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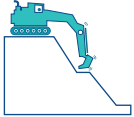
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FISCAL YEAR 24/25 2ND QUARTERLY REPORT

STRATEGIC RESOURCE EVALUATION STUDY
HIGHWAY CONSTRUCTION MATERIALS
CONTRACT BEC18

OVERVIEW: FLORIDA'S HIGHWAY CONSTRUCTION MATERIALS

Construction Material	Status
 <p>ASPHALT</p>	<p>Asphalt bids trended down this quarter, falling 8.1% to \$167 per ton compared to year-end FY 2024. Despite declining fuel costs, binder prices remained flat over the same period. Industry surveys were optimistic this quarter, with 82% of respondents estimating the probability of the U.S. entering a recession within the next 12 months at less than 25%. While current crude oil forecasts show significant decline in both FY 2025 and FY 2026, the biggest risks to company outlooks were implementation and timing of policy proposals from the new administration (61%) and increased global geopolitical instability (36%).</p>
 <p>CONCRETE</p>	<p>Concrete bids were flat this quarter, averaging \$1,403 per cubic yard - the same price as year-end FY 2024. Cement prices appear to be coming down in northern states, but remain at an all-time high in southern states at this writing. Significant industry consolidation occurred this quarter with German-owned cement producer Heidelberg Materials entering an agreement to acquire Giant Cement Holding, Inc. and Quikrete moving to acquire Summit Materials.</p>
 <p>STEEL</p>	<p>Reinforcing steel bids were higher than expected this quarter and do not appear to be following national downward trends; structural steel prices remain high. The sale of U.S. Steel to Nippon Steel was blocked in early January by the outgoing administration and the deal is now in litigation. Some Canadian and Mexican steelmakers halted new orders to the U.S. due to uncertainty about changing U.S. trade policies and tariffs.</p>
 <p>AGGREGATE</p>	<p>Aggregate base prices fell to \$31 per square yard this quarter with updated bid data, a decline of 6% from FY 2024. However, Florida crushed stone production was down 11% in the third quarter of calendar year 2024 and supplier prices rose 10% over the same period. Competition appears to be outweighing cost increases at this time, but upper bound price estimates should not be discounted.</p>
 <p>EARTHWORK</p>	<p>Earthwork bids held steady at about \$21 per cubic yard this quarter. Declining fuel costs have not accompanied declines in prices. In general, equipment costs seem to have hit their respective floors and started rising again over the last quarter.</p>

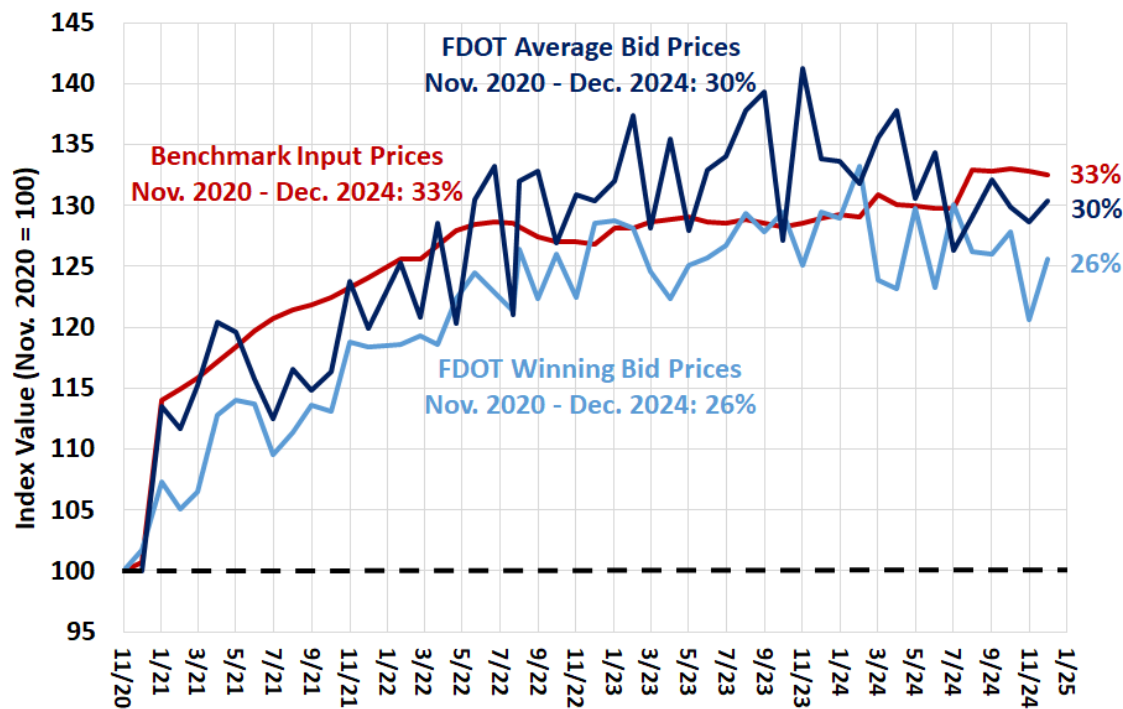
FDOT Cost Index

The **Florida Department of Transportation (FDOT) Cost Index** is calculated by assessing awarded and average bids. The share of aggregate, asphalt, concrete, and steel dollars spent on FDOT projects is compared to a baseline index that is calculated from regional industry prices; see **Figure 1** for data from November 2020 forward.

FDOT winning and average contractor bids tracked under industry benchmark input prices over the last quarter. The industry benchmark remained 33% higher than November 2020 levels through December 2024. According to December 2024 preliminary data, FDOT winning bids were 26% higher than November 2020 levels. Preliminary average bid prices remained elevated in December 2024 at 30% higher than pre-pandemic levels. The gap between *average* bid prices (calculated from all bids received) and *winning* (awarded) bid prices widened over the last three months, as did the gap between average bids and the industry benchmark, indicating more competitive bidding activity.

Monthly cost composition by material is provided in **Appendix A**, along with an update on the Bureau of Labor Statistics (BLS) Producer Price Index (PPI).

Figure 1. Florida Benchmark Input Prices vs FDOT Bid Prices



TBG calculated from data provided by FDOT Office of Forecasting and Project Cost.

Table 1 shows the estimated cost impacts as a result of changes to different market factors. For example, if the price of asphalt binder increases 10%, FDOT’s bid prices for hot mix asphalt (HMA), on

a weighted average basis, could be expected to see an increase of 3.57%, based on recent bidding behavior.

Table 1. Market Factor Cost Impacts

For every 10% increase in:		FDOT saw a cost increase of:
HMA	Nonfarm Employment	13.78%
	FDOT Work Program	4.52%
	Construction Employment	3.98%
	Price of Binder	3.57%
Concrete	Construction Employment	8.73%
	Price of Crushed Stone	4.76%
	Price of Crude	2.43%
	Price of Diesel	2.38%
Reinforcing Steel	Construction Employment	7.11%
	GSP	3.53%
	Price of Crude	3.43%
Structural Steel	Crude Oil Demand¹	24.46%
	Chinese Imports	3.98%
	FDOT Work Program	1.32%
Aggregate	Construction Employment	6.80%
	GSP	6.43%
	FDOT Work Program	3.91%
	Price of Crushed Stone	3.78%
Earthwork	Total Non-farm Employment	33.25%
	Construction Employment	7.95%
	Single Family Housing Starts	2.38%
	Price of Diesel	2.33%

Source: TBG Work Product.

¹ In this case, global crude consumption functions as a proxy for global economic activity, reflecting that FDOT structural steel bids have shown high sensitivity to global energy demand and macroeconomic activity.

Disclaimer

The opinions, findings, and conclusions expressed in this publication are those of the authors and not necessarily those of the State of Florida Department of Transportation

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INTRODUCTION

The Florida Department of Transportation commissioned The Balmoral Group (TBG) to evaluate the availability and costs of critical highway construction materials in Florida. The evaluation includes an analysis of existing and planned supply of these materials, and an estimate of future costs and quantity requirements FDOT will face in fulfilling its five-year work program. Materials in the analysis include the bituminous, cement, steel, aggregate and earthwork markets. An annual assessment of the materials markets and significant trends affecting FDOT's supply availability and costs is included in this report.

The report is organized as follows:

- **General Economic Landscape** for highway construction materials,
- **Work Program Work Mix** allocation and materials quantities estimates,
- **Material-specific findings** for supply chain variables, including
 - raw material sources,
 - existing and likely future transport and distribution methods,
 - potential impact of external forces including global markets, technological change, foreign materials, and environmental regulatory or permitting issues, as relevant,
 - forecasts of likely Florida supply and FDOT costs for the five-year work plan, and
 - GIS maps of existing supplier locations.

GENERAL OUTLOOK: HIGHWAY CONSTRUCTION MATERIALS

Bid Data

Average bids provide insight to market trends; in economic terms, the expected value of a contract or project is the average of all bids. In this analysis, the average of all bids, or the mean, is compared to the official preliminary estimate. Using a 3-month rolling average, in the second quarter of Fiscal Year 2024-25 (FY 2025), the average deviation of all bids from the mean of all official preliminary estimates was -1%; lower than the previous quarter (**Figure 2**). Excluding contracts exceeding an official estimate of \$100 million from the analysis finds different results, with bids being -3% lower than the official estimate.

Figure 2. Average Bid vs. Official Estimate, 3-month Rolling Average

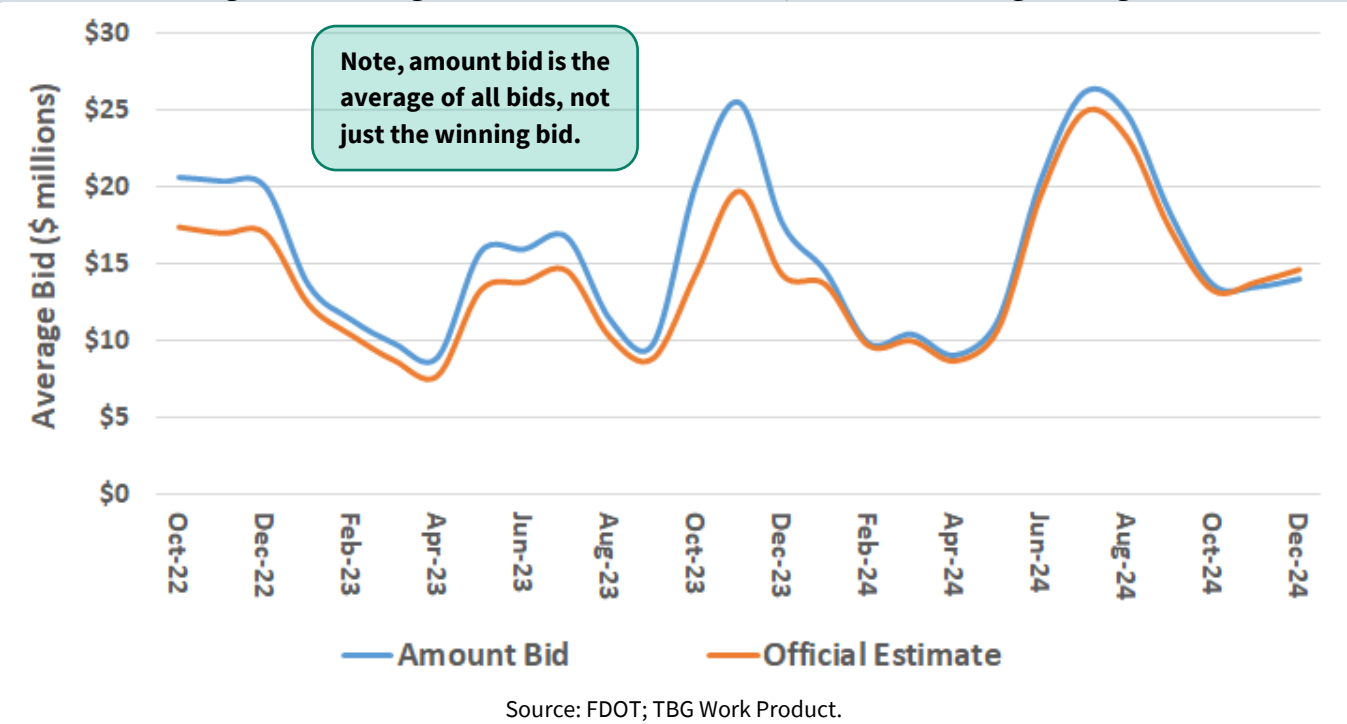
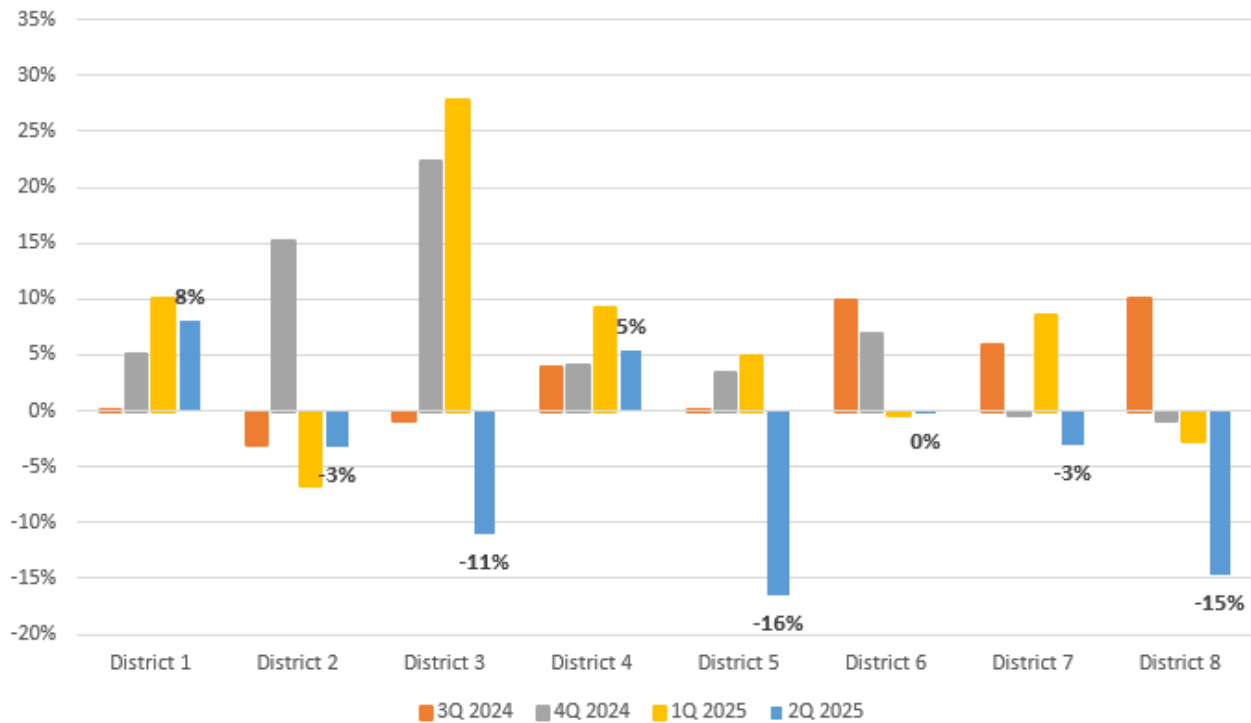


Figure 3 illustrates the average bid versus their official estimate by District on a three-month rolling average. Differences in district-level percentages compared to overall statewide averages are driven by the total amount of dollars for both the official estimate and bids, as well as the total number of bids. Over the past 4 quarters, most districts have average bids lower than the official estimates.

