



City of Grosse Pointe

2016-2020

Street Capital Improvement Plan

December 14, 2015

Pavement Condition Survey

Conducted in October of 2015. 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

2015 Condition Survey Results

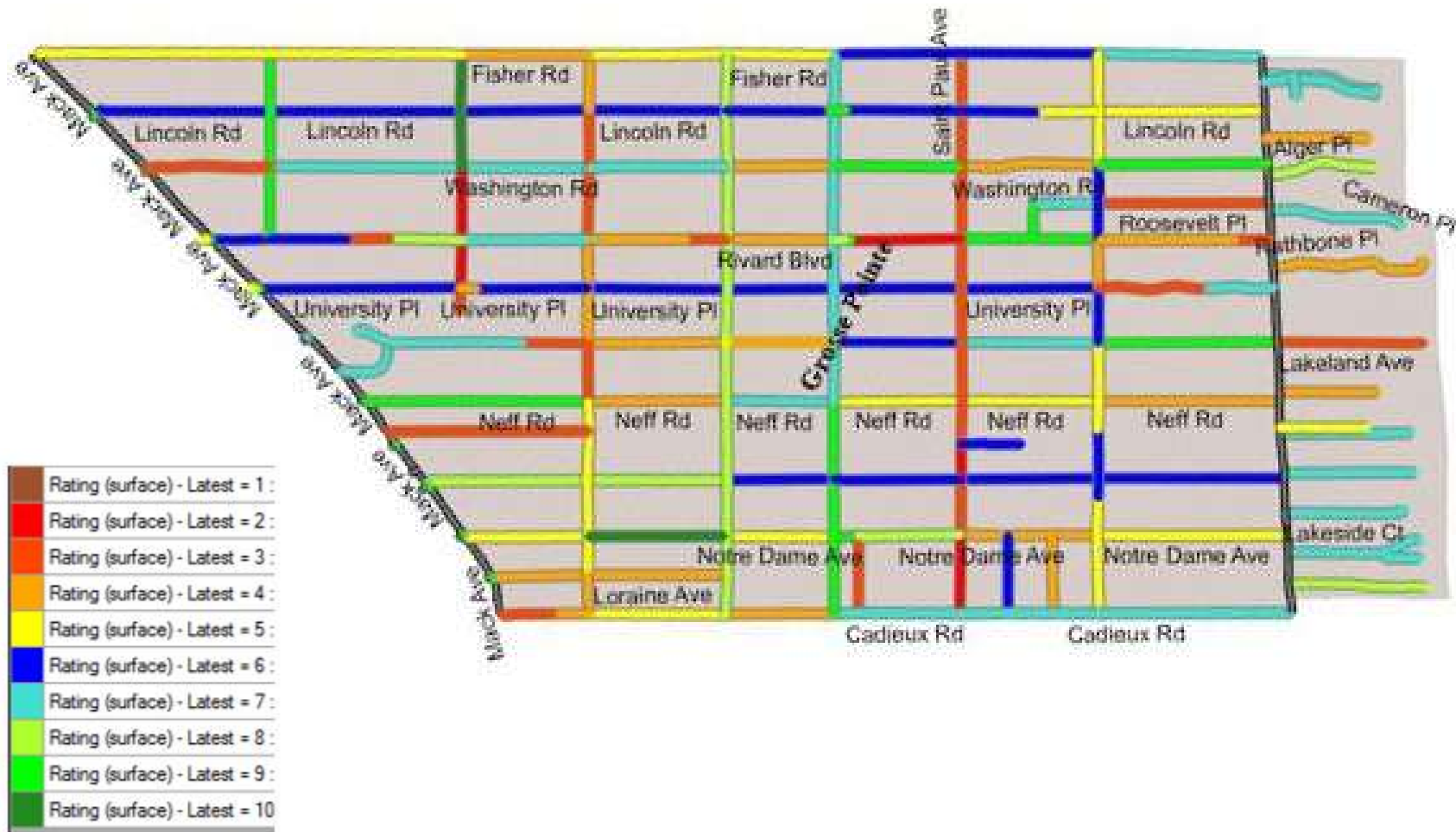
Federal Aid Streets

- Minor Arterial (Kercheval, Cadieux) – 1.745 miles
 - Average PASER Rating – 6.64 (5.9 in 2014)
- Major Collector (Waterloo, St. Clair) – 1.838 miles
 - Average PASER Rating – 7.2 (7.6 in 2014)

