

2016 State of the Roadway Network in Dunwoody

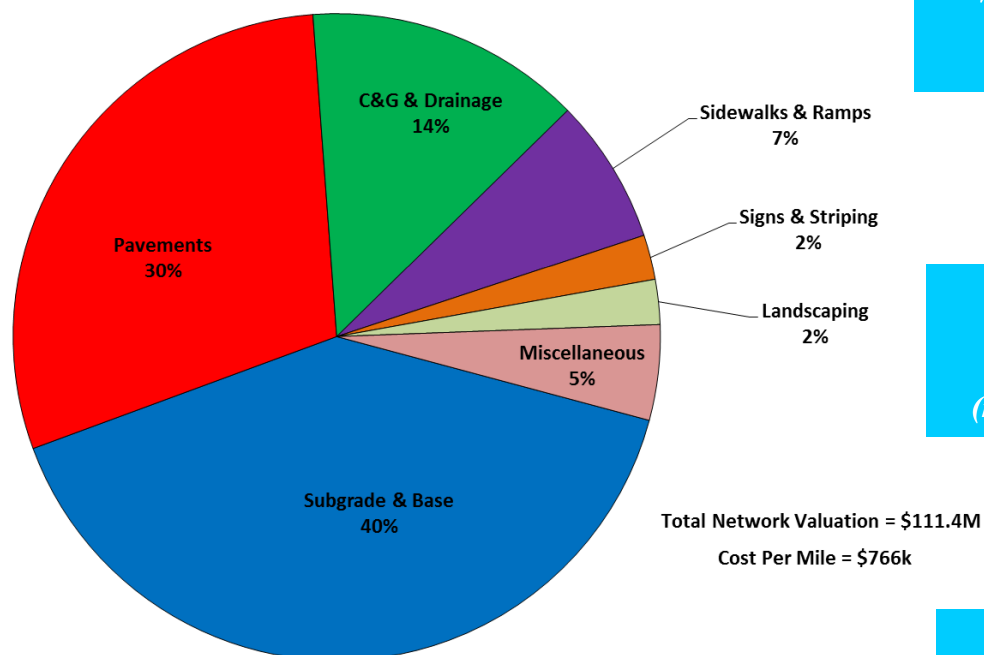


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IMS Infrastructure Management Services

Scale of Investment....



**City of Dunwoody
Network Valuation**

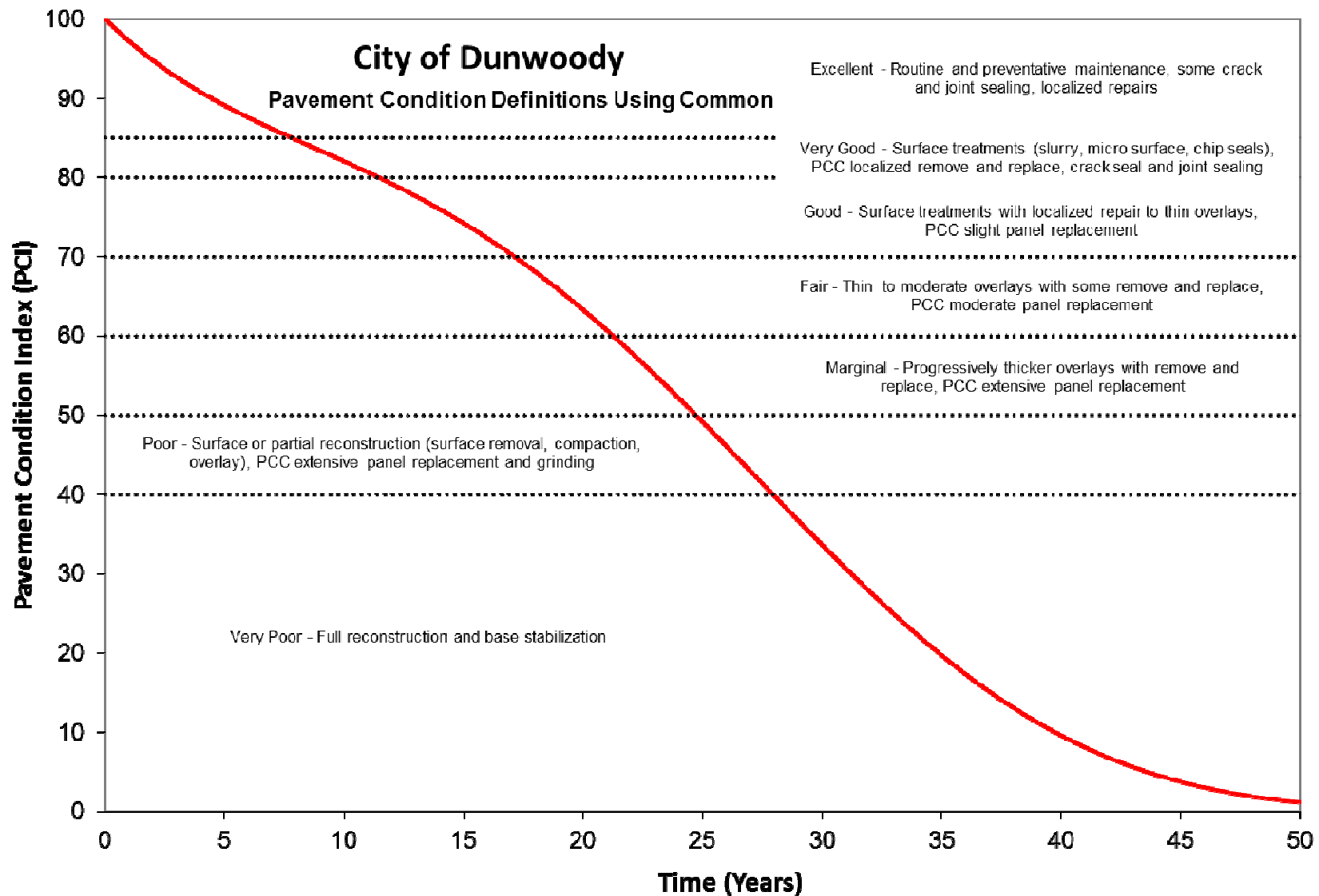


*~48,000 people
~147 CL miles of city owned roadways
2.45M square yards of pavement*

