

**TRANSPORTATION  
AND OTHER  
DAMAGE**



**Effects of Wind**



**Contact with an overpass**





**Wind fallen tree damage**



**Contact with a guard rail**





**Contractor doing repairs for transit damage done by a transporter while shipping the home for a retailer.**



**Truss damage  
outside the  
manufacturer's  
control.**



**This is an overhead electrical power line that hung too low over the road. It cut its way down the roof before it was pulled off the pole.**





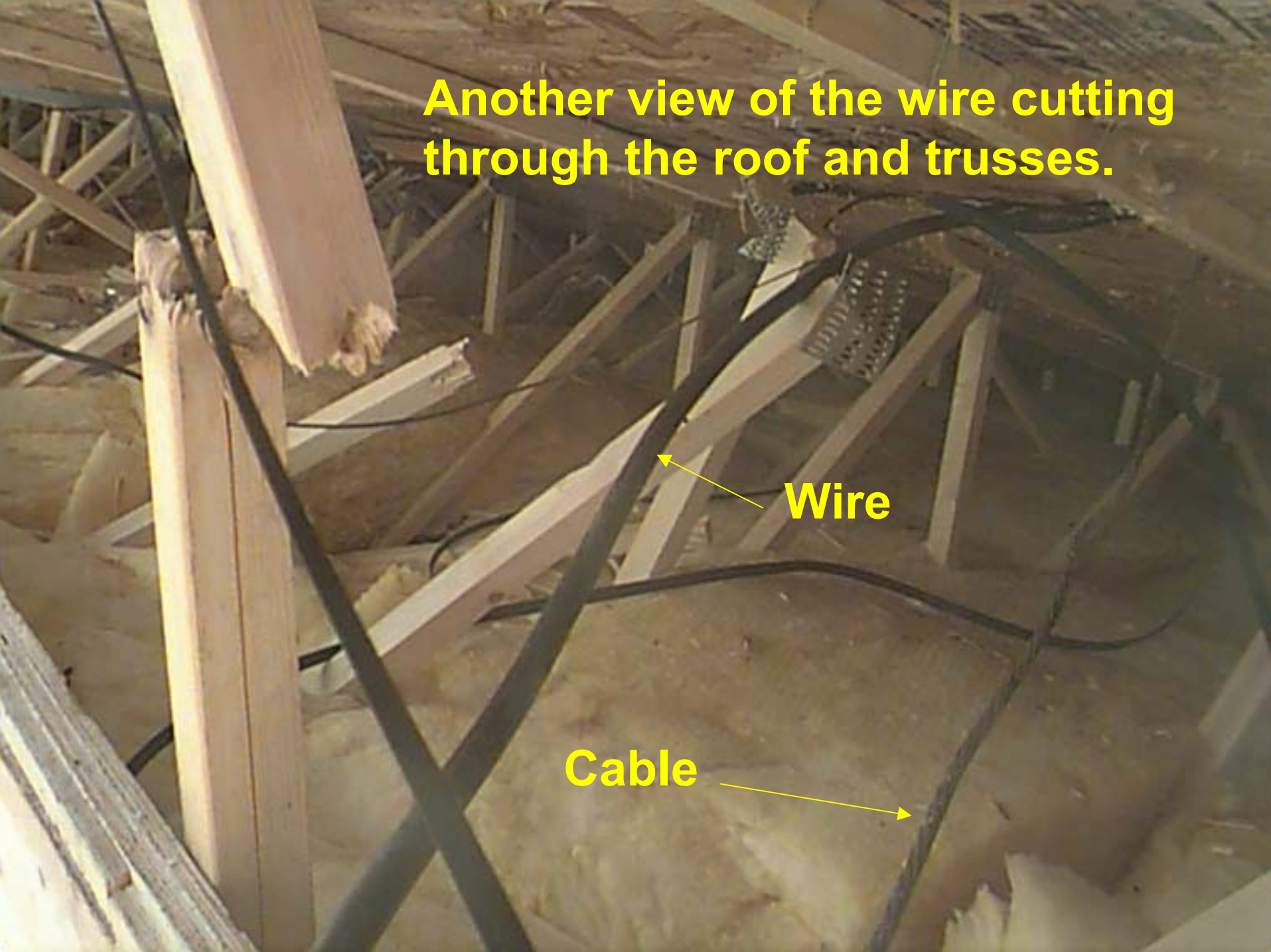
**This is what the wire did to the trusses.**



**Another view of the wire cutting through the roof and trusses.**

**Wire**

**Cable**








**Contact with a bridge guard rail.**

# **SITE PREPARATION**





**Masonry skirting is not sealed or treated to keep water from migrating into the crawlspace.**



**This obviously wet site is at street level. Where will the water drain?**



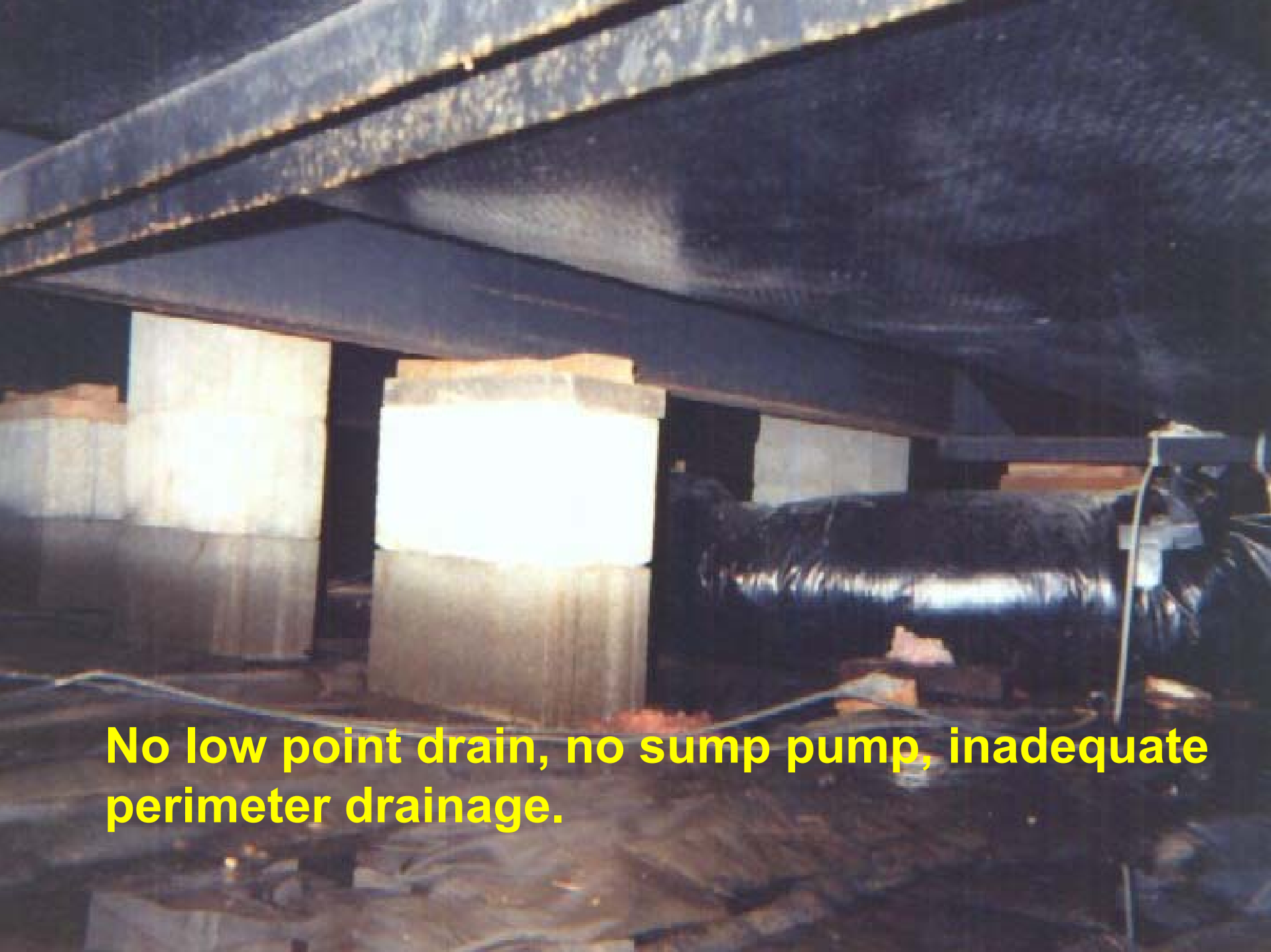


**This stand  
was prepared  
over a natural  
spring.**



**Organic debris  
included in engineered fill**





**No low point drain, no sump pump, inadequate perimeter drainage.**



**Pit set home with no provisions for drainage.**



**Downspouts dumping to surface**

**Grade sloping  
toward the adjacent  
site.**





**Downspouts**

**Blocked Skirting Vents**





**This home has a properly graded site**

# **FOOTING AND FOUNDATIONS**





**Different footings mixed.**

**Crib for a home. Note the inadequate size of the crawlspace access.**





**The grade around the home is too steep.  
The fill is sliding out from under the  
foundation.**



**Attempted repair**




**The fill under the slab was not compacted.  
The home is settling. The slab is broken.**







**Innovative footing design, not in compliance.**



**Three pad  
runners. No  
provision for  
drainage between  
the runners.**

00:31

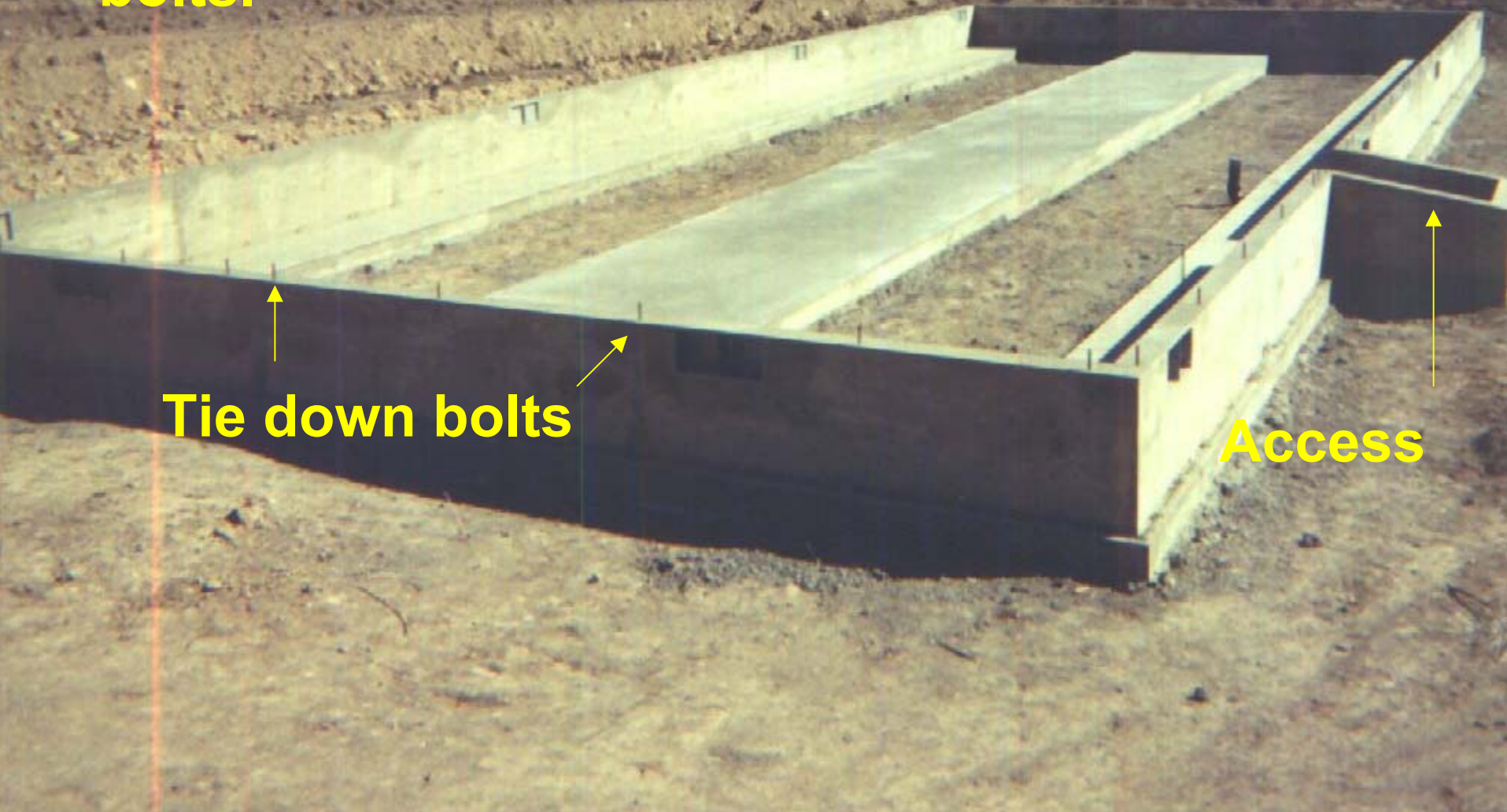




**This is commonly called a 3 pad pour. It is one of the best. All piers are placed on a uniform surface and exhibit little differential movement.**



