



## 6. PAYING OUR WAY



The past few chapters have identified the vision for the transportation system, system objectives and planning considerations, needs and risks across modes, and strategies to make progress towards the system vision. However, this vision will not be achievable if adequate funding is not available to invest into the system. This chapter highlights the financial reality of transportation funding, projections for costs and revenues across modes, potential shortfalls and implications, and possible ways to generate additional revenue.

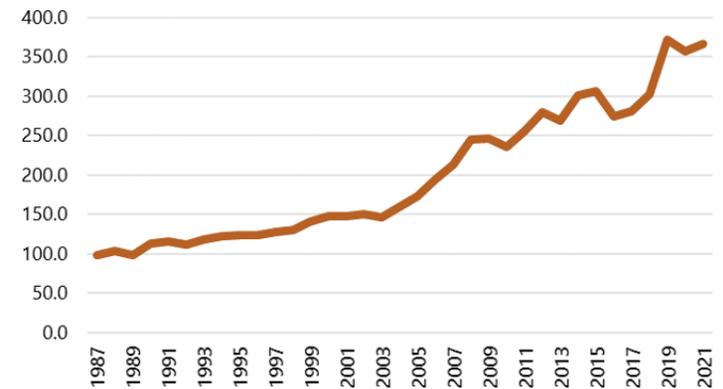
## 6.1 Introduction

The costs and revenues discussion in this chapter is framed primarily within the context of the Iowa Department of Transportation (DOT) Five-Year Program, which is the basis for the terms “Iowa DOT costs” and “Iowa DOT revenues” used in this chapter. Both costs and revenues are presented in average annual future year dollars. The most critical piece of information presented in this chapter is the shortfall between anticipated future costs and revenues.

The costs associated with nearly all goods and services typically increase over time, including those in transportation. The term for this increase is inflation, which is often expressed as a rate or index. An oft-referenced index in the transportation industry is the Construction Cost Index (CCI), which is shown using Iowa data in Figure 6.1. To better understand the impacts of this inflation, consider that a \$1 million project in 1987 cost approximately \$3.67 million in 2021.

Over time, the effects of cost inflation erode the buying power of available revenue. An example of this is illustrated in Figure 6.2, which shows Iowa Road Use Tax Fund (RUTF) revenue history adjusted to constant 1997 dollars based on the Iowa CCI.

Figure 6.1: Construction cost index trend for Iowa highway construction (percent of 1987 base)



Source: Iowa DOT

Figure 6.2: History of Road Use Tax Fund revenue, 1997-2021



Source: Iowa DOT

State revenues for transportation primarily come from Iowa's RUTF and TIME-21 Fund. Combined, those two funds consist of revenues from fuel taxes, registration fees, use taxes, driver's license fees, and other miscellaneous sources. After remaining at the same level for more than two decades, in 2015 the legislature increased the fuel tax rate by 10 cents per gallon. However, as shown on Figure 6.2, inflation has already negated that increase in terms of constant dollars.

Most of the federal revenue that the Iowa DOT receives for transportation is generated by the federal fuel tax. The Fixing America's Surface Transportation (FAST) Act expired on September 30, 2021 after a one-year extension, and its successor, the Infrastructure and Investment Jobs Act (IIJA), was passed through Congress and signed into law on November 15, 2021. Over the five-year life of IIJA, the bill provides an increase in federal funds of approximately 30 percent over 2021 amounts, as well as year-over-year increases through 2026. While this is a significant increase over past funding levels, it is unknown whether that increase will be sustained beyond the timeframe of IIJA.

The additional revenue will provide a significant boost. However, since transportation costs have outpaced revenues over time, Iowa's transportation system has been and will continue to be subject to deterioration. Also, future revenues are not guaranteed. The level of revenues received is affected by a number of factors, including, but not limited to, the amount of federal dollars actually appropriated and available to obligate, vehicle miles traveled, vehicle fuel efficiency, and the use of alternative fuels (e.g., ethanol, biodiesel, natural gas, and electricity). Regardless, an adequate level of revenue is necessary to support the state's future transportation system and keep Iowa competitive in an ever-changing economy.

## 6.2 Annual Transportation Funding

Table 6.1 highlights the budgeted distribution of transportation funding by the Iowa DOT by state fiscal year (SFY). Note that these figures do not include federal highway or transit funds administered by the Iowa DOT but transferred to local jurisdictions for local programming authority.