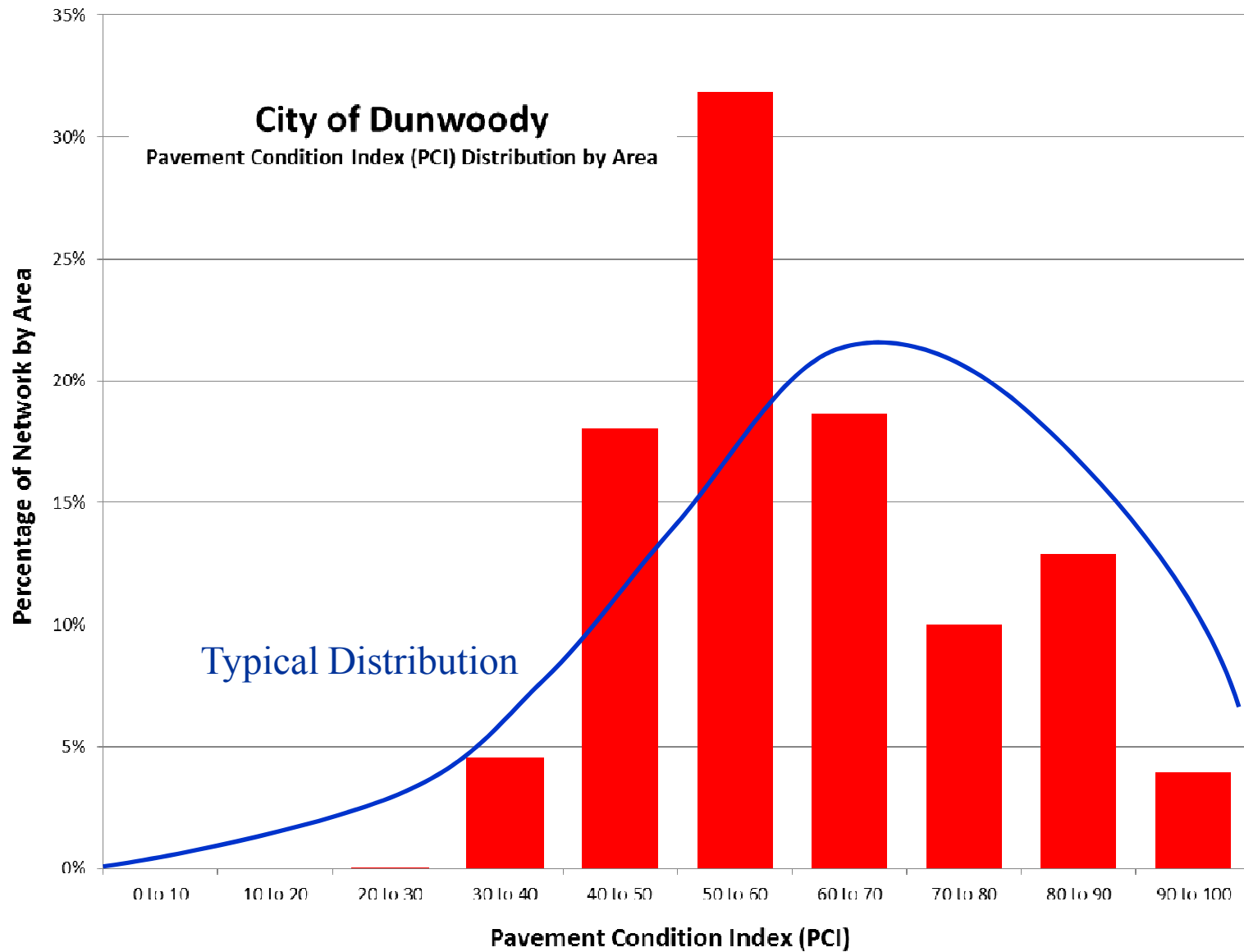
*Single largest City asset valued at
\$766K/mile or \$111.4M total
(not including the value of land, bridges, sidewalks, etc.)*

*2013 Condition Score Summary:
PCI = 66 (Fair)
Back log = 23% (target < 15%)
Rates as a C+*

