PROTECT, PRESERVE AND ENHANCE

REPLACEMENT RESERVES

AND

FINANCIALLY SUSTAINABLE COMMUNITIES

2017

Peter B. Miller, RS, EBP



Housekeeping Note ...

www.MillerDodson.com

/Resources/Presentations/

"Financially Sustainable Communities"

Why do people choose CIC's

- Lifestyle
 - Amenities / Activities
 - Same age group
 - Security
- Convenience Maintenance Free
- Location proximity to _____
- Stability of Property Values

"Perhaps the greatest
Duty of the Board of
Directors is to Protect,
Preserve and Enhance
the value of the homes
within the community!"



Robert Lyles, Esq. Charleston, SC

Why Do We Plan For Reserves

- Legal
- Practical/Financial
- Ethical

Meet Betty Jones!

- Retired;
- Lives on a fixed income;



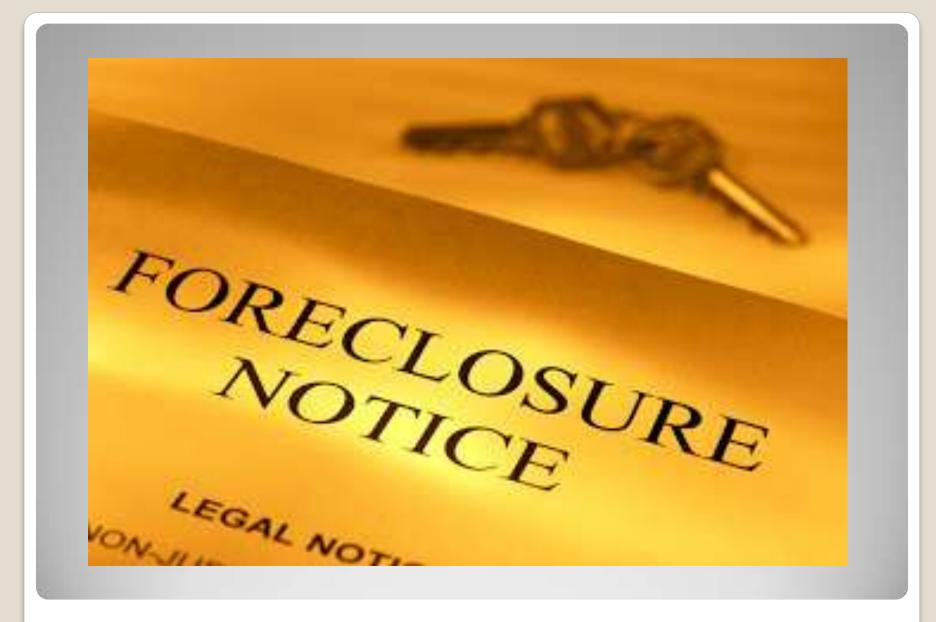
- Has lived in your HOA for 20 years;
- She is the ideal neighbor! Almost family!
- As a member of the Board of Directors,
 you are foreclosing on her home!

How Could This Happen?

Lack of Planning on the part of the Board!

Resulted in a Special Assessment, or

Resulted in precipitous increases in Normal Assessments!



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Unintended Consequences!

Betty's low-ball price is now the RE Comp for everyone else's home in the community!



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Food for Thought:

Almost all CIC financial disasters result, not from an event, but from lack of planning!

"Perhaps the greatest
Duty of the Board of
Directors is to Protect,
Preserve and Enhance
the value of the homes
within the community!"



Robert Lyles, Esq. Charleston, SC

Why Do We Plan For Reserves

- Legal
- Practical
- Ethical

Legal Considerations

- State Statutes
- Governing Documents
- IRS Guidelines
- FHA Requirements
- Bank Loan Requirements
- Fiduciary Duty of Board

Practical Considerations

- 10% 40% or more of Annual Budget!
- Sound Financial Planning!
- Equitable Distribution of costs over time!
- Avoid Special Assessments!

Ethical Considerations

- Avoids "kicking the can down the road" (future financial obligations) to future new or long-term owners!
- Provides for equitable Distribution of costs over time!
- "Everybody pays their fair share!" *
 - * Not an easy sell among some demographics!

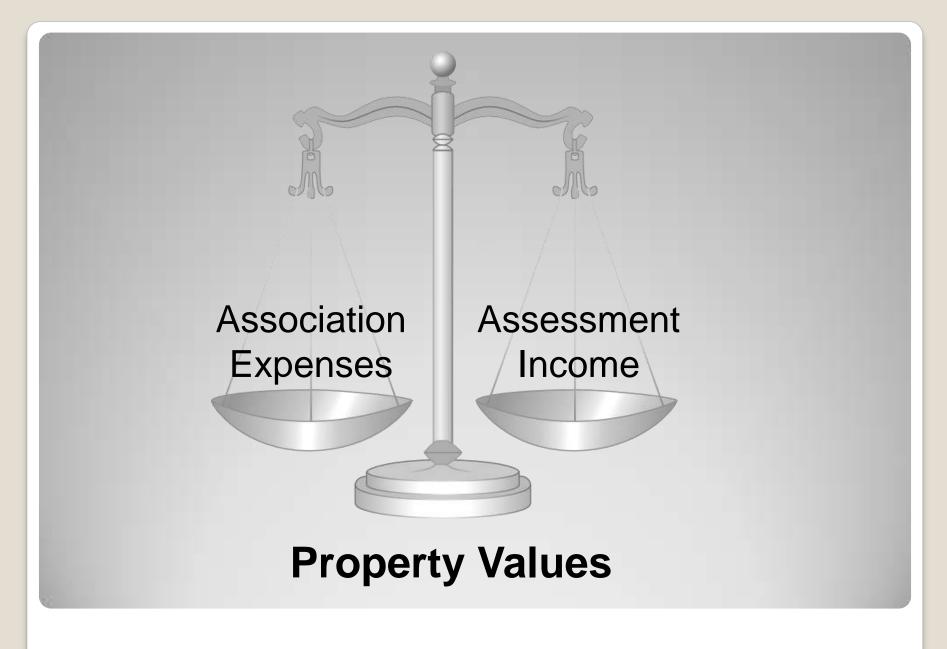
Financially Sustainable Community

Operations Expenses

Annual Budget

Maintenance Expenses

Replacement Reserves



Reserve Funding Pitfall Cycle

- Lack of Adequate Reserve Funding result in higher future assessments.
- Higher Future Assessments (or special assessments) result in financial hardship for some owners.
- Financial Hardship results in more delinquencies.
- More Delinquencies mean less annual revenue!
 - Less Annual Revenue means higher future assessments for others!

Financially Sustainable Community

- Annual Budget is balanced and adequate...
- Normal Assessments are stable, not stagnant!
- Normal Assessments increase appropriately each year with Inflation (PPI).
- Property Values are Protected, Preserved & Enhanced!
- Your community is Financially Sustainable!

Financially Sustainable Community

- Acknowledges and functions within the economic realities of the present without limiting the financial abilities of the future.
- Balances the need for adequate budget (assessments) against the exigencies of the housing market.

