

 October 28-29, 2025

 Orlando, FL



**TRANSPORTATION
SYMPOSIUM**

Unlocking Cost Mastery

**Harnessing FDOT's Pricing Dashboards
for Smarter Project Decisions**

Ashley Anderson, PE
Gaelan Bishop, PE

Transportation Symposium
Website



SCAN ME

1

Safety Message





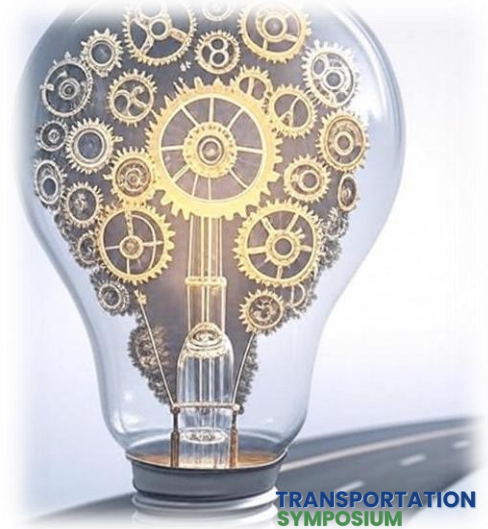
**TRANSPORTATION
SYMPOSIUM**

2

Unlocking Cost Mastery

Objectives

- **Discover** how to transform project cost
- **Empower** engineers, designers, and construction professionals to leverage historical bid data
- **Learn to analyze key factors** like geography, quantity, constructability, production rates, and site conditions
- **Gain practical insights** to optimize cost development and enhance budget stability



3

3

Unlocking Cost Mastery

Agenda

- Introduction
- Principles in Pricing
- Dashboard Operation
- Constructability & Site Conditions
- Wrap-Up
- Questions & Answers

Budget Roller Coaster



TRANSPORTATION
SYMPOSIUM

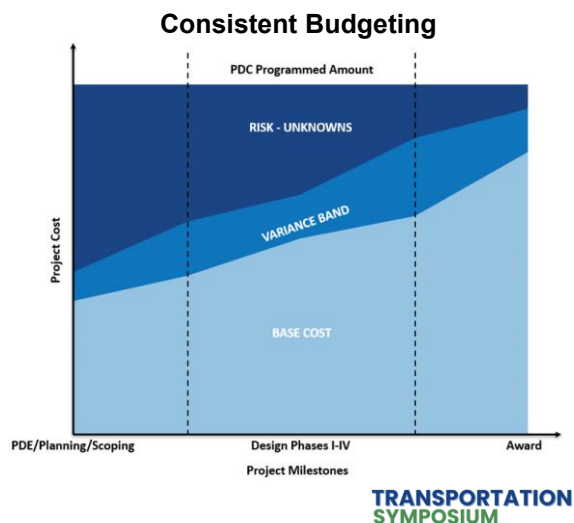
4

4

Introduction

Why Accuracy Matters

- **Positive Impacts**
 - Increase budget stability
 - On-time projects
- **Negative Impacts**
 - Delayed projects
 - Possible budget returned to State General Fund
- **Solution**
 - Bid-based parametric approach to pricing



5

5

Principles in Pricing

The Bias Trap – Cognitive

- **Optimism Bias** – “I’m less likely to experience negative events compared to others.”
- **Planning Fallacy** – Overestimating benefits while underestimating cost, schedule, and risk.
- **Anchoring Bias** – Relying too heavily on the first piece of information.

**TRANSPORTATION
SYMPOSIUM**

6

6

Principles in Pricing

The Bias Trap – Common Expressions

- “The Maintenance of Traffic percentage will cover it.”
- “It’s only a preliminary planning/scoping milestone.”
- “My current project cost is good because my last one (on a completely different project) was accurate.”
- “The percent unknowns will cover our KNOWNS that we don’t have enough data to price and KNOWN UNKNOWNNS.”
- “My bridge cost is good; I used the Structures Manual and/or LRE template to price my project.”



7

7

Principles in Pricing

Where We’ve Been & What's Next

	Historical Averages	LRE and DQE	Dashboards (NEW)
Duration	6 – 12 months	36 months	Adjustable
Updates	Monthly	Daily	Daily
Bid Status	Executed	ALL	Executed
Contract Type	Construction	Construction & Maintenance	ALL – Adjustable
Bidders Included	Awarded	ALL Except Rejected	ALL – Adjustable
Outliers	Included	Removed*	Optional***
Weighting	Weighted Average	Average of Methods**	Weighted Average
Inflation - Historical	-	-	Included

