




STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J. ERIC BOYETTE
SECRETARY

DATE: May 18, 2020

MEMORANDUM TO: Division Engineers

FROM: T. M. Little, PE 
Chief Engineer

SUBJECT: Operation of Construction Equipment on Bridges

Article 420-20 of the 2018 Standard Specifications requires that contractors submit, for review and approval, their plans to operate on or cross a bridge deck with heavy equipment that is not legally allowed on a roadway. Examples of equipment that fall under this requirement include, but are not limited to, crawler cranes, truck cranes and concrete pumping trucks operating with outriggers down, scrapers, off-road dump trucks, automatically controlled fine grading machines, and concrete paving machines.

In administering this requirement, the following review authority applies:

1. Structures Management Unit will review plans for all bridges that have been or are being constructed under the contract, or for existing bridges in or adjacent to the project that are open to public traffic. Related forms for submission to SMU can be found at <https://connect.ncdot.gov/resources/Structures/Pages/Structure-Resources.aspx>.
2. The Designer of Record will review and accept plans for Detour Bridges on the project that have been designed by the Contractor or consultant working for the Contractor. In this case, the Contractor must provide a letter, to the Resident Engineer from the Designer of Record, indicating that the proposed plan is acceptable. Details of the proposed operation must be submitted and sealed by the Design Engineer of Record.
3. The District/Resident Engineer will review all proposals to cross bridges with construction equipment that can legally cross a bridge but may cause damage to the bridge deck and joints. This includes, but is not limited to, asphalt paving machines and steel wheel rollers.

In order to expedite the review, the following information should be obtained and submitted with the request:

- Location, dimensions, and weight of stored materials or debris
- Make and model of the equipment including the manufacturer's catalog cuts
- General dimensions of the equipment, including width and length of tracks and spacing center to center of tracks or number and spacing of axles

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- Weight of the equipment when traveling on the bridge including weight to be carried for individual axles
- Type of work being performed and weight of load to be lifted or carried by the equipment while on the bridge
- Size of construction mats to be used under the tracks or outriggers
- Spans that the equipment will be traveling on and exact locations on the spans
- Any other equipment, vehicles, or materials that will be on the span at the same time
- Proposed method for protecting joints or joint blockouts

Under no circumstances should heavy equipment be allowed on a bridge deck without prior approval. Upon completion of the work or crossing, both the contractor and the Department should inspect the deck and report any damage to the reviewing authority for further investigation.

Please direct any questions that you may have on this subject to the Area Construction Engineer or Regional Bridge Construction Engineer for your Division.

TML/acc

cc: Mr. C. A. Peoples, PE
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Resident Engineers
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Regional Bridge Construction Engineers
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