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# Dry Hydrant Installations

Traditional and Bridge-Mount  
Dry Fire Hydrant Designs  
By GBW Associates, LLC

# Facts & Figures...

- GBW Associates, LLC designs and installs dry fire hydrants for fire protection water supply needs.
- Our dry hydrant work includes the traditional “in-ground” designs as well as wall-mount and bridge-mount designs.
- Our deployable, swiveling bridge-mount design has become popular in areas where permanent dry hydrant installations are difficult to install due to environmental regulations or requirements.
- For more information visit us at [www.GotBigWater.com](http://www.GotBigWater.com).

# Traditional DFH - 6" Retrofit Mt Airy, MD



This 6-inch dry hydrant had developed an air leak and was repaired by GBW Associates, LLC by replacing the 45-degree elbow and installing a new 6-inch NST male suction head.



# Traditional DFH - 6" w/Swivel MT Airy, MD



This traditional dry hydrant was installed by GBW Associates, LLC in a pond at a local nursing home. The 6-inch PVC pipe was outfitted with a tear drop style suction strainer and the 6-inch NST male suction head was connected to a full-time swivel.

# Traditional - 8" pipe Reduced to 6" w/Swivel Lafayette Twp, PA



This traditional dry hydrant was installed in a pond in the Allegheny National Forest. Forty-feet of 8" PVC pipe was used to get the 8" barrel strainer far enough out into the pond to be away from aquatic growth. The 8" pipe was reduced to 6-inch pipe at grade level and then trimmed out with a 6-inch NST male suction head connected to a full-time swivel.



# Traditional - 8" pipe reduced to 6" w/Swivel Corydon Twp, PA



This traditional installation used 20-feet of 8-inch PVC pipe outfitted with a barrel strainer. The pipe was then reduced to 6 inches at the full-time swivel and then trimmed out with a 6-inch NST male suction head.

# Bridge Mount - 6" w/ Articulating Arm Corydon Twp, PA



This bridge-mounted installation used a 20-ft articulating arm outfitted with a teardrop strainer to reach the water below. The articulating arm was used because of the limitations created by the guardrail.



# Corydon Twp - Bridge Mount



The articulating arm is stored along the bridge wall when not in use.



# Corydon Twp - Bridge Mount



When ready to deploy, one person can lower the arm using a mechanical advantage raising/lowering system.

# Corydon Twp - Bridge Mount



Once in place on the rocky stream bottom, the dry hydrant is ready for use.



# Corydon Twp - Bridge Mount



The retrieval system uses polypropylene rope for weather resistance and the rope is stored in a small, mesh stuff sack.

# Corydon Twp - Bridge Mount



The rope bag is stored with the arm over the side of the bridge ready for use.



# Bridge Mount - 6" Swiveling Standpipe Woodbine, MD



This dry hydrant installation is mounted to a "jersey" wall type of bridge over a local river. The installation uses a saddle-mount design that "slips" over the concrete wall and is held in place by friction and tension bolts. No holes are drilled into the bridge. The design minimizes exposure to snow plows and vandalism.

# Woodbine - Swiveling Standpipe



The standpipe is constructed of 6-inch PVC pipe and is outfitted with a tear drop style strainer and a 6-inch NST male suction head. A simple, rope retrieval/lowering system is used to maneuver the standpipe.



# Woodbine - Swiveling Standpipe



The saddle-mount bracket works well on concrete barrier walls. The bracket is low profile to protect from snow plow damage and can easily be relocated on the wall should stream flow change.

# Woodbine - Swiveling Standpipe



The standpipe is easily deployed by one or two persons. A 1,500 gpm pumper is shown here drafting from the deployed standpipe. A flow of 1,000 gpm+ was obtained.



# Bridge Mount - 6" Swiveling Standpipe Gamber, MD



This dry hydrant installation is mounted to a jersey wall-type bridge wall over a local creek. The installation uses a saddle-mount design that "slips" over the concrete wall and is held in place by friction and tension bolts without drilling any holes into the bridge. The design minimizes exposure to snow plows and vandalism.

# Gamber - Swiveling Standpipe



The saddle mount is the preferred mounting system for this style of bridge. The mounting system allows for a secure anchor while also adding flexibility if the location has to change in the future due to stream flow changes.