Food for Thought:

Almost all CIC financial disasters result, not from an event, but from lack of planning!

She has spent \$9,000 on condo Leo association fees over five years.



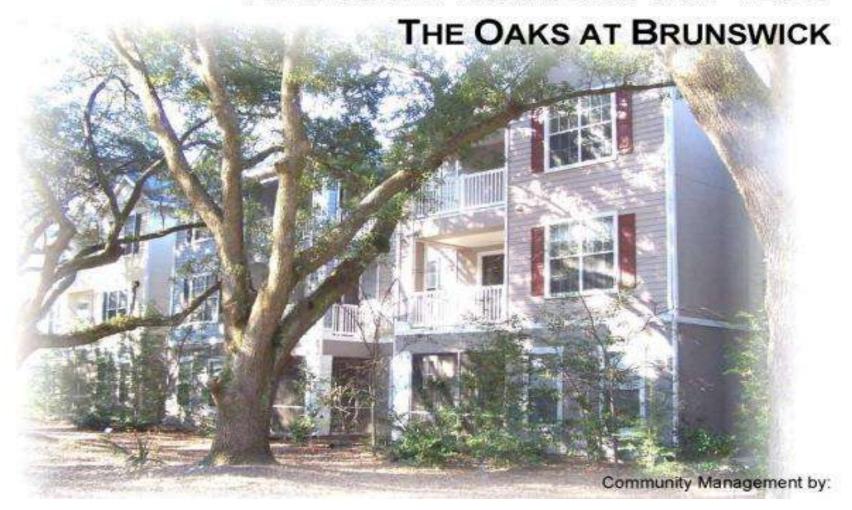
She had to come up with \$12,000 more in three months. She couldn't.

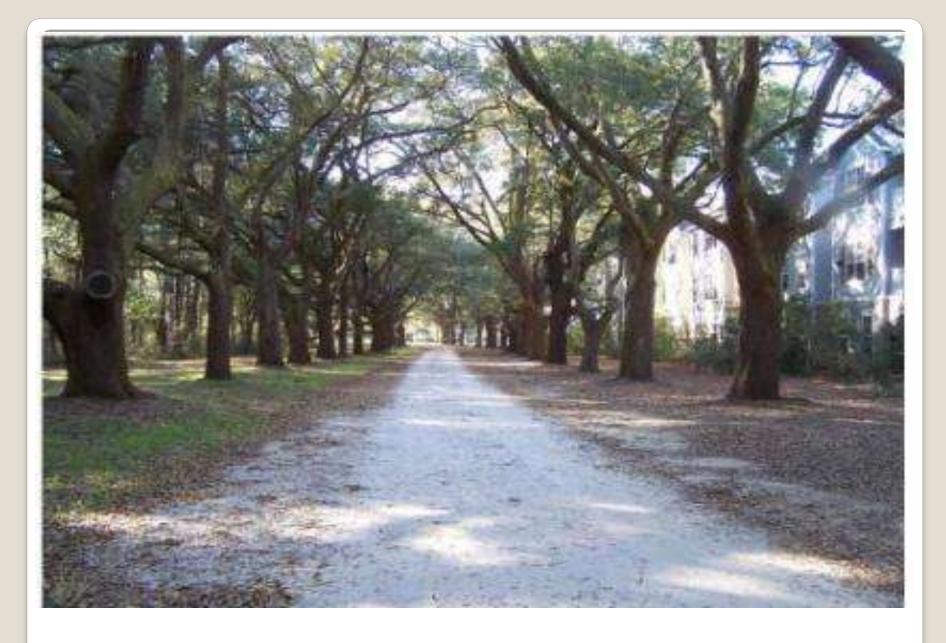
Questions

Module 2

Sample Reserve Study

REPLACEMENT RESERVE REPORT FY 2015





Miller + Dodson Associates, Inc.

Replacement Reserve Analysis - Page A1

Oaks at Brunswick

June 14, 2014 106241020AKS AT 15

EXECUTIVE SUMMARY

The Oaks at Brunswick Replacement Reserve Analysis uses the Cash Flow Method (CFM) to calculate Replacement Reserve funding for the periodic replacement of the 103 Projected Replacements identified in the Replacement Reserve Inventory.

\$149,507

RECOMMENDED REPLACEMENT RESERVE FUNDING FOR THE STUDY YEAR, 2015

\$57.68 Per unit (average), minimum monthly funding of Replacement Reserves

We recommend the Association adopt a Replacement Reserve Funding Plan based on the annual funding recommendation above. Inflation adjusted funding for subsequent years is shown on Page A5.

Oaks at Brunswick reports a Starting Balance of \$77,240 and Annual Funding totaling \$90,000.

Current funding is inadequate to fund the \$5,616,122 of Projected Replacements scheduled in the Replacement Reserve Inventory over the 40-year Study Period. See Page A3 for a more detailed evaluation.

< 0.000 miles	IERAL SITE IMPROVEMENTS ECTED REPLACEMENTS						
N N	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	COST (8)	NORMAL ECONOMIC LIFE LYRSE	PEMAINING ECONOMIC LIFE (YRS)	PEPLACEMEN COST (
1	Asphalt road and parking area	sf	157,053	\$1.30	20	15	\$204,169
2	Seal coat asphalt	sf	157,053	\$0.16	5	none	\$25,12
3	Concrete curb & gutter (20%)	If	1,072	\$34.00	54	6	\$36,44
4	Concrete flatwork (6%)	sf	817	\$8.50	60	6	\$6,94
	Repoint masonry entrance feature	sf	20				
5	Sandblasted wood signage	Is	1	\$1,200.00	15	10	\$1,20
6	Segmental retaining wall, 30%	sf	697	\$45.00	40	35	\$31,36
7	Mailboxes	Is	1	\$18,000.00	25	15	\$18,00
8	Dumpster pad	sf	816	\$10.00	25	20	\$8,16
9	Dumpster enclosure stucco repair	sf	805	\$12.75	50	45	\$10,26
10	Dumpster trellace	Is	1	\$1,500.00	20	15	\$1,50
11	Dumpster gates	pr	1	\$1,000.00	10	5	\$1,00
12	Site lighting	ea	26	\$2,100.00	30	25	\$54,60
13	Sanitary sewer - mains (10%)	unit	216	\$155.00	20	15	\$33,48
14	Domestic water - mains (10%)	unit	216	\$95.00	20	15	\$20,52
15	Storm water - structure & pipe (10%)	unit	216	\$185.00	20	15	\$39,96
16	Storm water pond dredging	Is	1	\$50,000.00	20	15	\$50,00
	GENE	RAL SITE	MPROVEME	NTS - Replacem	ent Costs	Subtotal	\$542,73

