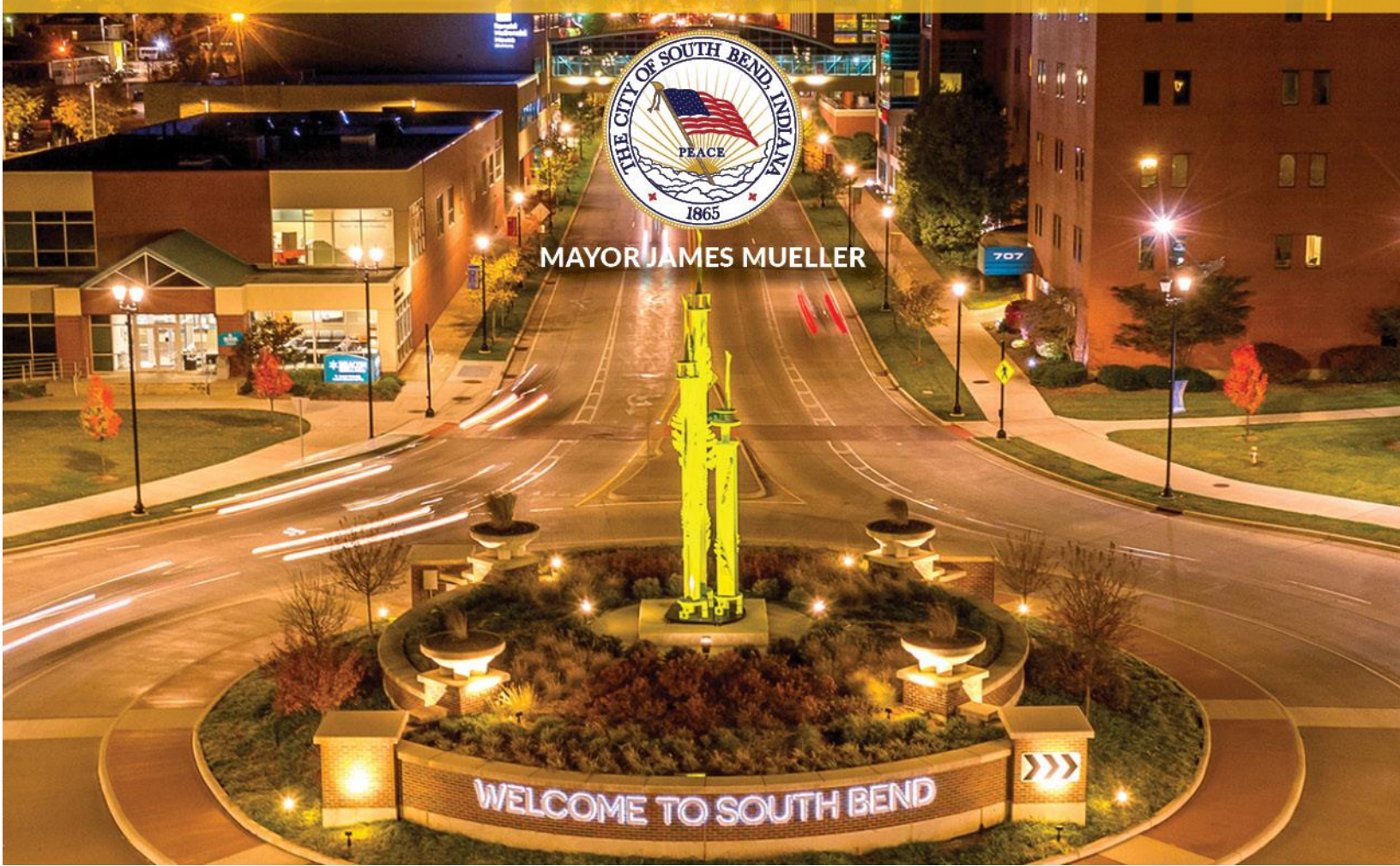




# REBUILDING OUR STREETS A 10-YEAR IMPROVEMENT PLAN

DEPARTMENT OF PUBLIC WORKS  
UPDATE: AUGUST 2021





# MAYOR'S MESSAGE

During my conversations with residents throughout our city, I am struck by one thing I hear repeatedly – our streets, especially those in residential areas, are in desperate need of improvement and only seem to be getting worse. We can and must do better.

Like many Midwestern cities with harsh winters and limited funding streams dedicated for our expansive infrastructure, South Bend has struggled to keep up with street maintenance. The City of South Bend receives enough public street funding to pave each lane mile of a street roughly once every 100 years, even though they need to be paved roughly once every 15-20 years depending on the type of street.



That's not sustainable, and that's why we've worked to develop this plan that will help make meaningful progress in improving the condition of our city's streets in an equitable and measurable way. This plan addresses neighborhood streets, not just main streets, across the entire city, including neighborhoods who may feel forgotten.

This Rebuilding Our Streets Plan lays out short-term (three-year) and long-term (ten-year) goals for the City that are feasible and ambitious to improve resident satisfaction with our essential local infrastructure over time.

- **A top goal for the City is to address all “failed” streets in South Bend over the next year.** As these street segments typically require full depth reconstruction at a high cost, there has been a tendency in the past to use the limited funds for repaving which is a lower cost than full reconstruction. This has resulted in chronically bad conditions for many residential streets over time. We aim to tackle these chronic, failed streets first, while also preventing other streets from falling into these conditions in the future.
- **Another goal for the City is to improve the average rating of streets over the next 10 years with geographic equity, so the condition of our streets improves in each and every neighborhood.** Pavement Surface Evaluation and Rating (PASER) is an objective measure from 1 to 10 that characterizes the condition of each street segment and will be used to track our progress.

Throughout the implementation of the Streets Plan, the City will communicate clearly and transparently with the public and share data on its progress through an online dashboard, where residents can see the schedule of planned paving projects and monitor the change in street ratings over time.

Our team is ready to invest the time and resources necessary to improve the condition of the streets in the City of South Bend. I am excited to make progress on this longstanding community priority that impacts us all.

Mayor James Mueller

# GUIDING PRINCIPLES

There are five guiding principles shaping the City's approach to street repair from 2021 - 2030:

- 1. Fix failed streets.** Address all streets with a PASER of 1 or 2 (failed) over the next three years. A failed street is one that has deteriorated so much that it can no longer be maintained by the standard mill and overlay paving. The street may still be drivable, but the pavement has lost its integrity and has severe cracking. The only solution for a failed street is complete removal and rebuilding of the pavement layers from the ground up.
- 2. Raise the bar.** Aim to increase average PASER to achieve and maintain a citywide average above a rating of 7 over the next 10 years. In 2020, the City's average PASER was 6. The City will continue to track average PASER of other cities in Indiana and benchmark against them.
- 3. Create geographical equity.** Monitor street conditions by council district, creating equitable street quality – especially residential street quality.
- 4. Make data driven decisions.** Investing in new tools and processes to monitor progress on street conditions. The City has developed a public dashboard showing PASER ratings and is looking at alternative technologies to better analyze and track street condition annually.
- 5. Share data and be more transparent.** Aim to be more transparent with residents, sharing plans for street repair proactively. This includes the methodology behind decisions to prioritize certain streets, street repair lists and the streets conditions dashboard for residents to monitor the City's data on street quality over time.
- 6. Increase efficiency.** Find ways to stretch the lifespan of our streets and invest more in upfront maintenance to reduce costs over the long term.

# STRATEGY ROADMAP

The City's strategy to meet these policy principles sets short-term milestones for street improvement and establishes long-term frameworks to accommodate financial needs and year-to-year flexibility. The items below serve as the outline for the City's 10-year Rebuilding Our Streets Plan.

