



Indiana 2016 legislation enables the City of Bloomington to levy a combination of excise and wheel taxes to increase funding for local roads. Is now the time to do so? This report outlines the various tax implications that the Bloomington City Council will need to evaluate prior to enacting an ordinance.

# Bloomington Wheel Tax

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# SUMMARY

- The local roadways and transit corridors in the City of Bloomington, IN have deteriorated over the past 5 years.
- Bloomington can adopt two motor vehicle taxes which would raise considerable revenue to augment roadway maintenance funds.
- These taxes could increase citizen quality of life, decrease vehicle maintenance repairs, and reduce deferred maintenance costs.

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## **Key Terms**

BBCMPO	Bloomington-Monroe County Metropolitan Planning Organization
BMV	Bureau of Motor Vehicles
CAFR	Comprehensive Annual Financial Report
FHWA	Federal Highway Administration
IC	Indiana Code
INDOT	Indiana Department of Transportation
LRSB	Local Road and Street Budget
M&R	Maintenance and Rehabilitation
MPO	Metropolitan Planning Organization
NHS	National Highway System
PCI	Pavement Condition Index
TAMP	Transportation Asset Management Plan
TIP	Transportation Improvement Plan

## **Executive Summary**

Residents in the City of Bloomington, Indiana enjoy a high quality of life. Over the past five years, however, local roadway pavement conditions have steadily deteriorated. Residents express frustration with the City's road maintenance in open forums and surveys. The City budget does not currently allocate sufficient funding for adequate roadway maintenance. More frequent extreme weather events, which affect road condition, plus rising costs of infrastructure means that tax dollars accomplish less each year.

In 2016, the Indiana Legislature passed a provision to allow municipalities to adopt a wheel tax. Prior to then, only counties could levy a wheel tax on motor vehicles. Now, Bloomington can consider enacting an ordinance to impose a wheel tax ("Wheel Tax" or "Tax") on motor vehicles registered in the City. A Wheel Tax applies a flat use rate to non-exempt vehicles (e.g., personal vehicles, trucks, buses, recreational vehicles, semi-trucks, and tractor trailers) upon registration at the Bureau of Motor Vehicles (BMV). Exempt vehicles include state vehicles, school buses, and funeral hearses.

Adopting municipalities may use the Tax revenue to fund roadway and bridge maintenance. The legislation defines two distinct taxes with different bases and rates, but the two taxes must be adopted concurrently, and if rescinded, rescinded concurrently. The law outlines an upper and lower bound for the rate. This report outlines the implementation of the Tax and provides preliminary estimates on revenue collections. If the City Council adopts the lower bound of the rate, the Tax will generate an estimated \$1.06 million per year; the upper bound will generate an estimated \$2.06 million per year.

The Tax functions akin to other vehicle registration costs, and has identical consequences for evasion (Class B misdemeanor). Given that the Tax has low salience—a vehicle registrant only views it as an additional line item at the BMV during registration—it will likely have minimal impact on total vehicle registrations. The City can anticipate that, depending on the rate it selects, some large vehicle fleet managers may choose to register their vehicles outside of the City limits to avoid the Wheel Tax. In practice, this will likely only constitute a minor percentage of all large vehicle registrations.

In contrast, individual vehicle owners will most likely not move outside of city limits to evade paying a tax in the range of \$7.50 to \$25.00 per vehicle. Like most use taxes, the Tax affects vehicle owners regressively; as income decreases, the Tax constitutes a greater proportion of a vehicle owner's expense. In this light, the Tax does not track an individual's roadway usage, but rather an individual's vehicle ownership, raising some concerns about equity. On balance, all roadway users will benefit from improved roadways that cause less wear-and-tear on their vehicles and contribute to a generally more pleasant driving experience.

The City Council must consider which rates to pursue, if at all. A lower tax rate will fund less maintenance and rehabilitation. This report provides an estimate of the optimal level of roadway funding to ultimately diminish the non-linear cost of deferred maintenance. Roads in worse states of disrepair require more extensive maintenance than frequently maintained roads. Consequently, a higher tax rate will generate more revenue and be more likely to offset future outlays to roadway maintenance. Preventative maintenance prolongs roadway life; this report concludes with a recommendation for the higher rate.

## Introduction

The City of Bloomington in Monroe County, Indiana enjoys world-class amenities for its small population of 85,000 residents, regional community of 170,000 and roughly 2,000,000 annual visitors.<sup>1</sup> In the City's most recent community survey, 8 in 10 residents rated the overall quality of life as "good" or "excellent." Only 2 in 10 rated it "fair" or "poor".<sup>2</sup> Residents enjoy a wide range of community amenities including parks, trails, public transportation, and community events.

Bloomington's transportation assets and ease of mobility factor into residents' high quality of life. Residents consider ease and quality of mobility when judging their overall perception of the City. On balance, most residents were pleased with ease of mobility and rated pedestrian walkways and bicycle paths as generally high quality. In contrast, others noted with displeasure that the physical condition of automotive byways has deteriorated in comparison to other city-funded projects (e.g., parking facilities or walking paths).

The following excerpts from the Verbatim Responses in the 2021 Community Survey, Appendix C, "highlight residents' perceptions of quality of life, [and] community challenges... regarding mobility (roads, traffic, difficulty navigating community, public transportation, parking)".<sup>3</sup> Verbatim responses in Community Surveys 2020, 2019, 2018, and 2017 show a similar sentiment of displeasure.

- "Attention to non-essential road repair- not fixing potholes."
- "Potholes everywhere that are never fixed, and useless expansion of walking trails instead of fixing the roads"
- "Roads need repairing"
- "Roads! Fix potholes and pave!!!"
- "Roads, Road construction, care and maintenance of roadways and conditions (pot holes, resurfacing, etc.), traffic"
- "Rough streets"
- "Soooooo many potholes!!"
- "TRAVELWAYS, ROADS ARE NOT KEPT IN BALANCE WITH THE RE-DEVELOPMENT OF THE CITY."

The overall respondent statistics corroborate these verbatim responses from the 2021 Community Survey. Roughly 21% of the survey participants rated mobility as their least favorite thing about Bloomington, second only to homelessness (29%). Only 26% of respondents rated street repair as "excellent" or "good" as opposed to 70% who rated it as "fair" or "poor" (4% responded "don't know"). Together with the

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<sup>1</sup> See Memorandum from Joe Van Deventer, Pub. Works Asst. Dir., and Adam Wason, Pub. Works Dir., Aug 19, 2021. Hereafter "Pub. Works: Street Division 2022 Budget Request." [https://bloomington.in.gov/sites/default/files/2021-08/Combined\\_Ver\\_1.8.19.21.pdf](https://bloomington.in.gov/sites/default/files/2021-08/Combined_Ver_1.8.19.21.pdf)

<sup>2</sup> In 2021, 527 respondents completed the survey, and prior years had similar response rates. See Polco, 2021. City of Bloomington, IN 2021 Community Survey: Report of Results (Survey). Hereafter "2021 Community Survey." <https://bloomington.in.gov/sites/default/files/2021-07/Bloomington%2C%20IN%20Community%20Survey%20Report%202021%20FINALv2.pdf>

<sup>3</sup> 2021 Community Survey, pp. 66-67.

descriptive sentiments, the full Community Survey responses help indicate that residents feel frustration about the City's roadways.

## Does the City's current budget cover roadway expense?

In addition to descriptive statistics, Bloomington has conducted a full assessment of its pavement conditions. Bloomington scores a 63, or "fair" for its overall roadway conditions, according to a 2018 study.<sup>4</sup> Yet, roadways constitute but one of many worthwhile expenditures of a limited City budget. The City's Department of Public Works: Street Division has full oversight over the maintenance and rehabilitation (M&R) of the City's 237 lane miles of public streets and other byways, e.g., sidewalks, bike paths, and public paths.<sup>5</sup> The Street Division outlined the following M&R goals in its 2022 budget request:

- Complete proactive crack sealing efforts with 10-15 lane miles by 2022 Q3.
- Mill and prep for repave at least 10 street lane miles by 2022 Q3.
- Resurface a minimum of 12 street lane miles by 2022 Q3.
- Apply for INDOT Community Crossing Match Grant funds for additional infrastructure improvements by the end of 2022 Q3.

To accomplish these goals, the Street Division requested a nearly 200% increase (2021: \$168,407 to 2022 request: \$503,673) in funding for supplies, though the total budget request decreased by 1% (driven largely by a decrease in requested supply funding for leaf removal, sidewalk maintenance, urban forest maintenance, and alley repairs).<sup>6</sup> Yet, these repairs represent the "worst-first" approach and do not reduce the growing cost of deferred maintenance—the 2018 assessment estimated a minimum of \$688,000 per year to maintain the current pavement condition.<sup>7</sup> Furthermore, the budget increase more likely reflects the inflated cost of asphalt and concrete, than a more aggressive M&R approach.

Materials cost in combination with a growing urgency for repairs due to deferred maintenance costs means that the current fiscal measures fall short of the list of needed M&R. While the proposed 2022 budget reflects conservative spending and requests in light of the ongoing COVID-19 pandemic, the deferred maintenance costs have not evaporated. In this current year, and in each of the past five years (2016 - 2021), roadway and transportation management has constituted less than two percent of the overall City budget. As a percentage of the whole, the percent of the budget spent on roadway management has increased by 23% on a nominal basis since 2016.

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<sup>4</sup> "2018 Pavement Condition Report", City of Bloomington, Indiana. Hereafter "2018 PCI Report."

<https://data.bloomington.in.gov/dataset/2018-pavement-condition-report>

<sup>5</sup> The Pub. Works: Street Division has four funding sources: Local Road and Street (LRS), Motor Vehicle Highway (MVH) and Motor Vehicle Highway Restricted (MVH Restricted), Cumulative Capital Improvement (CCI) and Cumulative Capital Development (CCD). See Pub. Works: Street Division 2022 Budget Request. Examples of City roads include neighborhood streets and minor byways, as well as larger arterial byways, e.g., Walnut Street, College Mall, Rohrer Road, High Street, and 3rd Street. Roads not in the City's jurisdiction are State-owned and Indiana Department of Transportation (INDOT) operated and maintained e.g., I-69 and State Roads 37, 45, 46, and 48.

<sup>6</sup> *Ibid.*

<sup>7</sup> 2018 PCI Report, Table 4.2

## How to improve the roadways?

The Indiana Business Research Center anticipates that Monroe County will experience a net population increase of 15% in the next 30 years, driven in large part by Bloomington's growing metro area (Indiana Business Research Center, 2018). The moderate population growth contrasts with the rest of the state which will likely see an overall decrease due to lower fertility rates and net migration. Consequently, as Bloomington plans to accommodate steady population growth over the next decades, it will need to consider additional revenue sources to improve existing transit quality and transportation byways.

In January 2016, Indiana state representative Ed Soliday (District 4, Porter County) introduced H.B. 1001 to increase funding for local roadways. The bill passed with an overwhelming majority and Governor Eric Holcomb signed it into law on March 23, 2016.<sup>8</sup> The law, comprising Indiana Code (IC) sections 6-3.5-10 and 11, determines various components of the Tax and outlines in explicit detail the appropriate use of revenue generated from the Tax. See the Appendices (IC 6-3.5-10 Excise Tax and IC 6-3.5-11 Wheel Tax) for the full legislative detail.

The balance of this report explores the contours of the Wheel Tax (see "Note about Nomenclature"), as outlined in the law, and the proposed revenue implications, should the City elect to adopt it. The Excise and Wheel taxes, if adopted, would apply to all four of the Street Divisions M&R goals and create a stable source of increased revenue. In the short run, this funding would improve pavement conditions, while in the long run, it would decrease the cost of deferred maintenance and prepare roadways for increased future use.

## Roadmap

The remainder of the report proceeds as follows.

### Tax Design

The report provides a comprehensive review of the various components of laws: IC 6-3.5-10 Excise Tax and IC 6-3.5-11 Wheel Tax. The laws provide guidance on Rate, Base, Trigger, Penalty, Remittance, Use, Simplicity, Transparency, and Implementation Timeline. Much of this section is dictated by the parameters outlined in the IC.

### Tax Implications

The report then turns to a review of the Adequacy, Fairness, and Efficiency of the Excise and Wheel Taxes. The report employs various methods to estimate the upper and lower bound to revenue generated by the Tax. Should Bloomington decide to implement a new Wheel Tax to augment existing roadway revenues, it

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<sup>8</sup> The bill passed in the House on February 2, 2016 (61 Yes / 36 No / 3 abstain) and Senate on March 1, 2016 (39/11/0). See Indiana General Assembly, 2016 Session:  
[http://iga.in.gov/legislative/2016/committees/conference\\_committee\\_for\\_sb\\_1001](http://iga.in.gov/legislative/2016/committees/conference_committee_for_sb_1001)

will need to work in with the BMV to solidify current and projected numbers of vehicle registrations. This will help identify more robust revenue estimates than the preliminary estimates included in the report.

## Tax Adoption Requirements

Next, the report reviews the necessary evidence the City will need to furnish in order to justify a new Wheel Tax. This includes the Transportation Asset Management Plan (TAMP), which INDOT will have to approve prior to enactment. This section explains how the City can comply with the TAMP adoption requirement.

## Conclusion

The report offers brief concluding remarks and a policy recommendation for the City Council to adopt the higher end of the rate: preventative maintenance can extend roadway life and diminish the costs of deferred maintenance, e.g., full replacement or more extensive repairs. Following the conclusion, the report provides extensive appendices with full detail on the methodological approach, supporting graphs, and figures.

### A note about nomenclature:

Throughout this report, the authors refer variously to a Wheel Tax and a Vehicle Excise tax or Vehicle Surtax. These taxes are functionally equivalent in both implementation and design, and must be adopted or rescinded concurrently, if at all (see IC 6-3.5-10-1 and IC 6-3.5-11-1). The reason for two distinct taxes and funds is that the taxes differ primarily in base and rate—one applies to large vehicles; one applies to small vehicles. For simplicity, however, all references to a Wheel Tax are to both taxes, unless otherwise specified.

All references to the City are, unless otherwise specified, to the City of Bloomington. Mention of actions taken by the City are generally references to the City of Bloomington Common Council, or more simply City Council, which functions as the legislative body of the City and controls both the City budget and City ordinances.



**Chapter Summary:** The IN Legislature passed an important provision to allow municipals to increase funding for local roads.

## Tax Design

### *Taxation Components*

A primary component of the law, as defined in IC 6-3.5-10-1 and IC 6-3.5-11-1, is that if the City levies the Wheel Tax, it must also levy the Excise Tax.

### Base

The Wheel and Vehicle Excise Surtax rates will be levied on the following vehicles.

*Table 1. Bloomington Municipal Wheel Tax Base*

Vehicle Excise Surtax	Wheel Tax
Passenger Motor Vehicles	Buses
Motorcycles	Recreational vehicles
Motor driven cycles	Semi-Trailer/Farm Semi-Trailers
Collector Vehicles	Semi-Tractors/Farm Semi-Tractors
Trailer Vehicles (under 9,000lbs)	Light Trailers (under 3,000lbs)
Trucks (Under 11,000)	Heavy Trailers (Over 3,000lbs)
Mini-trucks	Trucks/Farm Trucks
Military vehicles	

## Rate

The wheel and surtax rate may be levied on non-exempt vehicles, at the rates defined in IC 6-3.5-10-2 and IC 6-3.5-11-2. The Wheel Tax on large vehicles, defined in IC 6-3.5-11-2, allows for variable rates, e.g., a \$5.00 tax on Recreational Vehicles, a \$7.50 tax on Buses, and a \$15.00 tax on Semi-trailers.

**Table 2. Bloomington Municipal Wheel Tax Rate**

Vehicle Excise Surtax	
Flat Rate	\$7.50 - \$25.00
Wheel Tax	
Recreational Vehicles	\$5.00 - \$40.00
Buses	\$5.00 - \$40.00
Semi-Trailer/Farm Semi-Trailers	\$5.00 - \$40.00
Semi-Tractors/Farm Semi-Tractors	\$5.00 - \$40.00
Light Trailers (under 3,000lbs)	\$5.00 - \$40.00
Heavy Trailers (Over 3,000lbs)	\$5.00 - \$40.00
Trucks/Farm Trucks	\$5.00 - \$40.00

## Trigger

### Bureau of Motor Vehicles

The Tax trigger will occur at the Bloomington branch of the BMV or at the BMV's online portal.<sup>9</sup> When a person registers a non-exempt vehicle that is subject to either of the taxes, the person will pay the Tax. If a person fails to pay either tax for a prior calendar year then the respective tax will be triggered both for the prior and next calendar year. Failure to pay the fee results in a penalty, described in the penalty section.