Figure 3. Average Bid vs. Official Estimate, 3-month Rolling Average by District



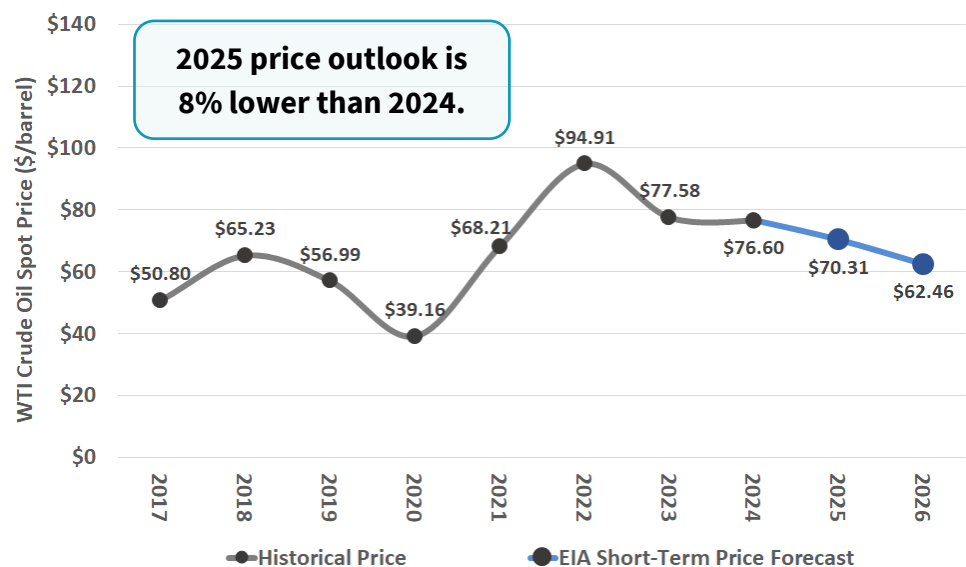
Source: FDOT; TBG Work Product

Energy Prices

The U.S. Energy Information Administration (EIA) January 2025 Short-Term Outlook forecasted the 2025 crude oil spot price to average \$70.31 per barrel, an 8% decline from the 2024 price of \$76.60 per barrel (**Figure 4**). Currently, year-over-year crude oil prices are down 1% as of January 2025.

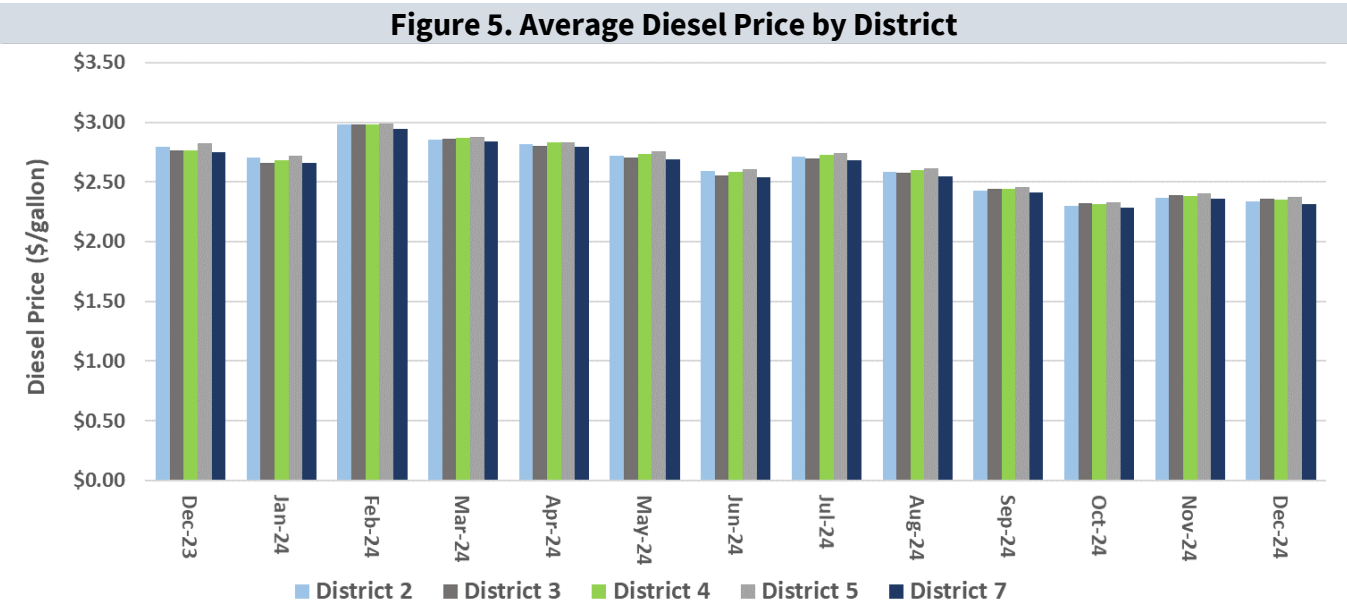
However, ongoing geopolitical conflicts and evolving domestic policies could disrupt oil prices at any time. EIA's Annual Energy Outlook 2025 is expected to be published in Spring 2025, which will shed more light on potential upper and lower bound scenarios given current market conditions.

Figure 4. Monthly Crude Oil Price, 2017 to 2026



Source: EIA Annual Energy Outlook and Short-term Forecast.

Diesel price quotes from suppliers at terminals around the state decreased from December 2023 to December 2024. On average, prices in December 2024 were \$2.35 per gallon, which is a 16% decrease year-over-year and a 1% decrease month-over-month (**Figure 5**). Prices in all districts ranged between \$2.32 and \$2.37 per gallon. The latest EIA Short-Term Energy Outlook for the U.S. diesel market was revised downward from \$3.78 per gallon in 2024 to \$3.66 per gallon 2025. Prices are forecast to be flat in 2026 to \$36.64 per gallon.



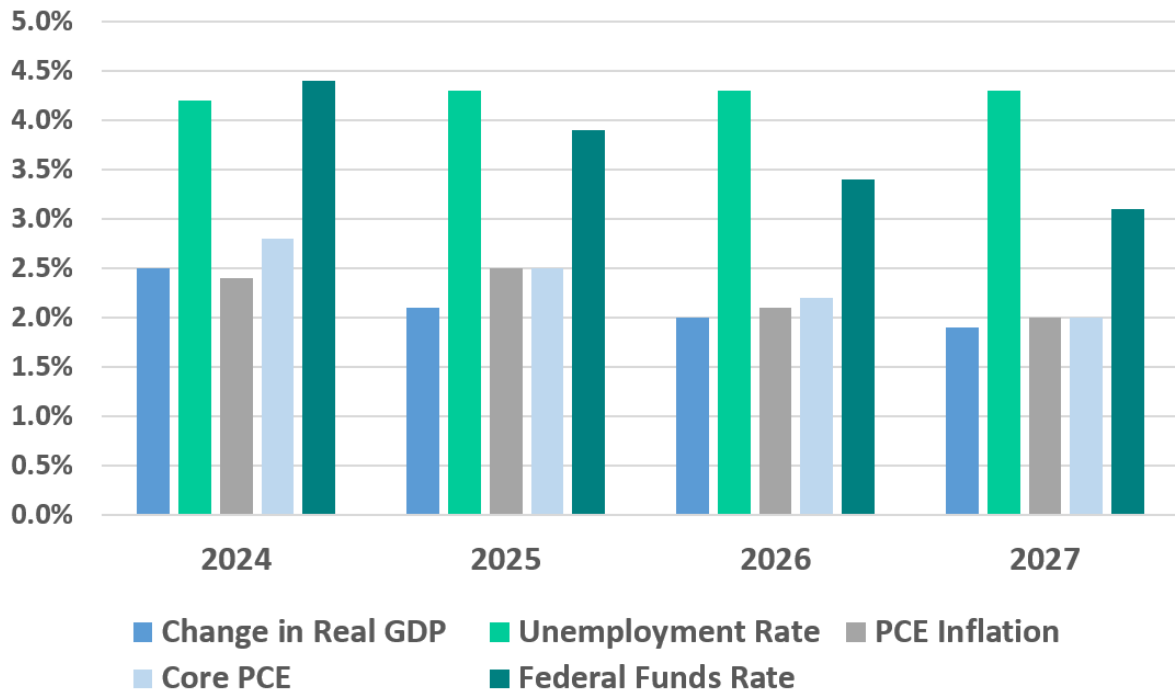
Source: FDOT, TBG Work Product (D1 and D6 terminals did not report data).

Inflation

The Federal Open Market Committee (FOMC) released revised economic projections in December 2024, leaving Gross Domestic Product (GDP) estimates relatively unchanged from June and September, with only a slight increase in 2024. Unemployment estimates slightly decreased for 2024 through 2025 from the Sept. publication. However, inflation estimates are now estimated to be slightly higher at 2.4% for 2024 and 2.5% in 2025, up from 2.3% and 2.1% in September (**Figure 6**). The National Association of Business Economists (NABE), in their November Business Outlook Survey, finds the consensus among corporate economists that forecasted economic growth in 2024 and 2025 was higher than previous projections. The largest share of respondents (44%) now see the risks surrounding the outlook as balanced, whereas the majority of respondents in the previous survey thought downside risks were more likely than balanced or upside risks. The median forecasts for inflation call for further cooling with the CPI projected to slow in 2025.



Figure 6. FOMC Economic Projections, December 2024



Source: Economic Projections were provided by Federal Reserve Board members and Federal Reserve Bank Presidents.

Legislation and Regulations



State and federal funding and regulatory changes are expected to increase demand for, or otherwise impact, highway construction materials resources:

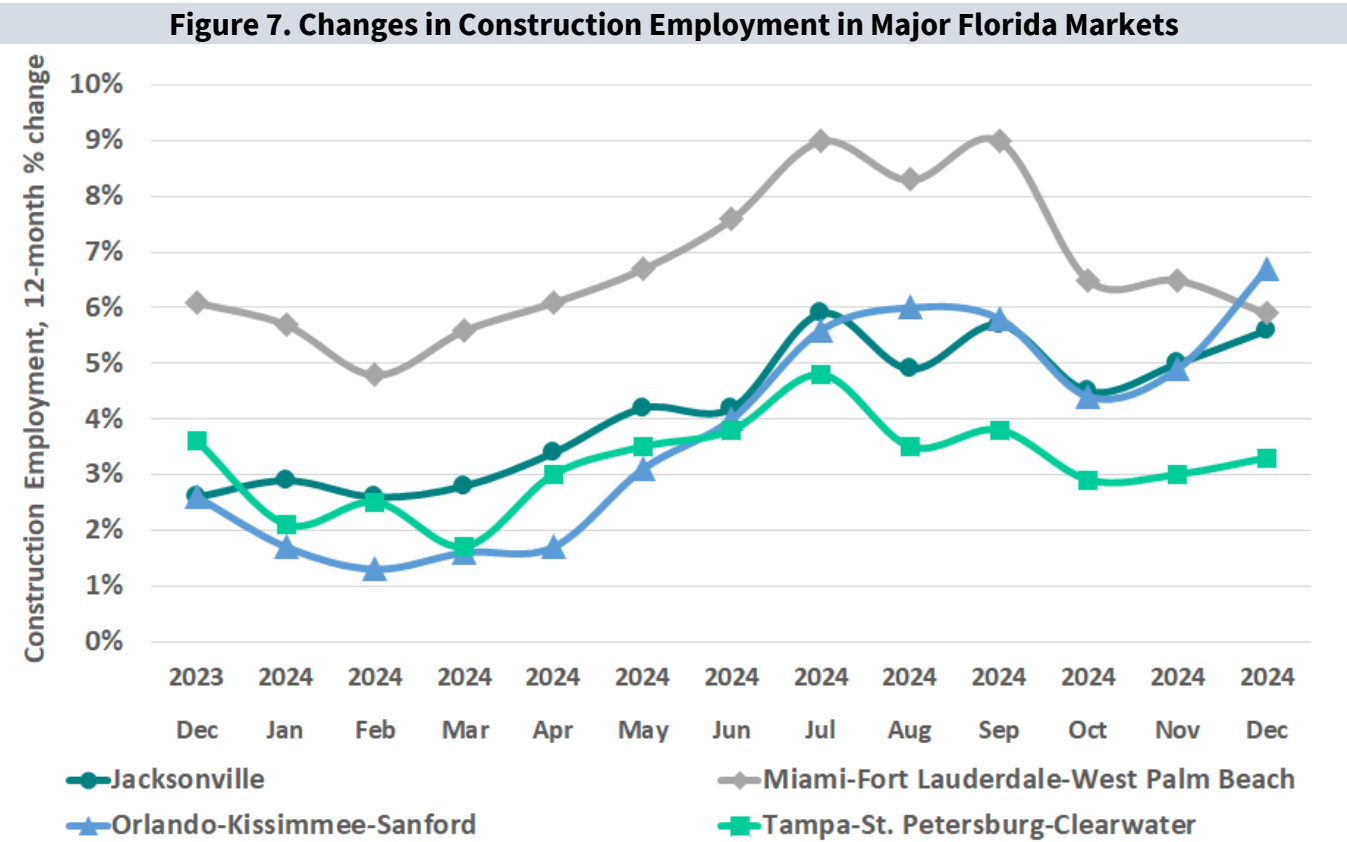
<p>Funding Awarded to Support Florida's Military Communities</p> <p>The Florida Commerce announced on January 7, 2025 that \$7 million in funding has been awarded to many military communities throughout the state for the Defense Infrastructure Grant Program. This grant program provides support for infrastructure projects that have been deemed to have an impact on the military value of</p>	<p>of installations within the state by addressing encroachment, transportation and access, housing, utilities, communications, environment, security needs, and more.</p> <p>17 Florida Communities Receive Funding for Infrastructure Improvements</p> <p>In December, Governor Ron DeSantis announced the award of \$20 million to small county governments and rural</p>	<p>municipalities. This funding is through the Rural Infrastructure Fund (RIF). Awards were made to 17 Florida communities for projects that will aid in crucial infrastructure developments and boost the rural economies. The RIF program supports the planning, designing, and financing of infrastructure projects solely within rural communities. The goal is to drive in growth and attract businesses to these areas.</p>
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<p>Space Florida Prioritizing Infrastructure Improvements to Aid in the Industry Developments</p> <p>In November, 78 rocket launches were recorded from the state in 2024. This already exceeded 2023's record of 72 launches. With an impressive 10-year goal of sending 5,000 metric tons to space, 1,000 have been recorded to date causing concern for needed infrastructure to meet such goals. Space Florida officials have identified six projects to support growth which include the replacement of the NASA-owned Roy D. Bridges Jr. Bridge to accommodate larger loads to wharf spaces or near Port Canaveral. Space Florida estimates \$103 million a year is needed to meet the infrastructure challenges such as additional wastewater treatment capacity, improved power distribution, wetland mitigation credits, and expanded distribution of natural gas.</p>	<p>NOAA and U.S. DOT Team Up in Advancement of Climate-Smart Transportation</p> <p>In November, it was announced that NOAA and the U.S. DOT signed a memorandum of understanding paired up in efforts within the advancement of new climate-smart transportation methods. Transportation sector officials will now have easier access to climate and environmental information, including technical assistance. The collaboration arrives at a time where extreme weather, sea level rise, and flooding are taking a toll on the nation's roadways, bridges, rail lines, and ports.</p> <p>U.S. DOT Announces First Round of 2025 RAISE Grants</p> <p>The U.S. Department of Transportation awarded \$1.32 billion in Rebuilding American Infrastructure with Sustainability and Equity (RAISE) grants. This funding is directed to 109 projects with the goal of rebuilding and</p>	<p>repairing “critical infrastructure in areas of local or regional significance.” U.S. DOT also announced \$635 million in grants for electric vehicle charging infrastructure around the country, expanding charging networks and access.</p> <p>U.S. Office of Management and Budget Rescinds January 27 Memo</p> <p>Uncertainty abounds as a memo freezing spending on federal loans and grants issued on January 27, 2025 was rescinded two days later on January 29 amid concerns raised by states, school, charities and other organizations, and citizens that depend on federal funding. It is unclear at this time if a revised or more targeted memo will be forthcoming. White House memos indicate more than 2,600 programs are under evaluation for funding cuts, including within U.S. Department of Transportation.</p>
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Construction Employment

Statewide construction employment increased in December 2024 to 4.5% higher than the same month last year (**Figure 7**). However, some metro areas had slightly different growth patterns. The Miami and Jacksonville metro areas increased at similar rates in December 2024 (5.9% and 5.6%, respectively).

December 2024 construction employment in the Orlando metro area increased 6.7% and construction employment in the Tampa metro area also saw an increase of 3.3%. December data are preliminary and may be revised.



