



# SQUARE SHAFT HELICAL PILES



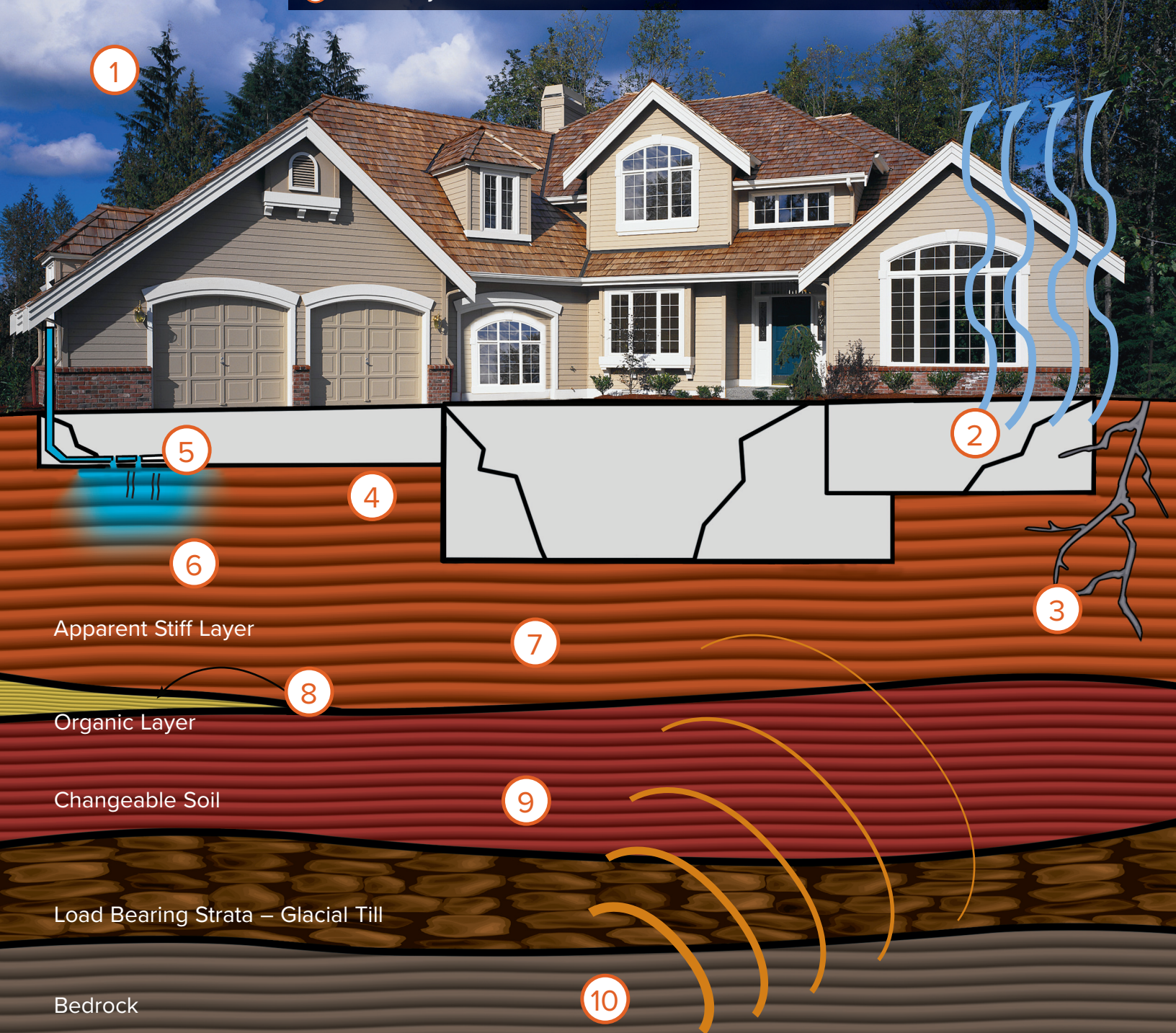
Foundation Solutions for Settlement in  
Residential or Light Commercial Structures and  
New Construction Applications

# 10

## Major Causes of foundation settlement

One or more conditions may apply.

