LCB File No. R118-08

PROPOSED REGULATION OF THE DEPARTMENT OF TRANSPORTATION

Underground Installations

NAC 408.447 Standards for placement of utilities or pipes under state highway.

1. Utilities or pipes placed under a state highway must:
   (a) Be jacked***, bored*** or otherwise forced underneath the pavement without disturbing the pavement.
   (b) Not be placed inside culverts used for drainage.
   (c) Be designed to support the load of the highway and loads imposed thereon.
   (d) Be composed of material sufficient to withstand the conditions to which they may be exposed.
2. Pavement or roadway must not be cut unless prior approval from the department is obtained.
3. The district engineer shall authorize trenching across a paved highway if:
   (a) The roadway is scheduled for overlay or reconstruction within 2 years after the trenching is scheduled to begin;
   (b) The roadway is in such poor condition that a permanent patch of the pavement will not adversely affect the condition of the surface of the roadway;
   (c) The area is so congested with other underground facilities that boring is impractical; or
   (d) The installation has been attempted by jacking or boring and is impractical because of the conditions below the ground.
4. Except as otherwise authorized by the department:
   (a) No excavation within the right of way of a highway may be made which is less than 6 feet (1.8 meters) from the edge of the pavement.
   (b) There must be, within the right of way of a highway, at least 36 inches (915 millimeters) of cover over all underground utilities, pipes or conduits, including at ditch or wash flow lines.
   (c) Underground pipes and cables must be placed at least 12 inches (300 millimeters) below culverts or drainage boxes. ***However, if the utility is cased and can maintain a minimum of 36" (915 millimeters) of coverage from the top of the utility structure to finish grade, and utility separation of 12" is attainable between the utility and the drainage structure, the district engineer may authorize installation of underground utilities above culverts or drainage boxes. The length of casing required will be determined by the district engineer on a case by case basis. At the discretion of the district engineer an Engineering Analysis performed by an authorized and licensed engineer may be required.***
   (d) Should it become necessary to protect your facility in place during State activity, it shall be the responsibility of permittee to provide sufficient resources and methods of protection.
5. Each trench must be filled with granular backfill or any other material approved by the district engineer to the elevation of the bottom of the existing base and surfacing or subgrade in accordance with the requirements set forth in the occupancy permit.

6. All underground utility installations shall meet the design and installation provisions of the Minimum Federal Safety Standards, 49 CFR Part 192.

~~[6]~~ 7. As used in this section:

(a) "Base" means the layer of material of a designated type and thickness which is placed on a subbase or subgrade to support a surface.

(b) "Culvert" means any structure which is not a bridge which provides an opening under a roadway.

NAC 408.453 Requirements for casing.

1. Except as otherwise provided in subsection 2, casing must be:

(a) ~~[Used for]~~ ***Utilized and extended beyond*** the width of the ~~[roadway]~~ ***Roadway Prism*** for all pipes carrying fluid or gaseous substances ~~[which cross the highway.]~~***, as well as other utilities at the discretion of the district engineer, which cross an Interstate, US Route and some State Routes as determined by the district engineer.***

(b) Designed to support the load of the highway and loads imposed thereon.

(c) At least equal to the structural requirements for facilities for the drainage ***across*** highways.

(d) Composed of material sufficient to withstand the conditions to which they may be exposed.

~~[2. The district engineer may waive the requirements of this section if an engineering analysis indicates that casing is not necessary.]~~

2. The district engineer may waive the requirements of this section if an Engineering Analysis is performed by an authorized and licensed Engineer that indicates the casing is not necessary. The Engineering Analysis must include but is not limited to the following criteria:

(a) Priority of Highway

(b) Risk of Placement

(c) Potential Impacts of Utility to Infrastructure

(d) Site Conditions

3. Based on an Engineering Analysis as outlined above, the Utility shall specify the appropriate provisions for responding to risk factors. The Standard Terms and Conditions provided by NDOT shall be the default guidelines for the installation. However, the Utility may propose alternative installation parameters or methods if the Engineering Analysis justifies alternatives. Certain Terms and Conditions may be waived or lessened if the Engineering Analysis justifies the waiving or lessening of such terms and conditions. However, based on the Engineering Analysis risk factors may warrant enhanced or additional installation provisions than those outlined in the Standard Terms and Conditions. In general, the installation provisions shall be designed to be equal to or greater than the loading and resilience of the roadway in which the Utility will be placed. Provisions will be required that will protect the roadway and its facilities from damage caused by failure of the Utility line. Provisions will be required to anticipate future impacts from either maintenance and/or expansion of the Utility or the Roadway and its facilities.

4. As used in this section:

(a) "Interstate" means one of a primary system of highways involving, existing between or connecting two or more states. A full control of access roadway that extends from and links together major cities of the 48 contiguous United States.

(b) "US Route" means one of a primary system of highways involving, existing between or connecting two or more states. A roadway that extends from and links together major cities. It differs from an Interstate in that it may not be a full control of access roadway.

(c) "State Route" means paved roadways designated and maintained by the State that generally include secondary state routes, primary county routes and other roadways that connect principal cities and towns with the primary highway system.

(d) "Roadway Prism" means the roadway surface and side slopes, which includes drainage, which integrates the roadway into the existing surrounding topography.