



**TISBURY SCHOOL ADDITION AND RENOVATION  
PROJECT**

**40 WEST WILLIAM STREET  
VINEYARD HAVEN, MA 02568**

**PROPOSITION 2½ DEBT EXCLUSIONS  
(G.L. c. 59, SS21C(k) and 21D)**

**CONTENT REPORT  
July 26, 2022**

**LETTER FROM THE OWNER'S PROJECT MANAGER (OPM) DETAILING  
THE CIRCUMSTANCES FOR THE COST INCREASE**



July 26, 2022

To: Town of Tisbury  
From: CHA Consulting (Owner's Project Manager)

Project: Tisbury School – Addition / Renovation

Re: Proposition 2 ½ Debt Exclusions  
Determination of Borrowing  
Circumstances Surrounding Cost Increase

“Two years after the coronavirus pandemic struck, the U.S. construction industry is still experiencing multiple impacts. Unprecedented increases in materials costs, supply-chain disruptions, and an increasingly tight labor market have made life difficult for contractors and project owners alike.”  
*(AGC 2022 Construction Inflation Alert)*

In February the AGC released an updated report detailing impacts from inflation, supply chain effects and a very sharp decline in the labor work force (*please refer to indices contained within*). The findings from this report when coupled with a high activity of greater opportunities for contractors to submit bids on more work are resulting in higher bid margins and limited competition. This has directly wedged the construction industry into a high rate of inflation costs effecting materials and labor required to complete this project. Additionally, with main land construction opportunities at an all-time high, it has been increasingly difficulty to secure the necessary trade contractors needed to construct a project of this size and complexity on island. Significant impacts of post pandemic influences, major supply chain forces, severe labor shortages and a strong local off-island construction marketplace are the main factors surrounding this cost increase.

In April, the professional team (Construction Manager, Architect/Engineer and Owner's Project Manager) conducted an in-depth Value Engineering initiative to consider alternate design options to decrease construction costs. *Value Engineering (VE) is a systematic, organized approach to modifying existing designs and specifications with the intent of preserving necessary functions in a project at the lowest cost. VE promotes the substitution of materials and methods with less expensive alternatives, without sacrificing functionality and is focused primarily on the functions of various components and materials, rather than their physical attributes. Value engineering is also referred to as value analysis.* The following three options were developed:

- Option 1 – VE Gym addition reducing the Administration Addition in size, develop alternates for strategic bid award and reduce renovation work scopes
- Option 2 – Renovate existing gym, Cafeteria and Administration Additions remain with a full renovation of the existing school less some VE (4%)
- Option 3 - VE Gym addition reducing the Administration Addition in size with major renovation reductions

Option 3 was chosen by the Building Committee and ratified by both the School Committee and Select Board which met the complete educational program in design and space requirements for the next 50 to 75 years. Options 1 and 2 did not meet the educational program and/or reduced the size of the building to the extent that the cost to complete the project without delivering the required space to meet operational and programmatic requirements would not be responsible to the school or the community.

Finally, as we look into the near future, we see no reverse in the impacts of the current market conditions and expect the cost to complete the project will continue to rise and anticipate continuing increases in cost based on market volatility paired with decreases in available labor and bidder interest.

Respectfully Submitted,

Michael T. Owen  
Senior project Manager

**REPORT SHOWING ORIGINAL PROJECT COSTS BY MAJOR CATEGORY  
AND BUDGET**

# TISBURY SCHOOL | TOTAL PROJECT BUDGET

	Budget
<b>ADMINISTRATION</b> (Legal, Printing, Advertising, Misc. Project Costs)	\$223,095
<b>OWNERS PROJECT MANAGER</b> (OPM Administration, On-Site Representative)	\$1,680,230
<b>ARCHITECTURE AND DESIGN</b> (Architectural and Engineering Costs, Reimbursable Services)	\$4,521,920
<b>PRE-CONSTRUCTION</b>	\$160,000
<b>CONSTRUCTION</b> (Demolition, Building Renovation, Sitework) VE Gym Addition; Reduce Admin Addition and Make Alternate; Renovation reductions Also includes Temp Modular School Construction and Early Enabling Site Work	\$71,221,289
<b>MISC. PROJECT COST</b> (Utility Costs, Permitting, Moving Costs, Testing & Inspections)	\$481,750
<b>FURNITURE, FIXTURES, AND EQUIPMENT</b> (Furnishings, Misc. Equipment, Technology, Phones, Computers)	\$825,000
<b>CONTINGENCY</b> (Owners Soft Cost and Construction Contingency)	\$2,730,000
<b>TOTAL PROJECT</b>	<b>\$81,843,284</b>
	Approved Debt Override (maximum)
	\$55,000,000
	Additional Temporary School Facility Funds from Town (2019 Appropriation)
	\$1,232,443
	<b>Total Project Budget</b>
	\$56,232,443
	<b>Shortfall</b>
	<b>(\$25,610,841)</b>



W. T. RICH COMPANY, INC.

July 25, 2022

CHA Consulting, Inc.  
One Washington Mall, Suite 1500  
Boston, MA 02108

Attention: Michael Owen, Senior Project Manager

Reference: Tisbury School

Subject: SD Comparison to Current Budget

Dear Mike,

As communicated, please find attached backup for the comparison of the SD Budget to the current July 2022 Budget.