- ① Extreme drying of clay soils from the sun and wind
- ② Evaporation
- ③ Roots drawing out moisture
- ④ Shallow footings
- ⑤ Broken pipes
- ⑥ Extremely wet soil
- ⑦ Compressible soil (natural or man-made)
- ⑧ Organic layer (natural peat or man-made)
- ⑨ Deep soils affected by seasonal water tables; wet-dry cycles
- ⑩ Earthquakes and tremors





When the foundation of your home is compromised with serious cracks and settlement problems, look to CERTIFIED INSTALLERS from IDEAL Foundation Systems to put you back on solid footing. With engineered products and methods, and hundreds of relieved customers, we are your responsible choice when you need foundation repairs.

## Common Signs of Foundation Settlement

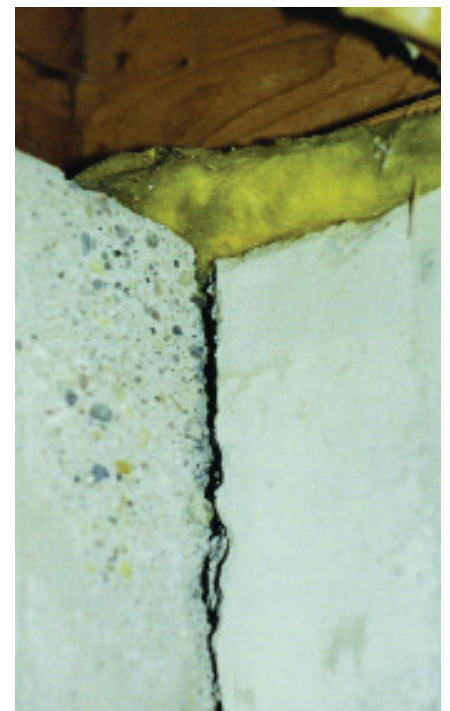
### EXTERIOR

- Cracks in Foundation Walls
- Cracks in Brickwork
- Misaligned Doors and Windows
- Gap Between Chimney and House
- Gaps and Cracks in Unusual Places