## 01

Short-term  
(1 – 3 Years)

- + Immediate priority: repair all failed streets (PASER of 1 or 2)
- + Next step: repair all poor and fair streets (PASER of 3 or 4)
- + Publicize 3 year paving list and develop a Streets Dashboard. (See Appendix B)

## 02

Long-term  
(3 - 10 Years)

- + Achieve a target citywide average PASER rating of 7
- + Develop a sustainable funding repair strategy that maintains and/or improves citywide street quality

## 03

Dashboard &  
Ongoing Reporting

- + Consistently track and analyze street quality data in order to support data driven decision-making
- + Keep the Streets Dashboard updated and share progress of the Plan with the public

# METHODOLOGY

The City owns and maintains 1,258 lane miles of streets. Of which, 1,073 lane miles are asphalt, 161 lane miles are concrete, and 24 lane miles are brick. The City plans to adopt a more strategic approach for street preservation using data driven decision-making to improve their overall condition. The steps for using data to drive the street preservation program is to first assess the condition of the streets with a strategy that is objective, consistent and dependable. The street assessment strategies the City has been using are PASER and RoadBotics. Using the results of the assessment, the maintenance strategy can be determined. The final step to the methodology is to develop a long-term plan to be able to address road repair in a cost-effective way.

## Street Condition Assessment Timeline

2016	PASER Assessment performed with visual inspection
2018	PASER Tracked inspection logs in real time with GIS iPad application
Aug 2018	RoadBotics assessment
Apr 2020	PASER assessment completed
July 2020	RoadBotics assessment performed

## Pavement Surface Evaluation and Rating (PASER)

PASER is a 1-10 rating system developed by the University of Wisconsin-Madison Transportation Information Center for governments to compare street segments. The rating is determined based on the surface condition with 1 being a failed street and 10 being a new paved street. Every street segment is driven and assigned a rating based on visual and structural deterioration, such as types of cracks, frequency of cracks, potholes, patches and rutting.

Table 1. PASER Condition and Treatment

PASER RATING	CONDITION	TREATMENT
1	Failed	Reconstruction
2	Very Poor	Reconstruction
3	Poor	Structural Renewal (overlay)
4	Fair	Structural Renewal (overlay)
5	Fair	Preservation treatments (non-structural)
6	Good	Preservation treatments (non-structural)
7	Good	Crack sealing and minor patching
8	Very Good	Crack sealing and minor patching
9	Excellent	No Maintenance required
10	Excellent	No Maintenance required

## Alternative Pavement Assessment

The City is utilizing an alternative street assessment technology by RoadBotics, a firm that utilizes cellphone camera technology and Artificial Intelligence (AI) to determine a 1-5 rating for each street segment. Not only does this method provide an automated and unbiased rating, but it also allows any City staff to drive the streets to get the ratings regardless of experience or training. The City intends to compare the accuracy of both RoadBotics and PASER data to determine which tool will be more efficient in the long term.

## Street Life-Cycle

A typical asphalt street will last 15-20 years without any maintenance. Most of the deterioration will take place towards the end of this cycle as cracks form and freeze/thaw and traffic loading exacerbate the problem. It is important to perform regular maintenance on streets in order to extend their life. Regular maintenance includes preservation techniques such as crack sealing and microsurfacing, low cost treatments which prevent cracks from extending into the base of the pavement and causing structural deficiencies. Once the deterioration occurs in the base of the pavement, surface treatments are no longer effective.

*Table 2. Street Life-Cycle*

Project Type	Street Type	Street Material	Years Added
Reconstruction	Residential	Asphalt	20
Reconstruction	Arterial	Asphalt	15
Reconstruction	Arterial	Concrete	50
Mill and Overlay (1.5"/3")	Both	Asphalt	10 - 13
Crack Sealing	Both	Asphalt	3
Microsurfacing	Both	Asphalt	7.5

# DATA ANALYSIS

## PASER Data

The most recent PASER evaluations were conducted in 2019 and 2020. The table below shows the change in average PASER over time between those two evaluations, partially illustrating that the City's street system is in decline given current spending levels.

*Table 3. South Bend PASER average from 2019 to 2020*

	2019	2020	Difference
PASER Average (out of 10)	6.6	6.0	(0.6)

Breaking down the data further, below are tables that show 2020 PASER data by street surface type and street classification.

*Table 4. South Bend 2020 PASER average by street surface type*

Street Type	PASER Average (out of 10)	Total Lane Miles	Percent of City Street System
Asphalt	6.02	~ 1,073	85%
Concrete	6.41	~ 160	13%
Brick*	8	~ 24	2%

\*Brick PASER classification is converted to a 1-10 scale from a 1-4 scale

*Table 5. South Bend 2020 PASER average street classification*

Street Classification	PASER Average (out of 10)	Total Lane Miles	Percent of City Street System
Non-residential	6.22	~ 395	33%
Residential*	5.89	~ 796	67%

\*Includes Streets classified as Local Streets & Minor Collectors

*Table 6. South Bend PASER projection after completion of three-year plan- All streets*

Council District	End of Year 1	End of Year 2	End of Year 3
1	6.37	6.58	6.78
2	5.82	6.10	6.77
3	5.61	5.91	6.39
4	6.13	6.30	6.57
5	5.91	6.00	6.39
6	5.55	5.79	6.40

*Table 7. South Bend PASER projection after completion of three-year plan- Residential streets only*

Council District	End of Year 1	End of Year 2	End of Year 3
1	6.15	6.35	6.67
2	5.61	5.73	6.77
3	5.54	5.93	6.39
4	5.99	6.15	6.50
5	5.81	5.90	6.32
6	5.42	5.73	6.50

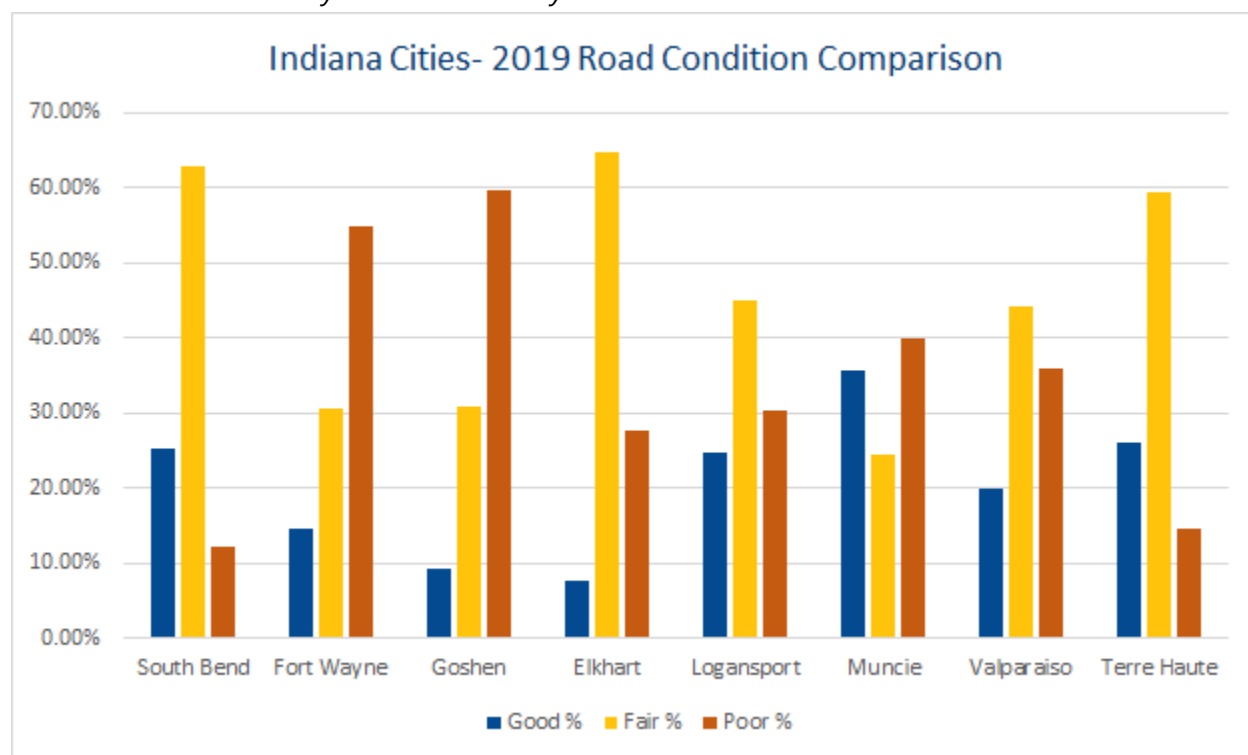


## Benchmark Data

### Peer City PASER Data

The City of South Bend looked at other municipalities in Indiana to better understand how its streets were rated in comparison. This data made available through the Indiana Department of Transportation (INDOT) shows that South Bend has a higher percentage of streets in good and fair condition than most of its peer cities. Also, the percentage of streets in poor condition is significantly lower than similar cities. Despite this information, our residents are looking for higher standards of street repair and maintenance.

