



Santa Clara Valley Water District

2025 Escalation Project Report

Santa Clara County, CA



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EXECUTIVE SUMMARY

PURPOSE & METHODOLOGY

To support the Santa Clara Valley Water District “Valley Water” planning goals with respect to capital planning, construction planning and financial analysis in the 2025 fiscal year OCMI has been asked to provide a market study that provides analysis of current and projected future market conditions. Due to continuing instability in root determiners of future expected national economic conditions that will have very real impacts on Valley Water construction priorities this report is being issued as an Interim or Draft as a precursor to a final report assembly in the fourth quarter of the year.

MARKET VOLATILITY

Federal measures to raise interest rates are continuing to show signs of effectively stifling both inflation and new construction spending. At the same time, the other associated effects of these actions make the possibility of recession very real. As of time of reporting, volatility in construction material costs has effectively subsided across most major subcategories, though elevated post-pandemic pricing levels remain the going rates. Global conflict in important oil producing regions could instigate volatility in key material sectors; particularly concrete and other energy-heavy production materials. Vsatly higher than typical instability in the national political picture in regards to the upcoming 2024 Presidential contest and the degree of difference in approach, end goals and strategy between the competing candidates/parties is further compounding volatility across the marketplace and

constitutes a significant risk factor when attempting current analysis.

NATIONAL CONSTRUCTION MARKET

Steep increases in both construction costs and, importantly, spending over the last 1.5 years has forced public and private capital project managers to regularly adapt to changing conditions. Well-documented material price spikes have combined with long-term construction labor shortages and monetary inflation to created unique bidding conditions relative to traditional market recovery trends. Recent trend lines reported by various media outlets have indicated a noted increase in public (federal) construction in inverse relation to a noted slow down in private sector construction investment.

KEY TAKE AWAYS

Labor: While overall construction labor positions in the area have declined over the last twelve (12) months, this decline appears to be moving in tandem with reductions in available workforce. Consequently, though this deceleration in competition will provide itinerant relief on labor supply for Valley Water projects it will not serve to balance out long-term deltas between staff needed and staff available. Additionally, the steep increase in projects that compete with Valley Waters’ priorities has resulted in an all time high in the area for workers that specialize in these project types, which will further increase difficulty in worker attraction and retention.

Materials: Generally, material pricing has stabilized in the wake of 2021-2022 mass volatility. The forward looking exceptions include copper (wire, electronics), which is forecasted to surge in costs as demands compound for the material. Other ‘smart’ electrical and low voltage materials & equipment are

likewise continuing to see upward price pressures caused by converging demand, as are concrete and hardscape related products. Energy markets will continue to remain volatile over the foreseeable future and will continue to exert upward price influence on transportation, concrete and steel pricing, among others.

Competition: The wider Northern California contracting market has begun to become more motivated in its attempts to secure future backlog. Companies are increasingly looking to public/horizontal projects as viable opportunities, which will benefit Valley Water average project bidder turnout. This situation will continue to persist for at least 3-6 months after the changes to federal funds interest rates.

Escalation OCMI projects an average per annum escalation rate of approximately 5.2% through FY 31, falling to 4.8% for the years thereafter, due to the factors discussed herein.

HEADLINE NUMBERS		
AIA ABI	44.7	May-24
Turner Building Cost Index	+0.09%	Q4 '23 - Q1 '24
ENR Construction Cost Index	1.5%	YoY, MON YEAR
Dodge Institutional Building Momentum Index	-3.4%	MoM, MON YEAR
Consumer Price Index	+3.3%	% Change YoY MON YEAR

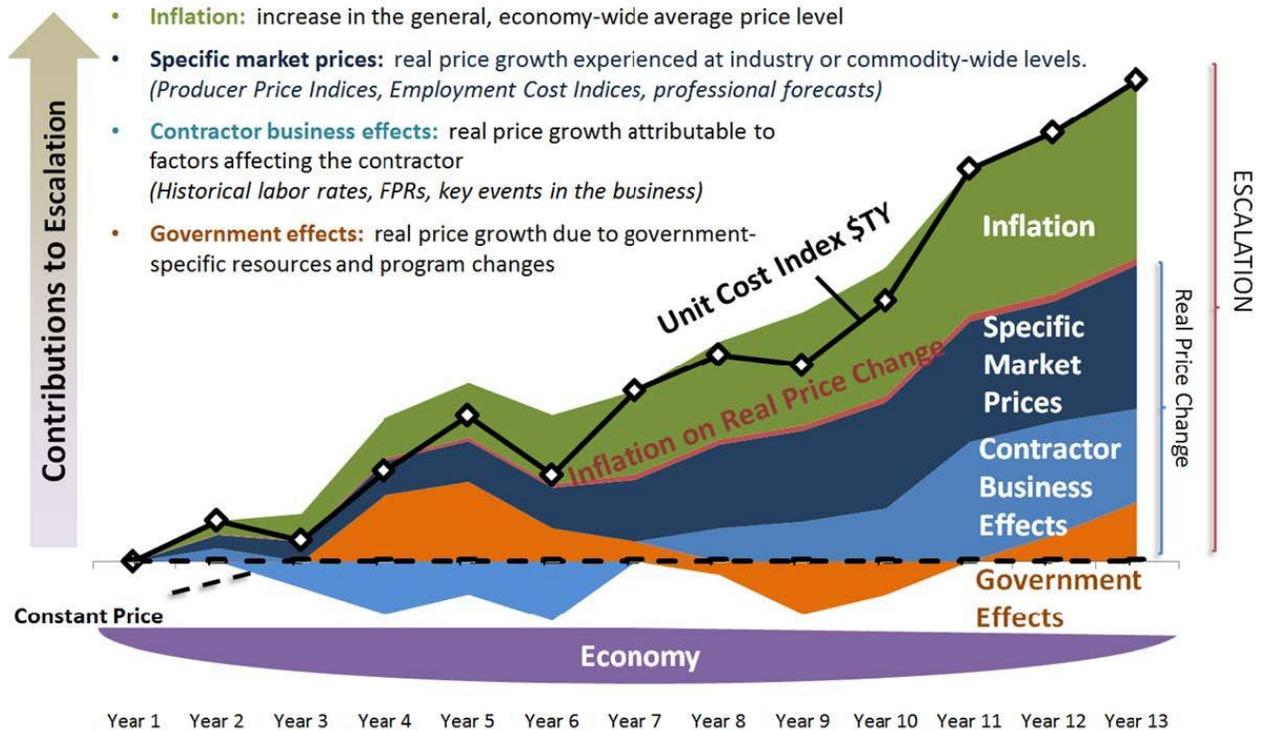


GENERAL CONSTRUCTION MARKET CONDITIONS

FACTORS OF ESCALATION

Before the discussion on escalation, it is important to emphasize and illustrate the factors and components that make cost escalation - a primary subject of this report - and how those differ from one the component parts, inflation. While cost escalation includes inflation, other economic variables make calculating the escalation factor for any one specific industry and/or region a more complicated exercise. Escalation is as a combination of variables; any number of which can vary from expectations in response to ordinary or extraordinary market activities, as seen during the recent global COVID outbreak.

