




City of Phoenix

FIRE DEPARTMENT
FIRE PREVENTION DIVISION

Explanatory Policy – Vehicle Impact Protection

SUBJECT: Vehicle Impact Protection Requirements	EFFECTIVE DATE: July 19, 2019
REFERENCES: The Phoenix Fire Code (2018 Edition) Section 312	REVIEW DATE: July 2024
APPROVED:  John Mertens, Fire Marshal	

Scope:

Identify vehicle impact protection requirements and accompanying submittal document requirements.

Code:

PFC Section 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.

PFC Section 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.

PFC Section 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 permit where approved.

Submittal Requirements:

Posts and other barriers used for impact protection require a detail of the impact protection option used, either post or other barrier, to be stamped by a structural engineer and provided with the submittal



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documents. In addition, the expected impact scenario being safeguarded against shall be identified on the impact protection detail. (See attached detail)

Where Required:

- Where installed within 10 feet of vehicle traffic, LP-gas storage containers, pumps and dispensers shall be protected in accordance with Section 2307.5, Item 2.

Section 2307.5 – (2) - LP gas Dispensing devices installed within 10 feet (3048 mm) of where vehicle traffic occurs shall be protected against physical damage by mounting on a concrete island 6 inches (152 mm) or more in height or shall be protected in accordance with Section 312.

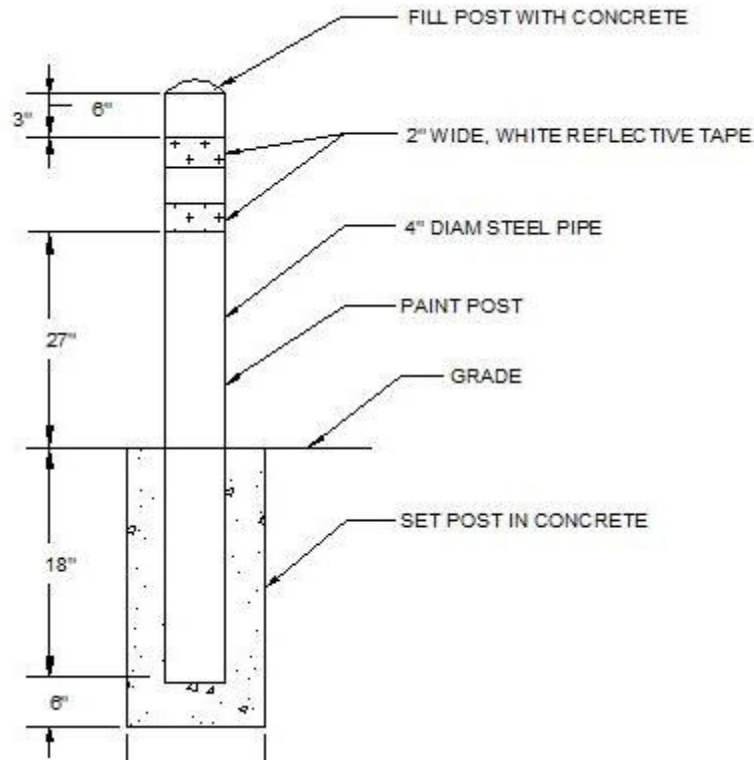
- Where flammable liquid above-ground tanks, piping, electrical conduit or dispensers are subject to vehicular impact, they shall be protected therefrom, either by having the impact protection incorporated into the system design in compliance with the impact test protocol of UL 2085, or by meeting the provisions of Section 312, or where necessary, a combination of both. Where guard posts or there approved barriers are provided, they shall be independent of each above-ground tank.
- Vaults shall be resistant to damage from the impact of a motor vehicle, or vehicle impact protection shall be provided in accordance with Section 312.
- Where stationary storage battery systems are subject to impact by a motor vehicle, including fork lifts, vehicle impact protection shall be provided in accordance with Section 312.
- Where stationary fuel cell power systems are subject to impact by a motor vehicle, vehicle impact protection shall be provided in accordance with Section 312.
- Where the fire-fighter air system panel is located in an area subject to vehicle traffic, impact protection shall be provided in accordance with Section 312.
- Where fire department connections are subject to impact by a motor vehicle, vehicle impact protection shall be provided in accordance with Section 312.



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EXAMPLE DETAIL



IMPACT SCENARIO: The expected vehicle traffic for (Facility Name) is (Light-Duty; Medium-Duty; Heavy-Duty), for which the vehicle impact protection detail provides the required protection from impact for.



Expires 12/31/2018