CB Windows, 20%		OFUNITE	REPLACEMENT COST (E)	LIFE (VRS)	ECONOMIC LIFE (FR6)	PEPLACEMEN COST (
	st	2,232	\$35.00	30	21	\$78,120
CB Windows, 20%	sf	2,232	\$35.00	30	23	\$78,120
CB Windows, 20%	sf	2,232	\$35.00	30	25	\$78,12
CB Windows, 20%	sf	2,232	\$35.00	30	27	\$78,12
CB Windows, 20%	sf	2,232	\$35.00	30	29	\$78,12
CB Window shutters	pr	160	\$100.00	15	10	\$16,00
CB Doors, 20%	ea	43	\$950.00	25	18	\$41,04
CB Doors, 20%	ea	43	\$950.00	25	19	\$41,04
CB Doors, 20%	ea	43	\$950.00	25	20	\$41,04
CB Doors, 20%	ea	43	\$950.00	25	21	\$41,04
CB Doors, 20%	ea	43	\$950.00	25	22	\$41,04
CB Patio doors, 20%	ea	12	\$1,470.00	25	18	\$17,64
CB Patio doors, 20%	ea	12	\$1,470.00	25	19	\$17,64
CB Patio doors, 20%	ea	12	\$1,470.00	25	20	\$17,64
CB Patio doors, 20%	ea	12	\$1,470.00	25	21	\$17,64
CB Patio doors, 20%	ea	12	\$1,470.00	25	22	\$17,64
	CB Windows, 20% CB Windows, 20% CB Window shutters CB Doors, 20% CB Patio doors, 20%	CB Windows, 20% sf CB Windows, 20% sf CB Windows hutters pr CB Doors, 20% ea CB Patio doors, 20% ea	CB Windows, 20% sf 2,232 CB Windows, 20% sf 2,232 CB Windows hutters pr 160 CB Doors, 20% ea 43 CB Doors, 20% ea 12 CB Patio doors, 20% ea 12	CB Windows, 20% sf 2,232 \$35.00 CB Windows, 20% sf 2,232 \$35.00 CB Windows shutters pr 160 \$100.00 CB Doors, 20% ea 43 \$950.00 CB Patio doors, 20% ea 12 \$1,470.00 CB	CB Windows, 20% sf 2,232 \$35.00 30 CB Windows, 20% sf 2,232 \$35.00 30 CB Windows shutters pr 160 \$100.00 15 CB Doors, 20% ea 43 \$950.00 25 CB Patio doors, 20% ea 12 \$1,470.00 25 CB Patio doors, 20% e	CB Windows, 20% sf 2,232 \$35.00 30 27 CB Windows, 20% sf 2,232 \$35.00 30 29 CB Windows, 20% sf 2,232 \$35.00 30 29 CB Windows shutters pr 160 \$100.00 15 10 CB Doors, 20% ea 43 \$950.00 25 18 CB Doors, 20% ea 43 \$950.00 25 19 CB Doors, 20% ea 43 \$950.00 25 20 CB Doors, 20% ea 43 \$950.00 25 21 CB Doors, 20% ea 43 \$950.00 25 22 CB Patio doors, 20% ea 12 \$1,470.00 25 18 CB Patio doors, 20% ea 12 \$1,470.00 25 19 CB Patio doors, 20% ea 12 \$1,470.00 25 20 CB Patio doors, 20% ea 12 \$1,470.00 25 20 CB Patio doors, 20% ea 12 \$1,470.00 25 20 CB Patio doors, 20% ea 12 \$1,470.00 25 20 CB Patio doors, 20% ea 12 \$1,470.00 25 21

EM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	HEPLACEMENT COST (8)	NORMAL ECONOMIC LIFE (VRS)	REMARING ECONOMIC LIFE (VRS)	PEPLACEMBY COST d
66	Swimming pool - structure	sf	990	\$70.00	45	40	\$69,300
67	Swimming pool - finish	sf	990	\$3.50	10	4	\$3,465
68	Swimming pool - waterline tile	ft	135	\$40.00	15	10	\$5,400
69	Swimming pool pump (2 - 5 hp)	ea	1	\$3,200.00	10	5	\$3,20
70	Swimming pool filter/chlorinator	sf	990	\$4.00	20	15	\$3,96
71	Swimming pool valves & plumbing	sf	990	\$2.00	20	15	\$1,98
72	Swimming pool - concrete deck, 25%	sf	480	\$10.25	30	5	\$4,92
73	Swimming pool - concrete deck, 25%	sf	480	\$10.25	30	10	\$4,92
74	Swimming pool - concrete deck, 25%	sf	480	\$10.25	30	15	\$4,92
75	Swimming pool - concrete deck, 25%	sf	480	\$10.25	30	20	\$4,92
76	Swimming pool deck coating	sf	1,920	\$10.00	10	6	\$19,20
77	Swimming pool furniture (50%)	Is	1	\$1,950.00	8	1	\$1,95
78	Swimming pool furniture (50%)	Is	1	\$1,950.00	8	3	\$1,95
79	Spa structure	sf	50	\$100.00	45	40	\$5,02
80	Spa finish	sf	50	\$10.00	10	4	\$50
81	Spa waterline tile	If	25	\$40.00	15	10	\$1,00
82	Spa filter/chlorinator	Is	1	\$2,500.00	20	15	\$2,50
83	Swimming pool lighting	ea	7	\$900.00	30	25	\$6,30
84	Pool perimeter fence - 6' (metal)	ft	186	\$55.00	30	25	\$10,23
85	Swimming pool retaining wall	sf	165	\$40.00	35	30	\$6,60
		5	SWIMMING POOL - Replacement Costs - Subtotal				

Miller + Dodson Associates, Inc.

Projected Annual Replacements - Page C3

Oaks at Brunswick June 14, 2014

106241020AKS AT15

PROJECTED REPLACEMENTS - YEARS 4 TO 6

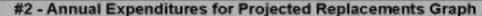
tem	2018 - YEAR 4	\$	item 2019 - Y	EAR 5 S	Item	2020 - YEAR 6	\$
78	Swimming pool furniture (50	\$1,950	67 Swimming pool 80 Spa finish	ol - finish \$3,465 \$500	2 11 27 69 72 88 95 99	Seal coat asphalt Dumpster gates CB EIFS coating Swimming pool pump (2 - 5 Swimming pool - concrete d CO EIFS coating FC EIFS coating FC HVAC system	\$25,12 \$1,00 \$344,96 \$3,20 \$4,92 \$10,83 \$3,86 \$2,50
***	al Scheduled Replacements	\$1,950	Total Scheduled R	eplacements \$3,965		tal Scheduled Replacements	\$396.4