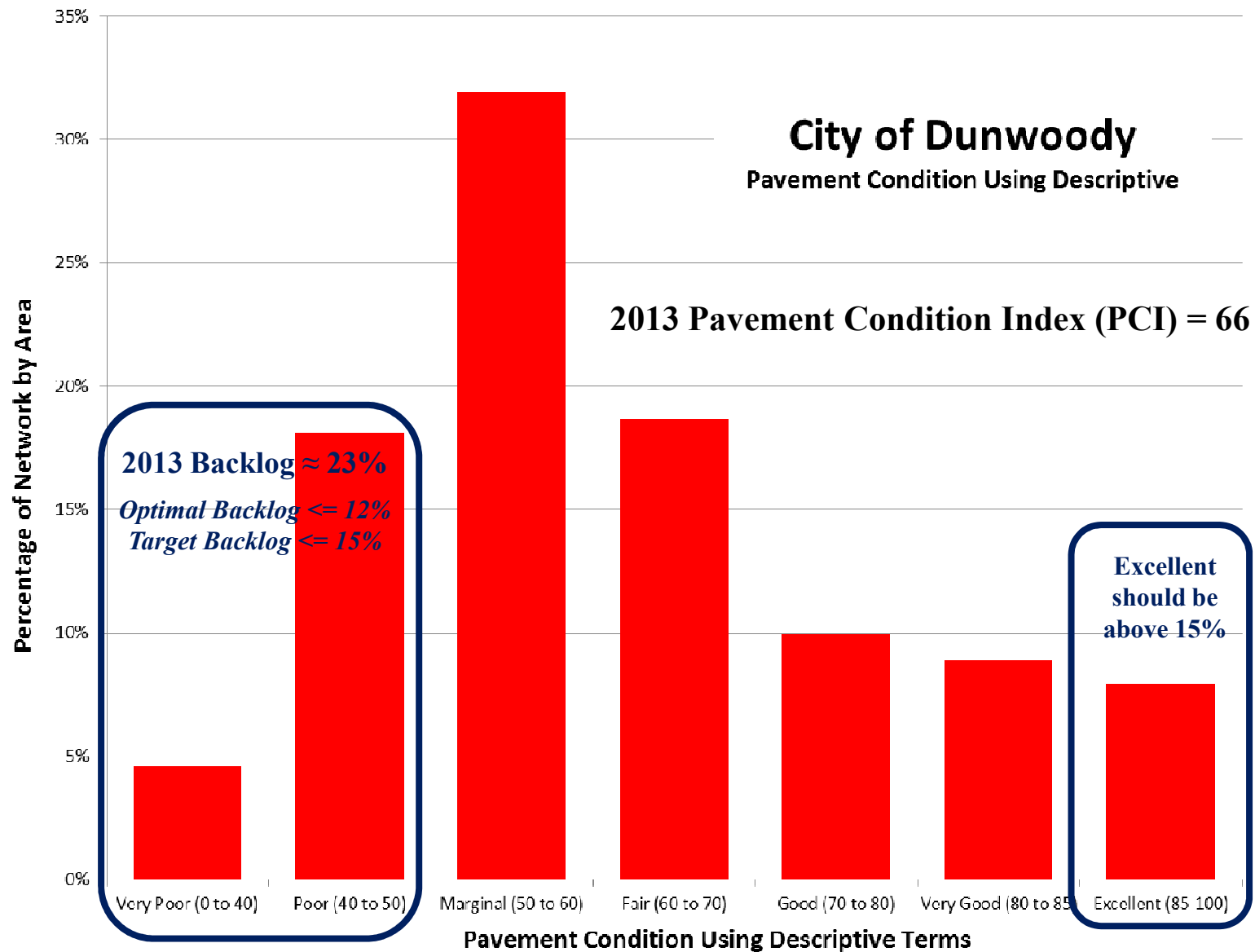
Understanding the Pavement Condition Index....



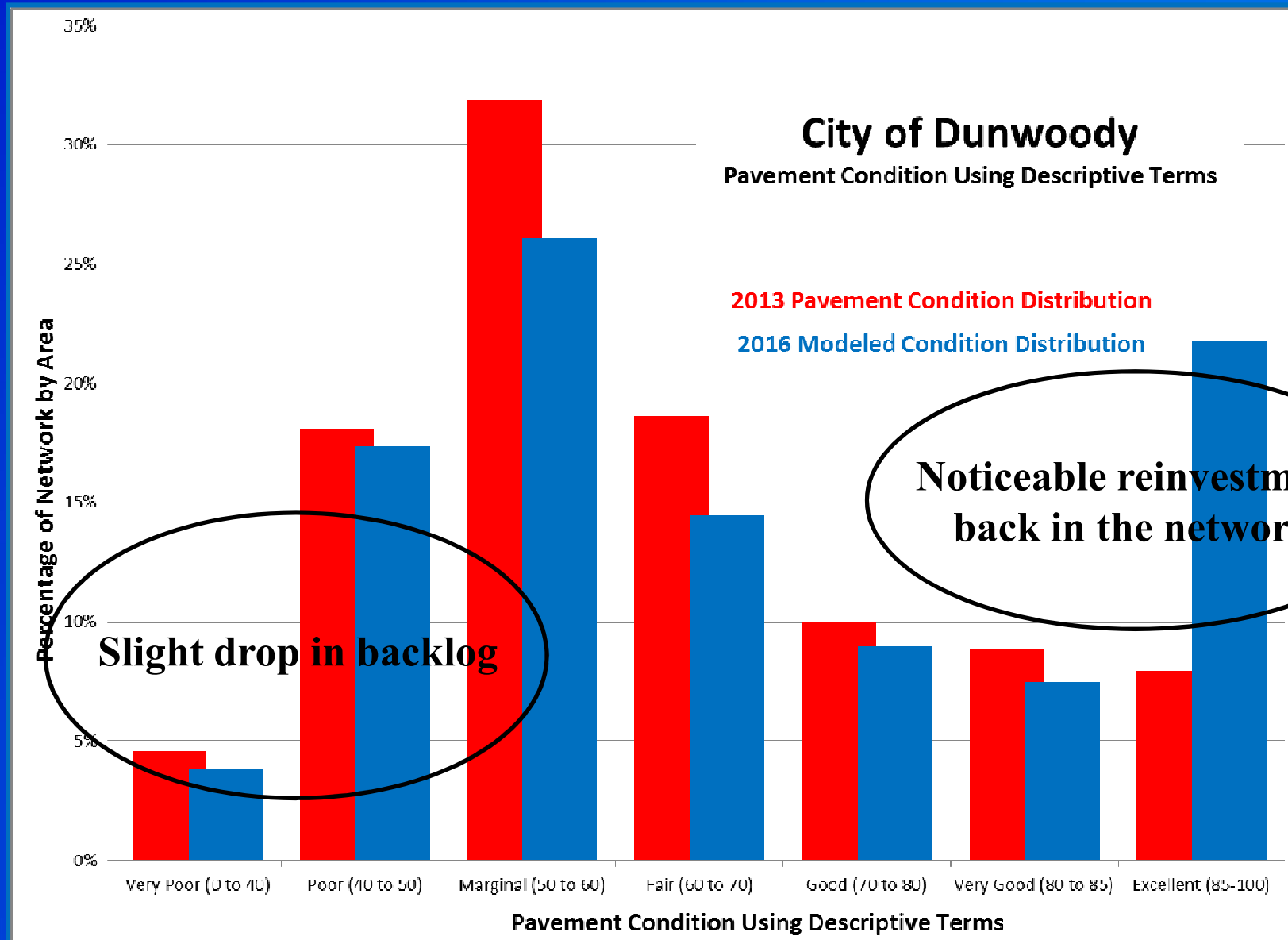
Dunwoody PCI Results in 2013....