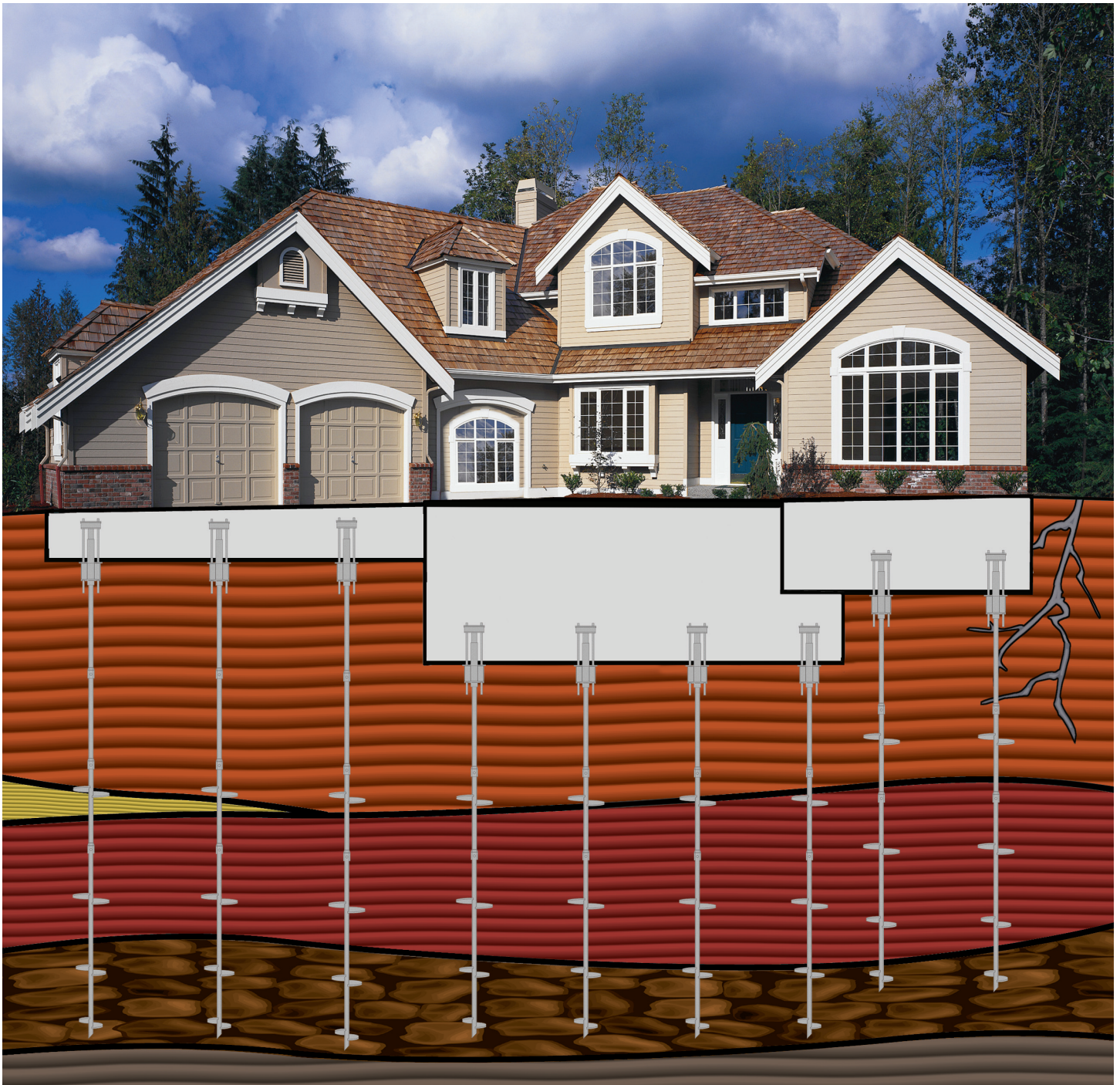
### INTERIOR

- Cracks in Walls and Ceilings
- Sloping Floors
- Cracks in Tile and Concrete Floors
- Difficulty Opening Doors and Windows
- Gaps Around Fireplace and Wall
- Stresses and Strains to Plumbing, Electrical and Gas Lines



# THE iDEAL SOLUTION

- 1 An IDEAL Foundation Systems certified installer will analyze the foundation and gather necessary data for remediation design.
- 2 Soil information will need to be obtained to determine pier depth necessary to achieve desired capacity for each pier.
- 3 A final design is presented indicating pile locations, helix size, central shaft requirements and bracket specifications.
- 4 The IDEAL foundation remediation process is completed.



# THE IDEAL PROCESS



First, we excavate down to the footing of the affected foundation wall.



Next, we notch the footing and prepare for placement of the patented IDEAL underpinning bracket.



Then the piles are drilled to the depth determined in the design process to achieve the capacity required to support the structure.



Once the piles are drilled to the required depth, the bracket is installed and the weight of the wall is transferred to the helical pile assembly.



The foundation wall may be lifted to the desired elevation and the structure is permanently stabilized.



Cracks below the surface level of the landscape are repaired, the excavation is back-filled, and the project is completed.

# THE iDEAL ADVANTAGE

In many applications, helical units may offer significant advantages over other systems. Some of these include:

## FOR NEW OR EXISTING STRUCTURES

Helical piles can be used for existing settling or compromised foundations and new construction foundations in poor soils.

## VERSATILE INSTALLATION ANGLES

Adaptability to a variety of installation angles to accommodate compression, tension, lateral, and overturn.

## LOWER COSTS

Materials and installation are a lower cost than many other foundation options.

## RAPID INSTALLATION

Not quite lightning fast, but it's hard to beat the speed of installation.

## MINIMAL EQUIPMENT

Minimal support equipment is needed for installation. A drive head, torque indicator, and a few other components.

## GREAT FOR LIMITED ACCESS

Helical piles are great for low-headroom and other limited-access areas inside, underneath, and in between existing structures.

## INSTALL IN EXTREME WEATHER

Helical piles can be installed in any weather except thunderstorms and whatnot. We play it safe, and we think you should as well.

## MINIMAL VIBRATION AND NOISE

With minimal vibration and noise, helical piles are a perfect fit for historic structures and other urban projects surrounded by fragile people and buildings.