### Administrative Cost

The City may levy a nominal administrative service charge of \$0.15 for each Wheel Tax collection (IC 6-3.5-10-12 and IC 6-3.5-11-10). Aside from this small fee, the administrative overhead of this additional tax will be near zero, given that the BMV already collects vehicle registration fees and remits a fraction of these fees to various levels of jurisdiction (i.e., City, County, and State).

<sup>9</sup>

Bloomington BMV Branch: 1531 South Curry Pike, Bloomington, IN, 47403-5174  
BMV online: <https://mybmv.bmv.in.gov/bmv/mybmv/default.aspx>

## **Penalty**

The Owner of a vehicle who knowingly registers a vehicle without paying either the imposed Wheel Tax or surtax commits a Class B misdemeanor (IC 6-3.5-10-13 and IC 6-3.5-11-16). Similarly, any BMV employee who issues a registration to any vehicle without collecting the imposed Tax, commits a Class B misdemeanor.

## **Remittance**

The Tax will be remitted by the BMV to the Bloomington Controller's office no later than 21 days after it has been collected. The Controller's office will then deposit the pertaining funds into one of two separate accounts: the "Municipal Wheel Tax Fund" or the "Municipal Surtax Fund" distinguished by whether the tax type (IC 6-3.5-10-10 and IC 6-3.5-11-14). Once deposited in the appropriate account, the revenues may be used as outlined in the next section.

## **Use**

Under IC 6-3.5-10-10(b), Bloomington may use the tax revenues from the Excise Tax to:

1. Construct, reconstruct, repair, or maintain streets and roads under its jurisdiction; or
2. For the county's, city's, or town's contribution to obtain a grant from the local road and bridge matching fund under [IC 8-23-30](#)

Under IC 6-3.5-11-14(b), Bloomington may use the tax revenues from the Wheel Tax to:

1. [identical use to Excise Tax]
2. As a contribution to the Monroe County Infrastructure Authority, as defined under [IC 36-7-23](#)
3. [identical use to Excise Tax]

The overarching and primary use of either fund will be to improve the condition of the roadways.

## **Audit**

Bloomington does not have the authority to audit the BMV because it is a state agency, and limits the City's access to the Tax revenues except through the channels designated in IC 6-3.5-10-9 and IC 6-3.5-11-12. The BMV does, however, report to the City the number and type of registrations, and the City may conduct a check to validate that the registrations and revenue match. On an annual or semi-annual basis, the City may request that the BMV audit 1% of the registrations completed per employee. Since the employee who registers the Tax can be penalized for knowingly not applying the registration tax, this random audit can help incentivize employees and ensure that they collect the Tax.

## **Simplicity**

The Wheel Tax provides a straightforward and simple design. The Tax offers a flat rate applied to a broad, and well-defined base of vehicles. The Tax occurs only at the time of vehicle registration. The IN

Legislature designed the Tax to reduce complications and ensure that adopting municipalities, BMV agents, and fiscal officers can understand it. Further, the simplicity of the Tax will reduce market distorting effects.

## Transparency

The City of Bloomington lacks financial transparency.<sup>10</sup> The IN legislature designed the Tax to include transparency, including specifying two distinct tax deposit accounts explained in the remittance section. The authors recommend that the City Council should ensure that the Tax is administered as transparently as possible. For example, the City could publish the wheel tax collections reports, as defined under IC 6-3.5-10-9 and IC 6-3.5-11-13(a)(2).

Furthermore, the authors urge the City Council to require the City Departments to report the Tax revenues in Bloomington's Comprehensive Annual Financial Report (CAFR) as an independent line item. As an extension of this move to increased transparency, the authors urge the City Council to require the City to report in more granular detail the amount of revenue stream flowing into each of the transportation accounts. As currently reported, the City budget does not provide line-item detail of its Transportation 00706 account—*inflow or outlay*. An improved City Budget would include a breakdown of each portion of the 00706 account, distinguished by funding type, e.g., city, county, state, or federal.

## Implementation Timeline

Should the City elect to adopt the Tax, it will have to follow the proscribed implementation timeline, as outlined in IC 6-3.5-10-3 and IC 6-3.5-11-5. The tax will not apply retroactively.

**Table 3. Wheel Tax Adoption or Modification Timeline**

If a city adopts the tax on ...	The tax applies to vehicles registered on or after...
January 1 - September 1, Year 0	January 1, Year 1
September 1 - December 31, Year 0	January 1, Year 2

For example, if Bloomington adopts the Tax in June 2022, the Tax will apply to vehicles registered on or after January 1, 2023. If Bloomington adopts the Tax on September 2, 2022, the Tax will apply to vehicles registered on or after January 1, 2024. If Bloomington were to adopt the Tax and later rescind the Tax, the same timeline would apply.

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<sup>10</sup> "Column: Before raising local income taxes, shouldn't we look at Bloomington's budget?", Justin Ross and Tom Guevara, The Herald Times, March 24, 2022, <https://www.heraldtimesonline.com/story/opinion/columns/guest/2022/03/24/column-bloomington-lacks-fiscal-transparency-while-seeking-more-taxes/7118414001/>



**Chapter Summary:** A Wheel Tax could provide a stable source of revenue for roadway maintenance and rehabilitation (M&R).

## Tax Implications

### Adequacy

This section outlines how much revenue the Wheel Tax would generate and whether the Tax would provide adequate revenue to address roadway M&R.

#### *Bloomington’s Road Conditions*

In 2018, Bloomington contracted with Transmap, an independent roadway surveyor, to catalog the condition of all of the City’s pavement assets. Transmap used Light Detection and Ranging technology (LIDAR) to collect comprehensive information on 234 miles of pavement from January to March 2018. Once complete, the Contractor delivered a report to the City with extensive detail on the Pavement Condition Index (PCI).<sup>11</sup>

The PCI metric ranks sections of roadway on a 0-100 scale; an index score of 0-70 represents roadway deterioration requiring more than routine maintenance. A PCI index of 86-100 represents “good” condition roadway. Pavement that meets this condition requires little to no roadway maintenance.<sup>12</sup> Roadway deterioration is non-linear; roadways deteriorate fastest during the middle of their lifespan.<sup>13</sup> Various charts in the Appendix provide graphical insight on the cost of roadway maintenance as a function of time and PCI rating.

The report found that Bloomington’s roads are not maintained well, and the report urged the City to correct its underfunded roadway maintenance budget. For example, 63% of Bloomington’s asphalt roads had a

<sup>11</sup> “2018 Pavement Condition Report”, City of Bloomington, Indiana, <https://data.bloomington.in.gov/dataset/2018-pavement-condition-report>

<sup>12</sup> Chart 6 in Appendix G provides further detail on the PCI index

<sup>13</sup> Chart 7 in Appendix G provides an illustrative of the pathway of the PCI decline

PCI of 70 or lower.<sup>14</sup> The majority of the roadways needed more than routine maintenance, e.g., needed repavement or complete rehabilitation.

Distinguishing by road type illustrates a further concerning trend. Roadway deterioration is worse on local roads than on arterial roads. Local roads make up 72% of Bloomington's total roadways, and have an average PCI of 60. Bloomington's "arterial and collector" roads make up the remaining 28% of its total roadways, and have an average PCI of 69.<sup>15</sup> The report outlined three budgetary alternatives that the City could pursue and analyzed their estimated impact on the average PCI.<sup>16</sup> Transmap estimated that the City needed to spend \$922,000 (in 2018 dollars) per year to achieve an average PCI of 70. As the introduction indicates, the Bloomington 00706 Transportation account is \$1,079,200 for FY 2022. This is \$951,000 in 2018 dollars. Therefore, the City has met the threshold to increase the average PCI to 70.

### *Estimated Revenues*

The revenues were estimated using three different methods. The first estimation used 2018-2020 Wheel Tax revenue from the City of Fishers, the second estimation used 2011 Wheel Tax revenue from Monroe County, and the third method used the 2010-2020 Indiana vehicle registration totals. For each method, the revenues were estimated using the lower bound (\$7.50 and \$25) and upper bound (\$25 and \$40) of the IC's rates. The estimates for the lower and upper bounds are provided below in Table 4. For a more detailed discussion of the revenue estimation methodology, see Appendix E.

**Table 4. Bloomington Wheel Tax Revenue Estimates**

Method	Lower Bound Estimate	Upper Bound Estimate
Fishers	\$1,473,362	\$2,496,471
Monroe County	\$989,081	\$1,596,088
Indiana Registration	\$732,379	\$2,078,590

### **Fairness**

The Vehicle Excise tax is regressive. Households with less income will have to pay a larger share of their income to the comply, even if the overall addition is relatively minor (i.e., additional \$25) at the high end of the rate. In a comprehensive 2012 review, Purdue researchers found this to be true of Indiana's county-

<sup>14</sup> This corresponds to 149.78 miles of the city's then-232.97 total miles of asphalt roadways. The City also had 2.27 miles of concrete roadway that the Contractor did not include in the disaggregated PCI report. Concrete is more expensive but lasts longer than concrete. Consequently, the concrete sections had an average PCI of 89. Including the high PCI of the concrete pavement in the aggregated total roadway does not change the overall average PCI. See Chart 9 in the Appendix G for more detail.

<sup>15</sup> Chart 10 in Appendix G provides further detail on the breakdown by roadway type.

<sup>16</sup> See Appendix E for more detailed information on the proposed alternatives.

level Excise Wheel and Surtax.<sup>17</sup> Chart 2 in Appendix G replicates a graph from their report illustrating the tax burden as a share of income across pre-tax household incomes. For households earning below \$25,000 per year, the tax is 0.06%-0.18% of their pre-tax income; However, for households earning above \$225,000, the surtax is 0.03% of their pre-tax earnings. This is 6 times less than the proportion a low-income household pays as a percent of its total income.

The Wheel Tax is also regressive, but less so than the surtax. Chart 2 in Appendix G also shows the distribution of the Wheel Tax. Households earning below \$25,000 per year pay between 0.07% and 0.09% of their pre-tax incomes towards the tax. Households earning above \$225,000 pay 0.03% of their pre-tax income to the excise tax. This represents only a three-fold differential in the tax as a percentage of pre-tax income across the top and bottom of the household income distribution.

The regressivity of the Tax is a factor to consider when considering whether to adopt the Tax. Though it is important to note that the additional amount owed for each vehicle registration comprises only fractions of a percent, the majority of the Tax will still be paid by higher-income households. For example, higher-income households may own more vehicles and consequently pay more tax, but as Chart 3 in Appendix G illustrates, this constitutes a smaller proportion of the total income.

Another factor to consider with respect to fairness is that Monroe County already levies a wheel and surtax. The county Vehicle Excise surtax is \$25 (on small vehicles) and the Wheel Tax is \$40 for all but one subset of large vehicles. If the City Council levies an additional municipal Tax at the highest allowable rate, it will effectively double the Tax for all new registrants. Note, the tax does not apply retroactively. This can have beneficial policy outcomes, e.g., encourage public transit use or alternative transit. However, given the earlier discussion, it will more likely discourage lower-income vehicle registrants than higher-income registrants. Thus, the City Council should consider the implications these potential outcomes will have on fairness.

## Efficiency

The Tax will likely have minor effects on behavior. Efficiency measures whether people alter their actions in response to the Tax. On a theoretical level, the Tax has low salience—a vehicle registrant only views it as an additional line item at registration—it will likely have minimal impact on total vehicle registrations. The City can anticipate that in the long run, some large vehicle owner/operators who would be subject to the Wheel Tax may elect to register their vehicles outside of the City.

In contrast, individual vehicle owners subject to the Excise Tax will most likely not try to move outside of the City limits to evade paying a small vehicle registration fee in the range of \$7.50 to \$25.00. Indiana University student vehicle registrations already constitute a relatively unpredictable source of revenue. The

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<sup>17</sup> "Indiana's County Motor Vehicle Excise Surtax and Wheel Tax", Larry DeBoer and Anita Yadavalli, Purdue University, August 2012, [https://cdext.purdue.edu/wp-content/uploads/2016/03/WheelTaxReport\\_Final\\_DeBoerYadavalli\\_0812.pdf](https://cdext.purdue.edu/wp-content/uploads/2016/03/WheelTaxReport_Final_DeBoerYadavalli_0812.pdf)

authors anticipate that a small percentage of students who would have otherwise registered their vehicles, i.e., less than 5%, will choose not to register their vehicles in response to the Tax.

Many Indiana counties have wheel taxes. So do several cities in Indiana (See Appendix C). However, Indiana lacks sufficient empirical analyses to evaluate the efficiency of the Tax. Several researchers in European countries have employed empirical methods to evaluate dynamic response to vehicle registration taxes. For example, researchers found that for every 1% increase in Norway's Vehicle Registration Tax there was a 1.37% decrease in vehicle registrations.<sup>18</sup> Another study in Switzerland found that for every 1% increase in the vehicle registration tax, there was a 0.08% decrease in total vehicle sales.<sup>19</sup>

While these two estimated effects vary widely and Bloomington is no Switzerland or Norway, the interpretation may still lend useful insights. The average passenger vehicle registration in Bloomington costs \$175.35; commercial vehicle registrations are typically in excess of \$500.<sup>20</sup> The Tax increase at the upper rate bound of \$25 and \$40 represents a 14% and 8% increase, respectively.

To strictly extrapolate on a percentage basis without adjusting for various omitted variables and heterogeneous effects, under the estimated model for Norway the City would see a 19.18% decrease in passenger vehicle registrations and a 10.96% decrease in commercial vehicle registrations. Similarly, extrapolating the estimated model for Switzerland, the City would see a 1.12% decrease in passenger vehicle registrations and a 0.64% decrease in commercial vehicle registrations.

However, the City Council should note that the taxes in the aforementioned studies only applied to motor vehicles with combustion engines, i.e., electric vehicles were exempted. This exemption encourages use of electric vehicles or other substitutes, which consequently increases elasticity. Similarly, public transportation is better in both countries than in Bloomington. A third point to keep in mind is that the taxes in these countries are already higher. The Swiss vehicle registration tax ranges from 200 to 1,000 Swiss francs a year for a passenger vehicle.<sup>21</sup> The Norwegian tax is a one-time tax paid at registration that is typically 25-75% of the sale price of the car.<sup>22</sup>

Given that the Norwegian study was on a one-time tax, the report assumes that the Swiss report is closer to the Bloomington elasticity. Therefore, it is estimated that the total decline in vehicle registrations post-tax will be less than 1% of current vehicle registrations.

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<sup>18</sup> "Stick or Carrot? Asymmetric Responses to Vehicle Registration Taxes in Norway", Alice Ciccone and Emilia Soldani, 2021, <https://link.springer.com/article/10.1007/s10640-021-00578-6#Sec5>

<sup>19</sup> "The Effect of Registration Taxes on New Car Sales and Emissions: Evidence from Switzerland", Anna Alberini and Markus Bareit, August 2021, [https://papers.ssm.com/sol3/papers.cfm?abstract\\_id=2773272](https://papers.ssm.com/sol3/papers.cfm?abstract_id=2773272)

<sup>20</sup> "Fee Chart", Indiana BMV, n.d., [https://www.in.gov/bmv/files/Fee\\_Chart.pdf](https://www.in.gov/bmv/files/Fee_Chart.pdf)

<sup>21</sup> "Vehicle Taxes in Switzerland, I Am Expat, n.d., <https://www.iamexpat.ch/expat-info/driving-switzerland/vehicle-taxes#:~:text=How%20much%20is%20Swiss%20vehicle,to%20800%20for%20a%20motorbike>.

<sup>22</sup> "Stick or Carrot? Asymmetric Responses to Vehicle Registration Taxes in Norway", Alice Ciccone and Emilia Soldani, 2021, <https://link.springer.com/article/10.1007/s10640-021-00578-6#Sec5>



**Chapter Summary:** To adopt a Wheel Tax, the City must justify the unmet need for local road repairs in a comprehensive plan.

## Tax Adoption Requirements

Prior to “adopt[ing] an ordinance to impose, rescind, or change the amount of the [Tax],” the City must send a copy of a letter from INDOT approving the City’s Transportation Asset Management Plan (TAMP) prior to September 1 for the Tax to take effect on January 1 of the following calendar year (See the Implementation Timeline section). See IC 6-3.5-10-6 and IC 6-3.5-11-8.

### Transportation Asset Management Plan

To adopt the Tax, the City will need to justify its unmet budgetary needs in a well-documented and comprehensive TAMP. In 2016, the FHWA issued a rulemaking in the Federal Register that required state DOTs to develop and publish a TAMP.<sup>23</sup> Indiana’s TAMP, published in 2019, complied with the 2016 regulation and helps various stakeholders coordinate their goals to achieve an aligned plan to improve the state’s bridges and roads.

The INDOT TAMP serves as an outline for Bloomington to document the pavement condition of its roads and forecasted roadway use, and served as a useful guidepost for this report. For example, the INDOT TAMP provides a detailed snapshot of the existing transportation network as well as establishes baseline goals and funding levels for the next ten years. INDOT will publish its next TAMP in 2023.