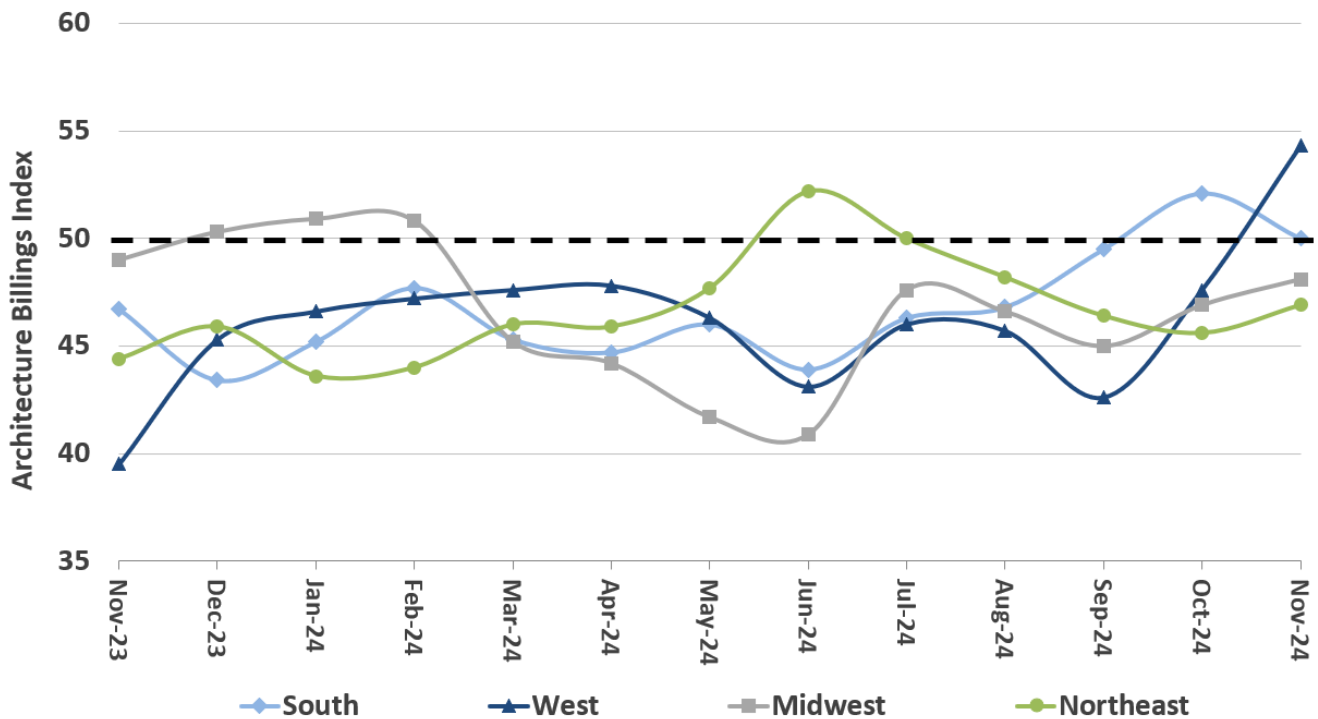
Source: Bureau of Labor Statistics.

Billings

The Architecture Billings Index (ABI) is a leading indicator for nonresidential construction activity.² Nationally, the index was 49.6 in November, indicating that a majority of architecture firms saw a slight decrease in billings at their firms (**Figure 8**). Since November 2023, the ABI has stayed below 50 in most months for all regions, with a few fluctuations seen over the year. Recently, the West region has seen strong increases in billings since September. Additional information on economic conditions is provided in **Appendix A**.

² ABI Billings are considered a leading indicator, meaning that construction activity 9-12 months from now generally follows the current ABI billings activity. A score below 50 indicates declining firm billings.

Figure 8. Architecture Billings Index



Source: American Institute of Architects, Architecture Billings Index

Rail

In December 2024, CSX's train and engine employee counts increased 1.97% year-over-year with counts fluctuating around 7,869 to 8,024 since December 2023. In regards to operating performance, average terminal dwell time (between October 2024 and January 2025) in Jacksonville increased 1.65% year-over-year to 22.4 hours and increased in Waycross, GA by 4.82% to 27.1 hours³. The overall system dwell time during the same timeframe increased 9% to 22.5 hours year-to-year. Dwell times have worsened in comparison to this time last year with significantly worse increases in Waycross, Georgia. Higher dwell times means that it takes more time to get material out of the station, which could lead to project delays. This is consistent with feedback from interviews as there has been some mention of rail delays affecting suppliers but little impact on producers.

³ Average amount of time in hours between car arrival to and departure from the yard.

ASPHALT

Summary

- Asphalt producers report stable prices and do not anticipate massive price increases to occur in FY 2025. Industry does not anticipate any major changes to general materials costs over the next three months.
- Florida asphalt binder prices remained flat this quarter, falling 1% compared to FY 2025 Q1. Although binder prices are expected to remain stable next quarter, prices are still about 50% higher than the same quarter in FY 2020.
- Although crude oil prices are declining, which should lower binder prices eventually, this trend could easily be interrupted due to changes in trade policy, global conflicts, extreme weather, and other factors that impact supply chains.

FDOT Impacts

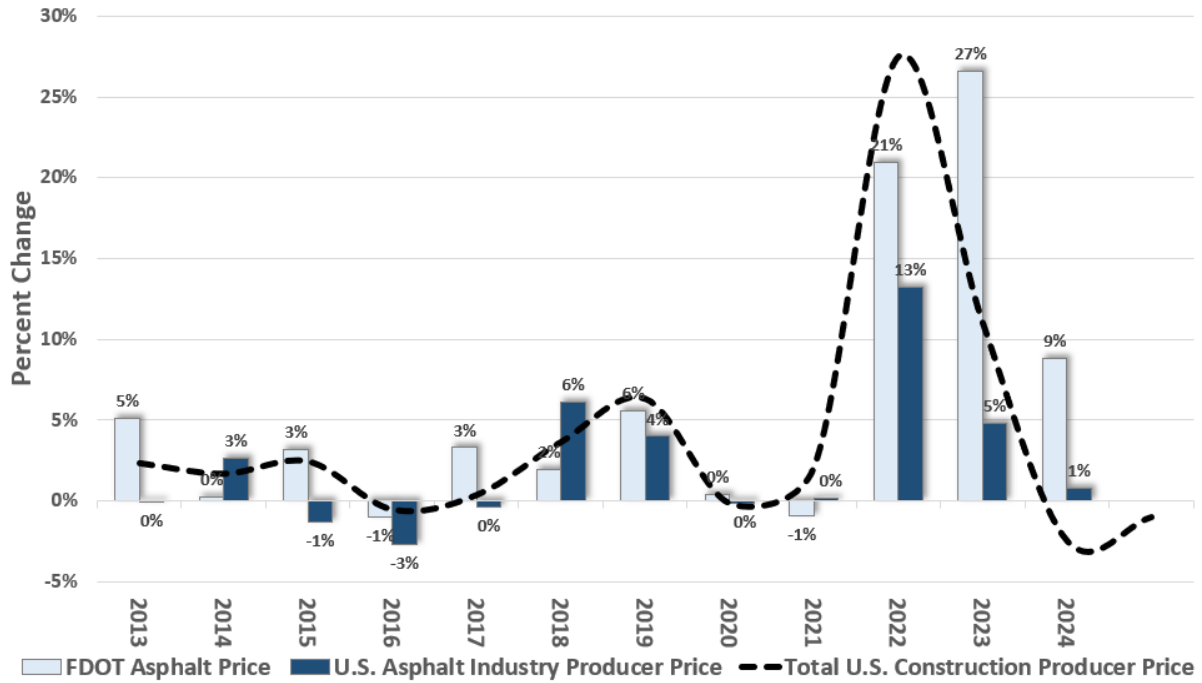
- FY 2025 year-to-date asphalt bids are trending downward, falling 8.1% to \$167 per ton compared to FY 2024.
- Updated asphalt price projections estimate a more moderate decline of 4.8% in bids through the end of FY 2025.
- Florida asphalt consumption is expected to range between 18-19 million tons through FY 2029 due to continued high levels of infrastructure spending and residential construction activity in major metro areas.

General Trends

National construction producer prices in asphalt declined significantly over the last two years. The decline follows annual fluctuation from -3% and 6% between 2013 and 2021, before increasing substantially in 2022. FDOT's asphalt prices rose 9% in 2024, after sharp increases in 2022 and 2023. They are anticipated to decrease in 2025. A comparison of changes in producer prices since 2013 as well as FDOT's asphalt price is provided in **Figure 9**, which shows that prior to COVID-19, FDOT prices tended to track but exaggerate national trends, a pattern that appears to still be holding.

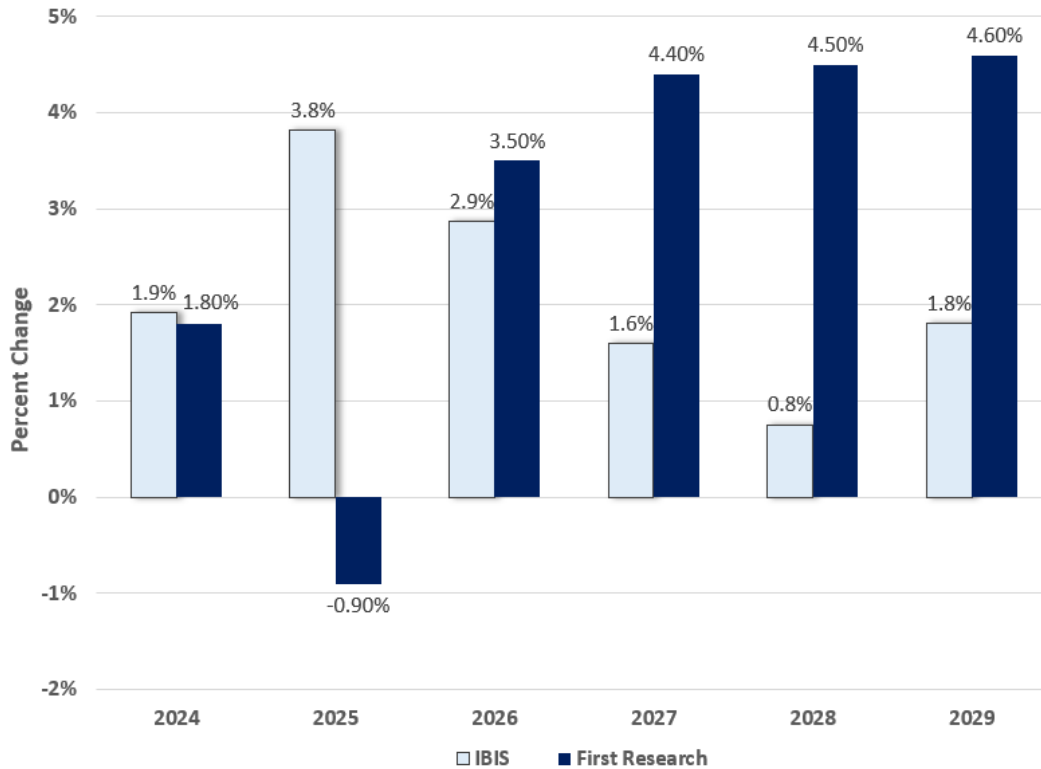
IBIS projects revenue growth to be higher in 2025, while First Research estimates revenue growth to decrease significantly in 2025. However, the two publications differ in how strong that turnaround in growth will be. First Research expects growth to be between 3.5% and 5% over the next four years, and modest growth after 2025. IBIS expects slightly lower growth rates between 0.8% and 3.8% over the next 4 years and decreasing growth after 2025 (**Figure 10**).

Figure 9. Change in Producer Prices, Asphalt Industry



Source: FDOT, U.S. Federal Reserve.







Figure 10. Asphalt Manufacturing Industry Revenue Outlook







Source: IBISWorld (IBIS) May 2024 Asphalt Manufacturing Report; First Research Industry Report August 2024.

SUPPLY CHAIN VARIABLES: ASPHALT PAVEMENT MATERIALS

Table 2 provides the current status of selected variables of interest.

Table 2. Supply Chain Summary: Asphalt Materials		
 Aggregate	The U.S. Geological Survey (USGS) reported that Florida's crushed stone production decreased 11.2% during the third quarter of calendar year 2024. At the national level, production decreased 6.5% in the same period. Aggregate prices have continued to steadily increase, but the industry expects to see double-digit increases in calendar year 2025. Interviews indicated that aggregate prices have continued to increase.	↑
 Refinery Capacity	Oil Refinery Utilization on the Gulf Coast was between 77% and 97.5% in calendar year 2024. Costs and prices will continue to be affected by geopolitical factors. The OPEC+ countries extended their additional voluntary production cuts of 2.2 million barrels per day and the 1.65 million barrels per day of cuts until the end of 2026. The EIA estimated that asphalt supplied to the East Coast declined 13% year-over-year, indicating lower demand for resources, and asphalt production on the Gulf Coast also decreased 6% year-over-year.	=
 Asphalt Binder	Unmodified (PG 67 & lower) asphalt binder prices are relatively unchanged from October 2024. For calendar year-end 2024, prices increased by only 1% compared to December 2023. Rack binder prices in Jacksonville and Miami increased 1.7% and 0.4%, year-over-year, respectively, and declined 2.2% in Tampa, year-over-year.	=
 Polymers	With very few suppliers, polymers are a source of vulnerability. According to the American Chemistry Council (ACC), U.S. production of resins increased 10.5% in November 2024 vs. November 2023. Year-to-date production increased 5.8% year-over-year. The U.S. Chemical Regional Production Index was flat in November 2024 month-over-month and increased 1.1% year-over-year, showing a positive trend in chemicals production. Reference prices and volumes from Q3 of calendar year 2024 earnings of a publicly traded polymer producer declined 41% year-over-year. The average cost per ton of ethylene production declined 12% quarter-over-quarter and declined 41% since Q3 of calendar year 2023.	↓
 Imports	Data from the U.S. International Trade Commission shows that imports of bitumen products to ports that service the Florida market increased 79% in calendar year 2024 through November. However, imports of bitumen products were impacted by hurricane Milton and Helene, which led to the temporary closure of major ports in Florida. In addition, ongoing labor negotiations between the International Longshoremen's Association (ILA) and the U.S. Maritime Alliance (USMX) may significantly hinder port operations along the East and Gulf Coasts. On January 8th, 2025, the ILA and USMX avoided a strike after a tentative agreement was reached that would allow employers to deploy semiautomated container cranes and other robotic equipment in exchange for job guarantees for union members. Interviews have not mentioned any concerns with shipping materials this quarter.	↓
 Rail	In Q3 of calendar year 2024, tons of asphalt products shipped by CSX, regardless of the destination, decreased by 14% and revenues of asphalt products decreased by 11% year-over-year. This indicates an increase in price compared to a decrease last quarter. Despite CSX seeing more overall shipments in the third quarter of 2024, there was a modest volume growth in the rest of 2024, as the Southeast was rebuilding after two	=

	major hurricanes. As a result, the railroad's revenue was expected to decrease significantly in the last quarter of 2024.	
 Trucking	Asphalt suppliers continue facing issues with trucking. Diesel prices slowly declined through the fiscal year and in December 2024, they decreased 15% year-over-year. On January 8 th , 2025, the Federal Motor Carrier Safety Administration (FMCSA) announced two grant programs, which could total over \$86 million to be awarded to projects that increase commercial motor vehicle safety (CMV), as well as that advance the technological capability and promote the deployment of intelligent transportation system applications for CMV. The grant programs will ensure that they improve the safety and productivity of CMV's and commercial drivers. A moderate growth to trucking volumes and rates is expected in 2025. ATA Freight predicts a growth of 1.6% in truck volumes in 2025.	=
 Pavement Markings	As mentioned in the polymers section, the Chemical Regional Production Index stayed flat month-over-month in November 2024. However, production of coatings, adhesives and other specialty chemicals slightly increased. Overall, pavement markings and other plastics-based/petroleum-based ancillary products continue to be susceptible to movements in the crude oil markets and supply chain issues. Interviewees did not raise any issues with pavement markings this quarter.	=
 Labor	Skilled labor is an ongoing concern for asphalt plant operators. Statewide construction employment increased 4.5% year-over-year, and went up 0.3% in December from the previous month. Interview responses were mixed this quarter, with some producers seeing improvement in hiring, while others saw no change. Anecdotally, those who stated the job environment has worsened also said adding more migrants to the workforce could improve the situation.	↑
 Competition	The number of asphalt producers in FDOT's approved list increased by 3 plants in FY 2024 to 126. No new asphalt plants under construction have been added to FDEP's Air Permitted list.	=

↑	Exerting negative influence on FDOT's costs; monitor.
=	Currently stable; not influencing FDOT's costs.
↓	Exerting positive influence on FDOT's costs.