* Median Absolute Deviation Method

** (Weighted Average + Weighted Time of Bid + Statewide Average) ÷ 3

*** Weighted Standard Deviation

**TRANSPORTATION
SYMPOSIUM**

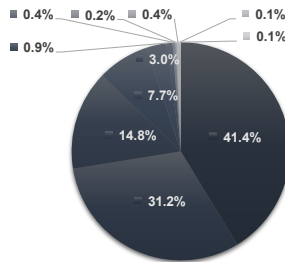
8

8

Principles in Pricing

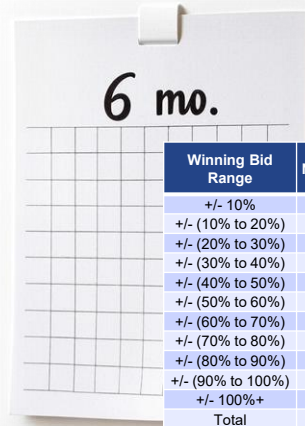
Submittals & Accuracy

- Submit project costs at every milestone
- Project costs no older than six months
- FHWA Goal: 50% of project costs should be within $\pm 10\%$ of the winning bid



Award-Official

- +/- 10%
- +/- (10% to 20%)
- +/- (20% to 30%)
- +/- (30% to 40%)
- +/- (40% to 50%)
- +/- (50% to 60%)
- +/- (60% to 70%)
- +/- (70% to 80%)
- +/- (80% to 90%)
- +/- (90% to 100%)
- +/- 100%+



Winning Bid Range	No. Projects	Percent of Range
+/- 10%	707	41.4%
+/- (10% to 20%)	533	31.2%
+/- (20% to 30%)	253	14.8%
+/- (30% to 40%)	131	7.7%
+/- (40% to 50%)	52	3.0%
+/- (50% to 60%)	15	0.9%
+/- (60% to 70%)	7	0.4%
+/- (70% to 80%)	3	0.2%
+/- (80% to 90%)	6	0.4%
+/- (90% to 100%)	1	0.1%
+/- 100%+	1	0.1%
Total	1,709	100%

Data: Fiscal Years 2021-2025, Executed Construction Contracts

**TRANSPORTATION
SYMPOSIUM**

9

9

Principles in Pricing

Small vs. Major & Mega

- Small (<\$100M) – Overestimated
- Major (\$100M - \$500M) – Underestimated
- Mega (\$500M+) – Underestimated

Cost Range	No. Contracts	No. Projects	Over +10% (Contracts) Underestimated	Under -10% (Contracts) Overestimated	Outside Range	% Outside Range	% In Range	Outside Range Surplus/Deficit
ALL	1709	2748	275	727	1002	58.6%	41.4%	Surplus
\$0 to <\$5M	976	1310	157	457	614	62.9%	37.1%	Surplus
\$5M to <\$10M	358	610	50	140	190	53.1%	46.9%	Surplus
\$10M to <\$20M	216	425	34	77	111	51.4%	48.6%	Surplus
\$20M to <\$50M	96	229	20	33	53	55.2%	44.8%	Surplus
\$50M to <\$100M	26	63	4	12	16	61.5%	38.5%	Surplus
\$100M+	37	111	10	8	18	48.6%	51.4%	Deficit

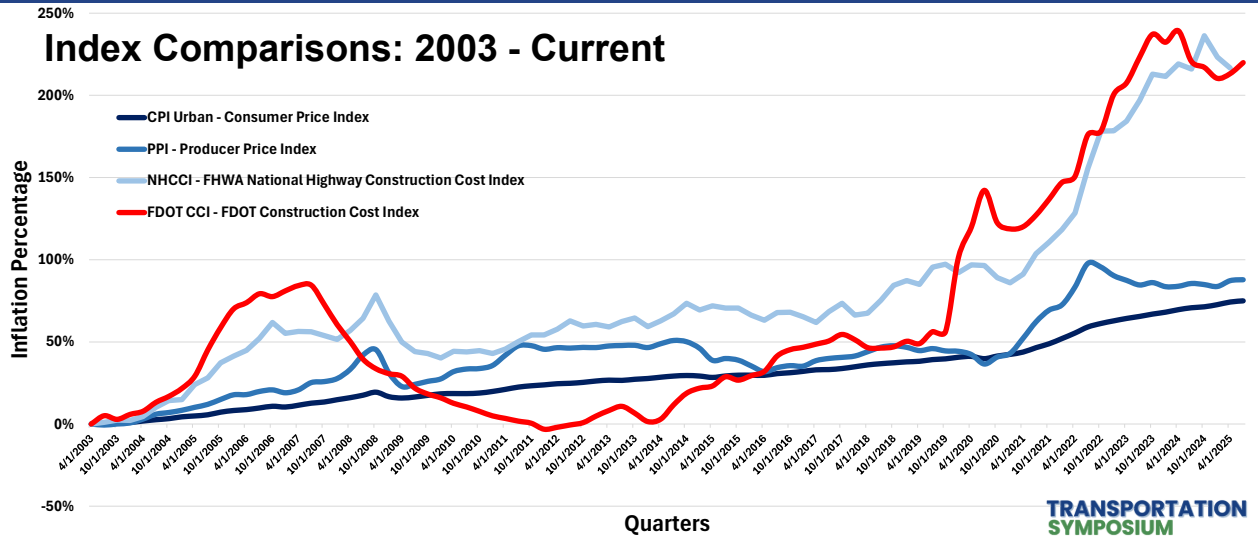
Data: Fiscal Years 2021-2025, Executed Construction Contracts (PrP Proposal)