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<sup>23</sup> Federal Highway Administration, Asset Management Plans and Periodic Evaluations of Facilities Repeatedly Requiring Repair and Reconstruction Due to Emergency Events, 81 FR 73196, <https://www.federalregister.gov/d/2016-25117/p-3>



**Chapter Summary:** The Bloomington City Council should consider adopting the high end of the Wheel Tax rate.

## **Policy Recommendation and Conclusion**

This report provides an overview of the design and implementation of both a Wheel and Excise tax, as outlined in the IN Legislature's 2016 addition of IC 6-3.5-10 and IC 6-3.5-11. The report provides the justification of a new tax—to improve the maintenance and rehabilitation of local roads. The report reviews the Rate, Base, Trigger, Penalty, Remittance, Use, Simplicity, Transparency, and Implementation Timeline of the proposed Tax. The report also explores the likely implications of the Tax, by balancing Adequacy, Fairness, and Efficiency.

The report employs various methods to estimate the upper and lower bound to revenue generated by the Tax. To meet the recommended upper threshold outlined in the 2018 Pavement Condition Study, as well as in comparison with other Indiana jurisdictions, the authors recommend the using the upper rates of \$25 and \$40 for the Excise Tax and Wheel Tax, respectively, and will generate an estimated annual revenue of \$2.06 million.

Bloomington's roads need substantial M&R, indicated both by resident complaints and by independent analysis. The proposed Tax would generate enough revenue to quickly lower the deferred maintenance costs of the road and help the City end its "worst-first" approach to M&R. If, after substantially improving the roads to a significantly higher pavement condition index, the City were to decide to reduce or rescind the Tax, the process is also outlined in this report and in IC 6-3-10-5 and IC 6-3.5-11-7.

This proposed Tax could improve the quality of life for Bloomington residents by improving travel safety and diminishing cost of car maintenance due to potholes and driving on otherwise rough roads. The Tax at the higher rate would also significantly draw down the costs of deferred maintenance, which accrue more quickly for roads in worse repair. We encourage the City to thoroughly consider adopting the Excise Tax and Wheel Tax, as outlined in IC 6-3.5-10 and IC 6-3.5-11 and in this report. Thank you.

# **Appendix A IC 6-3.5-10 Excise Tax**

## **IC 6-3.5-10**

6-3.5-10-1	<b>Definitions</b>
6-3.5-10-1	Definitions
6-3.5-10-2	Imposition and rate of surtax; application of tax; restrictions
6-3.5-10-3	Vehicles subject to tax
6-3.5-10-4	Rescission of surtax and wheel tax
6-3.5-10-5	Increase or decrease of surtax
6-3.5-10-6	Adopted ordinance; letter approving transportation asset management plan; transmittal of copies
6-3.5-10-7	Registration of vehicle; collection of surtax
6-3.5-10-8	Surtax adjustment
6-3.5-10-9	Collections; remittance; report
6-3.5-10-10	Surtax fund; use
6-3.5-10-11	Estimate of revenues
6-3.5-10-12	Service charge
6-3.5-10-13	Violations; offense

## **IC 6-3.5-10-1 Definitions**

*Note: This version of section amended by P.L.218-2017, SEC.23, effective 4-27-2017. See also following version of this section amended by P.L.256-2017, SEC.10, effective 7-1-2017.*

Sec. 1. The following definitions apply throughout this chapter:

- (1) "Adopting municipality" means an eligible municipality that has adopted the surtax.
- (2) "Eligible municipality" means a municipality having a population of at least five thousand (5,000).
- (3) "Fiscal body" has the meaning set forth in IC 36-1-2-6.
- (4) "Fiscal officer" has the meaning set forth in IC 36-1-2-7.
- (5) "Motor vehicle" means a vehicle that is subject to the annual license excise tax imposed under IC 6-6-5.
- (6) "Municipality" has the meaning set forth in IC 36-1-2-11.
- (7) "Surtax" means the annual license excise surtax imposed by the fiscal body of an eligible municipality under this chapter.
- (8) "Transportation asset management plan" includes planning for drainage systems and rights-of-way that affect transportation assets.

*As added by P.L.146-2016, SEC.11. Amended by P.L.218-2017, SEC.23.*

## **IC 6-3.5-10-1 Definitions**

*Note: This version of section amended by P.L.256-2017, SEC.10, effective 7-1-2017. See also preceding version of this section amended by P.L.218-2017, SEC.23, effective 4-27-2017.*

Sec. 1. The following definitions apply throughout this chapter:

- (1) "Adopting municipality" means an eligible municipality that has adopted the surtax.
- (2) "Eligible municipality" means a municipality having a population of at least ten thousand (10,000).
- (3) "Fiscal body" has the meaning set forth in IC 36-1-2-6.
- (4) "Fiscal officer" has the meaning set forth in IC 36-1-2-7.
- (5) "Vehicle" has the meaning set forth in IC 6-6-5-1(b).
- (6) "Municipality" has the meaning set forth in IC 36-1-2-11.
- (7) "Surtax" means the municipal vehicle excise tax imposed by the fiscal body of an eligible municipality under this chapter.
- (8) "Transportation asset management plan" includes planning for drainage systems and rights-of-way that affect transportation assets.

*As added by P.L.146-2016, SEC.11. Amended by P.L.256-2017, SEC.10.*

## **IC 6-3.5-10-2 Imposition and rate of surtax; application of tax; restrictions**

Sec. 2. (a) The fiscal body of an eligible municipality may, subject to subsections (d) and (e), adopt an ordinance to impose a municipal vehicle excise tax on each vehicle listed in subsection (c) that is registered in the eligible municipality. The eligible municipality may impose the surtax at a specific amount of:

- (1) at least seven dollars and fifty cents (\$7.50); and
- (2) not more than twenty-five dollars (\$25).

The eligible municipality shall state the surtax rate or amount in the ordinance that imposes the tax.

(b) Subject to the limits and requirements of this section, the fiscal body of an eligible municipality may do any of the following:

- (1) Impose the municipal vehicle excise tax at the same amount on each vehicle that is subject to the tax.
- (2) Impose the municipal vehicle excise tax on vehicles subject to the tax at one (1) or more different amounts based on the class of vehicle listed in subsection (c).

(c) The municipal vehicle excise tax applies to the following vehicles:

- (1) Passenger vehicles.
- (2) Motorcycles.
- (3) Trucks with a declared gross weight that does not exceed eleven thousand (11,000) pounds.
- (4) Motor driven cycles.

(d) The fiscal body of an eligible municipality may not adopt an ordinance to impose the surtax unless the fiscal body concurrently adopts an ordinance under IC 6-3.5-11 to impose the municipal wheel tax.

(e) The fiscal body of an eligible municipality may not adopt an ordinance to impose the surtax unless the eligible municipality uses a transportation asset management plan approved by the Indiana department of transportation.

(f) A municipal vehicle excise tax imposed by this chapter for a vehicle is due and shall be paid each year at the time the vehicle is registered.

*As added by P.L.146-2016, SEC.11. Amended by P.L.256-2017, SEC.11.*

#### **IC 6-3.5-10-3              Vehicles subject to tax**

Sec. 3. If the fiscal body of an eligible municipality adopts an ordinance imposing the surtax after December 31 but on or before September 1 of the following year, a motor vehicle is subject to the tax if the motor vehicle is registered in the adopting municipality after December 31 of the year in which the ordinance is adopted. If the fiscal body of an eligible municipality adopts an ordinance imposing the surtax after September 1 but before the following January 1, a motor vehicle is subject to the tax if the motor vehicle is registered in the adopting municipality after December 31 of the year following the year in which the ordinance is adopted. However, in the first year the surtax is effective, the surtax does not apply to the registration of a motor vehicle for the registration year that commenced in the calendar year preceding the year the surtax is first effective.

*As added by P.L.146-2016, SEC.11. Amended by P.L.218-2017, SEC.24.*

#### **IC 6-3.5-10-4              Rescission of surtax and wheel tax**

Sec. 4. (a) After January 1 but before September 1 of any year, the fiscal body of an adopting municipality may, subject to the limitations imposed by subsection (b), adopt an ordinance to rescind the surtax. If a fiscal body adopts an ordinance to rescind the surtax, the surtax does not apply to a motor vehicle registered after December 31 of the year in which the ordinance is adopted.

(b) A fiscal body may not adopt an ordinance to rescind the surtax unless the fiscal body concurrently adopts an ordinance under IC 6-3.5-11 to rescind the municipal wheel tax.

*As added by P.L.146-2016, SEC.11. Amended by P.L.218-2017, SEC.25.*

**IC 6-3.5-10-5      Increase or decrease of surtax**

Sec. 5. The fiscal body of an adopting municipality may adopt an ordinance to increase or decrease the surtax amount. The new surtax amount must be within the range of amounts prescribed by section 2 of this chapter. A new amount that is established by an ordinance that is adopted after December 31 but on or before September 1 of the following year applies to motor vehicles registered after December 31 of the year in which the ordinance to change the amount is adopted. A new amount that is established by an ordinance that is adopted after September 1 but before January 1 of the following year applies to motor vehicles registered after December 31 of the year following the year in which the ordinance is adopted.

*As added by P.L.146-2016, SEC.11. Amended by P.L.218-2017, SEC.26.*

**IC 6-3.5-10-6      Adopted ordinance; letter approving transportation asset management plan; transmittal of copies**

Sec. 6. If the fiscal body of an eligible municipality adopts an ordinance to impose, rescind, or change the amount of the surtax, the fiscal body shall send a copy of the ordinance and a copy of a letter from the Indiana department of transportation approving the eligible municipality's transportation asset management plan to the bureau of motor vehicles on or before September 1 to be effective January 1 of the following calendar year.

*As added by P.L.146-2016, SEC.11. Amended by P.L.218-2017, SEC.27.*

**IC 6-3.5-10-7      Registration of vehicle; collection of surtax**

Sec. 7. A person may not register a vehicle in an adopting municipality unless the person pays the surtax due, if any, to the bureau of motor vehicles. The amount of the surtax due equals the amount established under section 2 of this chapter. The bureau of motor vehicles shall collect the surtax due, if any, at the time a vehicle is registered.

*As added by P.L.146-2016, SEC.11. Amended by P.L.256-2017, SEC.12.*

**IC 6-3.5-10-8      Surtax adjustment**

Sec. 8. (a) If a vehicle has been acquired or brought into Indiana, or for any other reason becomes subject to registration after the regular annual registration date in the year on or before which the owner of the vehicle is required under the motor vehicle registration laws of Indiana to register vehicles, the amount of the surtax shall be reduced in the same manner as the excise tax is reduced under IC 6-6-5-7.2.

(b) The owner of a vehicle who sells the vehicle in a year in which the owner has paid the surtax imposed by this chapter is entitled to receive a credit that is calculated in the same manner and subject to the same requirements as the credit for the excise tax under IC 6-6-5-7.2.

(c) If the name of the owner of a vehicle is legally changed and the change has caused a change in the owner's annual registration date, the surtax liability of the owner shall be adjusted in the same manner as excise taxes are adjusted under IC 6-6-5-7.2.

*As added by P.L.146-2016, SEC.11.*

**IC 6-3.5-10-9      Collections; remittance; report**

Sec. 9. On or before the tenth day of the month following the month in which the surtax is collected, the bureau of motor vehicles shall remit the surtax to the fiscal officer of the adopting municipality that imposed the surtax. Concurrently with the remittance, the bureau of motor vehicles shall file a surtax collections report prepared on forms prescribed by the state board of accounts with the fiscal officer of the adopting municipality.

*As added by P.L.146-2016, SEC.11.*

**IC 6-3.5-10-10      Surtax fund; use**

Sec. 10. (a) The fiscal officer of an adopting municipality shall deposit the surtax revenues in a fund to be known as the "municipal surtax fund".

(b) An adopting municipality may use the surtax revenues that the adopting municipality receives under this section:

- (1) to construct, reconstruct, repair, or maintain streets and roads under the adopting municipality's jurisdiction; or
- (2) for the county's, city's, or town's contribution to obtain a grant from the local road and bridge matching grant fund under IC 8-23-30.

*As added by P.L.146-2016, SEC.11.*

**IC 6-3.5-10-11 Estimate of revenues**

Sec. 11. On or before October 1 of each year, the fiscal officer of an adopting municipality shall provide the fiscal body of the adopting municipality with an estimate of the surtax revenues to be received by the adopting municipality during the next calendar year. The adopting municipality shall include the estimated surtax revenues in the adopting municipality's budget estimate for the calendar year.

*As added by P.L.146-2016, SEC.11. Amended by P.L.218-2017, SEC.28.*

**IC 6-3.5-10-12 Service charge**

Sec. 12. The following, as applicable, may impose a service charge of fifteen cents (\$0.15) for each surtax collected under this chapter:

- (1) The department.
- (2) The bureau of motor vehicles under IC 9-14-8-3.

*As added by P.L.146-2016, SEC.11. Amended by P.L.256-2017, SEC.13.*

**IC 6-3.5-10-13 Violations; offense**

Sec. 13. (a) The owner of a vehicle who knowingly registers the vehicle without paying the surtax imposed under this chapter with respect to that registration commits a Class B misdemeanor.

(b) An employee of the bureau of motor vehicles who recklessly issues a registration on any vehicle without collecting the surtax imposed under this chapter with respect to that registration commits a Class B misdemeanor.

*As added by P.L.146-2016, SEC.11. Amended by P.L.256-2017, SEC.14.*

## Appendix B IC 6-3.5-11 Wheel Tax

<b>IC 6-3.5-11</b>	<b>Chapter 11. Municipal Wheel Tax</b>
6-3.5-11-1	Definitions
6-3.5-11-1	Definitions
6-3.5-11-1	Definitions
6-3.5-11-2	Imposition of tax; municipal wheel tax; rate
6-3.5-11-3	Vehicles subject to tax
6-3.5-11-4	Exempt vehicles
6-3.5-11-4	Exempt vehicles
6-3.5-11-5	Registration of vehicles
6-3.5-11-6	Rescission of wheel tax and vehicle excise tax
6-3.5-11-7	Increase or decrease of tax; rates
6-3.5-11-8	Adopted ordinance; letter approving transportation asset management plan; transmittal of copies
6-3.5-11-9	Credit upon sale of vehicle
6-3.5-11-10	Registration of vehicle; wheel tax; amount; collection
6-3.5-11-11	Apportioned wheel tax for certain vehicles
6-3.5-11-12	Collections; remittance; report
6-3.5-11-13	Collection by bureau of motor vehicles or department of state revenue; remittance; report
6-3.5-11-14	Wheel tax fund; use
6-3.5-11-15	Estimate of revenues
6-3.5-11-16	Violations; offense

### **IC 6-3.5-11-1 Definitions**

*Note: This version of section amended by P.L.257-2017, SEC.7, effective until 7-1-2017. See also following version of this section amended by P.L.218-2017, SEC.29, effective 7-1-2017, and following version of this section amended by P.L.256-2017, SEC.15, effective 7-1-2017.*

Sec. 1. The following definitions apply throughout this chapter:

- (1) "Adopting municipality" means an eligible municipality that has adopted the wheel tax.
- (2) "Branch office" means a branch office of the bureau of motor vehicles.
- (3) "Bus" has the meaning set forth in IC 9-13-2-17.
- (4) "Commercial vehicle" has the meaning set forth in IC 6-6-5.5-1(c).
- (5) "Department" refers to the department of state revenue.
- (6) "Eligible municipality" means a municipality having a population of at least ten thousand (10,000).
- (7) "In-state miles" has the meaning set forth in IC 6-6-5.5-1(i).
- (8) "Political subdivision" has the meaning set forth in IC 34-6-2-110.
- (9) "Recreational vehicle" has the meaning set forth in IC 9-13-2-150.
- (10) "School bus" has the meaning set forth in IC 9-13-2-161(a).
- (11) "Semitrailer" has the meaning set forth in IC 9-13-2-164(a).
- (12) "State agency" has the meaning set forth in IC 34-6-2-141.
- (13) "Tractor" has the meaning set forth in IC 9-13-2-180.
- (14) "Trailer" has the meaning set forth in IC 9-13-2-184(a).
- (15) "Transportation asset management plan" includes planning for drainage systems and rights-of-way that affect transportation assets.
- (16) "Truck" has the meaning set forth in IC 9-13-2-188(a).
- (17) "Wheel tax" means the tax imposed under this chapter.

