

BUDGETS, RESERVES AND FINANCIALLY SUSTAINABLE COMMUNITIES

JANUARY 23, 2025



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Topics:

- **Module 1: Importance of Reserves**
- **Module 2: Basic Tenets**
- **Module 3: Financially Sustainable Communities**
- **Module 4: Sample Reserve Study**
- **Module 5: The Board's Involvement**
- **Module 6: Cash Flow vs. Component**
- **Module 7: Inflation CPI v. PPI**

Module 1

The Importance of Reserves

What are Reserves?

- **Replacement Reserves?** Money budgeted each year for the Replacement and major repair of common elements.
- **Replacement Reserve Studies?** Financial forecasting report used to assist Boards in establishing appropriate annual Reserve Funding Levels in Budget.

Why are Reserves Important?

Adequate Reserves help to Protect, Preserve and Enhance the property values in your community.

“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

How Do Reserves protect property values?

- Ensures that funding is available for timely replacement.
- Stabilizes Annual Assessment.
- Replacement costs are spread equitably over time.

Is the Board Required to do a Reserve Study?

- Not all States require Reserve Studies.
- Governing Docs. may provide Board the authority to establish Reserves in budget.
- Boards have a Fiduciary Duty to make prudent, business-like decisions.
- Maintaining Reserves is considered Industry "Best-Practice".

Reserve Study Levels

- **Level I**
 - Full Study w/ Onsite Condition Assessment.
- **Level II**
 - Reserve Study Update w/ On-site Condition Assessment
- **Level III**
 - Reserve Study Update w/o On-site Condition Assessment
- **Level IV**
 - Preliminary Reserve Study (from Drawings)

Identifying Reserve Components

- Commonly-Owned Physical Asset
(check governing documents)
- Will require major repair or replacement
- Suggested Resolutions:
 - Normal Economic Life \geq 3 Years
 - Replacement Cost \geq \$X,XXX

National Reserve Study Standards as Revised 2023

- Must update every three years.
- Must include funding for major maintenance.
- Must include funding for periodic Structural Evaluations.

Engaging a Qualified Reserve Study Company

- Designated Reserve Specialists (RS).
- Flexible with revisions and Zoom mtgs.
- Board should read Sample Report!
- **DO NOT SELECT BASED UPON LOW BID!**
There is a difference between cost and value!
- Provides Cash Flow Method of Calculation*.
*More realistic method of calculating Reserves.

Why We Plan For Reserves

- **Legal**
- **Practical/Financial**
- **Ethical**

Legal Considerations

- **State Statutes**
- **Governing Documents**
- **IRS Guidelines**
- **Bank Loan Requirements**
- **Fiduciary Duty of Board**
- **Fannie Mae Requirements**

Practical / Financial Considerations

- **PROTECT PROPERTY VALUES!**
- **10% - 50% of Annual Budget!**
- **Sound Financial Planning!**
- **Avoid Special Assessments!**
- **Equitable Distribution of costs over time!**

Ethical Considerations

- **Avoids “kicking the can down the road” (future financial obligations) to future new or long-term owners!**
- **Equitable Distribution of costs over time! “Everybody pays their fair share!” ***

*Not an easy sell among some demographics!

Questions?

Module 2

Three Basic Tenets of a Reserve Study

Tenet #1:

The Reserve Study must be readable and understandable in order to be usable!

Tenet #2:

The Reserve Study must reflect the priorities, the plans, the hopes, and the aspirations of the community!

Good versus Great!

Tenet #3

The Reserve Study funding recommendation must be practical and implementable!

Reasonable Expectations!

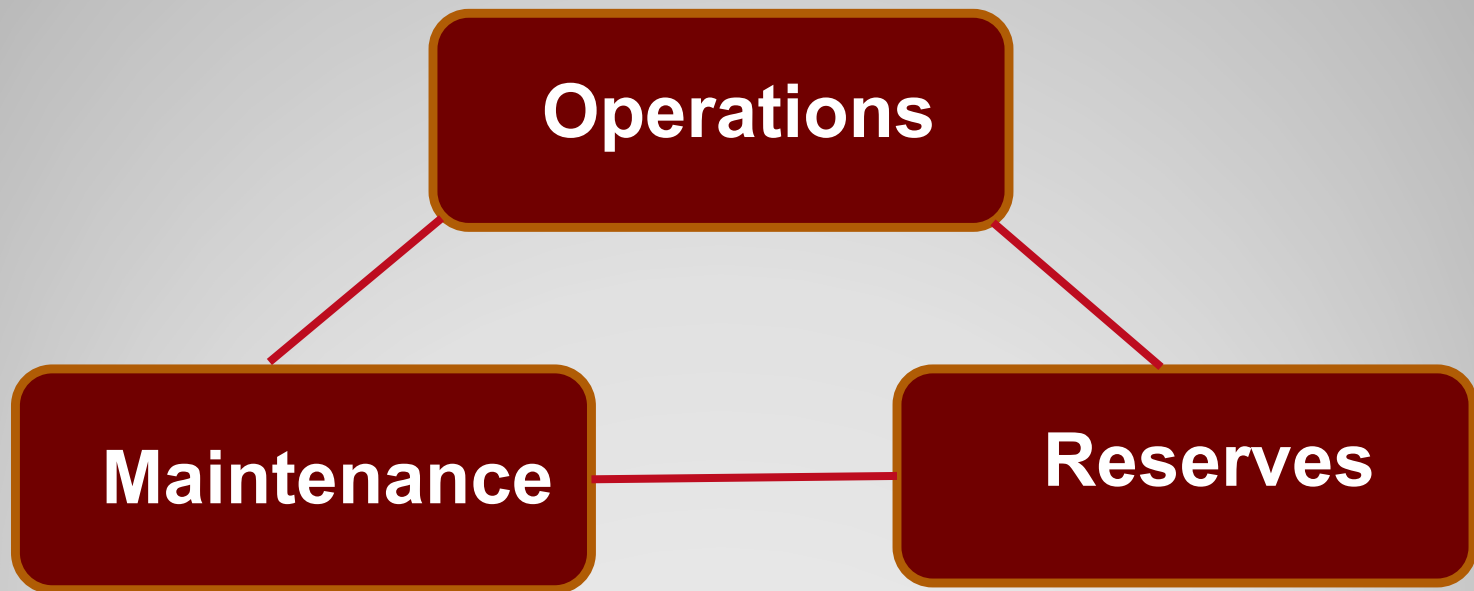
- A Reserve Study is a visual condition assessment.
- It is not an in-depth technical study or structural evaluation.
- Increase the accuracy of the Study by bringing in your professional experts! i.e., HVAC, Bathymetry, Paving, etc.

Questions?

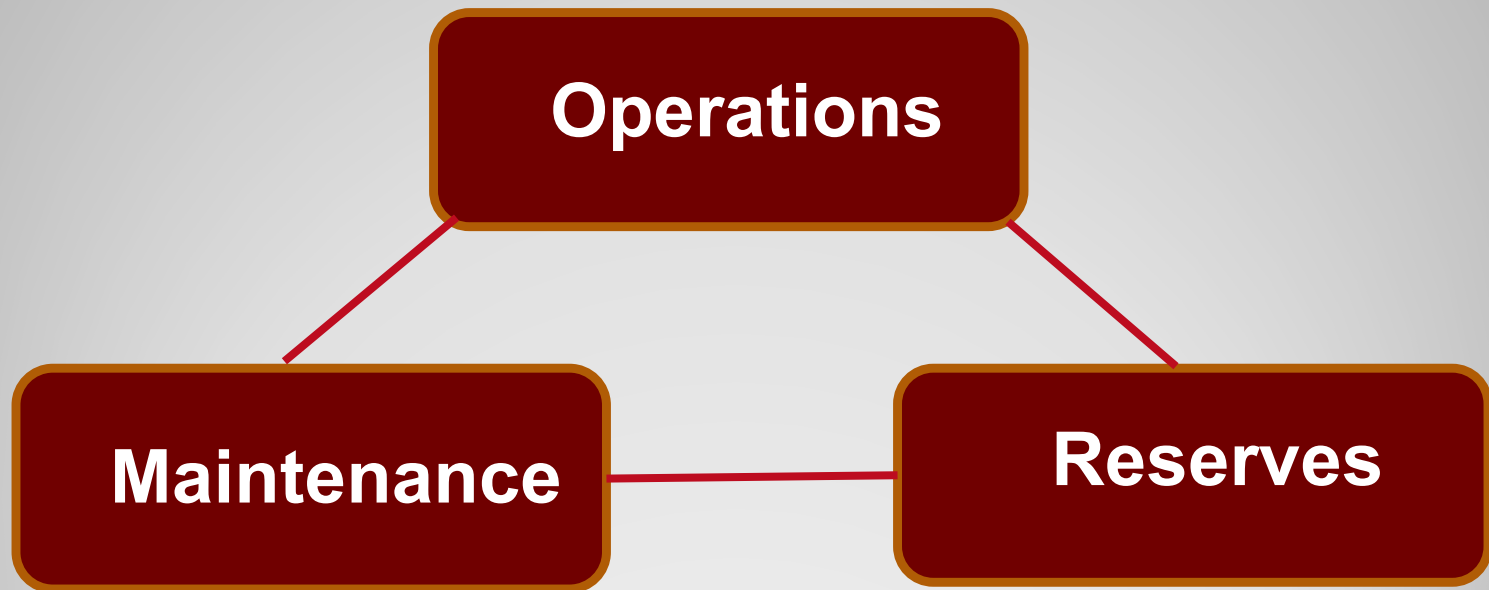
Module 3

Financially Sustainable Communities

Where do the Reserves fit in the budgeting process?



