

Pay Items and the Pay Item Structure

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There have been some concerns with a few pay item changes over the past year. I'd like to provide a little background before I address the specific issues.



Goal

- Review pay items to determine if they meet the needs of our customers: Designers, Estimators, Construction, Contractors, and Management

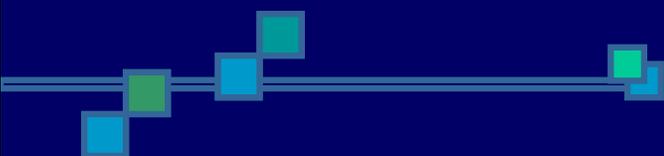
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This is NOT just a Pay Item REDUCTION process.

We are REVIEWING the items to determine if they meet the needs of our customers: Designers, Estimators, Construction, Contractors, and Management.

Sometimes the result will require restructuring a pay item.



Customers

- Designers: account for quantity, by location- specify & tabulate
- Estimators: price items with similar history
- Contractors: Furnish & Install
- Construction: Verify installation
- Management: Report to public

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Our customers range from start to finish: Design to implementation.

While Designers using a CADD system could report to the smallest detail, it would not be productive to try account for every cubic foot of dirt or traffic cone. ***Why spend \$50. to save \$0.50?***

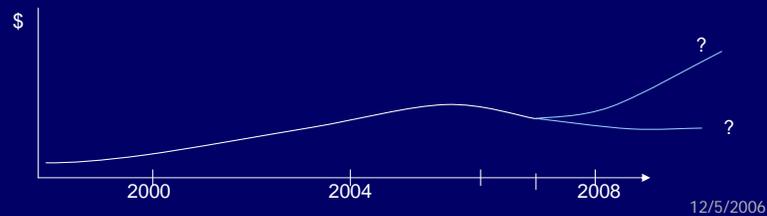
As much as we hope to avoid supplemental agreements, Construction must use the average price to consider if a supplemental agreement is fair to both the Contractor and the citizens of Florida.

Similarly, without some accounting, we would be unable to provide feedback to management for future projects (bid history) or legislative funding. ***Can we accurately estimate items for future lettings or the 5 year Work Program?***

Clearly, some balance or compromise is needed. ***Can we reasonably account for the quantity and price of concrete, steel, asphalt, and other resources?***

Disclaimer

- The pay item information used in this presentation is based on the July 2005-June 2006 item history, unless otherwise indicated.
- 305 contracts



We need to start with some numbers...

We all know that prices have been going up over the past few years. Some believe that prices have “stabilized” and/or begun to decrease over the last few months.

Numbers that we report to Work Program are “Present Day Costs”. It is up to the economists and financial staff to adjust or predict future costs. For that reason, I’ve chosen to work with the last fiscal year.

(The 305 contracts is based on the number of contracts with MOT.)

Note for users of historical data: Generally, prices for frequently used items could be limited to 6-12 months. Less frequent items could use 18 months. Price data older than 18 months should be used with caution. Data older than 2-3 years is nice for historical purposes (trends, averages, etc), but be careful.



Ideally, looking at historical prices, you would see some type of relationship between the price and quantity. (Small quantities of a given item tend to have larger prices, due to the set-up & clean-up involved: mobilization & demobilization of the sub-contractors)

With enough data, you could even look at a particular district to determine a price trend. (Concrete, asphalt, and dirt/rock materials tend to vary by location around the state.)

In the example above 15+ “hits” or “Awarded Contract Bid History” data points would be reasonable to get an estimate based on quantity.

Current Situation

- 5275 Pay Items (4245 + 1030 utility)
- 1959 Items Used '05-'06 (1824 + 135)
- 266 Items used on 20+ contracts

- 130 (of 135) Utility items were used only once; only 3 used on 5+ contracts
- 12 contract average use per item on all others
- 648 drainage items: only 69 were used on 10+ contracts (30 on 20+ contracts)

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Many of the 5000 items were established 15-20 years ago, with minor changes based on materials or processes. (Only 5% of the items have “reasonable” history for estimating purposes.)

While the items may serve the designers, the estimators, contractors, construction, and management do not have the data they need to effectively use these numbers.

Two specific examples-

Utilities: Looking at the data above, there is “NO history”. With only 1 or 2 project prices, the bid data must be interpreted as “project specific information.” All estimates currently need to rely on input from utility companies.

Drainage: Mixed history- a few frequently used items with many limited use items.

We’ll get into more details on these areas in a few moments.

Current Situation (cont.)

- Good news...
- MOT/Erosion: 59 of 125 items used for an average of 59 contracts; 28 had 30+ contracts
- Earthwork: 11 of 45 items with 30+ contracts
- Base/Surface: 18 of 66 items with 30+ contracts

Some of our pay items work well for all of our customers...
Reasonable for design, estimates, construction, and reporting.

