

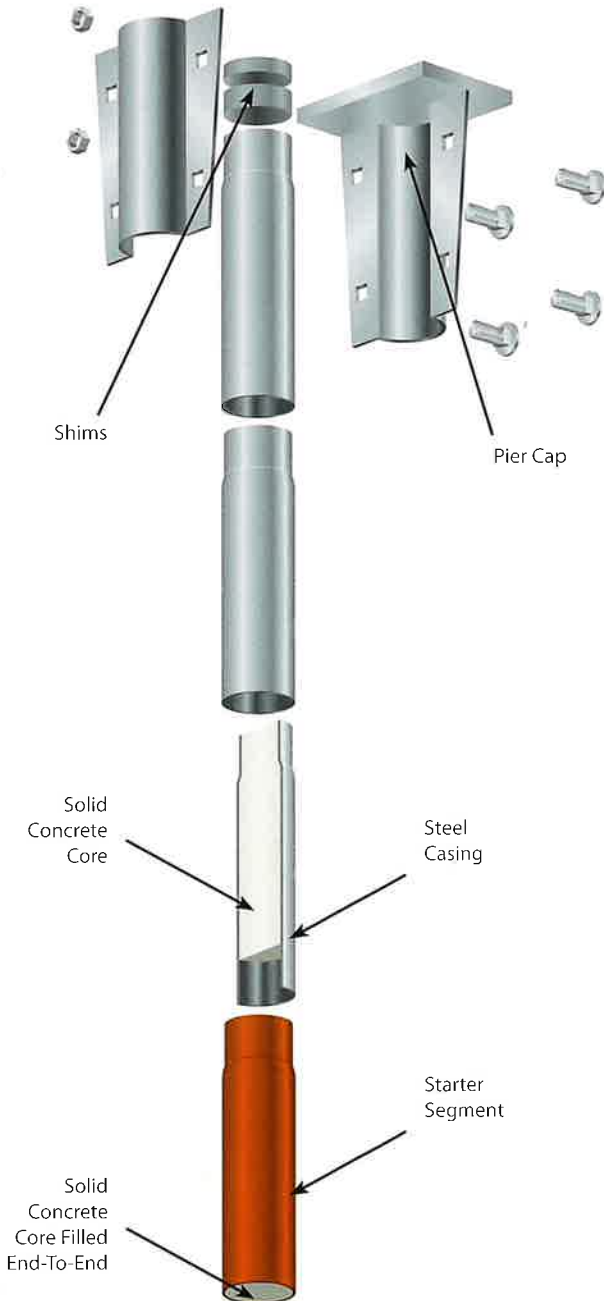
# DynaPier®



*Go Deep With DynaPier!*

# DynaPier®

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## Technical Specifications:

DynaPier® segments are comprised of 2<sup>7</sup>/<sub>8</sub>" diameter 8 gauge powder-coated tubing. The steel segments are pre-cast with an 9,000 psi concrete mix. Segments that have cured for 28 days can withstand compressive loads in excess of 75 tons.