Table 8. Indiana Peer City Street Data analysis



### Brick Street Survey

The Brick Streets survey was administered in August 2020 by online survey tool, SurveyMonkey and sent to neighborhood organizations where brick streets currently exist. These include the Near Northwest Neighborhood, Chapin Park Historic District, East Bank, Monroe Park and Near Westside neighborhoods. Approximately 250 responses were collected.

Respondents strongly agreed to the preservation of brick streets in the city. Many mentioned the drainage benefits of brick streets as well as their traffic calming abilities. While the ride quality of brick streets is often less than asphalt or concrete, respondents showed a high tolerance for slightly uneven brick streets. There was strong support for their maintenance and the need for minor repairs to level sections of brick streets that have settled over time.

# OUR STRATEGY

## Target for South Bend

In the short and mid-term, the City's street repair goal will be based upon the total percentage of poor, fair, and good streets (as defined by the PASER system). Based upon the methodology and peer city data outlined above, the initial goal will be as follows: 0% poor, approximately 50% fair, and approximately 50% good.

The City's street repair goals will eventually shift from being based upon a percentage of poor, fair, and good streets to focusing instead on a target average citywide PASER. The inherent assumption within this long-term goal is that the short- and mid-term goal will have already been achieved (i.e. 0% of City streets are in poor or failed condition). Once all City streets are either in fair or good condition, the long-term goal will be to achieve an average citywide PASER of 7. This target is based upon the desire to increase the current citywide PASER of 6 in response to resident feedback, assuming this will lead to an increase in resident satisfaction over time, as well as both in-state peer city data (shown above) and best practice research. It is important to note that this goal will take longer to achieve, due to both logistical and financial constraints.

## Financial Strategy

A sustainable street financing strategy can be achieved in the long run through smart investments and proactive street maintenance practices. In general, streets become exponentially more expensive to repair the longer they are not maintained, as illustrated by the table below. The key to a sustainable long-term street financial plan is to allocate more funds to proactive maintenance techniques such as crack sealing, instead of waiting until full street reconstruction is needed.

Table 9. Street Repair Strategy Costs

PASER	Repair Strategy	Maintenance Technique	Cost Per Lane Mile	Estimated Service Life Increase to Road
7 - 10	Preservation	Crack Sealing/ Microsurfacing	\$5,500/15,000	3 - 7
5 - 6	Rehabilitation	1.5" Mill and Overlay	\$125,000	10
3 - 4	Rehabilitation	3" Mill and Overlay	\$182,000	13
1 - 2	Reconstruction	Traditional Reconstruction	\$300,000	20

## Short Term Strategy (2021-2023)

The three-year plan in this document is achievable through existing annual City resources available for street repair and planned strategic capital investment (debt). Below are the financial details assumed to complete the three-year plan attached to this document.

Table 10. 3-Year Projected Funding by Source for In-house and Outsourced Paving

Funding Sources	2021	2022	2023
Motor Vehicle Highway Fund (MVH)	\$1,519,000	\$1,922,261	\$1,180,000
Local Roads & Streets (LRS)	\$350,000	\$1,600,000	-
Major Moves Fund (MM)	\$450,000	\$800,000	-
Community Crossings Grant	\$1,000,000	\$1,000,000	\$1,000,000
Local Federal-Aid Grant	-	\$500,000	-
Strategic Capital Investment	\$6,600,000	3,000,000	4,500,000
<b>Total</b>	<b>\$9,919,000</b>	<b>\$8,822,261</b>	<b>\$6,680,000</b>

Table 11. 3-Year Repair List Lane Mile and Cost Estimate Breakdown

Type of Work	2021		2022		2023	
	Lane Miles	Estimated Cost	Lane Miles	Estimated Cost	Lane Miles	Estimated Cost
Crack seal	80	\$206,500	70	\$140,500	85	\$239,500
Microsurface	10	\$150,000	10	\$150,000	10	\$150,000
Resurface (without milling)	1.63	\$30,500	0.00	\$0	0.00	\$0
Mill & Overlay	43.6	\$6,393,000	34.4	\$4,760,500	38.2	\$5,435,500
Reconstruction	3.4	\$2,705,900	2.6	\$2,957,000	0	\$0
Asphalt Overlay on Concrete	1.3	\$102,700	0.9	\$71,000	5.4	\$435,000
Concrete Street Repair	0.00	\$0	0.00	\$0	1	\$420,000
Brick Spot Repair	1.5	\$160,400	2	\$551,000	0	\$0
<b>Total</b>	<b>141.43</b>	<b>\$9,749,000</b>	<b>119.9</b>	<b>\$8,630,000</b>	<b>139.6</b>	<b>\$6,680,000</b>

## Funding sources:

*MVH:* Motor Vehicle Highway Fund; provided by State of Indiana motor vehicle highway distribution

*LRS:* Local Roads and Streets; provided by State of Indiana gasoline tax distributions

*Community Crossings:* Matching grant by State of Indiana for street repair

*Local-Federal Aid:* Federal aid for Transportation projects requiring a local match

*Strategic Capital:* Issuance of Bonds by the City to support infrastructure projects, Tax Increment Financing (TIF), and annually appropriated capital dollars.

## Street treatments defined:

*Crack seal:* Filling individual cracks with a sealant on asphalt or concrete roads to prevent moisture from seeping down into the base layers causing further deterioration.

*Microsurface:* A thin layer of asphalt emulsion mix applied to the entire street. This process helps to seal the roadway.

*Resurface:* Placing 1.5" of asphalt onto of an existing asphalt roadway. No milling of the existing street is done.

*Asphalt Overlay:* Milling a concrete street (1.5"-3") and repaving the surface with asphalt.

*Brick Spot Repair:* Removing and replacing brick sections to remove dips in the roadway

*Mill & Overlay:* Milling off the existing asphalt surface (1.5"-3") and repaving with asphalt.

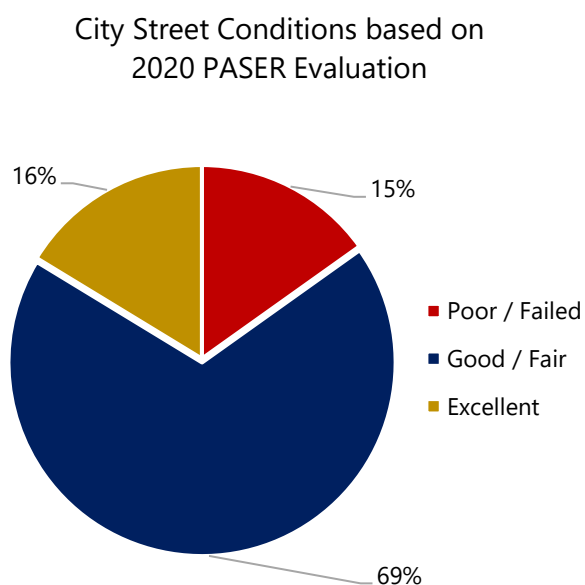
*Concrete Street Repair:* Repairing sections of concrete roadway by removing sections or panels and replacing with concrete.