In short, the below are the overall numbers that are detailed within the attached. These numbers are inclusive of the Modular Costs, Alternate and Unit Pricing:

Original Tappe/PMC	=	\$45,328,549
WTR Projected	=	\$71,221,289
Delta	=	\$25,892,740

Should you have any questions please do not hesitate to contact me directly.

TY

Very truly yours,  
W. T. RICH COMPANY, INC.



Brian Santos, President

CC: WTR Project Team

0725.SDbudgetCompare



Tisbury Elementary School  
Renovation and Addition  
Vineyard Haven, MA  
Schematic Design Estimate

**TAPPE/PMC SD ESTIMATE**  
Date: 07-May-21

<b>W.T. RICH PROJECTED GMP</b>		
Date: 25-Jul-22		
	<b>WT RICH PROJECTED GMP</b>	<b>PROJECT OVERRUN</b>
	<b>Estimated GMP</b>	<b>Delta</b>
	See CSI Summary	See CSI Summary
	See CSI Summary	See CSI Summary
	See CSI Summary	See CSI Summary
	See CSI Summary	See CSI Summary
	See CSI Summary	See CSI Summary
	<b>\$54,254,038</b>	<b>\$19,656,061</b>
	Included	Included
	Included	Included
	<b>\$54,254,038</b>	<b>\$19,656,061</b>
	<b>\$5,013,289</b>	<b>\$1,280,846</b>
	<b>\$1,748,624</b>	<b>\$1,748,624</b>
	\$4,446,381	(\$51,356)
	\$1,294,521	\$1,294,521
	\$510,000	\$510,000
	Included	Included
	Included	Included
1.84%	\$1,112,263	\$403,091
2.25%	\$1,445,677	\$450,555
2%	\$1,396,496	\$600,398
<b>\$1,017</b>	<b>\$71,221,289</b>	<b>\$25,892,740</b>
<b>\$/SF</b>		

	<b>TAPPE/PM&amp;C SD ESTIMATE</b>	
	<b>\$/sf</b>	<b>Estimated Construction Cost</b>
<b>MAIN CONSTRUCTION COST SUMMARY</b>		
Renovation	\$312.68	\$13,253,673
Additions	\$409.85	\$13,119,611
Demolition of Existing Building	\$12.00	\$168,276
Abatement of Existing Building		\$579,900
Sitework		\$2,704,382
<b>SUBTOTAL TRADE COSTS BUILDING and SITEWORK</b>	<b>\$400.90</b>	<b>\$29,825,842</b>
Design and Estimating Contingency	10.0%	\$2,982,584
Escalation - (Start June 2022; assume 4% PA)	6.0%	\$1,789,551
<b>SUBTOTAL INCLUDING CONTINGENCIES</b>		<b>\$34,597,977</b>
Site Enabling & Temp Modulars (CO#1,3,4)		<b>\$3,732,443</b>
Remaining Balance of Unit Price Work		<b>\$0</b>
General Conditions	7.0%	\$2,421,858
Extended General Conditions		\$0
Extended Modular Lease (6 months)		\$0
General Requirements	4.0%	\$1,383,919
Logistics/Travel	2.0%	\$691,960
Insurances	1.25%	\$432,475
Bond	0.70%	\$276,697
Fee	2.5%	\$995,122
CM Contingency	2.00%	\$796,098
<b>TOTAL ESTIMATED CONSTRUCTION COST</b>	<b>\$609</b>	<b>\$45,328,549</b>
	<b>\$/SF</b>	



