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 the video



Transportation Performance Management Freight Performance – Part 2: Truck Freight Bottlenecks

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TPM requirements for coordination among State Departments of Transportation, Metropolitan Planning Organizations, and operators of public transportation



Topics Covered in Video

- What are truck freight bottlenecks?
- What are the reporting requirements for truck freight bottlenecks?
- What are some noteworthy practices for identifying addressing truck freight bottlenecks?

Statutes & Regulations

- 23 CFR 450.322(d)
- 23 CFR 490.101
- 23 CFR 490.107(b)(1)(ii)(E)
- 23 CFR 490.107(b)(2)(ii)(D)
- 23 CFR 490.107(b)(3)(ii)(D)
- 23 CFR 490.109(f)(2)(iii)
- 23 CFR 490.109(f)(3)
- 23 USC 150
- 23 USC 150(e)(4)

The Transportation Performance Management Topic Videos series, produced by the Federal Highway Administration (FHWA), provides State Departments of Transportation, Metropolitan Planning Organizations, operators of public transportation, and other interested parties guidance for implementing Transportation Performance Management (TPM).

The National Highway System promotes economic vitality throughout the country as part of a robust national multimodal freight network. In turn, the freight network enables access to national and international trade markets, promotes regional economic development, and supports industry and commerce.

To ensure that national goals for freight movement and economic vitality are met, USDOT established two major freight requirements: measuring freight movement on the Interstate and addressing freight bottlenecks. In this video, we'll focus on Part 2, truck freight bottlenecks.

This video is geared towards the State Departments of Transportation (DOTs) and Metropolitan Planning Organizations (MPOs) that are responsible for reporting on freight network measures under Transportation Performance Management (TPM).

Other local entities also affected by truck freight bottlenecks may have a wealth of knowledge that could inform State and MPO reporting – and they may find this video helpful. These include stakeholders such as local governments, port authorities, chambers of commerce, and other industry representatives.

Federal law and regulation require that State DOTs identify freight bottlenecks, analyze congestion at bottlenecks, and describe the ways congestion is being addressed at these locations. In this video, we will answer the questions:

- What are truck freight bottlenecks?
- What are the reporting requirements for truck freight bottlenecks?
- What are some noteworthy practices for identifying addressing truck freight bottlenecks?

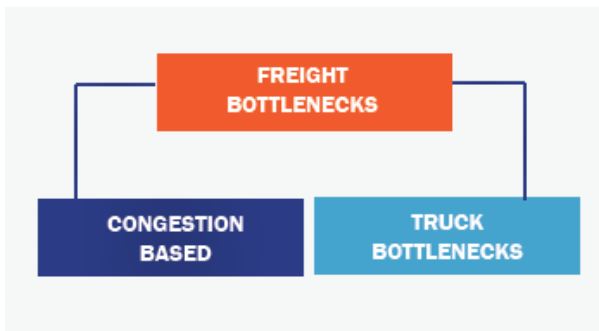
What are truck freight bottlenecks?

The performance management regulations define a truck freight bottleneck as “a segment of roadway identified by the State DOT as having constraints that cause a significant impact on freight mobility and reliability.”

Delays can be caused by different factors, including recurring or non-recurring traffic congestion or truck travel restrictions. Understanding the sources of the bottleneck will help guide appropriate and effective solutions or mitigation efforts.

Let’s take a look at the different types of truck freight bottlenecks.

Congestion Bottlenecks can be recurring or non-recurring delays.



Recurring delays can be caused when traffic volume exceeds a road’s capacity, or when there are geographic limitations such as steep grades or freeway on and off ramps. Non-recurring delays happen because of unpredictable events like crashes, severe weather, or other special events. While recurring delays can be best managed through infrastructure improvements, non-recurring delays are more likely to be managed through operations strategies, such as road incident management.

Truck bottlenecks may be caused by infrastructure limitations like narrow lanes or substandard bridge heights; time restrictions prohibiting truck passage at certain times of day; and other restrictions such as inadequate facilities or staffing at places like ports, or border crossings. Understanding the cause of the bottleneck will help prescribe an appropriate resolution to it.

What are the reporting requirements for truck freight bottlenecks?

Transportation Performance Management regulations require that States document where truck freight bottlenecks are occurring and show the ways States are addressing congestion at these bottlenecks.

Truck freight bottleneck reporting activities must be conducted as part of a series of State DOT reports submitted to FHWA over the course of four-year performance reporting periods. These reports include:

A baseline performance report.

