

Capital Improvement Plan Streets

Street Facts

8.41 Miles of Major Streets

11.60 Miles of Local Streets

0.73 Miles of Private Streets

20.74 Total Miles



Street Facts (cont.)

- ▶ 4.14 Miles of Concrete Streets
- ▶ 15.73 Miles of Asphalt / Composite Streets
- ▶ 0.13 Miles of Brick Street (Woodland Place)



Pavement Condition Survey

- ▶ Conducted in April of 2013. The initial condition survey was conducted in December of 2006 and has been conducted annually since.
- ▶ All surveys were completed using RoadSoft software and the PASER rating system consistent with state asset management requirements.



Pavement Condition Survey (cont.)

- ▶ PASER rating system
 - Good – Rating of 8–10
 - Little to no maintenance
 - Fair – Rating of 5–7
 - Capital Preventative Maintenance (CPM)
 - Poor – Rating of 1–4
 - Rehabilitation or Reconstruction Required



2013 Condition Survey Results

▶ Federal Aid Streets

- Minor Arterial (Kercheval, Cadieux) – 1.745 miles
 - Average PASER Rating – 6.3
- Major Collector (Waterloo, St. Clair, Fisher) – 2.529 miles
 - Average PASER Rating – 7.3

▶ Local Streets – 15.730 miles

- Average PASER Rating 5.5
 - Asphalt – 5.0
 - Concrete – 7.1
 - Brick – 4.0

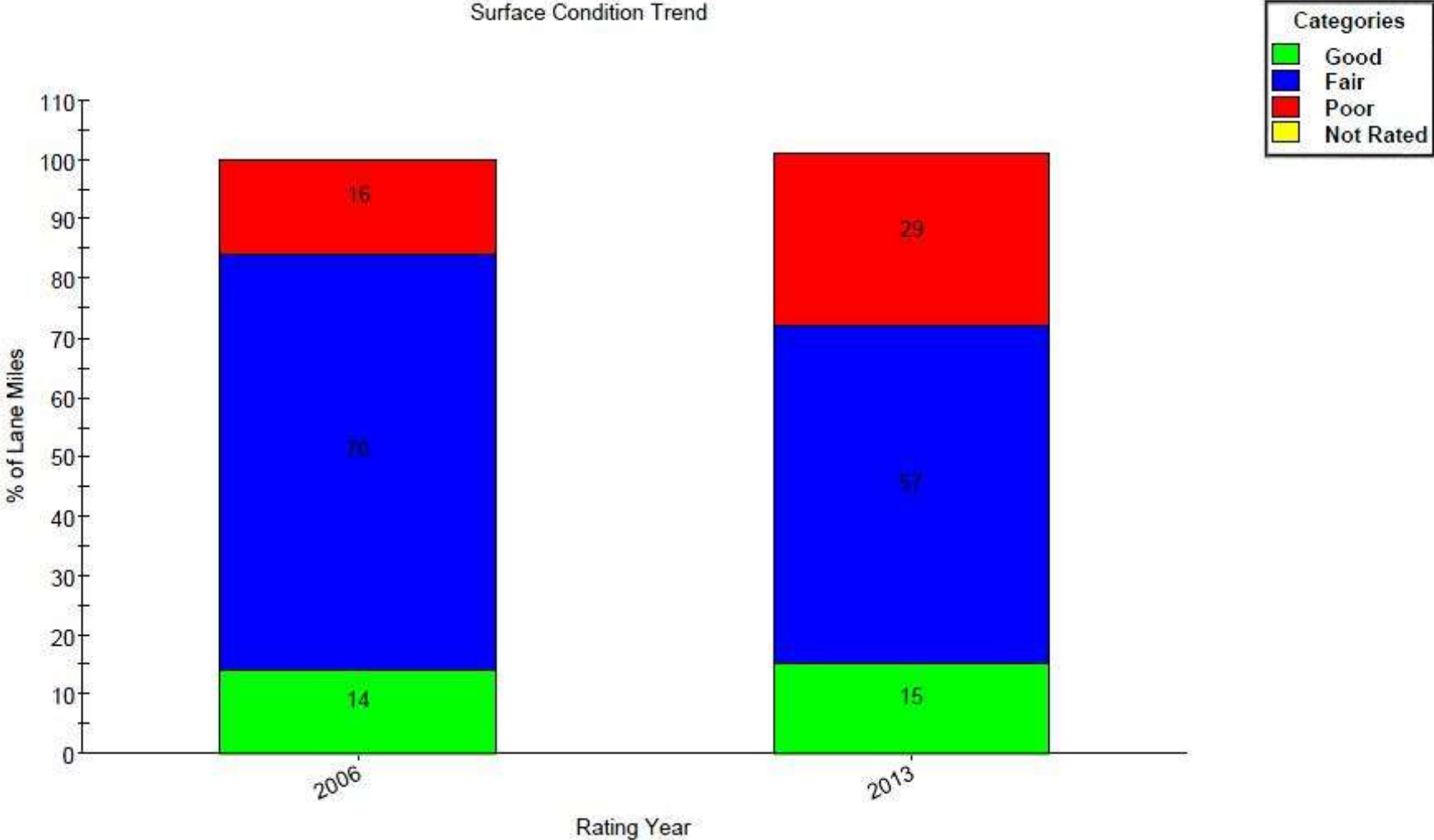


2013 Condition Survey Results

Rating	Miles	% of System (2012 %)
10	0.15	0.76% (0%)
9	1.49	7.44% (1.3%)
8	1.47	7.34% (9.04%)
7	5.58	27.9% (30.1%)
6	2.6	13.0% (6.48%)
5	3.1	15.5% (15.79%)
4	3.1	15.5% (24.55%)
3	2.53	13.4% (11.98%)
2	0	0.0% (0.76%)
1	0	0



Surface Condition Trend



Current 5 Year CIP for Streets

2014 to 2018 CAPITAL IMPROVEMENT PROGRAM FOR STREETS
CITY OF GROSSE POINTE
May 5, 2014