Tisbury Elementary School  
Renovation and Addition  
Vineyard Haven, MA

Schematic Design Estimate

**PROJECTED GMP DETAIL SHEET**

**PM&C/TAPPE**  
5/7/2021

**WT RICH CO.**  
7/22/2022

CONSTRUCTION COST SUMMARY IN CSI FORM		TOTAL	TOTAL w/ 16% D&E	ACTUAL/PROJECTED GMP DETAIL	DELTA
TOTAL PROJECT Subtotal					
<b>TOTAL PROJECT CSI SUMMARY</b>					
<b>DIV. 2 EXISTING CONDITIONS</b>					
024116	Structure Demolition	\$1,078,200	\$1,923,396.00	\$2,907,000.00	\$983,604.00
028213	Abatement	\$579,900	Included above	Included above	
<b>DIV. 3 CONCRETE</b>					
033000	Cast-in-Place Concrete	\$1,790,590	\$2,228,959.72	\$2,808,030.00	\$579,070.28
033510	Polished Concrete Finishing	\$130,927	Included above	\$2,761,200.00	
<i>035400 Concrete Floor Topping</i>				\$0.00	
				\$46,830.00	
<b>DIV. 4 MASONRY</b>					
040001	Unit Masonry - FSB	\$1,036,824	\$1,202,715.84	\$2,276,000.00	\$1,073,284.16
<i>049500 Sandblasting</i>				\$2,234,000.00	
				\$42,000.00	
<b>DIV. 5 METALS</b>					
050001	Metal Fabrications - FSB	\$679,298	\$2,951,657.12	\$3,361,911.00	\$410,253.88
051200	Structural Steel Framing	\$1,865,234	Included above	\$673,911.00	
				\$2,688,000.00	
<b>DIV. 6 WOODS &amp; PLASTICS</b>					
061000	Rough Carpentry	\$239,530	\$477,026.80	\$1,122,356.00	\$645,329.20
<i>060120 Exterior Finish Carpentry &amp; Restoration</i>				Included w/ 092110	
		\$0		\$182,000.00	
064110	Architectural Woodwork	\$171,700		\$940,356.00	
066400	FRP Paneling	\$0		Included w/ 092110	
<b>DIV. 7 THERMAL &amp; MOISTURE PROTECTION</b>					
070001	Waterproofing, Dampproofing and Caulking - FSB	\$1,293,184	\$3,724,696.20	\$3,658,784.20	-\$65,912.00
070002	Roofing and Flashing - FSB	\$927,740		\$524,650.00	
072100	Thermal Insulation	\$187,840		\$1,867,200.00	
				\$262,976.00	





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TOTAL PROJECT		Subtotal			
<b>TOTAL PROJECT CSI SUMMARY</b>					
074213	Metal Wall Panels	\$582,475		\$369,693.80	
074610	Fiber Cement Siding	\$0		\$469,886.20	
078400	Fireproofing	\$219,706		\$38,500.00	
079500	Expansion Control	\$0		\$125,878.20	
<b>DIV. 8</b>	<b>DOORS &amp; WINDOWS</b>		<b>\$2,374,270</b>	<b>\$5,075,987.60</b>	<b>\$2,321,834.40</b>
080001	Windows	\$1,583,625		\$0.00	
080002	Glass and Glazing - FSB	\$0		\$53,500.00	
081113	Doors, Frames and Hardware	\$415,540		\$916,707.60	
083113	Access Doors and Frames	\$7,500		Included w/ 081113	
083323	Overhead Coiling Doors	\$15,680		\$65,040.00	
083326	Coiling Grilles	\$0		\$0.00	
084413	Glazed Curtain Wall	\$0		\$4,016,100.00	
084523	Fiberglass Sandwich Panels	\$160,425		Included w/ 084413	
086200	Unit Skylights	\$184,000		Included w/ 070002	
089000	Louvers	\$7,500		\$24,640.00	
<b>DIV. 9</b>	<b>FINISHES</b>		<b>\$3,238,589</b>	<b>\$6,865,537.00</b>	<b>\$3,108,773.76</b>
090002	Tiling - FSB	\$222,095		\$182,490.00	
090003	Acoustical Ceilings	\$358,090		\$755,290.20	
090005	Resilient Flooring - FSB	\$231,275		\$751,986.00	
090007	Painting - FSB	\$311,681		\$287,320.00	
092900	Gypsum Board Assemblies	\$1,544,587		\$4,379,340.00	
096450	Wood Flooring	\$111,050		\$75,600.00	
096466	Wood Athletic Flooring	\$116,798		\$0.00	
096566	Resilient Athletic Flooring	\$0		Included w/ 090005	
096810	Carpet	\$31,713		\$69,261.60	
098120	Sprayed Acoustic Insulation	\$0		\$285,480.00	
098430	Sound-Absorbing Panels	\$0		\$78,769.20	