Oaks at Brunswick

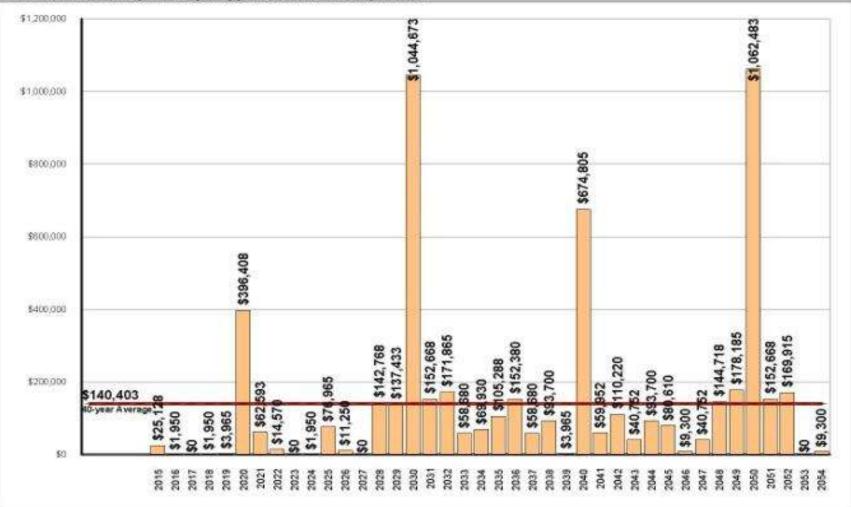
June 14, 2014 106241020AKS AT15

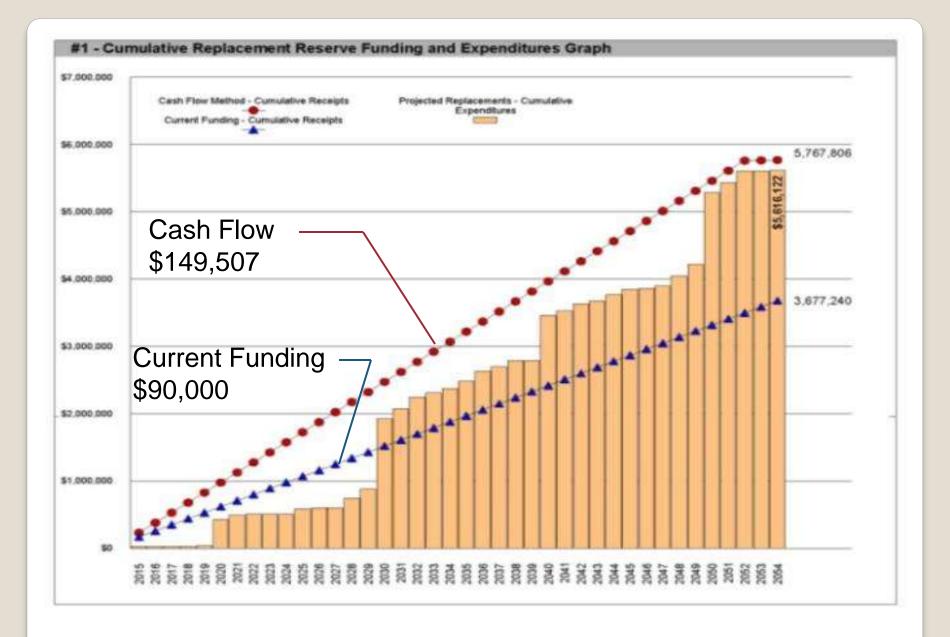
PROJECTED REPLACEMENTS - YEARS 25 TO 27

Item	2039 - YEAR 25	\$	Item	2040 - YEAR 26	\$	Item	2041 - YEAR 27	\$
67 80	Swimming pool - finish Spa finish	\$3,465 \$500	2 5 11 12 27 36 39 55 56 60 65 68 69 77 81 83 84 88 90 91 95 100	Seal coat asphalt Sandblasted wood signage Dumpster gates Site lighting CB EIFS coating CB Windows, 20% CB Windows, 20% CB Window shutters CB Balcony structure CB Balcony surface CB Stairs, 20% CB Exit lights Swimming pool - waterline ti Swimming pool pump (2 - 5 Swimming pool furniture (50 Spa waterline tile Swimming pool lighting Pool perimeter fence - 6' (mi CO EIFS coating CO Windows CO Windows CO Windows FC EIFS coating FC HVAC condensing unit	\$25,128 \$1,200 \$1,000 \$54,600 \$344,960 \$78,120 \$16,000 \$58,800 \$21,112 \$15,580 \$4,500 \$3,200 \$1,950 \$1,005 \$6,300 \$10,230 \$10,836 \$8,820 \$1,000 \$3,864 \$1,200	29 76	CB Vinyl siding, 20% Swimming pool deck coating	\$40,752 \$19,200
To	tal Scheduled Replacements	\$3,965	Tot	al Scheduled Replacements	\$674,805	То	tal Scheduled Replacements	\$59,952



This graph shows annual expenditures for Projected Replacements over the 40-year Study Period. The red line shows the average annual expenditure of \$140,403. Section C provides a year by year Calendar of these expenditures.





What's the Next Step?

- You as the Manager...
- You as a Board Member...
- You as a FinanceCommittee Member...

What's the Next Step?

You just were handed this report!

It says to increase the Reserve Funding from \$90K to \$150K!

What?

That's a \$60K annual increase!

Holy Cr@p!

What Are Your Alternatives?

- Increase Normal Assessments
- Special Assessment
- Commercial Bank Loan
- Combination of two or more

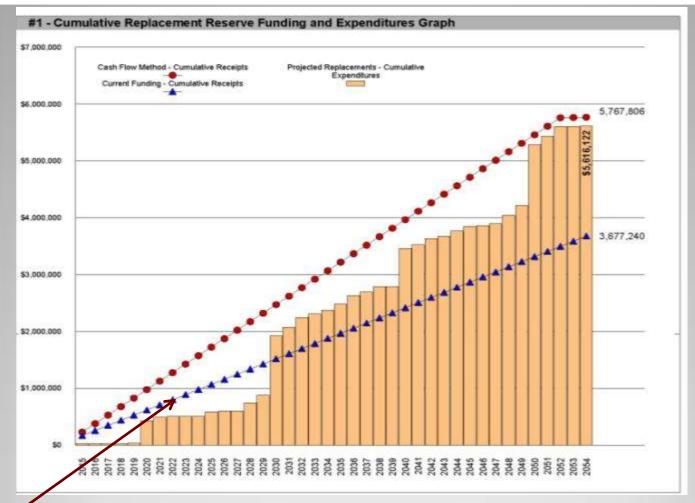
Next Step:

- Review inventory data.
- Re-think replacement priorities.
- Check Cash Flow margins.
- Develop Strategic Funding Plan.

