

# Impacts on Trains Longer Than 7,500 Feet

TRB Annual Meeting 2023 Update

*Consensus and Advisory Studies Division*

# Statement of Task

An ad hoc committee will conduct a study of freight trains that are longer than 7,500 feet. Consideration will be given to the following:

- a) Communications between end of train device and locomotive cab
- b) Radio communications between crew members
- c) Derailments associated with in-train forces and slack action
- d) Use and control of distributed power units
- e) Braking, locomotive performance, and track wear

The committee will review how engineers and conductors are trained to operate longer trains, the scheduling and efficiency of passenger and freight train operations, greenhouse gas emissions, and the frequency and amount of time that highway-rail grade crossings are occupied by trains.

## Statement of Task, continued

- If warranted from its findings, the committee may examine safety margins and human factors and make recommendations on whether additional engineer and conductor training is required for safely operating longer trains.
- The committee may also make other recommendations, including to Congress and the US Department of Transportation, on steps needed to better understand and reduce any adverse impacts of longer trains.

# Impact on Trains Longer than 7,500 Feet

## Committee Members

<b>Committee Members</b>	<b>Affiliation</b>
<b>Debra L. Miller, Chair</b>	Retired, Kansas DOT
<b>Faye Ackermans</b>	CP, Canada TSB
<b>C. Tyler Dick</b>	U-Texas, Austin
<b>Theresa M. Impestate</b>	Washington DC Metro
<b>Venetta H. Keefe</b>	Indiana DOT
<b>Gary F. Knudsen</b>	Retired, former BNSF
<b>Dennis S. Mogan</b>	Illinois ICC
<b>J. Allan Rutter</b>	TTI, former FRA
<b>John M. Samuels</b>	Retired NS, consulting
<b>Peter F. Swan</b>	Penn State University
<b>Elton E. Toma</b>	NRC Canada
<b>Paul E. Vilter</b>	Retired, Amtrak

# Background

Section 2422 of H.R. 3684 directs the Federal Railroad Administration (FRA) to contract with the TRB to “study the operation of freight trains that are longer than 7,500 feet.” While train length has been growing for decades, in recent years Class I railroads have put greater emphasis on the use of long trains.

An impetus for this study request was a derailment in 2017 in which a 178-car freight train over 2 miles long derailed in Hyndman, Pennsylvania. The NTSB investigated the derailment and identified several factors associated with the cause of the derailment, including the length, makeup, and operation of the train.

# Study Timeline – September 2022 – June 2024

Tasks	2022				2023											2024						
Contract Quarter	1			2		3			1				2			3		4			1	
Month	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Contract Start	█																					
1-Committee formation	█	█	█																			
2-Committee meetings				1	2			3			4			5			6					
3-Stakeholder input			█	█	█	█	█	█	█	█	█	█	█	█	█	█	█					
4-Workshop									█													
5-Industry site visits									█	█												
6-Report writing				█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	
7-NAS Report review																			█	█		
8-Report Publication																				█	█	█
Contract End																						█

# Questions

## **Study Web Page**

<https://www.nationalacademies.org/our-work/impacts-of-trains-longer-than-7500-feet>

**Study Committee Contact:**  
David Willauer, Study Director  
202-334-2234  
[dwillauer@nas.edu](mailto:dwillauer@nas.edu)