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TOTAL PROJECT Subtotal					
<b>TOTAL PROJECT CSI SUMMARY</b>					
098400	Acoustic Room Components	\$311,300		\$0.00	
<b>DIV 10 SPECIALTIES</b>		<b>\$314,028</b>	<b>\$364,272.48</b>	<b>\$300,746</b>	<b>-\$63,526.48</b>
101100	Visual Display Surfaces	\$92,998		\$84,196.80	
101400	Signage	\$81,480		\$31,560.00	
102100	Toilet Compartments and Cubicles	\$29,000		\$57,944.40	
102600	Wall and Door Protection	\$0		\$5,359.20	
102800	Toilet Accessories	\$36,600		\$10,410.00	
104300	Fire Protection Specialties	\$8,750		\$3,453.60	
105113	Lockers	\$65,200		\$107,822.40	
<b>DIV. 11 EQUIPMENT</b>		<b>\$521,964</b>	<b>\$605,478.24</b>	<b>\$1,468,363.80</b>	<b>\$862,885.56</b>
111300	Loading Dock Equipment	\$10,000		\$0.00	
113100	Appliances	\$3,000		\$29,106.00	
114000	Food Service Equipment	\$240,000		\$602,575.20	
115213	Projection Screens	\$20,000		\$30,651.60	
116200	Theatre Equipment	\$75,000		\$223,200.00	
116600	Athletic Equipment	\$173,964		\$213,000.00	
116800	Playground Equipment	\$0		\$277,068.00	
118129	Facility Fall Protection	\$0		\$92,763.00	
<b>DIV. 12 FURNISHINGS</b>		<b>\$498,076</b>	<b>\$577,768.16</b>	<b>\$27,562.80</b>	<b>-\$550,205.36</b>
112113	Window Treatments	\$184,905		\$0.00	
123200	Fixed Casework and Equipment	\$273,796		Included w/ 064110	
124813	Entrance Mats and Frames	\$39,375		\$27,562.80	
<b>DIV. 14 CONVEYING SYSTEMS</b>		<b>\$345,000</b>	<b>\$400,200.00</b>	<b>\$594,000.00</b>	<b>\$193,800.00</b>
142100	Passenger Elevators	\$345,000		\$594,000.00	



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TOTAL PROJECT Subtotal					
<b>TOTAL PROJECT CSI SUMMARY</b>					
<b>DIV. 21 FIRE SUPPRESSION</b>					
210000	Fire Protection - FSB	\$610,990	\$708,748.40	\$835,500.00	\$126,751.60
		\$610,990		\$835,500.00	
<b>DIV. 22 PLUMBING</b>					
220000	Plumbing - FSB	\$1,283,318	\$1,488,648.88	\$2,877,000.00	\$1,388,351.12
		\$1,283,318		\$2,877,000.00	
<b>DIV. 23 HVAC</b>					
230000	HVAC - FSB	\$3,538,312	\$4,104,441.92	\$6,197,000.00	\$2,092,558.08
		\$3,538,312		\$6,197,000.00	
<b>DIV. 26 ELECTRICAL</b>					
260000	Electrical - FSB	\$3,261,336	\$3,783,149.76	\$5,900,000.00	\$2,116,850.24
		\$3,261,336		\$5,900,000.00	
<b>DIV. 31 EARTHWORK</b>					
311000	Site Preparation	\$268,825	\$1,355,734.92	\$5,725,050.50	\$4,369,315.58
312000	Earthwork	\$807,212		\$4,300,092.50	
312500	Erosion and Sedimentation Control	\$92,700		Included w/ 311000	
		\$0		Included w/ 311000	
	<i>315010 Secant Wall Pile</i>			\$1,424,958.00	
<b>DIV. 32 EXTERIOR IMPROVEMENTS</b>					
321000	Site Paving	\$521,744	\$1,492,694.96	\$1,493,209.20	\$514.24
323000	Site Improvements	\$550,300		\$0.00	
328400	Irrigation	\$0		\$770,420.00	
	<i>323100 Fencing</i>	\$0		\$0.00	
	<i>329200 Landscaping</i>	\$214,762		\$98,476.00	
				\$624,313.20	
<b>DIV. 33 UTILITIES</b>					
331000	Water Utilities	\$112,500	\$697,470.88	\$0.00	-\$697,470.88
333000	Sanitary Utilities	\$58,100		Included w/ 311000	
334000	Storm Utilities	\$430,668		Included w/ 311000	



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<b>CONSTRUCTION COST SUMMARY IN CSI FORM</b>		<b>TOTAL</b>	<b>TOTAL w/ 16% D&amp;E</b>
<b>TOTAL PROJECT Subtotal</b>			
<b>GMP ALLOWANCES</b>	\$0		
<b>SUBTOTAL DIRECT (TRADE) COST</b>		<b>\$30,091,138</b>	<b>\$34,597,977</b>

<b>ACTUAL/PROJECTED GMP DETAIL</b>	<b>DELTA</b>
\$760,000.00	\$760,000.00
<b>\$54,254,038</b>	<b>\$19,656,061</b>