**TRANSPORTATION
SYMPOSIUM**

10

10

Principles in Pricing



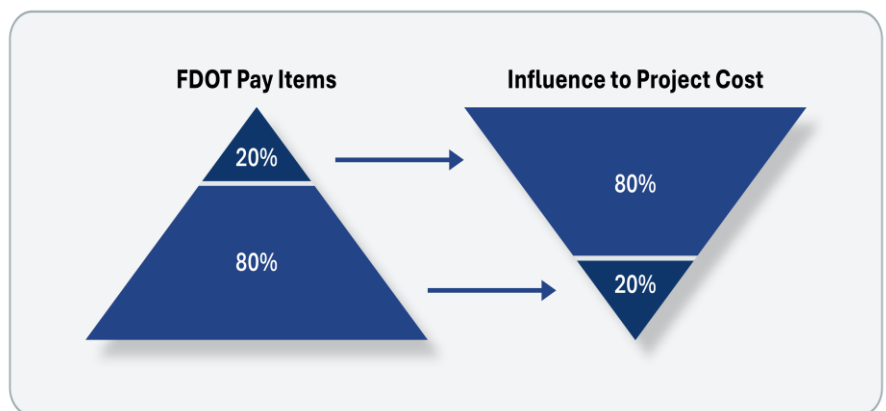
11

11

Principles in Pricing

Pareto Principle

- Cost Drivers
 - Aggregate
 - Asphalt
 - Concrete
 - Earthwork
 - Steel
- Quick Checks
 - Quantity Validation
 - Extended Costs



TRANSPORTATION SYMPOSIUM

12

12

Dashboard Operation

Search Options

- A** Forecasting and Project Cost Website
 - Historical Item Average Cost Reports
 - <https://www.fdot.gov/fpo/fpc>
- B** Power BI – Public Version
 - Bid Price Search
 - <https://www.fdot.gov/fpo/fpc>
- C** DQE
 - Unit Price Search
 - <https://dqe.fdot.gov/#/unitpricerearch>

Forecasting and Project Cost

The Forecasting and Project Cost section of the Forecasting and Performance Office is the home of both the Long Range Estimates (LRE) and the Design Quantities and Estimates (DQE) applications. The DQE application is where you can find BOE Pay Item Details and the Master Pay Item List. We also publish the Basis of Estimates (BOE) Manual, Historical Item Cost Averages reports and Strategic Resource Evaluation Study (SRES) reports.

Forecasting & Project Cost Engineer
Ashley Anderson, P.E.
605 Suwannee Street
Tallahassee, FL 32399
Ashley.Anderson@fdot.state.fl.us
(850) 414-4184
[Staff Directory](#)

Applications

[Design Quantities and Estimates \(DQE\)](#)

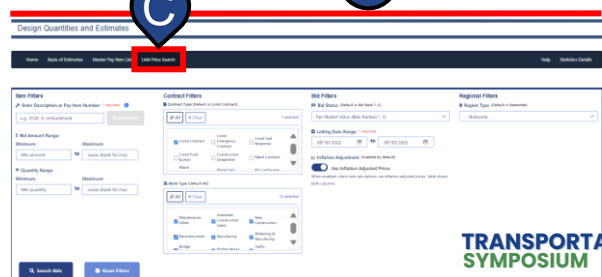
- [BOE Pay Item Details](#)
- [Master Pay Item List](#)
- [DQE Help](#)
- [Long Range Estimates \(LRE\)](#)
- [LRE Training \(2 hour\)](#)
- [ASHTO/Trans Project Website](#)

Publications

[Basis of Estimates Manual](#)
[Bulletins and Memos](#)

Reports

[Bid Price Search Dashboard](#)
[Historical Item Average Cost Reports](#)
[Strategic Resource Evaluation Study Reports](#)



13

13

Dashboard Operation

Unit Price Search

- 1) Iterative Evaluation Process
 - Sieve Process
- 2) Initial Search
 - Enter pay item description or number
 - Use defaults
- 3) Additional Searches
 - Regional Filters
 - Quantity Range
- 4) Refinements
 - Contract Type
 - Work Type



**TRANSPORTATION
SYMPOSIUM**

14

14

Dashboard Operation

Data Confidence

LESS ← → **MORE**

6 Mo. ← → **12 Mo.** ← → **36 Mo.**

County ← → **Market Area** ← → **Statewide**

Winning Bid ← → **Fair Market Value**

TRANSPORTATION
SYMPOSIUM

15

15

Dashboard Operation

Data Confidence

- Date Filters (by Letting Date)
 - Historical Moving Averages
 - Six Months (Recent Pricing)
 - 12 Months (Captures additional bid points for Statewide and Market Area)
 - Power BI Bid Price Search Dashboard
 - Adjustable
 - Five Years of Data Available
 - DQE Unit Price Search Dashboard
 - Adjustable (Default 36 months)
 - 10 Years of Data Available
 - Brand New FDOT Construction Cost Index (FDOT CCI)
- Regional Filters
 - County – Most Restrictive
 - Market Area – Less Restrictive
 - Statewide – Least Restrictive
- Results
 - **High # of Bid Points**
= **Higher Confidence**
 - **Low # of Bid Points**
= **Lower Confidence**