Table 6.1: Annual Iowa DOT transportation funding (\$ millions)

	Annual average, SFY 2000-2022	SFY 2022
<b>Highway</b>	\$826.76	\$1,174.86
<b>Aviation</b>	\$4.29	\$6.27
<b>Bike/pedestrian (trails)*</b>	\$1.95	\$1.50
<b>Public transit</b>	\$13.08	\$17.75
<b>Railroad</b>	\$3.19	\$2.60
<b>General services**</b>	\$82.28	\$97.25
<b>Motor vehicle</b>	\$36.46	\$32.35
<b>Total</b>	<b>\$968.01</b>	<b>\$1,332.59</b>

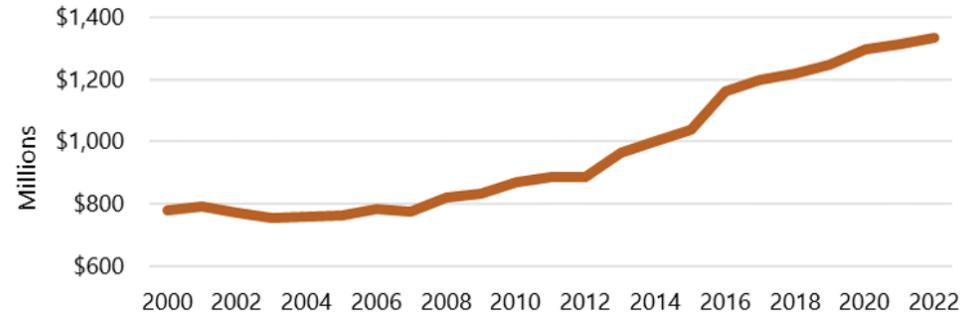
\*Trails funding does not include Federal Recreational Trails Program or Statewide Transportation Alternatives Program funding.

\*\*General services include various special purpose operations and capital funding.

Source: Iowa DOT

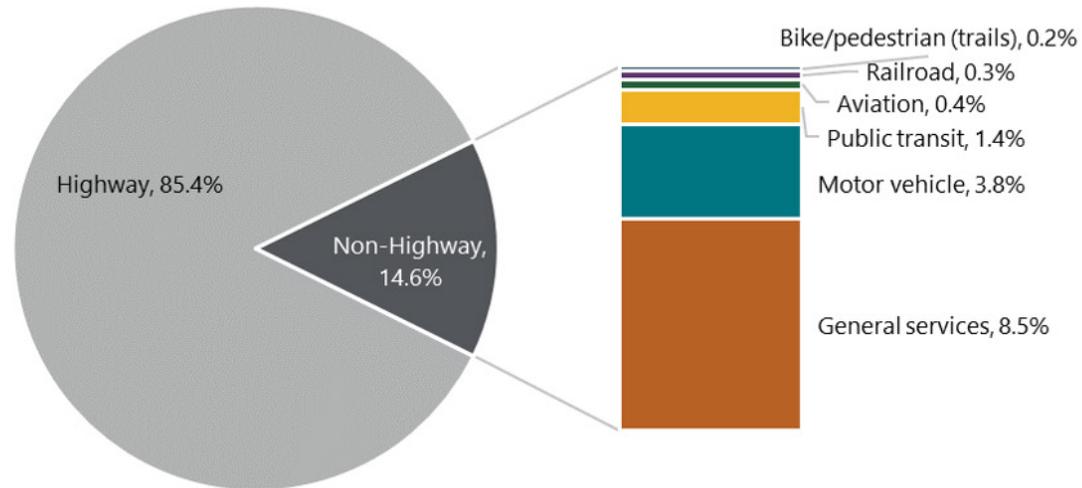
Figure 6.3 illustrates the recent history of total Iowa DOT-programmed transportation funding. While this total has increased at a steady pace in recent years, it has not kept up with inflation and cannot fully address the growing list of needs and escalating costs associated with meeting those needs. Figure 6.4 highlights the distribution of funds to highways and various nonhighway categories.

**Figure 6.3: History of total Iowa DOT-programmed transportation funding, SFY 2000-2022**



Source: Iowa DOT

**Figure 6.4: Distribution of Iowa DOT-programmed transportation funding (SFY 2000-2022)**



Source: Iowa DOT

## 6.3 Future Costs and Revenues by Mode

The following pages highlight the cost of future investment in the state's transportation system versus anticipated Iowa DOT revenues. As was previously mentioned, where possible, this discussion is framed within the context of the Iowa DOT's Five-Year Program, which is the basis for the terms "Iowa DOT costs" and "Iowa DOT revenues" used in this section. These amounts represent, for estimating purposes, the portion of the modal costs that can be considered the Iowa DOT's share, and the portion of modal revenues that can be anticipated through the Iowa DOT. Where detailed forecasts are unavailable, these figures are based on recent historical trends. Both costs and revenues are presented in average annual future year dollars.

It is important to note that the costs identified in this chapter may not align directly with the improvement needs highlighted in Chapter 5. While the needs identified in this State Long Range Transportation Plan (SLRTP) help serve as a general guide for the Iowa DOT's future transportation investments, specific costs for each mode were developed from the investment needs identified by individual modal plans and studies. These plans and studies are referenced in the following sections.

Also, while the focus of this chapter is on Iowa DOT revenues, it should be noted that there are significant sources of revenue for each mode that can be applied toward those costs that exceed or are not eligible for Iowa DOT-programmed funds. Some examples of these revenue sources include, but are not limited to, the following.