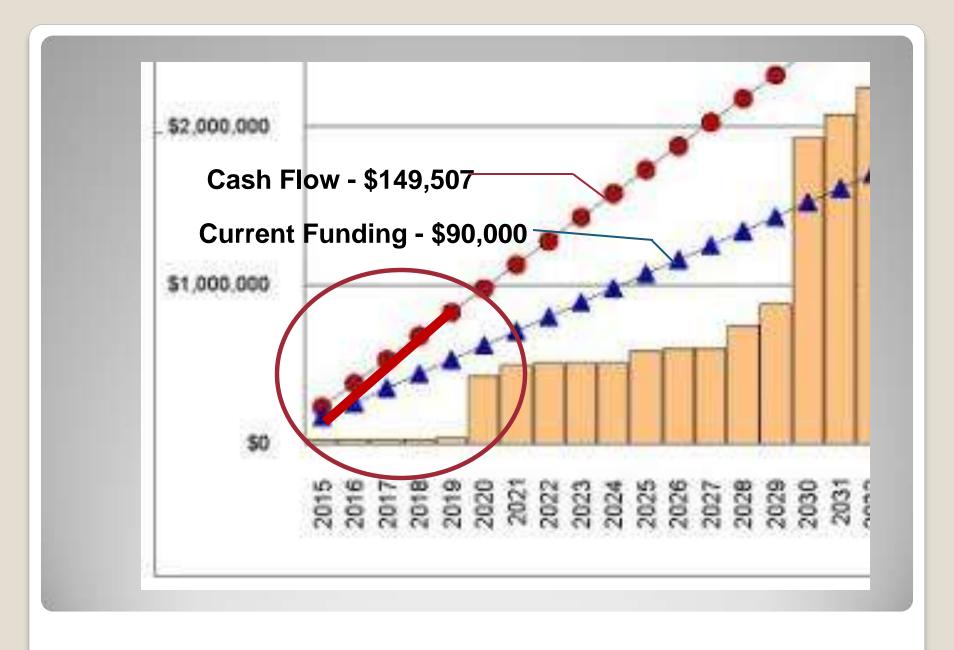
Check Cash Flow Margins

Year	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Starting Balance	\$77,240			100000000	100000000			10000000000		2000000
Projected Replacements	(\$25,128)	(\$1,950)	0000000000	(\$1,950)	(\$3,965)	(\$396,408)	(\$62,593)	(\$14,570)	0040000000	(\$1,950
Annual Deposit	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000
End of Year Balance	\$142,112	\$230,162	\$320,182	\$408,212	\$494,247	\$187,838	\$215,246	\$290,676	\$380,676	\$468,726
Cumulative Expenditures	(\$25,128)	(\$27,078)	(\$27,078)	(\$29,028)	(\$32,993)	(\$429,402)	(\$491,994)	(\$506,584)	(\$508,564)	(\$509,514
Cumulative Receipts	\$167,240	\$257,240	\$347,240	\$437,248	\$527,240	\$617,248	\$707,240	\$797,240	\$887,240	\$977,240
Year	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Projected Replacements	(\$76,965)	(\$11,250)		(\$142,768)	(\$137,433)	[\$1,044,673]	(\$152,668)	(\$171,885)	(\$58,680)	(\$69,930
Annual Deposit	\$90,000	\$90,000	\$90,000	\$96,000	\$90,000	\$90,800	\$90,000	\$90,000	\$90,000	\$90,000
End of Year Balance	\$481,781	\$560,511	\$850,511	\$597,743	\$550,309	(\$404,364)	(\$467,032)	(\$548,887)	(\$517,577)	(\$497,507
Cumulative Expenditures	(\$585,479)	(\$596,729)	(\$596,729)	(\$739,497)	(\$876,931)	(\$1,921,684)	\$2,074,272	(\$2,246,137)	(\$2,304,817)	(\$2,374,747
Cumulative Receipts	\$1,867,248	\$1,157,248	\$1,247,248	\$1,337,248	\$1,427,248	\$1,517,240	\$1,807,240	\$1,697,240	\$1,787,240	\$1,877,240
Year	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Projected Replacements	(\$105,288)	(\$152,380)	(\$58,680)	(\$93,700)	(\$3,985)	(\$874,805)	(\$59,952)	(\$110,220)	(\$40,752)	(\$93,700
Annual Deposit	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000
End of Year Balance	(\$512,798)	(\$575,178)	(\$543,856)	(\$547,558)	(\$461,521)	(\$1,046,326)	(\$1,018,278)	(\$1,036,497)	(\$987,249)	(\$890,949)
Cumulative Expenditures	(\$2,480,036)	(\$2,632,416)	(\$2,691,096)	(\$2,784,796)	(\$2,788,761)	(\$3,463,566)	(\$3,523,518)	(\$3,633,737)	(\$3,874,489)	(\$3,768,189)
Cumulative Receipts	\$1,967,248	\$2,057,240	\$2,147,240	\$2,237,240	\$2,327,240	\$2,417,248	\$2,507,240	\$2,597,240	\$2,687,240	\$2,777,240
Year	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054
Projected Replacements	(\$80,618)	(\$9,300)	(\$40,752)	(\$144,718)	(\$178,185)	(\$1,062,483)	(\$152,868)	(\$169,915)		(\$9,300
Annual Deposit	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000
End of Year Balance	(\$981,560)	(\$990,860)	(\$851,612)	(\$908,330)	(\$994,515)	(\$1,986,999)	(\$2,029,887)	(\$2,109,582)	(\$2,019,582)	(\$1,938,882)
Cumulative Expenditures	(\$3,948,800)	(\$3,858,100)	(\$3,898,852)	(\$4,043,570)	(\$4,221,755)	(\$5,284,239)	(\$5,438,907)	(\$5,686,822)	(\$5,606,822)	(\$5,816,122
Cumulative Receipts	\$2,887,240	\$2,957,248	\$3,847,248	\$3,137,240	\$3,227,240	\$3,317,248	\$3,407,240	\$3,497,248	\$3,587,248	\$3,877,240

Year end balance stays positive until year 2030.



This association has the latitude to "ramp up" rather than have one large increase.



Strategic Funding Plan

Ramp Up Annual Funding over five years:

Year 1: \$90K to \$102K

Year 2: \$102K to \$114K

Year 3: \$114K to \$126K

Year 4: \$126K to \$138K

Year 5: \$138K to \$150K *

^{*}Year 5 would bring Reserve Study update and would adjust for inflation, underfunding, changed conditions.

Questions

Module 3

Cash Flow Method Versus Component Method

CASH FLOW vs COMPONENT (Pooling vs. Full Funding)

CASH FLOW ("Pooling") METHOD

Treats Reserves as an aggregate "pool" of funds.

COMPONENT ("Full Funding") METHOD Treats each Reserve Item as a separate "line item" budget.

Illustration of the Different Mathematical Models

- One Project per year,
- Projects repeat every 4 yrs
- Cost of \$12,000 per Project
- Four Projects:

Year One - Parging,

Year Two - Seal Coat,

Year Three - Plumbing,

Year Four - Retaining Wall

(Assume \$Zero Starting Balance) (Assume \$Zero Threshold)

Component Calculations

	Year	1st	2 nd	3 rd	4th	Total				
COMPONENT	Cost x \$1,000	Annual Contributions								
Parging Year One	\$12	12	3	3	3	\$21				
Paving Year Two	\$12	6	6	3	3	\$18				
Plumbing Year Three	\$12	4	4	4	3	\$15				
Retaining Wall Year Four	\$12	3	3	3	3	\$12				
Total Cost	\$48	\$25	\$16	\$13	\$12	\$66				

Cash Flow Calculations

	Year	1st	2 nd	3 rd	4th	Total				
COMPONENT	Cost x \$1,000	Annual Contributions								
Parging Year One	\$12	3	3	3	3	\$12				
Paving Year Two	\$12	3	3	3	3	\$12				
Plumbing Year Three	\$12	3	3	3	3	\$12				
Retaining Wall Year Four	\$12	3	3	3	3	\$12				
Total Cost	\$48	\$12	\$12	\$12	\$12	\$48				