At the same time, it is valuable to try to parse what is permanent and what is conditional. While the specifics and contextual variables are too numerous to fully quantify, the underlying principle of temporary spikes is important to apply to this analysis. For example, temporary spikes in price due to prolonged supply access shortages (real or contrived) should not necessarily dictate the calculus of the authoritative 'new normal' in terms of pricing and growth rate. This is critical to realistic projections of future escalation which rely on a current period denominator.



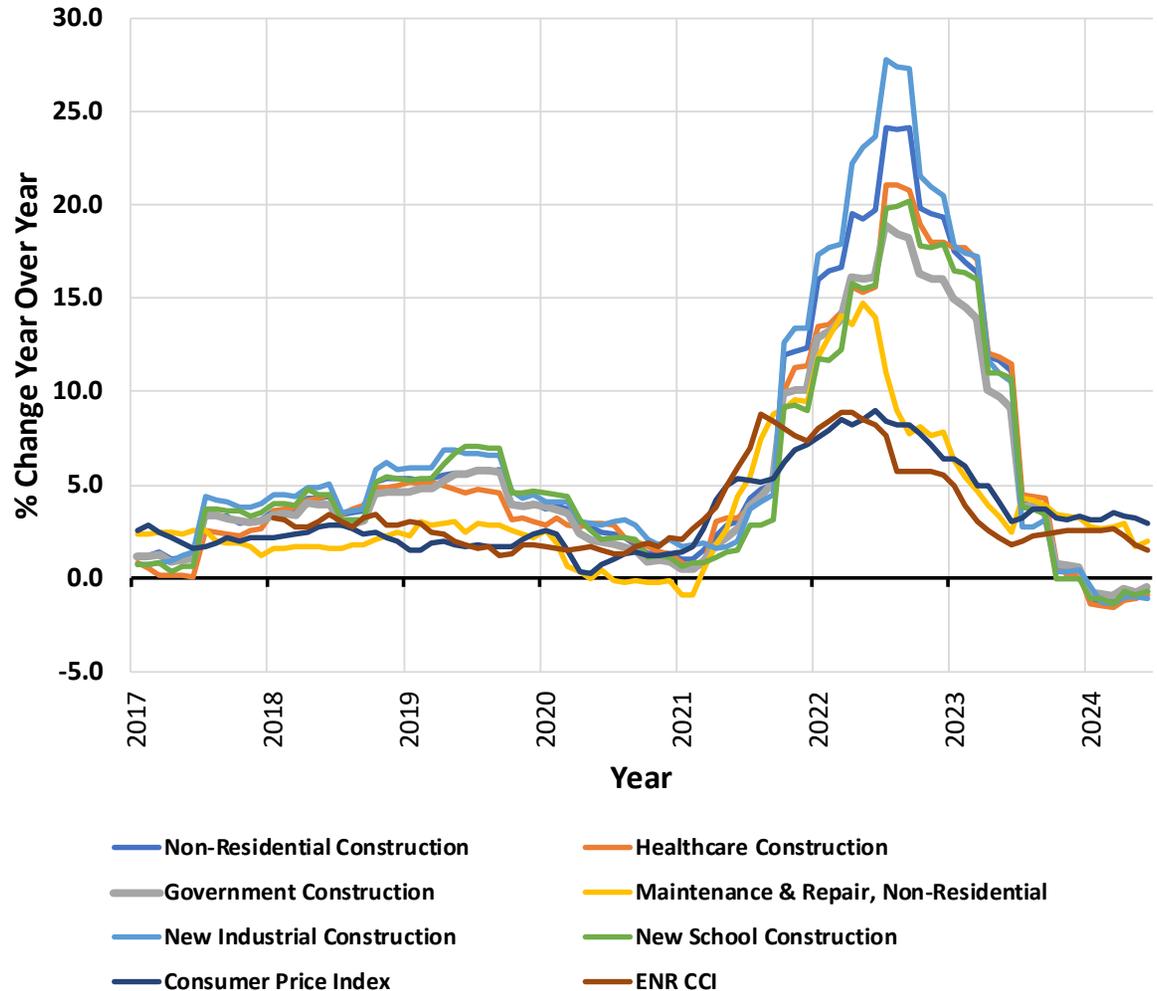
PROBABLE NATIONAL AVERAGE ESCALATION

By a number of metrics (including ENR CCI, ENR BCI, BLS Non-residential Construction Cost PPI), the historical average annual construction cost escalation rate is approximately 3.2% per year. Counter to this trend, the years 2021 and 2022 registered construction cost escalation rates of 4.8% and 19.9%, respectively. As forecasted by OCMI, 2023 saw a regression to more typical rates of change, with average YoY escalation settling around 7.5%. In fact, December 2023 data shows a net-effective change of near-zero percent compared to December 2022. Looking at Federal Reserve Economic Data (FRED) final demand Producer Price Indexes, 2024 has thus far seen Year-over-Year index value changes as follows (as of June's reported data for each):

PPI	Change YoY
New Nonresidential	-1.00%
Healthcare Construction	-1.50%
Government Construction	-0.70%

Going forward, we anticipate slightly higher than average (3.5%) national escalation over the next 1-2 years as labor costs and demand for engineered electrical equipment and concrete materials continue to push escalation upwards. For a table documenting future anticipated escalation for the Santa Clara submarket please see the Local Conditions section below.