Dunwoody 2013 Results... areas of concern and strengths



Network Comparison & Improvements

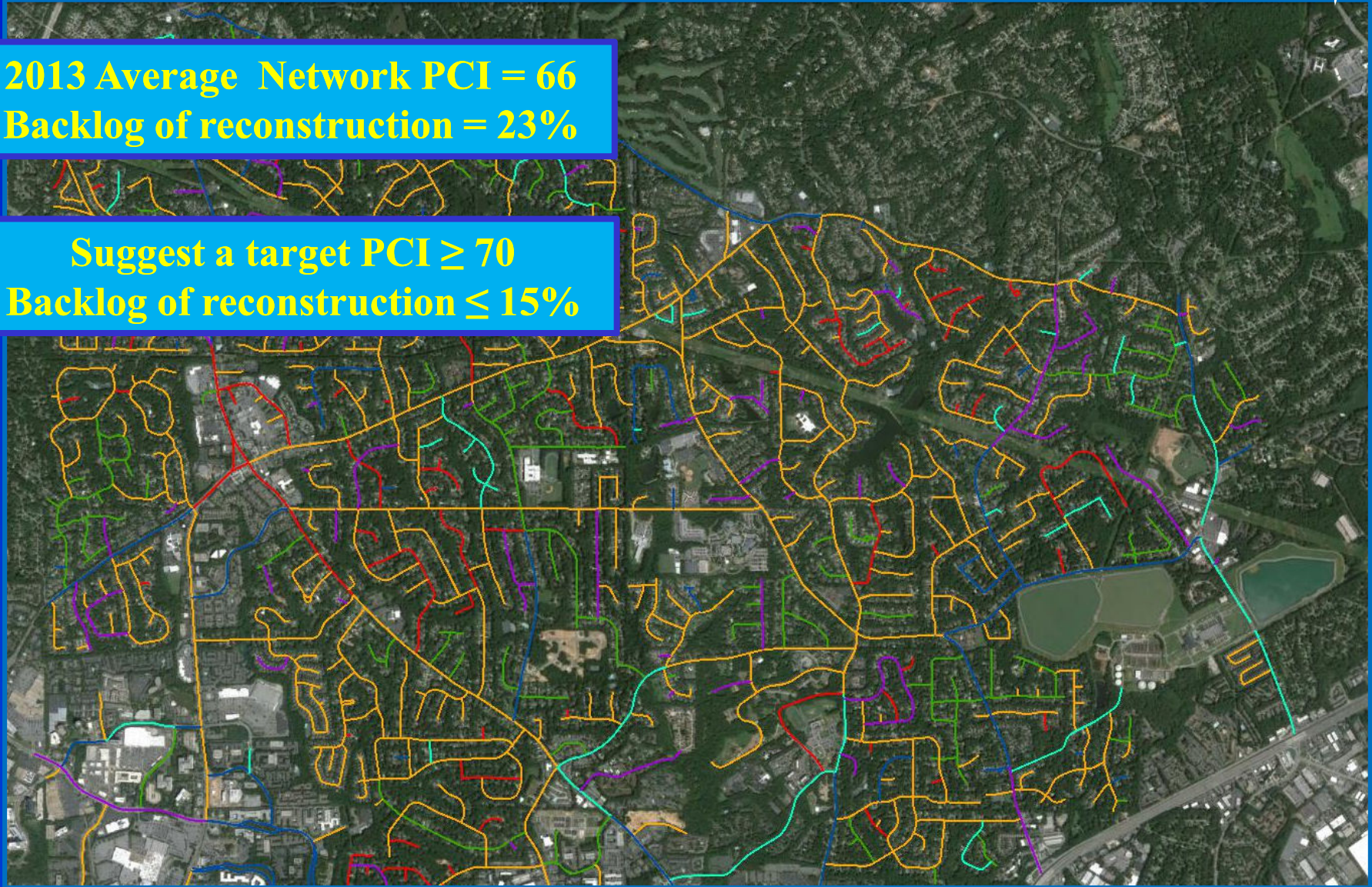


Dunwoody Pavement Results...



