



## Knightdale Fire Department

### Fire Marshal's Office

950 Steeple Square Court Knightdale, North Carolina 27545



#### Impact Protection

##### *Informational Bulletin*

Impact protection is intended to reduce risk and potential damage to sensitive equipment, systems, or hazardous items. The following information is intended to assist with determining when & how to install impact protection.

This document was developed to provide guidance and clarify our expectations after reviewing the North Carolina Fire Code.

The following list is intended to identify common items that will require impact protection, inside or outside of a building:

- Emergency and standby generators
- Any critical infrastructure
- Compressed Gas Tanks or Cylinders
- Fire sprinkler backflow prevention devices
- Fire sprinkler post indicating valves (PIV)
- Fire hydrants in open parking areas
- Remote fire department connections (FDC)
- Power transformers or similar
- Fuel pumps and aboveground fuel tanks
- Hazardous material storage areas or vessels
- Critical valves or other sensitive equipment
- Any critical infrastructure
- Compressed Gas Tanks or Cylinders

Items that require impact protection shall be provided with appropriately designed bollard(s) or other design elements that provide an equivalent protection.

**NCFC 312.1 General.** Vehicle impact protection required by this code shall be provided by posts that comply with Section 312.2 or by other approved physical barriers that comply with Section 312.3.

**NCFC 312.2 Posts.** Guard posts shall comply with all of the following requirements:

1. Constructed of steel not less than 4 inches (102 mm) in diameter and concrete filled.
2. Spaced not more than 4 feet (1219 mm) between posts on center.
3. Set not less than 3 feet (914 mm) deep in a concrete footing of not less than a 15-inch (381 mm) diameter.
4. Set with the top of the posts not less than 3 feet (914 mm) above ground.
5. Located not less than 3 feet (914 mm) from the protected object.

**NCFC 312.3 Other barriers.** Barriers, other than posts specified in section 312.2, that are designed to resist, deflect or visually deter vehicular impact commensurate with an anticipated impact scenario shall be permitted where approved.



## **Knightdale Fire Department**

### **Fire Marshal's Office**

**950 Steeple Square Court Knightdale, North Carolina 27545**

---



Exceptions maybe granted on a case-by-case basis if, (1) The protected item is positioned at least 20' from any drivable surface and a standard raised square curb delineates the edge of the drivable surface, or (2) The protected item is positioned at least 50' from any drivable surface that does not include a raised curb. These exceptions shall not preclude the installation of impact protection when deemed required by this office.