Recent Construction Escalation



NATIONAL CONSTRUCTION SPENDING

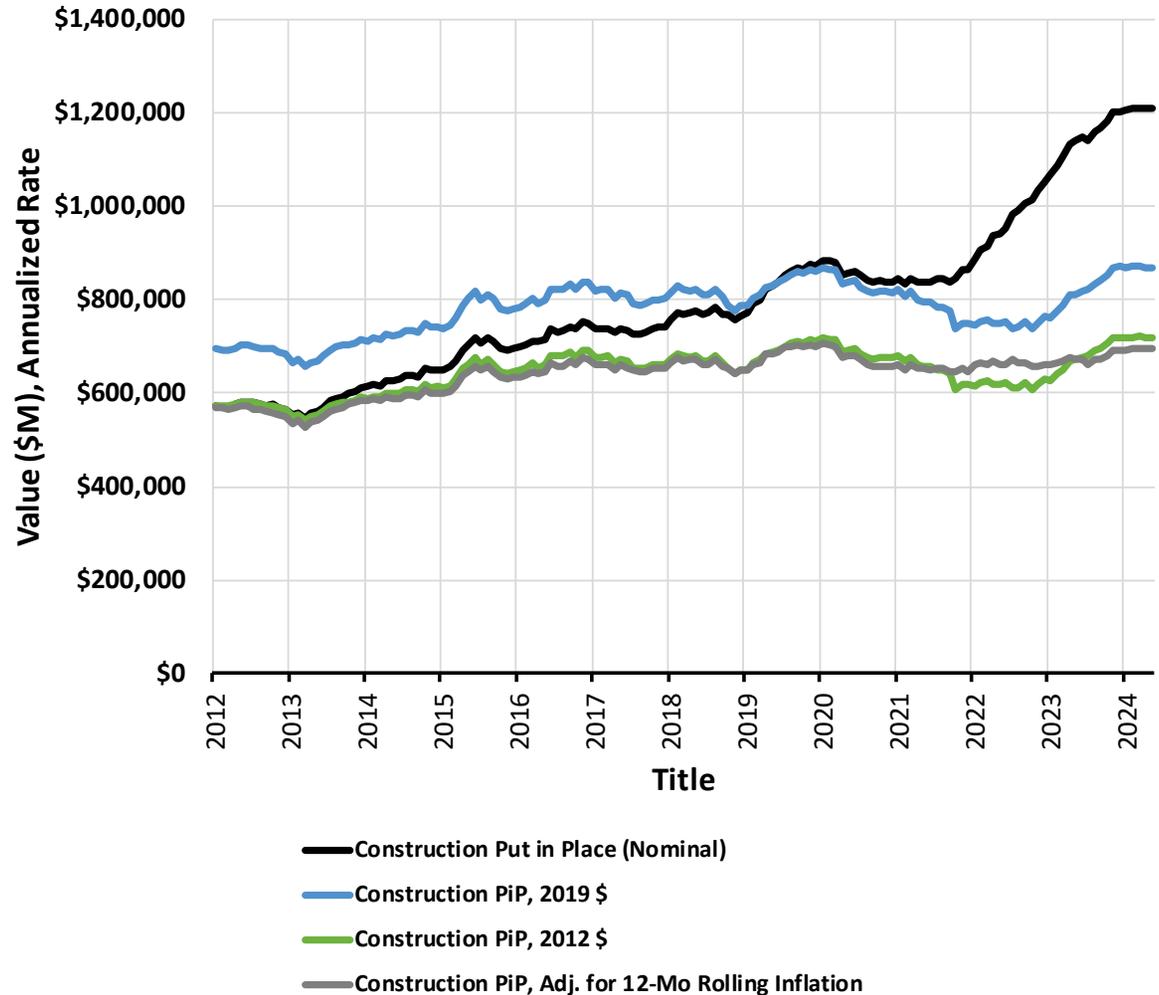
At a nominal level (black line), Total Nonresidential Construction Spending (TNRCS) in the US has rebounded from post pandemic-onset dip since September of 2021, with annualized rates of construction spending reaching a new highs each month for the last year.

Importantly, though, the reported spending values are not controlled for inflation; monetary or otherwise. While it is difficult to apply a perfect adjustment methodology, the graph to the right demonstrates the results of adjusting the data to reflect 2012 dollar values (green) and, alternatively, to 2019 dollars (blue) and via a 12-month preceding rolling average inflation adjustment (gray). In all three (3) scenarios, it is clear that the aggressively upward trend in nominal spending is not likely reflective of actual volume of work being accomplished. This is an important filter for the data so that one may understand the other factors (discussed later in this report) that are driving construction costs in addition to volume of demand.

As seen in the graph, by any of the metrics, nominal or inflation-controlling, construction spending (volume) has all but peaked as of mid-2024. This leveling was brought about by higher interest rates and a realization of gaps in backlogs due to projects cancelled in 2023 due to budget misalignments.

Looking forward, as interest rates are now being stepped downward, we expect more private (and public) projects to get restarted over the next 6 months. In turn, this is likely to result in an uptick in overall construction spending (volume), particularly in the last quarter of 2025 and into 2026.

Nonresidential Construction Spending



INFLATION AND WAGE GROWTH

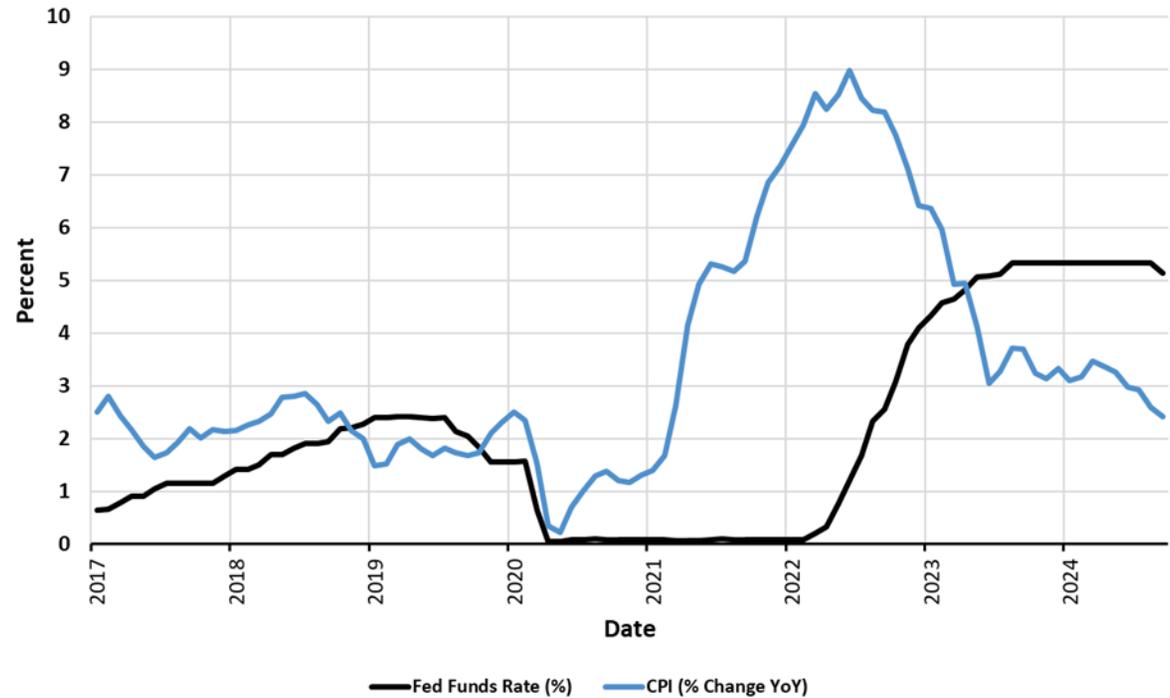
Capital infusion into the US economy combined with historically low interest rates in 2021 and 2022 resulted in monetary supply growing at an unprecedented rate, as seen for example, in the graph to the right. This monetary growth combined with supply chain disruptions and temporary energy pricing spikes created aggressive monetary inflation.

As a correction, the U.S. Federal Reserve worked to increase Effective Federal Interest Rates (Fed Rate) at a rapid pace. Now two and a half years later, interest rates are being reduced as inflation has returned closer to target levels (typical target is 2.0%). The Federal Reserve has forecasted targeted rate cuts down to 4.25% – 4.5% by the end of 2024.

The specific effects of this interest rate pull back will take sometime to be realized – likely a year-plus. We expect the net effects to likely include:

- Stabilization of monetary inflation, with some potential for it to maintain above the 2% target through 2025;
- Increased demand for investment as bond returns become less attractive to investors;
- Sustained upward pressure on labor wages, particularly in construction, particularly if monetary inflation sustains above the two percent target range.