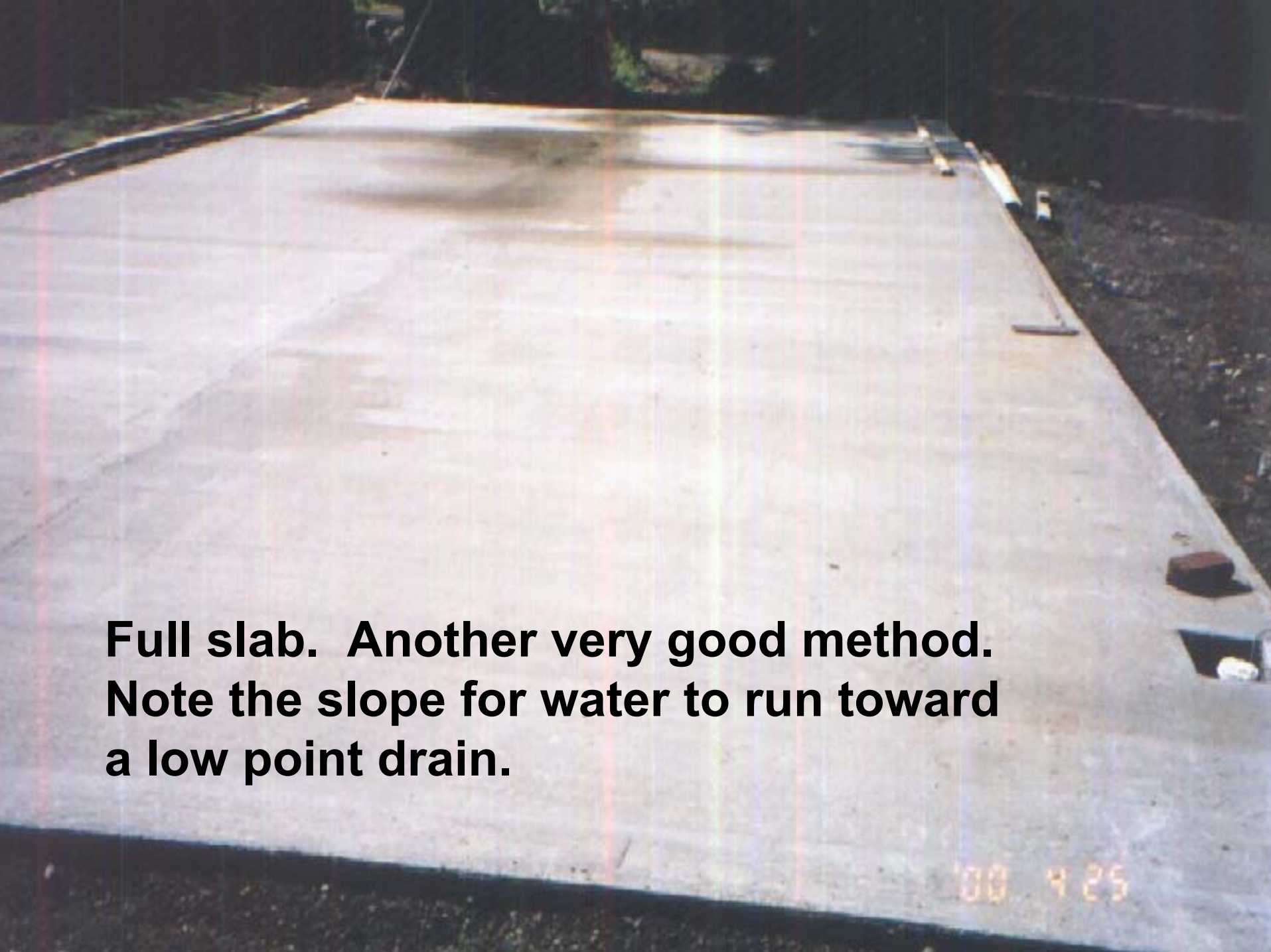
Another 3 pad with the addition of a poured perimeter foundation wall. This is perhaps the best. Note the crawl space access and tie down bolts.



Tie down bolts

Access





**Full slab. Another very good method.  
Note the slope for water to run toward  
a low point drain.**

00 4 25

**PIERS**





**Improper block orientation**



**No footer**



**The installer must have run out of footing pads and pier blocks.**



**Feeder**

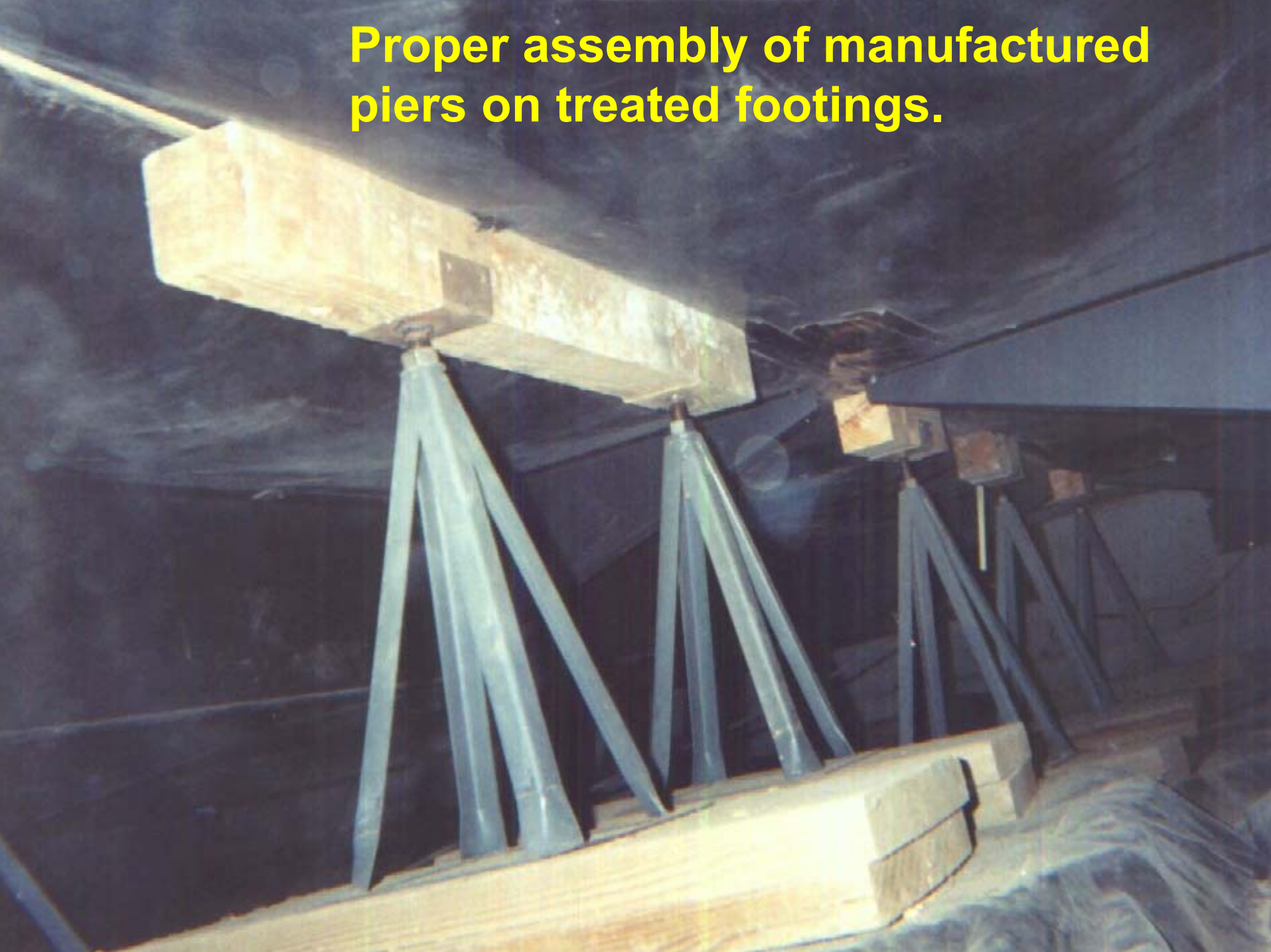
**Wrong pier makeup, no footers, improper steps, feeder wires not buried or in conduit.**