*Reconstruction:* The complete removal and replacement of the entire roadway in order to repair any structural issues in the base. Curb and/or sidewalk replacement may be needed.

## Long-Term Needs (2023-2030)

The 2020 PASER evaluation and conservative street decay rates suggest that current street maintenance funding levels are not adequate to maintain PASER ratings into the future. The majority of streets in the City are rated as "Fair" and "Good" based on the 2020 PASER evaluation, so in order to maintain those streets the City will need to invest in proactive maintenance strategies to avoid large reconstruction needs and create a plan for regular street rehabilitation (i.e. Mill and Overlays).

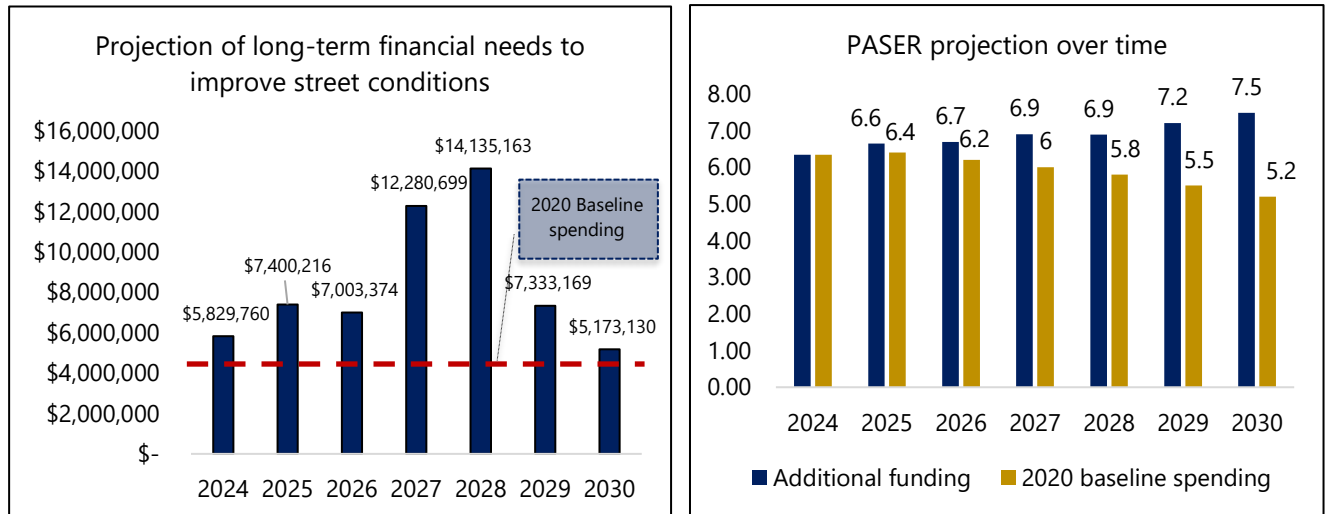
Increasing resource allocation to streets maintenance enables the City to maintain and/or improve street conditions in the future, while setting a financially sustainable long-term streets repair strategy in 2030 and beyond.





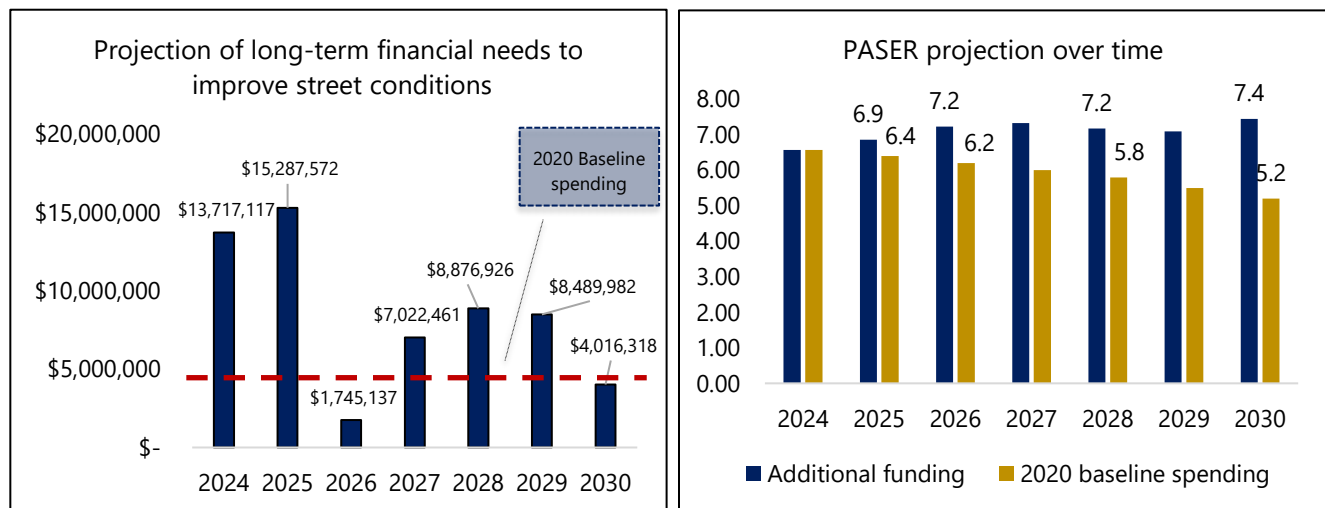
### Option 1. Financial needs to achieve a city-wide PASER average of 7 by 2030

Below is a projection of financial needs and street conditions for the City to achieve a 7 PASER average by 2030. This projection assumes the three-year plan outlined in this document is completed and includes current baseline spending on streets maintenance.



### Option 2. Financial needs to achieve a city-wide PASER average of 7 by 2026

Below is a projection of financial needs and street conditions for the City to achieve a 7 PASER average by 2030. This projection assumes the three-year plan outlined in this document is completed and includes current baseline spending on streets maintenance.