When all three budgets are in balance, you have a Financially Sustainable Community!



Module 4

Sample Reserve Study

THE OAKS AT BRUNSWICK

Community Management by:



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.

Starting Balance	\$77,240
Current Funding	\$90,000
Recommended Funding	\$150,000

**GENERAL SITE IMPROVEMENTS
PROJECTED REPLACEMENTS**

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT 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	\$25,128
3	Concrete curb & gutter (20%)	lf	1,072	\$34.00	54	6	\$36,448
4	Concrete flatwork (6%)	sf	817	\$8.50	60	6	\$6,945
5	Repoint masonry entrance feature Sandblasted wood signage	sf ls	20 1		15	10	\$1,200
6	Segmental retaining wall, 30%	sf	697	\$45.00	40	35	\$31,361
7	Mailboxes	ls	1	\$18,000.00	25	15	\$18,000
8	Dumpster pad	sf	816	\$10.00	25	20	\$8,160
9	Dumpster enclosure stucco repair	sf	805	\$12.75	50	45	\$10,264
10	Dumpster trellace	ls	1	\$1,500.00	20	15	\$1,500
11	Dumpster gates	pr	1	\$1,000.00	10	5	\$1,000
12	Site lighting	ea	26	\$2,100.00	30	25	\$54,600
13	Sanitary sewer - mains (10%)	unit	216	\$155.00	20	15	\$33,480
14	Domestic water - mains (10%)	unit	216	\$95.00	20	15	\$20,520
15	Storm water - structure & pipe (10%)	unit	216	\$185.00	20	15	\$39,960
16	Storm water pond dredging	ls	1	\$50,000.00	20	15	\$50,000
GENERAL SITE IMPROVEMENTS - Replacement Costs - Subtotal							\$542,734



Each inventory item is assigned a Remaining Economic Life based upon condition. Based upon that REL, each item is then shown in the calendar, see page C3.

CONDOMINIUM BUILDING EXTERIORS, Con't (CB)**PROJECTED REPLACEMENTS**

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
34	CB Windows, 20%	sf	2,232	\$35.00	30	21	\$78,120
35	CB Windows, 20%	sf	2,232	\$35.00	30	23	\$78,120
36	CB Windows, 20%	sf	2,232	\$35.00	30	25	\$78,120
37	CB Windows, 20%	sf	2,232	\$35.00	30	27	\$78,120
38	CB Windows, 20%	sf	2,232	\$35.00	30	29	\$78,120
39	CB Window shutters	pr	160	\$100.00	15	10	\$16,000
40	CB Doors, 20%	ea	43	\$950.00	25	18	\$41,040
41	CB Doors, 20%	ea	43	\$950.00	25	19	\$41,040
42	CB Doors, 20%	ea	43	\$950.00	25	20	\$41,040
43	CB Doors, 20%	ea	43	\$950.00	25	21	\$41,040
44	CB Doors, 20%	ea	43	\$950.00	25	22	\$41,040
45	CB Patio doors, 20%	ea	12	\$1,470.00	25	18	\$17,640
46	CB Patio doors, 20%	ea	12	\$1,470.00	25	19	\$17,640
47	CB Patio doors, 20%	ea	12	\$1,470.00	25	20	\$17,640
48	CB Patio doors, 20%	ea	12	\$1,470.00	25	21	\$17,640
49	CB Patio doors, 20%	ea	12	\$1,470.00	25	22	\$17,640

CONDOMINIUM BUILDING EXTERIORS, Con't (CB) - Replacement Costs - Subtotal

\$700,000

**SWIMMING POOL
PROJECTED REPLACEMENTS**

ITEM #	ITEM DESCRIPTION	UNIT	NUMBER OF UNITS	UNIT REPLACEMENT COST (\$)	NORMAL ECONOMIC LIFE (YRS)	REMAINING ECONOMIC LIFE (YRS)	REPLACEMENT COST (\$)
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	\$3,200
70	Swimming pool filter/chlorinator	sf	990	\$4.00	20	15	\$3,960
71	Swimming pool valves & plumbing	sf	990	\$2.00	20	15	\$1,980
72	Swimming pool - concrete deck, 25%	sf	480	\$10.25	30	5	\$4,920
73	Swimming pool - concrete deck, 25%	sf	480	\$10.25	30	10	\$4,920
74	Swimming pool - concrete deck, 25%	sf	480	\$10.25	30	15	\$4,920
75	Swimming pool - concrete deck, 25%	sf	480	\$10.25	30	20	\$4,920
76	Swimming pool deck coating	sf	1,920	\$10.00	10	6	\$19,200
77	Swimming pool furniture (50%)	ls	1	\$1,950.00	8	1	\$1,950
78	Swimming pool furniture (50%)	ls	1	\$1,950.00	8	3	\$1,950
79	Spa structure	sf	50	\$100.00	45	40	\$5,024
80	Spa finish	sf	50	\$10.00	10	4	\$500
81	Spa waterline tile	lf	25	\$40.00	15	10	\$1,005
82	Spa filter/chlorinator	ls	1	\$2,500.00	20	15	\$2,500
83	Swimming pool lighting	ea	7	\$900.00	30	25	\$6,300
84	Pool perimeter fence - 6" (metal)	ft	186	\$55.00	30	25	\$10,230
85	Swimming pool retaining wall	sf	165	\$40.00	35	30	\$6,600
SWIMMING POOL - Replacement Costs - Subtotal							\$162,244

PROJECTED REPLACEMENTS - YEARS 4 TO 6

Item	2018 - YEAR 4	\$	Item	2019 - YEAR 5	\$	Item	2020 - YEAR 6	\$
78	Swimming pool furniture (50	\$1,950	67	Swimming pool - finish	\$3,465	2	Seal coat asphalt	\$25,128
			80	Spa finish	\$500	11	Dumpster gates	\$1,000
						27	CB EIFS coating	\$24,960
						69	Swimming pool pump (2 - 5	\$3,200
						72	Swimming pool - concrete d	\$4,920
						88	CO EIFS coating	\$10,836
						95	FC EIFS coating	\$3,864
						99	FC HVAC system	\$2,500
Total Scheduled Replacements		\$1,950	Total Scheduled Replacements		\$3,965	Total Scheduled Replacements		\$396,408

Based upon the Remaining Economic Life, each inventory item is shown in the calendar in the appropriate year.