TRANSPORTATION
SYMPOSIUM

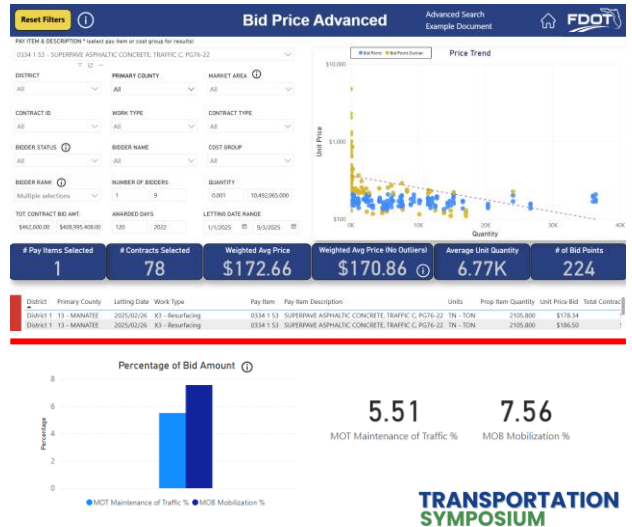
16

16

Dashboard Operation

Bid Price Search (Power BI)

- Internal Version
 - Allows Downloads
- Public Version
 - Same Reports as the Internal Dashboard
 - Microsoft Restricts Downloads
- Dashboard Reports
 - Advanced
 - Basic – Table Includes Market Area Averages
 - Percentage – MOT & MOB
 - Item Range
 - Item Range (No Outliers)
 - Bidder – See Bidder Activity
 - Item Trend – See Price Changes Over Time



17

17

Dashboard Operation

Initial Search - (1) Pay Item

- Enter Description or Pay Item No. **1**
- Use Defaults
- Search Bids

1

Search Process: Type at least 3 characters, then click the search button or press Enter.

Results: Select from the dropdown list that appears after searching.

Search Options: You can search by Pay Item Number or Description.

Case Insensitive: Search works with any case combination (e.g., "embankment" or "EMBANKMENT").

Item Filters

Enter Description or Pay Item Number: *required

e.g. 0120 & embankment

Search Bids

Design Quantities and Estimates

Home Basic of Estimates Master Pay Item List **Unit Price Search** Help Statistics Details

Item Filters

Enter Description or Pay Item Number: *required

e.g. 0120 & embankment

Search Bids

Contract Filters

Contract Type (Default is Const Contract)

All X Clear 1 selected

Const Contract Const Emergency Contract Const Fast Response Const Push Button Const Construction Shutdown Const Contract MT

Bid Filters

Bid Status (Default is Bid Rank 1-3)

Fair Market Value (Bids Ranked 1-3)

Letting Date Range: *required

10/10/2022 To 10/10/2025

IC Inflation Adjustment (Enabled by default)

Use Inflation-Adjusted Prices

When enabled, charts and calculations use inflation-adjusted prices. Table shows both columns.

Regional Filters

Region Type (Default is Statewide)

-- Statewide --

Work Type (Default is All)

All X Clear 12 selected

Maintenance Other Intermediate New Construction Reconstruction Resurfacing Widening & Resurfacing Bridge Bridge Rehabilitation Traffic

Bid Search

Search Bids

Reset Filters

TRANSPORTATION SYMPOSIUM

18

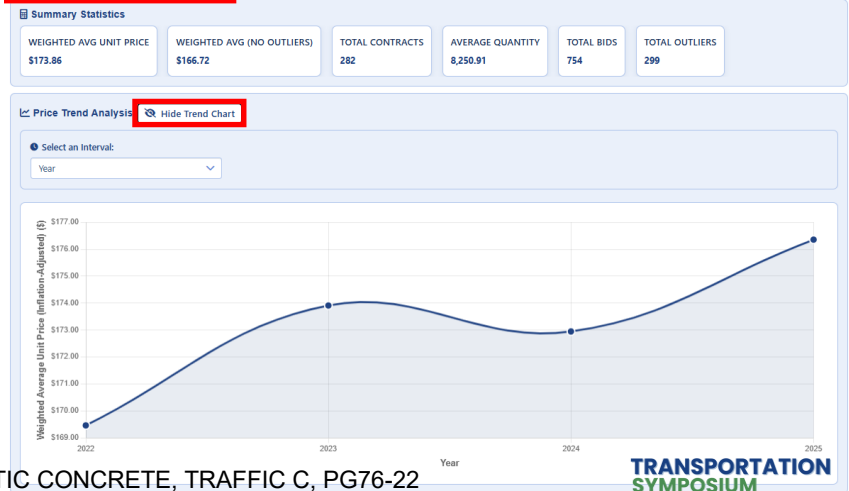
18

Dashboard Operation

Price Trend Analysis

- All Defaults
- 36 Months (8/5/2025)
- Inflation Adjusted
 - Dynamic Adjustment

Unit Price Bid Analysis (Inflation-Adjusted)