Local Streets – 15.730 miles

- Average PASER Rating 5.6 (5.5 in 2014)
 - Asphalt – 5.2 (5.0 in 2014)
 - Concrete – 6.6 (7.1 in 2014)
 - Brick – 4.0 (4.0 in 2014)

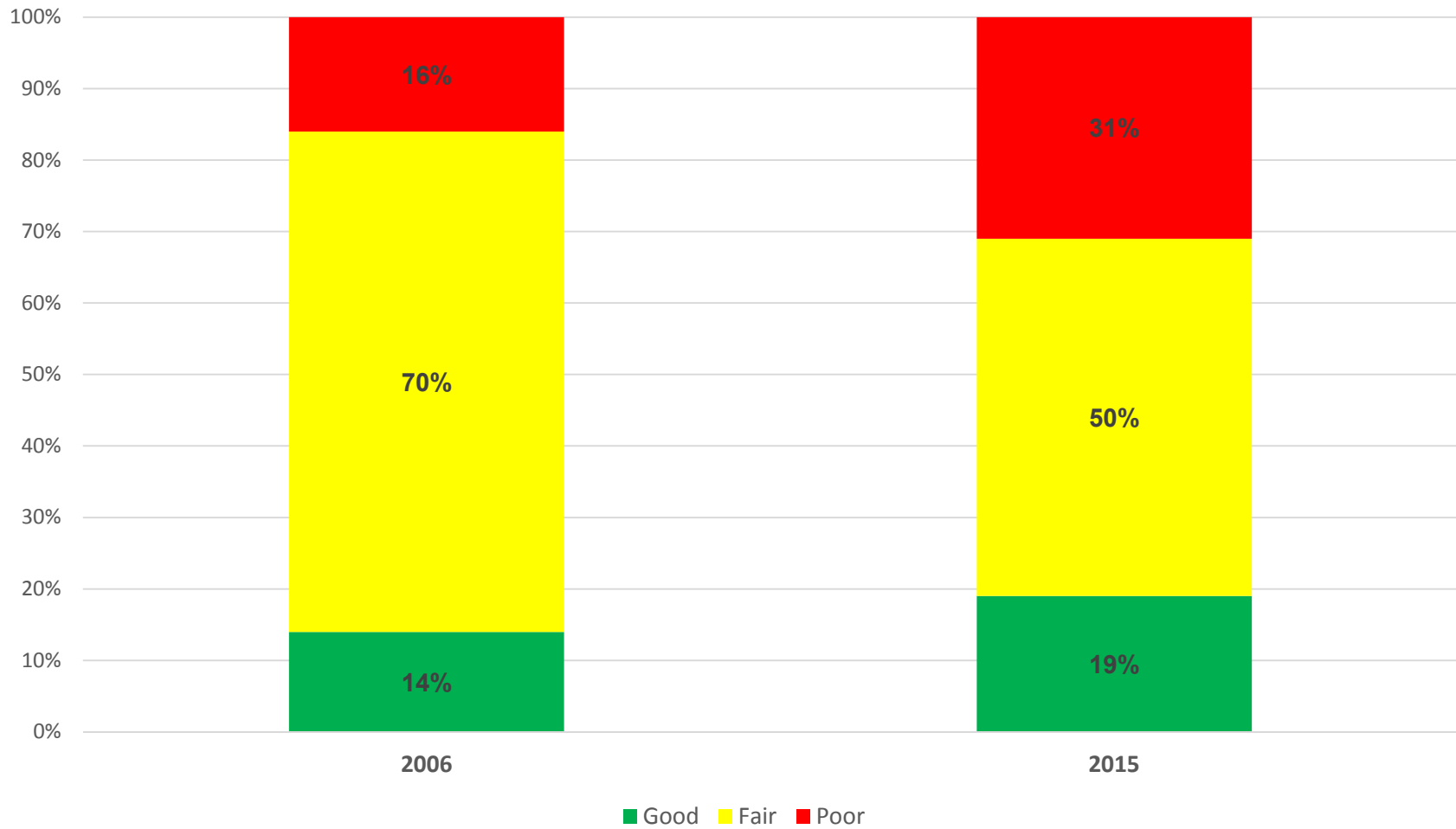
2015 PASER Ratings



2015 Condition Survey Results

Rating	Miles	% of System (2014 %)
10	0.32	1.67% (0.8%)
9	1.75	9.22% (6.4%)
8	1.5	7.83% (4.5%)
7	3.73	19.47% (34.1%)
6	3.74	19.52% (7.3%)
5	2.09	10.91% (14.5%)
4	2.88	15.03% (15.1%)
3	2.43	12.68% (13.6%)
2	0.71	3.71% (3.8%)
1	0	0