Asphalt Forecast

Asphalt prices are projected in **Table 3** for the five-year construction work program. Regression modeling was performed using pay item data, supply chain variables, and other macroeconomic indicators to identify models that best predicted FDOT’s materials costs and quantities.

Table 3. FDOT HMA Price Forecast Results						
Year	2024	2025	2026	2027	2028	2029
Price HMA, \$/Tons	\$182	\$173	\$176	\$171	\$166	\$168
Percent Change, %	8.9%	-4.8%	1.7%	-2.8%	-3.0%	1.1%

Source: TBG calculated from data provided by FDOT Office of Forecasting and Project Cost, various industry sources.

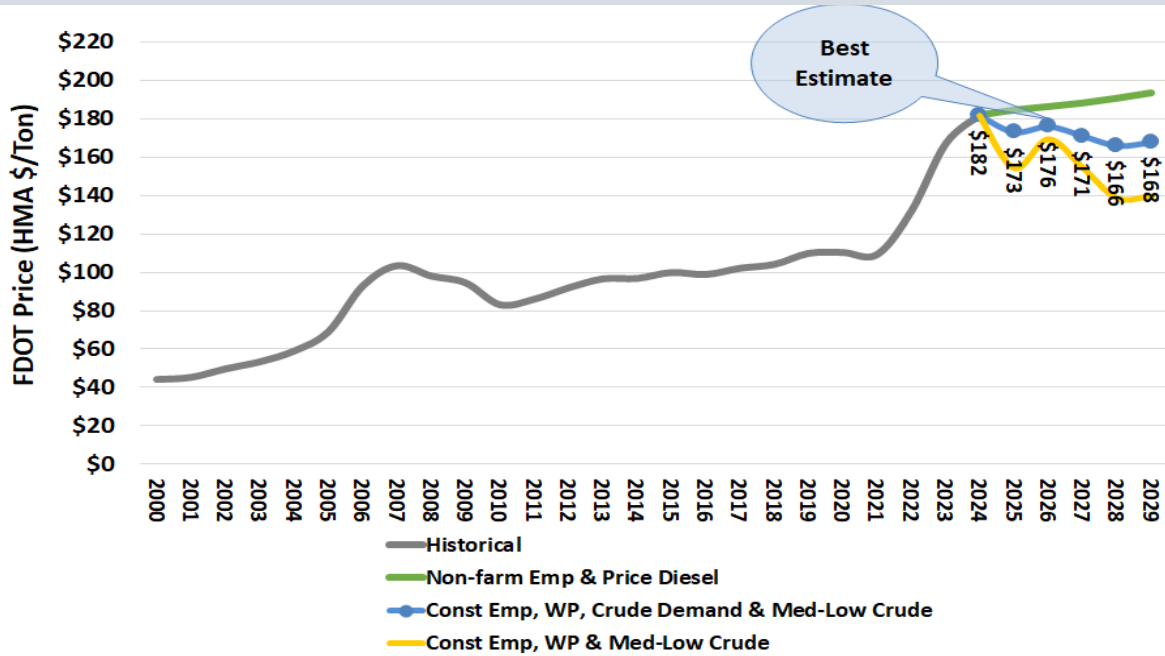
The latest EIA short-term crude oil price projections show significant declines in both 2025 and 2026, which should help lower prices for products like asphalt binder. If domestic production and imports continue at current levels, fuel prices should continue trending downward. However, there is a chance a disruption of Canadian oil imports (due to proposed tariffs) could drive up prices once again as the country provided 75% of U.S. heavy crude oil imports in 2024.

The current FY 2025 forecast was adjusted to take lower than expected crude pricing into account, along with more positive industry outlooks. According to the NABE January 2025 Business Conditions Survey, 82% of respondents estimate the probability of the U.S. entering a recession within the next 12 months is less than 25%. The biggest risks to respondents’ company outlooks included the implementation and timing of policy proposals from the new administration (61%) and increased global geopolitical instability (36%). A majority of respondents (57%) reported no change in materials costs last quarter, while 62% anticipate no change to materials costs during the next three months. Interviews with FDOT producers also indicate that pricing has been stable over the last quarter. If these assumptions hold, FDOT may see a welcome decline in asphalt costs in FY 2025.

The updated FY 2025 best estimate forecasts FDOT’s weighted average price of asphalt falling by 4.8% before moving with changes in projected construction employment, work program allocations, crude oil demand, and crude oil prices through FY 2029. The upper bound scenario is supported by general employment and fuel prices. This line was the model used as best estimate in the last quarter, when the outlook was less positive. The lower bound reflects a recessionary scenario, with lower crude prices, construction employment, and infrastructure demand.

Figure 11 shows the potential range of estimates over the five-year work program.

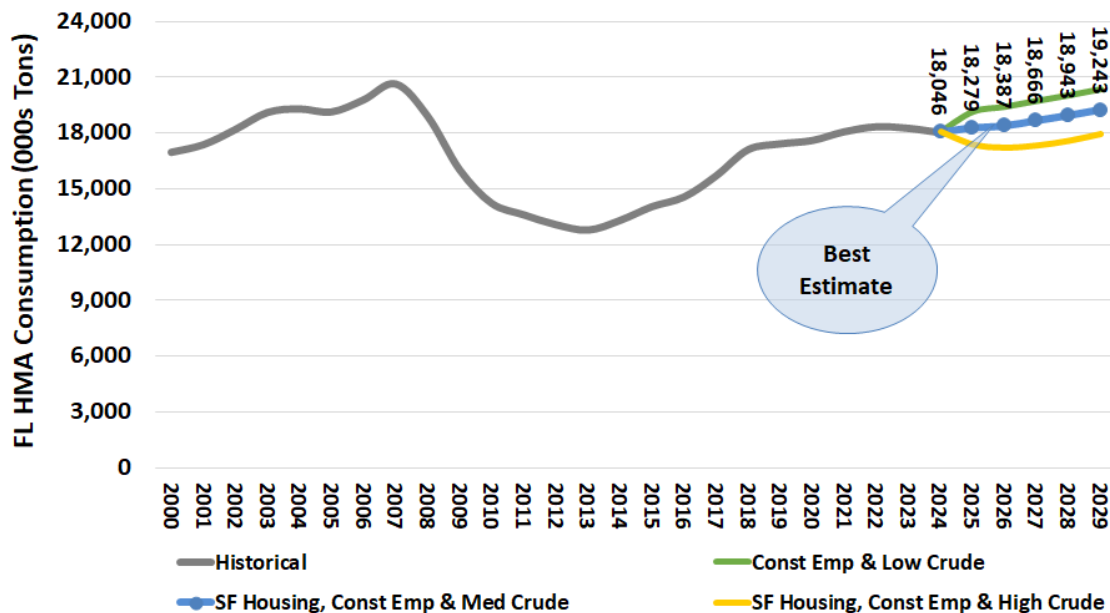
Figure 11. FDOT HMA Price Forecast



Source: TBG calculated from data provided by FDOT Office of Forecasting and Project Cost, various industry sources.

For Florida HMA consumption, **Figure 12** shows a best estimate of gradual production growth through FY 2029 based on single family housing starts, construction employment growth, and medium crude oil price projections. The upper bound is based on a more positive labor outlook and significantly lower fuel costs that would allow for additional production. The lower bound requires recessionary conditions, which appear unlikely at this writing, and higher crude oil prices.

Figure 12. Florida HMA Consumption Forecast



Source: TBG calculated from data provided by FDOT Office of Forecasting and Project Cost, various industry sources.

CONCRETE

Summary

- During Q3 of calendar year 2024 (Q1 FY 2025), publicly traded companies continued to report lower production volumes due to weather and price increases through September 2024.
- Contractors indicated no issues with availability this quarter, but reported continued and more frequent price increases. It does not appear the increases are being passed on through bids at this time.
- Significant industry consolidation is on the horizon as German-owned cement producer Heidelberg Materials has entered an agreement to acquire Giant Cement Holding, Inc. and Quikrete has entered an agreement to acquire Summit Materials.
- Through October of calendar year 2024, fly ash imports were up 23% compared to the same period in 2023.

FDOT Impacts

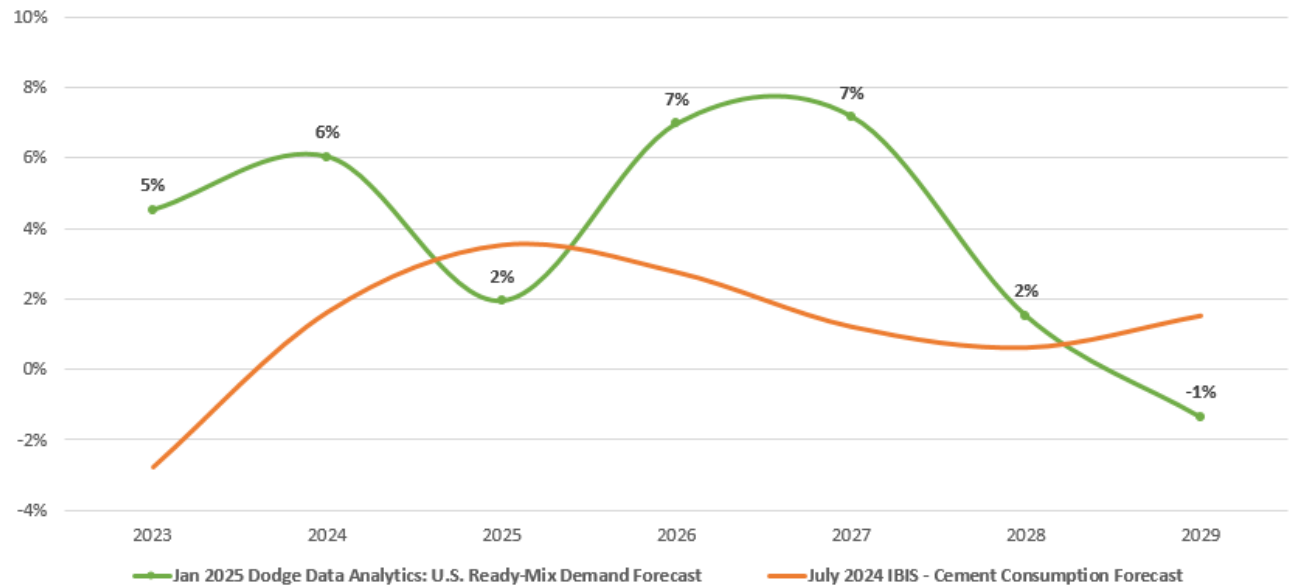
- Average industry benchmark cement prices declined about 22% over the last quarter in the northeast, but that relief has not been felt in states adjacent to Florida.
- FY 2025 year-to-date concrete bids remained flat with updated data, averaging \$1,403 per cubic yard (the same price as year-end FY 2024).
- Updated concrete price projections estimate a slight decline in pricing of 1.7% for FY 2025 with updated economic outlooks and industry data, but upper bound estimates may still hold for individual high-cost, low-quantity bids.
- Florida concrete consumption is forecasted between 28,000 to 31,000 cubic yards through FY 2029 due to high infrastructure, housing, and industrial demand and resiliency efforts.

General Trends

Figure 13 shows the forecasted U.S. demand for ready mix concrete through 2029 alongside previous cement consumption forecasts from multiple industry sources.⁴ The Dodge Data Analytics forecast predicts U.S. demand for Ready-Mix to increase 6% in 2024 year-over-year. Growth is expected to taper off in 2025 (growth rate of 2%), but then increase at higher rates of 7% in 2026 and 2027, respectively, and then slow again to 2% in 2028 and decline by 1% in 2029. Growth rate expectations for ready-mix are much higher in 2024, 2026, and 2027 than cement, but similar in 2025 and 2028. Expectations for 2029 are about 2% off from each other, with ready-mix demand expected to decline and cement consumption expected to slightly increase.

⁴ Source: The IBISWorld July 2024 forecast is based off domestic demand and is estimated by adding industry revenues with imports and subtracting exports. The U.S. Ready-Mix demand forecast is from Dodge Data Analytics as reported in their January 2025 edition of The Pulse.

Figure 13. U.S. Consumption Forecasts



Source: IBIS U.S. Cement Manufacturing Forecast July 2024, Dodge Data Analytics Jan. 2025.

SUPPLY CHAIN VARIABLES: CONCRETE MATERIALS




	Exerting negative influence on FDOT's costs; monitor.
	Currently stable; not influencing FDOT's costs.
	Exerting positive influence on FDOT's costs.

Table 4 provides an overview of supply chain variables and a summary of their current status.

Table 4. Structural Concrete Supply Chain Variables & Current Status		
 Cement	During Q3 of calendar year 2024 (Q1 FY 2025), publicly traded companies continued to report lower production volumes due to weather and price increases through September 2024. Contractors indicated no issues with availability but reported continued and more frequent price increases.	
 Aggregate	The U.S. Geological Survey (USGS) reported that Florida's crushed stone production decreased 11.2% during the third quarter of calendar year 2024. At the national level, production decreased 6.5% in the same period. Aggregate prices have continued steadily increasing, but the industry expects to see double-digit increases in calendar year 2025. Interviews indicated that aggregate prices have continued to increase.	
 Fly Ash	Through October of calendar year 2024, fly ash imports were up 23% compared to the same period in 2023. Imports were primarily sourced from Japan and Turkey into Tampa and Miami, though Guyana has been increasing their imports into Miami through 2024. Spain, Canada, and India also had shipments of fly ash delivered to Tampa. As of November, imports of fly ash into Tampa from Japan had exceeded the total that was imported into Tampa from Japan in all of 2023, at 126.5% of 2023 imports. Producers continue to report the same difficulty obtaining fly ash, though diversification of sources may help alleviate this difficulty.	
 Rail	In December 2024, CSX train and engine employment increased 1.97% year-over-year. Higher dwell times faced by producers from different industries could put more pressure on trucking when service issues arise. In May 2024, the Surface Transportation Board published the final rule on reciprocal switching for inadequate service issues. It went into effect on September 4, 2024, but CSX, Union Pacific, and Canadian National are attempting to appeal the rule. In Q3 of calendar year 2024, overall tons and revenues of concrete products shipped by CSX changed by -4.1% and 6.1%, respectively.	
 Truck	Diesel prices decreased 15% in December 2024 year-over-year. Interviews have indicated an increase in trucking costs and a lack of employees causing bottlenecks. According to Freight Transportation Research, specialized trucking volumes and rates in Florida have been 0%-20% below normal since December 2023, with January 2025 thus far being normal on average. Over the past quarter spot rates have been at or below 2023/2024 levels and this past week were 7.5% lower than the five-year average.	
 Labor	Interviews have indicated that labor is still an issue, primarily with truckers for concrete trucks. Competition remains high for workers. Other complaints for labor have been minimal.	
 Competition	This quarter, German-owned cement producer Heidelberg Materials has entered an agreement to acquire Giant Cement Holding, Inc. Additionally, Quikrete has entered an agreement to acquire Summit Materials; this merger is anticipated to be completed in the first half of 2025. Competition for resources from other sectors, including continued demand for industrial warehouses, ports upgrades and data centers, as well as sustained residential demand in the metropolitan districts, continues to influence bids.	