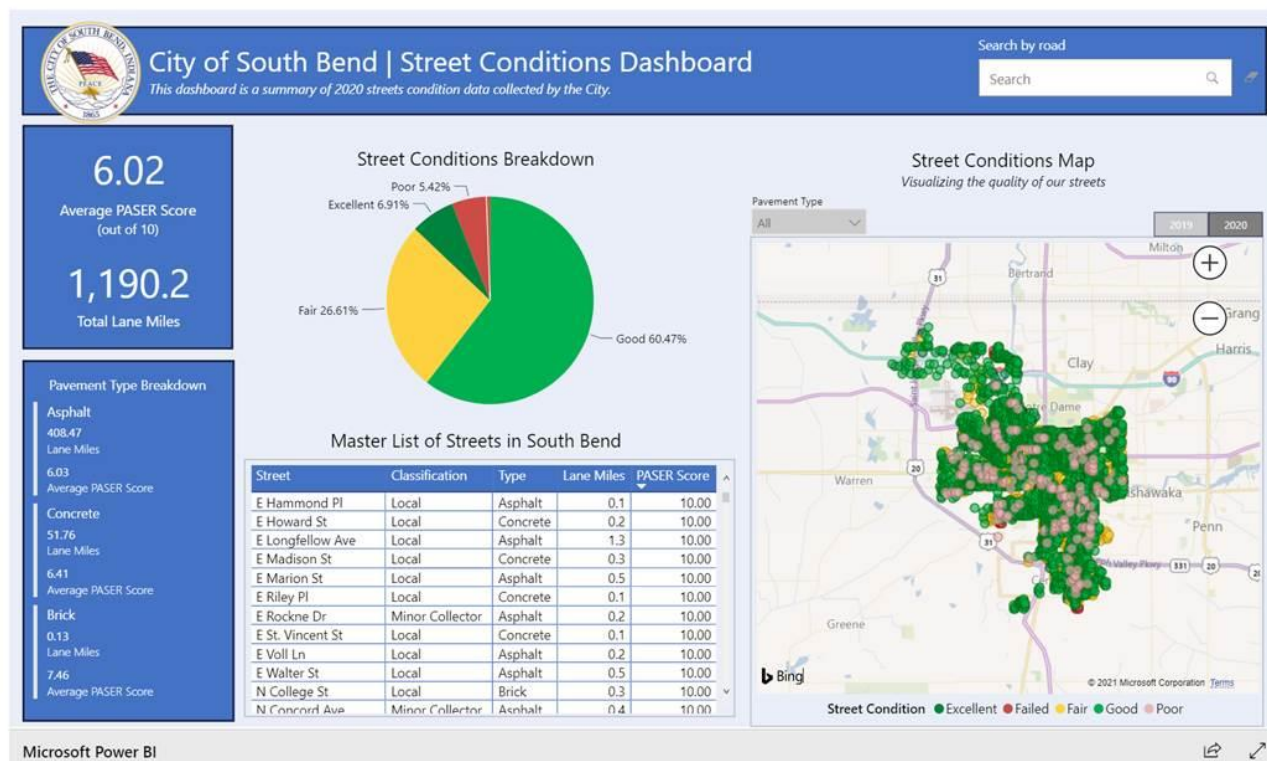


The City has a few options for alternative funding to consider over the next 10 years to meet this long-term financial need. A brief list of these options is below:

1. Tax Increment Financing (TIF) as dedicated funding source
2. Bond out portion of repairs
3. State and Federal grant opportunities (e.g. Community Crossings)
4. Potential COVID stimulus funding (uncertain and short-term)

# REPORTING

The City's Streets dashboard will show the current street conditions and track progress towards the 3 year and 10 years goals in this Plan.



The dashboard is available online at: <https://tinyurl.com/y37yng9v>

## SUMMARY

The City of South Bend intends to spend approximately \$25 Million over the next three years (2021-2023) to improve and repair streets in South Bend. The work is based on a data driven approach that looks at current and projected street conditions and determines the best repair or maintenance technique. The City will utilize a wide range of options including full depth reconstruction, mill and overlay, microsurfacing and crack sealing to extend pavement life. Funds are also allocated to address spot repairs of brick streets which are a tremendous asset in many older and historic neighborhoods in the city.

This Streets Plan will be revisited annually as part of the asset management planning process to make sure that information and data are current. The Streets Dashboard will allow the community to track the progress of our goals and provide added transparency to our decisions.

# Appendix A

## Peer City Data (2019)

		Good		Fair		Poor	
<b>South Bend</b>	Asphalt	101	21.72%	259	55.70%	41	8.82%
	Brick	0	0.00%	0	0.00%	10	2.15%
	Concrete	16	3.44%	33	7.10%	5	1.08%
<b>Fort Wayne</b>	Asphalt	132	11.87%	202	18.17%	430	38.67%
	Brick	0	0.00%	1	0.09%	2	0.18%
	Concrete	17	1.53%	95	8.54%	117	10.52%
	chip seal	13	1.17%	43	3.87%	60	5.40%
<b>Goshen</b>	Asphalt	12	8.63%	38	27.34%	77	55.40%
	Brick	0	0.00%	0	0.00%	1	0.72%
	Concrete	1	0.72%	5	3.60%	5	3.60%
<b>Elkhart</b>	Asphalt	21	7.24%	177	61.03%	77	26.55%
	Brick	0	0.00%	1	0.34%	0	0.00%
	Concrete	1	0.34%	10	3.45%	3	1.03%
<b>Logansport</b>	Asphalt	27	24.77%	49	44.95%	33	30.28%
	Brick	0	0.00%	0	0.00%	0	0.00%
	Concrete	0	0.00%	0	0.00%	0	0.00%
<b>Muncie</b>	Asphalt	115	33.05%	78	22.41%	136	39.08%
	Brick	0	0.00%	0	0.00%	0	0.00%
	Concrete	9	2.59%	7	2.01%	3	0.86%
<b>Valparaiso</b>	Asphalt	99	19.76%	216	43.11%	178	35.53%
	Brick	1	0.20%	0	0.00%	0	0.00%
	Concrete	0	0.00%	5	1.00%	2	0.40%
<b>Terre Haute</b>	Asphalt	84	25.15%	184	55.09%	44	13.17%
	Brick	0	0.00%	0	0.00%	0	0.00%
	Concrete	3	0.90%	14	4.19%	5	1.50%

	<b>Good %</b>	<b>Fair %</b>	<b>Poor %</b>
<b>South Bend</b>	25.16%	62.80%	12.04%
<b>Fort Wayne</b>	14.57%	30.67%	54.77%
<b>Goshen</b>	9.35%	30.94%	59.71%
<b>Elkhart</b>	7.59%	64.83%	27.59%
<b>Logansport</b>	24.77%	44.95%	30.28%
<b>Muncie</b>	35.63%	24.43%	39.94%
<b>Valparaiso</b>	19.96%	44.11%	35.93%
<b>Terre Haute</b>	26.05%	59.28%	14.67%



# Appendix B

## 3-Year Street Repair List

This list represents the streets shortlisted for paving, reconstruction, microsurfacing and brick repair over 2021-2023 using the PASER analysis performed in 2020. While the list below represents streets in the worst condition, this is subject to change with winter weather impacting street condition.

Year	Street Name	To	From	Lane Mile	PASER
2021	30th St	Jefferson Blvd	RR Tracks	0.31	3
2021	Adams St	Liston St	Orange St	0.26	3
2021	Adams St	Lincoln Way West	Elwood Ave	1.32	4
2021	Allen St	Oak St	Lincoln Way West	0.39	3
2021	Altgeld St	York Rd	Ironwood Dr	1.23	3
2021	Arthur St	Sorin St	Chalfant St	0.26	3
2021	Bendix Dr	Western Ave	Huron St	0.31	3
2021	Bent Oak Ln	Oakwood Park Dr	Oakbrook Dr	0.13	3
2021	Birner St	Allen St	Blaine Ave	0.13	4
2021	Blaine Ave	LaPorte Ave	Lincoln Way West	0.43	3
2021	Boston Dr	Linden Ave	Cul-De-Sac	0.12	3
2021	Bowman St	Miami St	Leer St	0.57	3
2021	Broadway St	High St	Miami St	0.45	3
2021	Bronson St	Michigan St	St. Joseph St	0.27	3
2021	Bulla St	Anderson Ave	Wilber St	0.34	3
2021	Burnett Dr	Ireland Rd	Burnett Dr	1.06	3
2021	Calvert St	High St	Miami St	0.56	2
2021	Calvert St	Walnut St	Morris St	0.12	3
2021	Catalpa St	Sample St	Kerr St	0.16	3
2021	Chicago St	Lincoln Way West	Cul-De-Sac	0.34	3
2021	Coquillard Dr	Jefferson Blvd	Colfax Ave	0.76	3
2021	Cottage Grove Ave	Alley	Oak St	0.08	3
2021	Dale Ave	Ewing Ave	Calvert St	0.49	3
2021	Danbury Dr	Gotham Dr	Berkshire Dr	0.61	3
2021	Dayton St	Caroline St	Robinson St	0.22	3
2021	Delbert Ct	Caroline St	Eldora Ct	0.09	3
2021	Dogwood Dr	Sylvan Ln	Parkway St	0.35	3
2021	Dubail Ave	Olive St	Grant St	0.53	3
2021	Dundee St	Ford St	Dunham St	0.31	3
2021	Dunham St	Dead End	Jackson St	0.61	3
2021	Eagle Cove Dr	Park South Blvd	Copperfield Dr	0.20	4
2021	Eckman St	Main St	Dead End	0.24	4

