

October 30, 2025

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Subject: Secondary and/or direct impacts not included in the Draft EIS or 203 Report regarding increased heavy truck impacts on roads and bridges, directly linked to the proposed deepening of the Cape Fear River, which violate the National Environmental Policy Act (NEPA).

Dear COL Morgan

**QUESTION: Why would the USACE draft EIS and the Port's Section 203 completely ignore NEPA requirements for direct and/or secondary effects related to the Port of Wilmington freight trucks damaging local roads and bridges, and forcing local taxpayers to subsidize repairs and replacements of that critical infrastructure?**

Heavily loaded freight trucks typically make around 500 trips from the Port facility each day, and this number could significantly increase as the Port expands its operations. To put the damage from these 500 daily truck trips into perspective, it would be equivalent to 500 heavily loaded trucks each carrying the car equivalent of 9,600 vehicles, totaling 4,800,000 cars impacting our public roads and the Cape Fear Memorial Bridge. While this comparison might seem staggering, I will explain further in my comments.

**FACT 1:** The Port of Wilmington currently handles about 500 container trucks daily, with expected increases if the port expands and improves its freight operations. The damage these heavily loaded trucks cause to local roads and the Cape Fear Memorial Bridge leads to a significant local subsidy paid by taxpayers for repairs and replacements of this vital infrastructure. Further exacerbating the problem is the fact that **Overloaded** trucks are allowed by Bill H 95, Jul 14, 2017. An act to authorize permitted oversized or overweight vehicles to travel after sunset when transporting and delivering cargo, containers, or other equipment to or from international ports. Enacted July 12, 2017. Effective July 12, 2017.

It is unclear why the Port and the Corps have never included this as either a direct or secondary effect related to port expansion or dredging projects in the past, and why it is not considered the same effects in the future project conditions in the Draft EIS or Section 203. The prepared materials lack an economic assessment of the damage to our local infrastructure caused by port trucking activities. In many ways, this directly conflicts with NEPA requirements.

**FACT 2:** Heavy-volume container trucks leaving the Port of Wilmington cause disproportionately high road and bridge damage due to their immense weight. A fully loaded truck leaving the Port of Wilmington can cause as much damage as thousands of cars; a standard comparison is that ONE 18-wheeler causes as much damage as 9,600 cars. This is because road damage increases exponentially, not linearly, with weight, so small increases in axle weight can lead to much greater pavement wear, causing roads to break down much faster than they were built to handle. [1, 2, 3, 4, 5, 6, 7]

What is the direct correlation between the Port of Wilmington's container truck weight and road damage on our local streets?

- **Exponential damage:** One 2019 estimate by the publication Medium states that a single 80,000-pound truck can cause 10,000 times more road damage than a car. [8]
- **Higher axle weight, higher damage:** A 2017 U.S. GAO report found that an 18,000-pound axle load does 5,000 times more damage than a 2,000-pound axle load, even though it's only nine times heavier. [6, 9]
- **Overloading accelerates wear:** The Governing Magazine noted that a 90,000-pound truck can cause a 42% increase in wear compared to a legal 80,000-pound truck, shortening the life of pavement designed to last 20 years to just seven. [7]
- **Exceeding weight limits:** A significant percentage of trucks exceed state weight limits, further increasing the damage they inflict on highways. [9]

So, how does the weight of Port of Wilmington container trucks affect the pavement on our city streets?

- **Stress and cracking:** Heavier trucks place more stress on the road surface, causing it to crack. [5, 10]
- **Pothole formation:** Once a crack forms, water seeps in and, when the truck passes, the water is squeezed out, carrying away soil and widening the crack. This creates a positive feedback loop that leads to the development of larger cracks and potholes. [11]
- **Structural failure:** Over time, the repeated stress from heavy trucks leads to the breakdown and fatigue of the pavement, causing it to break apart. [4]

**FACT 3:** Heavily loaded container trucks leaving the Port of Wilmington will continue to damage our bridges through a combination of weight, axle spacing, and frequent use. [[12](#), [13](#), [14](#), [15](#), [16](#)]

Factors that influence damage include:

- **Gross Vehicle Weight:** The total weight of a truck is a primary factor, but how that weight is distributed is also critical. An overweight truck can cause both visible and hidden damage, potentially leading to bridge failure or closure.
- **Axle Weight and Spacing:** Axle configuration is often more critical than total weight, especially for short-span bridge decks like the Cape Fear Memorial Bridge. A weight concentrated on too few axles can cause higher stress on a bridge deck and supporting beams.
- **Dynamic Loading:** The impact of a heavily loaded Port truck is not static. Speed and bridge deck roughness cause these Port trucks to bounce, magnifying the static weight and increasing stress on a bridge. This effect is why special permits for heavy loads often require slow "crawl speeds" across bridges.
- **Bridge Design:** Our Cape Fear Memorial Bridge has been explicitly vulnerable to the impacts of the Port trucks using this bridge as a primary route to the Port. For years, the bridge's design has been more susceptible to damage from heavy container trucks.
- **Volume:** The cumulative effect of a high volume of heavy trucks crossing over the Cape Fear Memorial Bridge repeatedly over time can cause fatigue damage. This accelerates the deterioration of the structure and shortens its service life. [[13](#), [15](#), [17](#), [18](#), [19](#), [20](#), [21](#)]

So, what have been and will be the ongoing impacts of heavily loaded trucks leaving the Port of Wilmington and driving on our local streets and the Cape Fear Memorial Bridge?

- **Reduced lifespan:** Heavy trucks can shorten the lifespan of bridges, forcing earlier and more costly rehabilitation or replacement.
- **Taxpayer Subsidy:** The cost of damage is ultimately passed on to taxpayers, and under current systems, trucks may only pay for a fraction of the infrastructure damage they cause.

- **Safety risks:** For state-owned bridges, the damage and risks from heavy container trucks may be more severe. [12, 14, 18, 17, 28, 29]

If the Port of Wilmington aims to expand cargo transportation by water or other means, NEPA requires the USACE to evaluate the environmental impacts of all such methods, considering potential effects on natural, human, and economic resources. The project footprint has been artificially limited, either intentionally or unintentionally, to exclude the complete impact cycle of the Port of Wilmington's effects on roads, bridges, and rails.

I appreciate the opportunity to comment on this crucial endeavor.

Thank you.

//SIGNED//

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