Year	Street	Limits	2013 Rating	Estimated cost	Description of Work
2014/15	Chalfonte Kercheval	Rivard to Fisher Cadieux to Neff	2 and 3	\$482,977.00	Asphalt Reconstruct
				\$52,500.00	100% design engineering and 1/3 of Construction Eng
			TOTAL	\$535,477.00	
2015/16	Kercheval	Cadieux to Neff	4	\$150,000.00	2/3rd of construction engineering and 20% const. match
			TOTAL	\$150,000.00	
2016/17	Rivard Rivard	N. of Goethe to Mack Jefferson to Maumee	3 and 6 3 and 4	\$131,725.00	1 1/2" Mill and Resurface, curb capping
				\$184,504.00	1 1/2" Mill and Resurface, curb capping
			TOTAL	\$316,229.00	
2017/18	Washington	Chalfonte to Mack	3	\$94,618.00	1 1/2" Mill and Resurface, curb capping
			TOTAL	\$94,618.00	
2018/19	Lakeland	Kercheval to Waterloo	3	\$133,584.00	3" Mill and Resurface w/ new curb and gutter
			TOTAL	\$133,584.00	



Current 5-Year Street CIP



Street CIP Summary

- Typical Annual Budget Amount Allocated to Streets = \$250,000.00
- Current rehabilitation method = 1 ½" Mill and Resurface w/ Curb Capping
- Cost of current rehabilitation method = \$600,000.00 per Mile
- **Life expectancy of current rehabilitation method = 7 to 10 years**
- Number of Miles of Streets with a current PASER rating of 4 or 5 = 6.2
- Total Cost to Rehab Streets with a rating of 4 or 5
 $\$600,000 \times 6.2 = \$3,720,000$
- Number of years to complete only streets at 4 or 5 rating at current funding levels
 $\$3,720,000 / \$250,000 = 14.9 \text{ years}$
- Time required to complete rehabilitation for a component of the street needs is greater than life expectancy of the improvements (Streets at 2 or 3 not included)
- Capital Projects Fund will be exhausted in 5 years at \$250,000 per year

