

Ripley's Dam

For Steep Slopes and High Groundwater Pipe Installations

1. Why are trench dams important in pipeline construction?

When groundwater invades a pipe trench, it will flow down the slope, creating an underground river. This flow erodes the backfill and creates voids. When a load passes over the pipeline, it could cause a collapse of the fill. The purpose of Ripley's Dam is to stop the flow in the pipe envelope, the area of high hydraulic conductivity. This allows the soil to function as a sponge and retain the water.

2. How have trench dams been constructed prior to the development of Ripley's Dam?

Either clay was packed around the pipe or concrete was poured or formed in the pipe envelope. Clay and concrete fail to make a watertight seal. Clay is a poor bedding material while concrete places an additional and possibly damaging load on the pipe.

3. Where should dams be placed on the pipe run?

It is generally recommended that a dam be placed on either side of structures such as manholes and pump stations. The engineering inspector on the job is generally the best qualified to evaluate where a dam should be installed.

4. What do contractors think of Ripley's Dam?

Contractors like its ease of installation and its watertight seal. Clay or concrete dams are very difficult to install if the trench is muddy or has water flowing in it and a watertight seal using clay or concrete is almost impossible to obtain on smooth surface pipe.

5. What effects do cold weather and corrosion have on Ripley's Dam?

The Dam, which is made of ABS (Acrylonitrile Butadiene Styrene) is not adversely affected by cold temperatures and is highly resistant to corrosion caused by chemicals or hot soils as is the flexible adaptor made of elastomeric PVC.

6. Is Ripley's Dam safe to install?

Unlike clay dams, a Ripley's Dam can be installed without leaving the trench box. The installer can stand at the rear of the trench box fully protected from wall collapse.



DESCRIPTION	PRODUCT NUMBER
4"-8" Ripley's Dam less/cplg.*	62388
10"-12" Ripley's Dam less/cplg.*	62388 1
15"-18" Ripley's Dam less/cplg.*	62388 2
21"-24" Ripley's Dam less/cplg.*	62388 3

* Pipe size and type must be specified when ordering.

NOTE: Ripley's Dam is not stocked at all EJP locations. Call your local Team EJP sales office for availability.

SAMPLE SPECIFICATION:

Trench Baffles:

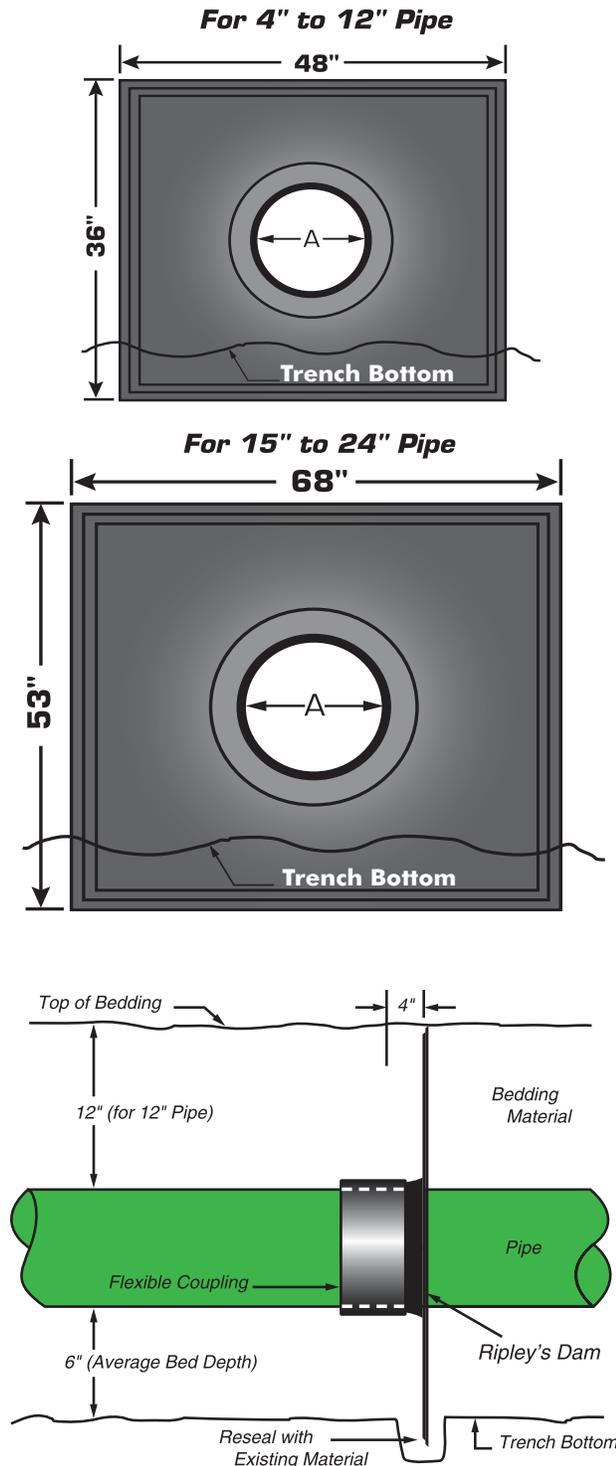
Install trench baffles at ____ foot intervals along the pipe from station ____ to station _____. Baffles will be self-supporting and provide a watertight seal around the pipe by use of an appropriately sized elastomeric PVC flexible coupling. Baffles shall form an impenetrable barrier in the pipe envelope to the flow of water. Baffles constructed of ABS plastic are acceptable. Trench baffles shall be Ripley's Dam or approved equal.