- Aviation – bonding, Federal Aviation Administration Airport Improvement Program, passenger facility charges, property tax levy
- Bicycle and pedestrian – local jurisdiction funds, private investment, Resource Enhancement and Protection Fund, Rebuild Iowa Infrastructure Fund
- Highway – Farm-to-Market Road Fund, Secondary Road Fund, Street Construction Fund, federal discretionary funds, local option sales tax
- Public transit – fare box revenue, federal discretionary funds, property tax levy
- Rail – federal discretionary funds, private investment, Railroad Rehabilitation & Improvement Financing program



## Aviation

### Costs

Costs for aviation were derived from the 2020 Iowa Aviation System Plan (IASP). The IASP identified System Plan objective costs, Airport Capital Improvement Program costs, and pavement maintenance and rehabilitation costs totaling nearly \$1.182 billion over the 10-year planning period, or \$118.2 million annually in 2021 dollars. The 2021-2030 costs include significant terminal improvements at the Des Moines International Airport and Eastern Iowa Airport in Cedar Rapids, so to extrapolate costs for the 2031-2050 time period, the average annual amount was reduced to a \$87.7 million annually in 2021 dollars. These annual amounts were inflated from 2021 dollars based on an annual inflation rate of 4.0 percent, which was based on the growth of Iowa’s CCI. **Average annual total costs** over the life of the SLRTP were then calculated.

To bring these costs into the context of the Five-Year Program, the portion of total aviation costs statewide that has historically been addressed through the aviation element of the Five-Year Program was examined. The aviation element of the Five-Year Program has included State Aviation Fund, Rebuild Iowa Infrastructure Fund, and annual appropriation funds. Between 2012 and 2021, this percentage varied from year to year and averaged 9.6 percent. This percentage was then applied to the average annual total costs mentioned above to estimate **average annual Iowa DOT costs** shown in Table 6.2.

Table 6.2: Average annual aviation costs, 2022-2050 (\$ millions)

Average annual total costs	Average annual Iowa DOT costs
\$151.654	\$14.599

Source: Iowa DOT

### Revenues

Revenues for aviation were derived based on historical and anticipated funding identified in the aviation element of the Five-Year Program. Aviation revenue was held constant throughout the life of the SLRTP, due to a flat long-term trend in aviation revenue, which is largely dependent upon annual legislative appropriations, aircraft registrations, and fuel sales. **Average annual Iowa DOT revenues** (Table 6.3) over the life of the SLRTP were then calculated.

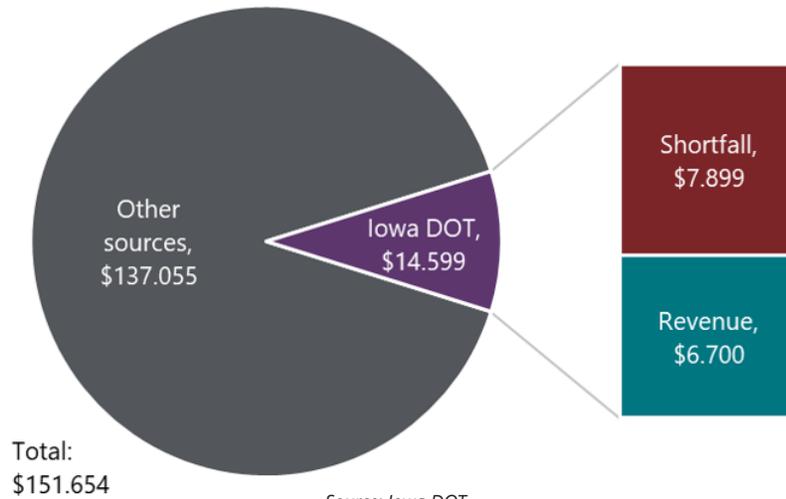
Table 6.3: Average annual aviation revenues, 2022-2050 (\$ millions)

Average annual Iowa DOT revenues
\$6.700

Source: Iowa DOT

The average annual costs for aviation, Iowa DOT share, and difference between Iowa DOT average annual costs and revenues is illustrated in Figure 6.5. It is estimated that anticipated revenues would cover approximately 46 percent of the anticipated Iowa DOT costs.

Figure 6.5: Aviation average annual total costs, Iowa DOT share, revenue, and shortfall, 2022-2050 (\$ millions)



### Implications of the Shortfall

- All objectives related to infrastructure and services may not be met, affecting the ability to address the needs of aviation users.
- Access to aviation services may not be maintained or enhanced.
- Planning for infrastructure, air space protection, and other key planning initiatives to ensure the most efficient and safe system may be inadequate.
- Protection of existing investments, such as covered storage for aircraft, could be limited.





## Bicycle and Pedestrian

### Costs

The 2017 SLRTP bicycle and pedestrian financial methodology for the on-road needs of the primary system was based on analysis that was conducted as part of the Bicycle and Pedestrian Long Range Plan, which was completed in 2018. This included an assessment of needs for the entire Primary Highway System, excluding Interstates. This analysis is being used again as the basis for bicycle and pedestrian costs. It is anticipated that this analysis will be updated prior to the next SLRTP update.