**Properly erected piers on proper footings**

**Proper assembly of manufactured piers on treated footings.**

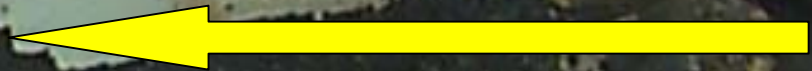




**STRUCTURAL**

**Field installed door did not have adequate sealant under the threshold.**

**Void in sealant**





**Homeowner tried to rebuild this home without obtaining permits.**




Leaks at the marriage line led to this damage

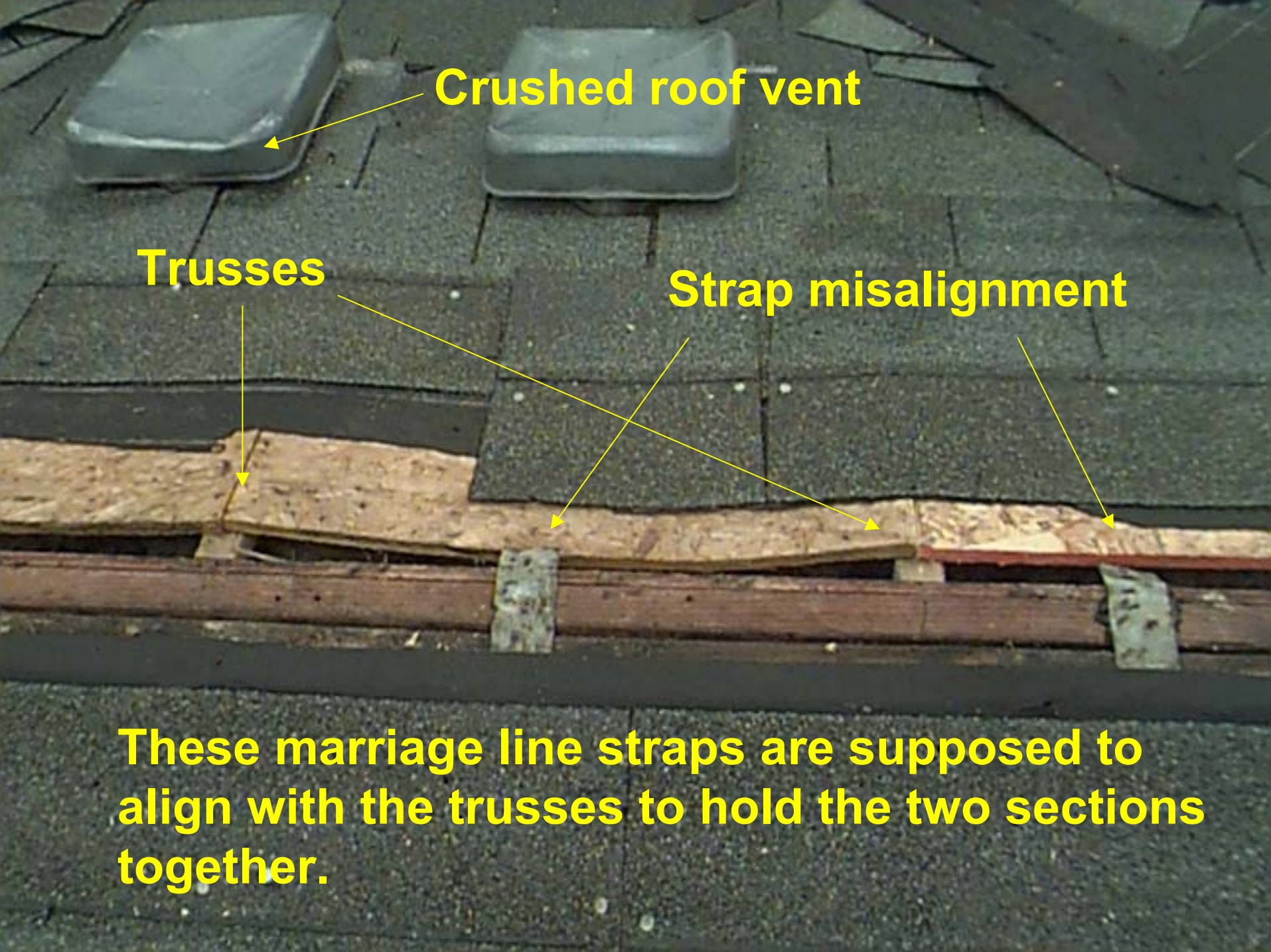


Rotted studs



A close-up photograph of a curved wooden structure, likely a log cabin or a similar building. The image shows several horizontal wooden planks. On the right side, the planks curve around a corner. The text is overlaid on the lower-left portion of the image. The text is in a bold, yellow font. The background is a clear blue sky.

**Improperly secured endwall  
siding applied in the field  
by an installer.**



**Crushed roof vent**

**Trusses**

**Strap misalignment**

**These marriage line straps are supposed to align with the trusses to hold the two sections together.**



## Green Lumber



An alteration as a part of the sales contract being done in the field by a contractor. Note the lumber stamp.