Surface Condition Trend



Financial Summary of the 2015 Projects

	Budgeted	Actual
Kercheval Resurfacing		
Design	\$32,500.00	\$35,283.00
Construction Engineering	\$86,845.00	\$32,822.00
Construction	\$83,155.00	\$77,782.00
Total	\$202,500.00	\$145,887.00
2015 Resurfacing (Washington, Charles, Rivard, Neff and Notre Dame)		
Design	\$32,000.00	\$26,000.00
Construction Engineering	\$58,000.00	\$61,000.00
Construction	\$452,000.00	\$402,000.00
Total	\$542,000.00	\$489,000.00
Chalfonte - Rivard to Fisher		
Design	\$29,000.00	\$31,600.00
Construction Engineering	\$51,500.00	\$50,000.00
Construction	\$402,500.00	\$463,250.00
Total	\$483,000.00	\$544,850.00
2015 Totals	\$1,227,500.00	\$1,179,737.00

Proposed Treatment Types

Asphalt

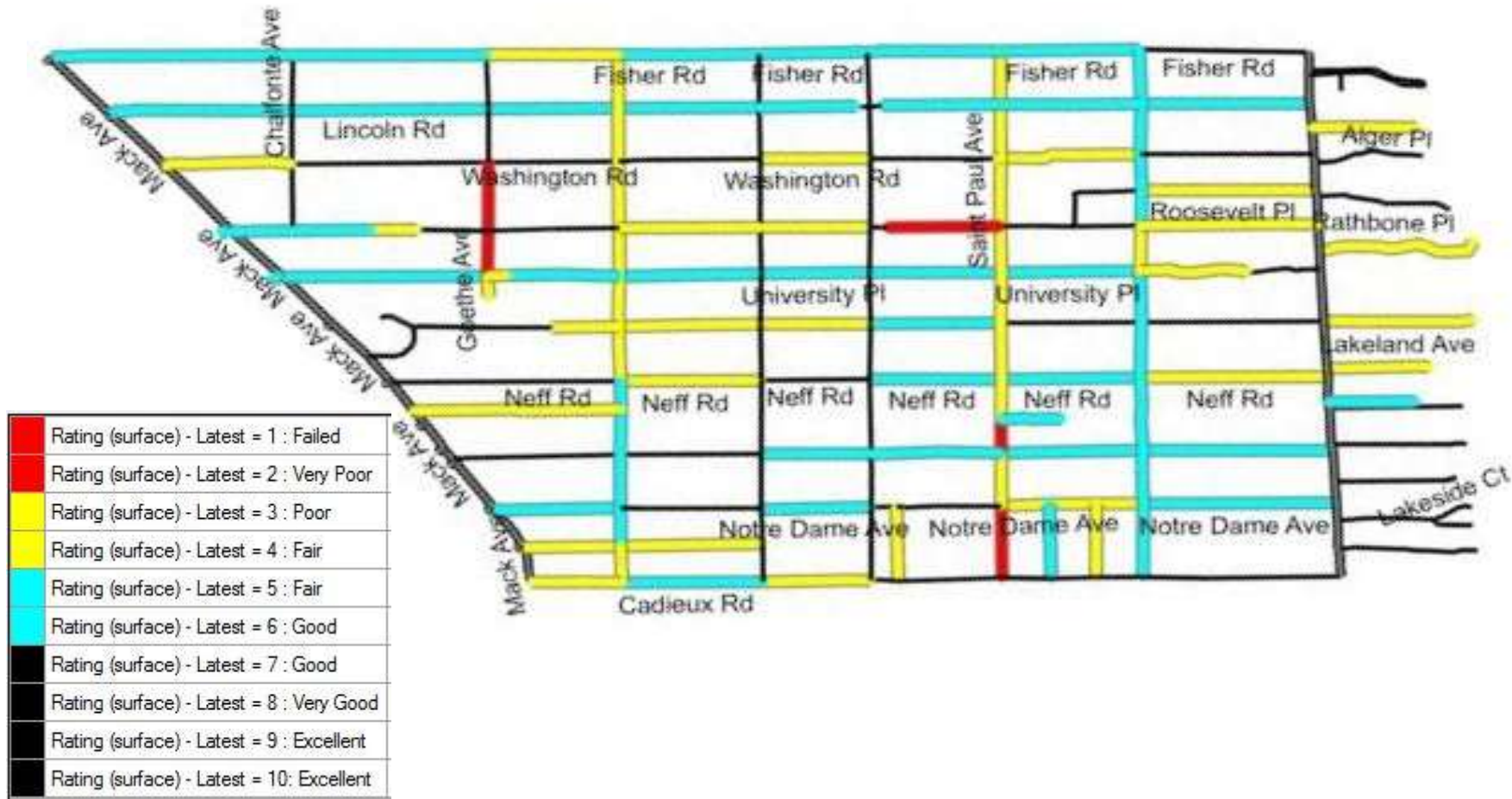
PASER	Treatment	Type	Cost/Syd	Cost/Mile	Reset	RSL	RSL	ESL
10	None - New Street							
9	None							
8	Crack Seal	CPM	\$ 0.77	\$ 12,648.53	8	10	12	2
7	Crack Seal	CPM	\$ 0.77	\$ 12,648.53	7	7	9	2
6	Mill & Resurfacing, 1-1/2" + Curb Capping	CPM	\$ 36.72	\$ 603,187.20	9	3	13	10
5	Mill & Resurfacing, 1-1/2" + Curb Capping	CPM	\$ 36.72	\$ 603,187.20	9	0	13	13
4	Mill & Resurfacing, 3-1/2" + New Curb &Gutter	RH	\$ 71.40	\$ 1,172,864.00	9	-3	13	16
3	Mill & Resurfacing, 3-1/2" + New Curb &Gutter	RH	\$ 71.40	\$ 1,172,864.00	9	-5	14	19
2	Reconstruction - 5" HMA on 8" Aggregate Base	RC	\$ 132.60	\$ 2,178,176.00	10	-10	14	24
1	Reconstruction - 5" HMA on 8" Aggregate Base	RC	\$ 132.60	\$ 2,178,176.00	10	-14	14	28

