Overview

The Annual Infrastructure Construction Cost Inflation Estimate is the projected rate of construction cost escalation for the upcoming calendar year.

The rate is used to:

- Forecast costs for the 2-Year Capital Budget & 10-Year Capital Plan
- Update Facility Resource Renewal Model (FRRM) and other city forecasting tools
- Departments will use this for next calendar year estimates, unless they provide evidence of a different escalation rate

**Today’s action item:** Adopt rate for CY 2024
Contents

- Experts’ projected escalation
- U.S. construction market
  - Construction cost indices
  - Material price changes
- Metropolitan market conditions
  - Local economic and construction indices
  - Labor and wages
  - Bid environment & views from Project Managers
  - Development pipeline
- Summary
# 2024 SF Experts Projected Escalation

<table>
<thead>
<tr>
<th>Organization</th>
<th>2021 Estimate</th>
<th>2022 Estimate</th>
<th>2023 Estimate</th>
<th>2024 Estimate</th>
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<tr>
<td><strong>Public Institutions</strong></td>
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<td>SFPUC</td>
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<td><strong>Builders</strong></td>
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<td>Pankow</td>
<td>3-4</td>
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<td>Cumming Construction</td>
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<td>5.6</td>
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<td>Clark Construction</td>
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<td>4.5-5.5</td>
<td>5.5</td>
<td>3.5-4</td>
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<td>Jacobs</td>
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<td><strong>Market Consultants</strong></td>
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<td>TBD Construction Consultants</td>
<td>3.5-4</td>
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<td>Saylor Consulting Group</td>
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<td>3-5</td>
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<td>Martin Lee Corporation</td>
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<td>5</td>
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<tr>
<td>Sightlines/Gordian</td>
<td>3.6</td>
<td>3.8</td>
<td>5.88</td>
<td>6.27</td>
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<tr>
<td><strong>Average</strong></td>
<td><strong>3.8</strong></td>
<td><strong>6.0</strong></td>
<td><strong>6.3</strong></td>
<td><strong>5.1</strong></td>
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National cost indices
# U.S. Construction Cost Indices

Year-on-year annual change, using June of each year

<table>
<thead>
<tr>
<th>Description</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
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<tbody>
<tr>
<td><strong>National Indices</strong></td>
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<tr>
<td>BLS New Construction PPI</td>
<td>5.5%</td>
<td>2.5%</td>
<td>3.2%</td>
<td>18.8%</td>
<td>11.6%</td>
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<tr>
<td>Change in bid price for new non-residential construction</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BLS Maintenance Contractor PPI</td>
<td>2.5%</td>
<td>0.4%</td>
<td>4.4%</td>
<td>13.9%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Change in bid price for work done to maintain and repair non-residential</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>buildings only</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Turner Building Cost Index</td>
<td>5.5%</td>
<td>2.4%</td>
<td>0.9%</td>
<td>8.1%</td>
<td>6.4%</td>
</tr>
<tr>
<td>Change in costs of non-residential building construction nationwide</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ENR Indices</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENR BCI</td>
<td>1.9%</td>
<td>2.1%</td>
<td>10.1%</td>
<td>14.8%</td>
<td>2.6%</td>
</tr>
<tr>
<td>Change in skilled labor and structural steel, portland cement, and lumber</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENR CCI</td>
<td>1.8%</td>
<td>1.5%</td>
<td>5.9%</td>
<td>8.2%</td>
<td>2.4%</td>
</tr>
<tr>
<td>Change in common labor and structural steel, portland cement, and lumber</td>
<td></td>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>

BLS = Bureau of Labor Statistics
PPI = Producer Price Index, measures the average change of selling prices
# Construction Site Materials Changes