2013 Average Network PCI = 66
Backlog of reconstruction = 23%

Suggest a target PCI ≥ 70
Backlog of reconstruction $\leq 15\%$



Dunwoody Annual Funding Estimates....



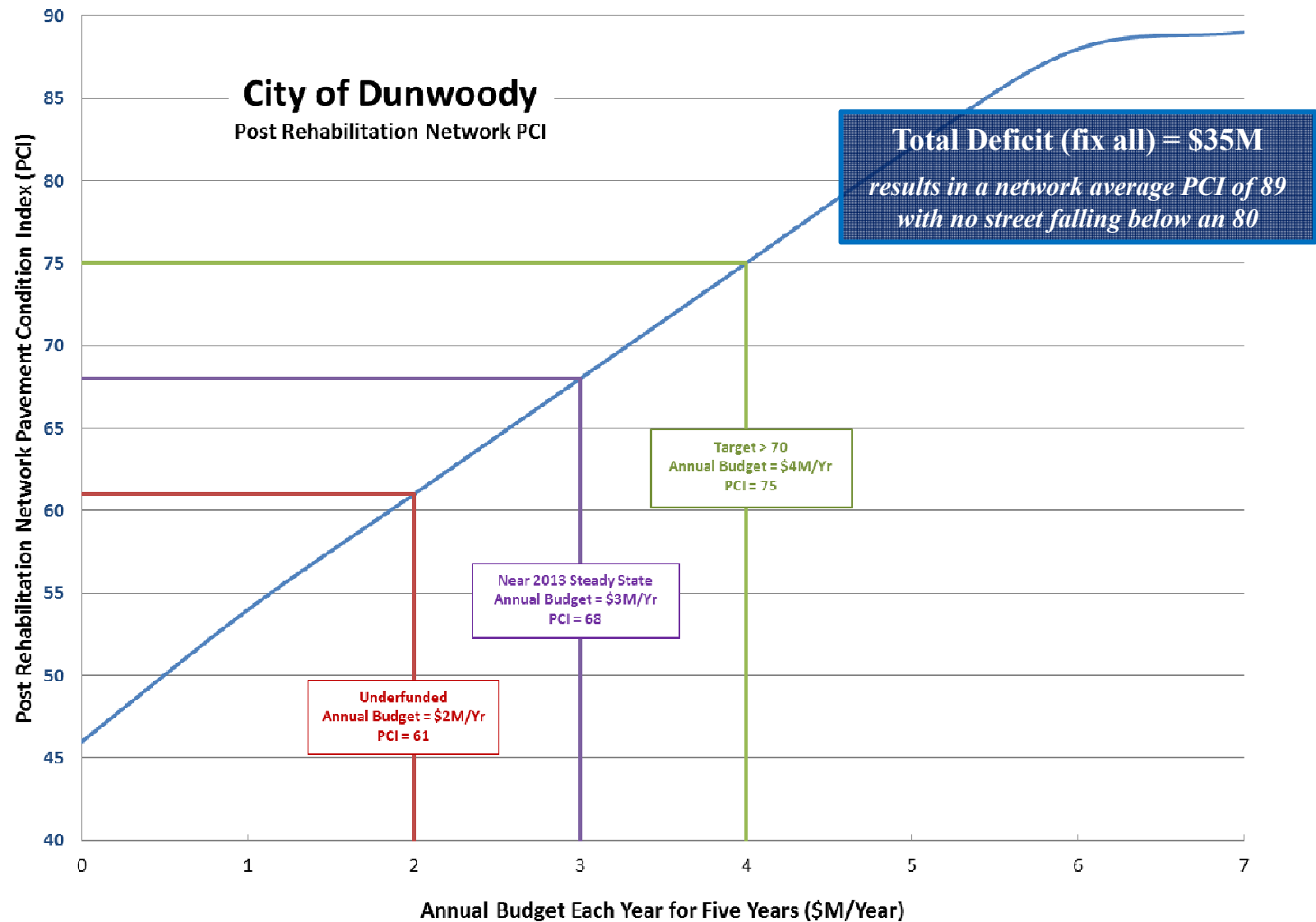
Estimate #1. - Based on Network Value Life Cycle Analysis

Pavement Type	Pavement Value (\$)	Ultimate Life Span (yrs)	Life Cycle Annual Cost (\$/yr)
Asphalt Network	111,331,000	50	2,230,000
All Streets	111,331,000		2,230,000