Current Situation- Summary

	Valid items	Used in 12 months
MOT	125	59 (47%)
Earthwork	67	45 (67%)
Base/Surface	125	66 (53%)
Structures	550	167 (30%)
Drainage	648	331 (51%)
Incidental	759	259 (35%)
Signals	872	490 (56%)
Signing/Marking	641	195 (30%)
Lighting	468	212 (45%)
Utilities	1030	135 (13%)
Total w/ util	5275	1959
Total w/o util	4245	1824

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Some of our items need to be reviewed...

Based on the number of items open/used, Utilities needed some **review**.

Current Situation- Summary

	Valid items	"Usable" history 5+ contracts	"Market" history 30+ contracts
MOT	125	45	27
Earthwork	67	23	11
Base/Surface	125	47	18
Structures	550	46	9
Drainage	648	146	12
Incidental	759	109	31
Signals	872	121	34
Signing/Marking	641	89	48
Lighting	468	60	7
Utilities	1030	5	3 (10-12 contr.)
Total w/ util	5275	686	197
Total w/o util	4245	697	197

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Looking further at the number of items with “usable history”, it was clear that utilities needed some action. **The question became “How can we update the utilities structure to serve our customers?”**

Utility items are not alone- just the most obvious at this point in the review.

Current Situation- Summary

	Valid items	"Usable" history 5+ contracts	Total \$ (Millions)
MOT	125	45	233
Earthwork	67	23	156
Base/Surface	125	47	384
Structures	550	46	224
Drainage	648	146	11
Incidental	759	109	219
Signals	872	121	81
Signing/Marking	641	89	57
Lighting	468	60	31
Utilities	1030	5	18
Total w/ util	5275	697	1,472
Total w/o util	4245	686	1,472

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Another big question that affects us all: **Where's the money?**

Looking at the above table, the drainage and utilities groups spend the least, but have a considerable number of pay items.

Again, we are looking for that **balance for all of the customers:** accountability, without "nickel -diming" the work.

Based on the above information, drainage items were also recommended for further review.

What is a pay item worth?

- From pay item history... **only 3 of the 1030 items have minimally useable cost history:**
- **water fittings (TN), sewer fittings (TN) and removal of pipe 18" and less (LF).**

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Again, most of the history for utilities is limited to a “per Ton” and a removal item.

Current Situation- Summary

	Valid items	"Usable" history 5+ contracts	Average \$ per item used (thousands)
MOT	125	45	67
Earthwork	67	23	138
Base/Surface	125	47	283
Structures	550	46	217
Drainage	648	146	5
Incidental	759	109	69
Signals	872	121	22
Signing/Marking	641	89	13
Lighting	468	60	29
Utilities	1030	5	85
Total w/ util	5275	697	
Total w/o util	4245	686	68

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The last column was calculated to answer “**How much is an average pay item worth?**”

In the data above, drainage has a bunch of items that we measure and pay, but compared to other areas of work, we may be “over- accounting”

Current Situation (cont.)

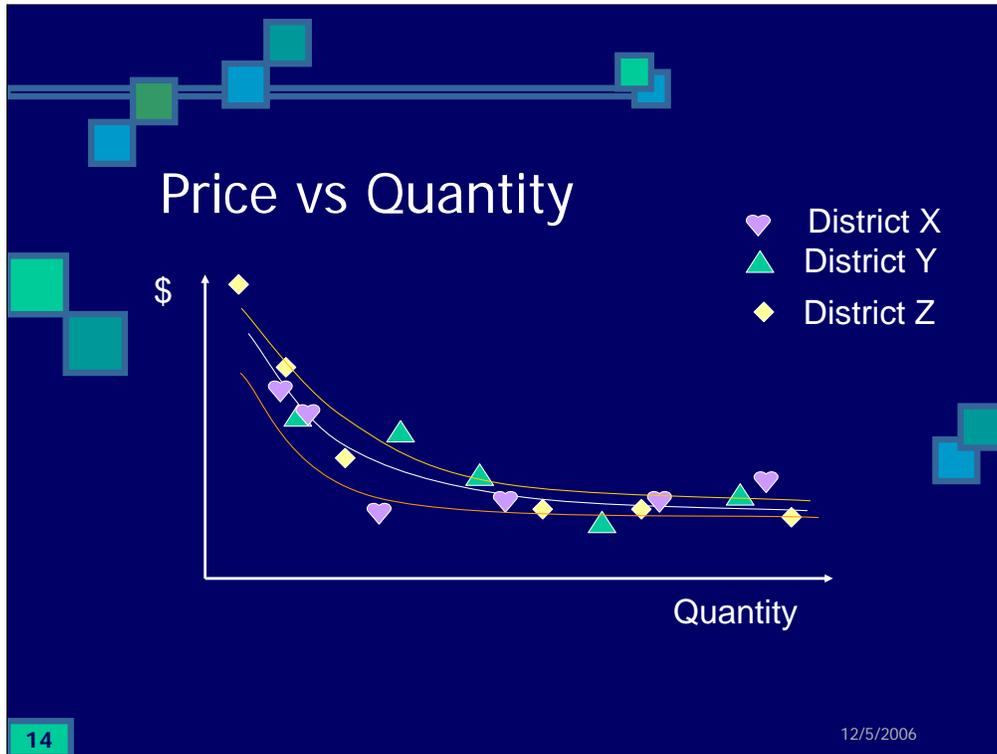
- Bad news...
- Utility items have little/no history. They are mostly single use, job specific items (tech spec)
- **Good news...**
- Many related items have similar costs- **bid price is driven by labor, not material size**
- Proposal...
- Group common items with somewhat similar prices