## The Unique DynaPier® System



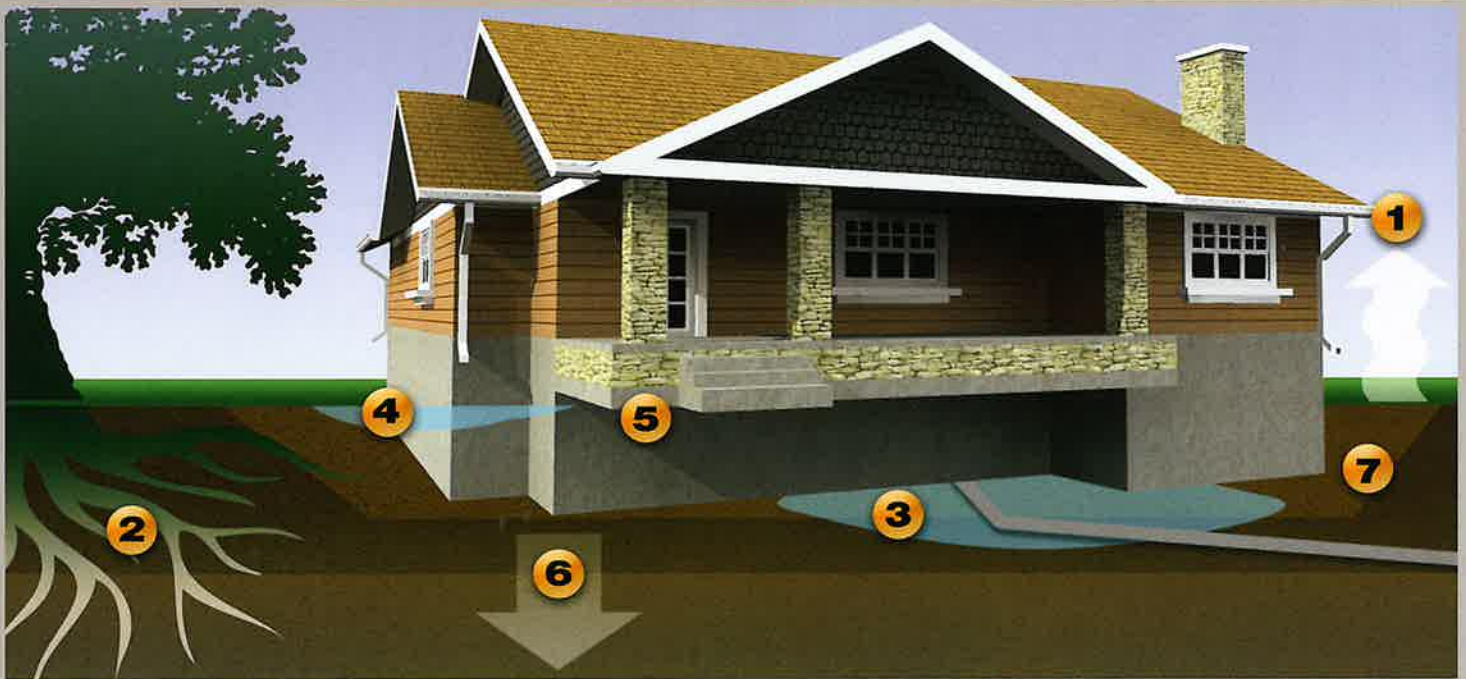
The DynaPier® system was designed to be the strongest foundation pier in the industry by combining steel and high strength concrete. It is installed centrally beneath the footing rather than outside of the footing, thus transferring the structural load directly on top of the pier. The DynaPier® will achieve the greatest depth while installed in a position to provide the greatest support. **No other piercing system can make these claims.**

The patented DynaPier® is comprised of high-strength concrete that is pre-cast in a steel sleeve which provides superior shear strength and compressive resistance as proven by independent testing labs. The outer steel casing is filled with a concrete core, and cured for maximum strength. The DynaPier® segments are hydraulically driven into the ground one at a time. After one DynaPier® segment is driven, another segment is connected to the pier, and the process is repeated until the foundation pier hits bedrock or a dense strata of subsurface material. A temporary platform is attached to the pier so that the structure can be lifted. Once the desired lift is achieved the pier is extended up to the footing and the pier cap is attached to the pier.