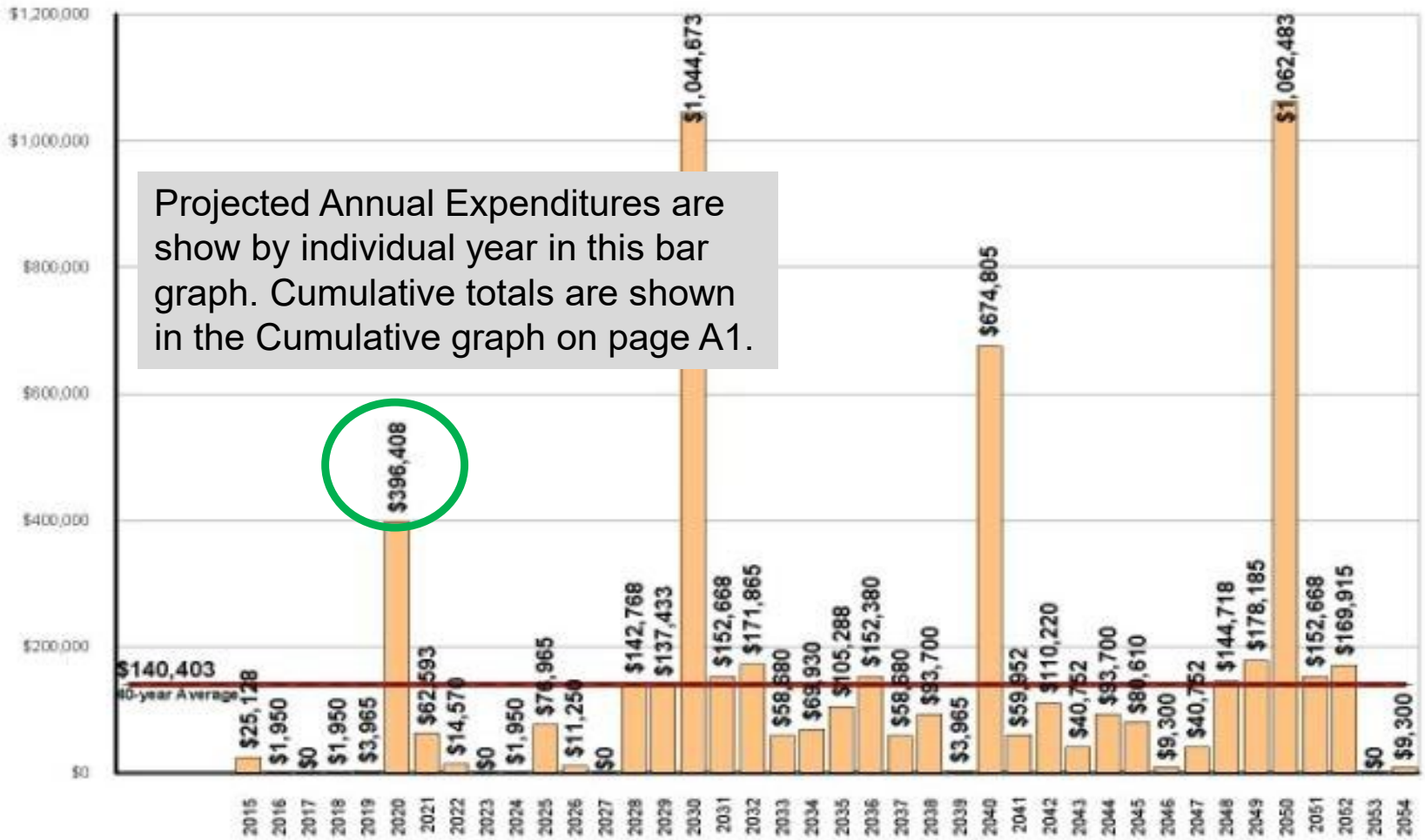
The annual projected costs for each year are then shown on page A2.

PROJECTED REPLACEMENTS - YEARS 25 TO 27

Item	2039 - YEAR 25	\$	Item	2040 - YEAR 26	\$	Item	2041 - YEAR 27	\$
67	Swimming pool - finish	\$3,465	2	Seal coat asphalt	\$25,128	29	CB Vinyl siding, 20%	\$40,752
80	Spa finish	\$500	5	Sandblasted wood signage	\$1,200	76	Swimming pool deck coating	\$19,200
			11	Dumpster gates	\$1,000			
			12	Site lighting	\$54,600			
			27	CB EIFS coating	\$344,960			
			36	CB Windows, 20%	\$78,120			
			39	CB Window shutters	\$16,000			
			55	CB Balcony structure	\$58,800			
			56	CB Balcony surface	\$21,112			
			60	CB Stairs, 20%	\$15,580			
			65	CB Exit lights	\$4,500			
			68	Swimming pool - waterline ti	\$5,400			
			69	Swimming pool pump (2 - 5	\$3,200			
			77	Swimming pool furniture (50	\$1,950			
			81	Spa waterline tile	\$1,005			
			83	Swimming pool lighting	\$6,300			
			84	Pool perimeter fence - 6' (m)	\$10,230			
			88	CO EIFS coating	\$10,836			
			90	CO Windows	\$8,820			
			91	CO Window shutters	\$1,000			
			95	FC EIFS coating	\$3,864			
			100	FC HVAC condensing unit	\$1,200			
Total Scheduled Replacements		\$3,965	Total Scheduled Replacements		\$674,805	Total Scheduled Replacements		\$59,952

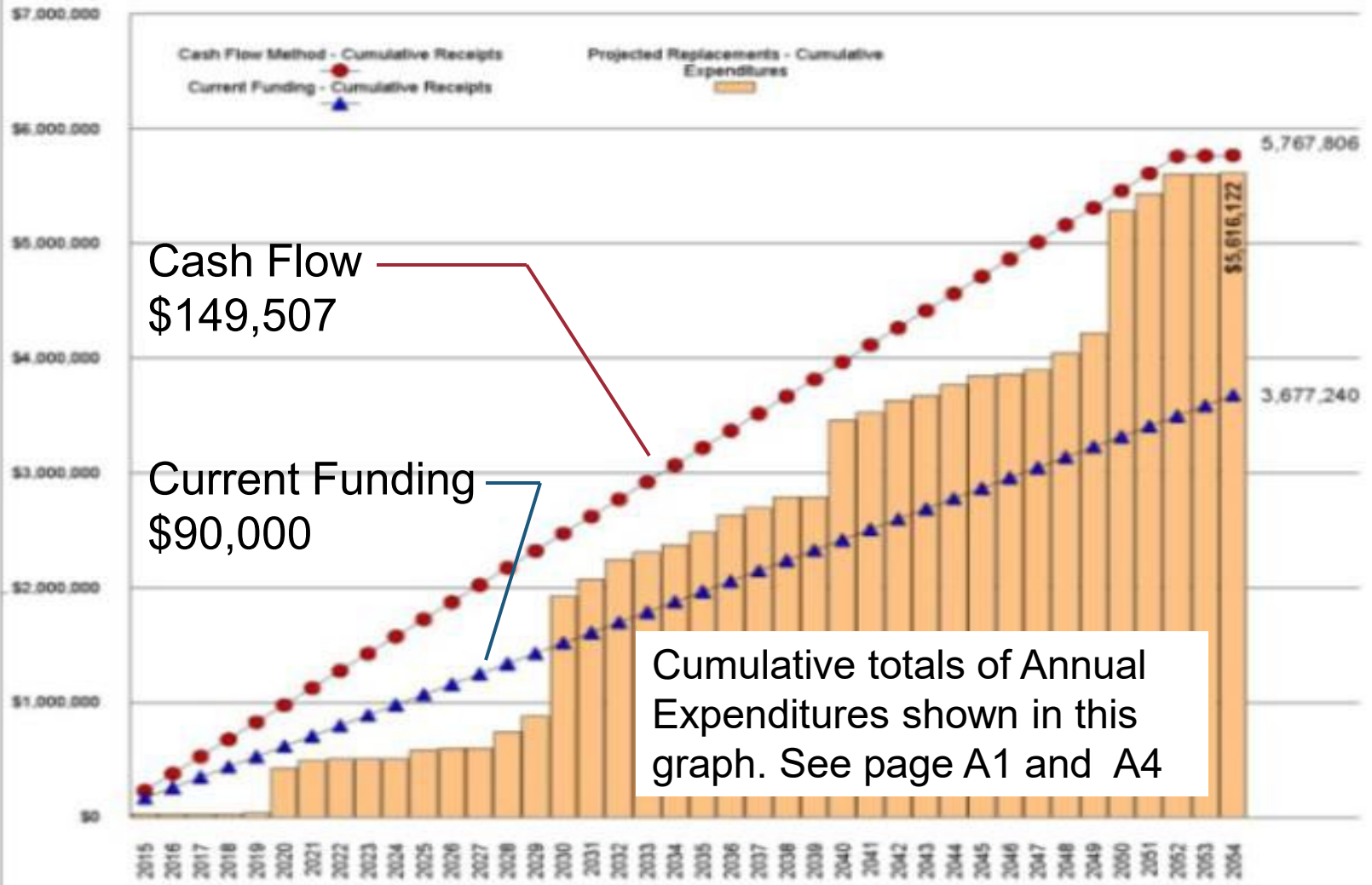
#2 - Annual Expenditures for Projected Replacements Graph

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.



Projected Annual Expenditures are shown by individual year in this bar graph. Cumulative totals are shown in the Cumulative graph on page A1.

