

Legislative Budget and Finance Committee

**A Study Pursuant to House Resolution 2022 – 130:
PennDOT Comparative Performance Measures**

**Report Comments by Stevi Sprenkle, Senior Analyst
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Good morning. Madam Chair and members of the Committee. It is a pleasure to be here to discuss the results of our study pursuant to House Resolution 130 (HR 130). Before getting into the results of our analysis, let me briefly describe what HR 130 asked us to study and how we approached the analysis.

HR 130 asked us to provide perspective on Pennsylvania’s road and bridge funding and to present a comparative analysis of Pennsylvania’s transportation rankings relative to other states’ transportation performance indicators. As such, we broke this task into two parts. First, we looked at “inputs,” which we defined as funding sources for transportation-related projects. Inputs include liquid fuel taxes, license and registration fees, and other revenue sources, which are used to fund road and bridge activities. Next, we looked at “outputs” – which we defined simply as the relative quality of state road and bridge systems compared to commonly recognized metrics or performance standards.

With this foundational structure in place, HR 130 asked us to make comparisons of Pennsylvania’s performance against a cohort of other states, which we were directed to select based on our judgment. To determine comparative states, referred to as “peer states” in our report, we reviewed Federal Highway Administration (FHWA) data and other information to identify states with similar populations, state-owned road mileage, number of bridges, and

weather. Ultimately, we selected Pennsylvania's surrounding states: New York, New Jersey, Delaware, Maryland, West Virginia, and Ohio. We also selected four states outside the mid-Atlantic region, including Georgia, Illinois, Michigan, and Missouri.

In conducting our study, it was clear funding for roads and bridges is a costly endeavor and a public policy area that has been a challenge at the federal, state, and local levels. Collectively, the United States road and bridge system has a 786-billion-dollar backlog; however, in 2017, federal, state, and local governments only spent 177 billion dollars on roads and bridges (or 23 percent of the backlog). A similar funding gap exists in Pennsylvania, as necessary road and bridge repairs exceed available funding. For example, highway and bridge projects in Pennsylvania currently have an 8.1-billion-dollar funding gap, which grows annually.

Pennsylvania's transportation funding gap is complicated by the fact that Pennsylvania's primary source of Motor License Fund revenue is unsustainable. The "gas tax," which serves as the primary revenue generator for the Motor License Fund, has become a less reliable source of revenue for the Fund because vehicles have become more fuel efficient, and consumer demand for electric vehicles has increased. At the same time, Pennsylvania has had to rely on the gas tax to the point where the commonwealth has the highest gas tax in the country or third in the country when considering all taxes applicable to gasoline (such as sales tax and other excise taxes specific to gasoline). We found most peer states rely on the gas tax as 50 percent or less of total revenue. In comparison, over 70 percent of Pennsylvania's transportation revenue is from the gas tax.

As noted in our study, Pennsylvania has more disbursements for state-administered highways than peer states. But it is important to highlight that Pennsylvania also has more total lane miles on state agency-owned road systems -- and more state-owned and maintained bridges than the peer states we reviewed. Likewise, Pennsylvania receives more federal funding (for roads and bridges) than peer states. Yet, when factoring in population and the number of registered vehicles in Pennsylvania, the commonwealth's federal funding is more average among peer states.

Pennsylvania has other unique characteristics that impact its transportation infrastructure and maintenance needs. One significant impact is truck traffic. Our research showed trucks damage roads and bridges more than passenger vehicles. Our analysis found that Pennsylvania has more registered trucks than peer states, which is a significant factor in Pennsylvania's infrastructure maintenance requirements. Weather patterns are another impactful variable to transportation maintenance requirements. Pennsylvania's temperatures, which can vary significantly from season to season--and within seasons--add additional factors not always seen in peer states.

Moving to a discussion of outputs, or road and bridge performance measures, our report highlights some significant issues impacting not just Pennsylvania, but all states. For example, over 40 percent of American roads are in poor or mediocre condition. Additionally, one in three bridges needs to be repaired or replaced nationwide. One survey found traffic/congestion, decaying infrastructure, poor quality roads, and road construction/maintenance delays were some of the most significant issues affecting American drivers.

Our research found that Pennsylvania’s roads and bridges are no exception to this problem. In nearly every category we reviewed, Pennsylvania ranked worse than the national average for percentage of road mileage in poor condition. While this fact may not be surprising to many, what we did find to be surprising is the estimated financial impact of these poor-quality roads and bridges – which is an added 639 dollars per motorist in Pennsylvania.

Pennsylvania also had a higher proportion of structurally deficient bridges than the national average. Structurally deficient bridges describe the condition of a bridge that, while viable, has a fundamental flaw in the structure’s condition. Pennsylvania notably struggles with this problem, as it is the sixth worst state nationally for the percentage of structurally deficient bridges, with 13 percent of bridges deemed structurally deficient in the total bridge inventory.

Among peer states, Pennsylvania also has the highest percentage of bridges older than 50 years. This is especially significant because the useful life was deemed 50 years when these bridges were constructed. In 2023, Pennsylvania, New York, and New Jersey had more bridges in their inventory that were older than 50 years than newer bridges. It should be noted that bridges constructed today have a useful life of 75 years.

Our research found that many selected peer states also struggle with poor roads and bridges. Comparing Pennsylvania to peer states is useful in some ways but potentially misleading in others. For example, peer states with “better roads” faced fewer “input” obstacles, such as fewer registered vehicles, less truck traffic, and different weather patterns.

In a related topic area, HR 130 asked us to evaluate technologies and engineering advancements among PennDOT and our selected peer states. We found PennDOT and peer states have many ongoing and potential technological advancements. While FHWA provides policy and technical guidance to states, innovation is largely left to each respective state. Road and bridge construction technology is also a bit of a “catch-22.” For example, technology can stretch dollars due to increases in efficiency, but a state’s ability to use technology also requires initial investments that may not be within budget priorities.

The timing of our report coincided with an opportunity to review a recent transportation emergency and the expedited nature of necessary repairs, which was the June 2023 I-95 overpass-bridge collapse in Philadelphia. While this was a unique situation with circumstances that likely do not indicate a structural deficiency, the I-95 accident warns of the costs of potential catastrophic failures to Pennsylvania’s aging bridges. For example, as of June 2023, FHWA estimated that the cost of the I-95 rebuild would be between 25 million dollars and 30 million dollars, or five to six times the average cost of a typical planned federal highway bridge replacement in Pennsylvania (which was 5 million dollars in 2021). The economic impact is also just as startling. For example, in the 2007 Minnesota bridge collapse, economists estimated a loss of 400,000 dollars per day in economic output. While I-95 was an unfortunate accident, the incident further highlights why bridges deemed structurally deficient are not only a safety concern but should also be a state funding priority.

In closing, I would like to thank PennDOT for their participation in our study. Additionally, I would like to thank Deputy Executive Director Steve Fickes for his guidance on this project and highlight the contributions of our staff – specifically, analysts Morgan Smith and James Wynne. I would be happy to answer any questions you may have.