Costs were based on providing the recommended type of treatment for roadways, which is determined based primarily on annual average daily traffic (AADT), roadway width, and speed. In general, the treatments would improve the bicycle compatibility rating of the roadway from poor or moderate to good, though a rating of moderate was deemed acceptable for a portion of four-lane highways and higher AADT two-lane highways. It was assumed that accommodations would be constructed in conjunction with other highway work rather than as standalone projects, which reduces their cost. Costs also are only for the portion of the accommodation that would not be addressed through standard highway work (e.g., in many cases the recommended accommodation would involve a slight widening of the paved shoulder that would typically be installed).

This analysis includes the full Primary Highway System costs, which are spread across the timeframe of the plan. Costs were developed in 2016 dollars, and then inflated to 2050 using an annual inflation rate of 4.0 percent, which was based on the growth of Iowa’s CCI. **Average annual total costs** over the life of the SLRTP were then calculated (see Table 6.4).

These costs represent improvements to the primary system, and do not include the cost to improve the secondary or municipal systems, or to complete portions of the statewide trail vision that are not aligned with

the Primary Highway System. These costs would represent a full “build-out” of bicycle accommodations, which may not occur as other factors such as percentage of highway project cost, connectivity, and potential usage could factor into whether or not accommodations are built.

**Table 6.4: Average annual bicycle and pedestrian accommodation costs, 2022-2050 (\$ millions)**

	Average annual total costs
Rural Primary Highway System	\$32.336
Urban Primary Highway System	\$12.651
<b>Total</b>	<b>\$44.987</b>

*Source: Iowa DOT*

### Revenues

Revenues for bicycle and pedestrian were derived from historical funding identified in the trail element of the Five-Year Program, which includes only the State Recreational Trails Program, plus funding from the Federal Recreational Trails Program, Statewide Transportation Enhancement Program/Statewide Transportation Alternatives Program, and Primary Road Fund used for on-road accommodations. This represents the total funding available for bicycle/pedestrian improvements. However, it is important to note that some of these sources can be spent on non-infrastructure uses, and many of these sources are awarded to other entities and spent on projects off the Primary Highway System. The actual amount of these sources spent on Primary Highway System bicycle and pedestrian accommodations will vary from year to year, and will generally be substantially less than the average annual amount. Historical data from SFY 2012 through 2021 was averaged, then projected out to 2050 to calculate **average annual Iowa DOT revenues** over the life of the SLRTP (see Table 6.5).

Table 6.5: Average annual bicycle and pedestrian revenues, 2022-2050 (\$ millions)

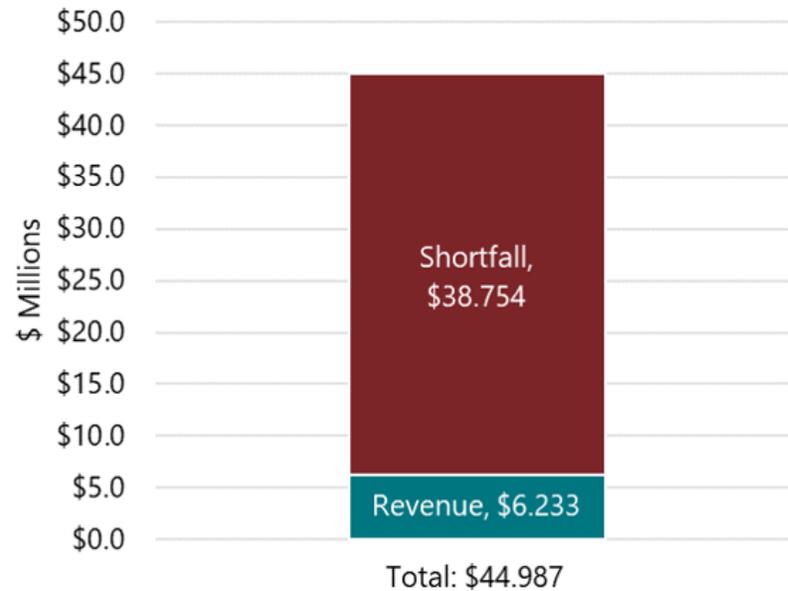
Average annual Iowa DOT revenues
\$6.233

Source: Iowa DOT

The difference between average annual costs and revenues is illustrated in Figure 6.6. As discussed previously, this would represent construction of on-road accommodations on the Primary Highway System using the maximum amount of current funding sources used specifically for bicycle/pedestrian improvements. Since much of that funding may be distributed to other entities for non-Primary Highway System projects, or spent on developing the statewide trails vision, this funding analysis helps show the significant need for additional sources of funding for bicycle and pedestrian projects. A strategy discussed in the Bicycle and Pedestrian Long Range Plan, same-source funding for bicycle and pedestrian accommodations as part of road projects, is a potential option to help address the shortfall. Through the implementation of the Complete Streets Policy, this is expected to occur more frequently and may mean that the shortfall is not as significant as shown in Figure 6.6.