Inflation Metrics



PROJECTED CONSTRUCTION ACTIVITY

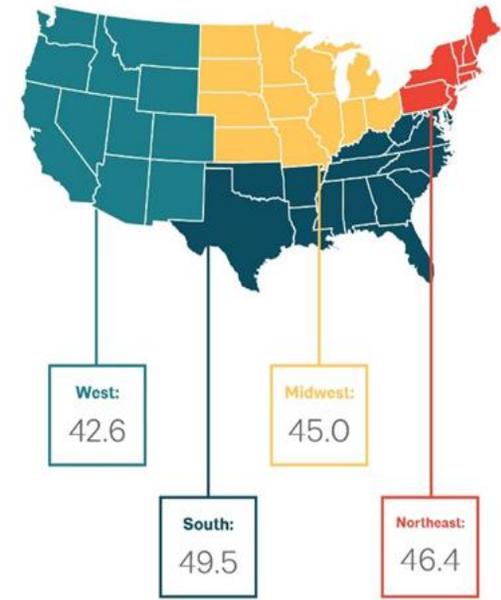
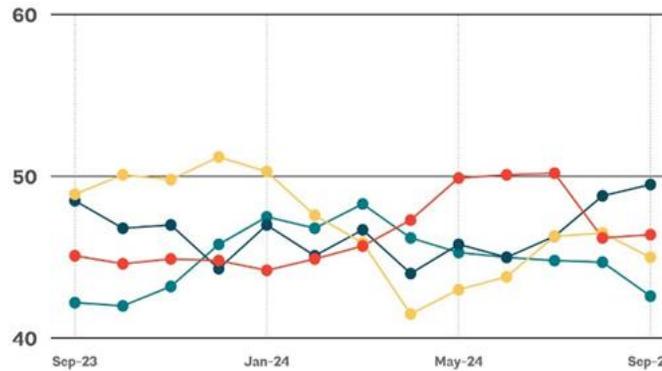
The Architecture Billings Index (ABI) is a regarded leading indicator of future construction activity by roughly 9-12 months. When evaluating the ABI it is important to bear in mind that a number above 50 can be reasonably said to indicate a market in expansion, while a number under 50 indicates the inverse. Looking at the last 12 months of reporting, we can see that the ABI has tracked well with general post-COVID lock down momentum. And with that, since November of 2022, index readings across each of the country's four major regions have hovered around or below the 50 mark - indicating comparatively falling interest and activity levels among architects.

The West Coast region was one of the first of the regional ABIs to see a real trend in declining overall volume, predicated somewhat on the reduction in private sector construction. Recent ABIs continue to indicate declines in the region (index readings are relative to prior months), indicating fewer projects in development over the entirety of the region. This is primarily applicable to the macro level of the regional construction economy, and shouldn't be taken as strictly indicative of future capacity or 'hunger' for the specialty or well-experienced contractors necessary for unique projects.

Regional

Business conditions generally remain weak across the country

Graphs represent data from September 2023 - September 2024 across the four regions; 50 represents the diffusion center. A score of 50 equals no change from the previous month. Above 50 shows increase; Below 50 shows decrease. 3-month moving average.



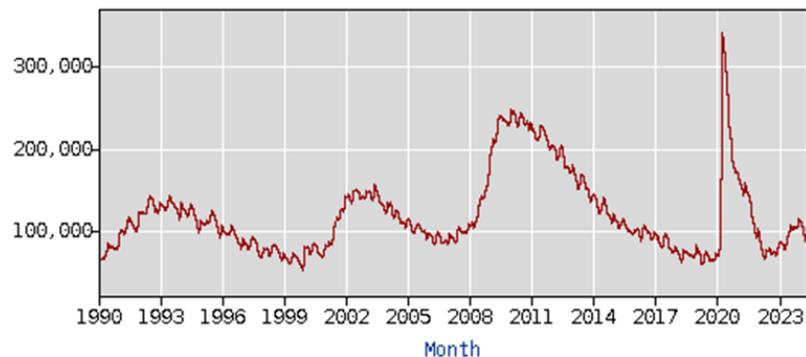
PROJECT-SPECIFIC MARKET CONDITIONS

LOCAL ECONOMIC CONDITIONS AND TRENDS

Santa Clara County covers a large portion of the southern Bay Area and runs from Palo Alto in the north past Gilroy at its southernmost point. and is the most populous county in Northern California and the 10th most populous county in the United States. Because of the size of the area and its proximity to San Francisco it is often evaluated in tandem with wider economic trends that effect the area broadly, but the density of both local construction volume and population necessitates a more tailored, specific approach to evaluating its current and future economic conditions.

The Santa Clara submarket, in tandem with the wider Northern California geographic area, has had a much slower than anticipated rate of growth to this point in 2024. Interest rate increases brought to market in a bid to tame national inflation have made a significant reduction in staffing and growth plans for many private sector employers, none more so than in the technology sector, and the local employment market has responded in kind. Reductions in capital expenditure outlay, along with reductions in both current and future anticipated staffing levels, have had a deleterious effect on the area employment landscape and have contributed to stagnant growth patterns across the Northern California markets. Current total employment across the San Jose/Santa Clara MSA is sitting at 1.5% below the level shown at this time last year, and at 4.2% current market wide unemployment is both showing its highest level since 2014 and only .1% below the national average of 4.3%.

unemployment



Meanwhile, the available labor force has likewise dwindled over the period to its lowest level since COVID. The labor force across the Santa Clara submarket today in 2024 is 1% lower than it was this time last year- indicating that available labor is continuing to decline as time goes on. The drivers of this decrease are diverse but the largest continues to be the cost of living in the area, most notably in housing. At an average single family home cost of \$1.48mil in 2024 the Santa Clara market still boasts one of the highest housing cost averages in the country, and as wages in non-management/technology jobs continue to stagnate more and more workers are choosing to relocate outside the area, especially as they move from early adulthood into their higher wage years where focus shifts to the accrual of assets and retirement prospects. Though this migration represents a continuation of trends noted in our previous report, it also becomes more worrisome as we move further away from the pandemic. The original driver of relocations across most of the country during the pandemic was the flight to remote work, and as companies continue to attempt to transition back to more in office work arrangements it was anticipated that this movement would slow significantly, if not cease. This has proven to be an incorrect assumption, however, and as the wider Northern California market, and San Jose in particular, continues to lose lower wage workers to other locales it will become increasingly difficult to find, train and deploy new workers across multiple sectors. This will be of particular concern in industries like construction, namely ones that do require a large amount of training/experience to be effective but do not provide premium level wage expectations.