*As added by P.L.146-2016, SEC.12. Amended by P.L.257-2017, SEC.7.*

### **IC 6-3.5-11-1 Definitions**

*Note: This version of section amended by P.L.218-2017, SEC.29, effective 7-1-2017. See also preceding version of this section amended by P.L.257-2017, SEC.7, effective until 7-1-2017, and following version of this section amended by P.L.256-2017, SEC.15, effective 7-1-2017.*

Sec. 1. The following definitions apply throughout this chapter:

- (1) "Adopting municipality" means an eligible municipality that has adopted the wheel tax.
- (2) "Branch office" means a branch office of the bureau of motor vehicles.
- (3) "Bus" has the meaning set forth in IC 9-13-2-17.
- (4) "Commercial vehicle" has the meaning set forth in IC 6-6-5.5-1(c).
- (5) "Department" refers to the department of state revenue.
- (6) "Eligible municipality" means a municipality having a population of at least five thousand (5,000).
- (7) "In-state miles" has the meaning set forth in IC 6-6-5.5-1(i).
- (8) "Political subdivision" has the meaning set forth in IC 34-6-2-110.
- (9) "Recreational vehicle" has the meaning set forth in IC 9-13-2-150.
- (10) "School bus" has the meaning set forth in IC 9-13-2-161(a).
- (11) "Semitrailer" has the meaning set forth in IC 9-13-2-164(a).
- (12) "State agency" has the meaning set forth in IC 34-6-2-141.
- (13) "Tractor" has the meaning set forth in IC 9-13-2-180.
- (14) "Trailer" has the meaning set forth in IC 9-13-2-184(a).
- (15) "Transportation asset management plan" includes planning for drainage systems and rights-of-way that affect transportation assets.
- (16) "Truck" has the meaning set forth in IC 9-13-2-188(a).
- (17) "Wheel tax" means the tax imposed under this chapter.

*As added by P.L.146-2016, SEC.12. Amended by P.L.257-2017, SEC.7; P.L.218-2017, SEC.29.*

#### **IC 6-3.5-11-1 Definitions**

*Note: This version of section amended by P.L.256-2017, SEC.15, effective 7-1-2017. See also preceding version of this section amended by P.L.257-2017, SEC.7, effective until 7-1-2017, and preceding version of this section amended by P.L.218-2017, SEC.29, effective 7-1-2017.*

Sec. 1. The following definitions apply throughout this chapter:

- (1) "Adopting municipality" means an eligible municipality that has adopted the wheel tax.
- (2) "Branch office" means a branch office of the bureau of motor vehicles.
- (3) "Bus" has the meaning set forth in IC 9-13-2-17.
- (4) "Commercial vehicle" has the meaning set forth in IC 6-6-5.5-1(b).
- (5) "Department" refers to the department of state revenue.
- (6) "Eligible municipality" means a municipality having a population of at least ten thousand (10,000).
- (7) "In-state miles" has the meaning set forth in IC 6-6-5.5-1(b).
- (8) "Political subdivision" has the meaning set forth in IC 34-6-2-110.
- (9) "Recreational vehicle" has the meaning set forth in IC 9-13-2-150.
- (10) "School bus" has the meaning set forth in IC 9-13-2-161(a).
- (11) "Semitrailer" has the meaning set forth in IC 9-13-2-164(a).
- (12) "State agency" has the meaning set forth in IC 34-6-2-141.
- (13) "Tractor" has the meaning set forth in IC 9-13-2-180.
- (14) "Trailer" has the meaning set forth in IC 9-13-2-184(a).
- (15) "Transportation asset management plan" includes planning for drainage systems and rights-of-way that affect transportation assets.
- (16) "Truck" has the meaning set forth in IC 9-13-2-188(a).
- (17) "Wheel tax" means the tax imposed under this chapter.

*As added by P.L.146-2016, SEC.12. Amended by P.L.257-2017, SEC.7; P.L.256-2017, SEC.15.*

**IC 6-3.5-11-2        Imposition of tax; municipal wheel tax; rate**

Sec. 2. (a) The fiscal body of an eligible municipality may, subject to subsections (b) and (c), adopt an ordinance to impose a municipal wheel tax in accordance with this chapter on each vehicle that:

- (1) is included in one (1) of the classes of vehicles listed in section 3 of this chapter;
- (2) is not exempt from the wheel tax under section 4 of this chapter; and
- (3) is registered in the eligible municipality.

(b) The fiscal body of an eligible municipality may not adopt an ordinance to impose the wheel tax unless the fiscal body concurrently adopts an ordinance under IC 6-3.5-10 to impose the municipal vehicle excise tax.

(c) The fiscal body of an eligible municipality may not adopt an ordinance to impose the wheel tax unless the eligible municipality uses a transportation asset management plan approved by the Indiana department of transportation.

(d) The fiscal body of an eligible municipality may impose the wheel tax at a different rate for each of the classes of vehicles listed in section 3 of this chapter. In addition, the fiscal body may establish different rates within the classes of buses, recreational vehicles, semitrailers, trailers, tractors, and trucks based on weight classifications of those vehicles that are established by the bureau of motor vehicles for use throughout Indiana. However, the wheel tax rate for a particular class or weight classification of vehicles may not be less than five dollars (\$5) and may not exceed forty dollars (\$40). The fiscal body shall state the initial wheel tax rates in the ordinance that imposes the tax.

(e) A wheel tax imposed by this chapter for a vehicle is due and shall be paid each year at the time the vehicle is registered.

*As added by P.L.146-2016, SEC.12. Amended by P.L.256-2017, SEC.16.*

**IC 6-3.5-11-3        Vehicles subject to tax**

Sec. 3. The wheel tax applies to the following classes of vehicles:

- (1) Buses.
- (2) Recreational vehicles.
- (3) Semitrailers.
- (4) Tractors.
- (5) Trailers.
- (6) Trucks.

*As added by P.L.146-2016, SEC.12.*

**IC 6-3.5-11-4        Exempt vehicles**

*Note: This version of section effective until 7-1-2017. See also following version of this section, effective 7-1-2017.*

Sec. 4. A vehicle is exempt from the wheel tax imposed under this chapter if the vehicle is:

- (1) owned by the state;
- (2) owned by a state agency of the state;
- (3) owned by a political subdivision of the state;
- (4) subject to the annual license excise surtax imposed under IC 6-3.5-10;
- (5) a bus owned and operated by a religious or nonprofit youth organization and used to transport persons to religious services or for the benefit of its members;
- (6) a school bus; or
- (7) a motor vehicle that is funeral equipment and that is used in the operation of funeral services (as defined in IC 25-15-2-17).

*As added by P.L.146-2016, SEC.12. Amended by P.L.257-2017, SEC.8.*

**IC 6-3.5-11-4        Exempt vehicles**

*Note: This version of section effective 7-1-2017. See also preceding version of this*

*section, effective until 7-1-2017.*

Sec. 4. A vehicle is exempt from the wheel tax imposed under this chapter if the vehicle is:

- (1) owned by the state;
- (2) owned by a state agency of the state;
- (3) owned by a political subdivision of the state;
- (4) subject to the multiple vehicle excise tax imposed under IC 6-3.5-10;
- (5) a bus owned and operated by a religious or nonprofit youth organization and used to transport persons to religious services or for the benefit of its members;
- (6) a school bus; or
- (7) a motor vehicle that is funeral equipment and that is used in the operation of funeral services (as defined in IC 25-15-2-17).

*As added by P.L.146-2016, SEC.12. Amended by P.L.257-2017, SEC.8; P.L.256-2017, SEC.17.*

**IC 6-3.5-11-5 Registration of vehicles**

Sec. 5. If the fiscal body of an eligible municipality adopts an ordinance imposing the wheel tax after December 31 but on or before September 1 of the following year, a vehicle described in section 2(a) of this chapter is subject to the tax if the vehicle is registered in the adopting municipality after December 31 of the year in which the ordinance is adopted. If a fiscal body adopts an ordinance imposing the wheel tax after September 1 but before the following January 1, a vehicle described in section 2(a) of this chapter is subject to the tax if the vehicle is registered in the adopting municipality after December 31 of the year following the year in which the ordinance is adopted. However, in the first year the tax is effective, the tax does not apply to the registration of a motor vehicle for the registration year that commenced in the calendar year preceding the year the tax is first effective.

*As added by P.L.146-2016, SEC.12. Amended by P.L.218-2017, SEC.30.*

**IC 6-3.5-11-6 Rescission of wheel tax and vehicle excise tax**

Sec. 6. (a) After January 1 but on or before September 1 of any year, the fiscal body of an adopting municipality may, subject to the limitations imposed by subsection (b), adopt an ordinance to rescind the wheel tax. If a fiscal body adopts an ordinance to rescind the wheel tax, the wheel tax does not apply to a vehicle registered after December 31 of the year the ordinance is adopted.

(b) The fiscal body of an adopting municipality may not adopt an ordinance to rescind the wheel tax unless the fiscal body concurrently adopts an ordinance under IC 6-3.5-10 to rescind the annual license excise surtax.

*As added by P.L.146-2016, SEC.12. Amended by P.L.218-2017, SEC.31.*

**IC 6-3.5-11-7 Increase or decrease of tax; rates**

Sec. 7. The fiscal body of an adopting municipality may adopt an ordinance to increase or decrease the wheel tax rates. The new wheel tax rates must be within the range of rates prescribed by section 2 of this chapter. New rates that are established by an ordinance that is adopted after December 31 but on or before September 1 of the following year apply to vehicles registered after December 31 of the year in which the ordinance to change the rates is adopted. New rates that are established by an ordinance that is adopted after September 1 but before January 1 of the following year apply to motor vehicles registered after December 31 of the year following the year in which the ordinance is adopted.

*As added by P.L.146-2016, SEC.12. Amended by P.L.218-2017, SEC.32.*

**IC 6-3.5-11-8 Adopted ordinance; letter approving transportation asset management plan; transmittal of copies**

Sec. 8. If the fiscal body of an eligible municipality adopts an ordinance to impose,

rescind, or change the rates of the wheel tax, the fiscal body shall send a copy of the ordinance and a copy of a letter from the department of transportation approving the eligible municipality's transportation asset management plan to:

(1) the bureau of motor vehicles; and

(2) the department of state revenue;

on or before September 1 to be effective January 1 of the following calendar year.

*As added by P.L.146-2016, SEC.12. Amended by P.L.218-2017, SEC.33.*

**IC 6-3.5-11-9 Credit upon sale of vehicle**

Sec. 9. (a) Every owner of a vehicle for which the wheel tax has been paid for the owner's registration year is entitled to a credit if during that registration year the owner sells the vehicle. The amount of the credit equals the wheel tax paid by the owner for the vehicle that was sold. The credit may be applied by the owner only against the wheel tax owed for a vehicle that is purchased during the same registration year.

(b) An owner of a vehicle is not entitled to a refund of any part of a credit that is not used under this section.

*As added by P.L.146-2016, SEC.12.*

**IC 6-3.5-11-10 Registration of vehicle; wheel tax; amount; collection**

Sec. 10. A person may not register a vehicle in an adopting municipality unless the person pays the wheel tax due, if any, to the bureau of motor vehicles. The amount of the wheel tax due is based on the wheel tax rate, for that class of vehicle, in effect at the time of registration. The bureau of motor vehicles shall collect the wheel tax due, if any, at the time a motor vehicle is registered. The following, as applicable, may impose a service charge of fifteen cents (\$0.15) for each wheel tax collection made under this chapter:

(1) The department.

(2) The bureau under IC 9-14-8-3.

*As added by P.L.146-2016, SEC.12. Amended by P.L.256-2017, SEC.18.*

**IC 6-3.5-11-11 Apportioned wheel tax for certain vehicles**

Sec. 11. (a) An owner of one (1) or more commercial vehicles paying an apportioned registration to the state under the International Registration Plan that is required to pay a wheel tax shall pay an apportioned wheel tax calculated by dividing in-state actual miles by total fleet miles generated during the preceding year. If in-state miles are estimated for purposes of proportional registration, these miles are divided by total actual and estimated fleet miles. The apportioned wheel tax under this section shall be paid at the same time and in the same manner as the commercial vehicle excise tax under IC 6-6-5.5.

(b) A voucher from the department showing payment of the wheel tax may be accepted by the bureau of motor vehicles instead of the payment required under section 10 of this chapter.

*As added by P.L.146-2016, SEC.12.*

**IC 6-3.5-11-12 Collections; remittance; report**

Sec. 12. On or before the tenth day of the month following the month in which the wheel tax is collected, the bureau of motor vehicles shall remit the wheel tax to the fiscal officer of the adopting municipality that imposed the wheel tax. Concurrently with the remittance, the bureau shall file a wheel tax collections report prepared on forms prescribed by the state board of accounts with the fiscal officer of the adopting municipality.

*As added by P.L.146-2016, SEC.12.*

**IC 6-3.5-11-13 Collection by bureau of motor vehicles or department of state revenue; remittance; report**

Sec. 13. (a) If the wheel tax is collected directly by the bureau of motor vehicles instead

of at a branch office, the commissioner of the bureau shall:

- (1) remit the wheel tax to, and file a wheel tax collections report with, the fiscal officer of the appropriate municipality; and
- (2) file a wheel tax collections report with the fiscal officer of the appropriate municipality;

in the same manner and at the same time that a branch office manager is required to remit and report under section 12 of this chapter.

(b) If the wheel tax for a commercial vehicle is collected directly by the department, the commissioner of the department shall:

- (1) remit the wheel tax to, and file a wheel tax collections report with, the fiscal officer of the appropriate municipality; and
- (2) file a wheel tax collections report with the fiscal officer of the appropriate municipality;

in the same manner and at the same time that a branch office manager is required to remit and report under section 12 of this chapter.

*As added by P.L. 146-2016, SEC.12.*

#### **IC 6-3.5-11-14      Wheel tax fund; use**

Sec. 14. (a) The fiscal officer of an adopting municipality shall deposit the wheel tax revenues in a fund to be known as the "municipal wheel tax fund".

(b) An adopting municipality may use the wheel tax revenues that the municipality receives under this section only:

- (1) to construct, reconstruct, repair, or maintain streets and roads under its jurisdiction;
- (2) as a contribution to an authority established under IC 36-7-23; or
- (3) for the county's, city's, or town's contribution to obtain a grant from the local road and bridge matching grant fund under IC 8-23-30.

*As added by P.L. 146-2016, SEC.12.*

#### **IC 6-3.5-11-15      Estimate of revenues**

Sec. 15. On or before October 1 of each year, the fiscal officer of an adopting municipality shall provide the fiscal body of the adopting municipality with an estimate of the wheel tax revenues to be received by the adopting municipality during the next calendar year. The adopting municipality shall include the estimated wheel tax revenues in the adopting municipality's budget estimate for the calendar year.

*As added by P.L. 146-2016, SEC.12. Amended by P.L.218-2017, SEC.34.*

#### **IC 6-3.5-11-16      Violations; offense**

Sec. 16. (a) The owner of a vehicle who knowingly registers the vehicle without paying the wheel tax imposed under this chapter with respect to that registration commits a Class B misdemeanor.

(b) An employee of the bureau of motor vehicles who recklessly issues a registration on any vehicle without collecting the wheel tax imposed under this chapter with respect to that registration commits a Class B misdemeanor.

*As added by P.L. 146-2016, SEC.12.*

## Appendix C Comparison to Indiana Jurisdictions

City/Town Name	City/Town	Population 2020 Census Estimate	Population Rank (Municipalities with Tax)	Population Rank (All Indiana Cities)	Vehicle Excise Tax (\$)					Wheel Tax (\$)						
					A	B	C	D	X	A	B	C	D	E	F	X
Bloomington	City	79,168	3	7	-	-	-	-	-	-	-	-	-	-	-	-
Boonville	City	6,712	15	110	25.00	15.00	7.50	25.00	18.13	25.00	7.50	7.50	7.50	25.00	25.00	16.30
Crown Point	City	33,899	9	31	25.00	25.00	25.00	25.00	25.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00
Dyer	Town	16,517	12	59	25.00	25.00	25.00	25.00	25.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00
Fishers	City	98,977	2	6	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00
Fort Wayne	City	263,886	1	2	20.00	12.50	12.50	25.00	17.50	40.00	12.50	12.50	40.00	40.00	40.00	30.80
Gary	City	69,093	5	9	25.00	25.00	25.00	25.00	25.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00
Greencastle	City	9,820	14	80	25.00	25.00	25.00	25.00	25.00	40.00	10.00	40.00	40.00	40.00	40.00	35.00
La Porte	City	22,471	11	44	25.00	15.00	15.00	25.00	20.00	40.00	10.00	40.00	40.00	40.00	40.00	35.00
Merrillville	Town	36,444	7	28	25.00	12.50	12.50	25.00	18.75	40.00	12.50	12.50	40.00	40.00	40.00	30.80
Munster	Town	23,894	10	42	25.00	12.50	12.50	25.00	18.75	40.00	20.00	40.00	40.00	40.00	40.00	36.70
New Haven	City	15,583	13	54	25.00	25.00	25.00	25.00	25.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00
Noblesville	City	69,604	4	11	25.00	25.00	25.00	25.00	25.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00
Portage	City	37,926	6	25	25.00	12.50	12.50	25.00	18.75	40.00	12.50	12.50	40.00	40.00	40.00	30.80
Valparaiso	City	34,151	8	30	25.00	12.50	12.50	25.00	18.75	40.00	12.50	12.50	40.00	40.00	40.00	30.80

Notes:

Vehicle Excise Tax

- A. Passenger Vehicles
- B. Motorcycles
- C. Motor Driven Cycles
- D. Trucks
- X. Average

Wheel Tax

- A. Trucks
- B. Trailers used with Trucks
- C. RVs
- E. Semitractors
- F. Buses
- X. Average

Sources:

Other Jurisdiction Tax rates: <https://www.in.gov/bmv/fees-taxes/municipal-vehicle-excise-tax-and-wheel-tax-bmv-home-fees-and-taxes-current/>

Indiana Population 2020 Census Estimate <https://www.census.gov/quickfacts/fact/table/>

Indiana Population Rank Compared to All Indiana Cities: <https://worldpopulationreview.com/states/cities/indiana>

## Appendix D Revenue Estimation Methodology

This Appendix will further discuss the methodology behind the revenue estimates that are presented earlier in this paper.<sup>24</sup> The methodologies described below were utilized because of sparse Wheel Tax revenue and vehicle registration data. The estimates were conducted for the lower and upper bound rates of the Tax. Similarly, a sensitivity analysis was conducted using a 5% uncertainty rate because the changes in population, registrations, and revenues are all estimations. 5% was used because the changes in population, registrations, and revenues are all fractions of a percent. Utilizing 5% ensures that there is high confidence that the estimates presented contain the true revenues that would be realized if the tax were levied.