Figure 6.6: Bicycle and pedestrian average annual total costs for Primary Highway System, revenue, and shortfall, 2022-2050 (\$ millions)



Note: See preceding discussion.

Source: Iowa DOT

### Implications of the Shortfall

- Bicycle and pedestrian accommodations may not be able to be constructed for primary highway projects when warranted.
- Some trails, including trails of statewide significance, may not be built, creating a disconnected and segmented system.
- Some existing facilities may not be adequately maintained.
- There may be fewer facilities available to accommodate potential bicyclists and pedestrians for transportation and recreational opportunities, adversely impacting health, quality of life, and the state’s tourism economy.

## Highway

### Costs

Costs for highway were derived from the Iowa DOT’s 2021 RUTF Study. The study identified total needs across the city, county, and state systems. To prioritize these needs, costs to maintain the public roadway system in its current form have been highlighted as stewardship needs. This would reflect only future investments in stewardship, or projects that extend the life and modernize existing infrastructure without adding capacity. While maintaining the existing public roadway system is most critical, an inability to deliver capacity improvements where needed would limit the efficiency and reliability of the transportation system and its ability to support the state’s economy.

The RUTF Study had a horizon of 2040. Its costs were extrapolated to the SLRTP horizon of 2050, then **average annual costs** for Iowa’s entire public roadway system were calculated. To bring these costs into the context of the Five-Year Program, the portion of statewide needs that could be attributed to the Primary Highway System were separated out as the **average annual Iowa DOT costs**. Table 6.6 shows the statewide and Iowa DOT portions of total highway costs (including capacity increases) while Table 6.7 shows only the stewardship portions of these costs.

Table 6.6: Average annual total highway costs, 2022-2050 (\$ millions)

Average annual total costs	Average annual Iowa DOT costs
\$4,950.347	\$1,789.296

Source: Iowa DOT

Table 6.7: Average annual stewardship highway costs, 2022-2050 (\$ millions)

Average annual stewardship costs	Average annual Iowa DOT costs
\$4,445.011	\$1,642.599

Source: Iowa DOT

### Revenues

Revenues for highway were also derived from extrapolating the revenue forecast used for the Iowa DOT’s 2021 RUTF Study. The following assumptions were used for federal and state revenue increases.

- After accounting for the increases in federal revenue from the IIJA, federal funding will increase slightly (0.5 percent annually) over the remaining years of the forecast period, resulting in a continuing loss of buying power.
- State revenue will grow about one percent annually, which will result in a continuing loss of buying power.

Revenues were forecast for 2022-2050. **Average annual Iowa DOT revenues** (Table 6.8) over the life of the SLRTP were then calculated.

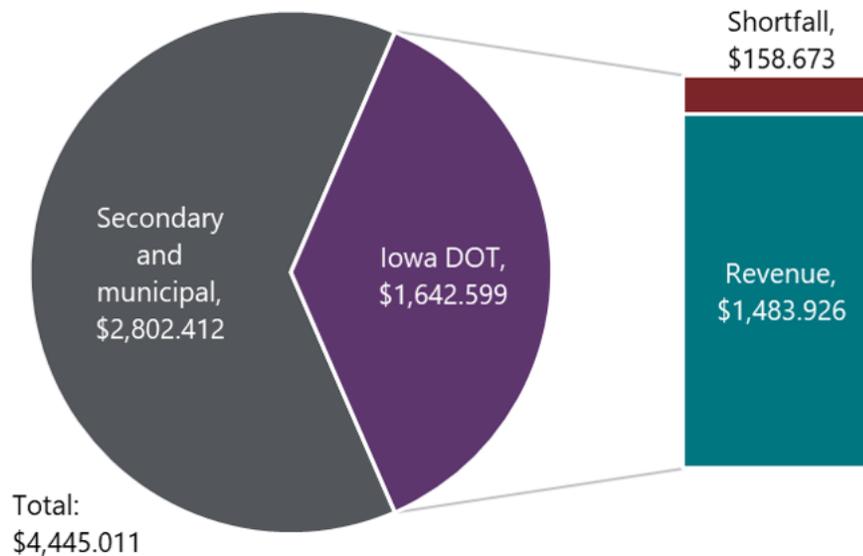
Table 6.8: Average annual highway revenues, 2022-2050 (\$ millions)

Average annual Iowa DOT revenues
\$1,483.926

Source: Iowa DOT

The total amount of stewardship needs and the difference between average annual stewardship costs and revenues for the Iowa DOT is illustrated in Figure 6.7. It is estimated that anticipated revenues would cover approximately 90 percent of the anticipated Iowa DOT stewardship costs. As illustrated, with projected inflation outpacing projected revenue growth, there will be a shortfall in addressing stewardship needs; also, this does not take into account the capacity needs identified as part of the totals in Table 6.6.