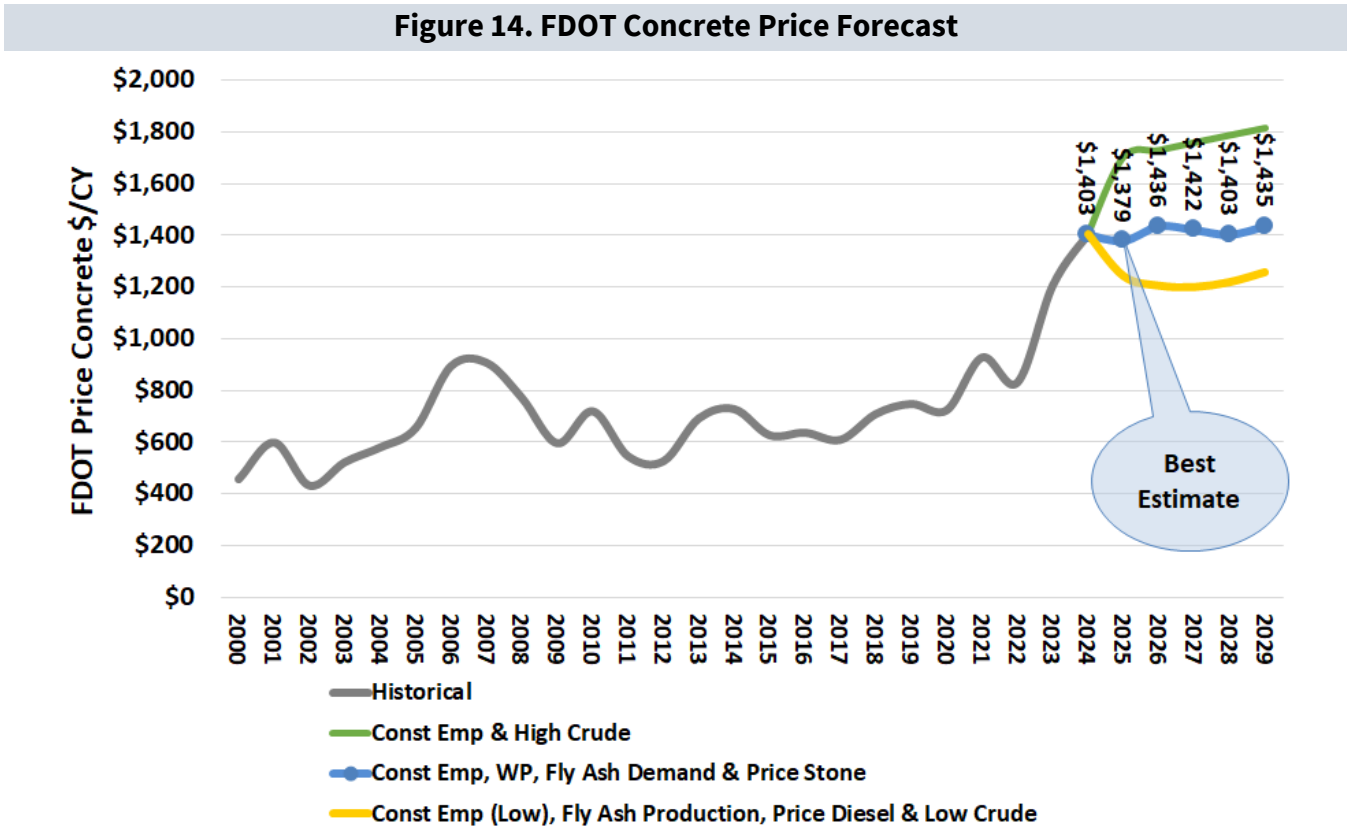
Concrete Forecast

Regression modeling was performed using pay item data, supply chain variables, and other macroeconomic indicators to identify models that best predicted FDOT’s materials costs and quantities. **Table 5** provides the updated forecast average price for concrete.

Table 5. FDOT Concrete Price Forecast Results						
Year	2024	2025	2026	2027	2028	2029
Price Concrete, \$/CY	\$1,403	\$1,379	\$1,436	\$1,422	\$1,403	\$1,435
Percent Change, %	16.3%	-1.7%	4.1%	-1.0%	-1.3%	2.3%

Source: TBG calculated from data provided by FDOT Office of Forecasting and Project Cost, various industry sources.

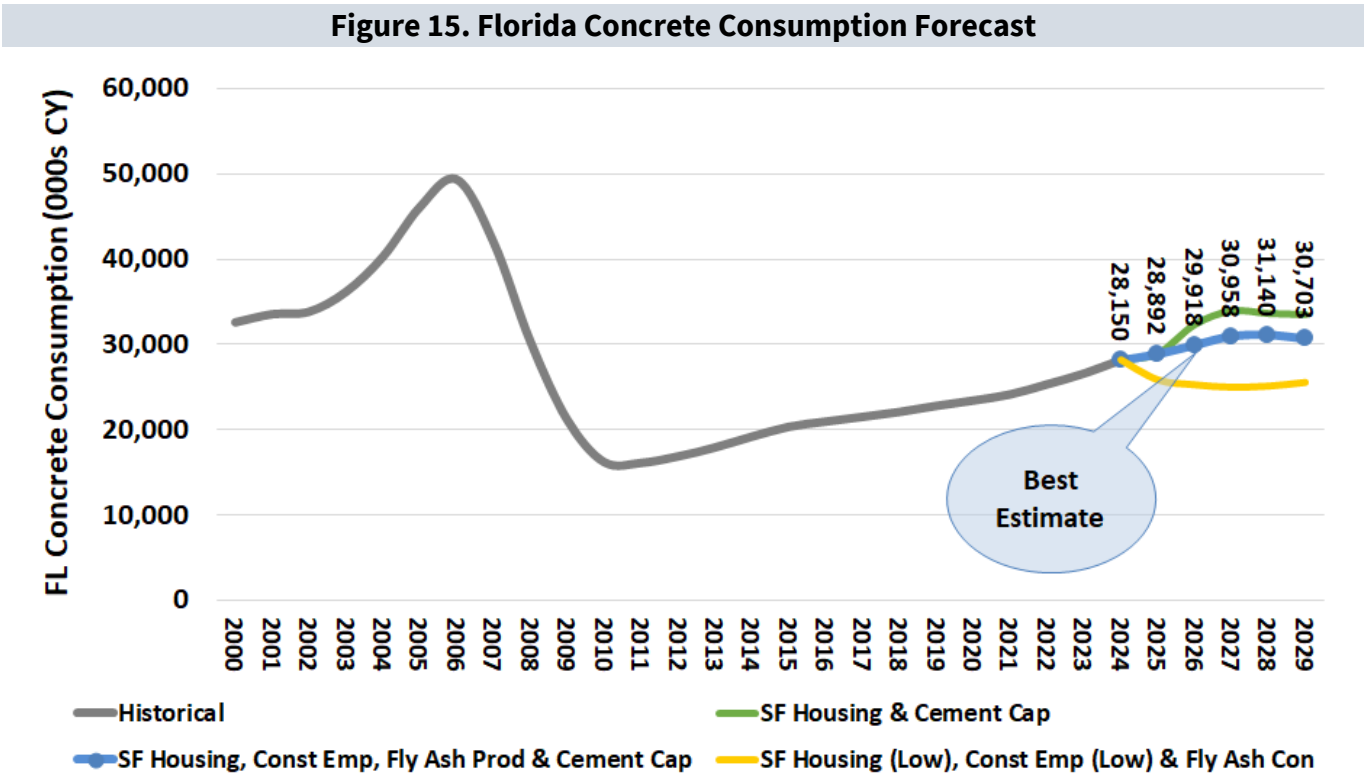
The updated best estimate FY 2025 forecast is about 2% lower than previous estimates as industry outlooks have become more positive and some contractor inputs, like fuel, have declined over the last quarter. While concrete costs are expected to remain high due to the increased cost of cement and aggregates, it does not appear that the rapid price escalation seen over the last few years will occur in FY 2025. Year-to-date pricing is mixed with one project from September 2024 (consisting of five bids) set at \$2,000 per cubic yard regardless of pay item type, while the weighted average price of all other bids was \$1,410 per cubic yard. The best estimate of concrete prices reflects changes in construction employment, FDOT work program demand, fly ash demand, and aggregate costs (**Figure 14**).



Source: TBG calculated from data provided by FDOT Office of Forecasting and Project Cost, various industry source.

The upper bound reflects construction employment and higher crude oil prices, while the lower bound scenario incorporates declines in construction labor, declines in fly ash production, and diesel and crude oil price projections.

Figure 15 shows the output of several quantity models forecasting statewide consumption of concrete and the scenario identified as the best estimate. The best estimate tracks Florida housing and construction employment, fly ash production, and cement production capacity. The upper bound reflects moderate housing start growth and cement production capacity. Declining production is shown in the lower bound where recessionary conditions of lower housing starts and construction employment, along with fly ash consumption, would drive down production.



Source: TBG calculated from data provided by FDOT Office of Forecasting and Project Cost, various industry source.

STEEL

Summary

- U.S. steel prices continued to fall or remained flat for most products through the end of 2024.
- U.S. steel production was flat in 2024, but has since fallen 3% compared to the first month of 2025. Utilization rates are 1% higher in January 2025 compared to calendar year-end 2024.
- Concerns over domestic steel production capabilities intensified this quarter as the sale of U.S. Steel has been put on hold.
- In addition, some Canadian and Mexican steelmakers have halted new orders to the U.S. due to uncertainty about changing U.S. trade policies and tariffs.

FDOT Impacts

- Structural steel prices are forecast to rise 4.2% in FY 2025 with revised industry expectations.
- FY 2025 year-to-date reinforcing steel bids are coming in higher than expected at \$1.60 per pound. This may be due to contractors' hesitancy to decrease prices as a result of potential price changes related to tariffs and other policies.
- FY 2025 reinforcing steel prices are currently forecast to gain back the decline seen in FY 2024 before declining in FY 2026 and flattening out for the remainder of the 5-Year Work Program.

General Trends

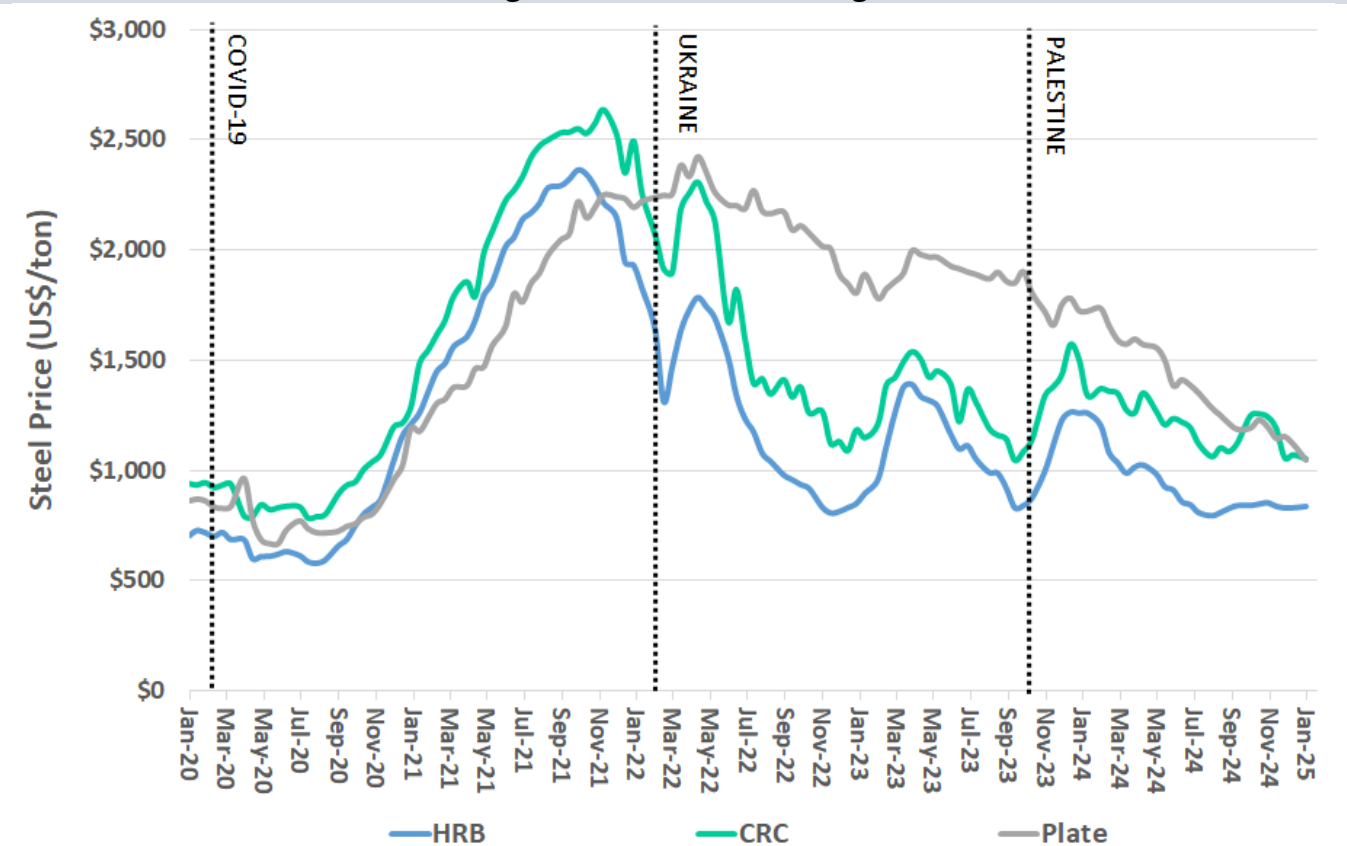
Contractors report that reinforcing steel prices continued trending down or remained flat over the last quarter, but structural steel and steel pipe prices have not seen the same decline. On average, FDOT bids for reinforcing steel are currently up, however, and do not appear to be following national trends. It's likely that the uncertainty surrounding changes in trade policy in FY 2025 led to bidders hedging their bets and pricing for potential disruptions in supply and/or the impact of increased import taxes on the market.

The new administration has stated that a 25% tariff may be imposed on Canada and Mexico starting on February 1, 2025. As a result, some industries are bracing for impact. Canadian and Mexican steelmakers are reportedly refusing new orders and suspending sales quotes for the time being. A decline in supply could impact FDOT prices. It does not appear Chinese imports will be affected by more than 10% at this time.




The outgoing administration blocked the sale of U.S. Steel to Nippon Steel and the deal is now in litigation. U.S. Steel's operations require significant investment to remain competitive and operate at a profit. U.S.-based steelmaker Cleveland-Cliffs previously bid on U.S. Steel for \$35 per share while Nippon offered \$55 per share and won the bid.

Steelbenchmarker data show plate prices continued to decline through the first month of 2025, while hot-rolled band (HRB) prices were flat for the last several months (**Figure 16**). Cold-rolled coil (CRC) prices jumped briefly in FY 2025 Q2 but have since moderated. U.S. HRB prices are up 1% month-over-month in January 2025, but down 34% year-over-year. U.S. CRC prices were down 1% month-over-month over the same period and down 26% year-over-year. U.S. Plate prices were down 8% month-over-month and down 39% year-over-year.

Figure 16. U.S. Steel Pricing







Source: AISI Weekly Raw Steel Production.

	Exerting negative influence on FDOT's costs; monitor.
	Currently stable; not influencing FDOT's costs.
	Exerting positive influence on FDOT's costs.

SUPPLY CHAIN VARIABLES: STEEL

Table 6 summarizes select variables that impact the steel supply chain and their current status.

Table 6. Supply Chain Variables for Structural Steel		
 Raw Materials	Nationally, prices for hot-rolled steel decreased 33% in January 2025 year-over-year. Prices declined for most of 2024, with a few products increasing slightly over the last few months of the calendar year, but all products have been showing decreases through December 2024 and into January 2025. Rebar prices decreased 15% year-over-year as of May 2024. Iron ore prices declined 23% year-over-year as of September 2024 after increasing 12% in 2023 – no updates have been observed into January 2025. Interviewees continue to be optimistic about rebar prices, but structural steel prices could be on the rise again.	
 Scrap Steel	Scrap steel prices have increased slightly since the previous report, growing by 3.4% from December 2024 to January 2025, and by 5.4% from September 2024 to January 2025. Compared to the January 2024, prices are down 15.5% year-over-year.	
 Galvanizing Steel	Global zinc prices increased 21% in calendar year 2024, year-over-year. Zinc prices were down to \$1.38 per pound in December 2024 from a peak of \$1.98 in April 2022, but are still 50% higher than in June 2020. Decreasing Chinese steel demand could bring down zinc prices further, but likely not to pre-pandemic levels.	
 China	In December 2024, Chinese steel prices declined 15% year-over-year to an average of \$472 per ton. Prices declined throughout the year, and into January 2025. Concerns around excess global capacity and China's role reported in the previous report remain. Other countries including Turkey and Indonesia have instituted anti-dumping duties on Chinese steel. Chinese exports of steel are expected to increase in 2025, even with declining domestic Chinese production, because of weakening demand in China (3.3% decline in 2023, 3% decline in 2024, and 1% decline in 2025 according to the World Steel Association forecast).	
 Transportation	Diesel prices decreased 15% in December 2024 year-over-year. According to Freight Transportation Research, specialized trucking volumes and rates in Florida have been 0%-20% below normal since December 2023, with January 2025 thus far being normal on average. Over the past quarter spot rates have been at or below 2023/2024 levels and this past week were 7.5% lower than the five-year average. The demand for trucking is expected to increase in 2025. Interviews still indicate a lack of drivers.	
 Milling Capacity	Nationally, steel mill capacity utilization rates averaged 74% so far in in calendar year 2025, a slight increase from the 73% for the same period in 2024.	
 Labor	This quarter, steelmakers indicated problems recruiting skilled labor but improvements with unskilled labor. Competition has not changed but remains very high. Wages in this sector are expected to continue increasing in 2025.	
 Competition	President Biden officially blocked Nippon Steel from acquiring U.S. Steel in early January 2025. Given the tight competition for domestic steel, this move is unlikely to impact FDOT's steel costs in the long-term, but short-term impacts should be minimal. No major changes occurred during Q2 FY 2025.	