19

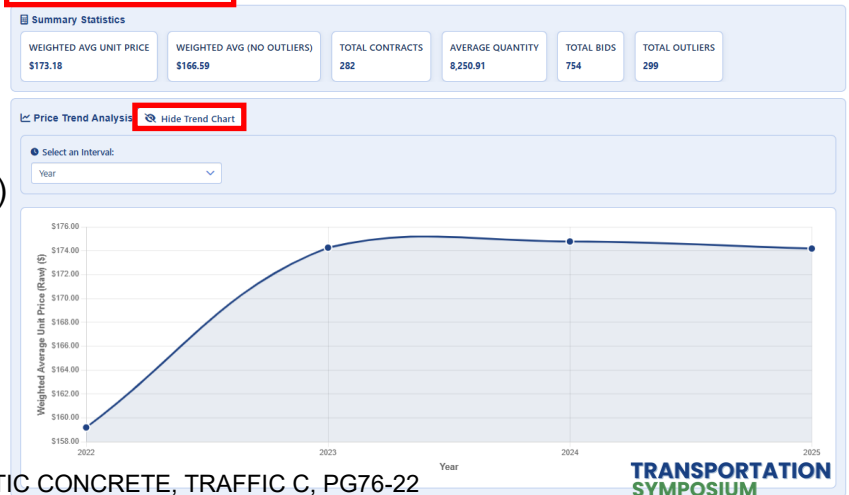
19

Dashboard Operation

Price Trend Analysis

- All Defaults
- 36 Months (8/5/2025)
- Raw Prices (No Inflation)
 - Dynamic Adjustment

Unit Price Bid Analysis (Raw Prices)



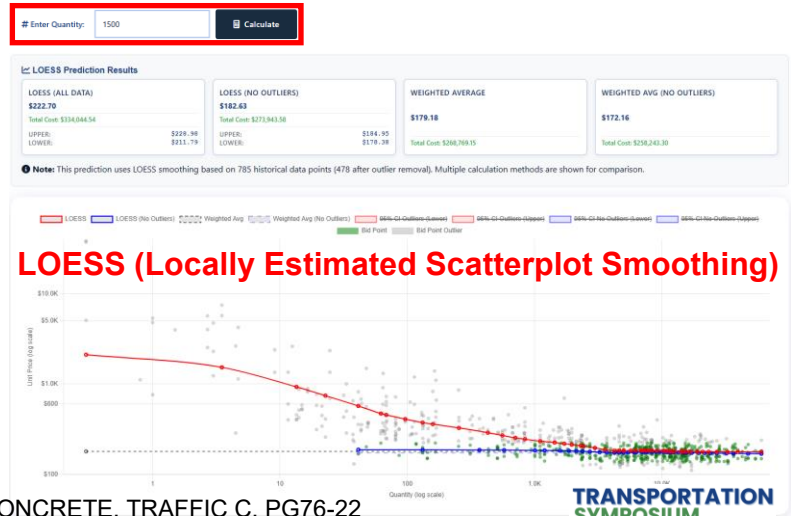
20

20

Dashboard Operation

Predictions

- All Defaults
- 36 Months (8/5/2025)
- Inflation Adjusted
- Quantity 1,500
- Prediction Range
 - Low: \$172.16
 - High: \$228.98



0334 1 53 - SUPERPAVE ASPHALTIC CONCRETE, TRAFFIC C, PG76-22

21

21

Dashboard Operation

Additional Search - (2) Quantity Range

- Enter Quantity Range
- Search Bids

Quantity Range:

Minimum: to Maximum:

Min quantity to Leave blank for max

Design Quantities and Estimates

Home Basis of Estimates Master Pay Item List **Unit Price Search** Help Statistics Details

Item Filters

Enter Description or Pay Item Number *required

e.g. 0120 & embankment

5 Bid Amount Range:

Minimum: to Maximum:

Min amount to Leave blank for max

Quantity Range:

Minimum: to Maximum:

Min quantity to Leave blank for max

Contract Filters

Contract Type (Default is Const Contract)

☐ Const ☐ Const Fast Response

☐ Emergency Contract ☐ Maint Contract

☐ Construction ☐ Maintenance

☐ Discontinue ☐ MT

Work Type (Default is All)

☐ Maintenance ☐ New Construction

☐ Reconstruction ☐ Widening & Resurfacing

☐ Bridge ☐ Traffic

Bid Filters

Bid Status (Default is Bid Rank 1-3)

Fair Market Value (Bids Ranked 1-3)

Letting Date Range: *required

10/10/2022 to 10/10/2025

Regional Filters

Region Type (Default is Statewide)

-- Statewide --

Use Inflation Adjustment (Enabled by default):

☐ Use Inflation-Adjusted Prices

When enabled, charts and calculations use inflation-adjusted prices. Table shows both columns.