**Flashing installed for a tag unit. Installer did not add the additional length. Result: Leak inside the wall space.**

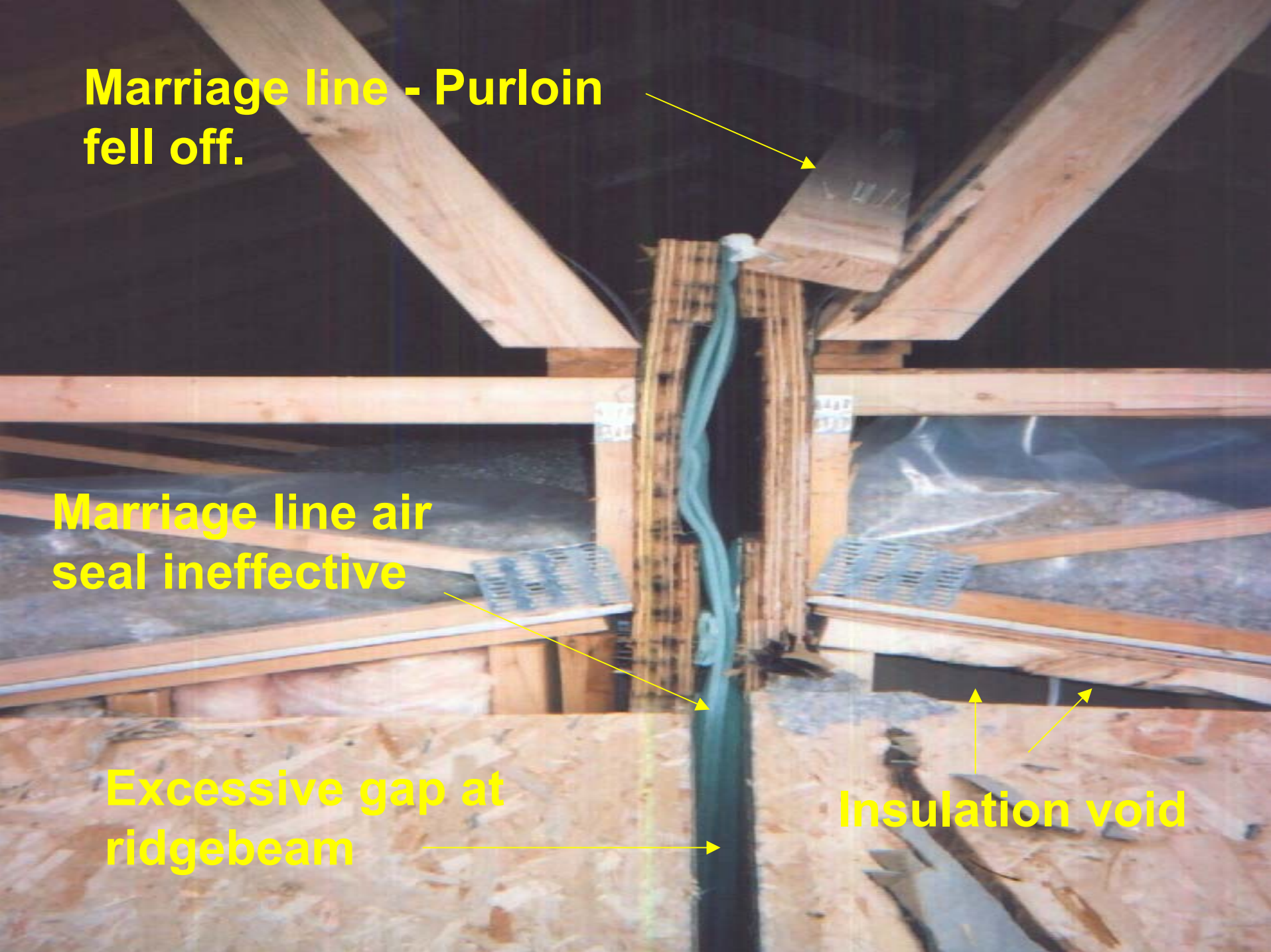


**Marriage line - Purloin  
fell off.**

**Marriage line air  
seal ineffective**

**Excessive gap at  
ridgebeam**

**Insulation void**

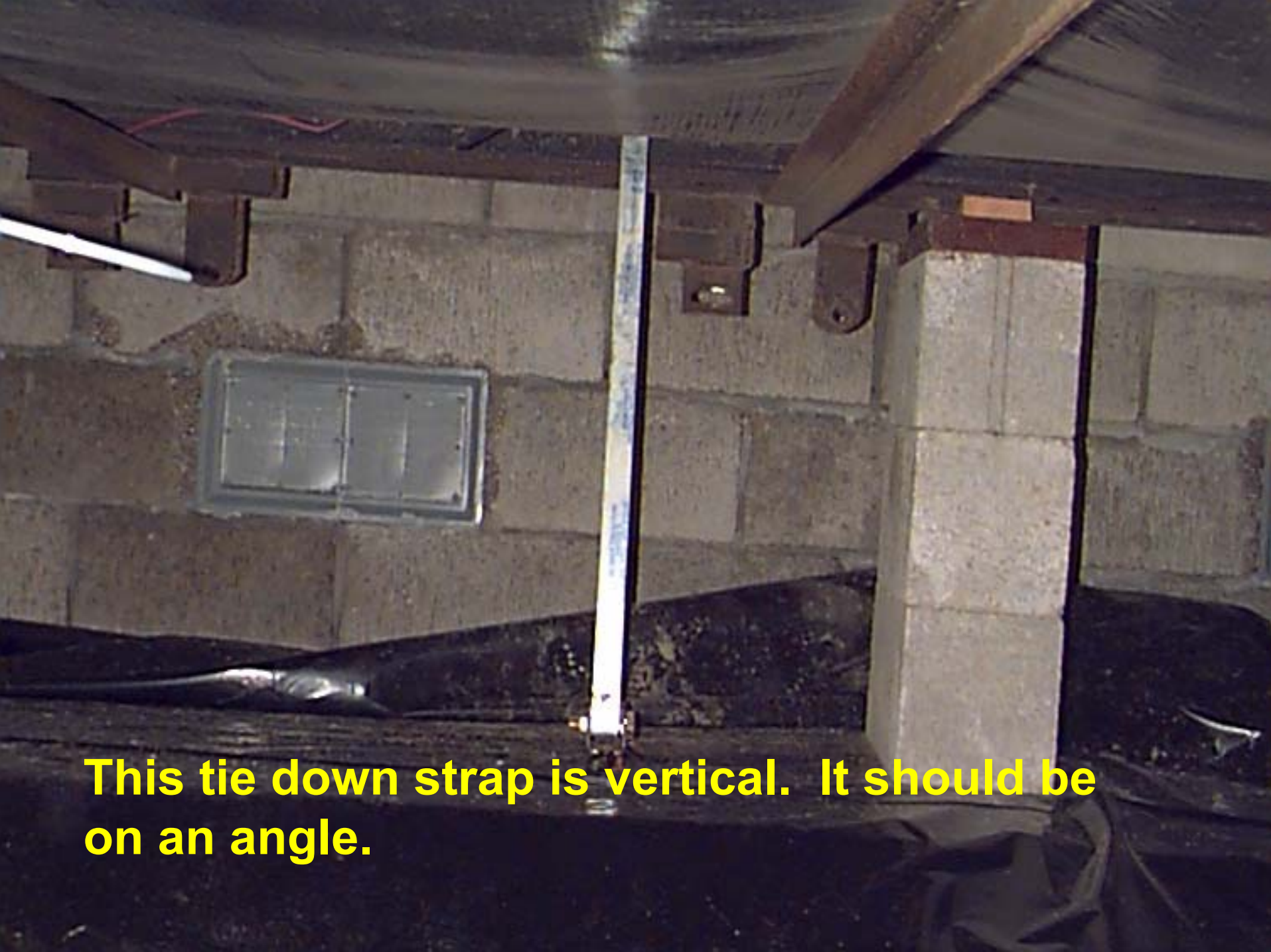


**TIE DOWNS**





**This light single section home was not tied down.**



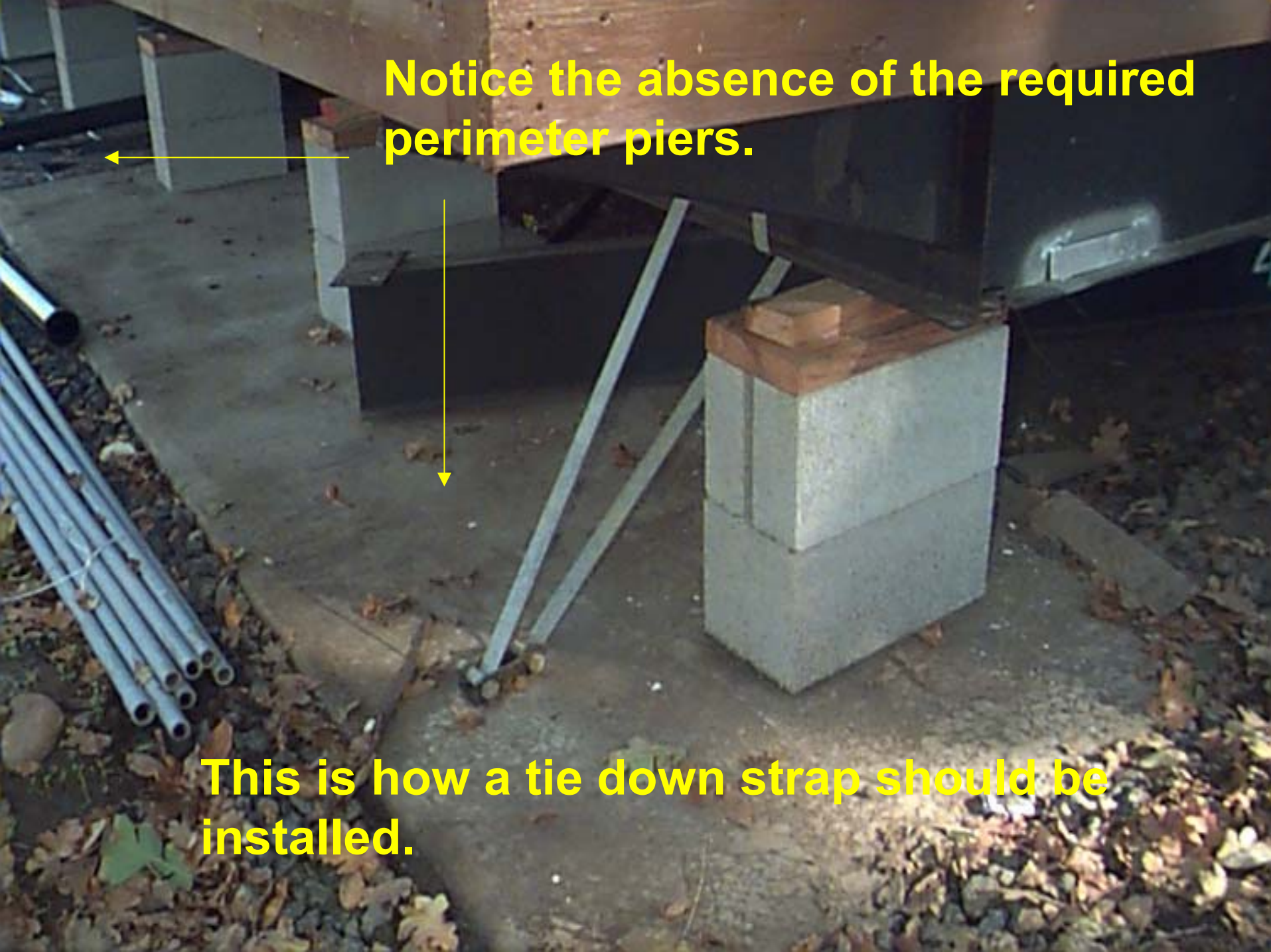
**This tie down strap is vertical. It should be on an angle.**

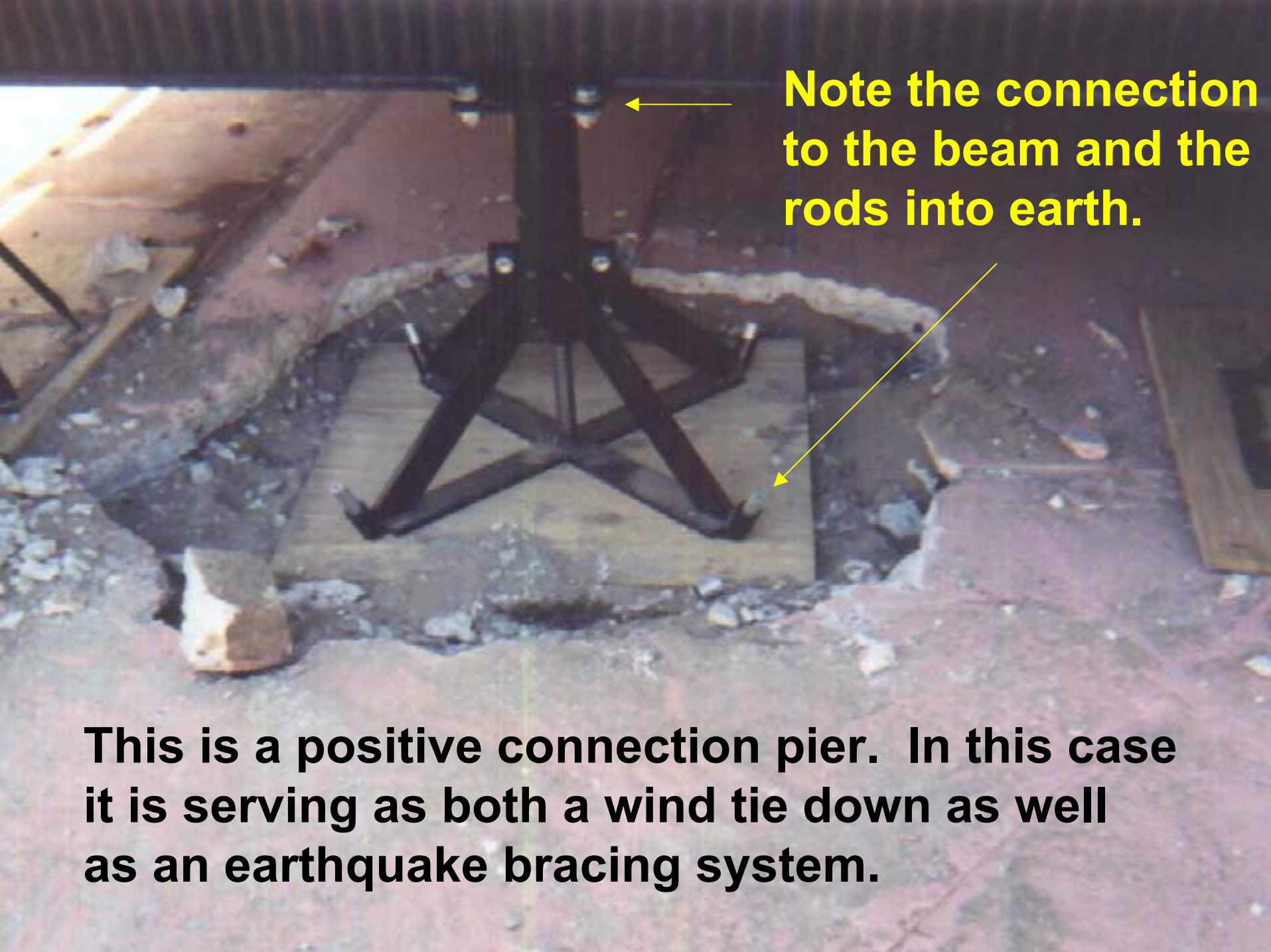


**Notice the absence of the required perimeter piers.**



**This is how a tie down strap should be installed.**





**Note the connection to the beam and the rods into earth.**

**This is a positive connection pier. In this case it is serving as both a wind tie down as well as an earthquake bracing system.**



**PLUMBING**

**Code requires this drain pipe to be buried under 12" of earth. Installer claimed backfill would cover it.**



**Twelve inches of soil would cover the vents and the two cleanouts.**





**Break in pipe**




**This installer saved money by using an unapproved flexible RV type drain pipe. It broke and allowed waste to leak out.**



Three inch pipe connecting into a four inch pipe without a fitting.





