



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

DATE: May 29, 2019

TO: Brenda L. Moore, PE
State Roadway Design Engineer

CC: Virginia Mabry
Project Management Unit Manager

FROM: Clark S. Morrison, P.E., Ph.D. *Clark S. Morrison*
State Pavement Design Engineer

SUBJECT: Pavement Designs for Driveways

Recent requests for clarification on pavement designs for driveways included in TIP projects have necessitated the revision of the "Pavement Designs for Driveways" memo. The normal practice is to replace driveways "in kind". If an existing driveway is gravel, the standard design is 6" of ABC. If the existing gravel driveway is expected to carry heavy vehicles (standard trucks or typical agricultural equipment), 8.0" of ABC may be used.

If the existing driveway is asphalt, the following guidelines are provided:

- 1) Residential & commercial driveways with no expected truck traffic: the minimum design is 6.0" of ABC, a prime coat, and 2.0" of S9.5B.
- 2) Residential & commercial driveways with minimal truck traffic (up to 5 trucks per day): the minimum design is 6.0" of ABC, a prime coat, and 2.5" of S9.5B or 2.5" of S9.5C.
- 3) Commercial & light industrial driveways with low truck traffic (up to 20 trucks per day): the minimum design is 6.0" of ABC, 2.5" of I19.0C, and 1.5" of S9.5B or 1.5" of S9.5C.

The notable exceptions to this practice are driveways with steep grades (grades in excess of 7%). In these cases, the designs shall be the same as those provided above except that the ABC thickness is increased to 8".

In rare instances designs are required for concrete driveways. These normally consist of at least 6" of jointed concrete with wire mesh. However, please request a design for all concrete driveways.

Please note: The above designs should not be used in cases where driveways will be carrying heavy vehicles other than standard trucks (for example: driveways for bus terminals, special configuration/overweight trucks, abnormally large agricultural equipment, heavy military vehicles, etc.).

The goal of this memo is to allow this information to be attached to design files for a broader range of driveway situations than were covered by previous versions of this memo, without all driveway designs receiving pavement design time. I would appreciate your help in getting the information out to project engineers and squad leaders. Please call Clark Morrison at 919-329-4018 if you have specific questions or whenever you feel these broad categories are not suitable for a particular project.

CSM/adw