Search Bids **Reset Filters**

TRANSPORTATION SYMPOSIUM

22

22

Dashboard Operation

Predictions

- All Defaults
- 36 Months (8/5/2025)
- Inflation Adjusted
- Quantity 1,500
- Prediction Range
 - Low: \$211.24
 - High: \$266.49



23

Dashboard Operation

Predictions

- All Defaults
- 36 Months (8/5/2025)
- Inflation Adjusted
- Quantity 1,500
- Prediction Range
 - Low: \$210.25
 - High: \$240.67



24

Dashboard Operation

Predictions

- All Defaults
- 36 Months (8/5/2025)
- Inflation Adjusted
- Quantity 8,000
- Prediction Range
 - Low: \$172.16
 - High: \$183.83



0334 1 53 - SUPERPAVE ASPHALTIC CONCRETE, TRAFFIC C, PG76-22

25

25

Dashboard Operation

Additional Search - (3) Region

- Select Region
- Search Bids

Design Quantities and Estimates

Home Basis of Estimates Master Pay Item List **Unit Price Search** Help Statistics Details

3

Regional Filters

Region Type: -- Statewide --

3

Item Filters

Enter Description or Pay Item Number: *required

e.g. 0120 6, embankment

Search Item

Contract Filters

Contract Type (Default is Const Contract)

Const Contract Const Emergency Const Fast Response Const Push Const Construction Const Streamline Const MT

Work Type (Default is All)

Maintenance Other New Construction Reconstruction Resurfacing Widening & Resurfacing Bridge Roadside Barrier Traffic

Bid Filters

Bid Status (Default is Bid Rank 1-3)

Fair Market Value (Bids Ranked 1-3)

Letting Date Range: *required

10/10/2022 to 10/10/2025

Inflation Adjustment (Enabled by default)

Use Inflation-Adjusted Prices

When enabled, charts and calculations use inflation-adjusted prices. Table shows both columns.

Regional Filters

Region Type (Default is Statewide)

-- Statewide --

Search Bids Reset Filters

TRANSPORTATION SYMPOSIUM

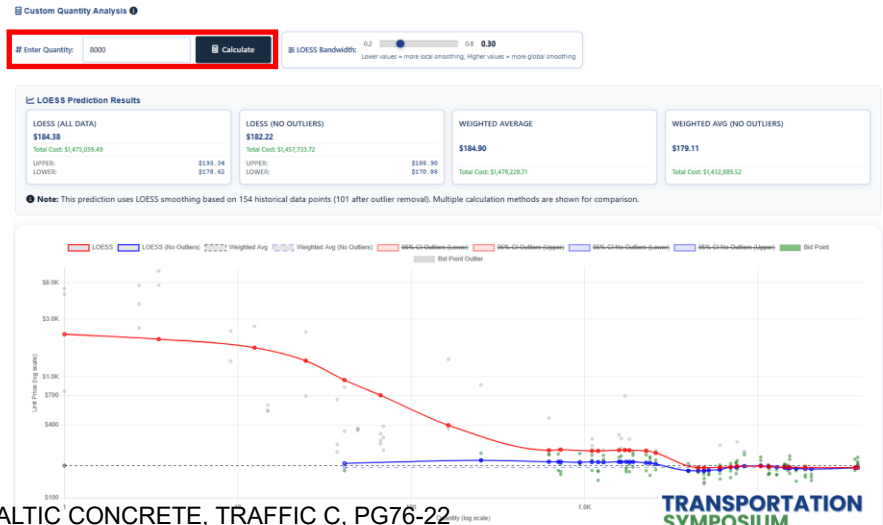
26

26

Dashboard Operation

Predictions

- All Defaults
- 36 Months (8/5/2025)
- Inflation Adjusted
- Quantity 8,000
- Prediction Range
 - Low: \$179.11
 - High: \$184.38



0334 1 53 - SUPERPAVE ASPHALTIC CONCRETE, TRAFFIC C, PG76-22

27

27

Dashboard Operation

Refinements - (4) Contract Type & (5) Work Type

Design Quantities and Estimates

Home Basis of Estimates Master Pay Item List **Unit Price Search** Help Statistics Details

Contract Filters (Default is Const Contract):

4

☒ All ☐ Clear

☒ Const Contract ☐ Const Emergency Contract ☐ Const Fast Response ☐ Const Push Button ☐ Const Streamline ☐ Maint Contract ☐ Maint Fact ☐ MT Landcrane

Work Type (Default is All):

5

☒ All ☐ Clear

☒ Maintenance Other ☒ Interstate Construction (new) ☒ New Construction ☒ Reconstruction ☒ Resurfacing ☒ Widening & Resurfacing ☐ Bridge ☐ Bridge Barrier ☐ Traffic