**Short turn bend on  
a horizontal to  
horizontal change.  
This requires a long  
turn fitting.**

**Uninsulated pressure line**







**Properly insulated pressure line and access to the shut off valve.**



**Drain line supported by the installer.**

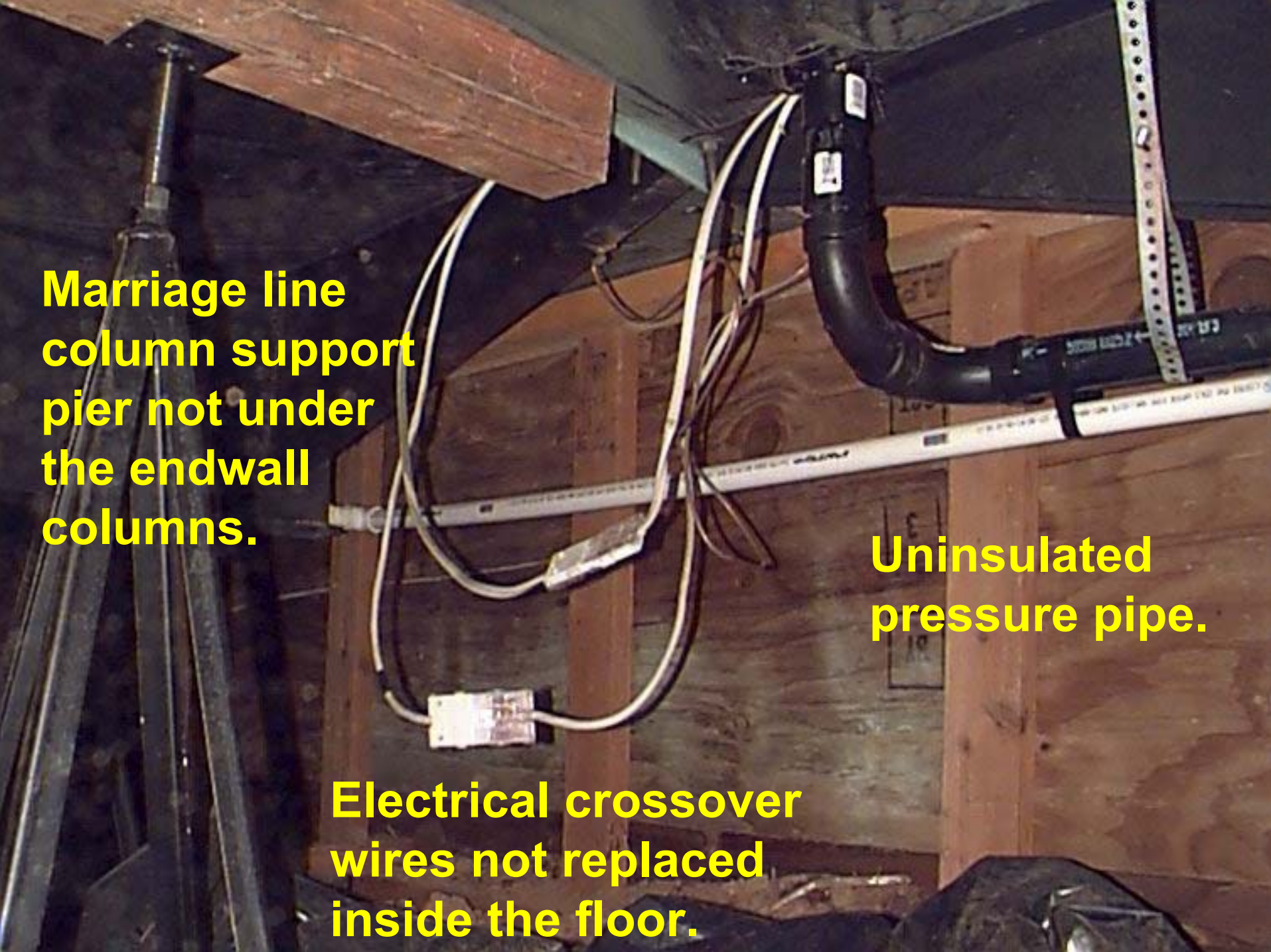




**Drain line supported at the factory.**

**ELECTRICAL**

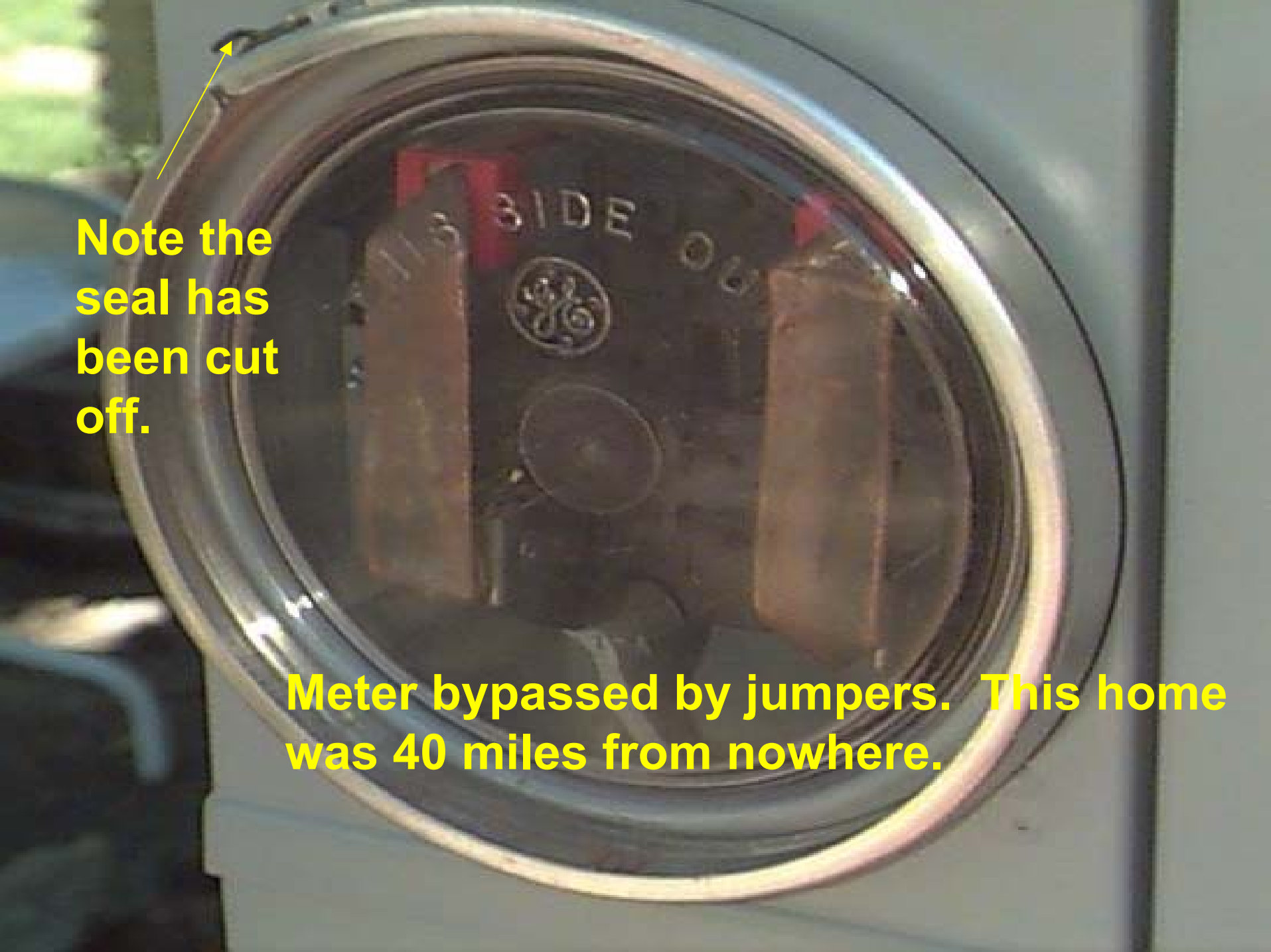




**Marriage line  
column support  
pier not under  
the endwall  
columns.**

**Uninsulated  
pressure pipe.**

**Electrical crossover  
wires not replaced  
inside the floor.**

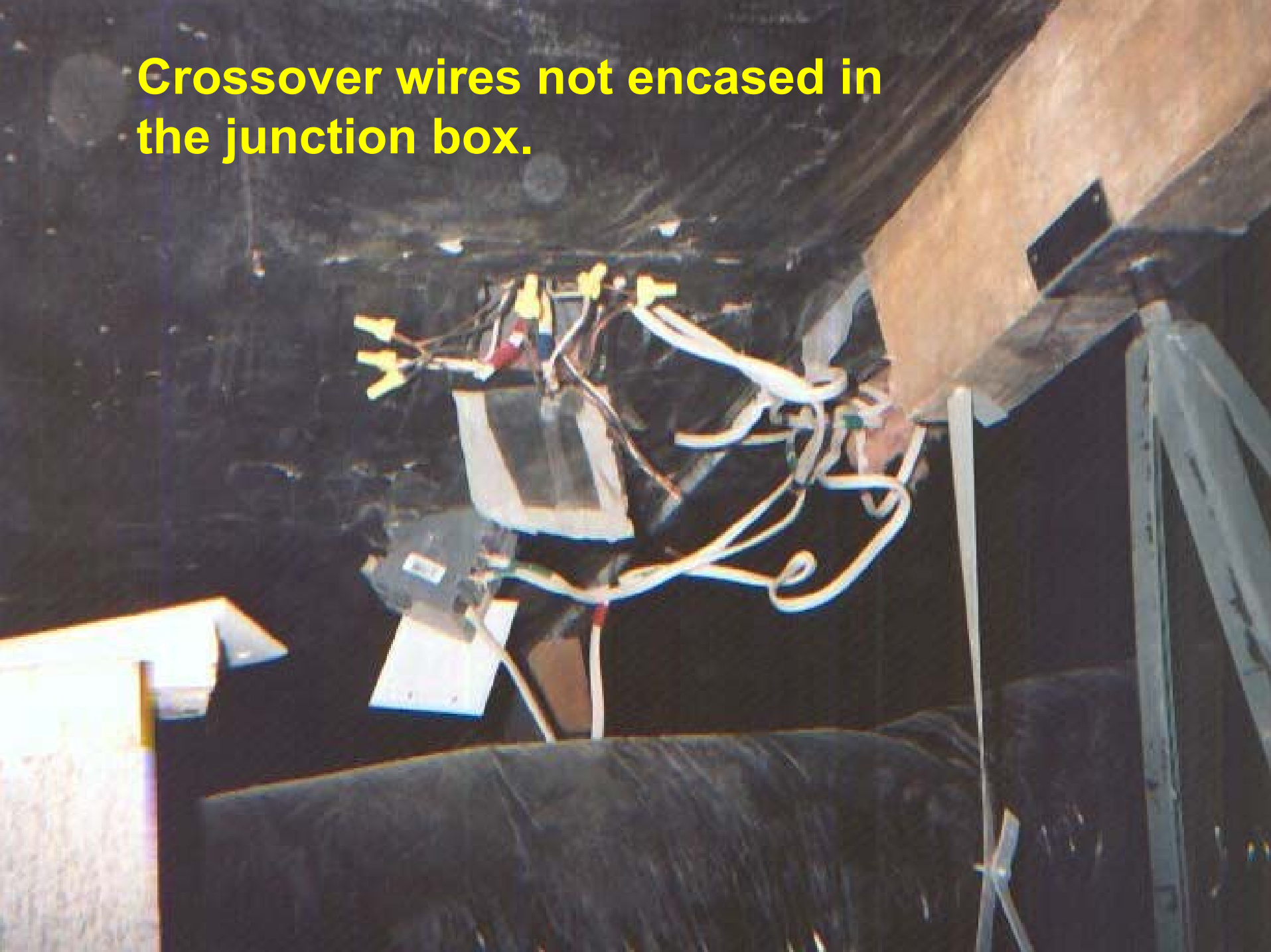


**Note the seal has been cut off.**

**Meter bypassed by jumpers. This home was 40 miles from nowhere.**



**Crossover wires not encased in the junction box.**





**VERY IMPORTANT NOTICE**

**DON'T TOUCH THAT WATER HEATER BREAKER!**

DO NOT TOUCH YOUR WATER HEATER BREAKER UNLESS YOU ARE A LICENSED ELECTRICIAN. IF YOU ARE NOT A LICENSED ELECTRICIAN, DO NOT TOUCH THE WATER HEATER BREAKER. IF YOU ARE A LICENSED ELECTRICIAN, DO NOT TOUCH THE WATER HEATER BREAKER UNLESS YOU ARE SURE IT IS SAFE TO DO SO. IF YOU ARE NOT SURE, CALL A LICENSED ELECTRICIAN. IF YOU ARE A LICENSED ELECTRICIAN, DO NOT TOUCH THE WATER HEATER BREAKER UNLESS YOU ARE SURE IT IS SAFE TO DO SO. IF YOU ARE NOT SURE, CALL A LICENSED ELECTRICIAN.

**NOTE: FAILURE TO FOLLOW THIS PROCEDURE COULD DAMAGE YOUR WATER HEATER ELEMENTS AND VOID YOUR WATER HEATER'S WARRANTY.**

**One of the phase wires was shorted to the box. Energizing from the pedestal caused this.**



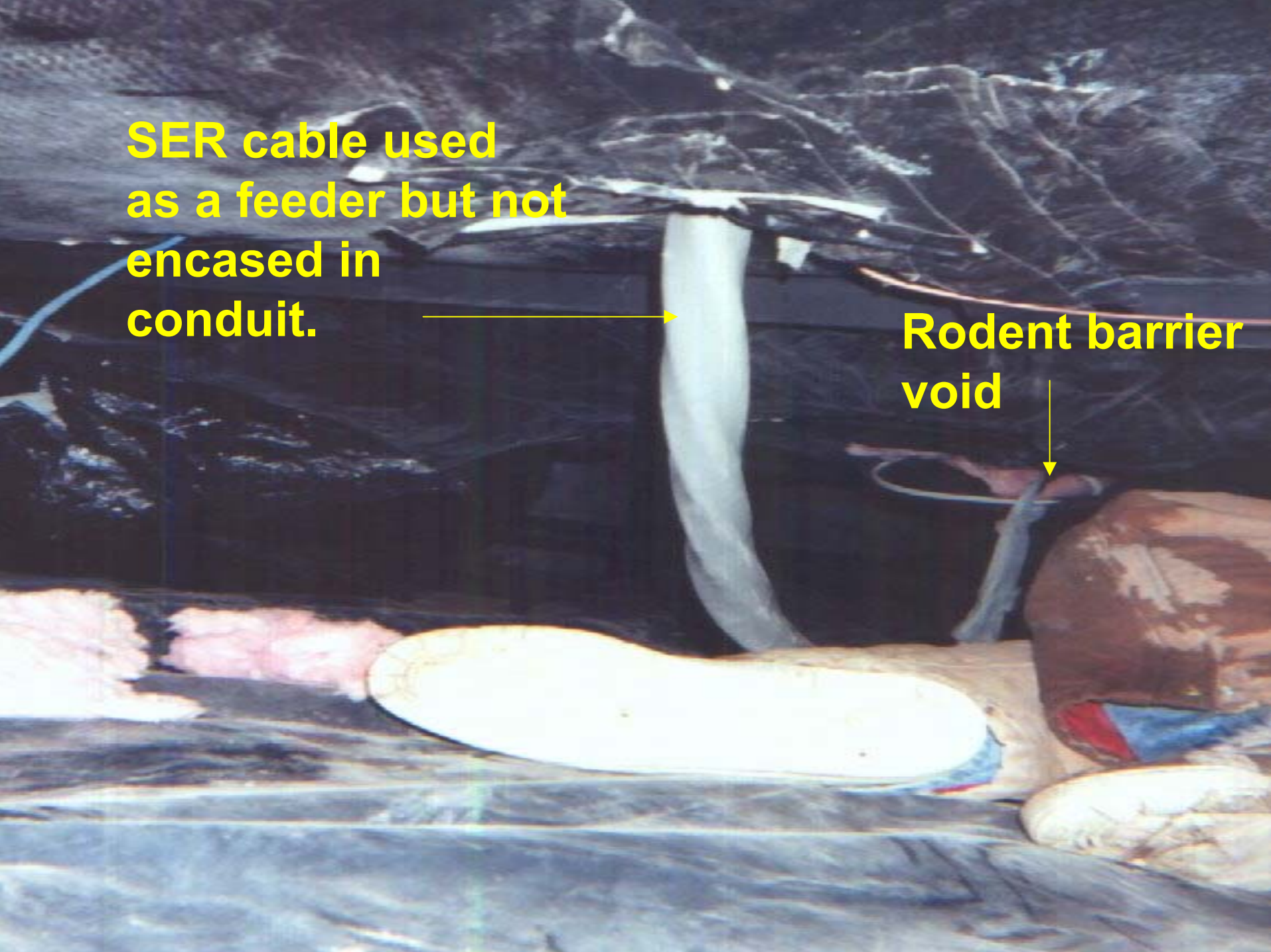
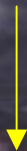