Questions

Module 4

Inflation and Reserve Fund Planning

Understand Inflation - CPI vs PPI

- Consumer Price Index (CPI)
 - Food Costs
 - Fuel Costs
 - Electricity Costs
 - Housing Costs (meaning rent)
- Producer Price Index (PPI)
 - Manufacturing costs
 - Construction costs



Percentage Change in Producer Price Indices (PPIn) and Employment Cost Indices (ECIn) for Construction, 2013-2017

BLS Serve (S		2012	2018	20.55	2016	10.8id 2012	2017 2017		BLS Series D		2012	2014	2015	20:5	SLEUGU ZZZ	59 ST	800E
Tale Colomon	in consumer, producer & agree/surface prices	Sauce.	444	-	SHARE.	AMAR.	MAL.	See .	Table 5: Change	in PPIs for processed appoin important to appointmention	64.00	-	****	***	Salah.	-	PARK
CULTROOSAO	Consumer price index (CPI-L)	15	- 11	0.7	24	1.2	0.2	13	WF0067363	€ danst het	-03	-26.5	40.1	214	2.4	92	283
WEUETA			100				0.5		WPU1294			100			-15	4.0	-75
WPUFDE	Producer price index (PPI) for final demand	12	0.9	4.1	17	92	1550	2.4	Carrie Concession and Carried Concession and	Paying medanss and brooks (signal)	1.0	25	4.5	46			0.2
and the second	Fine) demand construction	3.2	22	2.5	0.5	8.5	1.6	3.3	WELLSE	Argh at felts and coolings	-12	34	47	-12	0.3	1.5	-0
WEURDEL	Construction for private capital investment	33	21	2.9	0.1	0.3	16	2.2	WEGISER	Propered agricult ditar coding disaling products	-0.4	35	2.1	4.0	0.5	1.2	-0.5
WEUFORD	Construction for government	3.0	2.6	2.5	43.	9.2	17	2.4	of the same	40000	4.0	2.0	92	-	0.00		
*******	100000000000000000000000000000000000000	100	7022	2.00	01	1220	200	2.7	WPU1222	Correct	A7	87 61	2.8	3.1	42	43	Al
WFLEO	Construction (sortial)	2.5	22	2.0	4.9	0.2	14	3.4	WHUCH	Consents products			78.00				23
WFUIOL	New removalental building construction	2.3	22	2.5	W.A.	113	17	2.4	WPURSOT	Concrete blook and brick	2.5	32	1.9	2.9	8.6	0.9	- 0.0
WFUIOT 901	Niew warsforze building construction	23	2.7	21	13	0.1	1.7	4.1	IRPU1332	Concrete pipe	3.9	22	2.0	22	-1.0	-0.2	0.1
WF0401902	Nee school beiding contruction	2.4	2.2	2.5	42	0.2	22	2.9	WPURID	Raudy-mod coverels	2.9	5.5	3.7	3.7	0.4	0.0	3.2
WPUINT NO	New office building combruction	2.6	2.1	2.6	13	8.4	1.0	2.7	WP01334	Pre-caet concrete products	16	65	1.7	115	-8.5	0.0	2)
WF0101314	New industrial building condituation	4.1	1.8	2.2	4.0	0.5	2.4	4.5	WPU1335	Hastessed concrete products	2.4	23	9.9	11.1	-8.2	0.2	1.4
WEDDOLDS	New health care building construction	4.1	1.5	95	41	0.4	1.5	2.7	WFR/H342	Brick and structural day file	1.8	5.4	1.7	1.0	9.0	0.3	1.7
ANS (IDIO)	Mark Grepsir of names buildings (partial)	2.9	2.7	1,6	24	9.6	0.4	1.9									
									WENDERS	Plantic construction products	-03	1,6	9.4	-61	12	1.4	2.9
	in FPIs for mys. repair & maintenance, sweb, by subsent sets	EA.							WEST-11	Flat plant	2.7	2.4	5.0	2.4	0.0	0.1	9.2
PERENTAL	Concrete contractors, normalisted at trailiting work	2.6	2.0	2.35	44	0.7	1.5	2.7	M950122	Ogsturn products	06-2	6.1	0.1	7.9	-5.4	4.5	5.4
PELEGREEK	Planfing contractors, non-residential leatiting work.	17	4.3	1.8	11	0.0	0.7	2.6	WMMHORE	Would allian creations to	6.7	25	0.0	2.1	9.0	4.6	1.7
POUBSIENCE:	Electrical contractors, nonresidential trafsing work	1.5	8.9	5.6	-9.1	0.2	1.5	3,6	WPUGDINATE!	Jumber and plywood	10.0	2,2	7.1	2.8	9.30	0.7	6.2
PEUDSKIZK	Pluming contractives, nonequalistical building work	4.9	2.2	4.1	43.	0.2	12	2.2	0090002101	Architectural coalings	-0.3	6.9	2.1	0.3	0.2	14.	1.2
Table 1: Changes	in PPIs for inputs to construction industries, excluding supl	tallinest	ment, b	char are	limonts				WP08017	their mit products	-0.6	9.7	-9.4	66	-10	-18	67
AND DESTROOP	Inputs to construction instudings			-22	24	8.2	0.6	3.2	WEGHELDINGS.	Noticalled structural strapes, cartion	-63	55	-100.0				
WFUPSHOOT	burds to conduction industries, goods	1.3	43	-40	2.6	0.6	1.0	3.7	WPURETRIS.	Ovel ope and tube	-61	0.0	46.1	54	2.1	14	13.2
WFUF50888612	Injudicity construction industries, energy			-28 K	118	42	5.7	16.1	WPI.H02502	Copper and brazo mill dispers	44	45	.93	211	4.7	5.3	19.2
WFUF2310013	known to construction instartions, goods from fecula and energy			-0.5	11	0.4	0.5	2.4	WF5.H1250+1	Aumeum mil shapen.	4.5	10.9	-14.0	55	2.2	0.3	8.5
WPUF2310002	Panalla to construction instudence, samenes			9.5	28	42	0.5	2.5	WPUH71	Disset metal products	22	25	-15	22	6.2	0.7	2.0
WFUPS21000	Inputato new construction			-22	2.4	9.2	0.2	2.2	98793167400	Extrapled shartlest mile!	DE	1.4	33	2.3	6.0	1.3	2.3
WPUP201266	New records devial construction			-2.0	2.0	6.4	1.0	3.2	00933117-0051	Estricated structural metal bar yants 6 retar	0.4	2.5	0.9	43	0.0	0.0	42
WF0F001211	Commercial structures			-23	2.3	6.5	0.5	2.2	WF0H74654	Fabricated strategic metal for non-industrial buildings	0.5	2.2	4.5	40	6.0	0.0	4.4
W#10P2312F2	finificate studien			-21	2.1	8.2	0.6	3.2	ayponizates:	Futurialed studius tries for langes	0.9	5.6	-7.5	30	4.3	2.3	8.6
WP08P214290	Industrial disurfaces			-17	45	0.5	0.7	3.0	WF1.0167.003	Connected and architectural metal work	0.8	23	0.1	22	0.4	0.3	35
WFUP211230	Other norresidential			-32	21	0.4	0.5	3.2	WPU1976	Fabrication that plate	D.B.	1.4	-12	0.2	0.0	43	13
WFUP2012I/1	Highwarm and streets			-40	24	0.2	1.0	3.5	WF0.0176	Prehato cated metal buildings	12	3.6	2.6	41	4.1	0.2	2.6
WFUP0110021	Preser and communications shudrans			45	21	0.8	1.0	4.7	WPUHO.	Sonthuittion madenery and equipment.	12	3.5	12	8.8	6.0	ú.e.	8.6
WFUFQUIDS	Education of and incoding about any			-13	1.6	0.4	0.6	2.0	WYS.87120 NO.	Track Albus (not of the highway) pregnato free	4.6	-43	42	27	12	0.2	17
WFUP2312141	Other mine automorphytist construction			64	22	0.6	1.7	3.9	DET-000-100 NO	max and pro to congress production			-			9.2	
WFMPQ01100	Time resident al combustion			-1.6	24	0.2	0.2	2.0	Yukin B. Changes	in PPIs for unpresented goods important to construction							
WFUP201110	Bosto territo			-12	26	112	0.5	3.2	2475,050 512	Ashall istorivery	-13	0.2	45.5	44	47	0.6	16.5
WEDESTIO				-11	26	0.1	0.1	28	WPUIDE I	Construction sand drayes knowled state	19	33	44	23	43	0.5	2.8
	Multiprofy			29	22	0.2		32	WFUREIZ		75				2.4	43	
WFUF212000	Mantenance and repair construction			-33	22	0.4	0.5	35	WP01812	You and steel smap	-12.5	45	-867	637 363	36	45	254
NFUP23230 NFUP232110	Nonresidential maintenance and repair Rosslantial maintenance and repair			24	10	0.4	0.4	13	WENTERS IN	Stainless and ality deel scrap Cooper base coras	-62	119	38.4	115	41	56	145
	in PPIs for services important to construction			-					200000000000000000000000000000000000000	in ECIs for total compressation, sugges A salaries							
WP14631	Aphtechani servinas	17	22	13.	11	0.6	+5	2.4	C K000 100	Private initiality-total compensation (flyragh Jun.):	2.0	2.5	1.2	22		0.7	24
WFIRESO	Engineering services	11	13	18	2.0	-1.6	-6.0	1.4	CN20123	Coretruction-total compensation (ffmorgh.lum)	2.2	1.0	22	13		26	22
WFID012	Track transportetion of freight	0.9	1.1	-22	42	0.0	1.1	2.7	C1/00000	Private industry—wages and salaries (through Jun.)	2.2	2.2	2.1	23		26	24