ABS LOW GLOSS SPECIFICATIONS

PROPERTY	TEST METHOD	TEST CONDITIONS	VALUE	UNIT
Specific Gravity	ASTM D-792	73°F	1.05	g/cc
Izod Impact	ASTM D-256	73°F -40°F	6.0 2.0	ft. lbs/in
Tensile Strength	ASTM D-638	73°F	4800	psi
Tensile Modulus	ASTM D-638	73°F	2.8	psi x 10 ⁵
Flexural Strength	ASTM D-790	73°F	7000	psi
Flexural Modulus	ASTM D-790	73°F	3.0	psi x 10 ⁵
Deflection Temp.	ASTM D-648	264 psi (unannealed)	190	F
Gardner Gloss (after forming)	ASTM D-523	60° Angle	10-15	%
Hardness	ASTM D-785	73°F	85	Rockwell 'R'

Pipe A-49

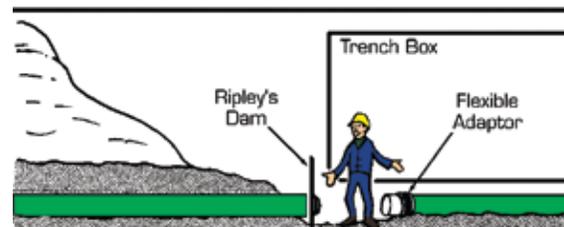
Ripley's Dam



PIPE SIZE	DIMENSION "A"
4"	9.500
6"	9.500
8"	9.500
10"	13.50
12"	13.50
15"	17.65
16"	17.65
18"	21.50
21"	25.00
24"	28.00

Installation Procedure:

1. Measure the distance between the laser point and the trench bottom.
2. Compare that distance with the distance between the target point and the bottom of the dam. Dig a trench approximately three feet from the preceding bell to accommodate the bottom of the dam.
3. With the neck of the dam facing upstream, fit the dam into the hand-dug trench.
4. Center the dam opening into the correct position using the laser and snap the edges into the trench side walls. The dam opening must be located before backfilling begins.
5. Place bedding material on both sides of the dam.
6. Slide the flexible coupling supplied, over the pipe to be installed. Slide the pipe through the dam opening and bell as usual. Slide the flexible coupling over the dam neck and tighten.
7. Set the pipe to line and grade and backfill.



Ripley's Dam installs quickly and easily and in the safety of a trench box.