#1 - Cumulative Replacement Reserve Funding and Expenditures Graph



Questions?

Module 5

The Board's Involvement

Board Involvement

- Establish inventory.
- Set threshold policy: (Board Resolution)
 - Lasts longer than "X",
 - Costs more than "Y"
- Provide data, guidance, contractor names, and historical context.
- Set Minimum Fund Balance.

Board Involvement (continued)

- Review draft:
 - Provides priorities and other input.
 - Replacement timing, replacement costs, etc.
- Investigate alternatives.
- Develop Strategic Funding Plan.

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PROJECTED REPLACEMENTS**

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CONDOMINIUM BUILDING EXTERIORS, Con't (CB)

PROJECTED REPLACEMENTS

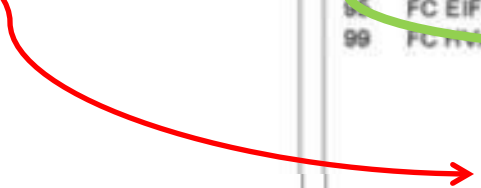
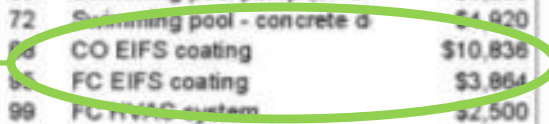
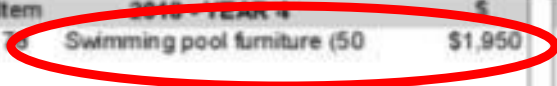
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CONDOMINIUM BUILDING EXTERIORS, Con't (CB) - Replacement Costs - Subtotal

\$700,000

PROJECTED REPLACEMENTS - YEARS 4 TO 6

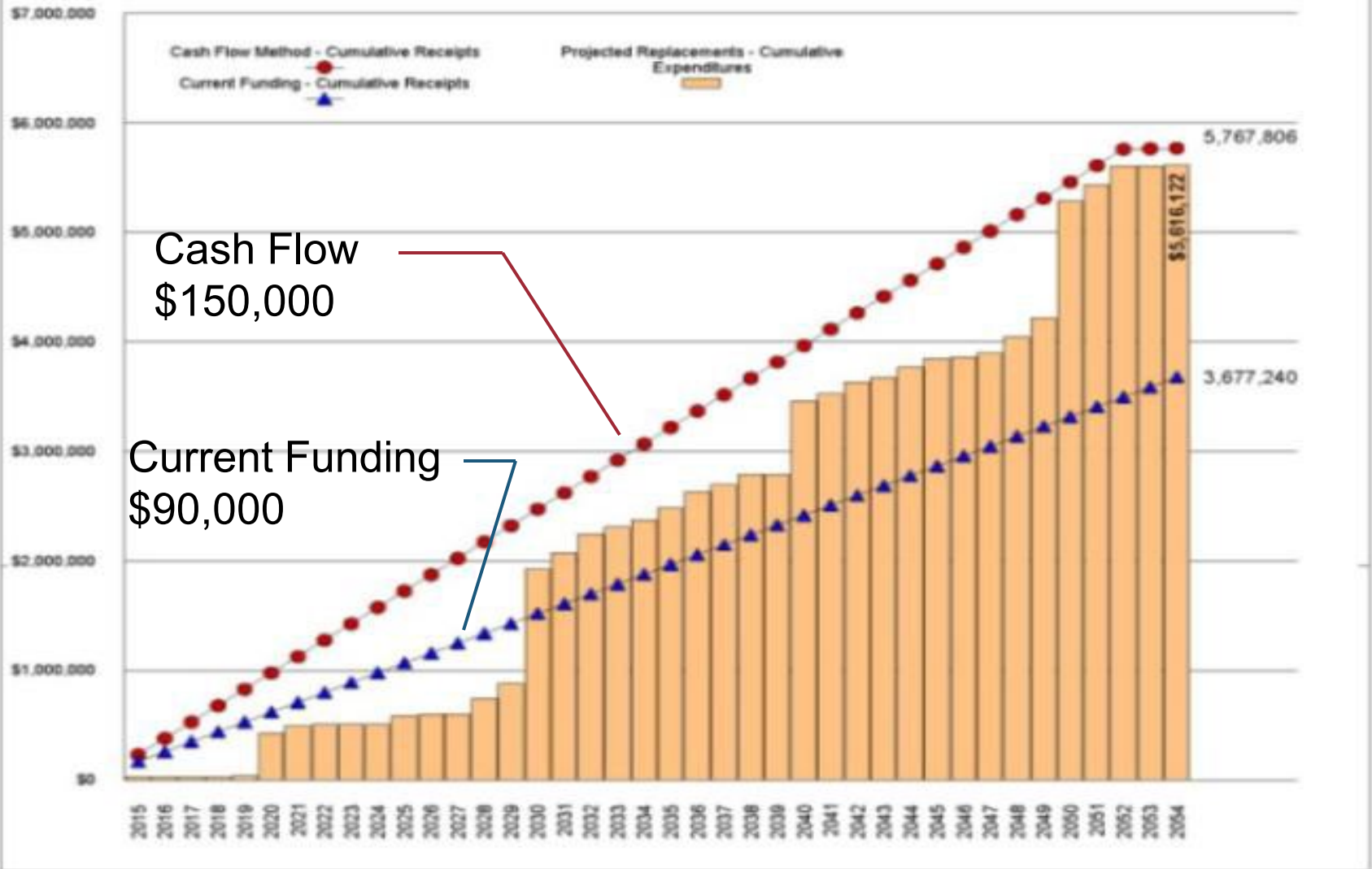
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Total Scheduled Replacements		\$3,965	Total Scheduled Replacements		\$674,805	Total Scheduled Replacements		\$59,952

#1 - Cumulative Replacement Reserve Funding and Expenditures Graph



What's the Next Step?

- **You as the Manager...**
- **You as a Board Member...**
- **You as a Finance
Committee 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.**