**Figure 6.7: Highway average annual stewardship needs, Iowa DOT share, revenue, and shortfall, 2022-2050 (\$ millions)**



Source: Iowa DOT

### Implications of the Shortfall

- Some stewardship needs may not be addressed, which could lead to decreasing pavement and bridge conditions.
- Some improvements on the Interstate system may not be addressed, which could lead to poorer pavement conditions and increased congestion and travel times.
- Some improvements on the Commercial and Industrial Network (CIN) may not be addressed, which could lead to fewer economic development opportunities and slower job growth.
- Some corridor improvements and work on other major projects, including major bridge structures, may not be addressed.
- Future modernization of the existing system will be a challenge.





## Public Transit

### Costs

Costs for public transit were derived from the Public Transit Long Range Plan (PTLRP) that was completed in 2020. The plan identified annual operating and capital costs for current services offered by the state’s 35 public transit providers, as well as annual incremental costs associated with addressing unmet needs. Operating expenses were forecast based on historical expenditures on operations, which resulted in an inflation rate of 4.95 percent per year. Unmet needs for additional staff, vehicles, and facilities were identified through a survey of public transit providers. These additional needs were then added to future operating needs by using the following indices for inflation. **Average annual total costs** over the life of the SLRTP were then calculated.

- Facility needs – Producer Price Index for non-residential building construction (2.14 percent per year)
- Vehicle needs – Producer Price Index for truck and bus bodies (2.41 percent per year)
- Personnel needs – Employment Cost Index (2.20 percent per year)

To bring these costs into the context of the Five-Year Program, the portion of total public transit costs statewide that has historically been addressed through the transit element of the Five-Year Program was examined. The transit element of the Five-Year Program includes State Transit Assistance funds and Public Transit Infrastructure Grant Program funds. Between 2011 and 2020, this portion was about 10.9 percent of costs. This percentage was then applied to the average annual total costs mentioned above to estimate **average annual Iowa DOT costs** shown in Table 6.9.

Table 6.9: Average annual public transit costs, 2022-2050 (\$ millions)

	Average annual total costs	Average annual Iowa DOT costs
Capital	\$58.621	-
Operating	\$270.999	-
<b>Total</b>	<b>\$329.620</b>	<b>\$36.016</b>

Source: Iowa DOT

### Revenues

Revenues for public transit were derived from historical funding identified in the transit element of the Five-Year Program plus a portion of Iowa’s Clean Air Attainment Program (ICAAP) funding that has routinely been allocated to bus replacements. A linear trend line was applied to the historical data from SFY 2012 through 2021 and then projected out to 2050. **Average annual Iowa DOT revenues** (Table 6.10) over the life of the SLRTP were then calculated.

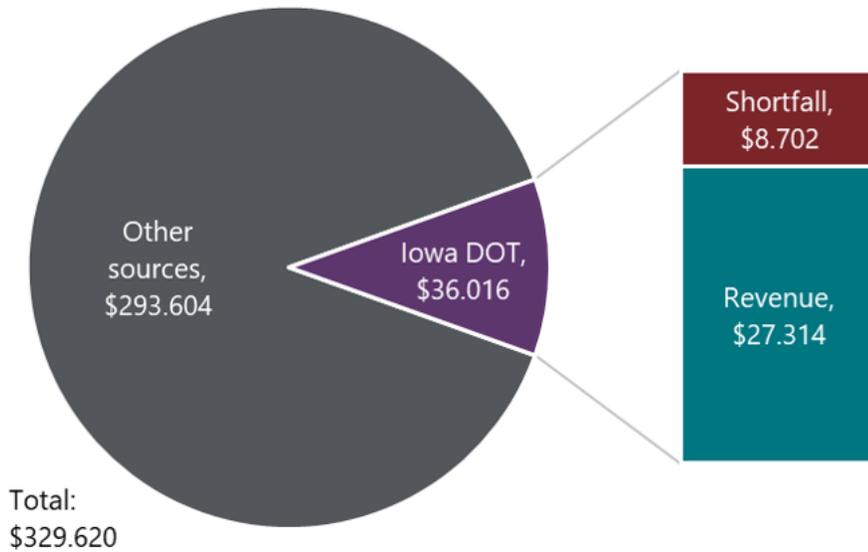
Table 6.10: Average annual public transit revenues, 2022-2050 (\$ millions)

Average annual Iowa DOT revenues
\$27.314

Source: Iowa DOT

The difference between average annual costs and revenues is illustrated in Figure 6.8. It is estimated that anticipated revenues would cover approximately 76 percent of the anticipated Iowa DOT costs.

Figure 6.8: Public transit average annual total costs, Iowa DOT share, revenue, and shortfall



Source: Iowa DOT

### Implications of the Shortfall

- Slow bus replacement will accelerate aging of the bus fleet, already well beyond useful life standards, and increase maintenance costs.
- Transit operational funding may need to be used to replace aging vehicles in disrepair, which could decrease service.
- Future plans for service enhancements may be delayed, and some existing services may be eliminated.
- Transit facilities may not be repaired or improved in a timely manner.