**ANALYSIS OF INFLATIONARY CIRCUMSTANCES CURRENTLY  
IMPACTING THE PROJECT COST**



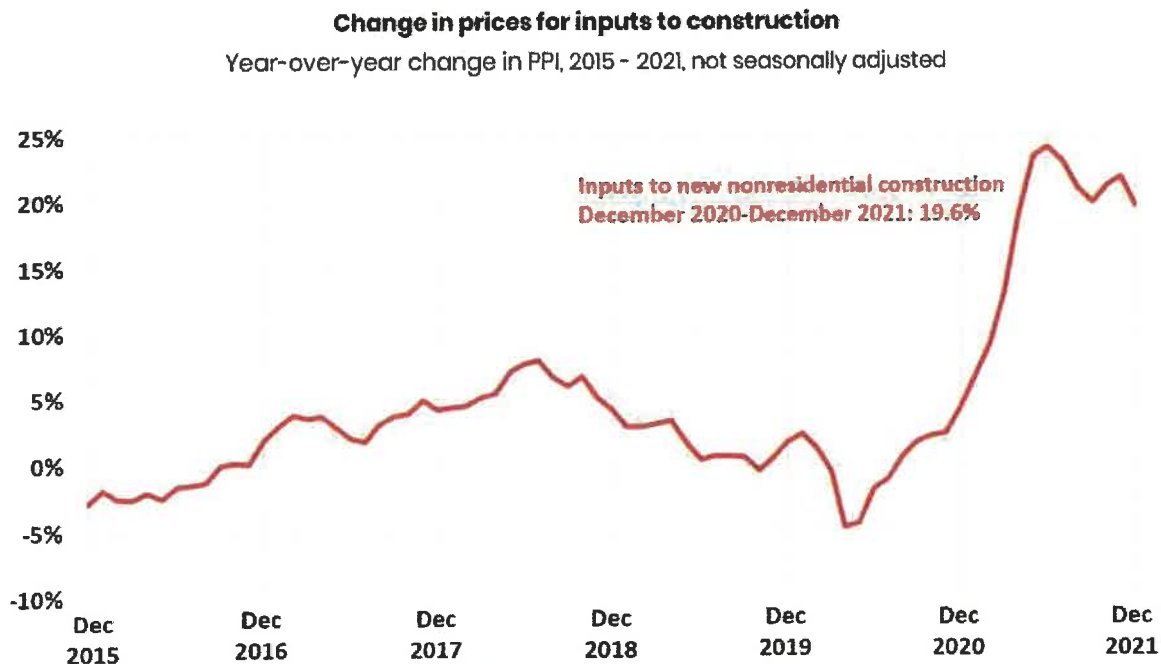
July 21, 2022

Re: Tisbury School Project  
Tisbury, MA  
DE-2 Option – Debt Exclusion  
IGR Application Support Document/Analysis

Analysis of inflationary circumstances currently impacting the Project Costs

Currently, CHA is tracking 8% YTD in escalation with last year totaling out being between 12% - 17%, notwithstanding island factor impacts and specific materials that had a greater volatility. CHA maintains constant contact with the subcontractor market base in verifying unit costs and tracking labor resources. We do that at a local level but also track by region, state, and national levels in terms of considering location factors and other impacts such as raw materials sourcing impacting production, as well as shipping. We continually monitor trade publications by way of example from JLL, RLB, CCorp, Turner, Vermeulens, AGC, NAHB, <https://edzarenski.com/>.

Jeff Birenbaum, MRED+U, Vice President



Source: Bureau of Labor Statistics, producer price indexes, [www.bls.gov/ppi/](https://www.bls.gov/ppi/)

No category of construction has escaped the extreme cost escalation. BLS posts PPIs for inputs to highways and streets; commercial, healthcare, industrial, power and communications, education and vocational, and other miscellaneous nonresidential structures; and for single- and multifamily construction. From December 2020 to December 2021, the increases in these input cost indexes ranged from 14.6% for new multifamily construction to 20.7% for commercial structures.

# Price increases for construction inputs

## Year-over-year change in December PPI

<b>Construction materials</b>	<b>2020</b>	<b>2021</b>
Steel mill products	5.2%	127%
Plastic construction products	5.4%	34%
Aluminum mill shapes	-1.7%	30%
Copper and brass mill shapes	24%	23%
Gypsum products	3.6%	21%
Lumber and plywood	37%	18%
Architectural coatings	1.9%	14%
Asphalt felts and coatings	2.1%	12%
<b>Used by contractors</b>		
Diesel fuel	-2.8%	55%
Truck transport of freight	2.2%	18%
Construction machinery and equipment	1.1%	10%
Truck and offroad tires	0.3%	11%

Source: Bureau of Labor Statistics, producer price indexes, [www.bls.gov/ppi](http://www.bls.gov/ppi)