## MINIMAL SITE DISRUPTION

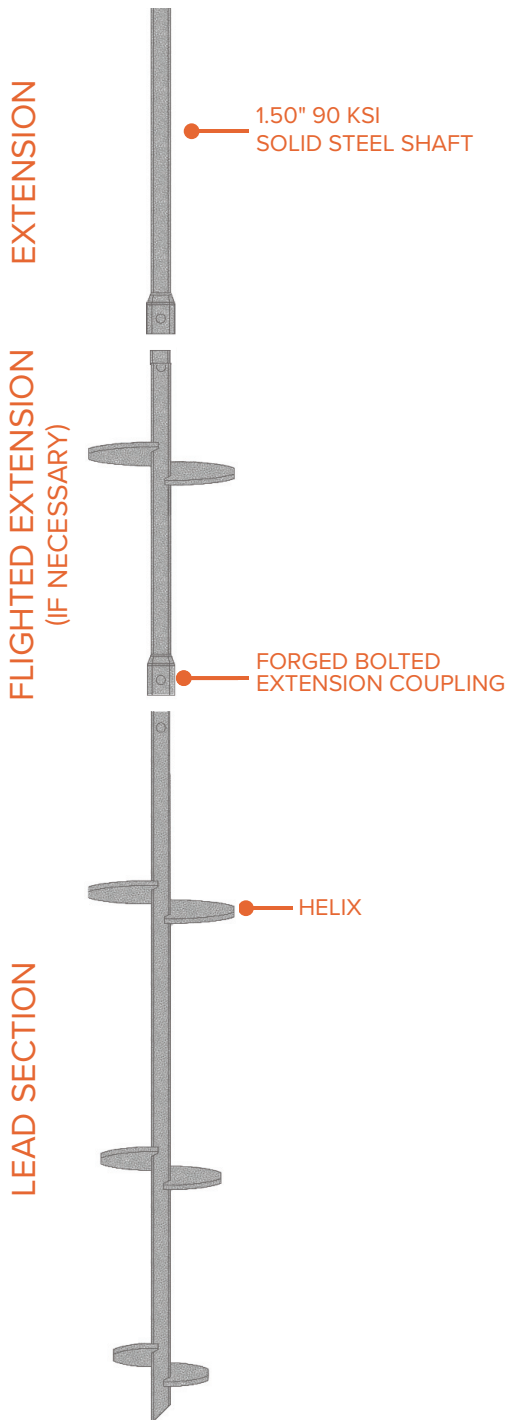
Minimal site disruption occurs during the installation of helical piles as limited excavation is required.



# THE IDEAL PILE

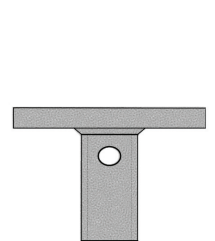
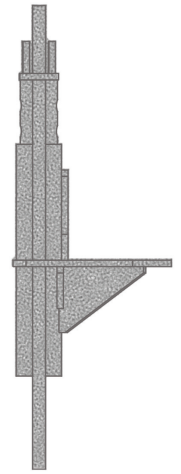
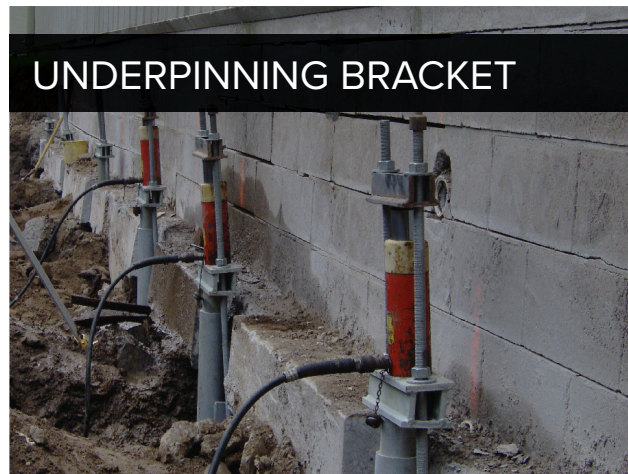
## HELICAL PILE SECTIONS

Every pile consists of a lead section with 1-4 helix plates and a bracket or hardware to transfer the load. If load bearing strata is beyond the reach of a lead section, the lead section will be followed by as many extensions as required. If further support is needed, flighted extensions are used.



## BRACKETS + HARDWARE

Below are examples of common hardware/brackets which are manufactured by IDEAL. Our team is often called on to fabricate custom brackets and load transfer devices for unique project requirements. If you don't see something that suits your need, rest assured we can design the perfect bracket to meet your requirements.





## OUR MISSION

To provide our clients and associates with “Leading Edge” technology, products, equipment and support to ensure excellence in the design and performance of projects relating to foundation remediation, helical piling, tension anchors and other foundation systems.