*Change in index between annual average*

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
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</thead>
<tbody>
<tr>
<td>Concrete and related products</td>
<td>11.03</td>
<td>11.08</td>
<td>12.69</td>
<td>33.09</td>
<td>40.81</td>
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<tr>
<td>Asphalt and tar paving mixtures</td>
<td>4.71</td>
<td>-0.18</td>
<td>-0.26</td>
<td>16.24</td>
<td>13.93</td>
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<tr>
<td>Gypsum building materials</td>
<td>-17.79</td>
<td>0.22</td>
<td>43.44</td>
<td>56.22</td>
<td>34.12</td>
</tr>
<tr>
<td>Lumber, softwood</td>
<td>-26.5</td>
<td>64.9</td>
<td>117.38</td>
<td>-12.79</td>
<td>-109.45</td>
</tr>
<tr>
<td>Sheet metal products</td>
<td>5.55</td>
<td>-1.23</td>
<td>42.5</td>
<td>54.06</td>
<td>14.8</td>
</tr>
<tr>
<td>Steel for buildings</td>
<td>-1.67</td>
<td>-0.08</td>
<td>44.72</td>
<td>42.51</td>
<td>4.49</td>
</tr>
<tr>
<td>Plastic construction products</td>
<td>3.31</td>
<td>4.03</td>
<td>52.03</td>
<td>66.39</td>
<td>13.06</td>
</tr>
<tr>
<td>Diesel fuel</td>
<td>-25.98</td>
<td>-45.68</td>
<td>140.216</td>
<td>208.34</td>
<td>-22.55</td>
</tr>
</tbody>
</table>

*Source: Bureau of Labor Statistics, various Producer Price commodity indices, 2018 - 2023*
S.F. metro construction market
## Local Economic and Construction Indices

<table>
<thead>
<tr>
<th>Description</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
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<tr>
<td><strong>Economic Indicators</strong></td>
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<tr>
<td>BLS SF Metro CPI</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change in cost of local consumer goods</td>
<td>3.2%</td>
<td>1.6%</td>
<td>3.2%</td>
<td>6.8%</td>
<td>2.9%</td>
</tr>
<tr>
<td>BLS Local Area Unemployment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percent of unemployed labor force in San Jose-San Francisco-Oakland area</td>
<td>3.0%</td>
<td>9.1%</td>
<td>5.8%</td>
<td>3.2%</td>
<td>4.2%</td>
</tr>
<tr>
<td>BLS SF Metro Employment Cost Index</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change in employment cost</td>
<td>2.6%</td>
<td>2.9%</td>
<td>3.1%</td>
<td>4.5%</td>
<td>4.3%</td>
</tr>
<tr>
<td>(wages/salaries &amp; benefits)</td>
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<td></td>
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<td></td>
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<tr>
<td><strong>Construction Indices</strong></td>
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<tr>
<td>ENR BCI – San Francisco</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change in skilled labor and structural steel, portland cement, and lumber</td>
<td>4.9%</td>
<td>6.5%</td>
<td>5.7%</td>
<td>23.2%</td>
<td>5.5%</td>
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<tr>
<td>ENR CCI – San Francisco</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change in common labor and structural steel, portland cement, and lumber</td>
<td>2.8%</td>
<td>5.4%</td>
<td>3.4%</td>
<td>14.1%</td>
<td>0.07%</td>
</tr>
<tr>
<td>TBD Consultants Bid Index</td>
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<td></td>
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<tr>
<td>Change in construction bid cost for an indexed new construction project in SF</td>
<td>10.4%</td>
<td>2.6%</td>
<td>3.6%</td>
<td>17.2%</td>
<td>4.9%</td>
</tr>
<tr>
<td>AICCIE</td>
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<tr>
<td></td>
<td>5.8%</td>
<td>6.0%</td>
<td>5.5%</td>
<td>3.5%</td>
<td>6.0%</td>
</tr>
</tbody>
</table>
Labor and wages

- Stable construction wage growth
- Skilled labor shortages
- Worker layoffs

Private Industry Wages and Salaries Change

Construction Employment and Wages

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

Bid Environment

- DPW received an **average of 3.8 bids and a median of 4 bids** (out of 25 projects)
- Winning bids were an average of 1.05x above engineer’s estimates