2021	Eldora Ct	Lincolnway East	Delbert Ct	0.11	3
2021	Erskine Manor Hill Dr	Erskine Ct	Honan Dr	0.19	3
2021	Ewing Ave	High St	Dale Ave	0.44	3
2021	Fairfax Ct	Cul-De-Sac	Cul-De-Sac	0.21	4
2021	Fairview Ave	Dale Ave	Miami St	0.21	3
2021	Farneman Ave	Michigan St	Main St	0.20	3
2021	Fellows St	Donmoyer Ave	Tasher St	0.32	3
2021	Flat Creek Dr	Cul-De-Sac	Foxfire Dr	0.18	4
2021	Fox St	Miami St	Leer St	0.57	3
2021	Fulton Ct	LaSalle Ave	Dead End	0.05	2
2021	Galway Ct	Galway Dr	Cul-De-Sac	0.08	4
2021	Garden Oak Dr	Dead End	Brick Rd	0.80	1
2021	Garfield Ct	Washington St	Dead End	0.10	3
2021	Garland Cir	York Rd	Cul-De-Sac	0.22	4
2021	Garland Rd	Ridgedale Rd	York Rd	0.58	4
2021	Georgian Ct	Cotswold Ln	Cul-De-Sac	0.11	3
2021	Gladstone St	Sample St	Silver Ln	0.25	3
2021	Glen St	Ewing Ave	Dead End	0.22	3
2021	Gotham Dr	Riding Mall	Berkshire Dr	0.73	2
2021	Grove St	Dead End	Canterbury Dr	0.20	3
2021	Hamilton Ct	Cul-De-Sac	Thornhill Dr	0.05	3
2021	Hancock St	Arnold St	Western Ave	0.15	2
2021	Haney Ave	Miami St	Broadway St	0.38	4
2021	Harrington Dr	Edison Rd	Dead End	0.21	3
2021	Harrison Ave	Fuerbringer St	Lincoln Way West	0.25	3
2021	Harrow Dr	Garway Common St	Regent Ct	0.64	3
2021	Hawthorne Dr	Colfax Ave	McKinley Ave	0.36	3
2021	High St	Wenger St	Sample St	0.44	3
2021	High St	Woodside St	Irvington St	0.36	3
2021	Highland Ave	Olive St	Carlisle St	0.30	3
2021	Hine St	Walnut St	Studebaker St	0.14	3
2021	Huey St	Frederickson St	Lincoln Way West	0.36	3
2021	Humphrey Ct	Sample St	Dead End	0.20	3
2021	Huron St	Kaley St	Liberty St	0.29	3
2021	Indiana Ave	Michigan St	High St	1.60	4
2021	Irvington Dr	Locust Rd	Emerson Forest Pkwy	0.41	1
2021	Irvington St	Woodmont Dr	Dead End	0.07	3
2021	Jackson St	Orange St	Linden Ave	0.12	3
2021	Jacob St	Cedar St	Campeau	0.67	2
2021	Jefferson Blvd	Chapin St	Scott St	0.26	2
2021	Jefferson Blvd	Cherry St	Walnut St	0.29	1
2021	Jennings St	Michigan St	St. Joseph St	0.39	3

2021	Kalorama St	Hill St	Turnock St	0.19	3
2021	Keller St	Olive St	Meade St	0.23	3
2021	Kentucky St	Western Ave	Ford St	0.61	3
2021	Kessler Blvd	Kessler Pl	Woodlawn Blvd	0.70	4
2021	Kindig Dr	Cambridge Dr	Fairfax Dr	0.25	2
2021	King St	Kessler Blvd	Portage Ave	0.24	3
2021	Kinyon St	Portage Ave	Wilber St	0.35	3
2021	Laurel St	Western Ave	Jefferson Blvd	0.34	2
2021	Liberty St	Western Ave	Ford St	0.60	3
2021	Liberty St	Washington St	Western Ave	0.54	3
2021	Liberty St	Western Ave	Ford St	0.60	3
2021	Lincoln Way West	Elmer St	Fremont St	0.66	4
2021	Lindsey Ave	Portage Ave	Blaine Ave	2.78	3
2021	Longley Ave	College St	Johnson St	0.30	3
2021	Maple St	Thomas St	Washington St	0.38	2
2021	Marquette Ave	Lafayette Blvd	Wakewa Ave	0.33	3
2021	McKinley Ave	Walsh St	Sunnyside Ave	0.13	3
2021	McPherson St	Thomas St	Western Ave	0.40	3
2021	Meade St	Newcome St	Western Ave	0.17	3
2021	Milton St	Miami St	Mumford Ct	0.23	3
2021	Milton St	Dale Ave	Miami St	0.17	3
2021	Napier St	Walnut St	Dead End	0.28	3
2021	Nursery Ct	28th St	30th St	0.17	3
2021	Ohio St	Michigan St	Fellows St	0.57	3
2021	Patty Ln	Corby Blvd	Bentley Ln	0.42	3
2021	Pine St	Western Ave	Napier St	0.09	2
2021	Poland St	Tade Ct	Harris St	0.22	2
2021	Portage Ct	Portage Ave	Ashland Ave	0.06	2
2021	Raleigh Dr	Cambridge Dr	Berkshire Dr	0.55	3
2021	Rexford Dr	Dead End	Hickory Rd	1.19	3
2021	Ridgedale Rd	York Rd	Woodmont Dr	1.41	3
2021	Ridgewood Cir	Cul-De-Sac	Rosemary Ln	0.30	3
2021	Rockne Dr	McKinley Ave	Sunnyside Ave	0.14	4
2021	Roelke Dr	Abshire Dr	Cul-De-Sac	0.27	3
2021	Rose St	Maple Ln	Crestwood Blvd	1.28	3
2021	Sample St	Chapin St	Arnold St	1.28	4
2021	Sherman Ave	Lincoln Way West	Portage Ave	1.41	3
2021	St. Vincent St	Notre Dame Ave	Frances St	0.16	3
2021	Sunnyside Ave	Jefferson Blvd	Colfax Ave	0.34	3
2021	Sylvan Ln	Scenic Dr	Sample St	0.54	3
2021	Tasher St	Michigan St	Main St	0.19	3
2021	Taylor St	Washington St	Colfax Ave	0.18	3
2021	Wakewa Ave	Hillcrest Rd	Iroquois St	0.90	3

