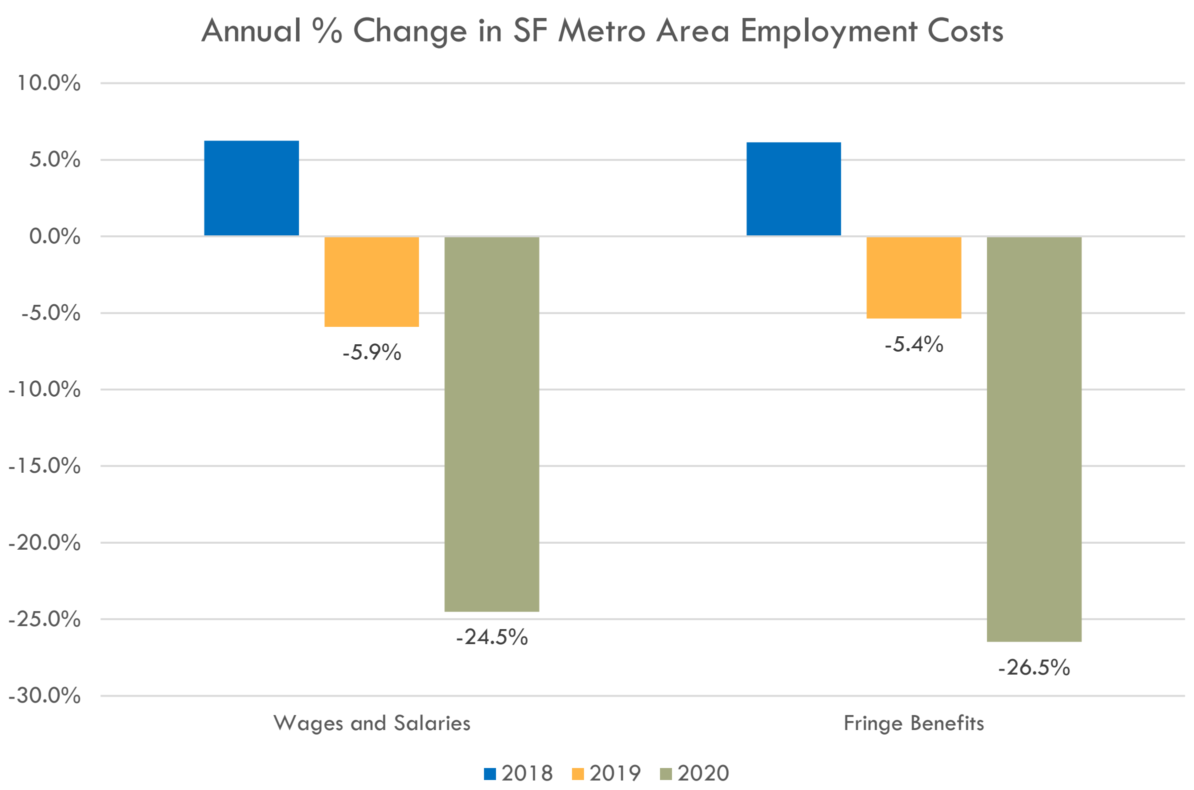
- Average is 5% lower than 2019.



Source: Bureau of Labor Statistics http://data.bls.gov/data, Industry and Commodity Data

Local Private Industry Employment Cost Index

- Wages and benefits declined for the second year in 2020



Source: Bureau of Labor Statistics Employer Costs for Employee Compensation San Jose-San Francisco-Oakland, CA

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Economic Trends—Global

- **Modest decline in global construction growth expected, if second wave avoided**
  - -3.2 overall decline in global construction market, recovered activity in China stemmed steeper drop
  - Projected 1.9% CAGR between 2019-2021
  - -8.9 GDP decline YOY Q2 2020

- **Ongoing uncertainty**
  - Additional waves of COVID shutdowns
  - Ongoing trade tensions between the US and China
  - Ongoing geopolitical tensions and concerns about the economic outlook