## Rail

### Freight Rail Costs

Costs for freight rail were derived from the Iowa State Rail Plan, which was updated in 2021. The plan identifies, describes, and prioritizes specific potential rail projects for short- and long-term implementation. The proposed projects are based largely on increasing the efficiency of rail operations of Iowa’s railroads; enhancing rail access and expanding or constructing multimodal facilities for handling freight more economically and efficiently; and enhancing safety at crossings. Focus areas for these potential projects include enhancing access to the state’s rail network for shippers; fixing rail service gaps; improving infrastructure and the capacity, safety, and efficiency of rail service and operations; adapting for climate change and environmental sustainability; and economic development.

Costs were inflated to the mid-years of the short- and long-range planning periods using an annual inflation rate of 2 percent. **Average annual total costs** over the life of the SLRTP were then calculated (see Table 6.11). These costs would be divided amongst a range of entities – the Iowa DOT, other federal funding sources, local funding sources, and the railroad companies or other private funding sources.

Table 6.11: Average annual freight rail costs, 2022-2050 (\$ millions)

Average annual total costs
\$118.447

Source: Iowa DOT

### Freight Rail Revenues

Revenues for freight rail were derived from historical funding for five funding programs managed by the Iowa DOT’s Modal Transportation Bureau. Programs includes the federal Highway Rail Grade Crossing Safety Fund, Highway-Railroad Crossing Surface Repair Fund, Primary Road Highway-Railroad Crossing Surface Improvements, Signal Maintenance, and the Railroad Revolving Loan and Grant Program. A linear trend line was applied to the historical data from SFY 2012 through 2021 and then projected out to 2050. **Average annual Iowa DOT revenues** (Table 6.12) over the life of the SLRTP were then calculated.

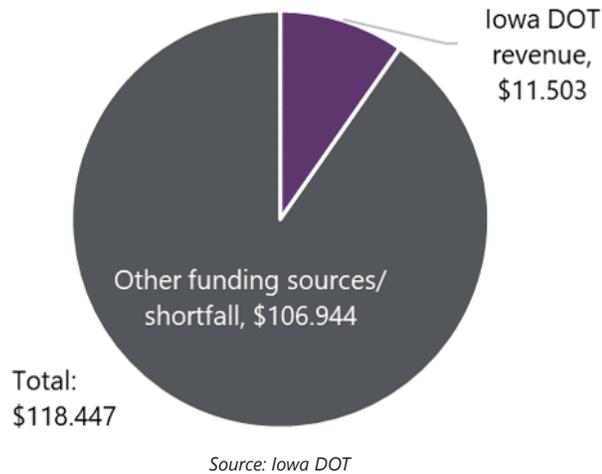
Table 6.12: Average annual freight rail revenues, 2022-2050 (\$ millions)

Average annual Iowa DOT revenues
\$11.503

Source: Iowa DOT

The difference between average annual freight rail costs and revenues is illustrated in Figure 6.9. It is estimated that anticipated revenues would cover approximately 10 percent of the total anticipated costs. As previously mentioned, the remaining costs would be divided among a range of entities, including other federal funding sources, local funding sources, and the railroad companies or other private funding sources.

Figure 6.9: Freight rail average annual total costs, Iowa DOT revenue, and other funding sources/shortfall, 2022-2050 (\$ millions)



### Passenger Rail Costs

Costs for passenger rail were also derived from the Iowa State Rail Plan. The plan identifies, describes, and prioritizes specific potential future rail projects for short- and long-term implementation. The proposed projects are based largely on upgrading existing passenger rail stations and the potential for expanding intercity passenger rail services. Capital projects that may provide opportunities for improved coordination, integration, and operations of passenger rail services in the state were also identified.

Costs were inflated to the mid-years of the short- and long-range periods using an annual inflation rate of 2 percent. **Average annual total costs** over the life of the SLRTP were then calculated (see Table 6.13). These costs would be divided amongst a range of entities – the Iowa DOT, other federal funding sources, local funding sources, and the railroad companies or other private funding sources.

Table 6.13: Average annual passenger rail costs, 2022-2050 (\$ millions)

Average annual total costs
\$218.982

Source: Iowa DOT

### Passenger Rail Revenues

Federal funding sources have enabled initial study of passenger rail from Chicago westward to Omaha. Federal funding will likely continue to be needed to advance many of the proposed passenger rail projects. An average annual Iowa DOT revenue figure is not provided, because there is not a substantial enough funding history of passenger rail initiatives by the state.

### Implications of the Shortfall

- Rail safety and service may be affected if rail revenue is not sufficient for needed infrastructure improvements.
- Some highway-railroad crossings may not receive timely improvements, which could lead to potential safety hazards for railroad and roadway travel.
- Inadequate funding for spur tracks to new or expanding industries may affect future economic development and job creation opportunities.
- Rail service may be impacted if railroads are unable to recover, without financial assistance, from natural disasters that cause infrastructure damage.
- Without adequate intermodal connections to rail, businesses may not be able to take advantage of competitive rail rates for shipments.
- New passenger rail service may not be initiated, delaying the potential for multimodal system benefits (e.g., lower transportation costs due to alternative passenger options and improved freight infrastructure, reduced highway usage).