**Underground rated feeders leave the conduit but are not buried.**

**SER cable used  
as a feeder but not  
encased in  
conduit.**



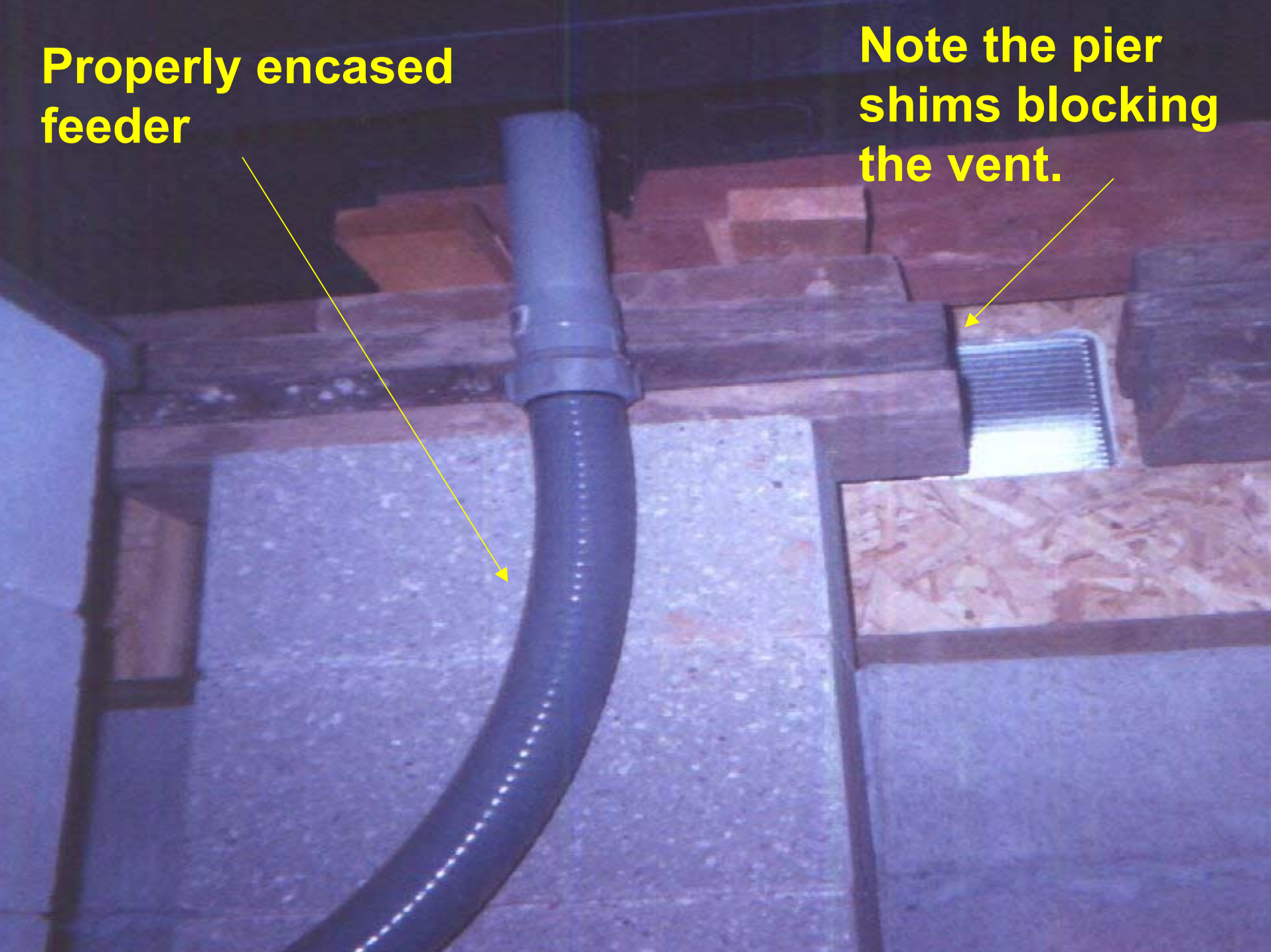
**Rodent barrier  
void**

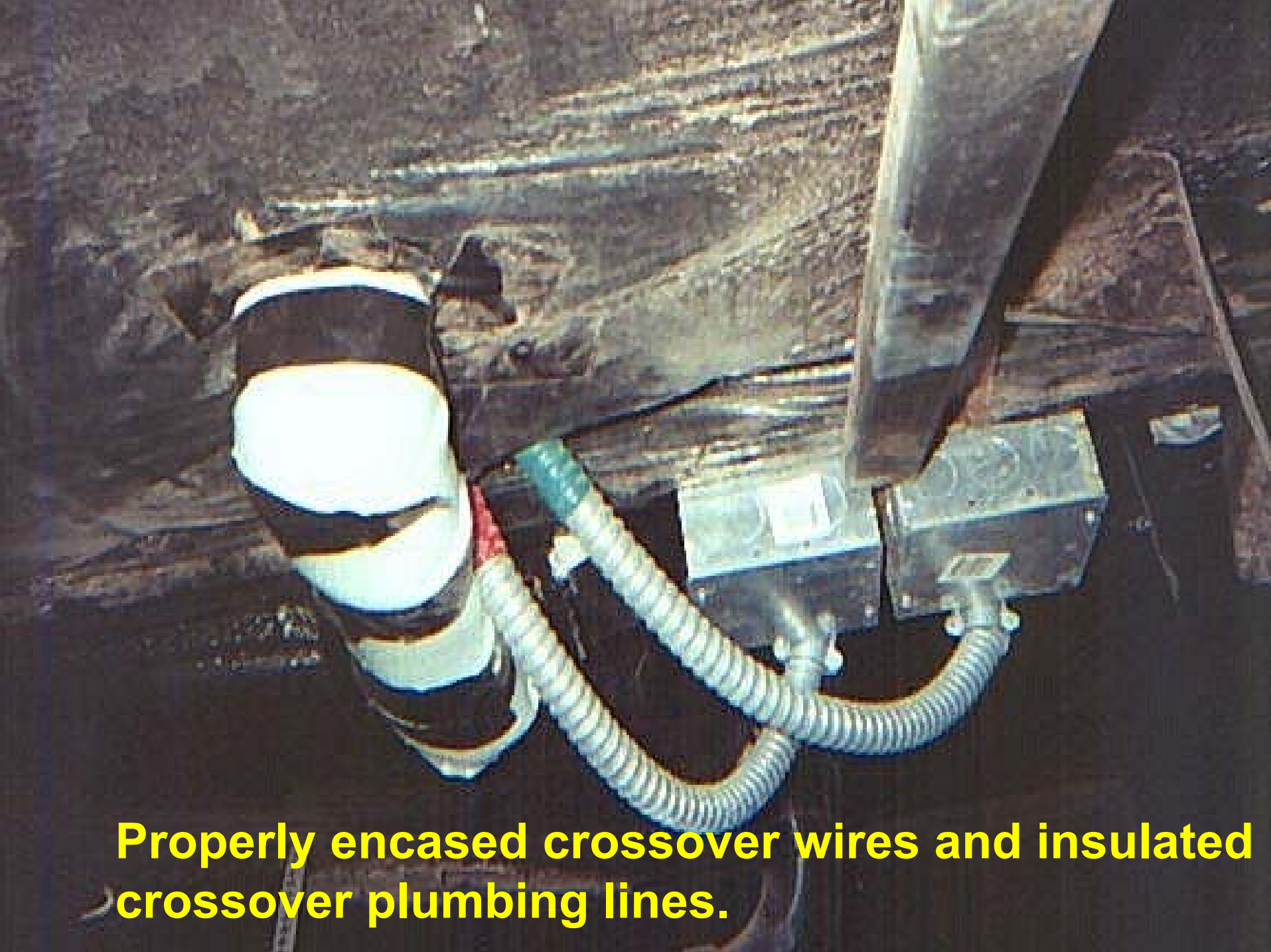




**Properly encased feeder**

**Note the pier shims blocking the vent.**

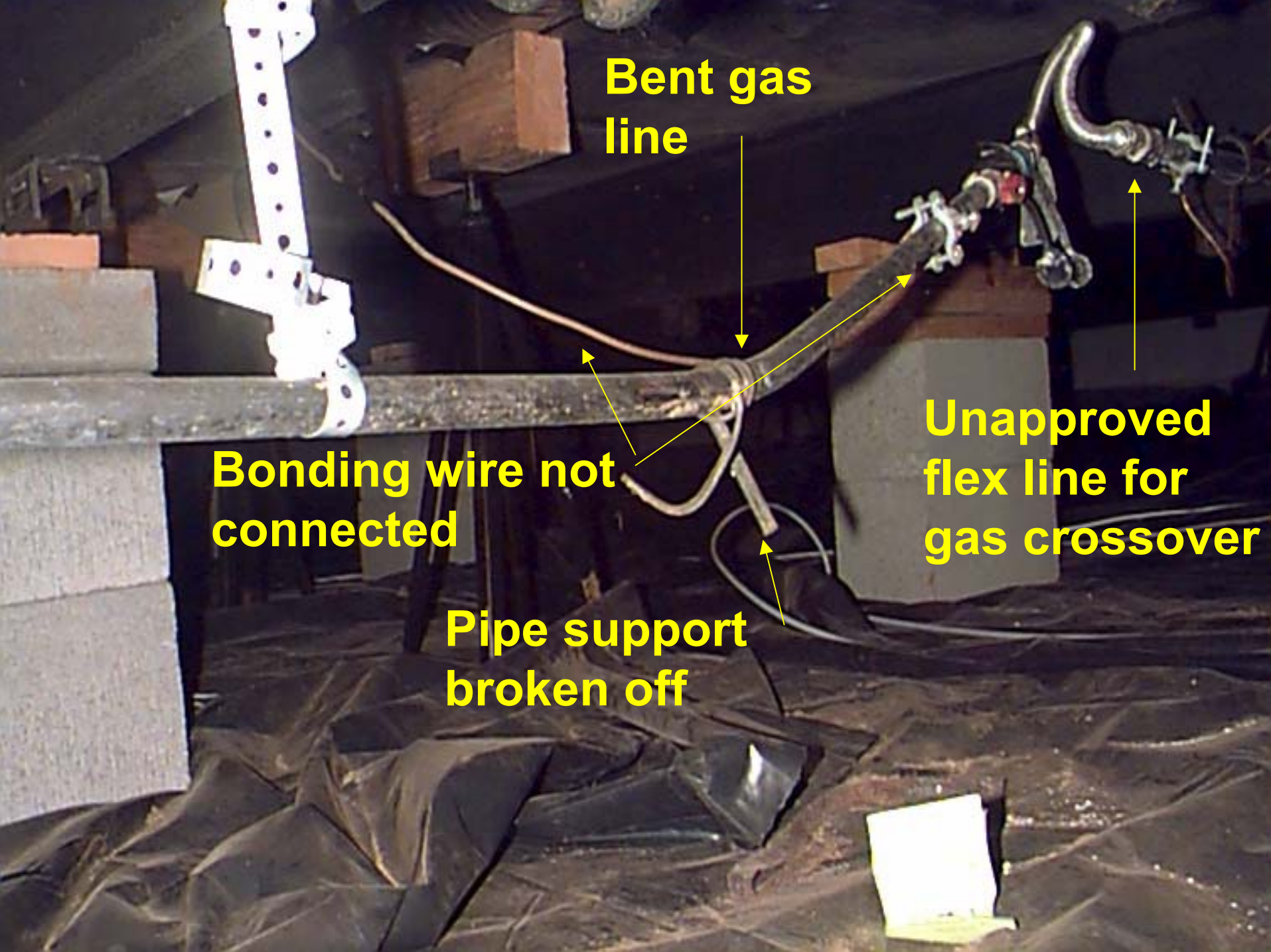




**Properly encased crossover wires and insulated crossover plumbing lines.**



**MECHANICAL**



**Bent gas line**

**Bonding wire not connected**

**Pipe support broken off**

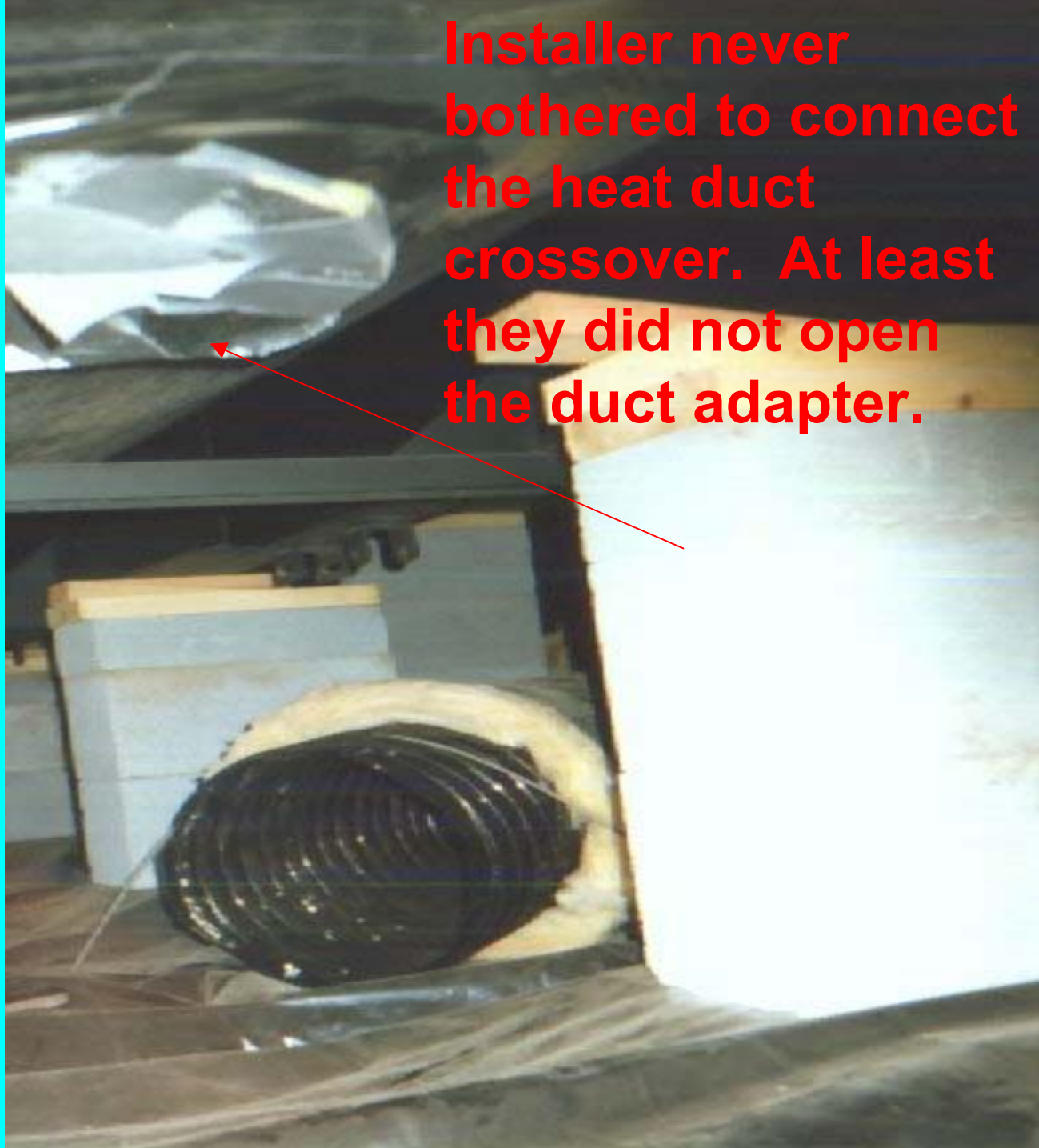