2021	Wall St	Ironwood Dr	31st St	1.42	3
2021	Wall St	31st St	Logan St	0.85	3
2021	Walsh St	LaSalle Ave	Cedar St	0.36	3
2021	Walter St	Michigan St	Main St	0.12	3
2021	Wayne St	Chapin St	Scott St	0.25	2
2021	Webster St	Indiana Ave	Prairie Ave	0.20	3
2021	Williamsburg Ct	Boston Dr	Cul-De-Sac	0.14	3
2021	Woodmont Dr	Ridgedale Rd	Brookmeade Dr	0.81	3
2022	26th St	Pleasant St	Dead End	0.24	4
2022	28th St	Wall St	Mishawaka Ave	0.30	4
2022	35th St	Marshall Ave	Jefferson Blvd	0.19	4
2022	35th St	RR Tracks	Hastings St	0.35	4
2022	Addison St	Luelde St	Teri St	0.13	4
2022	Apple Ridge Ct	Miami St	Cul-De-Sac	0.35	4
2022	Arnold St	Western Ave	Hancock St	0.09	4
2022	Bendix Dr	Washington St	Cul-De-Sac	0.53	4
2022	Bentley Ln	Patty Ln	Manchester Dr	0.40	4
2022	Blaine Ave	Lincoln Way West	Van Buren St	0.35	4
2022	Blaine Ave	Vassar Ave	Portage Ave	0.51	4
2022	Bonfield Pl	Village Way	Sheridan St	0.37	4
2022	Bowman St	Michigan St	Fellows St	0.57	4
2022	Brighton Pl	Patterson Dr	Whitehall Dr	0.17	4
2022	Brookfield St	Ewing Ave	Alley	0.24	4
2022	Brookhurst Pl	Patterson Dr	Whitehall Dr	0.25	4
2022	Brookton Dr	Byron Dr	Apline Dr	0.46	4
2022	Buick St	Linden Ave	Roger St	0.43	4
2022	Bulla St	O'Brien St	Huey St	0.13	4
2022	California Ave	Diamond Ave	Sancome Ave	0.26	4
2022	Cambridge Dr	Miami St	Abshire Dr	0.30	4
2022	Camden St	Washington St	Western Ave	0.63	4
2022	Canterbury Dr	Grove St	Elwood Ave	0.52	4
2022	Carlisle St	Delaware St	Ewing Ave	0.31	4
2022	Carroll St	Bronson St	RR Tracks	0.21	4
2022	Carroll St	Sample St	Ohio St	0.11	4
2022	Cherry St	Washington St	Dead End	0.25	4
2022	Cherry St	RR Tracks	Western Ave	0.08	4
2022	Clemens St	Linden Ave	Reo Ave	0.11	4
2022	Cleveland Ave	Lincoln Way West	Vassar Ave	0.99	4
2022	Colfax Ave	Jacob St	Esther St	0.75	4
2022	College St	Florence St	Fassnacht St	0.32	4
2022	Corby Blvd	Notre Dame Ave	South Bend Ave	0.28	4
2022	Delaware St	Meade St	Prospect St	0.13	4
2022	Diamond Ave	LaPorte Ave	Lincoln Way West	0.23	4



2022	Dundee St	Washington St	Western Ave	0.63	4
2022	Eastmont Dr	Riverside Dr	Northlea Dr	1.11	4
2022	Edison Ave	Washington St	Linden Ave	0.54	3
2022	Fairway St	Lombardy Dr	Sample St	0.71	4
2022	Ford St	Grant St	Kosciuszko St	0.51	4
2022	Franklin St	Ewing Ave	Indiana Ave	1.42	4
2022	Gladstone St	Bonfield Pl	Washington St	0.34	3
2022	Gladstone St	Sample St	Silver Ln	0.31	4
2022	Grant St	Alley	Sample St	0.16	4
2022	Greenlawn Ave	McKinley Ave	Madison St	0.18	4
2022	Greenview Ave	Lombardy Dr	Sample St	0.55	4
2022	Hastings St	30th St	33rd St	0.12	4
2022	Hastings St	Dead End	Ironwood Dr	0.08	4
2022	Hillside St	Phillipa St	Carisle St	0.15	3
2022	Inglewood Pl	Rose St	Woodlawn Blvd	0.68	4
2022	Inwood Rd	Springbrook Dr	Nall Ct	0.18	4
2022	Jefferson Blvd	William St	Taylor St	0.25	4
2022	Johnson Rd	Buckhorn Dr	Ironwood Dr	0.75	4
2022	Keller St	Portage Ave	Wilber St	0.31	4
2022	Kemble Ave	Calvert St	Ewing Ave	0.76	4
2022	LaMonte Terr	Forest Ave	Park Ave	0.28	2
2022	Lancaster Dr	Woldhaven St	Chippewa Ave	0.52	4
2022	LaPorte Ave	Sancome Ave	Wilber St	0.19	4
2022	Lawrence St	Howard St	Napoleon Blvd	0.46	4
2022	Linden Ave	College St	Grant St	0.43	4
2022	Linden Ave	Concord Ave	Lombardy Dr	0.33	4
2022	Manitou Pl	Forest Ave	Park Ave	0.38	2
2022	McKinley Ave	Jacob St	Twyckenham Dr	0.32	4
2022	Meade St	Newcome St	Colfax Ave	0.73	4
2022	Meadow Ln	Parkway St	Birchwood Ave	0.65	4
2022	Miner St	Jacob St	Twyckenham Dr	0.24	4
2022	Mumford Ct	Calvert St	Dayton St	0.17	4
2022	Napier St	Walnut St	Chapin St	0.72	2
2022	Oakbrook Dr	Bent Oak Ln	Dead End	0.16	4
2022	Oakside St	Dale Ave	Miami St	0.21	4
2022	Oakside St	Fellows St	Erskine Blvd	0.34	4
2022	O'Brien St	Vassar Ave	Elwood Ave	0.77	4
2022	O'Brien St	Alley	Werwinski St	0.15	4
2022	Olds Ave	Clemens St	Mayflower Rd	0.41	4
2022	Olive St	RR Tracks	SR 23	0.77	2
2022	Park Ave	Navarre Ave	Riverside Dr	0.80	2
2022	Parkview Pl	Woodlawn Blvd	Oakwood Blvd	0.52	4
2022	Phillipa St	Delaware St	Highland Ave	0.19	4

2022	Phillipa St	Indiana Ave	Dubail Ave	0.19	4
2022	Pulaski St	Western Ave	Ford St	0.61	4
2022	Rainbow Dr	Southlea Dr	Cul-De-Sac	0.27	4
2022	Raymond Ct	Haney Ave	Leer St	0.18	4
2022	Rupel St	Brookfield St	Johnson St	0.15	4
2022	South St	Michigan St	Carroll St	0.53	4
2022	Southlea Dr	Dead End	Eastmont Dr	0.46	4
2022	St. John's Way	Ryer St	Woodbine Way	0.98	4
2022	St. Vincent St	Stanfield St	Notre Dame Ave	1.01	4
2022	Sunnymede Ave	30th St	32nd St	0.34	4
2022	Sunset Pl	Sheridan St	Gladstone St	0.35	4
2022	Teri St	Addison St	Fellows St	0.48	4
2022	Topsfield Rd	Pimm's Ln	Inwood Rd	1.03	4
2022	Tutt St	Michigan St	Fellows St	0.57	4
2022	Washington St	Camden St	Dundee St	0.19	4
2022	Werwinski St	Johnson St	Huey St	0.29	4
2022	William St	Indiana Ave	Calvert St	0.63	4
2022	Wilson Ave	Greenlawn Ave	Tuxedo Dr	0.94	4
2022	Woldhaven St	Ridgedale Rd	Chippewa Ave	0.70	4
2022	Woodbine Way	St. John's Way	Elwood Ave	0.25	4
2023	27th St	Pleasant St	Mishawaka Ave	0.71	4
2023	27th St	Mishawaka Ave	Wall St	0.39	4
2023	32nd St	Mishawaka Ave	RR Tracks	0.93	4
2023	33rd St	Wall St	Mishawaka Ave	0.31	4
2023	Adams St	Keller St	Marquette Blvd	0.27	4
2023	Albert Ave	Washington St	Linden Ave	0.52	4
2023	Bellewood St	Parkwood Ln	Westwood Ln	0.34	4
2023	Birdsell St	Colfax Ave	Linden Ave	0.24	4
2023	Black Oak Dr	Scottswood Dr	Edison Rd	0.68	4
2023	Bowman St	Michigan St	Main St	0.21	4
2023	Bruce St	Kemble Ave	Alley	0.13	4
2023	Calvert St	High St	Mumford Ct	0.68	3
2023	Calvert St	Brookfield St	Warren St	0.28	3
2023	Calvert St	Phillipa St	Olive St	0.13	4
2023	Camden St	Western Ave	Sample St	1.25	3
2023	Clearview Pl	Floral Pl	Sunnyfield Pl	0.27	4
2023	Crescent Ave	Hill St	St. Louis Blvd	0.26	4
2023	Deer Lake Dr	Topsfield Rd	Topsfield Rd	0.87	4
2023	Devon Cir	Devon Cir	Esther St	0.22	4
2023	Devonshire Dr	Chevy Ch	Winding Wood Dr	0.16	4
2023	Donald St	High St	Miami St	0.53	4
2023	Donald St	Vernon St	Twyckenham Dr	0.17	4
2023	Donmoyer Ave	Michigan St	Main St	0.20	4