Though these changes have not been enough to alter the employment landscape in the area (technology jobs still represent the largest percentage of employment), the future landscape may be shifting. The fastest growing employment sectors in the area are all in service and hospitality related, while the construction sector continues to see a lower-than-average overall employment level than its national counterparts at 3.2% of total local jobs. This growth in service sector jobs is in line with the area's wider population dynamics noted in our last study, namely that the area is, on average, becoming older and possessing a less diverse range of skillsets than 30 years ago. This aging population requires increased levels of care as the years progress, and the market is responding accordingly, but it remains to be seen if these types of jobs can provide the long-term growth that



people require in order to stay in a sector the life of their careers, or will allow them to remain in the area as the transition to later stages of their lives.

In the near to medium term current market wide growth and employment dynamics will largely hinge around current interest rates as these are the determinants of both area employers’ ability to borrow to expand operations and area home producers (both multi and single-family housing) to build and lease/sell at a profit. The largest determiner of this equation is the opportunity for housing, and an increase in the number of newly built homes in the area will be a required precursor to the reversal of current relocation dynamics. This will lower the cost of employment for businesses and decrease the cost of hiring for the immediate area, making the relocation to or increase of current operations within the area a more attractive proposition.

VALLEY WATER COMMUNITY PROJECT BENEFIT

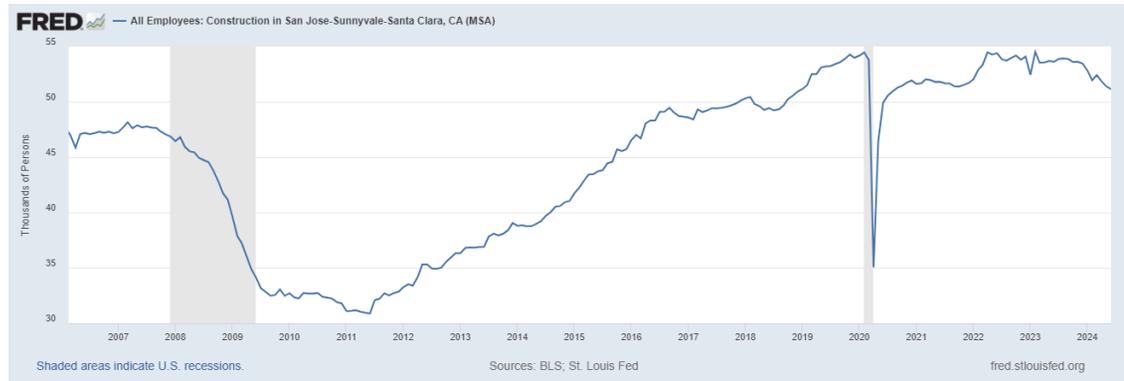
In addition to the direct benefits to local population provided by the substance of Valley Water projects in the form of new and/or increased utility service and safety, Valley Water projects also provide direct economic benefits to the community in the form of job creation. In order to assist in defining the total number of jobs created, we have taken Valley Water’s planned design and construction expenditures over the life of their capital plan and, utilizing average hourly rates, extracted a total number of jobs provided in each sector for each year. In the case of design professionals, research into current average hourly rates for Bay Area designers of different specialties was solicited and averaged, to which we then added additional allowances for company overhead, profit, etc. We then used these rates and average number of hours equivalent to a full time position to determine the total value of a full time design position in the area, and

divided the total funds set aside for design by these figures. Our methodology for the extraction of construction positions mirrored this closely with the exception of having pulled the current California Prevailing Wage statutes for the area for applicable positions utilized on Valley Water projects. Though these numbers are not exact, they do represent a reasonable extrapolation of the employment and economic benefits of SCVWD programs. Please see below for a table of positions created by Valley Water Capital Expenditures over the life of the program.

	2024 (Actual)	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Design/Planning	151	52	125	105	5	17	5	10	5	5	5	1	3	3	1	1	0
Environmental	80	63	164	140	5	6	5	11	4	4	5	0	0	3	0	0	0
Construction	953	1530	1813	2110	2445	2755	2413	2501	1985	1697	1644	1211	76	130	132	139	91
Total Jobs Created	1184	1645	2102	2355	2456	2779	2423	2523	1993	1706	1654	1212	79	137	133	140	91

LOCAL INTERVIEWS

The San Jose construction sector has experienced declines in total staffing in tandem with the wider market, though total construction volume has yet to experience a similar decline. Over the course of June of 2023 to June of 2024, the most recent month for which there are adjusted employment numbers, total jobs in the sector declined by roughly 2000 full time workers, coming to rest at roughly 51,000. Total construction volume has continued to increase, though it should be noted that most of this growth is attributable to horizontal, or heavy civil/utility, projects rather than traditional vertical construction.



LOCAL PROJECTS- VERTICAL CONSTRUCTION

Santa Clara County Current Vertical Construction Projects			
Project Name	Stage	Type	Valuation
2300 Calle De Luna @ East Tasman	Construction	MultiFamily	\$690,000,000
SCVMAC Behavioral Health Services	Construction	Hospital	\$388,376,000
Stack Trade Zone park Data Center Expansion	Construction	Data Center	\$375,000,000
SVY03 Data Center	Construction	Data Center	\$300,000,000
Sunnyvale Office Complex	Construction	Office	\$295,000,000
Digital Realty Data Center	Construction	Sewage Treatment	\$164,000,000
Cityline Mixed Use	Start	Office	\$250,000,000
Google R&D @ Caribbean Campus	Construction	Office	\$215,000,000
Orchard Residences Mixed Use	Construction	MultiFamily/Retail	\$207,000,000
Village Lake Apartments	Construction	MultiFamily	\$200,000,000

The vertical construction sector across the entire Northern California market has continued to largely drift sideways, with reductions in certain subsectors (notably office and data/technology) being offset with increases in others (notably retail and healthcare). Many vertical projects are also near the end of their development cycles and, as such, require lower levels of staffing than they do when they are in the middle of the construction schedule. This is accounting for the reduction in Specialty Contracting employment, which has seen a reduction of roughly 600 full-time jobs from June of last year to June of 2024, and though it does represent an increase in available staffing these are not roles that will see large amounts of involvement with Valley Water projects. It is important to note that though this trend of deceleration in vertical construction is now two (2) years old, it does not in any way signal that these project types are halting entirely. Market wide there is still procurement of large, vertical construction with work on large data center, medical facility and mixed-use projects still commencing and more than \$7bil. in current/planned vertical construction. Contractors surveyed are still having difficulty recruiting experienced labor as well, and shared that they frequently must utilize “B” or “C” level labor in the event of an unforeseen labor shortfall. The decline in vertical construction has been enough to drive down the overall cost of construction slightly (.5%) over the course of the calendar year, April of 2023 to April of 2024 represents the first time in thirty (30) years that overall construction escalation for the

Northern California submarket underperformed average escalation across the country at 4.6% and 5.4% respectively.