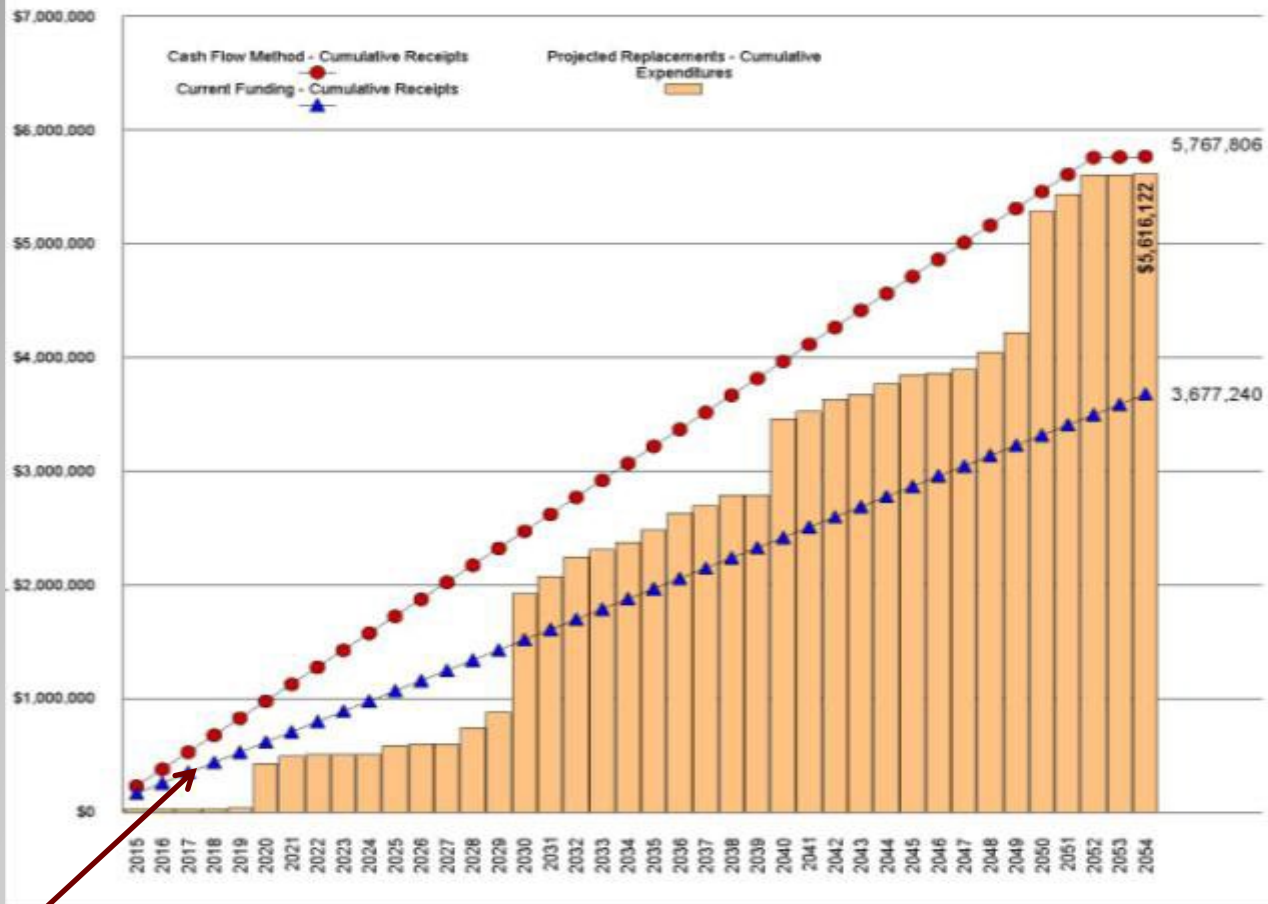
Check Cash Flow Margins

#3 - Table of Annual Expenditures and Current Funding Data - Years 1 through 40

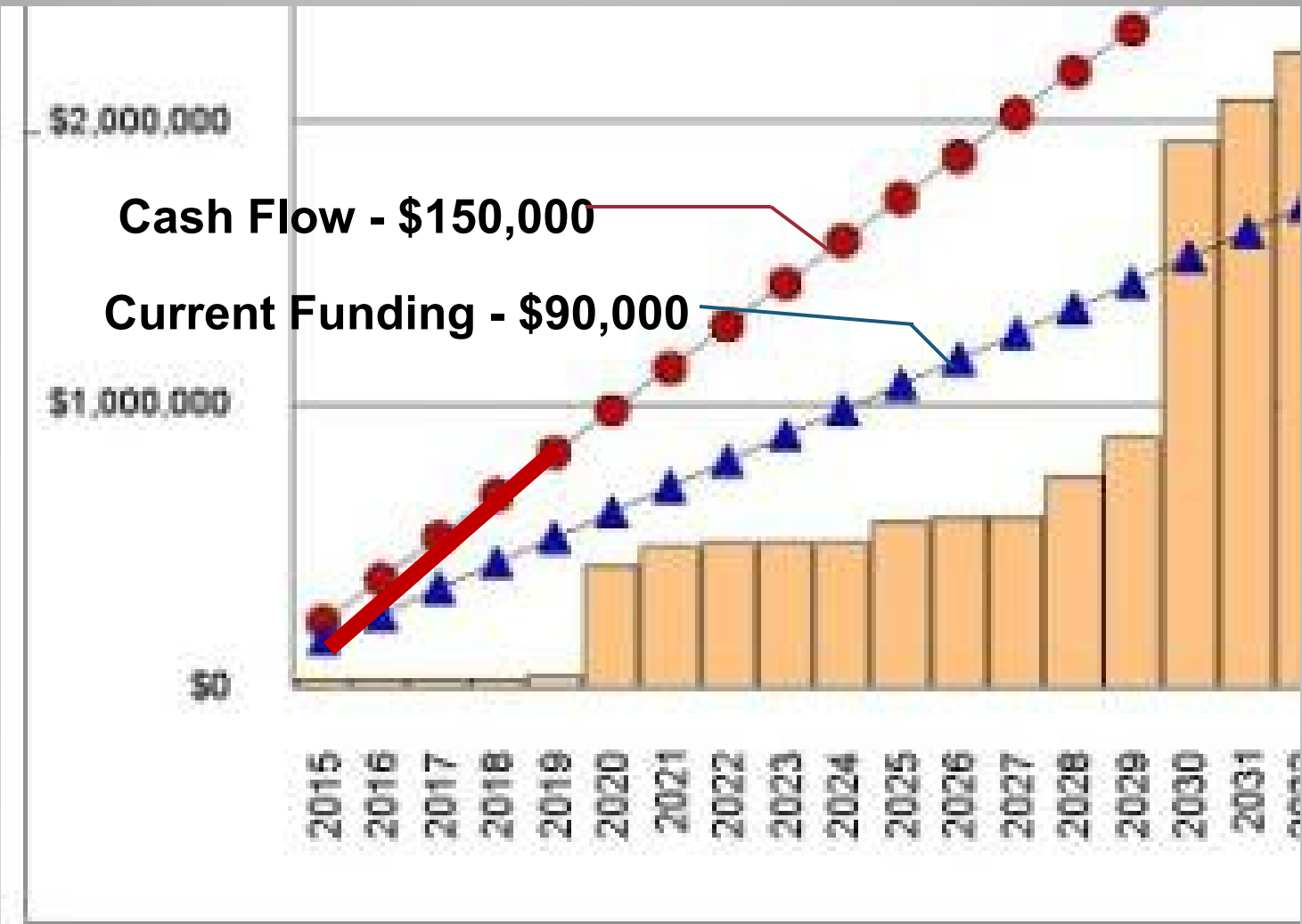
Year	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Starting Balance	\$77,240									
Projected Replacements	(\$25,128)	(\$1,950)		(\$1,950)	(\$3,965)	(\$396,408)	(\$62,593)	(\$14,570)		(\$1,950)
Annual Deposit	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000
End of Year Balance	\$142,112	\$230,162	\$320,182	\$408,212	\$494,247	\$187,838	\$215,246	\$290,676	\$380,676	\$488,726
Cumulative Expenditures	(\$25,128)	(\$27,078)	(\$27,078)	(\$29,028)	(\$32,993)	(\$429,402)	(\$491,994)	(\$506,564)	(\$506,564)	(\$508,514)
Cumulative Receipts	\$167,240	\$257,240	\$347,240	\$437,240	\$527,240	\$617,240	\$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)	(\$152,669)	(\$171,865)	(\$58,680)	(\$89,930)
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	\$481,761	\$560,511	\$650,511	\$597,743	\$550,309	(\$404,364)	(\$467,032)	(\$548,897)	(\$517,577)	(\$497,507)
Cumulative Expenditures	(\$585,479)	(\$596,729)	(\$596,729)	(\$739,497)	(\$876,931)	(\$1,921,604)	\$2,074,272)	(\$2,246,137)	(\$2,304,817)	(\$2,374,747)
Cumulative Receipts	\$1,067,240	\$1,157,240	\$1,247,240	\$1,337,240	\$1,427,240	\$1,517,240	\$1,607,240	\$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)	(\$3,965)	(\$674,805)	(\$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	(\$512,796)	(\$575,178)	(\$543,856)	(\$547,558)	(\$481,521)	(\$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)	(\$3,674,489)	(\$3,768,189)
Cumulative Receipts	\$1,967,240	\$2,057,240	\$2,147,240	\$2,237,240	\$2,327,240	\$2,417,240	\$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	(\$80,610)	(\$9,300)	(\$40,752)	(\$144,718)	(\$178,185)	(\$1,062,483)	(\$152,668)	(\$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	(\$91,580)	(\$90,860)	(\$85,612)	(\$908,330)	(\$994,515)	(\$1,986,999)	(\$2,029,687)	(\$2,109,582)	(\$2,019,582)	(\$1,838,882)
Cumulative Expenditures	(\$3,848,800)	(\$3,858,100)	(\$3,898,852)	(\$4,043,570)	(\$4,221,755)	(\$5,284,239)	(\$5,436,907)	(\$5,606,822)	(\$5,606,822)	(\$5,616,122)
Cumulative Receipts	\$2,987,240	\$2,957,240	\$3,047,240	\$3,137,240	\$3,227,240	\$3,317,240	\$3,407,240	\$3,497,240	\$3,587,240	\$3,677,240

Year end balance stays positive until year 2030.