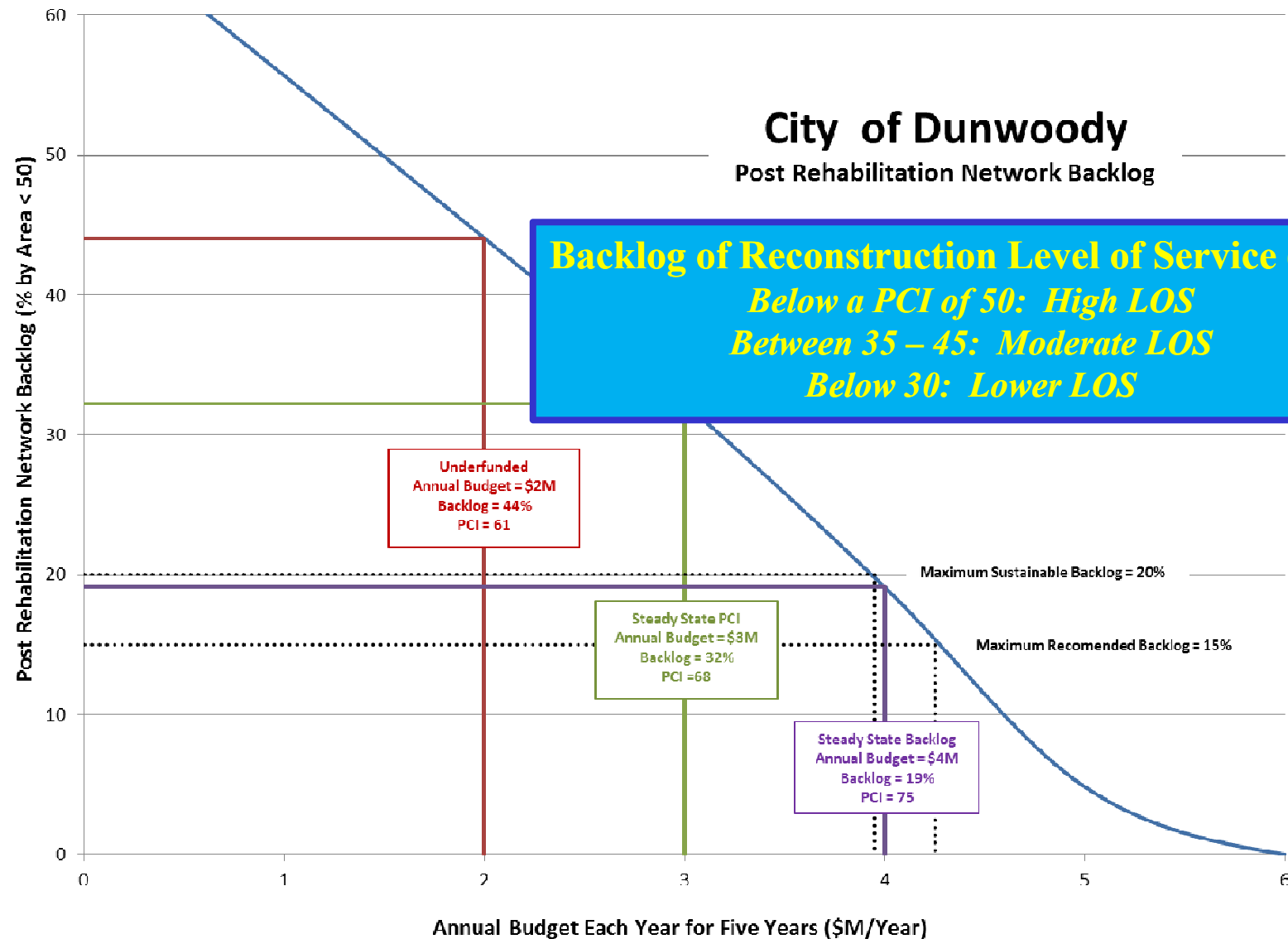
Estimate #2. - Based on Current Condition Life Cycle Analysis

Pavement Type	Pavement Condition Index (PCI)	Typical Rehab Based on Condition	Blended Rehab Unit Rate (\$/yd2)	Average Rehab Life Cycle (yrs)	Miles To Do Each Year (mi)	Cost Per Mile (\$/mi)	Life Cycle Annual Cost (\$/yr)
Asphalt Network	66	Mod Olay (1.5" - 2.0")	13.25	15	9.7	220,000	2,130,000
All Streets							2,130,000