**CONCLUSION – FUNDING LEVELS WILL NEED TO INCREASE
IN ORDER TO RETURN STREETS TO “GOOD” CONDITION**



Street Improvement Funding Options

- ▶ Millage Proposal – 2.5–mills per year
 - Generates approx. \$812,500 per year
 - Dedicated millage for 15 years
- ▶ Financial information for bond and millage proposals provided by Finance Department and Bendzinski & Co.



Millage Proposal

- ▶ Voter approval required
- ▶ 2.5 mills for 15 years
- ▶ Millage Revenue – \$812,500 per year
- ▶ Millage Revenue – \$12.2 million total
- ▶ Total Funding – \$13.45 million
- ▶ \$1.25 million in remaining Capital Projects Fund
- ▶ Long-term plan
- ▶ Asset Management approach for cost-effectiveness
- ▶ No interest payments – all revenue to road projects



Analysis of Options

- ▶ Roadsoft GIS program from MTU-CTT
 - Uses PASER rating data collected since 2006
 - Define the types of treatments and unit costs
 - Uses deterioration curves to model system
- ▶ Strategy Optimization
 - Apply the right treatment at the right time
- ▶ RSL – Remaining Service Life
 - Years remaining until structural rehabilitation needed
- ▶ Non-Federal Aid System



Pavement Treatments

Asphalt

PASER	Treatment	Type	Cost/Syd	Cost/ Mile	PASER Reset	Pre RSL	Post RSL	ESL
10	None - New Street							
9	None							
8	Crack Seal	CPM	\$ 0.25	\$ 4,106.67	8	10	12	2
7	Crack Seal	CPM	\$ 0.35	\$ 5,749.33	7	7	9	2
6	Mill & Resurf, 1-1/2"	CPM	\$ 36.00	\$ 591,360.00	9	3	13	10
5	Mill & Resurf, 1-1/2"	CPM	\$ 36.00	\$ 591,360.00	9	0	13	13
4	Mill & Resurf, 3" + Curb/Gutter	RH	\$ 66.00	\$ 1,084,160.00	9	-3	13	16
3	Reconstruction - 5" HMA/8" Agg	RC	\$ 122.00	\$ 2,004,053.33	10	-5	14	19
2	Reconstruction - 5" HMA/8" Agg	RC	\$ 122.00	\$ 2,004,053.33	10	-10	14	24
1	Reconstruction - 5" HMA/8" Agg	RC	\$ 122.00	\$ 2,004,053.33	10	-14	14	28