Every four years, beginning in October 2018, States must submit a baseline report to FHWA identifying truck freight bottlenecks on the State Interstate System. This report must include bottlenecks identified for the State in the National Freight Strategic Plan. If the State relies on a bottleneck list from its State freight plan, that plan must have been updated within the previous two years. If the latest state freight plan update is older, the State must update the bottleneck analysis.

Mid- and full-performance period progress reports.

States must provide a discussion of progress in addressing congestion at truck freight bottlenecks in the mid-performance period progress report and the full-performance period progress report. Respectively, this information is reported every four years at the mid-point and at the close of the performance period.



The discussion should include efforts through the State Freight Plan or MPO freight plans; the Statewide Transportation Improvement Program (STIP) and Transportation Improvement Program (TIP); regional or corridor level efforts or other planning efforts; and operational and capital improvements to the Interstate System.

“Failure to make significant progress” amended reporting.

This report is needed only if a State fails to make significant progress toward its national freight reliability performance measure target. This report needs to include more specific information than previously reported about each bottleneck and the ways the State is allocating funds to improve truck freight bottlenecks. The State DOT should do this within 6 months of the significant progress determination.

What are some noteworthy practices for identifying and addressing truck freight bottlenecks?

Federal regulations do not specify how States identify and address truck freight bottlenecks. However, a framework to assist States in this process can be found in FHWA’s Report on Freight Performance Measure Approaches for Bottlenecks, Arterials, and Linking Volumes to Congestion.

Steps in this framework include:

1. Select roadways for bottleneck analysis;
2. Gather data for bottleneck identification and analysis;
3. Screen for freight bottlenecks;
4. Validate the freight bottleneck list;
5. Evaluate freight bottleneck causes; and
6. Prioritize freight bottlenecks.

In addition, States are more likely to succeed if they implement some of the following noteworthy practices for the successful implementation of freight bottleneck analysis. These include:

- Rely on both quantitative and qualitative information. In addition to data analysis, transportation planners can verify their analysis, identify potential information not shown in the data, and respond more successfully to actual needs and problems by talking with a wide range of stakeholders.



- Integrate bottleneck lists with other freight planning activities. States and MPOs should integrate bottleneck analysis and reporting with their other freight planning efforts, such as state freight plans. In addition, by using the performance-based planning process with freight bottleneck measures, metrics, targets, and reporting, States and MPOs gain a valuable resource in making better decisions and improving their transportation network.
- Tailor the bottleneck identification process to State and local needs. State DOTs and MPOs can and should choose bottleneck identification methods that match the traffic characteristics, infrastructure constraints and impediments to efficient freight movement in their State.
- Engage district staff and external stakeholders. Local staff and external stakeholders from industry and commerce can provide valuable on-the-ground insights to both freight bottlenecks and opportunities to improve them. While reporting may happen at the State level, engaging these other stakeholders gives you better information about factors such as geographical issues, types of industry, and land use changes. Engaging them will contribute to better outcomes.

Overall, improving the reliability of freight movements on the Interstate System could reduce costs and enhance the productivity of industry and commerce in the United States. A separate video is available that describes the analysis and reporting on freight bottlenecks, which focuses more on making strategic investments to address capacity problems at key chokepoints in the system.

Working together, we can provide strategies to improve our nation and people’s lives through great transportation planning.

Additional Resources

Extend your learning through more detailed resources and through interactive learning methods.

TPM Training:

<https://www.fhwa.dot.gov/tpm/resources/training.cfm>

TPM Website:

<http://www.fhwa.dot.gov/tpm/about/index.cfm>

General Portal for FHWA Resources:

<https://www.fhwa.dot.gov/research/library/>

National Highway Institute (NHI) Course Catalogue on Transportation Performance Management:

https://www.nhi.fhwa.dot.gov/downloads/catalog/transportation-performance-management_all-delivery-types_sorted-by-title.pdf

You may also learn more at:

<https://highways.dot.gov/research>

<http://www.facebook.com/FederalHighwayAdmin>

<http://www.flickr.com/photos/fhwa>

<http://www.linkedin.com/company/federal-highway-administration>

<http://www.twitter.com/USDOTFHWA>

<http://www.youtube.com/user/USDOTFHWA>

The content of this document is not a substitute for information obtained from State departments of transportation, appropriate FHWA Division Offices, and applicable laws. Scenarios have been simplified for emphasis and do not necessarily reflect the actual range of requirements applicable to the scenario or this topic.

This document was created under contract number DTFH61-13-D-0004 by the Federal Highway Administration, U.S. Department of Transportation, and is offered to the public to heighten and focus awareness of Federal-aid requirements within the local public agencies community and reinforces the importance of the necessary policies, procedures, and practices. This companion resource contains the script content for the video production of the same name.