**Unapproved flex line for gas crossover**





**No flex line or swing joint at gas connection**


**Installer never bothered to connect the heat duct crossover. At least they did not open the duct adapter.**





**Gas water heater air  
intake damaged  
reducing combustion  
air.**





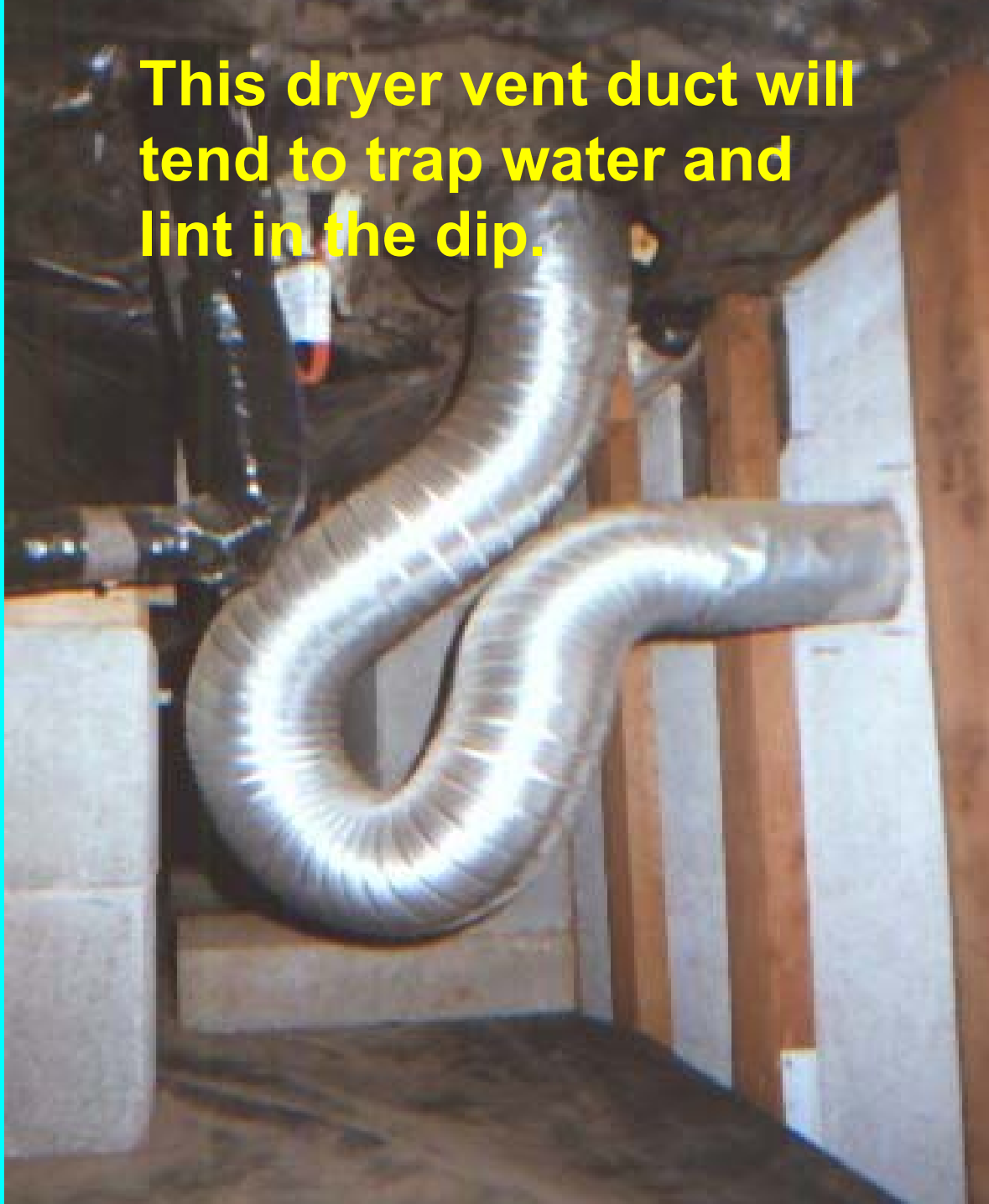
**Heat duct crossover  
not mechanically  
fastened so it easily  
came off when the duct  
was pressurized.**



