

What are private bridges?

Private bridges are where a private road or driveway crosses a river, stream or other waterway. Many were built decades ago without permits or plan review. Some have never been inspected by a qualified engineer, and no documentation exists for how much weight they can handle.

How many of these private bridges exist in Valley Center?

The Valley Center Fire Protection District does not have a complete inventory of private bridges. The District has identified over 660 potential locations where roads or driveways cross waterways, based on data from inspections.

So what does this have to do with emergency response?

Emergency responders may be reluctant to drive heavy vehicles across a private bridge without information about the bridge's capacity or condition and whether it can support their vehicle, which can lead to a slower response for fire and medical emergencies.

If responders do not cross a bridge, they will make every effort to reach the location, including carrying heavy medical equipment or running hoses for extended distances. This, in turn, adds critical delay to providing assistance and increases the potential for more severe property damage and the possibility of more serious injury or even death.

How heavy are emergency vehicles?

A fire engine, fully loaded with equipment, water and personnel, weighs about 38,000 pounds. A water tender, which often is used in more remote areas where there are no fire hydrants, can weigh up to 60,000 pounds.

Has a private bridge in Valley Center recently collapsed under the weight of a fire engine or other emergency vehicle? No, but there have been bridge collapses involving fire engines in other parts of the West Coast that have damaged or destroyed equipment and injured firefighters.

Why don't fire departments and districts purchase lighter vehicles?

Fire engines are the workhorses of fire departments and carry a variety of equipment to handle almost any emergency call. Also, it's not unusual for firefighters to receive another emergency call when they already have been dispatched to a fire, medical emergency or accident. They never know what they will face at the next emergency.

Does that mean emergency responders will never drive across a private bridge?

No. Emergency responders will cross if load limits are posted indicating the bridge can handle the weight of their vehicle.

Can a fire department be required to cross a private bridge?

No. In August 2010, a jury ruled in favor of Cowlitz 2 Fire & Rescue after the district notified property owners it would not cross a 133-foot bridge over the Coweeman River. A developer and several property owners filed a lawsuit after an engineering firm hired by the fire district determined the bridge, built by welding two steel rail cars together, was not safe for the district's heaviest equipment.

What governed construction of private bridges prior to local standards?

Under state law, roads serving homes more than 150 feet from a fire hydrant are designed as 'fire apparatus access roads' and must meet certain requirements for width and load capacity. Private bridges are extensions of these roads and had to comply with the same standards.

How often should an existing bridge be inspected?

The District recommends that every bridge be inspected or re-inspected by a qualified engineer once every five years.

What is the rationale for this recommendation?

Bridges are like any other structure or building; they need routine monitoring and periodic maintenance to avoid long-term problems and costly repairs. Inspections include examining the condition of piers (supports), beams and the bridge deck.

A qualified bridge engineer also can recommend if a private bridge should be evaluated for scour, a type of erosion caused by flowing water that can undermine bridge piers.

What is the difference between a bridge inspection and a load rating?

A bridge inspection is an assessment of the structure's current condition and a verification or measurement of key dimensions and details.

A bridge load rating is an engineering analysis of a structure's ability to safely carry vehicles of different weights and lengths. This analysis is done in the office and usually takes a few days or a week to complete.

What comes first, the inspection or the load rating?

The bridge inspection needs to be performed before the load rating. Information collected during inspection is used to complete the load rating.

Who can perform bridge inspections and load ratings?

They can be completed by a qualified bridge engineer or engineering firm. Typically, the engineer or firm that does the inspection can complete the load rating as well.

What can private bridge owners do to help make bridge inspections and load ratings less costly?

They can provide design records to bridge inspectors and load raters. These records include original design plans and documents related to later modifications.

What can private landowners do to ensure emergency responders will cross a bridge near their home?

They can have their bridge inspected and load rated by a qualified bridge engineer. It is the bridge owner's responsibility to post a sign indicating the rating, along with the year when re-inspection will be required to maintain the rating.

Will the District require property owners to inspect and possibly upgrade an existing private bridge?

No, but they need to understand that failing to inspect and install proper signage on a bridge could result in altered emergency response.

Are there any instances where the District could require private bridges to be inspected and upgraded?

The District may require an inspection and potential upgrade only if additional homes are built or if new lots are created. In these cases, developers or builders might choose to have the bridge inspected and possibly upgraded or, alternatively, provide fire-resistant construction, such as building homes with fire sprinklers.

The Valley Center Fire Marshal already has authority to require a bridge inspection or fire-resistant construction in these cases.

Are environmental permits needed to repair or replace a bridge?

Work near, over or in a stream often requires environmental permits from a variety of public agencies.

Is it important to involve permit agencies when considering bridge work, including maintenance?

Bridge work requires consultation on the width, location and effects on wetlands, wildlife habitat and other "critical areas." Some of these agencies regulate any work, including routine maintenance, because of the effect it can have on habitat or water quality and flow in creeks, streams and rivers.