# Gamber - Swiveling Standpipe



Once deployed, the suction strainer rests on the stream bed and the suction head is positioned for connection by the FD pumper. The height of the bridge wall affects the design process: some walls are too high.



# Swiveling Standpipe Deployment





# Swiveling Standpipe Deployment



The folks in Austerlitz, NY were able to flow 1000+ gpm from this installation using a two-person deployment team.

# Swiveling Standpipe Deployment



The standpipe system is easily lowered into the water and can be retrieved with minimal effort.



# Bridge Mount - 6" Swiveling Standpipe Sykesville, MD



This dry hydrant uses a swiveling standpipe type of design on a traditional guard rail type of bridge wall. The pipe is stowed on a bit of an angle in order to ensure drainage during the winter.



# Sykesville - Swiveling Standpipe



The system attaches directly to the guard rail posts and the brackets are adjustable to allow for stream flow changes over time.



# Sykesville - Swiveling Standpipe



This design is bolted to the stream side of the guard rail posts using existing holes in the posts or by drilling new holes.

# Bridge-Mount - 6" Swiveling Standpipe Hillsdale, NY



This standpipe was installed on a State-owned bridge and was the first GBW installation where the brackets were bolted to the bridge.



# Hillsdale - Swiveling Standpipe



The brackets were fabricated to bolt onto the base of the guard rail posts where they attached to the bridge deck.

# Hillsdale - Swiveling Standpipe



A New York DOT worker ensured proper tension on each bolt during the installation process.



# Hillsdale - Swiveling Standpipe



One of the concerns with this type of installation is the height of the suction head compared to the suction inlet on the pumper. At this installation, flow was not impacted even though the suction head was high.

# Bridge-Mount - 6" Swiveling Standpipe Austerlitz, NY



This installation on a County-owned bridge was anchored to the bridge using the existing guard rail structure.



# Austerlitz - Swiveling Standpipe



The bridge had wooden guardrail posts. The DFH mounting system used the existing bolt holes in the posts; however, each bolt was replaced with a new, galvanized bolt.

# Austerlitz - Swiveling Standpipe



Like the other swiveling standpipes, once deployed...the suction strainer rests on the stream bottom and supports the weight of the standpipe.



# Bridge-Mount - 6" Swiveling Standpipe Austerlitz, NY



This bridge-mount was installed on another County-owned bridge in Hudson County, New York and used the existing guard rail post bolts to anchor the system in place.

# Bridge-Mount - 6" Swiveling Standpipe Strafford, NH



This bridge-mount was installed on a Town-owned bridge and used the GBW saddle mount system of attachment. No holes were drilled into the concrete bridge structure.



# Strafford - Swiveling Standpipe



Once deployed, the suction head is in position for access by the FD pumper.

# Bridge-Mount - 6" Swiveling Standpipe Strafford, NH



This bridge-mount was installed on another Town-owned bridge and used the existing guard rail post bolts to anchor the system in place.



# Strafford - Swiveling Standpipe



This installation used our angle mount brackets which were bolted to the base of the guard rail posts using existing bolts. The angle mount brackets allow for adjustment over time if the stream flow changes.

# Strafford - Swiveling Standpipe



The lift at this location was high, but not insurmountable. And...it was the only reliable water source in the area. Once deployed, the suction head was in position for FD access.



# Bridge-Mount - 6" Swiveling Standpipe Strafford, NH



This bridge-mount was installed on State-owned bridge and used the existing guard rail post bolts to anchor the system in place.

# Strafford - Swiveling Standpipe



The installation used the angle mount brackets that were bolted to the bases of the guardrail posts using the existing bolts.



# Strafford - Swiveling Standpipe



Like the others, once deployed, the standpipe system rests on the streambed and the standpipe carries the load.

# Wall Mount - 6" Swiveling Standpipe Lineboro, MD



This saddle mount installation mounted to the bridge abutment wall and was equipped with a teardrop style strainer.



# Lineboro - Swiveling Standpipe



The installation required no drilling of holes and was very similar to a jersey wall, saddle mount installation.

# Wall Mount - 6" Swiveling Standpipe Jacksonville, MD



This swiveling standpipe replaced a fixed, dry hydrant that was damaged during flooding. The special "L" shape design was needed to clear a concrete shelf area under the water.



# Jacksonville - Swiveling Standpipe



Saddle mount brackets were used for this installation. No holes were drilled into the concrete bridge abutment.