Updated 9/13/17 Source: BLS: www.bis.gov/cpi for CPI, www.bis.gov/ppi for FPIs; www.bis.gov/ext for ECIs Compiled by Ken Simonson (simonsonk@agc.org), Chief Economist, Associated General Contractors of America, www.agc.org



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Percent Changes in Producer Price Index for Construction 2012 -2017

BLS Series ID						to Aud	gust 201	7 since
		2013	2014	2015	2016	7/17	5/17	8/16
Table 3: Changes	in PPIs for inputs to construction industries, excluding capita	al investo	n ent, la	bor and	imports			
WPUIP230000	Inputs to construction industries		77	-2.3	2.4	0.3	0.6	3.2
WPUIP2300001	Inputs to construction industries, goods	1.3	-0.9	-4.0	2.0	0.6	1.0	3.7
WPUIP23000012	Inputs to construction industries, energy			-29.6	11.8	4.3	5.7	16.1
WPUIP23000013	Inputs to construction industries, goods less foods and energy			-0.5	1.1	0.1	0.5	2.4
WPUIP2300002	Inputs to construction industries, services			0.3	2.8	-0.2	0.1	2.5
WPUIP231000	Inputs to new construction			-2.2	2.4	0.3	0.7	3.2
WPUIP231200	New nonresidential construction			-2.8	2.0	0.4	1.0	3.2
WPUIP231211	Commercial structures			-2.3	2.3	0.3	0.9	3.2
WPUIP231212	Healthcare structures			-2.1	2.1	0.3	8.0	3.2
WPUIP231220	Industrial structures			-1.7	1.5	0.2	0.7	3.0
WPUIP231230	Other nonresidential			-3.2	2.1	0.4	0.9	3.2
WPUIP231231	Highways and streets			-4.0	2.4	0.4	1.4	3.5
WPUIP2312321	Power and communications structures			-6.5	3.1	0.8	1.4	4.7
WPUIP231233	Educational and vocational structures			-1.8	1.8	0.4	0.6	2.9
WPUIP2312341	Other misc, nonresidential construction			-5.4	2.2	8.0	1.1	3.9
WPUIP231100	New residential construction			-1.6	2.4	0.2	0.3	3.0
WPUIP231110	Single-family			-1.7	2.6	0.2	0.5	3.2
WPUIP231120	Multifamily			-1.1	2.6	0.1	0.1	2.8
WPUIP232000	Maintenance and repair construction			-2.9	2.2	0.3	0.6	3.2
WPUIP232200	Nonresidential maintenance and repair			-3.3	2.3	0.4	0.7	3.5
WPUIP232100	Residential maintenance and repair			-2.4	2.0	0.1	0.4	3.2
Table 4: Changes	in PPIs for services important to construction							
WPU4531	Architectural services	1.7	2.3	1.8	1.1	0.6	1.5	2.4
WPU4532	Engineering services	1.1	1.9	2.5	2.0	-1.6	-0.8	1.4
WPU3012	Truck transportation of freight	0.9	1.1	-2.2	0.2	0.9	1.1	2.7