The horizontal subsector, meanwhile, has continued to see large year over year increases in total volume with over \$3bil. in current/future planned projects as the funds from federal infrastructure bills continue to wind their way through the development pipeline. Heavy equipment employment in the San Jose market, which is an indicator of absorption in this subsector, has continued to tick up over the year and at almost 20,000 full time jobs represents an all-time high going back to the 1990s when records began being kept. These projects are also, by and large, both earlier in their procurement cycles and subject to more factors that reduce productivity, e.g. weather, work hours limitations, and phasing, which tend to increase the length of their schedules and keep workers active longer, even given lower dollar values than their vertical counterparts. There is also an upcoming \$400mil. ballot measure in the November election that, if approved, would see \$355mil. in non-Valley Water infrastructure funding for area owners and which would effectively serve to increase competition for these same resources.

LOCAL PROJECTS- HORIZONTAL CONSTRUCTION

Santa Clara County Current Heavy Civil Construction Projects			
Project Name	Stage	Type	Valuation
Bart Silicon Valley Ph II Ext Tunnel/Trackwork	Bidding	Tunnel	\$500,000,000
Eastridge to BART Regional Connector	Start	Rail	\$437,100,000
Secondary Treatment and Dewatering Plant	Start	Sewage Treatment	\$277,872,751
SR-841/I-680 Interchange Improvements	Construction	Highway	\$200,594,000
Anderson Dam Tunnel Project	Construction	Tunnel	\$168,000,000
Digested Sludge Dewatering Facility	Construction	Sewage Treatment	\$164,000,000
Secondary Treatment Plant Upgrades	Start	Sewage Treatment	\$161,846,500
South San Francisco Bay Shoreline Reach 1-3	Start	Shoreline Maintenance	\$129,801,500
SCRWA Plant Expansion	Start	Sewage Treatment	\$62,207,000
Facility Wide System Water Improvements	Start	Sewage Treatment	\$59,490,760

EXPECTED FUTURE BIDDING CONDITIONS/ HUNGER FACTOR & CONTRACTOR INTEREST

From a bidding perspective, the lessening in frequency and magnitude of vertical construction opportunities should serve as positive influence on Valley Water construction priorities in the near and medium term. Of the two (2) large General Contractors surveyed for this report both reported lower than typical or desired backlog numbers (roughly 2/3 of typical levels), as well as that their project procurement teams were increasingly focusing on public projects, including utility and infrastructure, as a means for balancing out their medium-term planning. These same contractors shared that their subcontracting partners were similarly motivated, and that their average number of subcontractor bids on projects had increased significantly from last year to now (2 to 4-5 on average). This is anecdotally borne out across the entirety of the market as multiple AGC surveys point to an increasing flight to public and horizontal construction as a method of keeping crews active until vertical



construction becomes a more attractive prospect for owners, and the same contractors surveyed both shared that they'd seen a considerable uptick in interest from peers in the same projects that they themselves were beginning to pursue.

Due to the size and complexity of Valley Water projects small contractors are not likely to often bid projects as a general contractor, and of those recently contacted most were reluctant to bid projects of that type. Reservations typically include insurance and bonding requirements, ability to successfully complete projects of that size/complexity, and the ability to maintain financial and project records that would comply with Valley Water standards and practices. There are different potential options that could somewhat ameliorate these reservations and encourage more bidding activity, including more intensive outreach to small and disadvantaged area contractors on smaller projects, the encouragement of mentor/mentee arrangements between large and small businesses, and increased requirements for small business participation on contracting teams. However, given both the constraints previously noted above and the reality that given constraints in economies of scale small businesses cannot generally price their projects at the same margins as their larger counterparts this path is not likely to be a significant driver of change in Valley Water value for money in terms of construction service procurements.

From a design perspective small and medium sized businesses will constitute a more viable vendor source, but these types of projects are not often the focus of smaller design studios and, as such, are not typically pursued. Small firms that are currently doing design work for Santa Clara public agencies, e.g. RRM Design Group, do not have experience in Valley Water's typical project types, nor the resources to acquire them, and as such do not pursue these types of opportunities no

matter the size. This is potentially a conquerable challenge, though, as most design professionals spoken with did not have an accurate view of the total breadth and depth of the Valley Water project portfolio. A more concerted outreach to small and medium sized design groups, potentially through an industry day or similar event, with the goal of introducing them to smaller, more approachable Valley Water opportunities that would facilitate an eventual comfort level could, in the long term, produce a viable crop of these types of firms that are both capable of performing and willing to bid on future projects. Unlike purveyors of built services, the lack of requirement to purchase large amounts of external materials to provide services allows these firms to price their activities in line with their interest working on a particular job or with a particular client. Given that Valley Water is often a procurer of very large projects these firms, if they can be made to feel comfortable with their ability to perform, can and will price their efforts at or below their larger counterparts when they pursue.

LOCAL ESCALATION SUMMARY

Though uncertainty in terms of national leadership over the medium term is currently making achieving a true projection for a number of future expected economic conditions difficult, in summary current metrics for the Santa Clara MSA show a market continuing to shift sideways from an overall construction perspective. Continued reductions in (largely private) vertical construction, which will continue to manifest until 3-6 months after the federal funds interest rate is reduced, will provide some level of benefit to the (largely public) horizontal market in the form of lessened competition for material resources and certain types of construction labor/equipment. However, both known and anticipated increases in current, planned future and potential future transportation/utility projects will continue to provide a disproportionately diverse market in this subsector, somewhat muting the benefits of the reduction in competition from the private sector. Though materials pricing in the average continues to decline this does not include most of the materials heavily utilized in Valley Water projects, e.g. concrete and piping, and continued outsized volatility in energy markets will exert an outsized amount of influence on expected pricing and, correlatively, on construction bids with projects utilizing large amounts of heavy equipment. Current unemployment and labor supply dynamics indicate a market with a decreasing trend in worker availability, and though slight deceleration in particular construction sectors over the last twelve (12) months is providing those that continue to expand with some increased level of staffing the paucity of trade overlap between these sectors makes this condition of less benefit than it otherwise might be. At current we predict a current market escalation rate of 5.0% for the 2026 fiscal year, followed by a slight uptick to 5.5% in 2027. Please see below for a table of the currently expected escalation outlook for the Santa Clara County MSA.

ESCALATION OUTLOOK						
Year	FY26	FY27	FY28	FY29	FY30	FY31-40
Construction Cost Escalation Rate	5.0%	5.5%	6.0%	5.5%	5.0%	4.8%