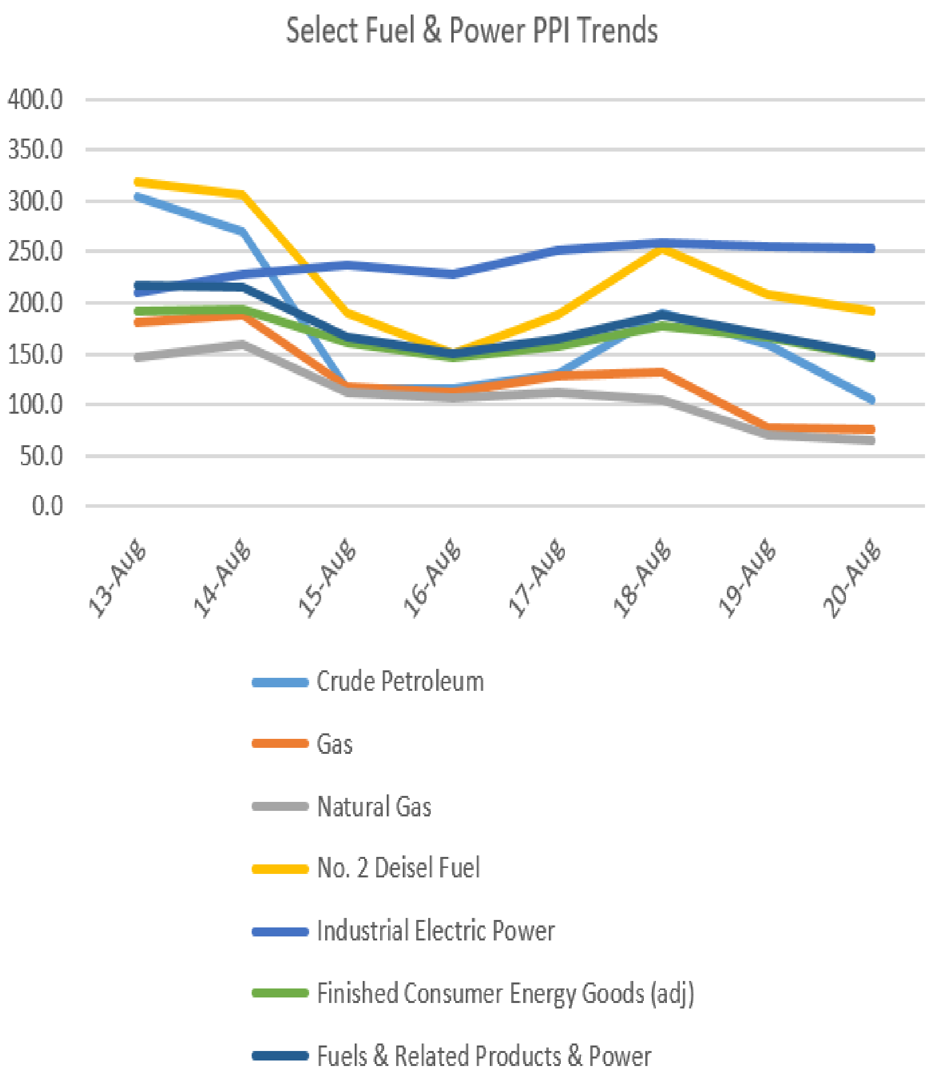
SF Debt Program and Enterprise Fund Projects

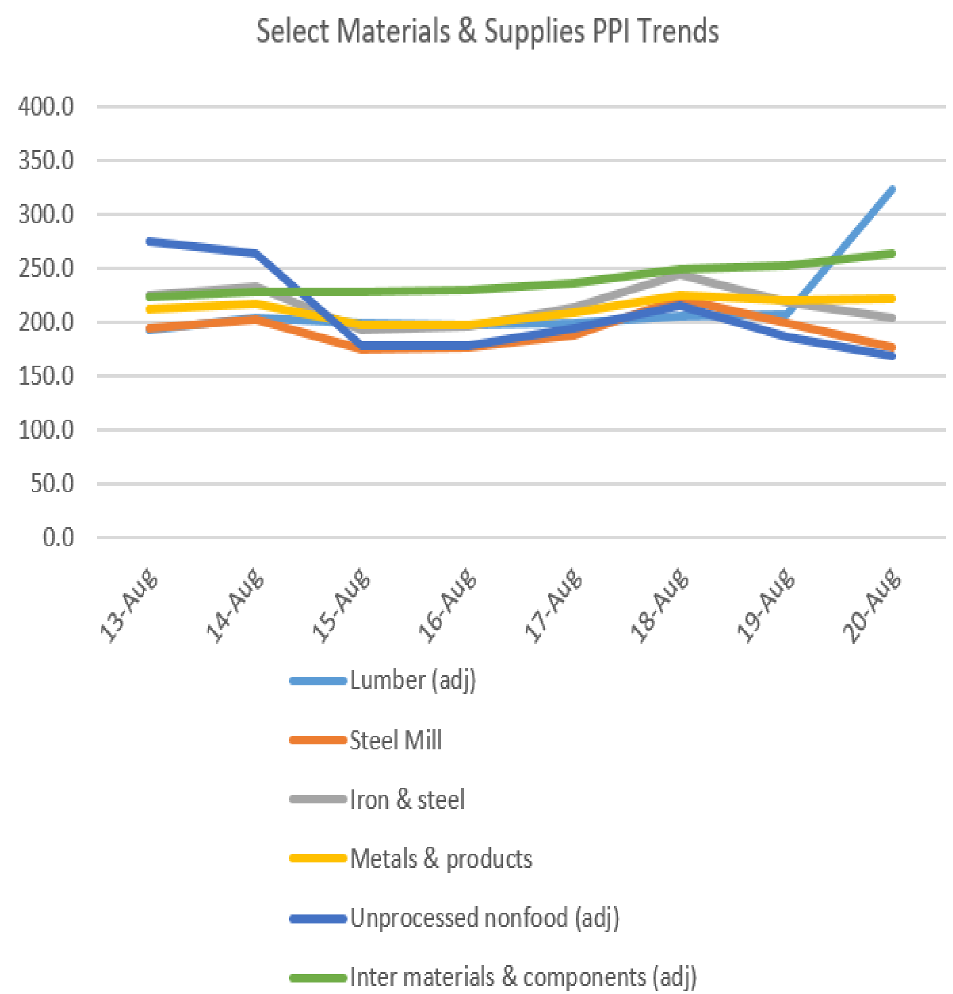
Enterprise Fund Projects
Central Subway
Transit Optimization Program
Pier 70
Sewer System Improvement Program
SFO On-Site Hotel and Terminal 1
Hope SF
Treasure Island Development
Hunters Point Shipyard and Candlestick Point Redevelopment
Seawall Project