BLS posts several PPIs for new nonresidential construction and for subcontractors' pricing. Since every construction project is unique, it is not possible to collect prices for identical construction "products" in the same way as for most goods and services. Instead, the agency creates "bid price" PPIs (BLS refers to them as output price indexes) through a two-step process. Each quarter it receives data from construction cost-estimating firms as to the cost of a package of installed components or "assemblies" of a particular nonresidential building. Every month BLS asks a fixed group of contractors the amount of overhead and profit they would charge to erect that building. BLS combines the answers from a set of contractors to create PPIs for new warehouse, school, office, industrial, and healthcare building construction, along with a weighted average of these building types for an overall index for new nonresidential building construction. There are also indexes for maintenance and repair and for all types of nonresidential work performed by concrete, electrical, roofing, and plumbing contractors.

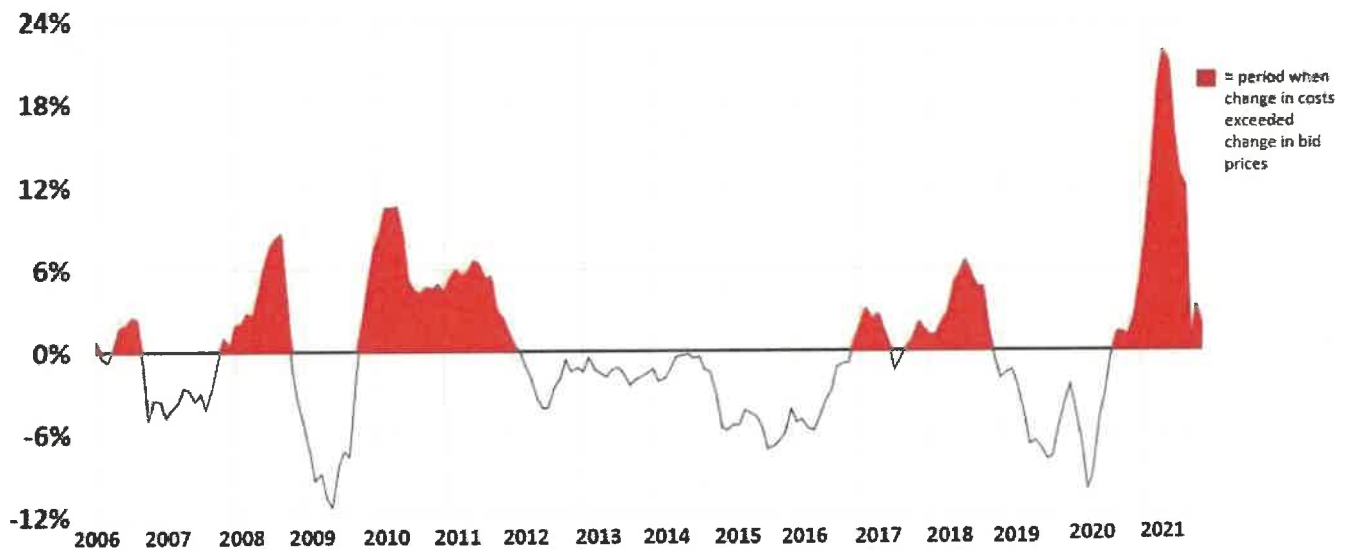
Despite the steep increase in most input prices last year, several of them slowed or reversed course during 2021. Price indexes for diesel fuel and lumber each more than doubled from mid-2020 to mid-2021 before ending the year higher by “only” 55% and 18%, respectively. The PPI for copper and brass mill shapes had a year-over-year gain of 65% earlier in 2021 but wound up “only” 23% higher than in December 2020.

Prices for each of these items have recently turned higher again. The futures price for lumber, as traded on the CME commodities exchange, tripled from a low in October to early January before partially retreating later in the month. The futures price for copper moved higher in January. The retail price of diesel fuel, as reported each Monday by the Energy Information Administration, reached a nearly eight-year high of \$3.95 per gallon on February 7, an increase of \$1.15 per gallon or 41% from one year earlier. These changes are likely to show up in PPIs in early 2022, and the fuel price increase will likely spread to higher prices for trucking, especially for deliveries of heavy items such as ready-mix concrete and rebar.

As of early February, it does not appear likely that input prices will set new records in 2022. But wide swings in both directions may continue. Such volatility can be as risky to contractors’ solvency as a steady change. Firms may submit bids based on the assumption that current prices will hold or slip further, only to be caught by a new upswing. And owners may pressure contractors to pass along recent price declines, not recognizing that current prices may not reflect the price a contractor already committed to pay for materials or the price it will pay months later when it places an order. There have also been recent cases of suppliers refusing to quote firm prices until time of shipment, at which point prices may greatly exceed the current price.