#1 - Cumulative Replacement Reserve Funding and Expenditures Graph



— 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 6

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)

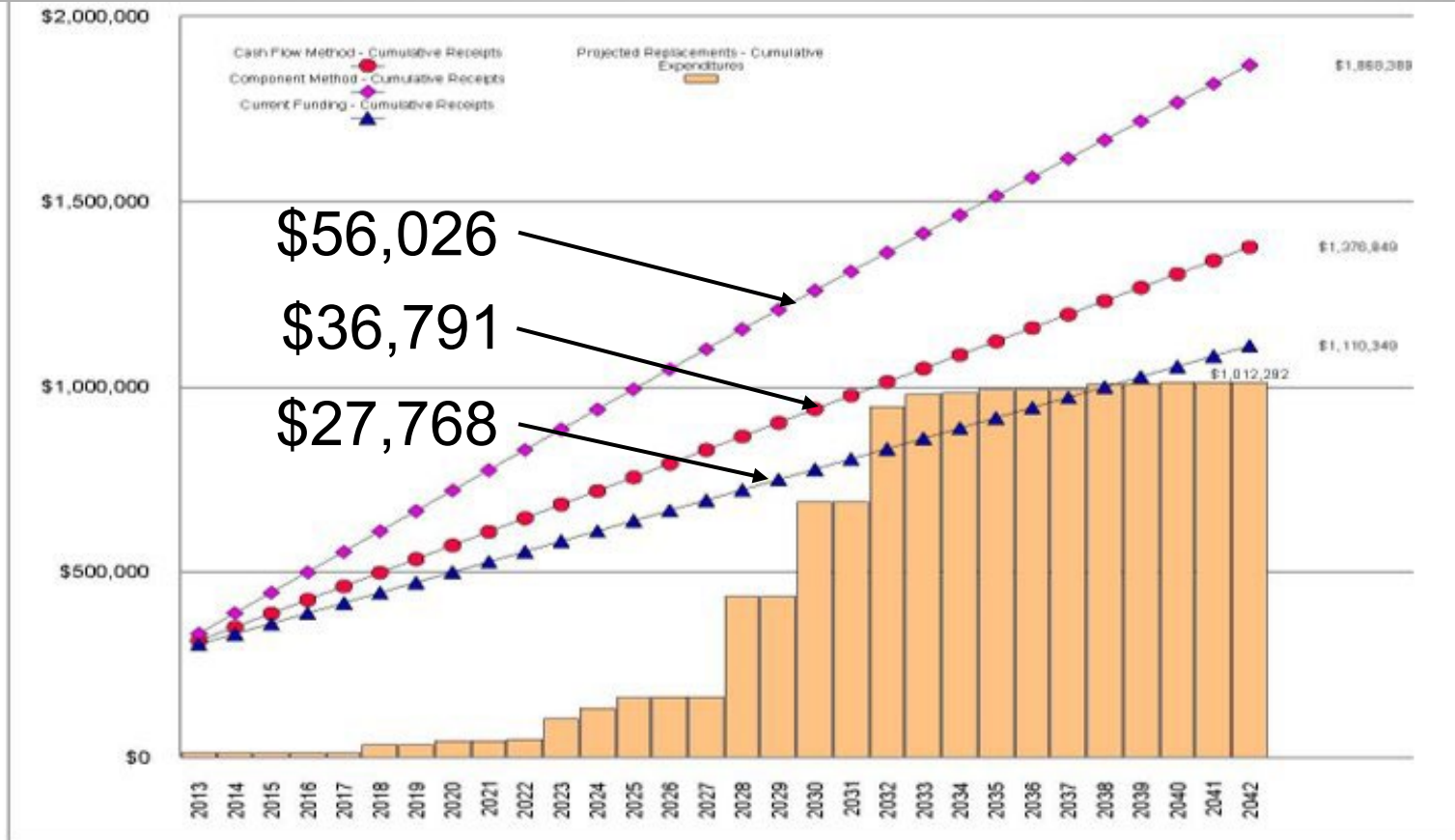
Cash Flow Calculations

	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

Component Calculations

	Year	1st	2nd	3rd	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

Actual Reserve Study



Questions

Module 7

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 Indexes (PPIs) and Employment Cost Indexes (ECIs) for Construction, 2019-2024