Concrete

PASER	Treatment	Type	Cost/Syd	Cost/Mile	Reset	RSL	RSL	ESL
10	None - New Street							
9	None							
8	Joint and Crack Seal	CPM	\$ 0.77	\$ 13,552.00				
7	Joint and Crack Seal	CPM	\$ 0.77	\$ 13,552.00	7	9	12	3
6	Joint and Crack Seal	CPM	\$ 0.77	\$ 13,552.00	6	6	8	2
5	Minor Patch	CPM	\$ 25.50	\$ 448,800.00	8	0	15	15
4	Major Patch	RH	\$ 36.72	\$ 646,272.00	8	-3	15	18
3	Major Patch	RH	\$ 55.08	\$ 969,408.00	10	-8	23	31
2	Reconstruction - 7" Conc/6" Agg	RC	\$ 151.00	\$ 2,657,600.00	10	-12	23	35
1	Reconstruction - 7" Conc/6" Agg	RC	\$ 151.00	\$ 2,657,600.00	10	-14	23	37

2015 Candidate Projects

PASER 1-2 – Reconstruct – 0.446 Miles @ \$2,178,000/Mile = \$971,388
 PASER 3-4 – Heavy Rehabilitation (3" to 3-1/2") – 4.981 Miles @ \$1,173,000 = \$5,842,713
 PASER 5-6 – CPM Resurfacing (1-1/2" to 2") – 4.613 Miles @ \$603,000 = \$2,781,639



Proposed 5 Year CIP for Streets

Fiscal Year	Work Year	Street	From	To	2015 PASER	Cost	Description of Work
2015/16	2015					\$ 200,000	Completion of 2015 Projects
	2016	Roosevelt Place	Jefferson	Maumee	3	\$ 85,308	1-1/2" Mill and Resurface, Curb Capping
	2016	University	Maumee	N. of Jefferson	3	\$ 61,073	1-1/2" Mill and Resurface, Curb Capping
	2016	St. Paul	Cadieux	Fisher	2/3	\$ 389,619	3-1/2" Mill and Resurface, Curb Capping, Full Curbs at Intersections
TOTAL						\$ 736,000	