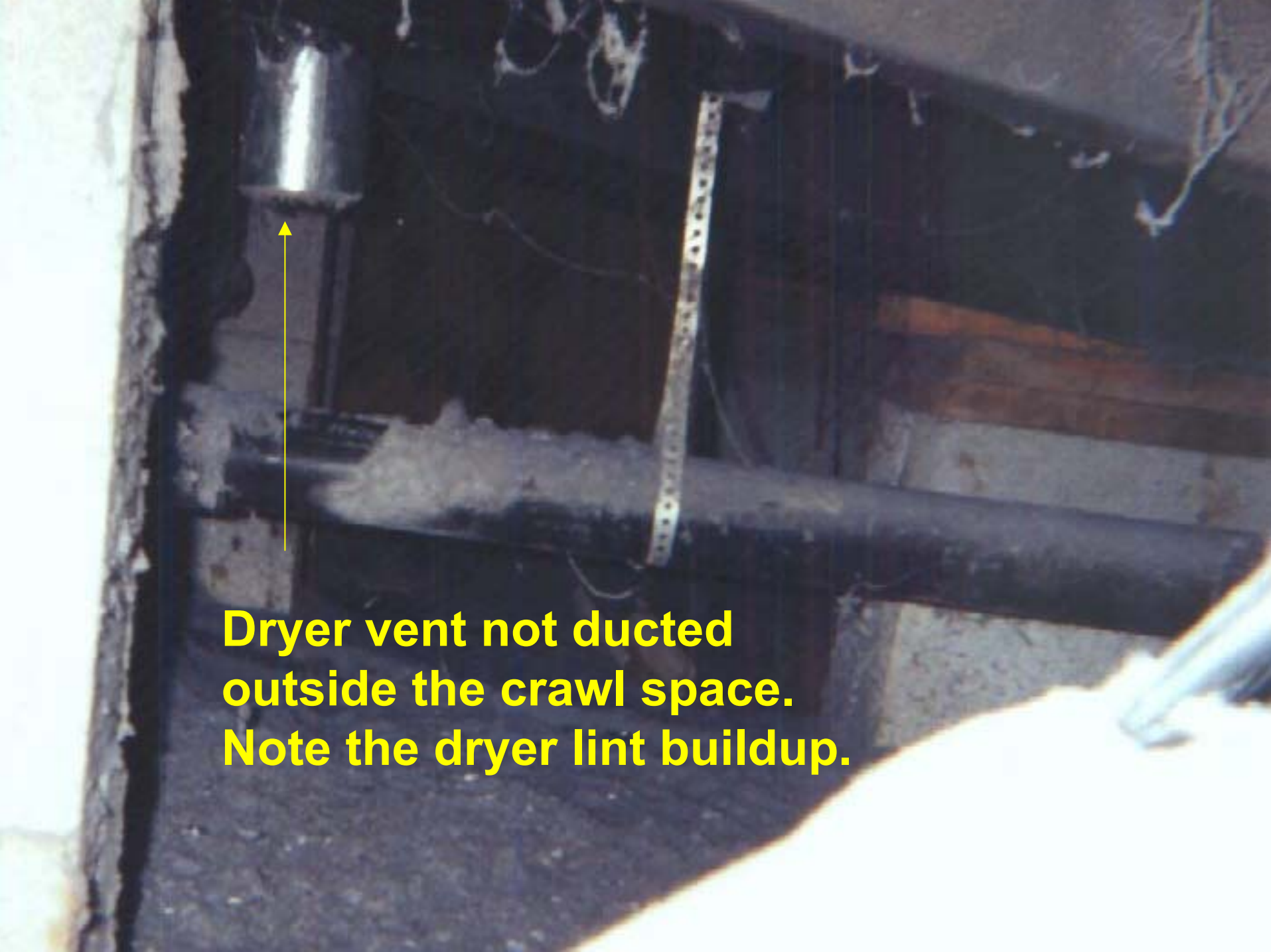
**Dryer vents are  
required to be ducted  
outside the crawl space**



**This dryer vent duct will  
tend to trap water and  
lint in the dip.**







**Dryer vent not ducted  
outside the crawl space.  
Note the dryer lint buildup.**



**This gas meter has the required flex connector.**

**Note the absence of a skirting band.**



**Properly supported  
gas line.**





**Dryer vent roughed in to terminate outside the building line.**



**SKIRTING**



**Crawl space access opening too small.  
Untreated plywood used for skirting.**



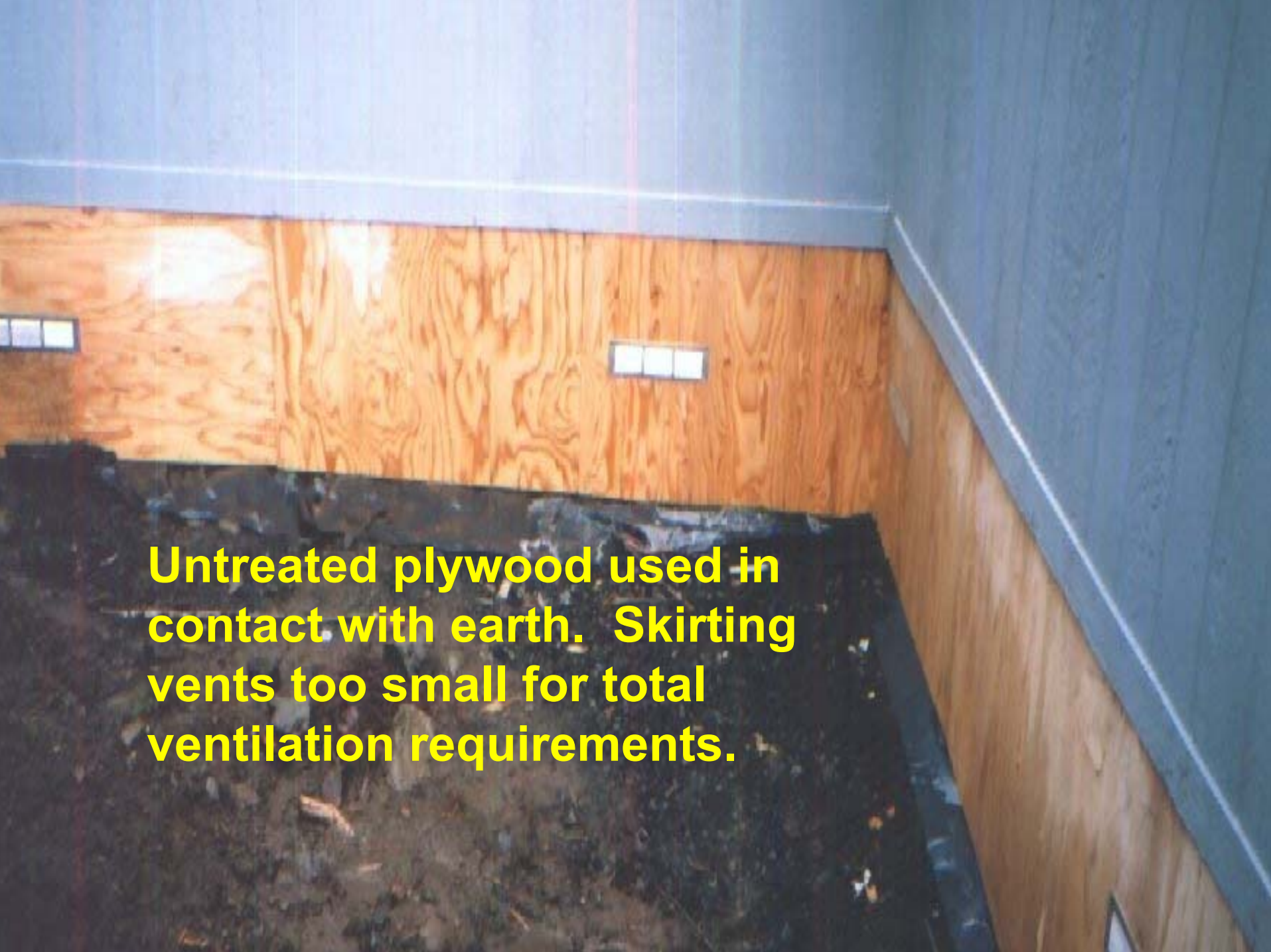
**Skirting  
will not  
prevent water  
from entering  
the crawl space.**





**No skirting vents.  
Skirting also overlaps  
the siding. It is untreated  
wood in contact with earth.**



A photograph showing the interior of a crawlspace. The walls are made of untreated plywood. There are two small, rectangular skirting vents on the wall. The floor is covered with dark, loose soil and debris. The ceiling is made of blue-painted drywall. The text is overlaid in yellow on the lower left portion of the image.

**Untreated plywood used in contact with earth. Skirting vents too small for total ventilation requirements.**

**Not sealed**



**Sealant**



**Skirting band properly sealed  
at the factory but not properly  
sealed by the skirting installer.**





**Skirting support is braced off the pier.**



**Unprotected electrical wire**

**Unsupported vinyl skirting.**





**Skirting braced  
off the pier.**



**Untreated skirting in contact  
with earth. Note the capillary  
action of water into the  
material.**





**Skirting vents covered or restricted by backfill.**



**Properly sealed masonry**



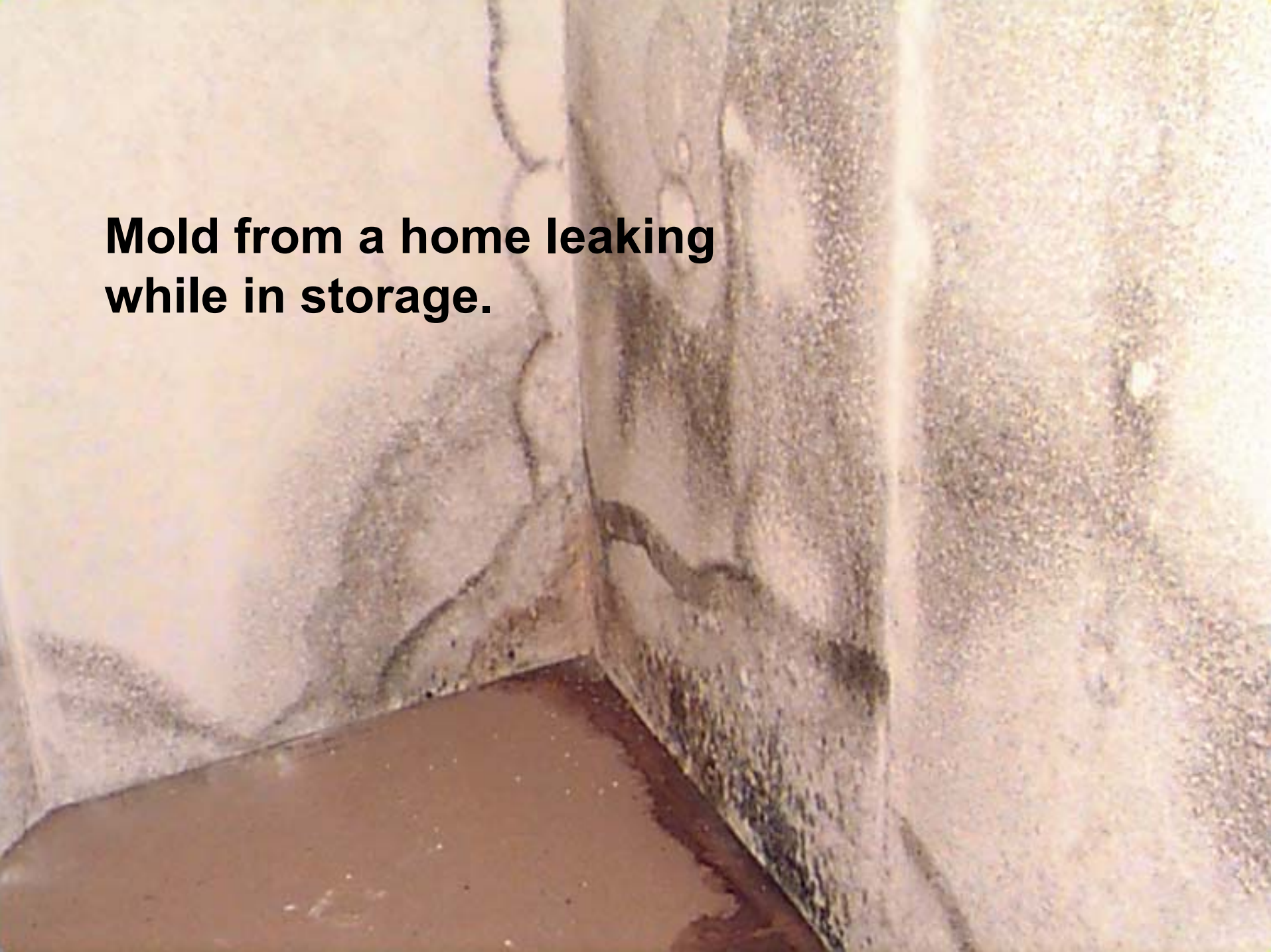
**STORAGE**



Home in storage not monitored.



**Mold from a home leaking  
while in storage.**







**Homes in storage. Not blocked  
and close-up material missing.**





**No blocking  
during storage.**





**Temporary blocking installed while being stored.**

# **ACCESSORIES**



**Awning not built properly. Could not hold load.**



**Fire separation not present between structures on adjoining lots.**







**Handrails missing**



**Handrails missing, no support under temporary steps.**





**Properly installed and constructed temporary steps.**





**Compliant access**