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Summarizing the Good news and Bad news...

We are not "losing" history... we have combined items with limited, but similar history.

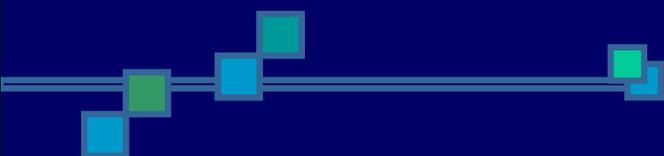


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.. When we group related items with similar costs, **the plans can continue identify the specific size, shape, or other attributes without having separate pay items.** The design is NOT a “contractor’s option”.

If the plans have identified more quantity on the larger end of the range, the estimator would price the item on the “high” side of average, or vice-versa.

Similarly, if the plans identify a balance of “large” and “small” sizes, the estimated price would likely fall in the middle of the historical average.



Current Situation (cont.)

- Bad news...
- Drainage Items currently “nickle-dime” the work
- **Good news...**
- Many related items have similar costs- **bid price is driven by labor, not material size**
- Proposal...
- Group common items with somewhat similar prices, include incidental work where possible

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The situation is almost identical for drainage pipe...
thus the similar item structure.

Now that we have looked at two examples, lets take a “big picture” look to understand the past, and prepare for the future-

How Did We Get Here?

- Many pay items structures were established 20+ years ago
- As materials, standards, equipment, and/or construction techniques change, pay items should be **reviewed**
- Market areas influence some prices (materials, equipment, and/or labor)

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When a pay item structure is first created, the originator often wants to track material "A" versus "B" and/or "C", to determine if it is more cost effective to use one material over another.

Based on experience, we have found that it is more cost effective to allow the Contractor to choose from "acceptable" options. **When given an option, the contractor factors both the material cost and the time/labor (installation) expense to install it.** In many cases, labor is the controlling factor, not the material cost.

$$\text{F\&I Cost} = \text{equipment} + \text{material} + \text{Labor}$$

For example: Concrete pipe is more expensive, but much faster to install. Concrete is the optional pipe selected most often by contractors.

As necessary, the responsible office should work with the Specifications Office to ensure that the optional materials "perform" to the same lifetime standard.

Recommendations

- For the '07 file, we did not simply “copy” the old list. All items were opened upon request
- Review the inactive items more frequently.

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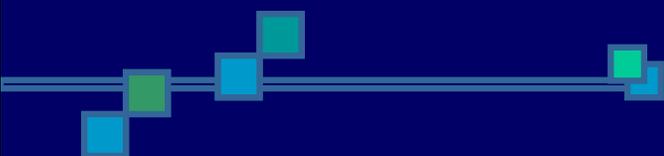
The '07 file was handled differently- we opened the 500 most commonly used items first. The remainder were “upon request”. Yes- it was more labor intensive. Yes- it has resulted in significantly (50%) fewer open items.

If an item remains inactive for more than a year, we contact the responsible office by phone/e-mail.

If all is well, the item is opened (normally only a +/-10 minute delay.)

If there is an issue, the responsible office can get involved- to recommend an alternate design, standard, or suggestion. If the need still exists, either the item is opened immediately, or a new basis of payment is recommended.

When items are requested at phase 2 (60% plans), as called for in the PPM, this process does not cause a production delay.



Recommendations

- Read the specifications.
- Limit plan notes.
- Work with the responsible office.

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Specs: The measurement and payment are normally included in the specification. **If in doubt, READ THEM**

Plan Notes: When a designer “buries” additional work and/or material requirements in an established item, the cost history becomes less useful. If you have a “special” situation, ask for an item

Responsible Office: While we try to support items from all areas, we are not experts in all subjects. We rely on the responsible offices to assist us in meeting your needs.

We will ask questions, make recommendations, and/or seek out alternatives, but the responsible office must be an active participant in issues related to their area.

Change will continue to happen...