Fiscal Year	Work Year	Street	From	To	2015 PASER	Cost	Description of Work
2016/17	2016	St. Paul	Cadieux	Fisher	2/3	\$ 568,944	Plus an additional \$125,000 from water and sewer
	2017	Washington	Chalfonte	Mack	3	\$ 184,504	3-1/2" Mill and Resurface, New Curb & Gutter
	2017	Notre Dame	Kercheval	Waterloo	5	\$ 103,784	1-1/2" Mill and Resurface, Curb Capping
TOTAL						\$ 857,232	

Fiscal Year	Work Year	Street	From	To	2015 PASER	Cost	Description of Work
2017/18	2017	Neff	Maumee	Kercheval	5	\$ 210,335	1-1/2" Mill and Resurface, Curb Capping
	2017	Lakeland	Charlevoix	450' N. of Charlevoix	3	\$ 90,757	3-1/2" Mill and Resurface, New Curb and Gutter
	2017	Lakeland	Jefferson	End	3	\$ 200,734	3-1/2" Mill and Resurface, New Curb & Gutter
	2017	Lakeland	Kercheval	Waterloo	3	\$ 147,347	3-1/2" Mill and Resurface, New Curb & Gutter
	2017	Kercheval Place	Cadieux	Notre Dame	3	\$ 165,550	3-1/2" Mill and Resurface, New Curb & Gutter
TOTAL						\$ 814,724	

Fiscal Year	Work Year	Street	From	To	2015 PASER	Cost	Description of Work
2018/19	2018	Lincoln	Jefferson	N. of Maumee	5	\$ 115,609	1-1/2" Mill and Resurface, Curb Capping
	2018	Rivard	300' between	Goethe and Chalfonte	3	\$ 72,161	3-1/2" Mill and Resurface, New Curb and Gutter
	2018	Charlevoix	Neff	Fisher	3/4	\$ 607,744	3-1/2" Mill and Resurface, New Curb & Gutter
TOTAL						\$ 795,514	

Fiscal Year	Work Year	Street	From	To	2015 PASER	Cost	Description of Work
2019/20	2019	Maumee	Cadieux	Fisher	4/5/6	\$ 510,027	1-1/2" Mill and Resurface, Curb Capping
	2019	Rivard	Jefferson	Maumee	3/4	\$ 388,177	3-1/2" Mill and Resurface, New Curb and Gutter
TOTAL						\$ 898,203	

Fiscal Year	Work Year	Street	From	To	2015 PASER	Cost	Description of Work
2020/21	2020	Goethe	University	Washington	2	\$ 415,325	5" HMA on 8" Aggregate Base
	2020	Neff	Waterloo	Charlevoix	4	\$ 221,460	3-1/2" Mill and Resurface, New Curb & Gutter
	2020	Rivard	Kercheval	Waterloo	4	\$ 176,385	3-1/2" Mill and Resurface, New Curb and Gutter
TOTAL						\$ 813,170	