BLS Series ID		12-month percentage change to December:					to March 2024 since:			BLS Series ID		12-month percentage change to December:					to March 2024 since:		
		2019	2020	2021	2022	2023	2/2024	12/2023	3/2023			2019	2020	2021	2022	2023	2/2024	12/2023	3/2023
Table 1: Changes in consumer, producer & construction prices																			
CUUR0000SA0	Consumer price index (CPI-U)	2.3	1.4	7.0	6.5	3.4	0.6	1.8	3.5	WPU057303	#2 diesel fuel	-0.7	-2.8	54.2	21.1	-18.4	-0.6	11.4	-6.2
WPUFD4	Producer price index (PPI) for final demand	1.4	0.8	10.0	6.4	1.1	0.5	1.9	2.1	WPU1394	Paving mixtures and blocks (asphalt)	-1.8	-2.7	8.2	16.2	2.4	-0.6	7.6	0.9
WPUFD43	Final demand construction	3.9	1.2	12.2	18.5	0.5	0.1	0.3	-1.1	WPU136	Asphalt felts and coatings	-0.8	2.1	18.1	11.4	2.5	0.1	0.7	5.9
WPUFD431	Construction for private capital investment	3.8	1.3	13.4	19.8	0.5	0.1	0.3	-1.2	WPU1361	Prepared asphalt & tar roofing & siding products	-0.8	2.5	19.6	11.7	2.6	0.1	0.8	7.0
WPUFD432	Construction for government	4.0	0.9	10.1	16.1	0.6	0.0	0.4	-1.0	WPU1322	Cement	1.9	1.9	4.4	13.0	8.9	0.0	2.5	5.0
WPU80	Construction (partial)	3.5	0.9	11.6	16.3	0.8	0.1	0.4	-0.8	WPU133	Concrete products	3.1	2.2	8.6	14.8	6.9	0.0	2.5	6.2
WPU801	New nonresidential building construction	4.0	1.3	12.4	19.4	0.4	0.1	0.3	-1.3	WPU1331	Concrete block and brick	3.6	3.0	5.1	13.8	10.6	0.0	1.8	6.2
WPU801101	New warehouse building construction	4.5	-0.1	20.4	20.9	-1.6	0.1	0.0	-1.0	WPU1332	Concrete pipe	4.1	2.6	14.9	19.9	5.5	0.0	2.5	7.5
WPU801102	New school building construction	4.7	1.2	9.0	17.9	0.0	-0.1	0.4	-1.4	WPU1333	Ready-mixed concrete	2.7	2.2	6.8	13.0	6.9	0.1	3.3	7.0
WPU801103	New office building construction	3.6	1.2	13.0	20.2	2.3	0.4	0.6	-1.2	WPU1334	Precast concrete products	3.9	3.0	12.0	13.1	6.0	0.0	1.5	4.2
WPU801104	New industrial building construction	4.5	2.0	13.4	20.5	0.5	0.0	0.5	-0.7	WPU1335	Prestressed concrete products	2.5	-1.2	14.7	31.9	4.6	-0.5	-1.0	3.5
WPU801105	New health care building construction	3.1	1.4	11.4	18.0	0.2	-0.2	0.0	-1.8	WPU1342	Brick and structural clay tile	1.8	3.3	6.1	8.8	5.5	0.3	3.6	4.0
WPU802	Maint & repair of nonres buildings (partial)	2.2	-0.2	9.5	7.8	3.3	0.6	0.8	2.7	WPU0721	Plastic construction products	0.4	5.4	35.4	8.7	-3.5	0.0	0.2	-2.0
Table 2: Changes in PPIs for new, repair & maintenance work by subcontractors																			
PCU23811X23811X	Concrete contractors, nonresidential building work	4.7	0.9	17.4	10.9	-2.0	0.2	0.8	-0.8	WPU1311	Flat glass	1.0	3.7	7.4	10.0	2.1	-0.3	0.0	-0.7
PCU23816X23816X	Roofing contractors, nonresidential building work	3.6	3.2	9.2	21.1	9.0	0.0	0.2	3.7	WPU13710102	Gypsum building materials	-7.5	4.6	23.0	17.5	-1.9	2.2	5.3	1.3
PCU23821X23821X	Electrical contractors, nonresidential building work	3.6	2.0	9.6	12.3	2.9	0.0	0.0	-5.1	WPU1392	Insulation materials	-3.1	1.6	16.9	14.9	1.2	-0.1	4.1	3.9
PCU23822X23822X	Plumbing contractors, nonresidential building work	3.7	0.0	8.4	14.6	3.1	-0.1	0.2	1.8	WPU1004011	Lumber and plywood	-2.2	37.2	18.1	-19.3	-6.5	1.7	3.0	-2.7
Table 3: Changes in PPIs for inputs to construction industries, excluding capital investment, labor and imports																			
WPUIP230000	Inputs to construction industries	1.4	5.5	18.5	6.1	1.7	0.4	1.9	1.8	WPU1017	Steel mill products	-16.0	5.2	128.0	-29.8	-3.3	-7.8	0.5	-3.6
WPUIP2300001	Inputs to construction industries, goods	0.8	2.6	22.8	7.7	1.1	0.4	2.7	1.7	WPU101706	Steel pipe and tube	-9.0	1.9	79.8	-7.9	-16.1	-2.6	0.8	-10.3
WPUIP23000012	Inputs to construction industries, energy	3.7	-11.0	51.4	7.4	-8.9	2.6	14.7	-2.2	WPU102502	Copper and brass mill shapes	-0.6	23.6	23.4	-2.3	-1.0	2.0	2.1	-3.1
WPUIP23000013	Inputs to construction industries, goods less foods	0.3	4.8	20.3	7.8	2.1	0.2	1.6	2.1	WPU102501	Aluminum mill shapes	-4.4	-1.7	29.5	-5.3	-1.9	-0.5	-1.1	-6.6
WPUIP2300002	Inputs to construction industries, services	2.1	9.1	12.1	3.5	3.1	0.3	0.2	2.0	WPU1073	Sheet metal products	-1.3	-0.3	35.5	8.0	0.3	0.5	1.1	2.4
WPUIP231000	Inputs to new construction	1.4	5.6	18.9	6.1	1.8	0.3	1.8	1.8	WPU107405	Fabricated structural metal	-3.3	-0.5	47.6	7.5	3.5	-0.7	-1.9	-1.0
WPUIP231200	New nonresidential construction	1.8	4.4	20.2	6.7	1.8	0.3	1.6	1.5	WPU1074051	Fabricated structural metal bar joists & rebar	-2.9	0.5	56.9	3.3	6.4	-1.6	-2.5	-0.3
WPUIP231211	Commercial structures	1.6	4.2	21.1	7.1	1.6	0.3	1.1	0.9	WPU10740514	Fabricated structural metal for non-industrial buildin	-3.8	0.2	61.7	3.5	7.7	-2.0	-4.9	-2.0
WPUIP231212	Healthcare structures	1.7	5.0	20.0	7.1	1.4	0.3	1.3	1.1	WPU10740553	Fabricated structural metal for bridges	-6.9	-0.4	41.2	15.3	0.2	-0.2	-6.6	-1.0
WPUIP231220	Industrial structures	3.2	3.8	18.6	6.7	2.8	0.5	1.6	1.7	WPU107408	Ornamental and architectural metal work	0.1	4.8	48.1	10.8	1.2	0.3	1.1	1.9
WPUIP231230	Other nonresidential	1.7	4.3	19.9	6.8	1.7	0.4	1.7	1.5	WPU1076	Fabricated steel plate	-1.3	1.8	45.5	1.9	-	-	-	-
WPUIP231231	Highways and streets	1.4	1.8	19.8	7.2	2.5	0.3	2.0	2.1	WPU1079	Prefabricated metal buildings	-5.3	12.0	41.4	-4.2	7.6	0.6	1.4	3.4
WPUIP231232	Power and communications structures	1.5	3.6	20.4	6.2	1.4	0.4	1.6	1.1	WPU112	Construction machinery and equipment	2.3	1.1	10.0	8.8	7.4	0.0	0.6	3.9
WPUIP231233	Educational and vocational structures	1.8	5.8	19.5	6.4	1.4	0.3	1.3	1.2	WPU07120105	Truck & bus (incl. off-the-highway) pneumatic tires	-0.1	0.3	10.9	19.6	-5.1	-0.1	-0.2	-7.5
WPUIP231234	Other misc. nonresidential construction	1.9	4.8	19.9	6.1	1.5	0.3	1.7	1.6	Table 6: Changes in PPIs for unprocessed goods important to construction									
WPUIP231100	New residential construction	1.0	6.7	15.9	5.4	2.0	0.3	2.0	2.4	WPU058102	Asphalt (at refinery)	-17.1	-13.9	70.6	-23.5	23.8	11.2	5.6	13.0
WPUIP231110	Single-family	1.0	6.6	15.4	5.2	1.8	0.4	2.0	2.3	WPU1321	Construction sand/gravel/crushed stone	4.2	4.3	4.1	12.0	8.5	0.4	5.8	8.3
WPUIP231120	Multifamily	1.0	7.6	15.5	4.8	2.5	0.2	1.8	3.0	WPU1012	Iron and steel scrap	-26.2	40.6	37.9	-30.0	17.5	-9.6	-10.5	-18.1
WPUIP232000	Maintenance and repair construction	1.4	5.7	16.8	6.2	1.5	0.3	2.2	1.9	WPU101212	Stainless and alloy steel scrap	-0.1	27.4	47.9	-28.0	-2.2	8.2	4.1	0.2
WPUIP232200	Nonresidential maintenance and repair	1.3	5.2	18.4	5.8	1.4	0.3	2.3	1.8	WPU102301	Copper kase scrap	-5.9	30.1	24.5	-7.5	-0.7	5.0	6.5	1.8
WPUIP232100	Residential maintenance and repair	1.0	6.1	14.8	5.9	1.9	0.3	2.0	2.3	Table 7: Changes in ECIs for total compensation, wages & salaries (through Dec 2023)									
Table 4: Changes in PPIs for services important to construction																			
WPU4531	Architectural services	-1.2	-1.7	0.6	1.9	1.9	0.0	0.6	2.1	CIU2010000000001	Private industry--total compensation	2.7	2.6	4.4	5.1	3.4	0.0	3.4	
WPU4532	Engineering services	2.1	2.0	1.5	6.2	3.5	0.0	1.3	2.8	CIU2012300000001	Construction--total compensation	3.5	2.4	3.5	4.3	3.2	0.0	3.2	
WPU3012	Truck transportation of freight	6.5	0.0	2.2	8.5	-8.9	0.4	0.9	-3.6	CIU2020000000001	Private industry--wages and salaries	3.0	2.8	5.0	5.1	3.5	0.0	3.5	
WPU443	Const, mining & forestry mach & eq rental & leasin	-0.5	-1.3	-4.6	8.1	1.2	0.6	-0.2	-0.3	CIU2022300000001	Construction--wages and salaries	3.8	2.8	3.8	4.8	3.3	0.0	3.3	

Updated 4/11/2024

 Source: BLS: www.bls.gov/cpi for CPI, www.bls.gov/ppi for PPIs; www.bls.gov/ect for ECIs.

 Compiled by Ken Simonson (ken.simonson@agc.org), Chief Economist, Associated General Contractors of America, www.agc.org.

<u>BLS Series ID</u>		<u>12-month percentage change to December:</u>					<u>to March 2024 since:</u>		
		<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2/2024</u>	<u>12/2023</u>	<u>3/2023</u>
<u>Table 1: Changes in consumer, producer & construction prices</u>									
CUUR0000SA0	Consumer price index (CPI-U)	2.3	1.4	7.0	6.5	3.4	0.6	1.8	3.5
WPUFD4	Producer price index (PPI) for final demand	1.4	0.8	10.0	6.4	1.1	0.5	1.9	2.1
WPUFD43	Final demand construction	3.9	1.2	12.2	18.5	0.5	0.1	0.3	-1.1
WPUFD431	Construction for private capital investment	3.8	1.3	13.4	19.8	0.5	0.1	0.3	-1.2
WPUFD432	Construction for government	4.0	0.9	10.1	16.1	0.6	0.0	0.4	-1.0
WPU80	Construction (partial)	3.5	0.9	11.6	16.3	0.8	0.1	0.4	-0.8
WPU801	New nonresidential building construction	4.0	1.3	12.4	19.4	0.4	0.1	0.3	-1.3
WPU801101	New warehouse building construction	4.5	-0.1	20.4	20.9	-1.6	0.1	0.0	-1.0
WPU801102	New school building construction	4.7	1.2	9.0	17.9	0.0	-0.1	0.4	-1.4
WPU801103	New office building construction	3.6	1.2	13.0	20.2	2.3	0.4	0.6	-1.2
WPU801104	New industrial building construction	4.5	2.0	13.4	20.5	0.5	0.0	0.5	-0.7
WPU801105	New health care building construction	3.1	1.4	11.4	18.0	0.2	-0.2	0.0	-1.8
WPU802	Maint & repair of nonres buildings (partial)	2.2	-0.2	9.5	7.8	3.3	0.6	0.8	2.7