Item Filters

Enter Description or Pay Item Number: *required
e.g., 0120 6, embankment

5 Bid Amount Range:
Minimum: to Maximum: Leave blank for max

Quantity Range:
Minimum: to Maximum: Leave blank for max

Contract Filters

4

☒ All ☐ Clear

☒ Const Contract ☐ Const Emergency Contract ☐ Const Fast Response ☐ Const Push Button ☐ Const Streamline ☐ Maint Contract ☐ MT

Work Type (Default is All)

5

☒ All ☐ Clear

☒ Maintenance Other ☒ Interstate Construction (new) ☒ New Construction ☒ Reconstruction ☒ Resurfacing ☒ Widening & Resurfacing ☐ Bridge ☐ Bridge Barrier ☐ Traffic

Bid Filters

Bid Status: (Default is Bid Rank 1-3)
Fair Market Value (Bids Ranked 1-3)

Letting Date Range: *required
10/10/2022 to 10/10/2025

Adjustment: (Enabled by default)
Inflation-Adjusted Prices
charts and calculations use inflation-adjusted prices.

Regional Filters

Region Type: (Default is Statewide)
Statewide

TRANSPORTATION SYMPOSIUM

- Select additional filters as needed

28

28

Dashboard Operation

Defaults for Search

- (6) Fair Market Value
- (7) 36 Months
- (7) Inflation Adjusted

Bid Filters

Bid Status (Default is Bid Rank 1-3):

Fair Market Value (Bids Ranked 1-3)

-- All Bids--

Won

Fair Market Value (Bids Ranked 1-3)

Letting Date Range: * required

08/05/2022 to 08/05/2025

Inflation Adjustment (Enabled by default):

☒ Use Inflation-Adjusted Prices

When enabled, charts and calculations use inflation-adjusted prices. Table shows both columns.

The screenshot shows the 'Let Price Search' dashboard. Callout 6 points to the 'Bid Status' dropdown menu, which is set to 'Fair Market Value (Bids Ranked 1-3)'. Callout 7 points to the 'Letting Date Range' and 'Inflation Adjustment' section, where the date range is '08/05/2022 to 08/05/2025' and the 'Use Inflation-Adjusted Prices' toggle is enabled.