<table>
<thead>
<tr>
<th># of Bids</th>
<th>Low Bid Deviation From Estimate</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>1.15</td>
</tr>
<tr>
<td>2</td>
<td>1.11</td>
</tr>
<tr>
<td>3</td>
<td>1.07</td>
</tr>
<tr>
<td>4</td>
<td>1.01</td>
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<tr>
<td>5</td>
<td>0.95</td>
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<td>6</td>
<td>0.91</td>
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<tr>
<td>7</td>
<td>0.89</td>
</tr>
<tr>
<td>8</td>
<td>0.88</td>
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</table>

Source: Saylor Consulting Market Conditions SF Bay Area 4Q 2023

Development in Pipeline

Projects in Pipeline

<table>
<thead>
<tr>
<th>Year</th>
<th>Projects in Pipeline</th>
</tr>
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<tbody>
<tr>
<td>2020</td>
<td>2,231</td>
</tr>
<tr>
<td>2021</td>
<td>2,325</td>
</tr>
<tr>
<td>2022</td>
<td>2,142</td>
</tr>
<tr>
<td>2023</td>
<td>3,011</td>
</tr>
</tbody>
</table>

Housing Units in Pipeline

- Net new housing units: 2020 - 70.80, 2021 - 70.35, 2022 - 72.18

Commercial Square Footage in Pipeline

- New commercial sqft under construction: 2020 - 3.72, 2021 - 2.21, 2022 - 0.45, 2023 - 0.45

Source: SF Planning Development Pipeline, Q1 2020, 2021, 2022, 2023
Recommendation & Summary

Materials & Supply Chain

Labor Availability & Employment Cost

Economic & Business Environment

= 5.0% for CY 2024

AICCIE, 2012 - 2024

*2024 rate pending CPC acceptance
Thank You!

There is only one San Francisco. Let’s take care of it.

The Office of Resilience and Capital Planning is the City and County of San Francisco’s program to plan and finance projects that strengthen the integrity and resilience of San Francisco’s infrastructure, neighborhoods, and residents.

www.onesanfrancisco.org
Appendix
Methodology

Review indices
- Bureau of Labor Statistics
- Engineering News-Record
- Turner Index
- TBD Bid index

Interview local experts
- SF Gov departments
- Construction companies, other private experts

Understand SF public construction market
- Bid competition & validity of engineer’s estimate
- Materials costs
  - Local labor considerations

Contextualize with state, national and global market trends

Resources:
- Major construction and construction-related cost indices
- Bureau of Labor Statistics (BLS) data
- Market reports from industry experts
- Conversations with project managers, construction consultants/economists, and those working in the field
- Public reports of local construction activity
AICCIE Legislation Text

The AICCIE “shall be updated on an annual basis...in order to establish a reasonable estimate of construction cost inflation for the next calendar year for a mix of public infrastructure and facilities in San Francisco.”

“The Controller shall review the amount of each development fee established in this Article and shall adjust the dollar amount of any development fee on an annual basis every January based solely on the AICCIE...”
Bond program spending in progress

- 2012 Clean & Safe Neighborhood Parks
- 2014 Earthquake Safety and Emergency Response
- 2014 Transportation and Road Improvement
- 2015 Affordable Housing
- 2016 Public Health and Safety
- 2016 Preservation and Seismic Safety
- 2018 Embarcadero Seawall Earthquake Safety
- 2019 Affordable Housing
- 2020 Health and Recovery

Source: Citizen’s General Obligation Bond Oversight Committee Report, FY 2019-20 & 2020-21
Large development

LAST YEAR’S MAJOR BAY AREA PROJECTS, by construction value

- Related Santa Clara
- San Jose BART Extension
- High Speed Rail
- Google North
- The Rise Mixed Use
- Pacheco Reservoir Enlargement
- Mission Point Mixed Use
- UCSF Parnassus Heights Hospital
- Potrero Power Plant
- Dumbarton Rail Bridge

CURRENT MAJOR BAY AREA PROJECTS, by construction value

- Power Station
- Mission Rock
- UCSF Parnassus Heights Hospital
- Parcmerced Phase 1
- Balboa Reservoir Redevelopment
- India Basin Mixed-Use
- 10 South Van Ness Mixed Use
- Pier 15 Mixed-Use
- Potrero Hope SF
- Piers 38 and 40

Source: Cumming Quarterly Construction Market Report Q2 2023