Percent Changes in Producer Price Index for Construction 2012 -2017

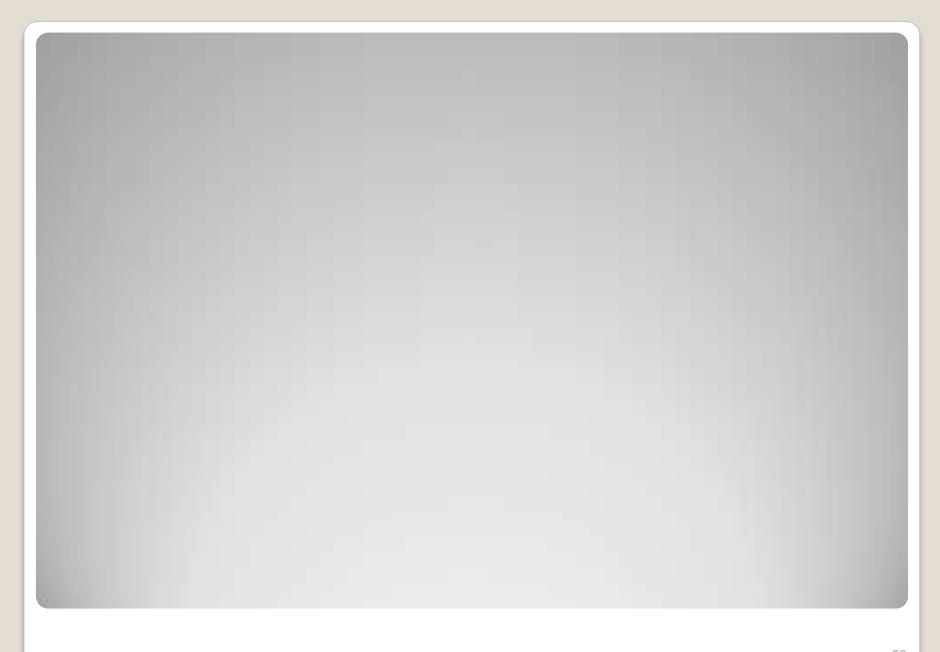
BLS Series ID						to Augu	st 2017	since
		2013	2014	2015	2016	<u>7/17</u>	5/17	8/16
Table 5: Change	s in PPIs for processed goods important to construction							
WPU057303	#2 diesel fuel	-0.9	-26.9	-43.1	21.4	2.4	9.2	29.7
WPU1394	Paving mixtures and blocks (asphalt)	1.0	2.5	-6.5	-5.6	-1.9	8.0	0.3
WPU136	Asphalt felts and coatings	-1.2	2.4	-4.7	-1.9	0.1	1.5	-1.0
WPU1361	Prepared asphalt &tar roofing &siding products	-0.4	2.5	-2.1	-1.0	0.1	1.7	-1.9
WPU1322	Cement	4.7	5.7	6.5	5.0	-0.2	-1.3	4.8
WPU133	Concrete products	2.6	5.1	2.9	3.1	0.2	0.6	2.9
WPU1331	Concrete block and brick	2.1	3.2	1.9	2.0	0.6	0.9	3.0
WPU1332	Concrete pipe	3.0	3.2	2.8	2.2	-1.5	-0.7	0.1
WPU1333	Ready-mixed concrete	2.9	5.5	3.7	3.7	0.4	8.0	3.3
WPU1334	Precast concrete products	1.6	6.5	1.7	0.5	-0.1	0.0	2.7
WPU1335	Prestressed concrete products	2.4	2.3	-0.9	11.1	-0.2	0.2	1.4
WPU1342	Brick and structural clay tile	1.4	1.4	1.3	1.0	0.0	0.3	1.7
WPU0721	Plastic construction products	-0.5	1.6	8.0	-0.1	1.3	1.4	2.9
WPU1311	Flat glass	2.7	2.4	5.3	3.1	0.0	-0.1	0.2
WPU137	Gypsum products	16.2	5.1	0.1	7.9	-1.4	-0.5	8.4
WPU1392	Insulation materials	6.7	2.5	0.5	3.1	0.5	0.6	1.7
WPUSI004011	Lumber and plywood	10.0	3.3	-7.9	3.6	1.8	0.7	6.2
WPU062101	Architectural coatings	-0.8	0.9	-2.8	0.9	0.2	1.4	1.3

Percent Changes in Producer Price Index for Construction 2012 -2017

BLS Series ID						to Augu	ust 2017	since
		2013	2014	2015	2016	7/17	5/17	8/16
WPU1017	Steel mill products	-0.6	0.7	-19.4	\$.6	-1.5	-1.0	6.7
WPU10170404	Hot-rolled structural shapes, carbon	-5.3	5.9	-100.0)			
WPU101706	Steel pipe and tube	-5.1	0.0	-16.1	5.4	2.1	1.4	13.2
WPU102502	Copper and brass mill shapes	-6.6	-4.5	-19.3	21.1	4.7	6.9	18.2
WPU102501	Aluminum mill shapes	-4.6	10.9	-14.0	5.5	2.2	0.3	9.5
WPU1073	Sheet metal products	-2.2	2.5	-1.5	2.2	0.2	0.7	2.0
WPU107405	Fabricated structural metal	-0.6	1.4	-3.3	2.3	0.0	1.3	3.3
WPU1074051	Fabricated structural metal bar joists & rebar	0.4	2.5	0.1	4.9	0.0	0.0	4.2
WPU10740514	Fabricated structural metal for non-industrial buildings	0.9	2.2	0.5	4.0	0.0	0.0	4.4
WPU10740553	Fabricated structural metal for bridges	-0.9	5.8	-7.5	-7.0	8.0	2.3	8.6
WPU107408	Ornamental and architectural metal work	0.4	3.1	0.1	2.2	0.4	0.3	2.5
WPU1076	Fabricated steel plate	0.0	1.4	-1.3	0.2	0.0	-0.3	1.3
WPU1079	Prefabricated metal buildings	3.2	3.6	-2.0	4.8	-0.1	0.2	2.5
WPU112	Construction machinery and equipment	1.5	1.6	1.2	0.9	0.0	0.0	0.8
WPU07120105	Truck & bus (incl. off-the-highway) pneumatic tires	-1.6	-4.3	-4.2	2.7	1.2	0.2	3.7
Table 6 : Changes	in PPIs for unprocessed goods important to construction							
WPU058102	Asphalt (at refinery)	-3.3	5.2	-45.5	-9.8	-4.7	-3.0	18.5
WPU1321	Construction sand/gravel/crushed stone	3.0	3.3	4.6	2.3	-0.3	0.5	2.8
WPU1012	Iron and steel scrap	7.5	-16.9	-50.8		5.4	4.8	29.4
WPU101212	Stainless and alloy steel scrap	-12.5		-35.7	30.3	3.6	-0.5	5.1
WPU102301	Copper base scrap	-6.2	-11.9	-28.4	11.0	4.1	5.6	14.5
Table 7: Changes	in ECIs for total compensation, wages & salaries							
CIU20100	Private industrytotal compensation (through Jun.)	2.0	2.3	1.9	2.2		0.7	2.4
CIU20123	Constructiontotal compensation (through Jun.)	2.0	1.8	2.2	1.9		0.6	2.2
CIU20200	Private industrywages and salaries (through Jun.)	2.1	2.2	2.1	2.3		0.6	2.4

Questions

Thank You!



Speaker BIO

Peter B. Miller, RS

A Principal in the firm of Miller – Dodson Associates, Peter Miller is considered to be one of the nation's leading experts in the field of Reserve Studies and Strategic Financial Planning for community associations. He holds the professional designation of Reserve Specialist (RS). Mr. Miller is a frequent author and lecturer, and was selected to develop and teach the Community Associations Institute's (CAI) Webinar on Reserves and Reserve Studies.

Peter served as the 2004 President of the CAI Washington Metropolitan Chapter, and was a member of the Board of the CAI South Carolina Chapter. Most recently, he served as the 2014 President of the Southeast Virginia Chapter of CAI. He served as Vice-Chair of the CAI National Reserves Committee, and currently serves on the CAI National Business Partners Council, an advisory group to the National Board of Trustees. He has been widely recognized for his efforts in the industry, including the CAI National "President's Award" and "Award for Excellence in Chapter Leadership".

Peter is a graduate of the College of Architecture and Urban Studies at Virginia Tech, and is a member of the Urban Land Institute and The Congress for a New Urbanism.