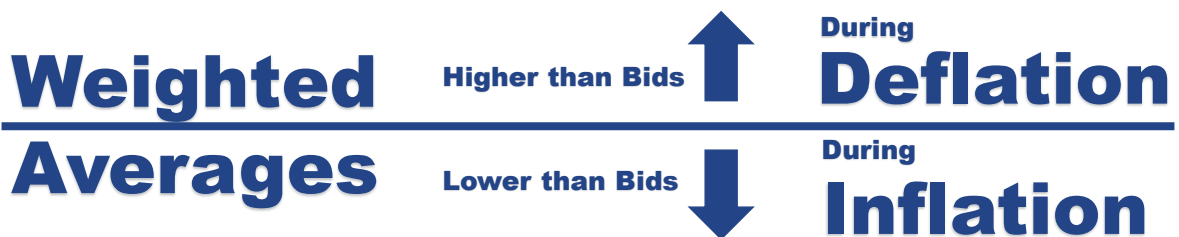
TRANSPORTATION
SYMPOSIUM

29

29

Dashboard Operation

Typical Project Cost Results vs. Bid Results



TRANSPORTATION
SYMPOSIUM

30

30

Constructability & Site Conditions

Bridge Demolition



0110 3 – Removal of Existing Structures/Bridges



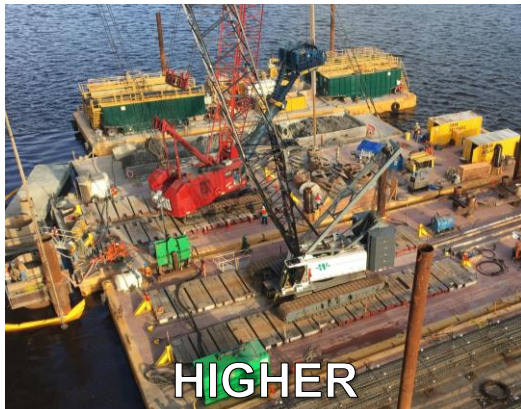
TRANSPORTATION
SYMPOSIUM

31

31

Constructability & Site Conditions

Drilled Shaft



0455 88 AA – Drilled Shaft



TRANSPORTATION
SYMPOSIUM

32

32

Constructability & Site Conditions

Pipe Installation



0430-17A-BCC – Pipe Culvert Optional Material – Excavation or Trenching

TRANSPORTATION
SYMPOSIUM

33

33

Constructability & Site Conditions

Earthwork



Item Number Varies – Excavation

TRANSPORTATION
SYMPOSIUM

34

34

Constructability & Site Conditions

Bridge Cap



Item Numbers Vary – Concrete & Steel



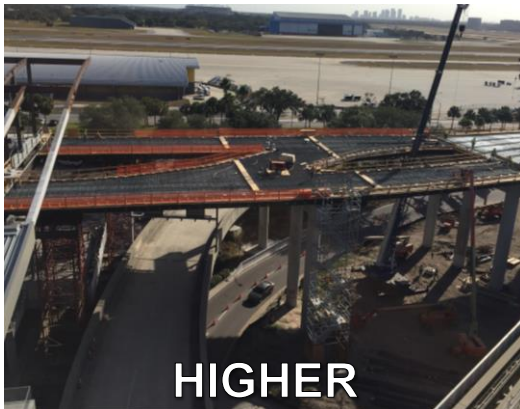
TRANSPORTATION
SYMPOSIUM

35

35

Constructability & Site Conditions

Bridge Deck



Item Numbers Vary – Concrete & Steel



TRANSPORTATION
SYMPOSIUM

36

36

Constructability & Site Conditions

Bridge Deck



Item Numbers Vary – Concrete & Steel



TRANSPORTATION
SYMPOSIUM

37

37

Constructability & Site Conditions

Pile Driving



Item Numbers Vary – Concrete & Steel



TRANSPORTATION
SYMPOSIUM

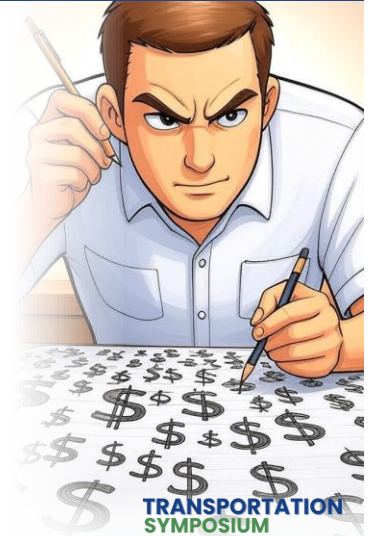
38

38

Wrap-Up

Misconceptions

- You can only use the last six months of data.
- You must use 36 months of data (dashboard default).
- You can effectively design to budget by lowering unit prices.
- You don't need to know about the project, just need to price the pay items and quantities provided.
- You should use the highest unit price found so that the budget will be conservative.
- You should raise/lower the Project Unknowns percentage so that the total project cost matches the budget amount.



39

39

Wrap-Up

Best Practices

- Have a defined scope of work and verify no missing items
- Use bid based parametric estimating
- Engage with constructability subject matter experts
- Document assumptions explicitly
- Identify and quantify risks
- Use checks to validate the project cost
- Review results after execution to identify focus areas
- Practice and apply lessons learned



40

40

Wrap-Up

Recap

- Smaller Projects are typically overestimated
- Larger Projects are typically underestimated
- All projects should be within $\pm 10\%$ of the winning bid
- Use dashboards to gain a comprehensive understanding of historical parametric bid-based costs



41

41

Questions & Answers

- Will the Scope of Services be changed to include project costs at every milestone?
- When should we use the price dashboard?
- Is there an easier way to determine cost drivers?
- Can we upload our project and get automatic pricing?
- Can AI help us price out a project?
- Can I use the DQE dashboard for lump-sum items?
 - 101-1 Mobilization
 - 102-1 Maintenance of Traffic



TRANSPORTATION
SYMPOSIUM

42

42

Questions & Answers

- Can I use this dashboard for hybrid unit items?
 - 110-1-1 Clearing & Grubbing
- Are there any items we should not use this dashboard for?
- Does this mean I can't use the weighted averages currently on the website?
- When do we use the new Power BI Bid Price Search Dashboard on the website vs. the DQE Unit Price Search dashboard? They give me different answers, which one do I use? There are several "answers" on the dashboards, which one should I use?
- Where can I learn more about LOESS, the inflation adjustment, and how this dashboard works?
- Have you tested the dashboard(s) for real-time predictions?



TRANSPORTATION
SYMPOSIUM

43

43

Questions & Answers

- How soon do bids received appear on the dashboard?
- Do we have to select the price the dashboard selects for us? What if we want to round it up/down or use a different unit price?
- What do the red and blue lines mean? Which one should I use?
- What if my project quantity is higher than the highest bid point?
- How do we save the data to prove the price we selected was "right"?
- Is there any way we could add other data to this dashboard, such as AADT, rural/urban, number of lanes, a map of projects where this bid data is located, crash locations, supplier/plant locations?



TRANSPORTATION
SYMPOSIUM

44

44

Contact Us

Office of Forecasting and Performance

Ashley Anderson, PE
Forecasting and Project Cost Engineer
 Forecasting and Performance Office
 Ashley.Anderson@dot.state.fl.us
 Phone: (850) 414-4184

Gaelan Bishop, PE
Senior Project Director
 AtkinsRéalis
 Gaelan.Bishop@dot.state.fl.us
 Phone: (386) 269-3265

**TRANSPORTATION
SYMPOSIUM**


45

45

 October 28-29, 2025
 Orlando, FL



DEADLINE



Please be sure to **certify your attendance** before leaving this event or no later than **November 30th**, in order to receive PDH/CEC. Detailed instructions are available on the Transportation Symposium website.

Transportation Symposium Website



SCAN ME

46