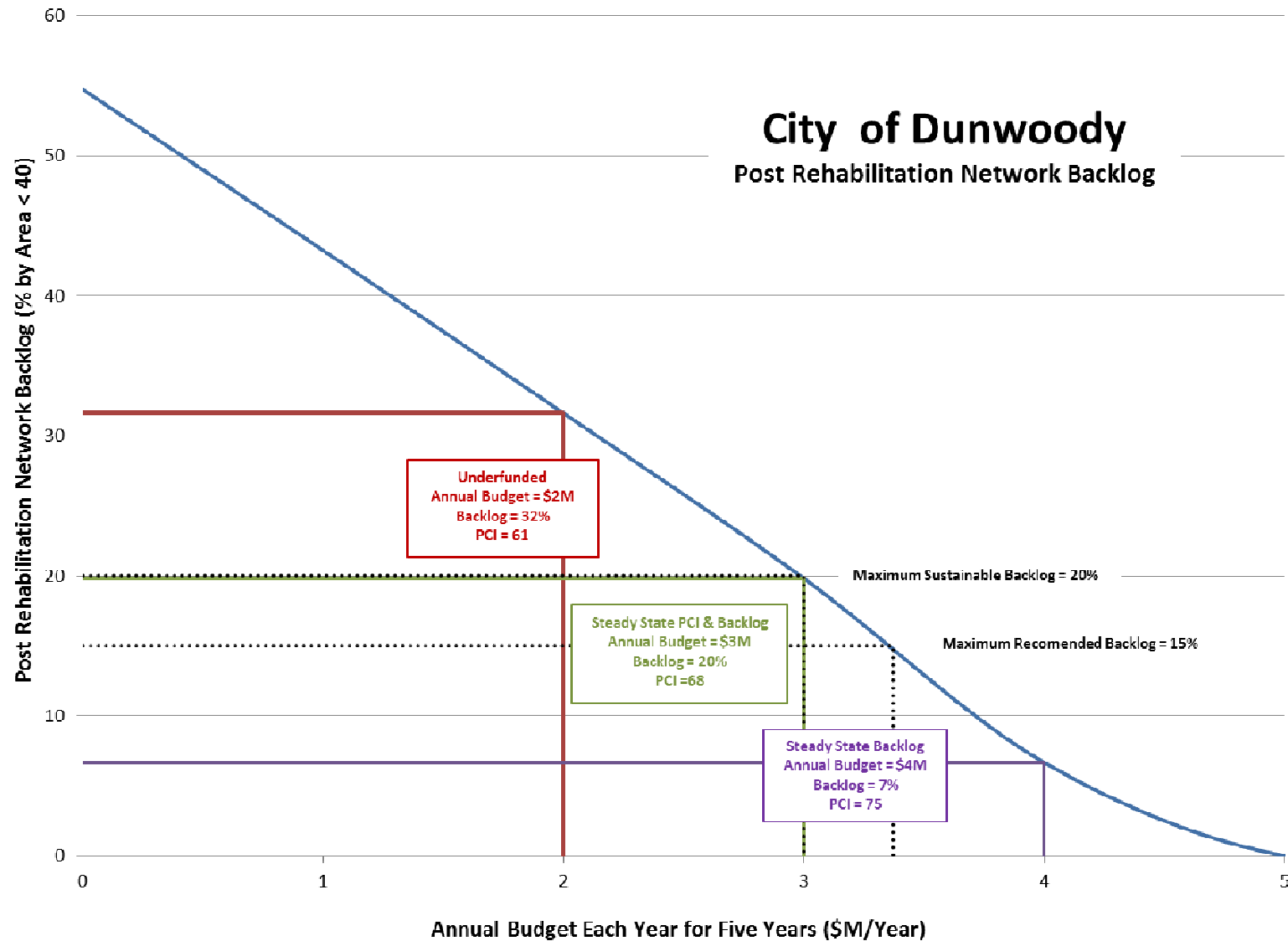
5-Year PCI & Annual Funding



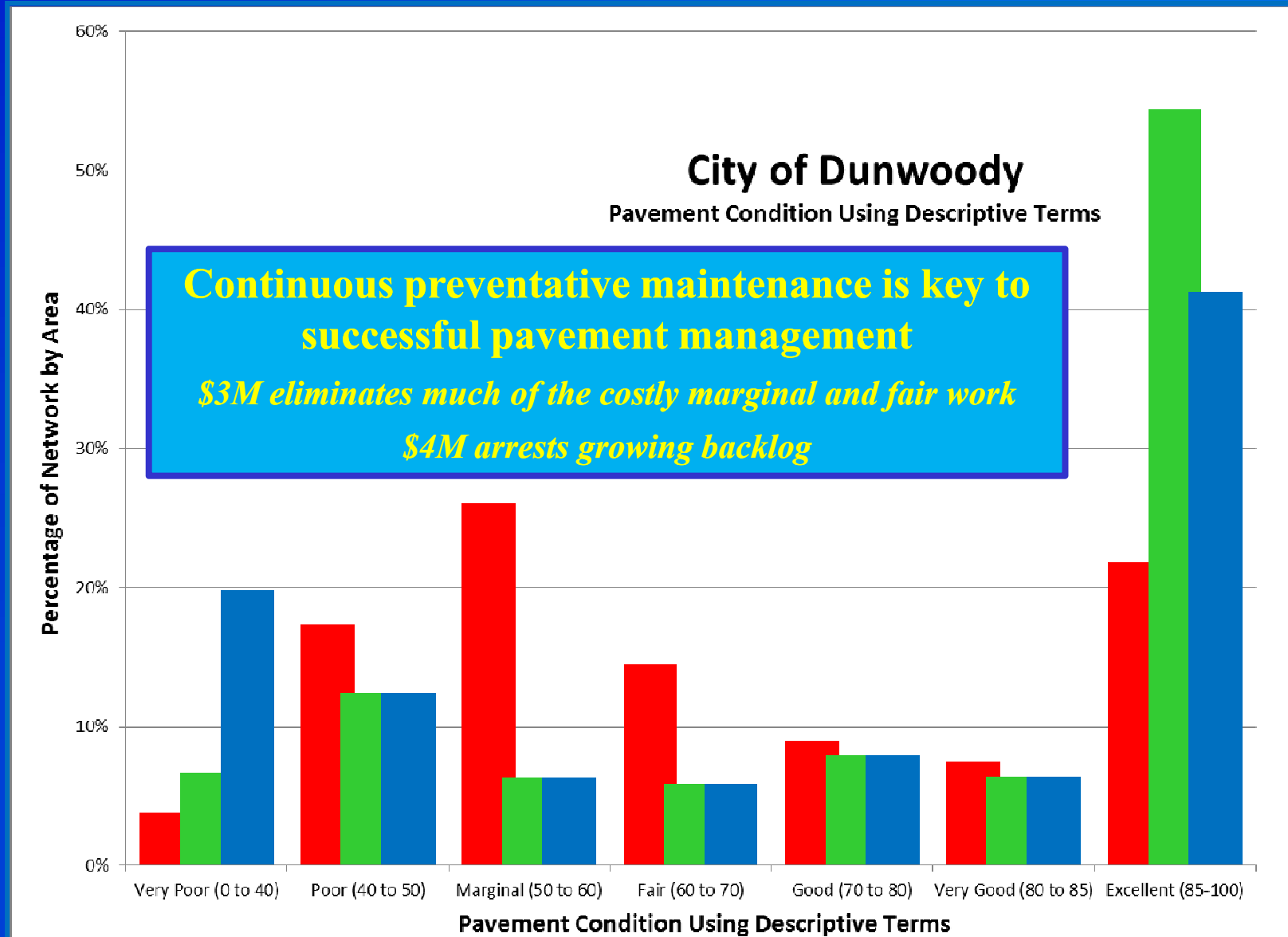
Post Rehab Backlog & Annual Funding



Post Rehab Backlog Below a PCI of 40



Post Rehab Condition & Funding...