Active GO Bond Programs
2012 Neighborhood Parks & Open Space
2014 Transportation
2014 and 2020 ESER
2015 Affordable Housing
2016 Public Health & Safety
2018 Seawall Bond

Other Major Public Construction Projects
Hall of Justice
India Basin Park
Homeless Health Services Center
Neighborhood Fire Stations Program

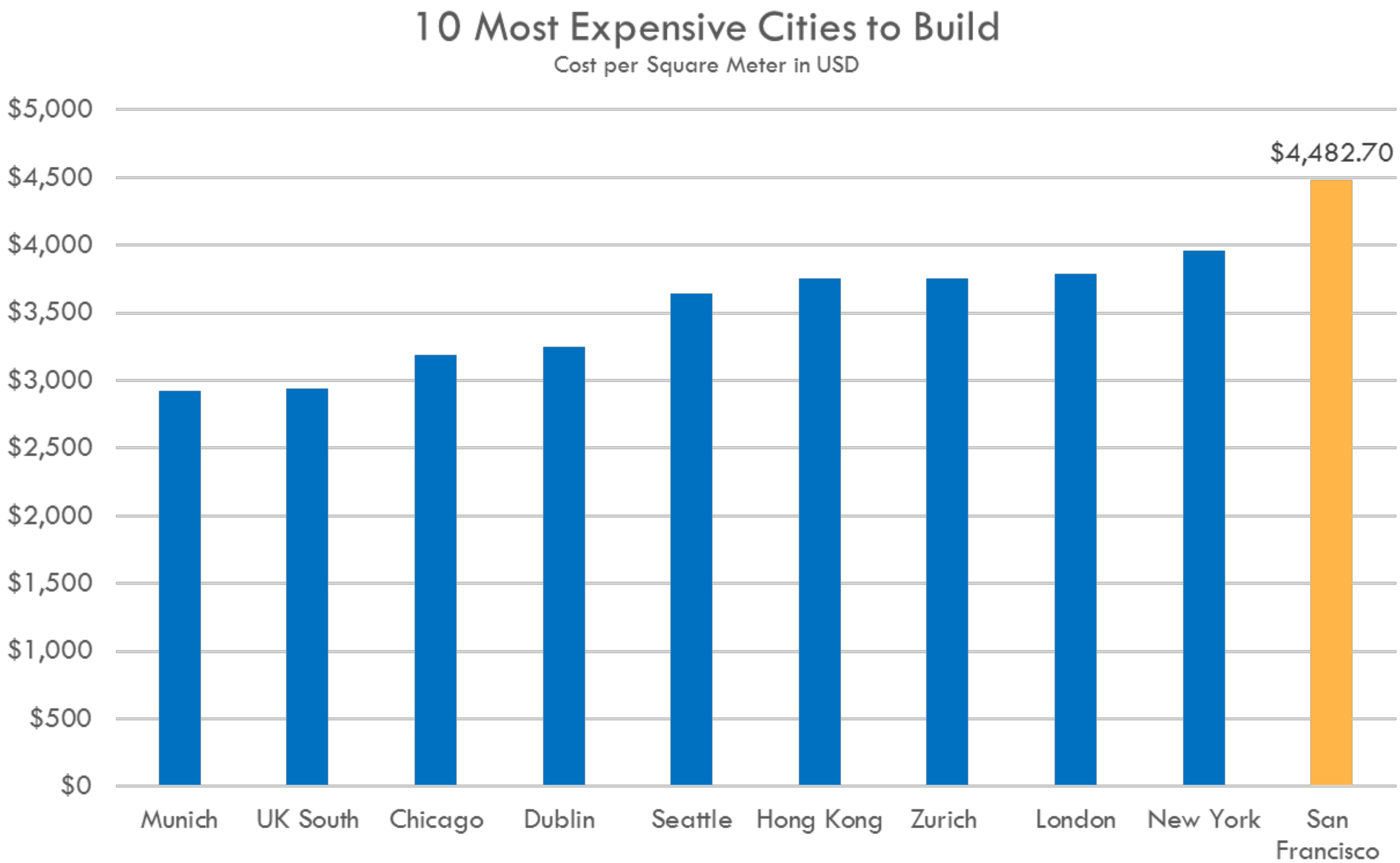
Materials Costs – Individual Commodities





Source: Bureau of Labor Statistics http://data.bls.gov/data, Industry and Commodity Data

Global Construction Costs



Source: Turner & Townsend International Construction Market Survey 2019