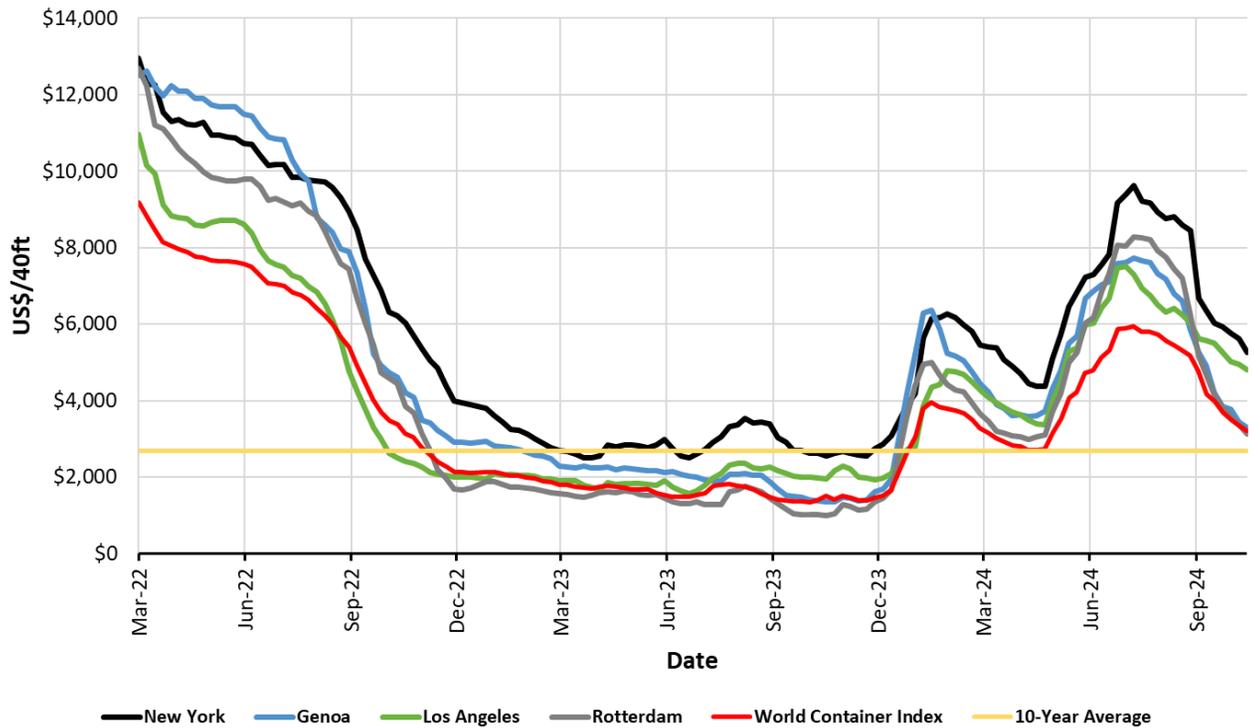
CONSTRUCTION MATERIALS

SHIPPING COSTS

A primary contributor to many of the material price spikes of the COVID era, transoceanic shipping disruptions and cost increases reached previously unimaginable levels in 2021 and early 2022. Drewry Supply Chain Advisors, which tracks and publishes container shipping costs, is currently tracking the composite cost of shipping containers at roughly \$5,736/40 ft container, or roughly double the pre-pandemic average pricing levels.

As mentioned previously, conflict in the Middle East and particularly in the Red Sea which serves as access to the Suez Canal, has caused disruptions and high volatility in global shipping. This remains one of the ever-present risks to budgeting forecasts as the cost of imported goods impacts all levels of the material and operations supply chains. Though given both its' project typology and procurement constraints Valley Water is less exposed to shipping cost volatility than many other comparably sized owners it still has the capacity to exert a large amount of influence on the supply of base materials components like steel, plastics and oil, all of which are refined into materials that are heavily utilized.

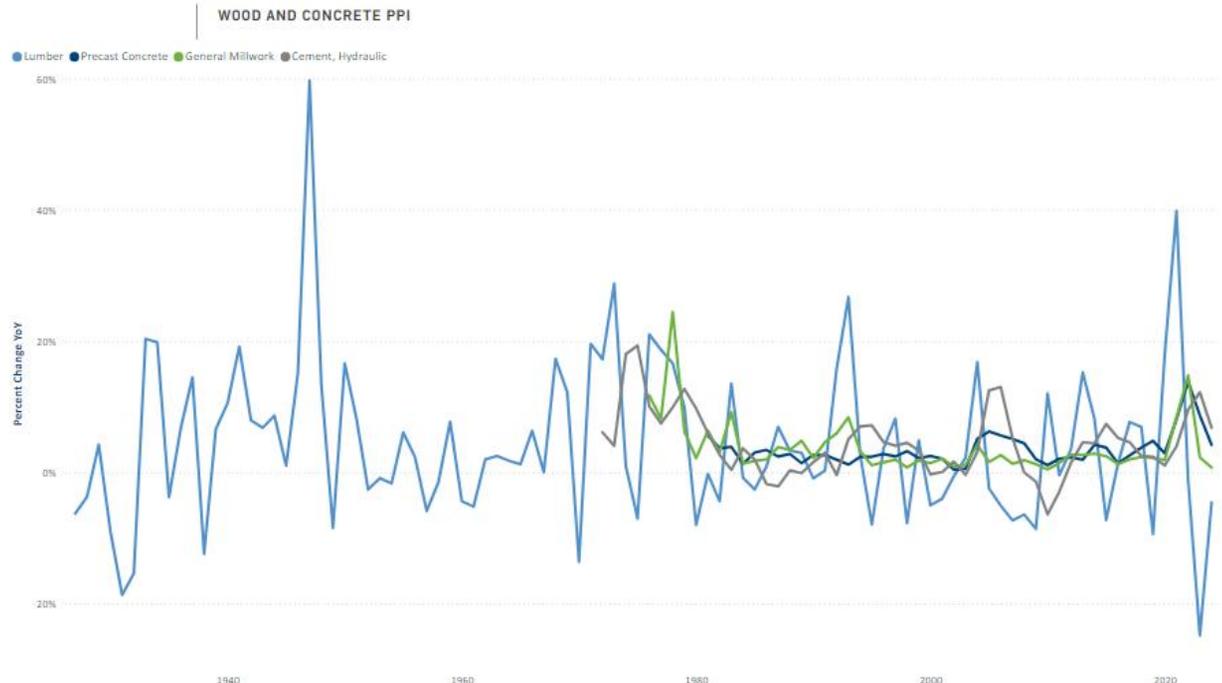
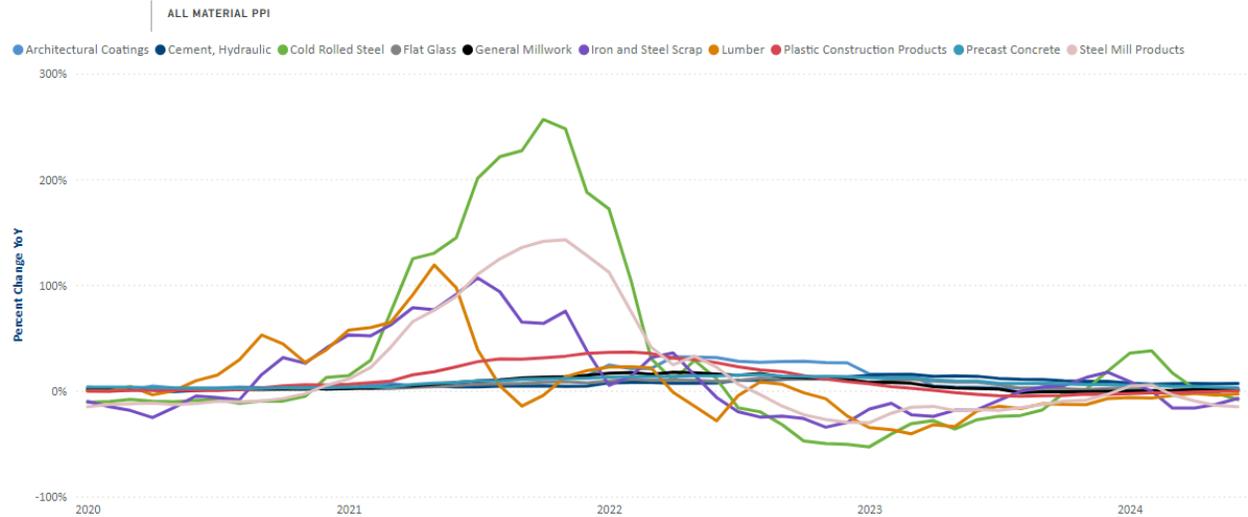
Transoceanic Shipping Rates