2023	Dorwood Dr	Oak Ridge Dr	Dead End	0.07	4
2023	Dubail Ave	Jackson St	Magnolia St	0.43	4
2023	Dunham St	Illinois St	Sheridan St	0.16	4
2023	Dunham St	Falcon St	Wellington St	0.32	4
2023	Edward St	Swygart St	Walnut St	0.11	4
2023	Elmer St	Frederickson St	Lincoln Way West	0.42	4
2023	Eunice Dr	Colfax Ave	McKinley Ave	0.26	4
2023	Ewing Ave	Meade St	Olive St	0.41	4
2023	Fairview Ave	Michigan St	Main St	0.20	4
2023	Fairview Ave	Meade St	Kaley St	0.17	4
2023	Farneman Ave	Michigan St	Carroll St	0.37	4
2023	Fisher St	Kaley St	Dunham St	0.44	4
2023	Florence St	Wilber St	Johnson St	0.60	4
2023	Fremont St	Orange St	Lawton St	0.14	4
2023	Garden Pl	Cul-De-Sac	Albert Ave	0.06	4
2023	George Ave	Dead End	Sample St	0.08	4
2023	Grant St	Orange St	Linden Ave	0.16	4
2023	Harris St	Western Ave	Huron St	0.31	4
2023	Hartman Dr	Dead End	Rosemary Ln	0.40	4
2023	Hawkins Ct	Danbury Dr	Cul-De-Sac	0.12	4
2023	High St	Altgeld St	Victoria St	0.13	4
2023	Hildreth St	Emerson Ave	Clover St	0.23	4
2023	Hillcrest Rd	Wakewa Ave	Tonti St	0.18	4
2023	Hillsdale Rd	Caroline St	Hilltop Dr	0.39	4
2023	Hilltop Dr	Southeast Dr	Southridge Dr	0.11	4
2023	Howard St	Niles Ave	Stanfield St	0.30	4
2023	Huffman Dr	Abshire Dr	Cul-De-Sac	0.28	4
2023	Huron St	Dundee St	Kentucky St	0.16	4
2023	Irvington St	Prairie Ave	Kaley St	0.13	4
2023	Jackson St	Calvert St	Dead End	0.15	4
2023	Jamestown Ct	Cul-De-Sac	Trenton Dr	0.19	4
2023	Kaley St	Victoria St	Prairie Ave	0.46	4
2023	Kemble Ave	Prairie Ave	Indiana Ave	0.52	4
2023	Kerr St	Chapin St	Catalpa St	0.19	4
2023	Kettering Dr	Crestwood Blvd	Dead End	0.20	4
2023	Kosciuszko St	Western Ave	Ford St	0.74	4
2023	Lagoon Ct	Hollywood Pl	Cul-De-Sac	0.11	4
2023	Lake St	Ford St	Dunham St	0.31	4
2023	Lee Ct	Fairfax Dr	Cul-De-Sac	0.09	4
2023	Leer St	Irvington Ave	Twyckenham Dr	0.19	4
2023	Locust Rd	Prairie Ave	St. Joseph Valley Pkwy	2.60	3
2023	Magyar Ct	Brookfield St	Alley	0.08	4
2023	Maple St	Napier St	Western Ave	0.12	4

2023	Marietta St	Dubail Ave	Dayton St	0.15	4
2023	Marine St	Dubail Ave	Calvert St	0.44	4
2023	Meade St	Western Ave	Ford St	0.57	4
2023	Miner St	Eddy St	Arthur St	0.23	4
2023	North Cove St	Cul-De-Sac	Elwood Ave	0.08	4
2023	Norwich Ct	Cul-De-Sac	Gotham Dr	0.30	4
2023	Oakdale Dr	Brookton Dr	York Rd	0.31	4
2023	Oakside St	Michigan St	Main St	0.20	4
2023	Packard Ave	Buick St	Mayflower Rd	0.23	4
2023	Pagin St	Hine St	Linden Ave	0.25	4
2023	Portage Ave	Vassar Ave	Yukon Ave	0.23	4
2023	Portsmouth Ct	Cul-De-Sac	Boston Dr	0.12	4
2023	Preston Dr	Manchester Dr	McKinley Ave	0.72	4
2023	Queen St	Sherman Ave	Portage Ave	0.74	4
2023	Ridge Trl	Maple Ct	Southfield Cir	0.19	4
2023	Roger St	Clemens St	Mayflower Rd	0.41	4
2023	Roosevelt St	Cushing St	Sherman Ave	0.33	4
2023	Rosemary Ln	Edison Rd	Charles St	0.39	4
2023	Rush St	Pennsylvania Ave	Broadway St	0.45	4
2023	Sample St	Eddy St	Lincoln Way West	0.49	4
2023	Sample St	Mayflower Rd	Greenview Ave	2.55	5
2023	Sancome Ave	LaPorte Ave	Lincoln Way West	0.17	4
2023	Scenic Dr	Ford St	Garden Ln	0.27	4
2023	Scholum St	Alley	Western Ave	0.11	4
2023	Smith St	Huey St	Olive St	0.20	4
2023	South St	United Dr	Alonzo Watson Dr	0.13	4
2023	Southeast Dr	Irvington St	Greenwood Dr	0.23	4
2023	Springbrook Dr	Hillsdale Rd	Brookmeade Dr	0.12	4
2023	St. Joseph St	Donmoyer Ave	Farneman Ave	0.15	4
2023	St. Louis Blvd	Corby Blvd	Napoleon Blvd	0.65	4
2023	Sterling St	Rose Street	Cabot Drive	0.21	4
2023	Sullivan Ct	Erskine Manor Hill Dr	Cul-De-Sac	0.21	4
2023	Sunnyside Ave	McKinley Ave	Rockne Dr	0.06	4
2023	Sutton Pl	Hampshire Dr	Cul-De-Sac	0.14	4
2023	Twixwood Ln	Topsfield Rd	Deer Lake Dr	0.31	4
2023	Vassar Ave	Diamond Ave	Wilber St	0.39	4
2023	Vernerlee Ln	Kettering Dr	Rose St	0.42	4
2023	Vernon St	Calvert St	Donald St	0.13	4
2023	Victoria St	Fellows St	Erskine Blvd	0.39	4
2023	Victoria St	Meade St	Kaley St	0.24	4
2023	Village Way	Washington St	Western Ave	0.69	4
2023	Wall St	Twyckenham Dr	Greenlawn Ave	0.61	4

2023	Warren St	Western Ave	Ford St	0.51	4
2023	Washington St	Mayflower Rd	Summit Dr	0.71	4
2023	Washington St	Ironwood Dr	Tuxedo Dr	0.30	4
2023	Wayne St	Twyckenham Dr	Greenlawn Ave	0.68	4
2023	Wenger St	Fellows St	Marietta St	0.40	4
2023	Werwinski St	College St	Brookfield St	0.21	4
2023	Western Ave	Phillipa St	Olive St	0.14	4
2023	Westmoor St	Goodland Ave	Bendix Dr	0.27	4
2023	Winthrop Dr	Byron Dr	Catherwood Dr	0.56	4
2023	Woodside St	Fellows St	Erskine Blvd	0.32	4
2023	York Rd	Glenlake Dr	Ireland Rd	0.13	4
2023	York Rd	Dead End	Byron Dr	0.23	4