Chart A below shows the revenue and summary statistics for all the methods.

Chart A: Revenue Estimates and Summary Statistics			
Upper Bound Revenue Estimates			
Method	Estimate -5%	Estimate	Estimate +5%
Fishers	\$ 2,371,647.13	\$ 2,496,470.66	\$ 2,621,294.19
Monroe County	\$ 1,516,283.80	\$ 1,596,088.21	\$ 1,675,892.62
IN Method	\$ 1,974,660.41	\$ 2,078,589.90	\$ 2,182,519.40
Lower Bound Revenue Estimates			
Method	Estimate -5%	Estimate	Estimate +5%
Fishers	\$ 1,399,703.09	\$ 1,473,371.67	\$ 1,547,040.26
Monroe County	\$ 939,627.34	\$ 989,081.41	\$ 1,038,535.48
IN Method	\$ 695,760.46	\$ 732,379.43	\$ 768,998.40
Lower Bound Summary Stats		Upper Bound Summary Stats	
Min Estimate	\$ 695,760.46	Min Estimate	\$ 1,516,283.80
Mean Estimate	\$ 1,064,944.17	Mean Estimate	\$ 2,057,049.59
Median Estimate	\$ 989,081.41	Median Estimate	\$ 2,078,589.90
Max Estimate	\$ 1,547,040.26	Max Estimate	\$ 2,621,294.19

### Fisher's Method Explained

This method has the most assumptions and estimated values to derive the final estimates. It is also the highest estimate. As described above, the Fishers Method principally relied on wheel and surtax revenues that were obtained from the City's 2018-2022 CAFR. Fishers' wheel and excise taxes are the same as the proposed taxes in this paper. Therefore, there was no need to take that into account for the estimate

<sup>24</sup> A note on terminology. In this section, the report describes two kinds of upper and lower bounds. The “upper (lower) bound rate” refers to whether the revenue is being estimated using the \$7.5/\$25 or \$25/\$40 rate. The “upper (lower) bound estimate” refers to the sensitivity analysis of +/- 5%

In a simple equation this method was:

$$R_{BT} = RF * (B_p/F_p)$$

Where:

$R_{BT}$  = Bloomington's Total Tax Revenue

$RF$  = Fishers' Wheel Tax Revenue

$B_p$  = Bloomington's Population

$F_p$  = Fishers' Population

Since 2022 data did not exist for Bloomington's or Fishers' population nor Fishers' Wheel Tax, these values had to be estimated from the historical data.

### ***Method Assumptions***

This method was calculated under two main assumptions. The first being that the population to vehicle registration ratios are the same for Fishers and Bloomington. The second being that the ratio of vehicles and the types of vehicles are the same for Fishers and Monroe County.

### ***Population Estimates***

For a description of how Bloomington's Population was estimated, see "Monroe County Method Explained". Fishers' population was estimated using a 3-year moving average of the yearly percentage change in the population. The 2010-2020 estimates were retrieved from the census bureau. However, the bureau did not have estimates for 2021 and 2022 so those had to be estimated. Chart B provides a visualization of this process. The column "% change" is the % change in the population, year over year. Then these percentages were averaged for the prior three years. See the "MA 3- % change" column. The estimates were achieved by multiplying the prior year by one plus the moving average of the prior three years. To illustrate this point:

$$\begin{aligned}\text{Fishers 2022 population} &= \text{Fishers 2021 population} * (1 + \text{MA 3- % change (2021)}) \\ 104445.4709 &= 101567.1602 * (1 + 0.0283)\end{aligned}$$

Chart B: Fishers Population Estimates			
Year	Fishers Population	% change	MA 3- % change
2010	77832		
2011	80503	0.03431750437	
2012	82389	0.02342769835	
2013	84416	0.02460279892	0.02744933388
2014	86865	0.02901108795	0.0256805284
2015	88656	0.02061820066	0.02474402917
2016	89809	0.01300532395	0.02087820418
2017	91606	0.02000913049	0.0178775517
2018	93407	0.01966028426	0.01755824623
2019	95310	0.02037320543	0.02001420673
2020	98977	0.03847445179	0.02616931383
2021	101567.1602	0.02616931383	0.02833899035
2022	104445.4709	0.02833899035	0.03099425199

### **Fishers Revenue Estimates**

Similarly, the revenues for Fishers' Wheel Tax were only available from 2018-2020. Therefore, they had to be estimated for 2022. This was calculated in a similar manner to the population by using a 3-year moving average. However, there are two key differences. First, the moving average was weighted to reduce the impact that 2020 had on the average because of Covid's presumed impact on the data. Second, to achieve three years of data to smooth out the data, the percent change from 2017 to 2018 was estimated using the other two percent changes. See Chart C as it further illustrates the calculations.

Chart C: Fishers Wheel Tax Revenue Estimates							
Year	Total Revenue	% Change	Weighted MA-3 % Change	Wheel Tax %	Wheel Tax	Excise Tax %	Excise Tax
2018	2027802	0.1157275278		0.1071327658	217244.0367	0.8928672342	1810557.963
2019	2763850	0.3629782395		0.1071327658	296098.8947	0.8928672342	2467751.105
2020	2313026	-0.1631144961	0.1387360387	0.1071327658	247800.8727	0.8928672342	2065225.127
2021	2633926.065	0.1387360387	0.1473642303	0.1071327658	282179.7842	0.8928672342	2351746.281
2022	3022072.552			0.1071327658	323762.9909	0.8928672342	2698309.561

The percent change from 2017 to 2018 (0.115) was calculated using a weight average of the following two years' % change. The years were given the weights of 2019 = 75% and 2020 = 25%, to account for the fact that it is likely that the dip in revenues were partially attributed to COVID-19.

#### Chart D: Fishers % Change Estimates

Year	Total Revenue	% Change	Weighted
2018	2027802	0.1157275278	
2019	2763850	0.3629782395	
2020	2313026	-0.1631144961	
2021	2633926.065	0.1387360387	
2022	3022072.552	C20 0.1157275278 X	
		= (C21*0.75+C22*0.25)/2	

Once this percentage was obtained, a 3-year weighted moving average was calculated to then estimate the revenues for 2021 and 2022. A weighted average was once again used to reduce the influence of the dip in 2020. 2020 was given a weight of .25 and the other two years were given a weight of .375. See Charts E and F for a visualization.

Chart E: Moving Average 1

Chart C: Fishers Wheel Tax Revenue Estimat				
Year	Total Revenue	% Change	Weighted MA-3 % Change	Wheel Tax %
2018	2027802	0.1157275278		0.1071327658
2019	2763850	0.3629782395		0.1071327658
2020	2313026	-0.1631144961	0.1387360387	0.1071327658
2021	2633926.065	0.1387360387	0.1473642303	0.1071327658
2022	3022072.552		D22 0.1387360387 ×	0.1071327658
			= (C20*0.375+C21*0.375+C22*0.25)	

Chart D: Moving Average 2

Chart C: Fishers Wheel Tax Revenue E				
Year	Total Revenue	% Change	Weighted MA-3 % Change	Wheel Ta
2018	2027802	0.1157275278		0.107132
2019	2763850	0.3629782395		0.107132
2020	2313026	-0.1631144961	0.1387360387	0.107132
2021	2633926.065	0.1387360387	0.1473642303	0.107132
2022	3022072.552		D23 0.1473642303 ×	0.107132
			= (C21*0.375+C22*0.25+C23*0.375)	

The Fishers Revenue estimates were achieved by multiplying the prior year by one plus the moving average of the prior three years. To illustrate this point:

$$\text{Fishers 2022 Tax Revenues} = \text{Fishers 2021 Tax Revenues} * (1 + \text{Weighted MA-3 \% change (2021)}) \\ 3022072.552 = 2633926.065 * (1 + 0.1473642303)$$

### Bloomington Revenue Estimates

Once the Fishers Revenue estimates were obtained, the wheel and excise taxes were disaggregated using the revenue split obtained from the Monroe County method. This gave an estimated 2020 fishers Wheel Tax revenue of \$323,763 and excise tax revenues of \$2,698,310. Then the Fishers Revenues were multiplied by the ratio of Bloomington's population over Fisher's population. This gave upper bound rate wheel and excise tax revenues of \$267,454 and \$2,229,017, respectively. These numbers were then added together to receive the overall Bloomington 2022 upper bound rate tax revenues estimate of \$2,496,471.

To account for the fact that the method assumptions as described above likely do not hold, a sensitivity analysis was conducted. A lower and upper bound estimate were created that accounted for a 5% discrepancy between the assumptions and the real world. Therefore, the lower bound estimate is 95% the original and the upper bound estimate is 105% of the original. The lower bound is \$2,371,647 and the upper bound is \$2,621,294.

Similarly, the lower bound rate wheel and excise tax revenues were calculated as \$80,236 and \$1,393,136, respectively. For a total overall Bloomington 2022 lower bound rate tax revenue estimate of \$1,473,372. The lower bound estimate is \$1,399,703 and the upper bound estimate is \$1,547,040.

## Indiana Registration Method Explained

This estimation method used the Indiana vehicle registration statistics from the FHWA and the census statistics for the populations of Indiana and Bloomington. These estimates were derived using the following equations:

### Bloomington Registrations

$$BR = (INR/INP) * B_p$$

Where:

$BR$  = Number of vehicles registered in Bloomington

$INR$  = Number of vehicles registered in Indiana

$INP$  = Indiana's Population

$B_p$  = Bloomington's Population

### Bloomington Wheel Tax Revenues

$$RBW = BR * MCW * r$$

Where:

$RBW$  = Bloomington Wheel Tax Revenue

$BR$  = Number of vehicles registered in Bloomington

$MCW$  = The percentage of vehicles in Monroe County subject to the Wheel Tax

$r$  = Wheel Tax Rate

## *Bloomington Excise Tax Revenues*

$$RBE = BR * MCE * r$$

Where:

$RBE$  = Bloomington Excise Tax Revenue

$BR$  = Number of vehicles registered in Bloomington

$MCE$  = The percentage of vehicles in Monroe County subject to the Excise Tax

$r$  = Excise Tax Rate

## *Total Tax Revenues*

$$RBT = RBW + RBE$$

Where:

$RBT$  = Bloomington Total Tax Revenue

$RBW$  = Bloomington Wheel Tax Revenue

$RBE$  = Bloomington Excise Tax Revenue

Since 2022 data did not exist for the number of vehicles registered in Indiana and Bloomington's population, these values had to be estimated from the historical data.

## **Method Assumptions**

This method was calculated under two main assumptions. The first being that the population to vehicle registration ratios are the same for Indiana and Bloomington. The second being that the ratio of vehicles and the types of vehicles are the same for Indiana and Bloomington.

## **Population Estimates**

For a description of how Bloomington's Population was estimated, see "Monroe County Method Explained". Indiana's population was estimated using a 3 year moving average of the yearly percentage change in the population. The 2010-2020 estimates were retrieved from the census bureau. However, the bureau did not have estimates for 2021 and 2022 so those had to be estimated. Chart F provides a visualization of this process. The column "% change" is the % change in the population, year over year. Then these percentages were averaged for the prior three years. See the "MA-3 % change" column. The estimates were achieved by multiplying the prior year by one plus the moving average of the prior three years. To illustrate this point:

$$\text{Indiana 2022 population} = \text{Indiana 2021 population} * (1 + \text{MA-3 \% change (2021)})$$

$$6912398.417 = 6856035.832 * (1 + 0.008220870771)$$

Chart F: Indiana Population Estimates

year	inpop	% change	% MA-3 change
2010	6483802		
2011	6516528	0.00504734722	
2012	6537703	0.003249429758	
2013	6568713	0.004743256156	0.004346677711
2014	6593644	0.003795416241	0.003929367385
2015	6608422	0.0022412493	0.003593307232
2016	6634304	0.003916517438	0.00331772766
2017	6658078	0.003583495722	0.003247087487
2018	6695497	0.005620090362	0.004373367841
2019	6732219	0.005484581652	0.004896055912
2020	6805985	0.01095715989	0.007353943968
2021	6856035.832		0.008220870771
2022	6912398.417		0.01095715989

### ***Vehicle Registration Estimates***

Indiana's vehicle registrations were estimated using a 5 year moving average of the yearly percentage change in the population. The 2010-2020 statistics were retrieved from the FHWA. However, FHWA did not have statistics for 2021 and 2022 so those had to be estimated. Chart G provides a visualization of this process. The column "% change" is the % change in the registration of vehicles in Indiana, year over year. Then these percentages were averaged for the prior five years. See the "MA-5 % change" column. A five year moving average was used to reduce the influence that 2020 had over the moving average. The estimates were achieved by multiplying the prior year by one plus the moving average of the prior five years. To illustrate this point:

$$\text{Indiana 2022 Registrations} = \text{Indiana 2021 Registrations} * (1 + \text{MA-5 \% change (2021)})$$

$$6270900.469 = 6240505.211 * (1 + -0.003322913028)$$

Chart G: Indiana Registration Estimates

year	inregistration	in reg %	% change	MA-3 % Change	MA-5 % Change
2010	5902984	0.91042015			
2011	6132772	0.94111036	0.0337099415		
2012	6004366	0.91842135	-0.02410876659		
2013	5574026	0.84857201	-0.07605369801	-0.02215084103	
2014	6012595	0.91187741	0.07460227212	-0.00852006416	
2015	6045114	0.91475908	0.003160150661	0.0005695749219	0.002261979937
2016	6140530	0.9255726	0.01182116716	0.02986119665	-0.002115774931
2017	6170034	0.92669897	0.001216943976	0.005399420601	0.002949367181
2018	6190736	0.92461187	-0.002252187676	0.003595307821	0.01770966925
2019	6223460	0.92442923	-0.0001975315329	-0.0004109250777	0.002749708518
2020	6199901	0.91094838	-0.01458289024	-0.005677536485	-0.0007988996627
2021	6240505.211	0.9102206236	-0.0007988996627	-0.005193107147	-0.003322913028
2022	6270900.469	0.9071960397	-0.003322913028		

Once the number of vehicles registered statewide were estimated, these estimates were used to estimate the number of vehicles registered in Bloomington.

Chart H: Bloomington Registration Estimates

year	inregistration	btown pop %	btown reg
2010	5902984	0.012400903	73202.33216
2011	6132772	0.0125062	76697.67101
2012	6004366	0.012567105	75457.49812
2013	5574026	0.012552992	69970.70223
2014	6012595	0.012612449	75833.54917
2015	6045114	0.012649919	76470.20005
2016	6140530	0.012719797	78106.295
2017	6170034	0.012741965	78618.36052
2018	6190736	0.01271586	78720.53
2019	6223460	0.012737999	79274.42862
2020	6199901	0.012554685	77837.80623
2021	6240505.211	0.012517866	78117.80087
2022	6270900.469	0.012457851	78121.9441

### **Bloomington Revenue Estimates**

Once the Population and Registration estimates were obtained, the wheel and excise taxes were disaggregated using the revenue split obtained from the Monroe County method. For 2022, this gave an estimated 8,369 vehicles subject to the Wheel Tax and 69,752 vehicles subject to the excise tax.