PRODUCER PRICE

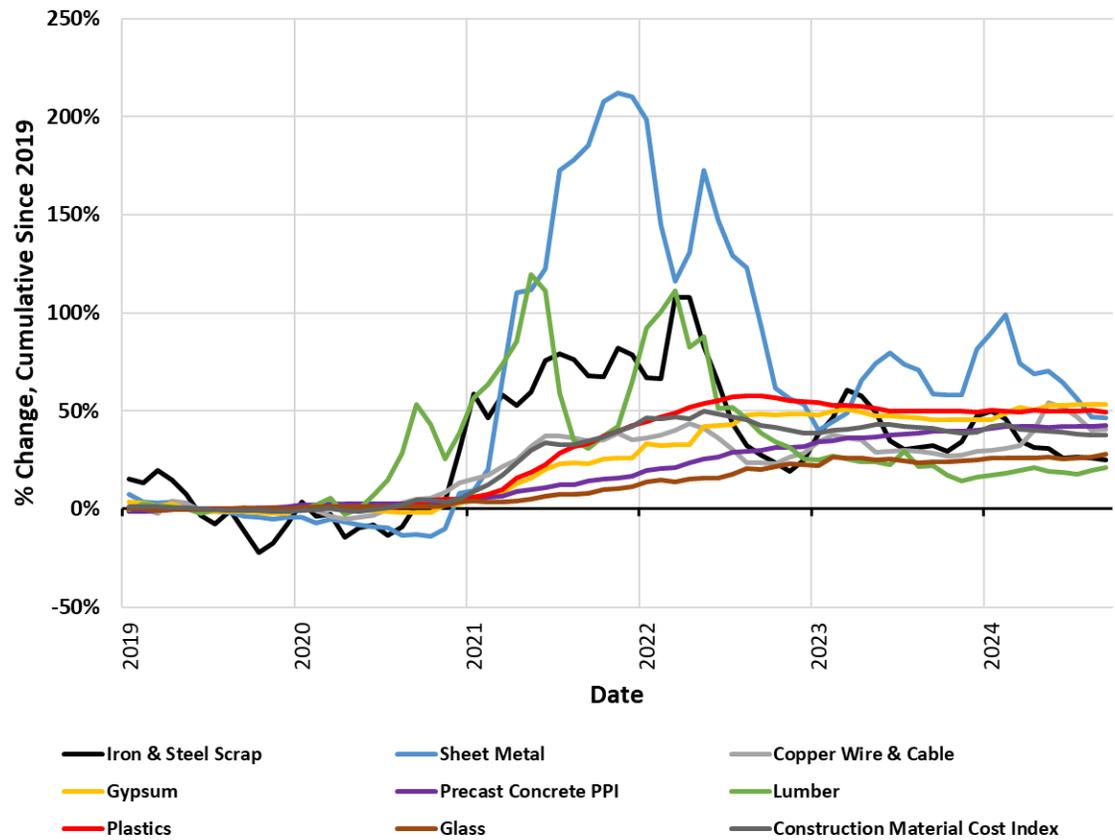
Previously forecasted trends of easing in material pricing volatility have continued to materialize over the last twelve months, with most major categories reporting some level of negative change year over year according to the most recent data (June 2024). The table to the right outlines the changes across major categories for the last 1, 3, 12, and 24 months. The table focuses on major components and materials that will be most heavily utilized on Valley Water projects. The table shows a very precipitous fall in the cost of lumber, which is a necessary input to concrete construction, as well as decline in precast concrete and millwork. Hydraulically placed concrete, however, has continued nascent trends noted in our last report and has seen an almost 7% rise over the course of the year. Mechanical, plumbing and electrical components have dropped in cost from their post COVID highs but have not regained parity with pre COVID pricing in deference to international geopolitical tensions, domestic reshoring efforts and heavy utilization in ongoing sustainability and utility projects.

Looking forward, we anticipate the majority of these trends continuing, at least until private/vertical construction volume begins to recover. Materials heavily utilized in flat construction, especially those that require a significant amount of oil/energy for production, will continue to see larger than average price swings and command higher prices at purchase. The influence of the Build American- Buy American (BABA) Act will have little effect on these premiums, however, as all of the materials being utilized by Valley Water are currently produced, or at least principally assembled, within the United States. This production method is in compliance with BABA requirements, and as such should exert upward pressure on Valley Water pricing.



The chart to the right highlights the year-over-year price movement of all construction material costs over the last 3+ years through the worst of the pandemic woes. At its peak, the spike from pre-COVID pricing levels reached +50%. At present, the net change from 2019 average pricing to today sits at just under 40% in total, with many materials and commodities seeing stabilization over the last 3-6 months. For reference, had the pandemic not happened and average yearly increases been registered in 2020-2023, we would expect the next change from 2019 (average) to present to have been closer to +15%.

Construction Material PPI



ENERGY COSTS

Energy, specifically by way of petroleum products, is one of the largest contributing factors to the cost of construction of any type. From concrete manufacturing to plastic products and material delivery, energy is a cost applied to nearly every construction activity. Accordingly, it is important to note that any potential improvement in the cost of other raw inputs will be partially, if not fully, offset by sustained, elevated energy prices. As seen in the chart to the right, energy was already the highest fluctuating input to construction. Low cost oil and natural gas through much of 2020 muted some price hikes in costs related to domestic transportation and delivery operations.

At present, the war in Ukraine and conflict in Gaza are ongoing with no clear path to cessation in sight. Current developments in the Middle East are likely a precursor to escalation of tensions between the US and several different significant OPEC countries, which could in turn raise doubts about the viability of shipping through the Straights of Hormuz and, correlatively, the world supply of light sweet crude. However, these expectations will also be heavily effected by the current US 2024 General Election with a significant amount of potential for reallocation of American financial, logistical and military support for foreign partners based on the results.

At present, the upshot of this is further spiking of energy (petroleum) costs in 2024 and anticipated further increases in 2025. This will impact almost all components of construction by way of transportation costs, personnel cost of living, and general operations, and will be a very prevalent driver for Valley Water project costs as so many large pieces of heavy equipment are typically utilized in their projects.

Inputs to Nonresidential Construction