Table 2: Changes in PPIs for new, repair & maintenance work by subcontractors

PCU23811X23811X	Concrete contractors, nonresidential building work	4.7	0.9	17.4	10.9	-2.0	0.2	0.8	-0.8
PCU23816X23816X	Roofing contractors, nonresidential building work	3.6	3.2	9.2	21.1	9.0	0.0	0.2	3.7
PCU23821X23821X	Electrical contractors, nonresidential building work	3.6	2.0	9.6	12.3	2.9	0.0	0.0	-5.1
PCU23822X23822X	Plumbing contractors, nonresidential building work	3.7	0.0	8.4	14.6	3.1	-0.1	0.2	1.8

BLS Series ID

12-month percentage change to December:

to March 2024 since:

2019

2020

2021

2022

2023

2/2024 12/2023

3/2023

Table 3: Changes in PPIs for inputs to construction industries, excluding capital investment, labor and imports

BLS Series ID		2019	2020	2021	2022	2023	2/2024 12/2023	3/2023	
WPUIP230000	Inputs to construction industries	1.4	5.5	18.5	6.1	1.7	0.4	1.9	1.8
WPUIP2300001	Inputs to construction industries, goods	0.8	2.6	22.8	7.7	1.1	0.4	2.7	1.7
WPUIP23000012	Inputs to construction industries, energy	3.7	-11.0	51.4	7.4	-8.9	2.6	14.7	-2.2
WPUIP23000013	Inputs to construction industries, goods less foods	0.3	4.8	20.3	7.8	2.1	0.2	1.6	2.1
WPUIP2300002	Inputs to construction industries, services	2.1	9.1	12.1	3.5	3.1	0.3	0.2	2.0
WPUIP231000	Inputs to new construction	1.4	5.6	18.9	6.1	1.8	0.3	1.8	1.8
WPUIP231200	New nonresidential construction	1.8	4.4	20.2	6.7	1.8	0.3	1.6	1.5
WPUIP231211	Commercial structures	1.6	4.2	21.1	7.1	1.6	0.3	1.1	0.9
WPUIP231212	Healthcare structures	1.7	5.0	20.0	7.1	1.4	0.3	1.3	1.1
WPUIP231220	Industrial structures	3.2	3.8	18.6	6.7	2.8	0.5	1.6	1.7
WPUIP231230	Other nonresidential	1.7	4.3	19.9	6.8	1.7	0.4	1.7	1.5
WPUIP231231	Highways and streets	1.4	1.8	19.8	7.2	2.5	0.3	2.0	2.1
WPUIP231232	Power and communications structures	1.5	3.6	20.4	6.2	1.4	0.4	1.6	1.1
WPUIP231233	Educational and vocational structures	1.8	5.8	19.5	6.4	1.4	0.3	1.3	1.2
WPUIP231234	Other misc. nonresidential construction	1.9	4.8	19.9	6.1	1.5	0.3	1.7	1.6
WPUIP231100	New residential construction	1.0	6.7	15.9	5.4	2.0	0.3	2.0	2.4
WPUIP231110	Single-family	1.0	6.6	15.4	5.2	1.8	0.4	2.0	2.3
WPUIP231120	Multifamily	1.0	7.6	15.5	4.8	2.5	0.2	1.8	3.0
WPUIP232000	Maintenance and repair construction	1.4	5.7	16.8	6.2	1.5	0.3	2.2	1.9
WPUIP232200	Nonresidential maintenance and repair	1.3	5.2	18.4	5.8	1.4	0.3	2.3	1.8
WPUIP232100	Residential maintenance and repair	1.0	6.1	14.8	5.9	1.9	0.3	2.0	2.3

BLS Series ID

12-month percentage change to December:

to March 2024 since:

2019 2020 2021 2022 2023 2/2024 12/2023 3/2023

Table 5: Changes in PPIs for processed goods important to construction

WPU057303	#2 diesel fuel	-0.7	-2.8	54.2	21.1	-18.4	-0.6	11.4	-6.2
WPU1394	Paving mixtures and blocks (asphalt)	-1.8	-2.7	8.2	16.2	2.4	-0.6	7.6	0.9
WPU136	Asphalt felts and coatings	-0.8	2.1	18.1	11.4	2.5	0.1	0.7	5.9
WPU1361	Prepared asphalt & tar roofing & siding products	-0.8	2.5	19.6	11.7	2.6	0.1	0.8	7.0
WPU1322	Cement	1.9	1.9	4.4	13.0	8.9	0.0	2.5	5.0
WPU133	Concrete products	3.1	2.2	8.6	14.8	6.9	0.0	2.5	6.2
WPU1331	Concrete block and brick	3.6	3.0	5.1	13.8	10.6	0.0	1.8	6.2
WPU1332	Concrete pipe	4.1	2.6	14.9	19.9	5.5	0.0	2.5	7.5
WPU1333	Ready-mixed concrete	2.7	2.2	6.8	13.0	6.9	0.1	3.3	7.0
WPU1334	Precast concrete products	3.9	3.0	12.0	13.1	6.0	0.0	1.5	4.2
WPU1335	Prestressed concrete products	2.5	-1.2	14.7	31.9	4.6	-0.5	-1.0	3.5
WPU1342	Brick and structural clay tile	1.8	3.3	6.1	8.8	5.5	0.3	3.6	4.0
WPU0721	Plastic construction products	0.4	5.4	35.4	8.7	-3.5	0.0	0.2	-2.0
WPU1311	Flat glass	1.0	3.7	7.4	10.0	2.1	-0.3	0.0	-0.7
WPU13710102	Gypsum building materials	-7.5	4.6	23.0	17.5	-1.9	2.2	5.3	1.3
WPU1392	Insulation materials	-3.1	1.6	16.9	14.9	1.2	-0.1	4.1	3.9
WPU1004011	Lumber and plywood	-2.2	37.2	18.1	-19.3	-6.5	1.7	3.0	-2.7
WPU062101	Architectural coatings	4.5	1.9	14.0	26.1	-0.3	0.0	0.4	0.0

BLS Series ID		12-month percentage change to December:					to March 2024 since:		
		2019	2020	2021	2022	2023	2/2024	12/2023	3/2023
WPU1017	Steel mill products	-16.0	5.2	128.0	-29.8	-3.3	-7.8	0.5	-3.6
WPU101706	Steel pipe and tube	-9.0	1.9	79.8	-7.9	-16.1	-2.6	0.8	-10.3
WPU102502	Copper and brass mill shapes	-0.6	23.6	23.4	-2.3	-1.0	2.0	2.1	-3.1
WPU102501	Aluminum mill shapes	-4.4	-1.7	29.5	-5.3	-1.9	-0.5	-1.1	-6.6
WPU1073	Sheet metal products	-1.3	-0.3	35.5	8.0	0.3	0.5	1.1	2.4
WPU107405	Fabricated structural metal	-3.3	-0.5	47.6	7.5	3.5	-0.7	-1.9	-1.0
WPU1074051	Fabricated structural metal bar joists & rebar	-2.9	0.5	56.9	3.3	6.4	-1.6	-2.5	-0.3
WPU10740514	Fabricated structural metal for non-industrial buildin	-3.8	0.2	61.7	3.5	7.7	-2.0	-4.9	-2.0
WPU10740553	Fabricated structural metal for bridges	-6.9	-0.4	41.2	15.3	0.2	-0.2	-6.6	-1.0
WPU107408	Ornamental and architectural metal work	0.1	4.8	48.1	10.8	1.2	0.3	1.1	1.9
WPU1076	Fabricated steel plate	-1.3	1.8	45.5	1.9	-	-	-	-
WPU1079	Prefabricated metal buildings	-5.3	12.0	41.4	-4.2	7.6	0.6	1.4	3.4
WPU112	Construction machinery and equipment	2.3	1.1	10.0	8.8	7.4	0.0	0.6	3.9
WPU07120105	Truck & bus (incl. off-the-highway) pneumatic tires	-0.1	0.3	10.9	19.6	-5.1	-0.1	-0.2	-7.5

Table 6: Changes in PPIs for unprocessed goods important to construction

WPU058102	Asphalt (at refinery)	-17.1	-13.9	70.6	-23.5	23.8	11.2	5.6	13.0
WPU1321	Construction sand/gravel/crushed stone	4.2	4.3	4.1	12.0	8.5	0.4	5.8	8.3
WPU1012	Iron and steel scrap	-26.2	40.6	37.9	-30.0	17.5	-9.6	-10.5	-18.1
WPU101212	Stainless and alloy steel scrap	-0.1	27.4	47.9	-28.0	-2.2	8.2	4.1	0.2
WPU102301	Copper base scrap	-5.9	30.1	24.5	-7.5	-0.7	5.0	6.5	1.8

Questions

Thank You!