Dunwoody Annual Funding Comparison....



Agency Funding Comparison											
Agency	State	Year	Mileage (mi)	PCI	Backlog	Steady State Budget (\$M/yr)	Steady State Rate (\$/mi)	Actual Funding (\$M/yr)	Actual Funding Rate (\$/mi)	Funding Ratio %	Comments
Agency CB	CA	2016	344	79	0%	3.00	9,000	3.25	9,000	100	Fully funded
Agency FW	WA	2011	231	79	4%	2.25	10,000	2.25	10,000	100	Fully funded, well structured
Agency E	TX	2014	128	77	2%	0.80	6,000	0.80	6,000	100	Fully funded, excellent backlog
Agency L	NE	2012	338	77	9%	5.25	16,000	5.00	15,000	94	Slightly underfunded, majors only
Agency EA	CO	2015	39	77	0%	0.70	18,000	0.20	5,000	28	
Agency FT	CA	2015	504	73	7%	7.25	14,000	5.00	10,000	71	Slightly underfunded, low backlog
Agency S	AZ	2015	896	72	1%	8.00	9,000	9.40	10,000	111	Well funded, looking to improve
Agency ST	WA	2015	75	72	1%	0.95	12,700	1.00	13,300	105	Fully funded, solid PCI, low backlog
Agency F	ND	2012	438	72	9%	6.00	14,000	4.00	9,000	64	Underfunded
Agency SV	WA	2015	436	72	10%	7.50	17,000	3.08	7,000	41	Underfunded - looking for alternate funding
Agency GI	AZ	2014	905	72	4%	7.50	8,000	2.83	3,000	38	Underfunded, but solid backlog
Agency SS	GA	2015	297	71	7%	4.25	14,000	3.10	10,000	71	Slightly underfunded, increasing backlog
Agency FS	CO	2014	60	70	1%	0.63	10,000	0.20	3,000	30	Underfunded, but solid backlog and PCI
Agency MC	SD	2014	353	69	4%	4.00	11,000	4.00	11,000	100	Fully funded, solid backlog and PCI
Agency H	TX	2015	155	69	2%	1.53	10,000	1.00	6,000	60	Underfunded, solid backlog and PCI
Agency Y	CA	2011	200	68	5%	1.60	8,000	1.00	5,000	63	Underfunded, decreasing PCI
Agency LV	WA	2011	138	68	7%	2.80	20,000	0.55	4,000	20	Underfunded
Agency P	WA	2015	24	67	7%	0.28	11,000	0.50	21,000	191	Well funded, solid backlog and PCI
Agency RC	OK	2015	156	67	4%	1.40	9,000	1.40	9,000	100	
Agency B	WA	2014	140	67	15%	1.50	11,000	0.60	4,000		
Agency D	GA	2013	147	66	23%	3.00	20,000	2.00	14,000		
Agency C	CA	2011	56	66	12%	1.10	20,000	1.10	20,000		
Agency L	CO	2014	160	66	15%	2.30	14,000	2.30	14,000	100	Fully funded
Agency B	OK	2015	121	66	6%	0.95	8,000	0.95	8,000	100	Underfunded, decreasing PCI
Agency WF	TX	2012	170	66	15%	1.40	8,000	0.66	4,000	50	Fully funded and working to increase PCI
Agency KW	FL	2012	65	65	7%	0.75	12,000	0.75	12,000	100	Fully funded
Agency BV	OK	2012	152	65	11%	1.25	8,000	1.25	8,000	100	Underfunded, but solid backlog
Agency GL	AZ	2015	747	65	5%	15.50	21,000	8.00	11,000	52	Fully funded, working to control backlog
Agency FC	GA	2015	162	64	10%	2.25	14,000	2.38	15,000	107	Slightly underfunded
Agency C	CO	2012	443	64	12%	6.00	14,000	5.00	11,000	79	Fully funded, low backlog
Agency PTC	GA	2015	111	63	5%	1.40	13,000	1.50	14,000	108	Underfunded and concerned about backlog
Agency LC	NM	2012	455	63	17%	5.60	12,000	3.00	7,000	58	Underfunded
Agency O	CA	2014	410	61	9%	7.50	18,000	5.10	12,000	67	Slightly underfunded, increasing backlog
Agency B	GA	2013	118	60	17%	1.30	11,000	1.50	13,000	118	Severely Underfunded, High Backlog
Agency LB	CA	2014	786	60	21%	30.90	39,000	14.80	19,000	49	Underfunded and concerned about backlog
Agency V	CA	2012	472	60	14%	7.50	16,000	2.50	5,000	31	Underfunded
Agency LC	PA	2012	102	59	15%	1.00	10,000	0.75	7,000	70	Underfunded, concerning backlog
Agency CB	TX	2015	179	51	20%	2.00	11,000	1.00	6,000	55	

Underfunded, Fair PCI & High Backlog

City of Dunwoody Recommendations....



1. As a backlog driven network, we suggest a minimum 5-year target that maintains the current backlog below 20% (a long term goal of arresting backlog below 15% is also desirable)
An annual budget of \$3M - \$4M would achieve this goal as backlog would hold steady at 19% and PCI would jump between 68 – 75.
2. A full suite of rehabilitation strategies and unit rates should be reviewed annually as these have a considerable impact
3. Steady – effective rehabilitation and maintenance on an annual basis saves the City money over deferred maintenance
4. The City should resurvey their streets every few years to update the condition data and rehabilitation program

Questions?....