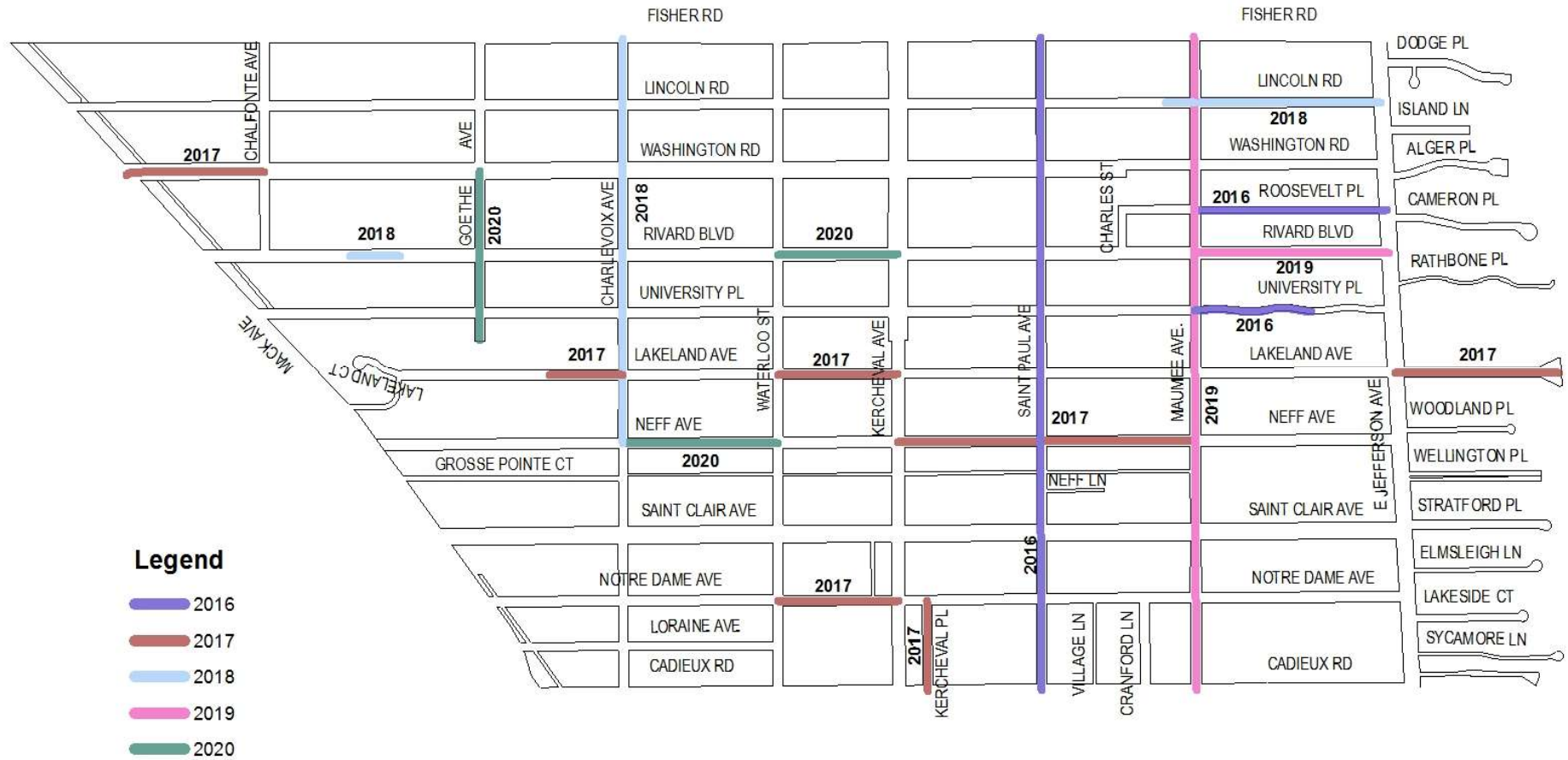
Summary of changes

- Moved Roosevelt Place – Jefferson to Maumee from 2017 to 2016
- Changed treatment type for University and Roosevelt Place from 3 ½” mill and resurface to 1 ½” Mill and resurface w/ curb capping due to relatively low traffic volumes on these streets and the proximity of mature trees to the street.
- Changed curb treatment on St. Paul from new curb and gutter to curb capping due to proximity of several mature trees to the street
- Added Lakeland from Charlevoix to 450’ N. of Charlevoix in 2017
- Added a 300’ section of Rivard between Goethe and Chalfonte in 2018

Summary of changes

- Moved Rivard from Jefferson to Maumee from 2018 to 2019
- Moved Neff from Waterloo to Charlevoix from 2019 to 2020
- Removed Lincoln from Jefferson to Maumee from 2019
- Added projects in 2020

Proposed 5-Year Street CIP



2015/16 Road Improvement Program Effectiveness

In order to offset decline in RSL of 1 per year, the product of the lane miles of work and Extended Service Life (ESL) should exceed total system lane miles:

- Roosevelt Place and University
 - $0.72 \text{ lane miles} * 13 \text{ yrs} = 9.36 \text{ lane mile*yrs}$
- St. Paul
 - $1.44 \text{ lane miles} * 16 \text{ yrs} = 23.04 \text{ lane mile*yrs}$
- Total = 32.4 lane mile*yr
- Total Network = 28.3 lane miles
- Therefore, program improves the overall system

Additional Items to Consider

- ▶ Based on:
 - Current Ratings and Projected Deterioration
 - Current Estimated Pricing
 - Selected Treatments
- ▶ Review Ratings, Pricing, Treatments Annually
- ▶ Considers only Asphalt in First 5 years
- ▶ Assumes Regular Joint & Crack Sealing
- ▶ Does Not Include Potential State and/or Federal Funding Increases

2016-2020 Street Capital Improvement Plan

THANK YOU