# Jacksonville - Swiveling Standpipe



Once deployed by a two-person crew, the standpipe flowed 1,000 gpm+ when connected to this 1,500 gpm pumper.



# Wall Mount - 6" Fixed Standpipe Austerlitz, NY



This wall mount installation used a GBW saddle mount bracket on the concrete wall to hold the standpipe in a "fixed" location. No holes were drilled in the wall, which also allows for repositioning the standpipe if needed over time due to changes in the lake bed.

# Austerlitz - Fixed Standpipe



The installation used a 6-inch barrel strainer with a backflush feature that allows the pipe to be cleared of debris and sediment before drafting commences.



# Austerlitz - Fixed Standpipe



A flow of 1,000 gpm+ was obtained during the flow test. The saddle mount installation bracket allows flexibility in installation location.

# Wall Mount - 6" Fixed Standpipe Carroll County, MD



This installation used a modified, saddle mount bracket to secure the standpipe. No holes were drilled into the concrete wall.

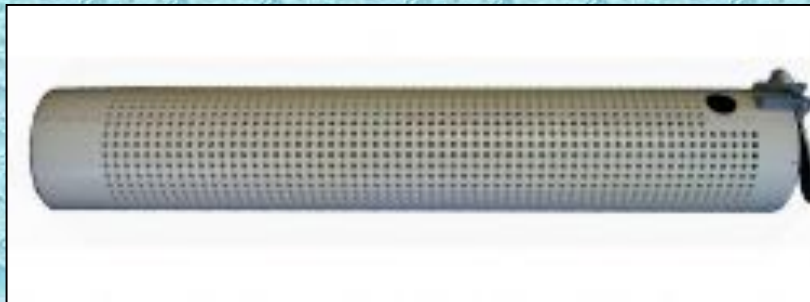


# Carroll County - Fixed Standpipe



A 2" steel pipe safety railing was added due to the location of the suction head and lack of bridge railing or guardrail.

# Dry Hydrant Fittings



Most all of our designs and installations use Kocheck fittings, from suction heads, to strainers, to swivels. Although other products are available, we most often use the Kocheck items.



# Typical Suction Head Installation



A 6-inch NST male suction head with an aluminum cap. When suction heads are exposed to mowers and vehicles, then protective bollards are recommended.

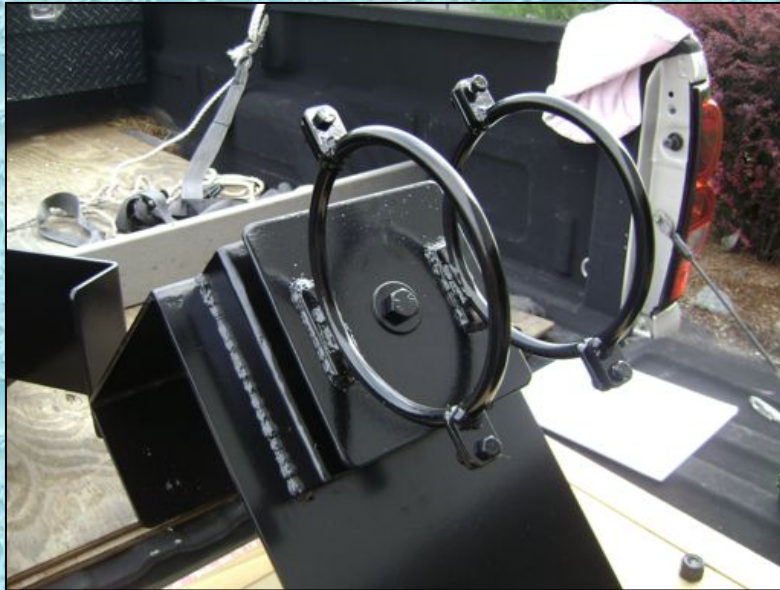
# Typical Strainer Installation



A Kocheck teardrop strainer is used in most all of our swiveling standpipe systems. The strainer's low profile design allows it to be used in shallow, moving water.



# Bridge Mount Brackets



Our bridge mount system is made from steel and is welded and bolted to provide strength, durability and maneuverability.

# Questions

For more information about  
GBW Dry Hydrants visit us at

[www.GotBigWater.com](http://www.GotBigWater.com)

Or call us at 443-398-6619