Steel Forecast

Steel prices were forecasted over the five-year work program. Regression modeling was performed using pay item data, supply chain variables, and other macroeconomic indicators to identify models that best predicted FDOT’s materials costs. **Table 7** provides the forecast average price for structural and reinforcing steel.

Table 7. FDOT Steel Price Forecast Results						
Year	2024	2025	2026	2027	2028	2029
Price Structural Steel, \$/lb.	\$4.52	\$4.71	\$4.61	\$4.79	\$4.99	\$4.99
Percent Change, %	28.6%	4.2%	-2.2%	4.0%	4.1%	0.1%
Price Reinforcing Steel, \$/lb.	\$1.34	\$1.54	\$1.41	\$1.40	\$1.39	\$1.42
Percent Change, %	-12.2%	14.9%	-8.3%	-0.7%	-0.8%	2.2%

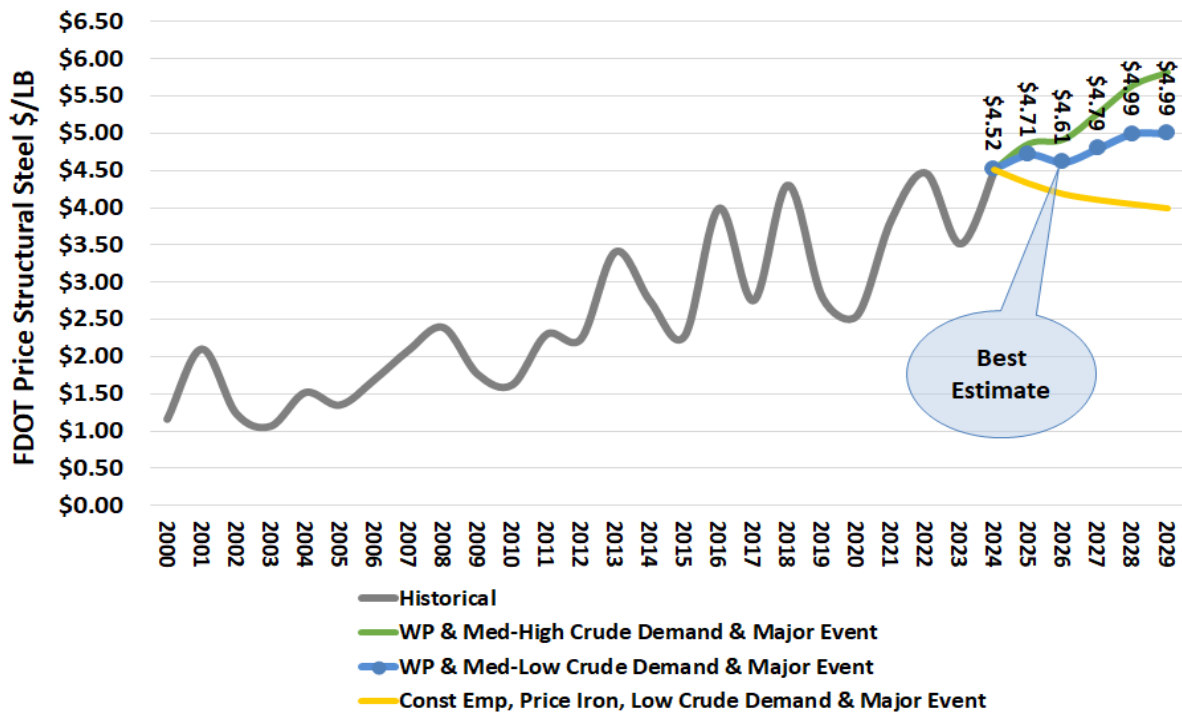
Source: TBG calculated from data provided by FDOT Office of Forecasting and Project Cost, various industry sources.

Structural steel costs remain high, with demand continuing to outpace production. Fabricator interviews indicated that prices have not changed drastically over the last quarter, however. With limited bid data and updated industry forecasts, the best estimate of FY 2025 structural steel costs rose to \$4.71 per pound, a 4.2% increase from FY 2024. The best estimate takes work program spending levels, changes in crude oil demand, and impacts of major events that affect steel prices into consideration. On the upper bound, higher crude oil demand could lift structural steel prices above \$5 per pound. Changes in construction employment, commodity prices, lower crude oil demand, and recessionary events could pull prices back down toward the lower bound.

While interviews and industry data indicate that U.S. reinforcing steel costs have declined or remained stable over the last quarter, FY 2025 year-to-date FDOT bids currently show an increase from \$1.34 per pound in FY 2024 to \$1.60 per pound through December 2024. If current pricing trends continue, average reinforcing steel prices are forecast to rise in FY 2025 by about 15%. The best estimate currently predicts reinforcing steel costs will fall in FY 2026 and then moderate for the remaining years of the work program based on updated construction employment projections and crude oil price forecasts. The upper bound takes Florida economic growth, construction employment, and higher crude oil prices into consideration. The lower bound, measuring construction employment, work program funding, and lower crude prices shows a steep decline closer to pre-pandemic pricing. With current expectations on recessionary conditions, this is considered less likely.

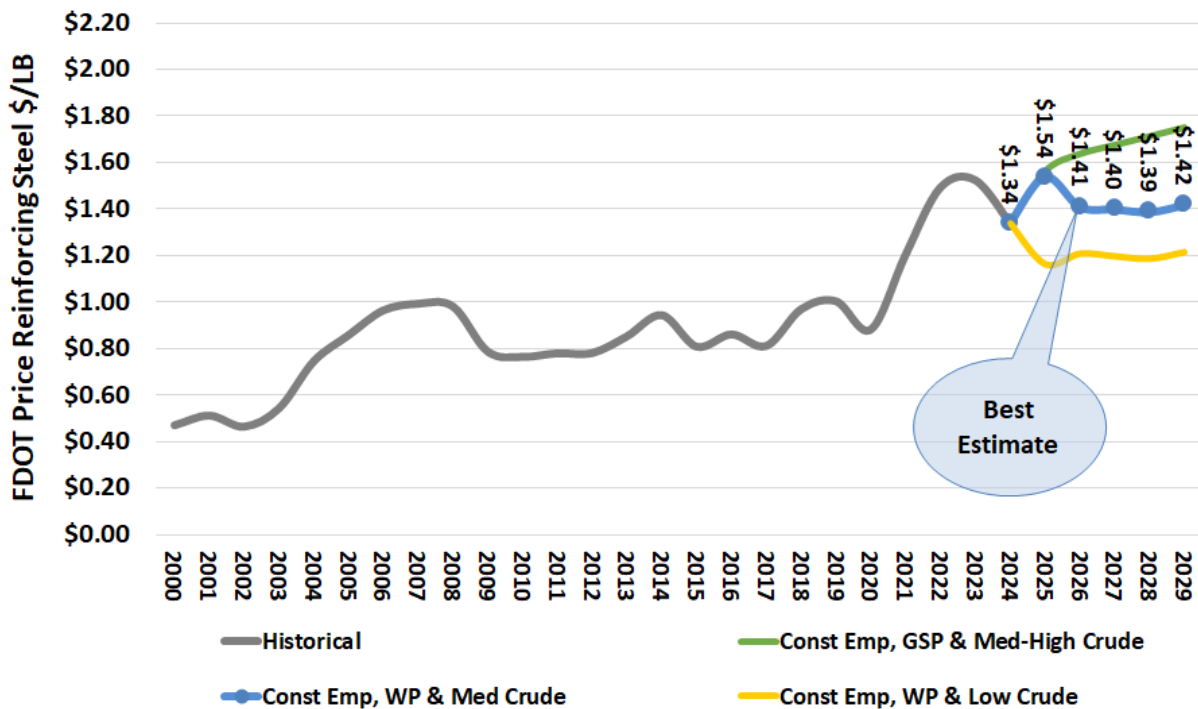
Figure 17 and **Figure 18** show the output of several price models and the scenario identified as best estimate for structural steel and reinforcing steel, respectively.

Figure 17. FDOT Structural Steel Price Forecast



Source: TBG calculated from data provided by FDOT Office of Forecasting and Project Cost, various industry sources.
(Variable descriptions available in the **Appendix**.)

Figure 18. FDOT Reinforcing Steel Price Forecast



Source: TBG calculated from data provided by FDOT Office of Forecasting and Project Cost, various industry sources.
(Variable descriptions available in the **Appendix**.)

AGGREGATE

Summary

- Florida crushed stone production declined 11.2% in the third quarter of calendar year 2024 year-over-year. Nationally, production declined 6.5% in the third quarter of 2024.
- Prices reported by publicly traded companies showed significant year-over-year increases by as much as 10% in the third quarter of calendar year 2024.
- Skilled labor availability is improving, but wage increases and trucking costs remain burdensome.




FDOT Impacts

- FY 2025 year-to-date aggregate base prices fell to \$31 per square yard with updated bid data.
- FDOT aggregate base prices are currently forecast to decline by 1.6% in FY 2025 before increasing with general inflation through FY 2029.
- Since September 2024, three new mines were added to FDOT's approved producer list, which should increase supply for FDOT projects.

General Trends















According to quarterly data released by the USGS, crushed stone production in Florida for the third quarter of calendar year 2024 was down 11.2% compared to production in the third quarter of 2023. Nationally, crushed stone production in the second quarter fell 6.5%, which was better than in Florida. Quarterly reports from most publicly traded companies showed a decline in shipments during the third quarter of calendar year 2024. Weather-driven inefficiencies throughout 2024 were cited as the main reason for these varying declines in volumes.

Prices from most publicly traded companies also increased year-over-year. Vulcan pricing environment is expected to be positive in 2025 with high single-digit increases in aggregate prices. As a result, a strong demand in public infrastructure will continue to drive demand.

	Exerting negative influence on FDOT's costs; monitor.
	Currently stable; not influencing FDOT's costs.
	Exerting positive influence on FDOT's costs.

SUPPLY CHAIN VARIABLES: AGGREGATE

Table 8 provides current status of selected supply chain variables.

Table 8. Aggregate Supply Chain Variables		
	USGS reported that Florida's crushed stone production declined 11.2% in the third quarter of calendar year 2024 compared to the same period in 2023. Nationally, production declined 6.5% in the third quarter of 2024. Prices from publicly traded companies showed significant year-over-year increases by as much as 10% in the third quarter of 2024, while volumes fluctuated between -10% and -1%.	
	Access to land with suitable deposits is essential to cost-effective material extraction for FDOT Aggregate. In order to promote cost effective and environmentally friendly processes to produce and refine minerals and materials, the U.S. Department of Energy (DOE) Office of Fossil Energy and Carbon Management (FEMA) announced on January 15, 2025 funding of \$32.75 million for 12 projects that will serve this cause. Most of the environmental resource permits issued in 2024 were for modifications of existing permits/mines excluding expansions. However, a recent ruling on Florida's 404 permitting program would prompt more disruptions in the industry creating delays and continued uncertainty.	
	Rail is the primary transportation for aggregates from Georgia, and from Lake Belt to Central and Northeast Florida. In the third quarter of calendar year 2024, tons of aggregate products shipped by CSX decreased by 0.4% year-over-over, while revenues of aggregate products shipped increased by 2.8% year-over-year. However, these statistics are for CSX's whole system as location specific data is not available.	
	In December 2024, diesel prices were at \$2.35, down 15% year-over year. No major changes or improvements in trucking costs or availability occurred this quarter according to interviewed contractors.	
	In the second half of 2024, producers reported issues with seeking and retaining skilled labor, and this is likely to continue in the first half of 2025. Statewide construction employment has skyrocketed year-over-over, and slightly increased in December from the previous month. Wage increases have slowed down in the third quarter of 2024. Nationally, stone mining and quarrying employment increased in November 2024, year-over year, but moderately decreased month-over-month. Interviews indicated there is still difficulty in retaining employees, but that last quarter has seen an overall improvement in the skilled labor market.	
	In calendar year 2024, the number of FDOT approved aggregate producers increased by 8.3%. Since September 2024, three new mines were added to FDOT's approved producer list (Districts 1, 5, and SMO).	
	In December 2024, the Federal Reserve cut interest rates further by 0.25% targeting a range between 4.25% and 4.50%. Therefore, the industry anticipates lower acquisition costs of equipment and vehicles, and a lower cost of long-term building construction. As the interest rate continues declining, this raise concerns in the industry as investors may find opportunities in other sectors. The rate is projected to decline more slowly in 2025.	

Aggregate Base-Course Forecast

Regression modeling was performed to estimate aggregate base costs using pay item data, Work Program funding, and supply chain variables and other macroeconomic indicators. **Table 9** provides the forecast average price for aggregate base.

Table 9. FDOT Aggregate Base Price Forecast Results

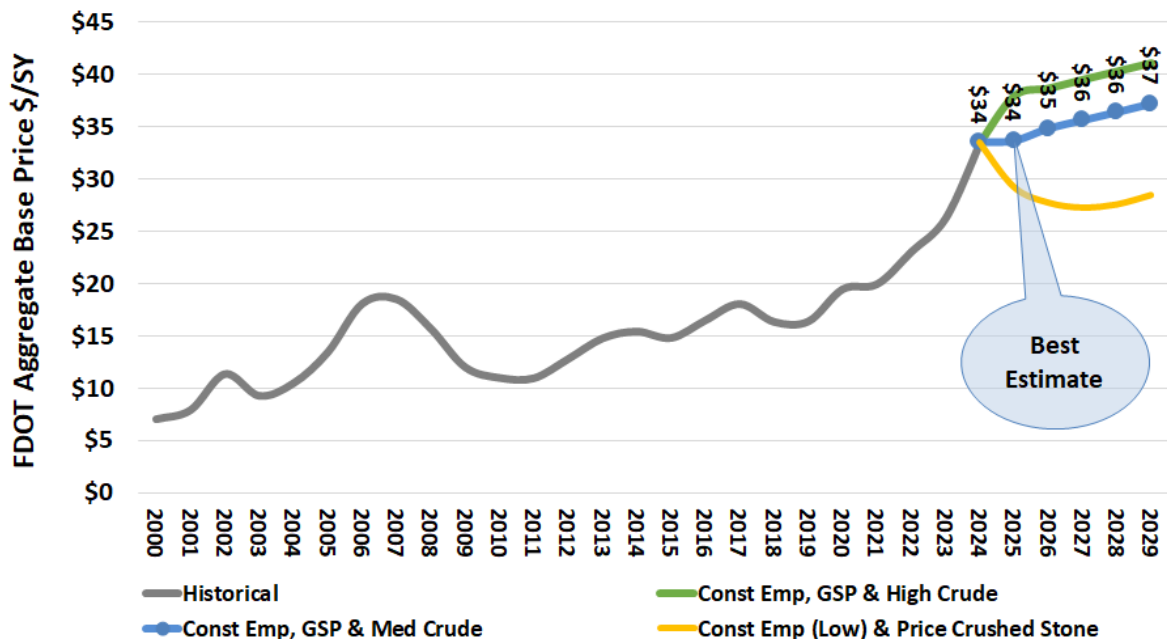
Year	2024	2025	2026	2027	2028	2029
Price Aggregate Base, \$/SY	\$34*	\$33	\$34	\$35	\$36	\$37
Percent Change, %	27.3%	-1.6%	3.4%	2.4%	2.4%	2.4%

Source: TBG calculated from data provided by FDOT Office of Forecasting and Project Cost, various industry sources.

Note: *One extremely high-cost, high-quantity bid from September 2023 was excluded, adjusting the FY 2024 weighted average earthwork price from \$38 per cubic yard to \$34 per cubic yard.

Current bid data shows that aggregate base costs declined 6% through the second quarter of FY 2025 compared to year-end FY 2024 prices. According to interviews, aggregate prices have remained high but have not increased over the last three months. The best estimate tracks changes in construction employment, statewide economic growth, and crude oil prices, supporting relatively flat price increases through FY 2029 (**Figure 19**). The upper bound also includes construction employment and economic growth, but higher energy costs. The lower bound takes construction employment growth, work program funding, and low crude oil prices into account and would yield lower aggregate base prices, yet still above pre-pandemic levels.