## Cost squeeze on contractors can last two years or more

Difference between year-over-year change in materials costs vs. bid prices, Jan 2006-Dec 2021



Source: Bureau of Labor Statistics, [www.bls.gov/oes/](https://www.bls.gov/oes/), producer price indexes for goods inputs to construction (material costs) and new warehouse construction (bid prices)

The areas in red indicate periods in which the year-over-year change in the PPI for inputs to construction exceeded the PPI for new nonresidential building construction—specifically, warehouses. (Similar patterns exist for the other new-construction “bid price” indexes: the PPIs for new school, office, industrial and healthcare buildings.)

Materials costs outran bid prices for as long as 27 months from late 2009 to early 2012 and for nearly 24 months from late 2016 to late 2018. The current gap hasn’t lasted as long—yet—but the peak was twice as high as in previous episodes, indicating the pain for contractors was that much more intense.



From the first days of the pandemic, availability and delivery times for materials have been never-ending headaches for construction firms. Problems began as early as February 2020, when factories in China and northern Italy were shut down, causing shortages of items as diverse as elevator parts, floor tiles, and kitchen appliances.

The following month, as the U.S. economy went into a steep dive, construction firms canceled orders and suppliers lost workers to Covid-19 or shut to comply with governors' edicts. When orders rebounded, there were not enough workers, ships, port berths, containers, chassis, or trucking, rail, and warehouse workers to produce and move goods.

Adding to these pandemic-induced problems, a series of unusual mishaps interfered with output or delivery of numerous goods. The biggest impact for construction came from the deep freeze in Texas in February 2021 that damaged all of the petrochemical plants producing resins for a host of construction plastics. Damage to the electrical grid in Louisiana from Hurricane Ida last summer further interfered with the production of some plastics inputs. Wildfires and mudslides in British Columbia and soggy conditions in the Southeast have affected lumber production. The blockage of the Suez Canal and the abrupt closure of an Interstate highway bridge across the Mississippi River in 2021 are further examples of "one-off" events that have disrupted the supply chain.

Construction has also been affected by the much-publicized shortage of computer chips. Not only is the industry a major buyer of pickup trucks that are in short supply, but deliveries of construction equipment also have been held up by a lack of semiconductors.

With so many factors contributing to delays, it is not surprising that 72% of the respondents to AGC's outlook survey reported that projects took longer than anticipated last year. As a result, 44% report that their firms are putting longer completion times into bids or contracts.

So far, there is little sign that the supply chain will consistently improve in 2022. While the lead time for some items has shortened, deliveries for many materials remain delayed or unpredictable. Dealers and contractors continue to report being informed shortly before an expected delivery that the item will not arrive for months or the quantity will be less than expected—and needed. Other items have shown up unexpectedly early, without warning, causing problems when they cannot be used, installed, or stored onsite.

The construction industry lost 1.1 million employees from February to April 2020—a 15% decline in just two months and nearly half as many as in the industry's five-year downturn from 2006 to 2011. While both residential and nonresidential construction employment rebounded somewhat in May 2020, employment stalled for more than a year after that among nonresidential firms—general and specialty trade contractors plus civil and heavy engineering construction firms. During that period, thousands of experienced workers moved into residential construction (homebuilding and remodeling), found jobs in other sectors, or left the workforce completely.

Nonresidential employment grew strongly in the last four months of 2021. But job openings increased even faster. Openings at the end of 2021 totaled 273,000, a jump of nearly 30% from the end of 2020, according to BLS's Job Openings and Labor Turnover Survey. The total exceeded the 220,000 employees hired in December, implying that construction firms would have added twice as many workers as they were able to, if there had been enough qualified applicants.

In order to attract, retain, and bring back workers, construction firms are raising pay. Average hourly earnings in construction rose 5.8% from February 2021 to January 2022 for "production and nonsupervisory employees"—mainly hourly craft workers. But the average for such workers in the overall private sector climbed 6.9%. The implication is that construction companies will have to raise pay even more in the coming months to remain competitive.