Concrete

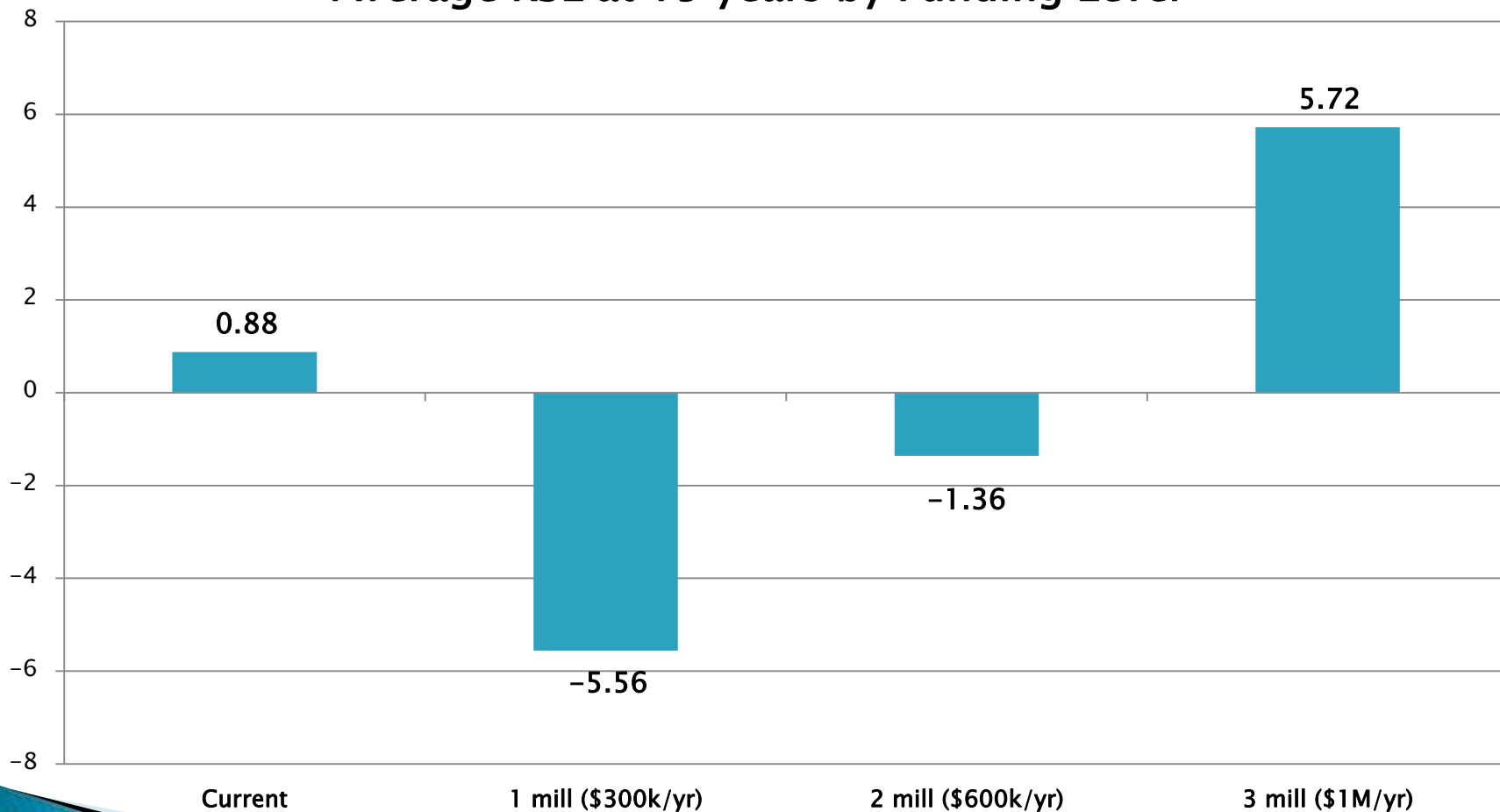
Width

PASER	Treatment	Type	Cost/Syd	Cost/ Mile	PASER Reset	Pre RSL	Post RSL	ESL
10	None - New Street							
9	None							
8	None							
7	Joint and Crack Seal	CPM	\$ 0.25	\$ 4,400.00	7	9	12	3
6	Joint and Crack Seal	CPM	\$ 0.35	\$ 6,160.00	6	6	8	2
5	Minor Patch	CPM	\$ 22.00	\$ 387,200.00	8	0	15	15
4	Major Patch	RH	\$ 30.00	\$ 528,000.00	8	-3	15	18
3	Reconstruction - 7" Conc/6" Agg	RC	\$ 136.00	\$ 2,393,600.00	10	-8	23	31
2	Reconstruction - 7" Conc/6" Agg	RC	\$ 136.00	\$ 2,393,600.00	10	-12	23	35
1	Reconstruction - 7" Conc/6" Agg	RC	\$ 136.00	\$ 2,393,600.00	10	-14	23	37