Figure 19. FDOT Aggregate Base Price Forecast



Source: TBG calculated from data provided by FDOT Office of Forecasting and Project Cost, various industry sources.
(Variable descriptions available in the **Appendix**.)

EARTHWORK

Summary

- It is estimated that trucking employment in Florida increased 1.5% year-over-year. A new bill introduced into the House of Representatives could, if passed, expand the hiring pool for states seeking CDL drivers.
- Over the past quarter spot rates have been at or below 2023/2024 levels and this past week were 7.5% lower than the five-year average.
- In general, equipment costs seem to have hit their respective floors and started rising again.

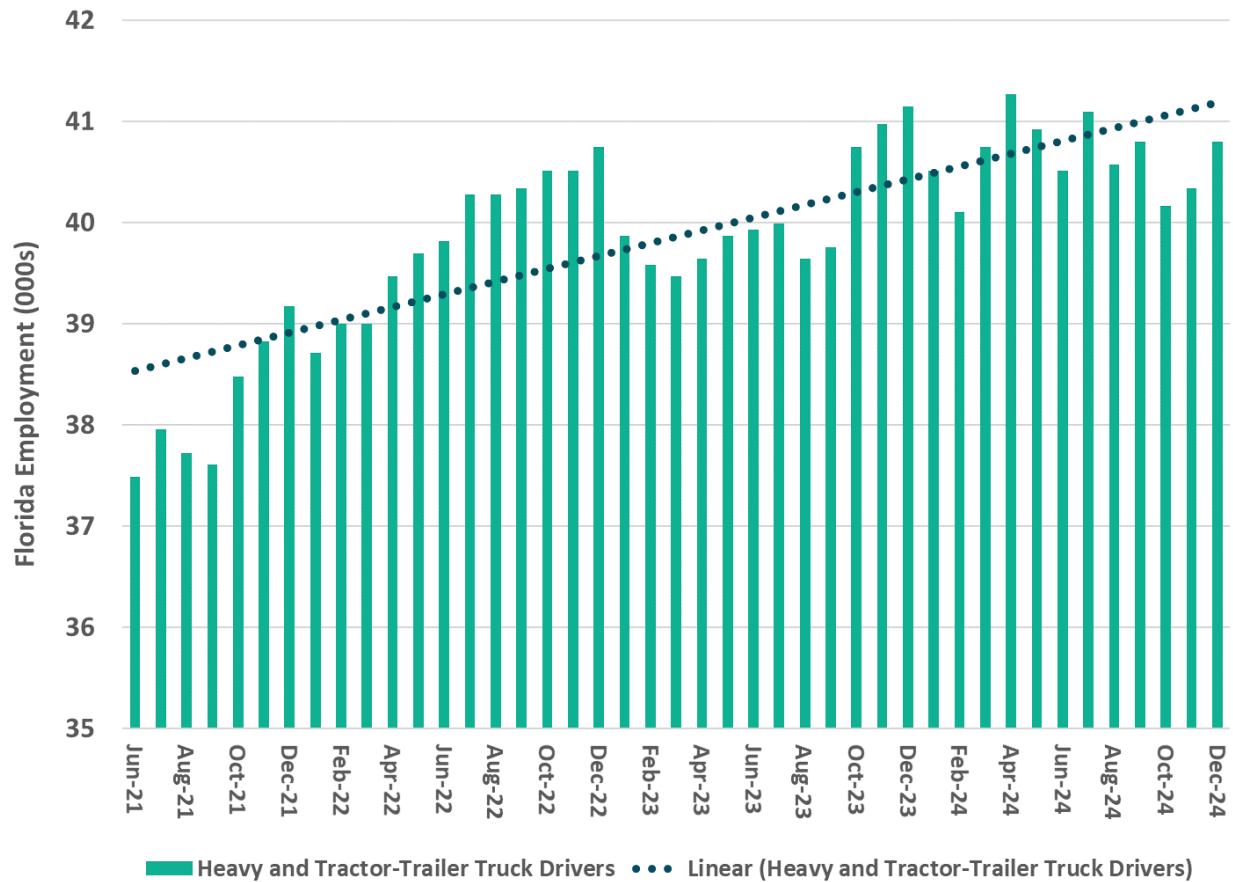
FDOT Impacts

- FY 2025 year-to-date earthwork bids are holding at about \$21 per cubic yard.
- Current models forecast earthwork bids to remain above \$20 per cubic yard through FY 2029.
- Skilled labor, driver availability, and trucking costs continue to be impediments to lowering earthwork costs.

General Trends

Trucking and labor costs are the primary factors in this sector. On average truck transportation employment increased 1.5% year-over-year (**Figure 20**). As mentioned in other areas of the report, in December 2024, diesel prices were at \$2.35, down 15% year-over year. According to Freight Transportation Research, specialized trucking volumes and rates in Florida have been 0%-20% below normal since December 2023. Over the past quarter spot rates have been at or below 2023/2024 levels and this past week were 7.5% lower than the five-year average. On January 24th, a bipartisan bill that “reduces bureaucratic barriers that delay new drivers from receiving their Commercial Driver’s License (CDL)” was introduced to the House of Representatives. If passed, the bill would allow State and third-party examiners to administer CDL skill and knowledge tests, as well as allow States to administer driving skills tests to out-of-state applicants. This bill would increase the pool of eligible applicants that states can pick from when seeking CDL drivers.

Figure 20. Florida Truck Transportation and Driver Employment



Source: TBG Work Product, BLS.

Earthmoving Equipment and Trucking

The December 2024 Equipment Report released by Rouse analyzes price trends of different construction equipment in the U.S. The report includes a Fair Market Value (FMV) Index and Forced Liquidation Value (FLV) Index (equipment sold at auctions) for heavy and light & medium Earthmoving equipment. After declining for several months, prices rose in November 2024 compared to the previous month for many equipment and trucking categories (**Table 10**). Auction and retail sales volumes of General Construction Equipment were flat year-over-year in November 2024, while Heavy Earthmoving Equipment volumes were down year-over-year.

Table 10. U.S. Equipment Prices, November 2024 vs October 2024

Equipment Type	Auction (FLV) Prices	Retail (FMV) Prices	Legend	
General Construction Equipment	↑	↓	↓	Month-over-month prices declined
Heavy Earthmoving Equipment	↓	↓	↑	Month-over-month prices increased
Light and Medium Earthmoving Equipment	↑	=	=	Month-over-month prices were flat
Excavators	↑	↑		
Dozers	↓	↓		
Wheel Loaders	↓	↑		
Articulated Trucks	↑	↓		
Forklift Trucks	↑	↑		
Truck Tractors	↑	↓		

Source: Rouse December 2024 Equipment Report.

Earthwork Forecast

Regression modeling was performed to estimate earthwork costs using pay item data, supply chain variables and other macroeconomic indicators. **Table 11** provides the forecast average price for earthwork.

Table 11. Earthwork Price Forecast Results

Year	2024	2025	2026	2027	2028	2029
Price Earthwork, \$/CY	\$21*	\$21	\$21	\$22	\$22	\$22
Percent Change, %	83.1%	0.9%	1.5%	1.7%	1.6%	1.7%

Source: TBG calculated from data provided by FDOT Office of Forecasting and Project Cost, various industry sources.

Note: *One extremely high-cost, high-quantity bid from September 2023 was excluded, adjusting the FY 2024 weighted average earthwork price from \$24 per cubic yard to \$19 per cubic yard.

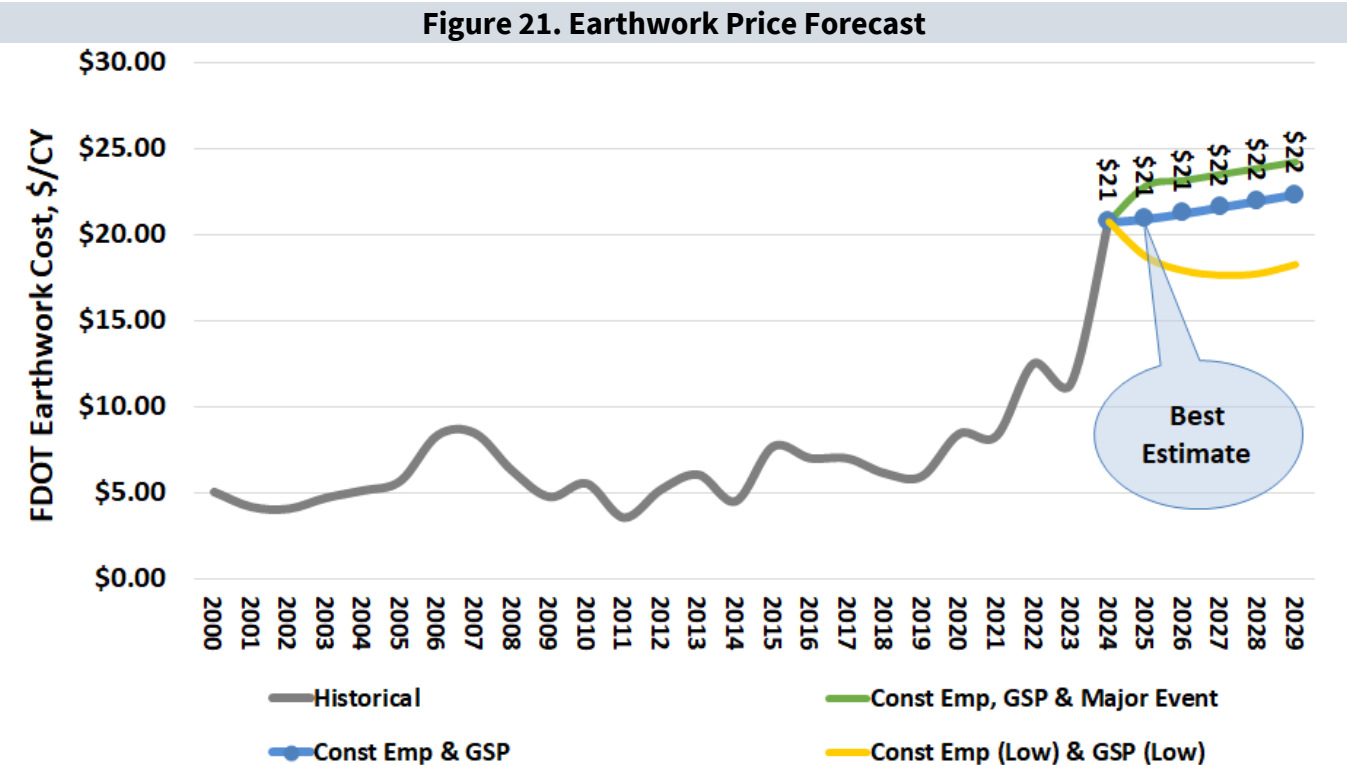
FY 2025 year-to-date earthwork costs are holding at about \$21 per cubic yard with updated FDOT bid data. Labor and equipment costs and availability remain issues for some contractors. In addition, recent industry reports on equipment and trucking price trends show volatility returning to those markets.

The best estimate of FY 2025 earthwork costs, revised with the latest industry employment and economic forecasts, shows earthwork bids continuing to grow at a steady rate close to general inflation through the end of the five-year work program. The updated upper bound, which takes forecasted construction employment and higher energy costs into account, as well as an indicator for major events that may disrupt supply chains, is not too far out of reach from current pricing. In the

lower bound scenario, recessionary conditions (employment and economic conditions) would drive down costs, but not to pre-pandemic bid levels.

It should be noted that the decline in earthwork bid prices during the Great Recession was 58% between 2007 and 2011. If a similar drop in prices happened today, earthwork prices would fall from \$21 per cubic yard to about \$9 per cubic yard.

Figure 21 shows the output of potential price models and the scenario identified as best estimate for earthwork.



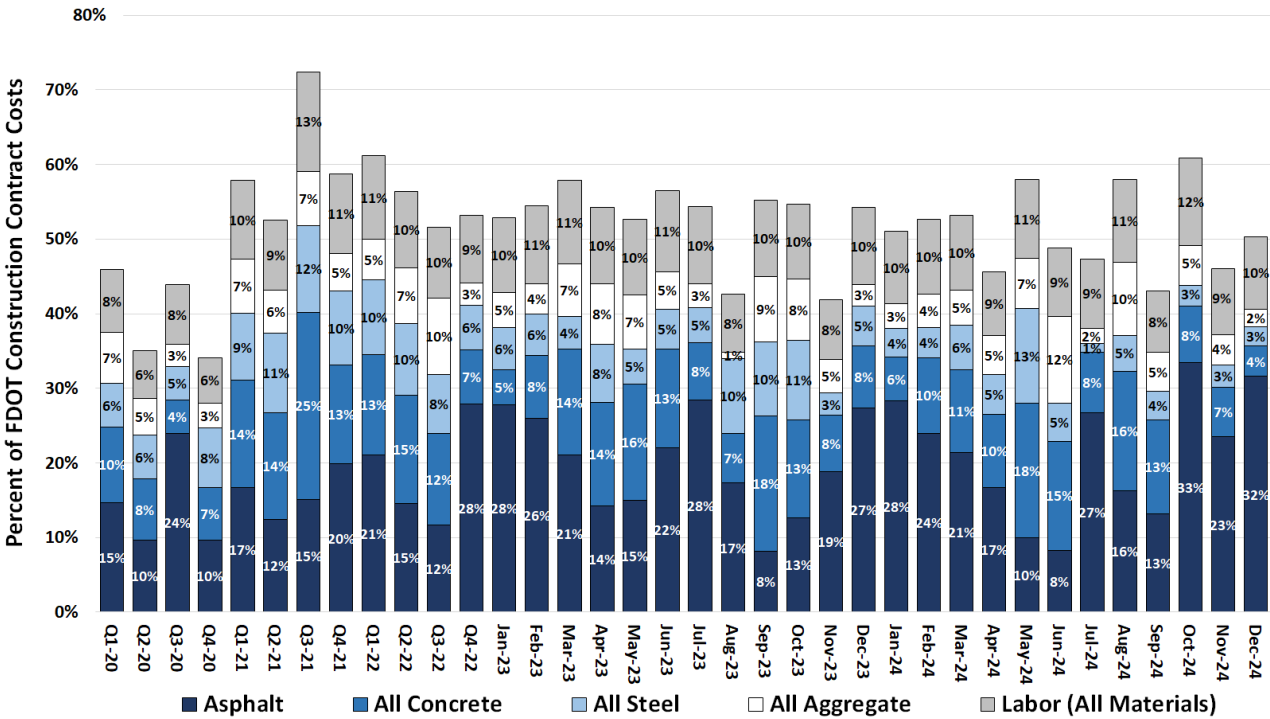
Source: TBG calculated from data provided by FDOT Office of Forecasting and Project Cost, various industry sources.
(Variable descriptions available in the Appendix.)

APPENDIX A: UNDERLYING ECONOMIC CONDITIONS

FDOT Cost Composition

Tracking FDOT’s costs by month shows how the cost composition may shift depending on project type, scheduling, and material costs (**Figure A- 1**). Asphalt costs were the largest share of total costs over the last three months according to revised November 2024 and preliminary December 2024 data. Concrete costs were the next largest share of total costs over the quarter due to high bid prices. Steel costs have fallen as a share of total costs as prices continued to ease during the last quarter. Aggregate costs moderated to historical levels with revised data. Labor costs continued fluctuating over the past few months between 9% to 12% of total costs.