- **The pier is located centrally and directly beneath the foundation footing.**
- **ALL parts are connected to form a monolithic pier.**
- **ALL shims are contained within the pier cap.**
- **Installation does not require removal or breaking of the footing; footing remains completely intact.**

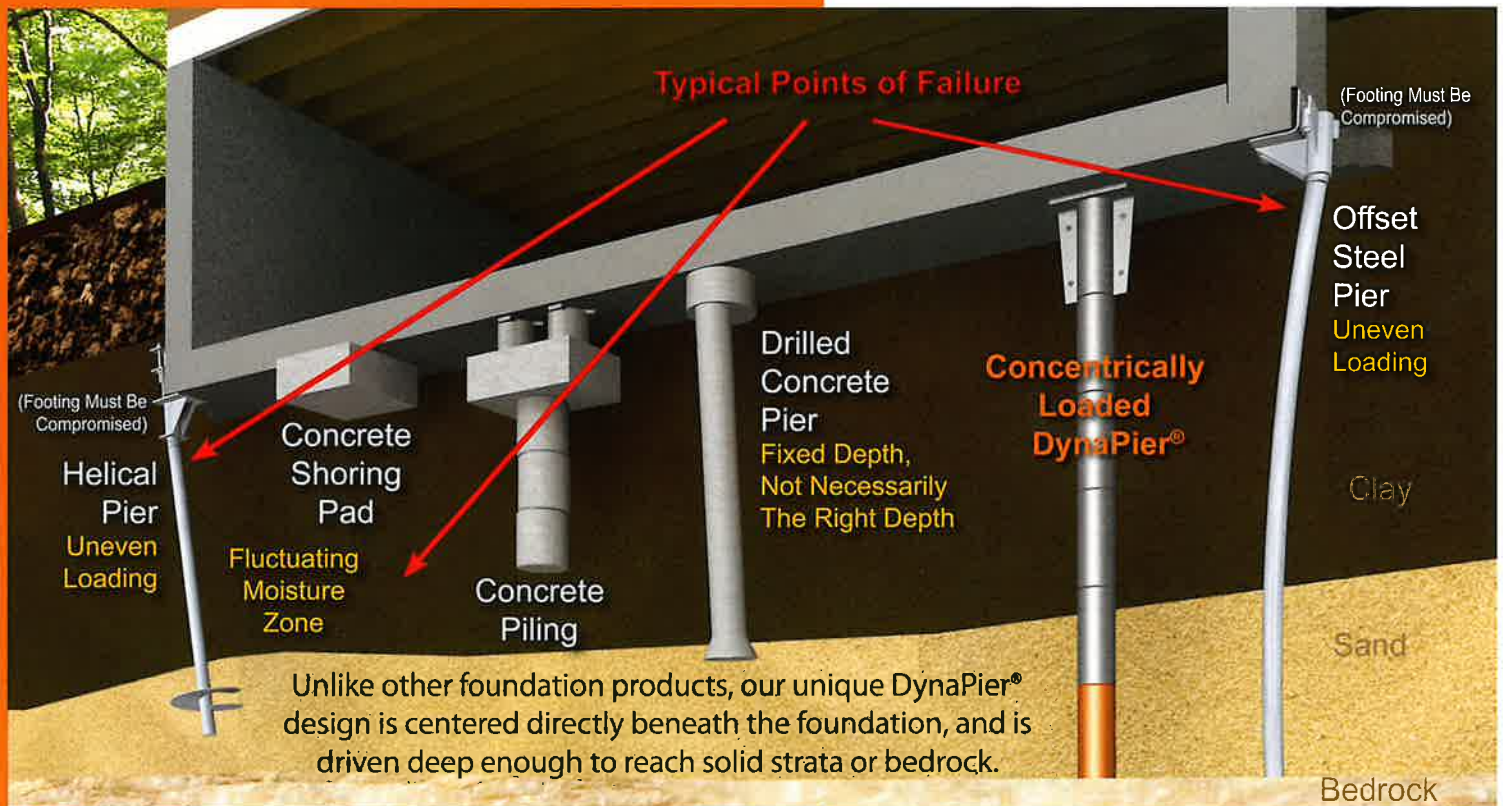
**The result is a foundation that far exceeds the home's original structural integrity, making your foundation better than new.**