**Note: Above information taken from the following report:**



**2022 CONSTRUCTION INFLATION ALERT |**

## Annual price increases

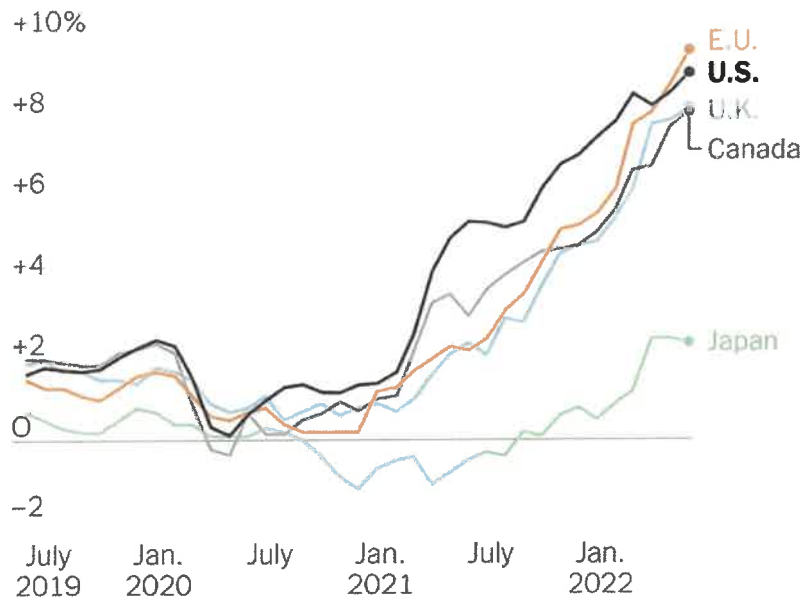


Chart showing annual change in Consumer Price Index each month up to June 2022. | Source: O.E.C.D.

## Common causes

The big factors that drove up inflation in the U.S. also affected the rest of the world: the disruption of supply chains by both the pandemic and Russia's invasion of Ukraine, and soaring consumer demand for goods.

But increasing inflation has played out differently in different countries, said Jason Furman, an economist at Harvard University. The U.S.'s earlier, bigger price spike had different causes than Europe's more recent increase. (Countries differ in how they calculate price changes, but economists still find comparisons of the available data useful.)

In the U.S., demand has played a bigger role in inflation than it has elsewhere. That is likely a result of not just the American Rescue Plan but also economic relief measures enacted by Donald Trump. Altogether, the U.S. [spent more](#) to prevent economic catastrophe during the pandemic than most of the world did. That led to a stronger recovery, but also to greater inflation.

In Europe, supply has played a bigger role. The five-month-old war in Ukraine was a more direct shock to Europe than it was to the rest of the world, because it pushed the continent to try to end its reliance on Russian oil and gas. That prompted Europe's recent jump in inflation.

"The U.S. is trying to cool down an overheating economy," my colleague Eshe Nelson, who covers economics from London, told me. "That is just not the situation in Europe."

The New York Times

**The Morning**

July 26, 2022

By [German Lopez](#)

**STATEMENT FROM THE ARCHITECT IN SUPPORT OF  
PARAGRAPH 3. CONTENT  
SUBPARAGRAPHS D and E**



**TAPPÉ**  
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## **MEMORANDUM**

**DATE:** July 22, 2022  
**To:** Town of Tisbury, CHA, W.T. Rich Construction  
**From:** Tappé Architects  
**Project:** Tisbury Elementary School  
**RE:** Cost and Scope Management

Tappé Architects was engaged to design and engineer a renovation and addition to the Tisbury Elementary School in late 2019. Through 2020 and into 2021 Tappe developed a plan that was approved by the Tisbury School Building Committee (TSBC) That plan resulted in roughly 74,398 square feet of enclosed space that was designed commensurate with current standards of school design and based upon a middle ground target in terms of finish materials and scope. This was meant to provide the town with a good level of quality that will last for more than 50 years but also not be too expensive in first cost. The plan consisted of 2 additions and a “gut” renovation to the existing building. The entire process followed a cost conscience approach knowing the position that the town of Tisbury was in financially and knowing that the entire amount of the project was going to be funded by the town. Since approval in 2021, the design team completed the construction documents and put the final details on the project to make it constructable and complete the scope which the electorate favorably supported. There were many meetings that focused on simplifying and great effort was given to saving money wherever possible. The scope in terms of program and detail was closely monitored by the TSBC and was never allowed to creep upward or change at any time. Going into the spring of 2022 the plan details and scope had all stayed the same as what was approved a year earlier in 2021.

In Spring of 2022, upon hiring the construction manager W.T. Rich and in collaboration with the cost estimator, it became apparent that the previous budget was in risk due to inflation, supply chain, labor workforce shortages and complications in logistics. The team began to analyze the major scopes of work and looked to find ways to manage the cost and budget. In May 2022, the project team evaluated that the project appeared to be several million over budget and we began to look for ways to cut cost. Every finish in the building was evaluated and many things were changed to lesser cost solutions. In addition, the team took an aggressive approach to bidding the project with alternates and unit prices so the town would have the greatest amount of leverage to do what they can afford. The biggest changes were big cuts in site work and landscaping and a significant reduction in the built addition on the west side of the project. The team revised the plans and reorganized the interior, using some excess gross square footage, and was able to eliminate 4,500 sf of building addition.

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Sincerely,

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