Figure A- 1. Monthly Cost Composition

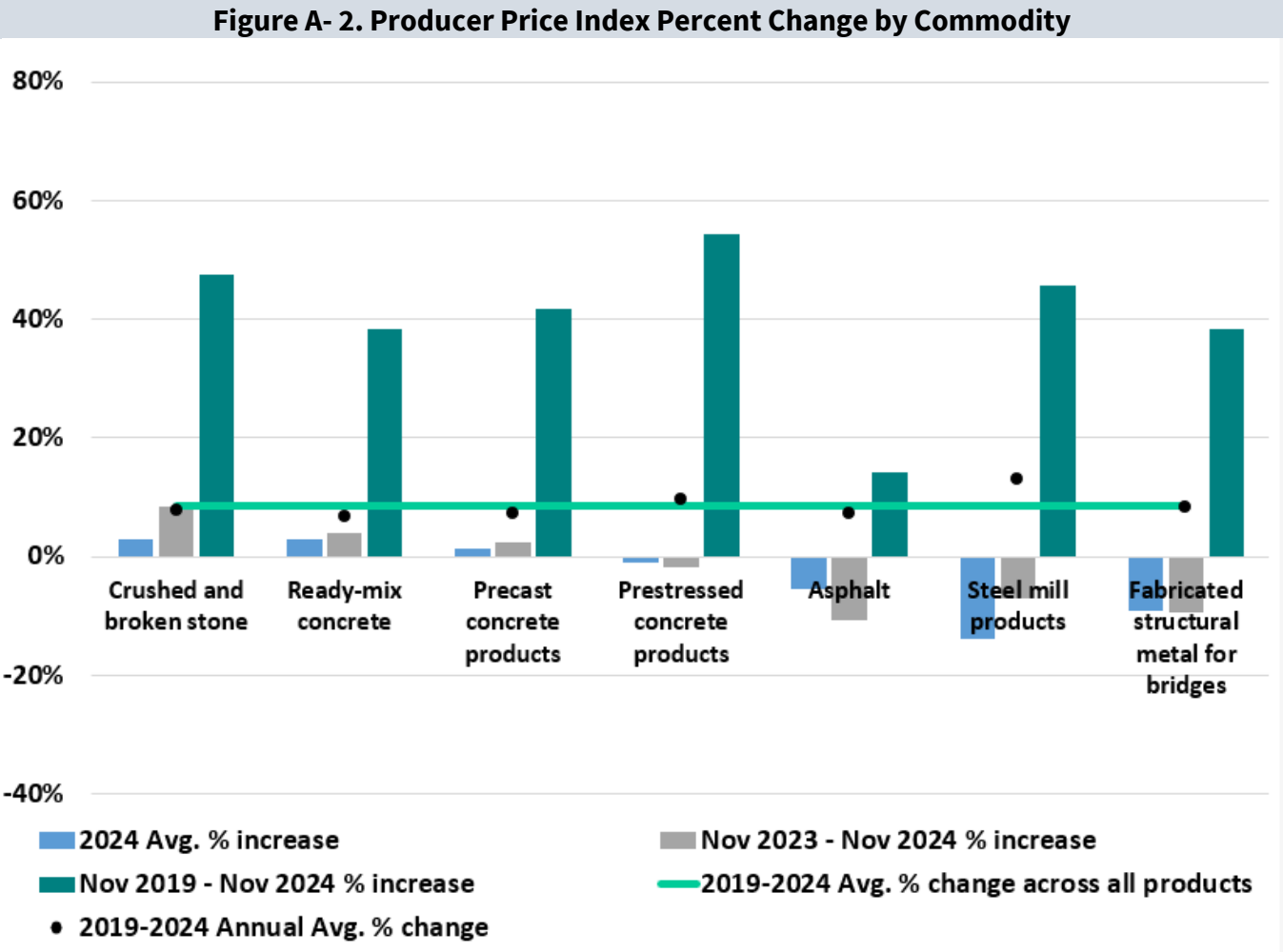


Source: TBG calculated from data provided by FDOT Office of Forecasting and Project Cost.

Note: IBIS industry reports are used to estimate the share of award by material type that may be attributed to labor.

U.S. Inflation

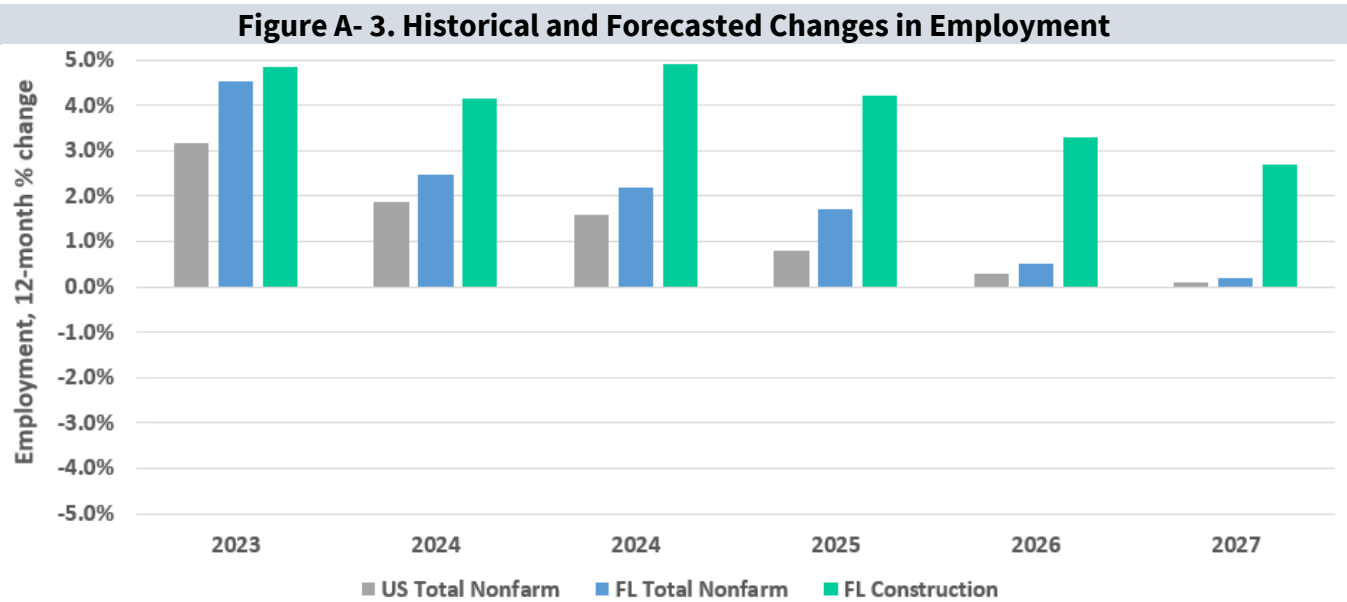
Another measure of inflation for the construction industry is the BLS PPI by commodity type. Nationally, a 1% average increase has been seen across all commodities in calendar year 2024, with crushed and broken stone having the largest (8%). Structural metal for bridges has declined 9%. Year-over-year, crushed stone, ready-mix, precast, prestressed, and asphalt (refinery production) have increased by 8%, 6%, 3%, 2%, and 0% respectively in the U.S. while steel mill products and structural metal for bridges have declined by 8% and 4%, respectively. ⁵ **Figure A- 2** illustrates select PPI in the U.S. for relevant commodity types.



⁵ As a processed good for intermediate demand; i.e. asphalt used at refineries as an input by producers and not the final prices seen by FDOT.

Construction Employment Forecast

According to the Economic Estimating Conference results from Florida’s Office of Economic & Demographic Research (EDR), statewide construction employment grew by 4.9% in 2024, above the most recent statewide construction employment growth estimate from the Bureau of Labor Statistics (BLS) at 4.1%. EDR expects construction employment growth to grow further over the next three years, with 2025 estimated to rise by 4.2%, 2026 by 3.3% and 2027 by 2.7%. The Institute for Economic Forecasting’s (IEF) most recent nationwide report elucidates their predictions for non-farm employment growth across the U.S., estimating a 1.6% increase in 2024, coming in under what the BLS has estimated at 1.9%. For further years, IEF estimates growth slowing down across the U.S., with 2025 expected to bring 0.8% employment growth, 0.3% expected in 2026, and 0.1% expected in 2027. In Figure A-5, BLS estimates for U.S. nonfarm, Florida nonfarm, and Florida construction employment growth in years 2023 and 2024 are shown alongside the IEF and EDR projected growth for years 2024, 2025, 2026, and 2027 (**Figure A- 3**).

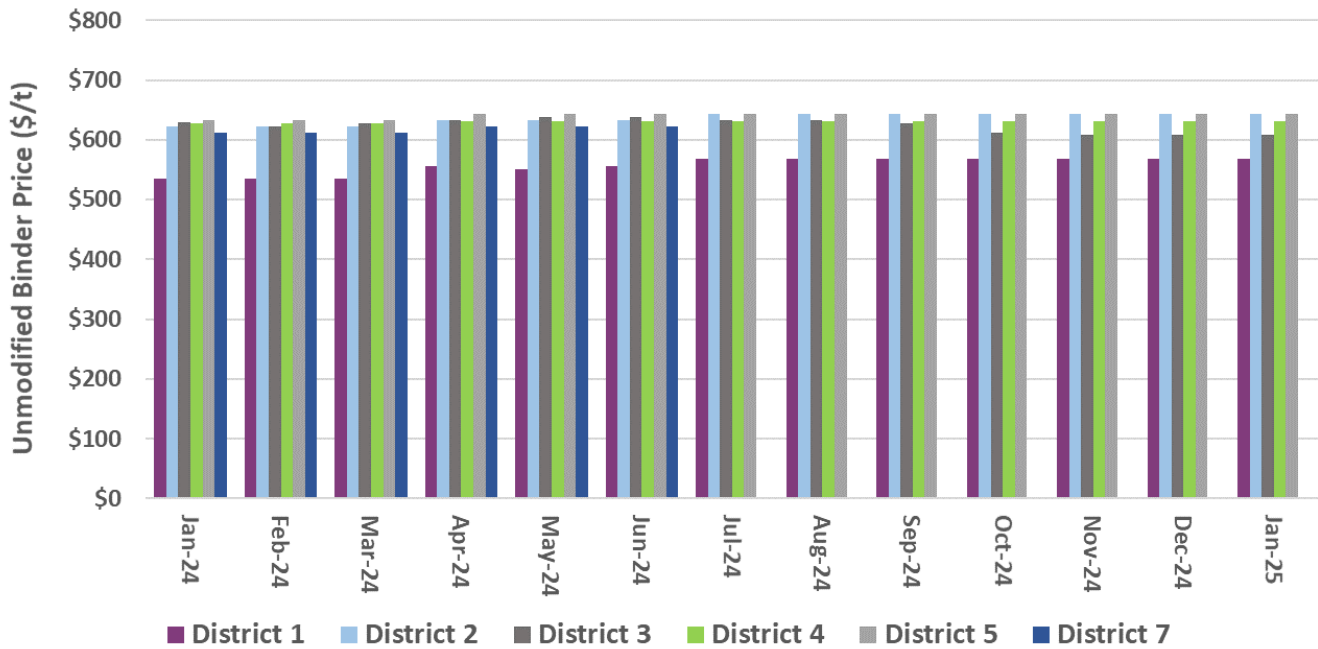


Source: UCF Institute for Economic Forecasting Spring 2024 Florida & Metro Forecast; Florida’s Office of Economic & Demographic Research; TBG work product.

Binder Prices by District

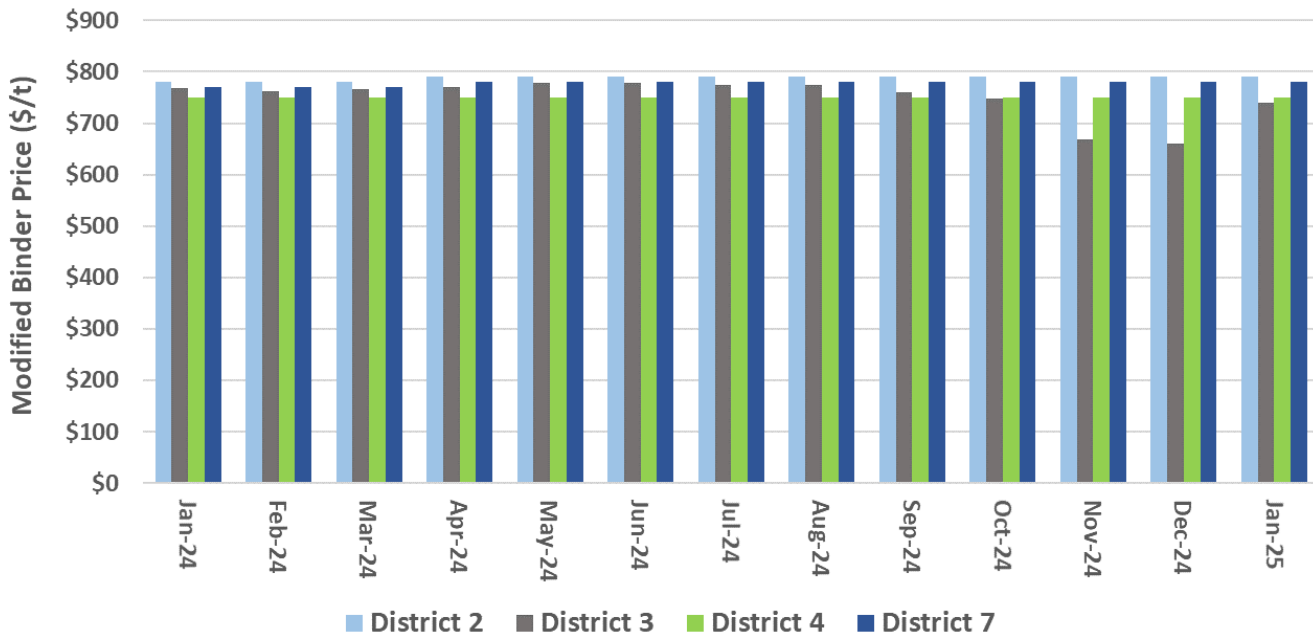
Where available, the average prices for unmodified (**Figure A- 4**) and modified (**Figure A- 5**) binder were calculated from monthly terminal price quotes at the district level. Unmodified binder is the average of PG 52-28 and PG 58-22 prices, while modified binder is a quote for the price of PG 76-22 (PMA) in the dataset. Unmodified binder prices increased in Districts 1, 2, 4, and 5, year-over-year, between 1% and 6% while District 3 decreased by 3%. Modified binder prices showed similar patterns, with prices increasing in Districts 2 and 7 while District 3 decreased by -3.5% year-over-year. Prices in all Districts were relatively stable through the year.

Figure A- 4. Unmodified Binder Price by District



Source: FDOT, TBG Work Product (D6 terminals did not report data).

Figure A- 5. Modified Binder Price by District



Source: FDOT, TBG Work Product (D1, D5, and D6 terminals did not report data).

APPENDIX B: FORECAST DETAILS

A description of the variables used in forecasting are provided in **Table B-1**.

Table B-1. Forecast Variable Descriptions	
Variable Reference	Description
Chinese Imports	The value of imports to global partners originating from China.
Const Emp	Baseline FL construction employment forecast.
Const Emp (Low)	Lower (less optimistic) FL construction employment forecast.
Crude Demand	Total world petroleum consumption.
FL Cement Price	Average price of cement in Florida.
Fly Ash Demand	U.S. production of fly ash as a share of total consumption.
Fly Ash Production	U.S. fly ash production.
GSP	FL Gross State Product.
GSP (Low)	Lower (less optimistic) FL gross state product forecast.
Historical	Historical pricing or quantity.
Housing Starts	FL housing starts forecast.
Housing Starts (Low)	Lower (less optimistic) FL housing starts forecast.
Low/Med/High Crude	Average crude price (low, medium, or high forecast).
Major Event	Major geo-political, health, or weather-related events that strongly affect market forces; i.e. 9/11, the Great Recession, hurricanes, pandemics.
Non-farm Emp⁶	FL Non-Farm employment forecast.
Non-farm Emp (Low)	Lower (less optimistic) FL total non-farm employment forecast.
Price Binder	Average price of HMA binder (PG-76 & higher).
Price Coal	Average price of coal.
Price Diesel	Average diesel price.
Price Iron	Average price of iron ore.
Price Stone	Average price of crushed stone.
Price Zinc	Average price of crushed stone.
SF Housing	FL Single-Family housing starts forecast.
SF Housing (Low)	Lower (less optimistic) FL Single-Family housing starts forecast.
US Cement Price	Average price of cement in the U.S.
WP	FDOT Five-Year Work Program.

Pay items that are partially or wholly used in the analysis are listed in **Appendix B** of the FDOT SRES [FY 2023-24 Final Report](#)⁷, starting on page 89. It should be noted that the lists may include some pay items that are no longer in use by FDOT, or are not represented in the lettings data every year, but are retained for historical record.

⁶ Workers in the agriculture sector are excluded from government and industry estimates; [Nonfarm Payrolls: Why Farmers Aren't Included in Jobs Data | St. Louis Fed \(stlouisfed.org\)](#)

⁷ Main page: [Strategic Resource Evaluation Study Reports \(fdot.gov\)](#)

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