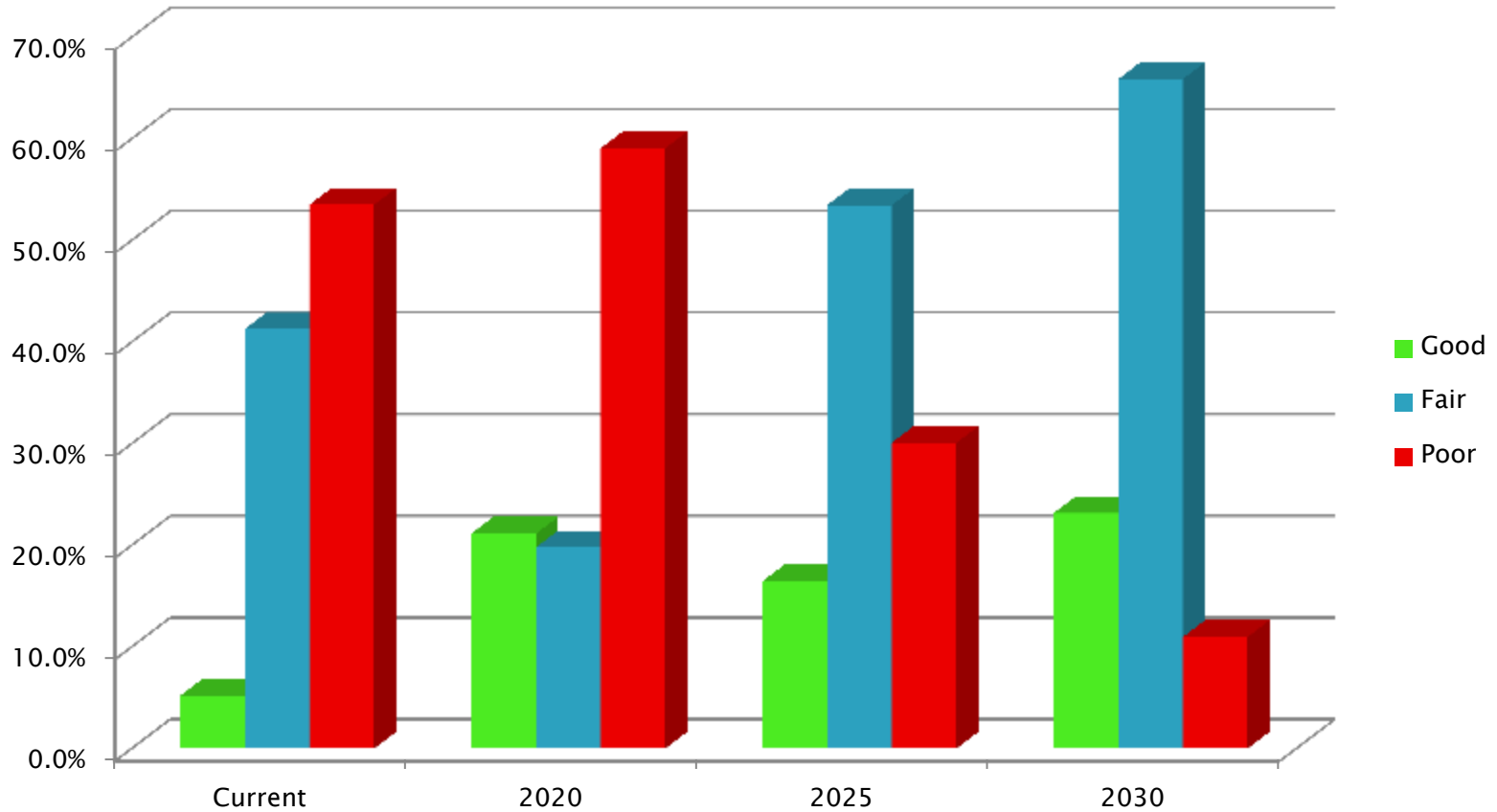
Millage Proposal – Projections from November Presentation