Chart I: Disaggregated Bloomington Vehicles

btown reg	btown wheel tax vehicle	btown excise tax vehicle
73202.33216	7842.368322	65359.96384
76697.67101	8216.833641	68480.83737
75457.49812	8083.970489	67373.52763
69970.70223	7496.154869	62474.54736
75833.54917	8124.257878	67709.29129
76470.20005	8192.464048	68277.736
78106.295	8367.743425	69738.55157
78618.36052	8422.602421	70195.7581
78720.53	8433.54812	70286.98188
79274.42862	8492.888811	70781.53981
77837.80623	8338.97948	69498.82675
78117.80087	8368.976081	69748.82479
78121.9441	8369.419957	69752.52414
Monroe County	0.107132766	0.892867234

Then the vehicle estimates were multiplied by the rates to achieve the final estimate. This gave upper bound rate wheel and excise tax revenues of \$334,777 and \$1,743,813, respectively. These numbers were then added together to receive the overall Bloomington 2022 tax revenues estimate of \$2,078,590.

To account for the fact that the method assumptions described above likely do not hold, a sensitivity analysis was conducted. A lower and upper bound estimate were created that accounted for a 5% discrepancy between the assumptions and the real world. Therefore, the lower bound estimate is 95% of the original and the upper bound estimate is 105% of the original. The lower bound is \$1,974,660 and the upper bound is \$2,182,519.

Similarly, the lower bound rate wheel and excise tax revenues were calculated as \$209,236 and \$523,144, respectively. For a total overall Bloomington 2022 lower bound rate tax revenue estimate of \$732,379. The lower bound estimate is \$1,399,703 and the upper bound estimate is \$1,547,040.

### Monroe County Method Explained

This estimation method used the 2011 Monroe county wheel and excise tax revenues. These estimates were derived using the following equations:

#### Bloomington Wheel Tax Revenues

$$RBW = RMCW * (MCP / BP)$$

Where:

$R_{BW}$  = Bloomington Wheel Tax Revenue

$R_{MCW}$  = Monroe County Wheel Tax Revenue

$MCP$  = Monroe County Population

$BP$  = Bloomington Population

### *Bloomington Excise Tax Revenues*

$$R_{BE} = R_{MCE} * (MCP / BP)$$

Where:

$R_{BE}$  = Bloomington Excise Tax Revenue

$R_{MCE}$  = Monroe County Excise Tax Revenue

$MCP$  = Monroe County Population

$BP$  = Bloomington Population

### *Total Tax Revenues*

$$R_{BT} = R_{BW} + R_{BE}$$

Where:

$R_{BT}$  = Bloomington Total Tax Revenue

$R_{BW}$  = Bloomington Wheel Tax Revenue

$R_{BE}$  = Bloomington Excise Tax Revenue

Since 2022 data did not exist for Bloomington or Monroe County's populations and Monroe County's tax revenues, these values had to be estimated from the historical data.

### ***Method Assumptions***

This method was calculated under the assumption that the registered vehicles in Bloomington are proportional to its population with respect to Monroe county.

### ***Bloomington Population Estimate***

Bloomington's population was estimated using a 7 year moving average of the yearly percentage change in the population. A 7 year moving average was used to reduce the impact that 2020 had on the average. 2020 was the first year since at least 2011 where Bloomington's population percent change was negative. The 2010-2020 estimates were retrieved from the census bureau. However, the bureau did not have estimates for 2021 and 2022 so those had to be estimated. Chart J provides a visualization of this process. The column "% change" is

the % change in the population, year over year. Then these percentages were averaged for the prior seven years. See the “MA-7 % change” column. The estimates were achieved by multiplying the prior year by one plus the moving average of the prior seven years. To illustrate this point:

$$\text{Bloomington 2022 population} = \text{Bloomington 2021 population} * (1 + \text{MA-7 \% change (2021)}) \\ 86,113.62662 = 85822.93463 * (1 + 0.004618054866)$$

Chart J: Bloomington Population Estimate

year	Bloomington Population	% Change	MA-7 % Change
2010	80405		
2011	81497	0.01358124495	
2012	82160	0.008135268783	
2013	82457	0.00361489776	
2014	83162	0.008549910863	
2015	83596	0.005218729708	
2016	84387	0.009462175224	
2017	84837	0.005332574923	0.007699257458
2018	85139	0.003559767554	0.006267617831
2019	85755	0.007235227099	0.006139040447
2020	85447	-0.00359162731	0.005109536866
2021	85822.93463	0.005109536866	0.004618054866
2022	86113.62662		0.004517942393

### **Monroe County Population Estimate**

Monroe County’s population was estimated using a 3 year moving average of the yearly percentage change in the population. The 2010-2020 estimates were retrieved from the census bureau. However, the bureau did not have estimates for 2021 and 2022 so those had to be estimated. Chart J provides a visualization of this process. The column “% change” is the % change in the population, year over year. Then these percentages were averaged for the prior three years. See the “MA-3 % change” column. The estimates were achieved by multiplying the prior year by one plus the moving average of the prior three years. To illustrate this point:

$$\text{Monroe County 2022 population} = \text{Monroe County 2021 population} * (1 + \text{MA-3 \% change (2021)}) \\ 151,261 = 150,243 * (1 + 0.0067760807)$$

Chart J: Monroe County Population Estimate

Year	Monroe Population	% Change	MA-3 % Change
2010	138,566		
2011	140,233	1.2030368%	
2012	141,484	0.8920867%	
2013	142,068	0.4127675%	0.0083596367
2014	143,403	0.9396909%	0.0074818170
2015	144,247	0.5885511%	0.0064700317
2016	145,757	1.0468155%	0.0085835250
2017	146,638	0.6044307%	0.0074659910
2018	147,230	0.4037153%	0.0068498717
2019	148,431	0.8157305%	0.0060795883
2020	149333.3994	0.6079588%	0.0060913487
2021	150243.0412	0.6091349%	0.0067760807
2022	151261.1001	0.6776081%	0.0063156727

### **Monroe County Revenue Estimate**

Since the revenues for the Monroe County Revenues were only available for 2011, they had to be estimated for 2022. This was estimated by finding the 2011 per capita revenues for each tax and then assumed to be constant to then estimate the 2022 revenues. Chart K below illustrates this point.

Chart K: Monroe County Revenue Estimate

Year	MC Population	MC Wheel Rev	MC Excise Rev
2011	140,233.00	277,919.00	2316236
2022	151,261.00	299,774.70	2498386.069
Year		MC Wheel Rev/cap	MC Excise Rev/cap
2011		1.981837371	16.51705376
2022		1.981837371	16.51705376

The per capita estimate equations:

$$\text{2011 Wheel Tax per capita} = \text{2011 Monroe County Wheel Tax revenue} / \text{2011 Monroe County population}$$

$$1.981837371 = 277,919 / 140,233$$

$$\text{2011 excise tax per capita} = \text{2011 Monroe County Wheel Tax revenue} / \text{2011 Monroe County population}$$

$$16.51705376 = 2,498,386 / 140,233$$

The 2022 revenue estimates:

$$\begin{aligned} 2022 \text{ Monroe County Wheel Tax revenue} &= 2022 \text{ Monroe County population} * 2011 \text{ Wheel Tax per capita} \\ 299,775 &= 151,261 * 1.981837371 \end{aligned}$$

$$\begin{aligned} 2022 \text{ Monroe County excise revenue} &= 2022 \text{ Monroe County population} * 2011 \text{ Wheel Tax per capita} \\ 2,498,386 &= 151,261 * 16.51705376 \end{aligned}$$

### ***Bloomington Revenue Estimate***

Once the Monroe County Revenue estimates were obtained, the estimates were plugged into the Bloomington Revenue equation described above to yield the final estimates. This gave upper bound rate wheel and excise tax revenues of \$170,993 and \$1,425,094, respectively. These numbers were then added together to receive the overall upper bound rate Bloomington 2022 tax revenues estimate of \$1,596,088.

To account for the fact that the method assumptions described above likely do not hold, a sensitivity analysis was conducted. A lower and upper bound estimate were created that accounted for a 5% discrepancy between the assumptions and the real world. Therefore, the lower bound estimate is 95% of the original and the upper bound estimate is 105% of the original. The lower bound is \$1,516,284 and the upper bound is \$1,675,893.

Similarly, the lower bound rate wheel and excise tax revenues were calculated as \$53,863 and \$935,219, respectively. For a total overall Bloomington 2022 lower bound rate tax revenue estimate of \$989,081 The lower bound estimate is \$939,627 and the upper bound estimate is \$1,038,535.

## **Appendix E Transmap's Report**

The three alternatives were: “Do Nothing Budget on All Asphalt Roads”, “\$688K Annual Budget Required to Maintain the Existing PCI for All Asphalt Roads”, and “922K Annual Budget Required to Achieve an Average Network PCI=70 on All Asphalt Roads”. They will be referred to as alternatives 1, 2, and 3, respectfully.<sup>25</sup>

### **Alternative 1**

Alternative 1 analyzed how Bloomington’s asphalt road conditions would change in response to a \$0 annual roads budget. The report found that the average PCI would fall to 46 by 2022. This represents an average decline of 4 PCI per year. The report also estimated that the deferred maintenance amount would rise from the then-\$7.5 million to \$12.2 million in 2022.<sup>26</sup>

### **Alternative 2**

Alternative 2 analyzed how Bloomington’s asphalt road conditions would change in response to a \$688K annual roads budget. The report found that this alternative would maintain the existing PCI through 2021; However, it shows the average PCI beginning to dip in 2022 to 65. The report estimated that the deferred maintenance amount, under this alternative, would fall \$0.4 million to \$6.4 million in 2022.<sup>27</sup>

### **Alternative 3**

Alternative 3 analyzed how Bloomington’s asphalt road conditions would change in response to a \$922K annual roads budget. The report found that this alternative would increase the average PCI to 70 by 2022. This is relevant as an average PCI of 70 would mean that the average asphalt road in Bloomington would only need routine maintenance. The report estimated that the deferred maintenance amount, under this alternative, would fall from \$6.6 million to \$4.8 million in 2022.<sup>28</sup>

### **Transmap’s PCI Methodology**

Another item to note is that the forecasting method employed by Transmap is flawed. While not much is known about this method, there is a short note on their predictive modeling in the appendices.<sup>29</sup> There they note that the model relies on historical data from “traffic loads, weather, and other factors that affect pavement life”.<sup>30</sup> The problem is that both traffic loads and weather events that could damage the roads will

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<sup>25</sup> “City of Bloomington, IN Pavement Management Report”, Transmap Corporation, May 2018,  
<https://data.bloomington.in.gov/dataset/5d9ee4cc-2e40-4959-9795-6ea802f78e72/resource/2b05f1f2-ddfd-4e10-9560-bb5d23e29745/download/pavement-management-report.pdf>

<sup>26</sup> Chart 11 in Appendix G provides further detail on Alternative 1

<sup>27</sup> Chart 12 in Appendix G provides further detail on Alternative 2

<sup>28</sup> Chart 13 in Appendix G provides further detail on Alternative 3

<sup>29</sup> See Appendix A in “City of Bloomington, IN Pavement Management Report”, Transmap Corporation, May 2018,  
<https://data.bloomington.in.gov/dataset/5d9ee4cc-2e40-4959-9795-6ea802f78e72/resource/2b05f1f2-ddfd-4e10-9560-bb5d23e29745/download/pavement-management-report.pdf>

<sup>30</sup> Ibid.

increase in the future. The report is silent on this issue and notes that they can “predict the future performance of a group of pavements with similar attributes.”

This section, therefore, is silent on the fact that the factors that impact the road’s life, traffic and weather, are likely to increase. Table 3 below shows how Bloomington’s traffic load has increased over time.<sup>31</sup> While there was a decline during 2020 because of Covid, 2019 saw a 10.6% increase from 2018. The dip from covid is likely to be short lived as a large share of that decline was due to reduced traffic because Indiana University classes were largely virtual that year. Similarly, climate change is increasing weather incidents that could degrade the roads at a quicker pace. The Transmap report itself acknowledges that the winter of 2017-2018 was harsher than normal and caused more pavement damage than prior years.<sup>32</sup> The City of Bloomington released a report on Climate Change in Bloomington where it concluded that the City has experienced an increase in the number of days above 95 degrees and below 32 degrees and an increase in the number of heavy rain events.<sup>33</sup>

While this report does not present an alternative method to forecast the decline in the PCI, this note has been provided to underscore the fact that the budgetary gap that was just presented is likely to be underestimated given the problems with the PCI forecasting methodology.

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<sup>31</sup> Chart 5.1 in Appendix G provides a graphical illustration of Table 3

<sup>32</sup> See Page 16 in “City of Bloomington, IN Pavement Management Report”, Transmap Corporation, May 2018,  
<https://data.bloomington.in.gov/dataset/5d9ee4cc-2e40-4959-9795-6ea802f78e72/resource/2b05f1f2-ddfd-4e10-9560-bb5d23e29745/download/pavement-management-report.pdf>

<sup>33</sup> “Climate Risk and Vulnerability Assessment”, City of Bloomington, March 2020,  
<https://bloomington.in.gov/sites/default/files/2020-08/Bloomington%20Climate%20Risk%20and%20Vulnerability%20Assessment%20May%202020.pdf>

## **Appendix F Assumptions on the Bloomington Budget**

It is important to note the assumptions that were made with respect to the Bloomington budget and the Transmap alternatives. Every measure was taken to ensure that the numbers are accurate; However, the City of Bloomington has an opaque budget<sup>34</sup> which makes this process difficult. The PCI reports created by Transmap<sup>35</sup> that were discussed in Appendix F refer to the “annual budget”. Specifically, it notes that, “The annual budget for the MicroPAVER Budget Scenarios is \$561K, plus \$50K for reclamation of RAP material, for a total annual budget of \$611K.”<sup>36</sup> It does not denote what fiscal year the annual budget is for, nor do any of the LRSBs report an appropriated nor actual 611K spent. Further, the LRSBs do not disaggregate the costs.<sup>37</sup> This is relevant because the LRSB primarily goes toward road maintenance and stop lights. The City does not note either in their budget documentation nor in their open budget project portal the breakdown of these costs. The City also receives grants from the state and federal government to help maintain local roads and streets. The financial documents and Transmap’s report leave it unclear exactly how much of the budget goes toward the direct maintenance of the local roads and streets. However, for this report, the Bloomington LRSB is being used as the budget that goes towards the direct maintenance of the local roads and streets. This is done because the Transmap report, which was conducted in 2018, notes that the LRSB is \$611K. In the 2018 FY city budget, the total LRSB is \$608,346. Therefore, this number was utilized.