## 6.4 Addressing the Shortfall

As shown in the prior sections, funding shortfalls are projected across transportation modes. With limited resources, making efficient investment actions through the Five-Year Program is extremely important to support the stewardship of Iowa's existing transportation system. Difficult decisions must be made in dealing with Iowa's funding shortfall. Prioritizing projects, emphasizing stewardship, and achieving the right blend of projects to meet system objectives will be critical to ensure limited dollars are spent in the most beneficial way.

Past funding increases, including the establishment of the TIME-21 fund and the 2015 fuel tax increase, have helped make up some of the ground lost due to construction cost increases, but as Figure 6.2 showed, the buying power of the RUTF is continuing to decrease. Similarly, while the increased funding levels beginning in 2022 due to the IJA will certainly help the situation, they are also not enough to address all needs and, if increases are not sustained over time, the same issue of losing ground to inflation is likely to occur.

The Appendix identifies various options for addressing the funding shortfalls, including some mechanisms that may be more applicable to a single mode, and others that could be used to generate revenue for various modes. It should be noted that some of these mechanisms are already in place, and additional revenue would need to be generated through some adjustment to how the mechanism is applied. In addition,

while various advantages and disadvantages are identified in the table, the purpose of this information is not to advocate for any specific revenue generating mechanism(s).

In evaluating funding mechanisms, the following principles should be considered. These were publicly expressed during the Governor's Transportation 2020 Citizen Advisory Commission's input gathering process, which was part of the development of the 2011 RUTF Study.

These concepts have continued to resonate as appropriate considerations for sustainable revenue funding mechanisms.

- The user fee concept should be preserved, where those who use the system pay for the system, including nonresidents.
- Revenue-generating mechanisms should be fair and equitable across users.
- Implement revenue-generating mechanisms that are viable now, but also begin to implement and set the stage for longer-term solutions that bring equity and stability to funding.
- Continue Iowa's long-standing tradition of pay-as-you-go financing.

## RUTF Study

The Iowa DOT has conducted the RUTF Study every five years since 2006. Iowa Code requires the department to review the current levels of the RUTF and the sufficiency of those revenues for projected construction and maintenance needs of city, county, and state governments; make funding recommendations if needed; and evaluate alternative funding sources for road maintenance and construction.

The 2016 RUTF Study included three specific areas that were recommended for monitoring and potential action to address future shortfalls. Two of these, indexing fuel tax rates and studying mileage-based user fees, have not had any legislative action occur. However, action has been taken regarding the other area, which was to implement an alternative fuel vehicle registration fee. In 2019, House File 767 was signed into law to create supplemental registration fees on certain electric vehicles, with a phased implementation from 2020-2022. Two excise taxes were also approved. An excise tax on electricity used to fuel electric vehicles at nonresidential locations will begin in 2023. Also, an excise tax on hydrogen used as a special fuel was implemented in 2020.

The 2021 RUTF Study<sup>1</sup> was submitted to the legislature in December 2021. The study concluded with the findings and recommendations shown below for addressing projected needs, which carried forward the two areas from 2016 that have not been addressed. Additional background information on the projected shortfall and these recommendations can be found in the study report.

## 2021 RUTF Study Findings and Recommendations

The conclusion of the 2021 RUTF Study is that current revenue levels are not sufficient for meeting the projected needs of the public roadway system in Iowa. The 20-year projected total needs for the city, county, and state systems is \$87.649 billion, with projected revenues over that time totaling \$72.029 billion. This amounts to a total shortfall of \$15.620 billion, or an average annual shortfall of \$781 million.

To mitigate this shortfall and growing financial challenges posed by construction cost inflation, alternative fuel vehicles, and increasing fuel efficiency, the Iowa DOT recommends the following.



<sup>1</sup><http://publications.iowa.gov/39691/>

### Recommendation 1: Indexing Fuel Tax Rates

The Iowa DOT recommends the legislature consider implementing indexing of state fuel tax rates based on the national Consumer Price Index for all urban consumers (CPI-U). To ensure that reasonable revenue forecasts can be produced, the Iowa DOT recommends that indexing be implemented with minimum fuel tax rates (no negative adjustments), but also recommends capping annual inflation adjustments at 3 percent. Implementing a cap on annual increases will ensure that fuel tax rates do not increase excessively in any one year in the future.

### Recommendation 2: Monitor Mileage-Based User Fee Mechanism

A mileage-based user fee (MBUF) continues to be the best long-term solution to addressing transportation revenue challenges. However, given the challenges of implementation and need for interoperability between states, a national level MBUF is required. The Iowa DOT will continue to monitor the development of MBUFs nationally as solutions to implementation challenges are addressed moving forward.