Average RSL at 15 years by Funding Level



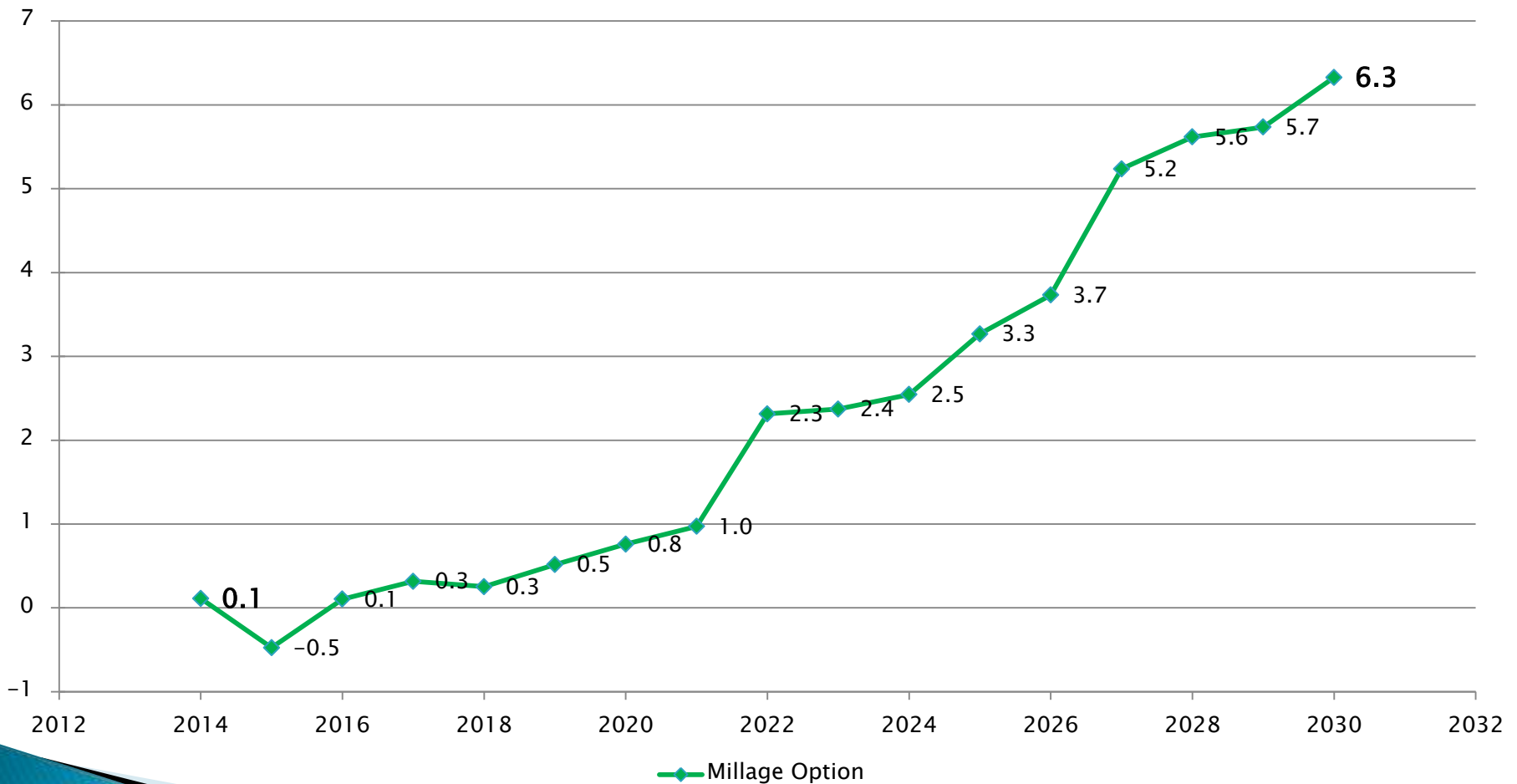
Millage Proposal – 2.5 Mills

Good/Fair/Poor Over 15 Years



RSL Change for 2.5 Mill Program

15- Year Remaining Service Life (RSL) – All Pavement Types



Bond / Millage Comparison

15- Year Remaining Service Life (RSL) Comparison All Pavement Types