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<sup>34</sup> “Column: Before raising local income taxes, shouldn’t we look at Bloomington’s budget?”, Justin Ross and Tom Guevara, The Herald Times, March 24, 2022, <https://www.heraldtimesonline.com/story/opinion/columns/guest/2022/03/24/column-bloomington-lacks-fiscal-transparency-while-seeking-more-taxes/7118414001/>

<sup>35</sup> “2018 Pavement Condition Report”, City of Bloomington, Indiana, <https://data.bloomington.in.gov/dataset/2018-pavement-condition-report>

<sup>36</sup> “City of Bloomington, IN Pavement Management Report”, Transmap Corporation, May 2018, <https://data.bloomington.in.gov/dataset/5d9ee4cc-2e40-4959-9795-6ea802f78e72/resource/2b05f1f2-ddfd-4e10-9560-bb5d23e29745/download/pavement-management-report.pdf>

<sup>37</sup> “City Budget”, City of Bloomington, Indiana, Multiple Years, <https://bloomington.in.gov/city/budget>

## **Appendix G Charts and Figures**

Chart 1: Monroe County Wheel Tax Base and Rate

### **MONROE COUNTY (53)**

#### **SURTAX**

**FLAT RATE OF \$25.00**

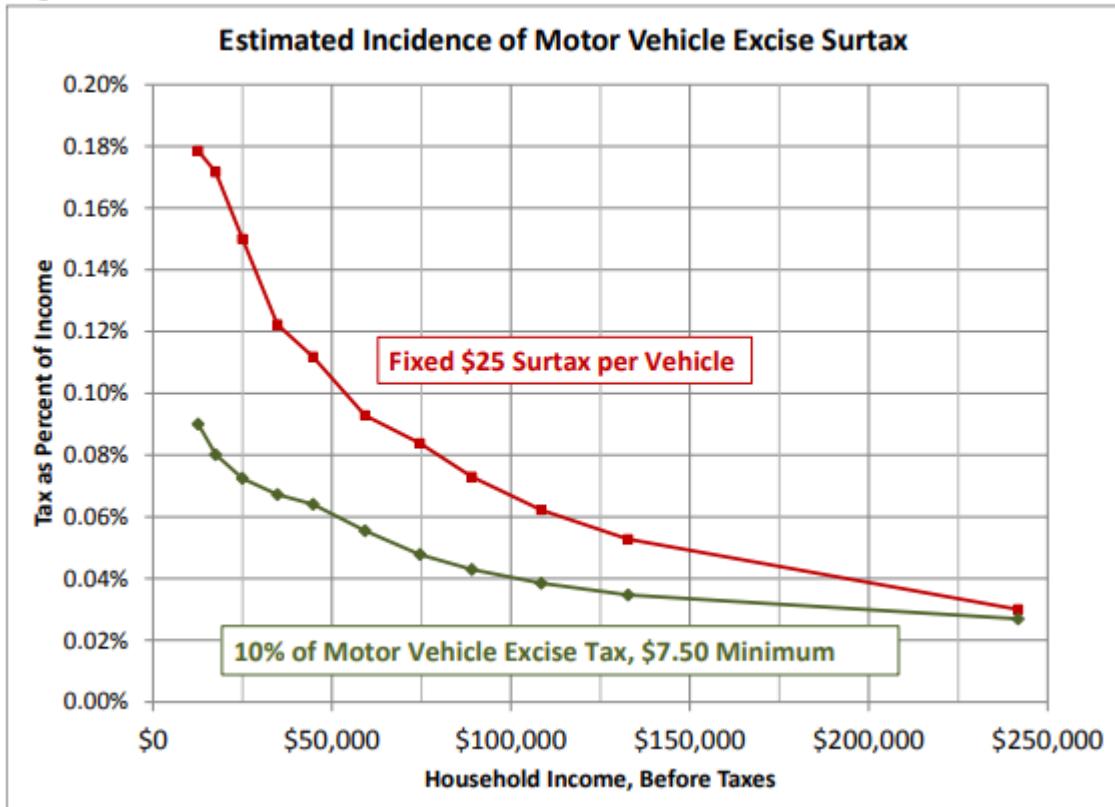
**MINIMUM \$7.50**

#### **WHEELTAX**

RV'S.....	\$ 40.00
BUSES.....	40.00
<b>(CHURCH BUSES ARE EXEMPT FROM WHEEL TAX)</b>	
SEMI-TRAILER /FARM SEMI-TRAILERS .....	40.00
SEMI-TRACTORS/FARM SEMI-TRACTORS.....	40.00
LIGHT TRAILERS (less than 3,000 lbs) .....	10.00
HEAVY TRAILERS (3,000 lbs or more) .....	40.00
TRUCKS/FARM TRUCKS .....	40.00
CLASS A RECOVERY VEHICLES.....	40.00
CLASS B RECOVERY VEHICLES.....	40.00
<b>ALL 5 YEAR FARM SEMI-TRAILERS/ALL 5 YEAR SEMI-TRAILERS PER YEAR</b>	
.....	40.00(PER YEAR)

## Chart 2: Vertical Equity

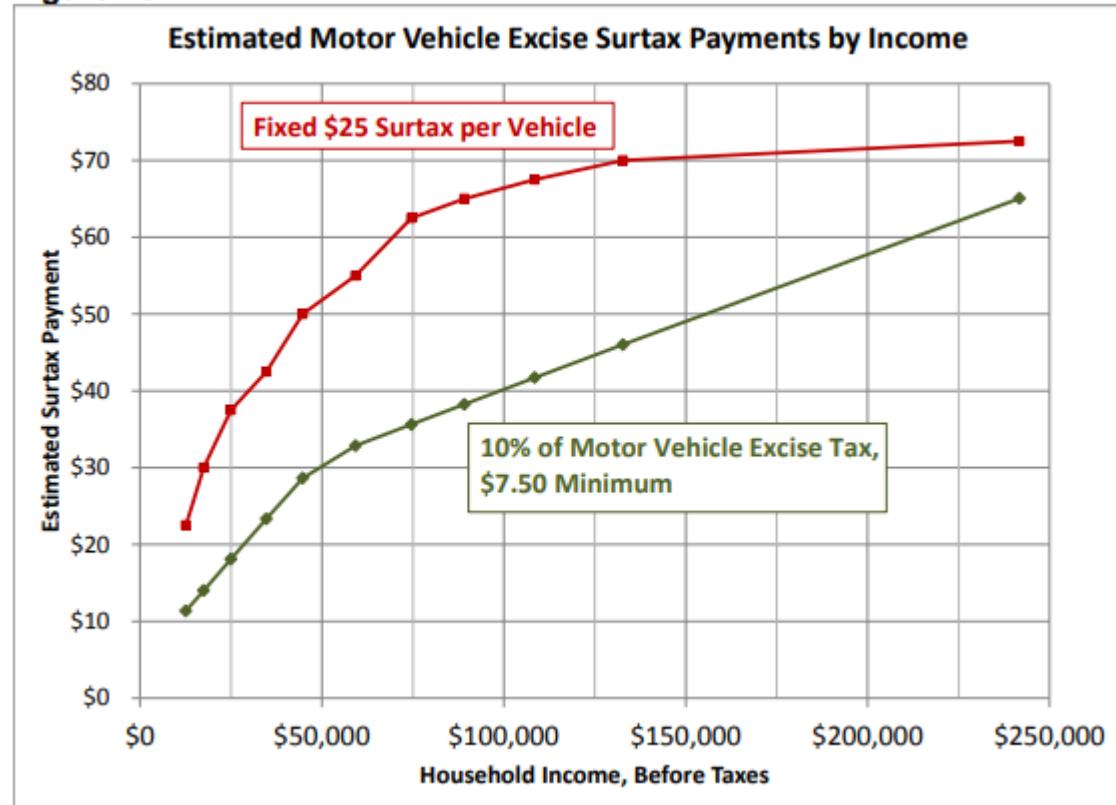
**Figure 17.**



Source: "Indiana's County Motor Vehicle Excise Surtax and Wheel Tax", Larry DeBoer and Anita Yadavalli, Purdue University, August 2012

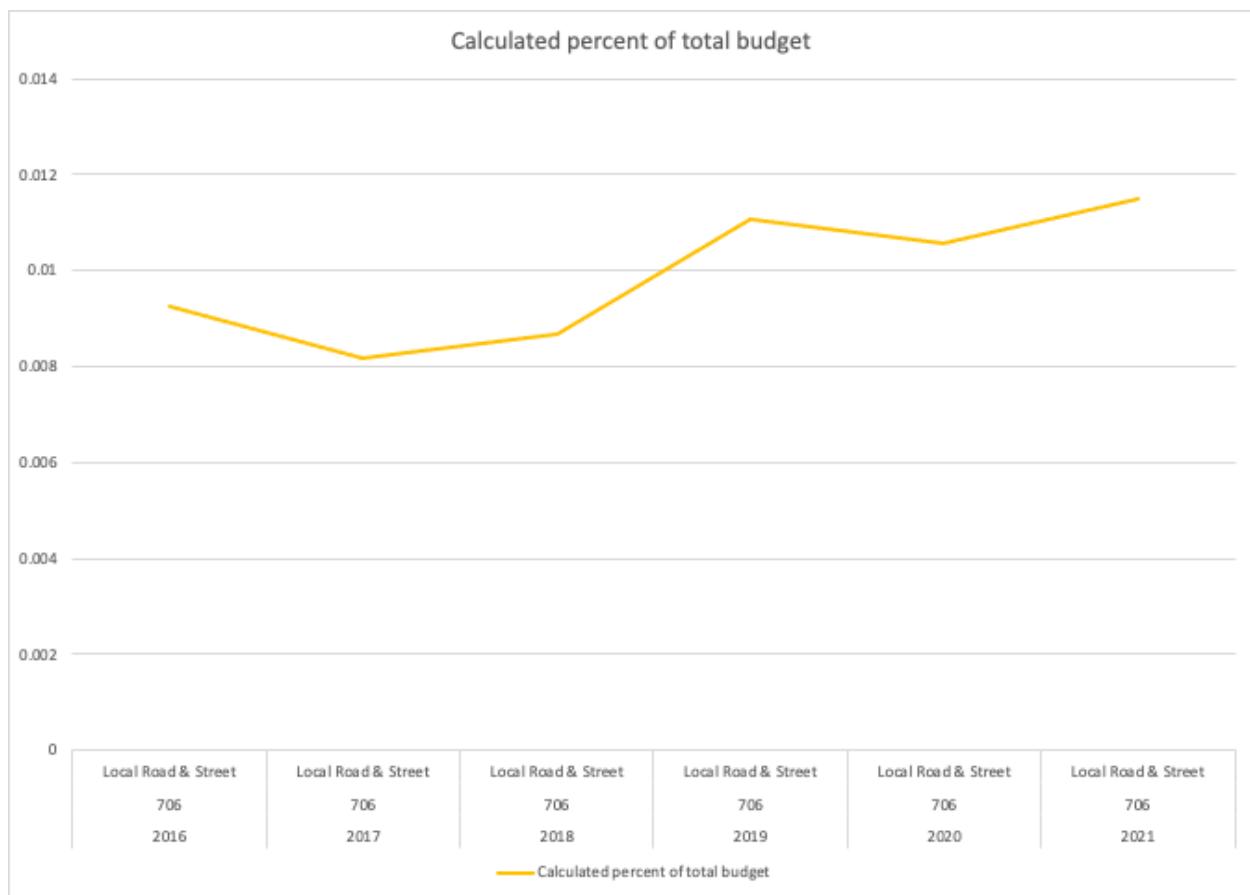
Chart 3: Distribution of tax payments by Household income

**Figure 16.**



Source: "Indiana's County Motor Vehicle Excise Surtax and Wheel Tax", Larry DeBoer and Anita Yadavalli, Purdue University, August 2012

Chart 4: Bloomington Budget on Local Roads



Source: Bloomington City Budgets, 2016 - 2021. <https://bloomington.in.gov/city/budget>

Chart 5.1: Bloomington Roadway Usage (Total)

### Total Roadway Travel in Bloomington

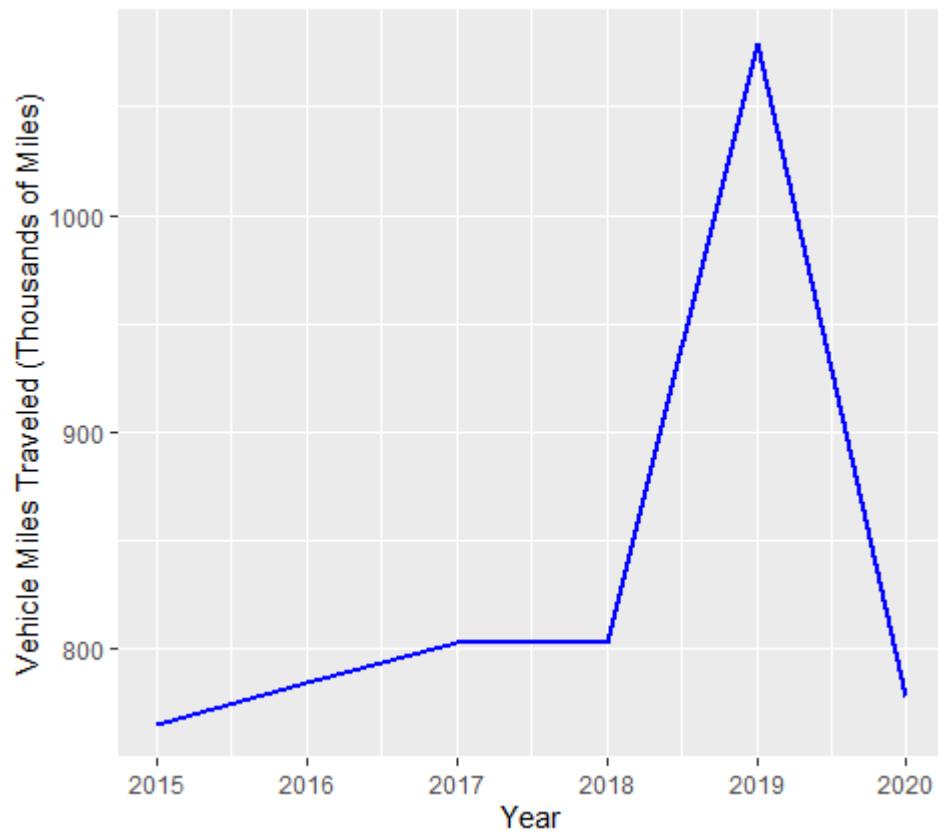
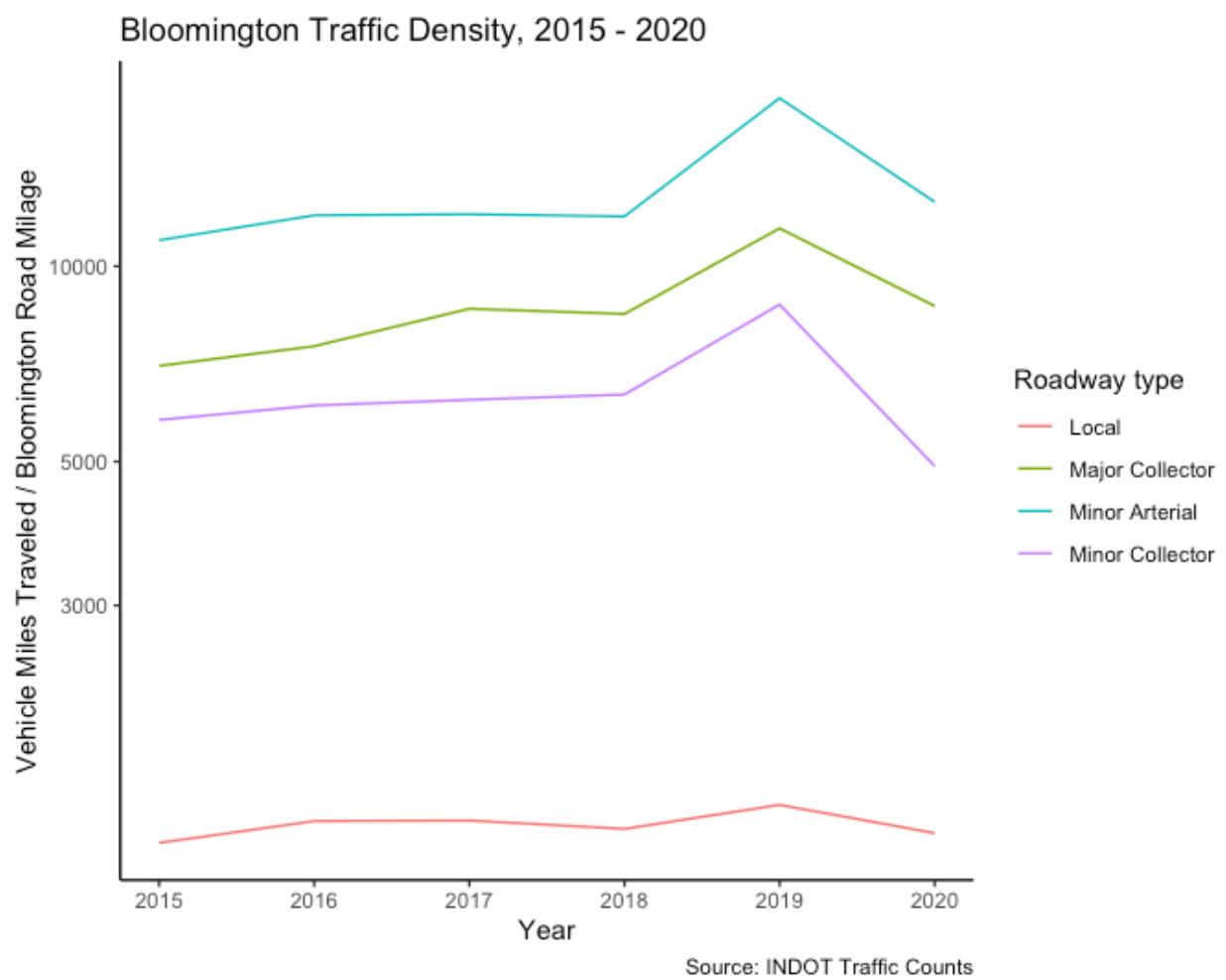


Chart 5.2: Bloomington Roadway Usage (By Road type)