# Causes Of Foundation Problems



- 1. Evaporation:** Hot dry wind and intense heat will often cause the soil to shrink beneath the foundation. This settlement may cause cracks to appear throughout the structure.
- 2. Transpiration:** Tree roots may desiccate the soil beneath a home causing the soil to shrink and the home to settle.
- 3. Plumbing Leaks:** Water from plumbing leaks is often a cause of foundation problems.
- 4. Drainage:** Improper drainage is one of the leading causes of foundation failure. Excess moisture will erode or consolidate soils and cause settlement.
- 5. Inferior Foundation Construction:** Insufficient steel and inferior concrete will contribute to movement in the slab.
- 6. Inferior Ground Preparation:** Soft, low density soils and/or improperly compacted soil beneath a home is the leading cause of foundation failure. Cut and fill methods are a leading cause of foundation settlement.
- 7. Poor Soil Conditions:** Poor soil and its expansion and/or contraction contribute to foundation failure.

# Why DynaPier® Is Best



# What Experts Say About The DynaPier®

Willard Norton is a founding partner of Norton & Schmidt, a respected engineering and consulting firm that provides design and inspection services for new construction, existing building renovation and restoration, parking garage restoration, general consulting, residential consulting and expert testimony.

## Norton & Schmidt

Consulting Engineers, LLC  
Established 1967  
Kansas City - Atlanta

December 7, 2007

DynaPier, LLC  
4220 Main St  
Grandview, MO 64030

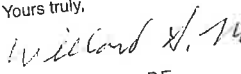
TO WHOM IT MAY CONCERN

I have evaluated this firm's pier installation materials and method, and observed its use in raising a house foundation.

Because its design incorporates concentric loading of the pier during installation and support of the foundation, and is filled with a concrete mix that tests in excess of 3500 p.s.i., it has the capacity to punch through rock floaters to solid bearing without being turned away from the vertical position.

This is not the case with the conventional eccentrically loaded pier, and as a result they fail from buckling and turning by floaters as they are driven to solid bearing.

Yours truly,



Willard S. Norton, P.E.  
Partner

WSN/rj



311 E. 11th Avenue • North Kansas City, MO 64116 • (816)

# DynaPier®

DynaPier, LLC  
13902 Norby Rd  
Grandview, MO 64030  
toll free: 844-456-3962

## Foundation Engineering Specialists LLC

# FES

This is written to certify that I, Don R. Carter a licensed engineering in the state of Missouri, did prepare test methodology and witness field testing for The DynaPier™ System, a patent pending foundation repair product. The following conditions apply:

- Test product was selected by the undersigned from DynaPier's stock inventory.
- Product was installed with daily-use, dealer equipment and installation crew.
- Dynapier was driven to a depth at which gage readings showed it was resisting twice the design load, or 33,600#. Load was removed, then a dial indicator and optical level were placed to define the deflection datum point.
- Load was increased incrementally from design load to design +5% (takeup), design +24%, design +49% and finally design +64%. Corresponding deflections were measured from the datum and the attached load deflection curve established.
- Load was then increased to the limit of hydraulic equipment, at which point the pier sustained a load of 40,255# or 2.4 times design.
- There is every reason to believe the pier would carry loads in excess of this as we observed no strain or visible distress in the product.

It is my professional opinion that the DynaPier System has proven capacity to meet foundation repair duty for which it is being marketed, with a safety factor of 2. We may never be able to quantify a load limit for this pier because it is concentrically loaded, uses short segments and has concrete filled tubes, greatly reducing the potential for buckling or bending failure.

Signed and sealed this 16<sup>th</sup> day of August, 2008



Don R. Carter PE  
Managing General Partner

 National Society of  
Professional Engineers®  
www.fdnengineering.com

913-685-1434  
913-709-8623

Don Carter is an experienced and highly respected consulting engineer specializing in foundation design and performance. After testing the DynaPier® System, Don carter said,

**"We may never be able to quantify a load limit for this pier because it is concentrically loaded, uses short segments, and has concrete filled tubes, greatly reducing the potential for buckling or bending failure."**