## Chart 6: Pavement Condition Index Range Descriptions

**Table 1.2 - Typical PCI Condition Ranges**

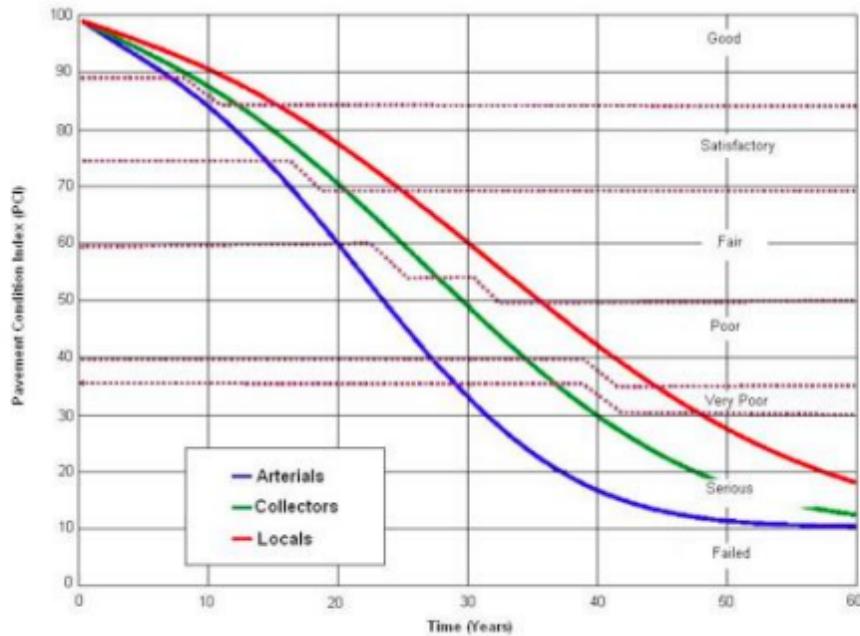
PCI Range	Work Type	Rehabilitation Options
86-100 Good	Rejuvenation	Little or no maintenance E.g. Crack Seal, Reclimite, fog seal
71-85 Satisfactory	Global	Routine Maintenance E.g. Seals such as slurry seal
56-70 Fair	Critical	Non-structural overlay, cape seal
41-55 Poor	Conventional	Structural overlay Overlay, Mill and overlay
26-40 Very Poor	Conventional	Structural Overlay Overlay, Mill and overlay
11-25 Serious	Reconstruction	Reconstruction, rebuild, full depth reclamation
0-10 Failed	Reconstruction	Reconstruction, rebuild, full depth reclamation

Source: “City of Bloomington, IN Pavement Management Report”, Transmap Corporation, May 2018, <https://data.bloomington.in.gov/dataset/5d9ee4cc-2e40-4959-9795-6ea802f78e72/resource/2b05f1f2-ddfd-4e10-9560-bb5d23e29745/download/pavement-management-report.pdf>

Chart 7: Pavement Condition Index Deterioration

### 1.3 Understanding the Pavement Condition Index

The following illustration (**Figure 1-3**) shows how the Pavement Condition Index (PCI) deteriorates over time for 3 different types of roadways. It also compares the PCIs to commonly used descriptive terms (Good, Satisfactory, Fair, Poor, Very Poor, Serious, Failed). The divisions between the descriptive terms are not fixed but are meant to indicate common perceptions of roadway condition.



**Figure 1-3 - Understanding the Pavement Condition Index Score**

Source: "City of Bloomington, IN Pavement Management Report", Transmap Corporation, May 2018, <https://data.bloomington.in.gov/dataset/5d9ee4cc-2e40-4959-9795-6ea802f78e72/resource/2b05f1f2-ddfd-4e10-9560-bb5d23e29745/download/pavement-management-report.pdf>

Chart 8: Bloomington Pavement Condition Index (Asphalt Pavement)

**Typical PCI Condition Ranges (All Asphalt Pavements)**

PCI Range	# of Sections	# of Miles	# of Square Yards	% by # of Square Yards
<b>86-100 Good</b>	<b>362</b>	<b>30.74</b>	<b>504,304</b>	<b>14%</b>
<b>71-85 Satisfactory</b>	<b>610</b>	<b>52.45</b>	<b>843,932</b>	<b>23%</b>
<b>56-70 Fair</b>	<b>713</b>	<b>61.55</b>	<b>969,183</b>	<b>27%</b>
<b>41-55 Poor</b>	<b>680</b>	<b>55.93</b>	<b>832,437</b>	<b>23%</b>
<b>26-40 Very Poor</b>	<b>321</b>	<b>24.33</b>	<b>350,916</b>	<b>10%</b>
<b>11-25 Serious</b>	<b>125</b>	<b>7.53</b>	<b>102,373</b>	<b>3%</b>
<b>0-10 Failed</b>	<b>8</b>	<b>0.44</b>	<b>4,530</b>	<b>0%</b>
<b>Total</b>	<b>2,819</b>	<b>232.97</b>	<b>3,607,675</b>	<b>100%</b>

Source: “Bloomington, IN - Pavement Management Boot Camp Meeting”, March 1, 2018, Transmap Corporation, <https://data.bloomington.in.gov/dataset/5d9ee4cc-2e40-4959-9795-6ea802f78e72/resource/8fc233c1-c2ae-4179-8ebe-affb7776e022/download/bloomington-project-summary-notes.pdf>

## Chart 9: Bloomington Pavement Condition Index by Surface Type

### Summary by Surface Type

Surface Type	# of Sections	Mileage	Area in Square Yards	% by Square Yards	Average PCI
<b>Asphalt</b>	2,819	232.98	3,607,675	99%	63
<b>Concrete</b>	25	2.27	36,294	1%	89
<b>Total</b>	2,844	235.25	3,643,969	100%	63

Source: "Bloomington, IN - Pavement Management Boot Camp Meeting", March 1, 2018, Transmap Corporation, <https://data.bloomington.in.gov/dataset/5d9ee4cc-2e40-4959-9795-6ea802f78e72/resource/8fc233c1-c2ae-4179-8ebe-affb7776e022/download/bloomington-project-summary-notes.pdf>

Chart 10: Bloomington Pavement Condition Index by Functional Class

**Summary by Functional Class for Asphalt Pavements**

Functional Class/Paver Designation	# of Sections	# of Miles	# of Square Yards	% by # of Square Yards	Weighted Average PCI
<b>Arterial &amp; Collector/ B</b>	569	54.72	1,018,356	28%	69
<b>Local/ E</b>	2,249	178.25	2,589,319	72%	60
<b>Total</b>	<b>2,819</b>	<b>232.97</b>	<b>3,607,675</b>	<b>100%</b>	<b>63</b>

Source: "Bloomington, IN - Pavement Management Boot Camp Meeting", March 1, 2018, Transmap Corporation, <https://data.bloomington.in.gov/dataset/5d9ee4cc-2e40-4959-9795-6ea802f78e72/resource/8fc233c1-c2ae-4179-8ebe-affb7776e022/download/bloomington-project-summary-notes.pdf>

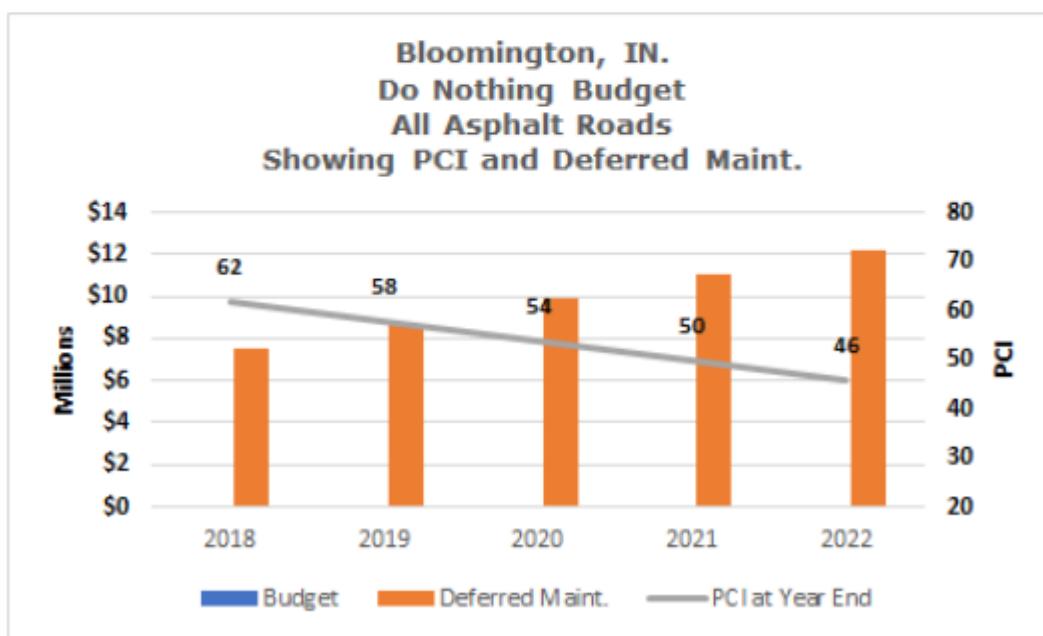
Chart 11: Alternative 1

## 4.1 Do Nothing Budget on All Asphalt Roads

**Table 4.1 - Do Nothing Budget on all Asphalt Roads**

**Showing the PCI at Year End and Deferred Maintenance**

Year Beginning	Average Annual Budget	PCI at Year End	Deferred Maint.
<b>2018</b>	\$0.00	62	\$7.5M
<b>2019</b>	\$0.00	58	\$8.7M
<b>2020</b>	\$0.00	54	\$9.9M
<b>2021</b>	\$0.00	50	\$11.0M
<b>2022</b>	\$0.00	46	\$12.2M



**Figure 4.1 - Do Nothing Budget on All Asphalt Roads**

Source: "City of Bloomington, IN Pavement Management Report", Transmap Corporation, May 2018, <https://data.bloomington.in.gov/dataset/5d9ee4cc-2e40-4959-9795-6ea802f78e72/resource/2b05f1f2-ddfd-4e10-9560-bb5d23e29745/download/pavement-management-report.pdf>

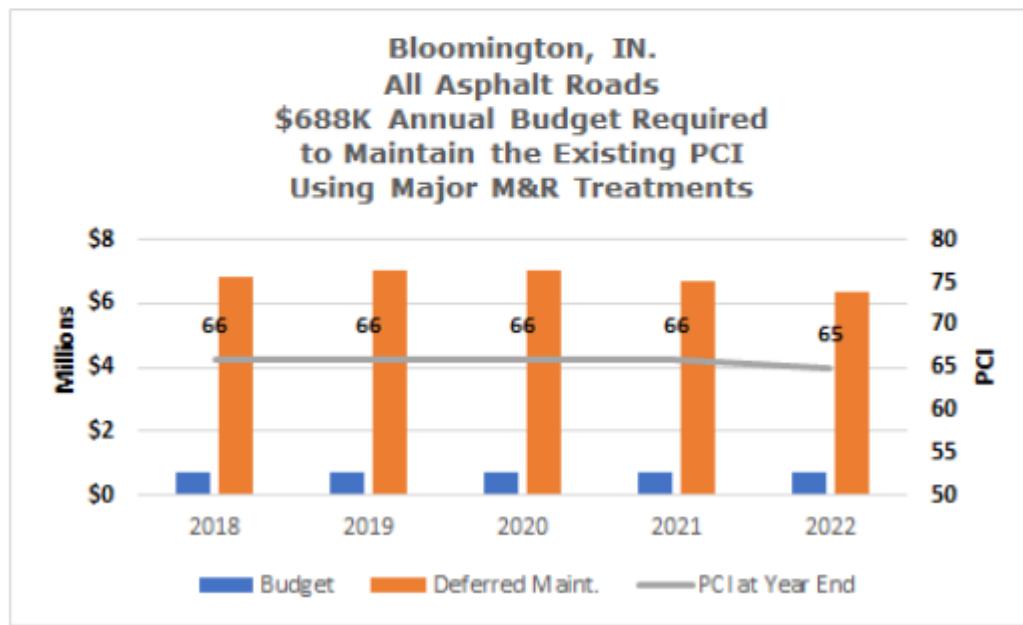
## Chart 12: Alternative 2

**Table 4.2 - \$688K Annual Budget Required to Maintain the Existing PCI for All Asphalt Roads**

**Showing the PCI at Year End and Deferred Maintenance**

**Using Major M&R Treatments Only**

Year Beginning	Annual Budget	PCI at Year End	Deferred Maint.
<b>2018</b>	\$688K	66	\$6.8M
<b>2019</b>	\$688K	66	\$7.0M
<b>2020</b>	\$688K	66	\$7.0M
<b>2021</b>	\$688K	66	\$6.8M
<b>2022</b>	\$688K	65	\$6.4M



**Figure 4.2 - Annual Budget Required to Maintain the Existing PCI  
on All Asphalt Roads**

Source: "City of Bloomington, IN Pavement Management Report", Transmap Corporation, May 2018, <https://data.bloomington.in.gov/dataset/5d9ee4cc-2e40-4959-9795-6ea802f78e72/resource/2b05f1f2-ddfd-4e10-9560-bb5d23e29745/download/pavement-management-report.pdf>

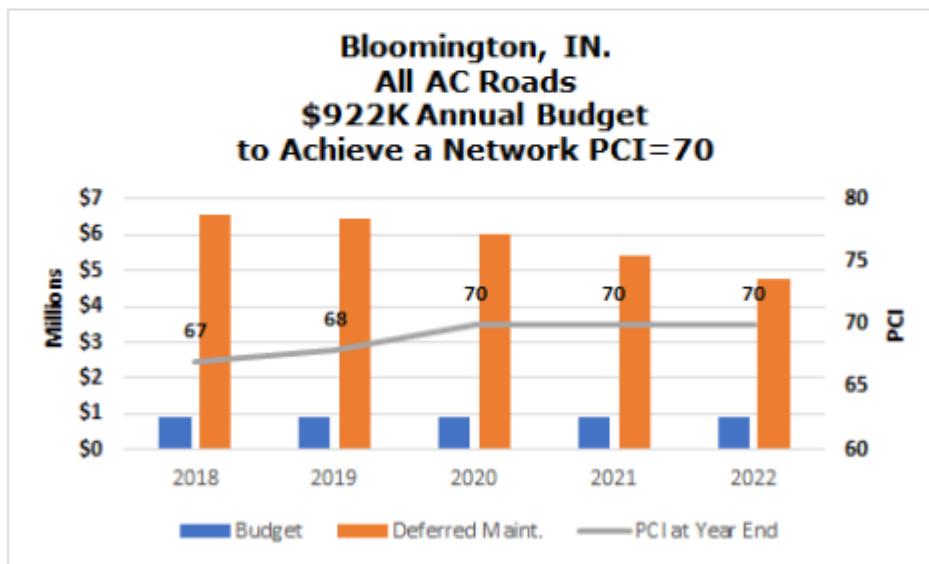
## Chart 13: Alternative 3

**Table 4.3 - \$922K Annual Budget Required to Achieve an Average Network PCI=70 on All Asphalt Roads**

**Using Major M&R Treatments Only**

**Showing the PCI at Year End and Deferred Maintenance**

Year Beginning	Average Annual Budget	PCI at Year End	Deferred Maint.
<b>2018</b>	\$922K	67	\$6.6M
<b>2019</b>	\$922K	68	\$6.5M
<b>2020</b>	\$922K	70	\$6.0M
<b>2021</b>	\$922K	70	\$5.4M
<b>2022</b>	\$922K	70	\$4.8M



**Figure 4.3 - \$922K Annual Budget Required to Achieve an**

**Average Network PCI=70 on All Asphalt Roads**

Source: "City of Bloomington, IN Pavement Management Report", Transmap Corporation, May 2018, <https://data.bloomington.in.gov/dataset/5d9ee4cc-2e40-4959-9795-6ea802f78e72/resource/2b05f1f2-ddfd-4e10-9560-bb5d23e29745/download/pavement-management-report.pdf>

**Chart 14: Bloomington's LSRB (FY 2016-2022)**

Fiscal Year	LSRB Budget (Nominal)	LSRB Budget (\$2018 dollars)
2016	\$630,305	\$659,440
2017	\$645,564	\$658,930
2018	\$608,346	\$608,346
2019	\$990,214	\$975,088
2020	\$1,032,580	\$992,137
2021	\$1,106,378	\$1,048,370
2022	\$1,079,200	\$951,449

Source: "City Budget", City of Bloomington, Indiana, Multiple Years, <https://bloomington.in.gov/city/budget>

Note: The LSRB Budget numbers for FY2022 are based off of the Mayor's budget and not the enacted budget.

Note: The \$2018 dollars values were generated using the BLS' CPI Inflation Calculator with the month set to January.

## Chart 15: Indiana Metropolitan Planning Organizations

In 1982, Indiana Governor Robert Orr established the Bloomington Area Transportation Study (BATS), which is now called Bloomington/Monroe County MPO (BMCMPO), to coordinate regional transportation planning efforts. The City will need to work with the BMCMPO to develop its TAMP.



### Indiana Metropolitan Planning Organizations

Note: The BMCMPO is one of fourteen MPOs in the state; the BMC members include the City of Bloomington, Monroe County, the Town of Ellettsville, Indiana University, and the Bloomington Public Transportation Corporation. Source: Indiana MPO Council, 2020.

[http://indianampo.com/inmopo\\_regions.html](http://indianampo.com/inmopo_regions.html)