Non-Vibratory Installation Methods are Expanding the Use of Steel-Cased Shafts

ROC Equipment
610mm to 5000mm shafts
(24” to 16’)

We Support a Diverse Set of Projects

Bridges

Utility Towers

Railroads

Foundations

Railway

Water Systems

Slope Stabilization

Treasure Hunting

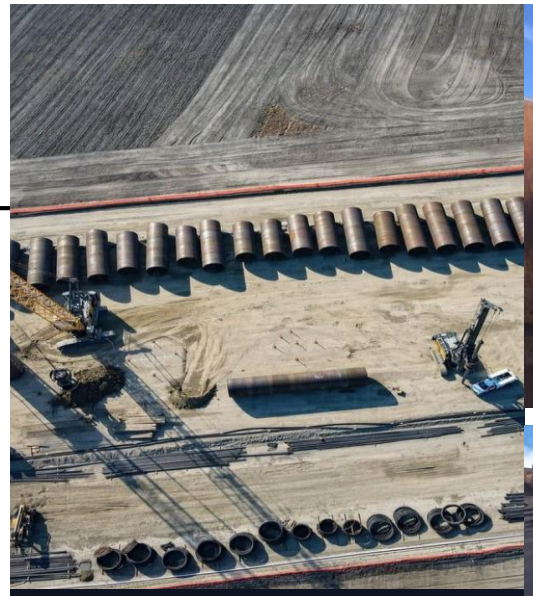
Steel- Cased Shafts

Temporary Casing

- **Joints**- Bolt together female and male ends
- **Starter Can Cutting Shoe**
- **Variety of diameters**
  - 610mm to 3800mm
- **Variety of lengths for each diameter.**

Permanent Pipe

- **Domestic and Foreign Steel**
- **Traceability**
- **Cutting Shoes or bare end.**
- **Variety of diameters**
  - 610mm to 3800mm
- **Variety of lengths for each diameter.**



Casing Equipment

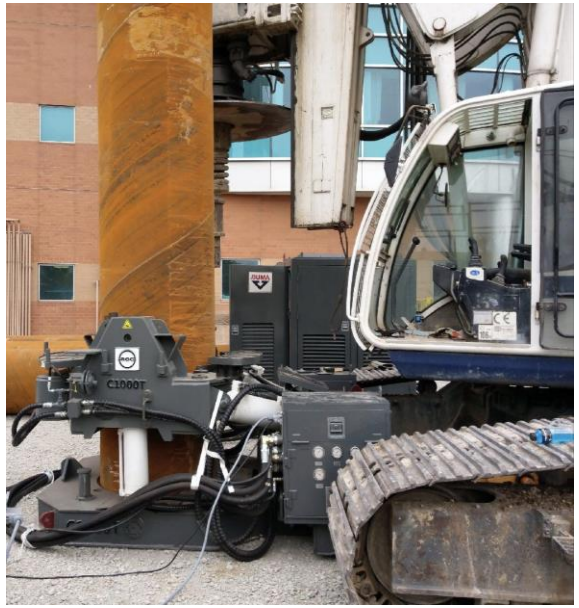
Casing Clamp

- Clamps
- Holds

Casing Extractor

- Clamps
- Holds
- Extracts

Casing Oscillator



- Installs
- Clamps
- Holds
- Extracts

Oscillators

Shaft Diameters 610mm to 4264mm (24” to 14ft)

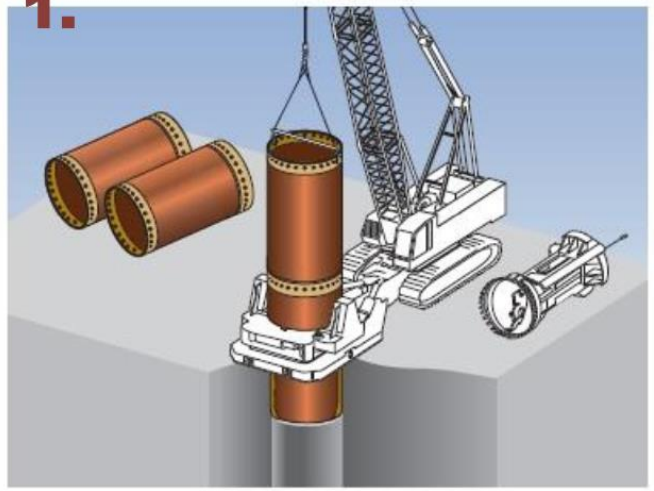
Oscillators are excellent for:

- Installing perm or temp casing
- Unstable ground conditions.
- Caving conditions, loose sands, gravel.
- Eco friendly:
  - Anti-vibration
  - Water is only drilling medium employed.

Anti-Vibration:

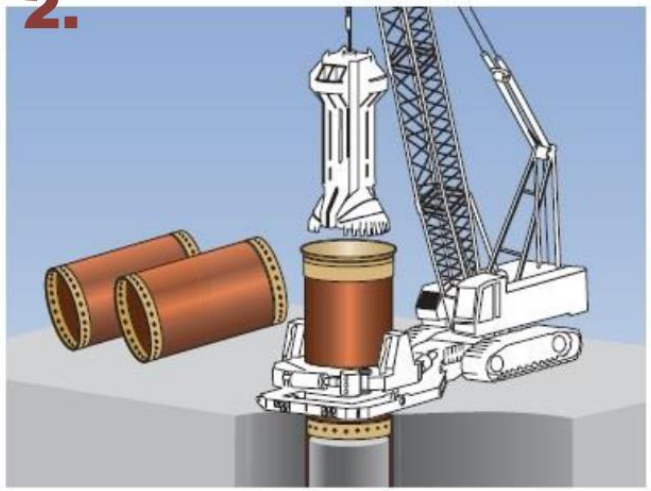
- Safe for existing structures
- Railways
- Marine work

1.



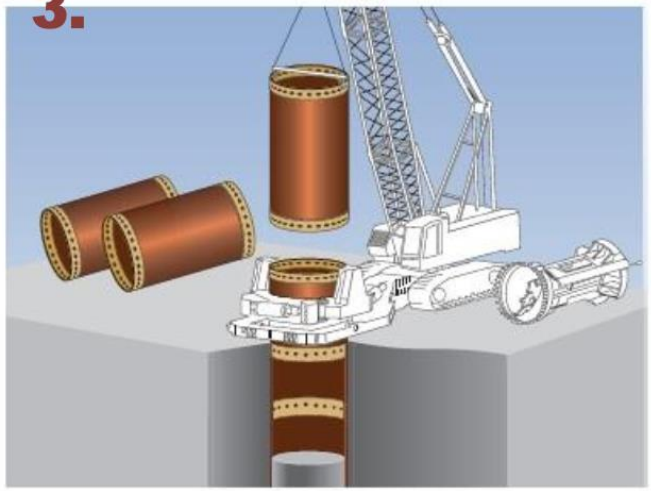
Install starter casing equipped with cutting teeth. Add new casing section with bolted connection.

2.



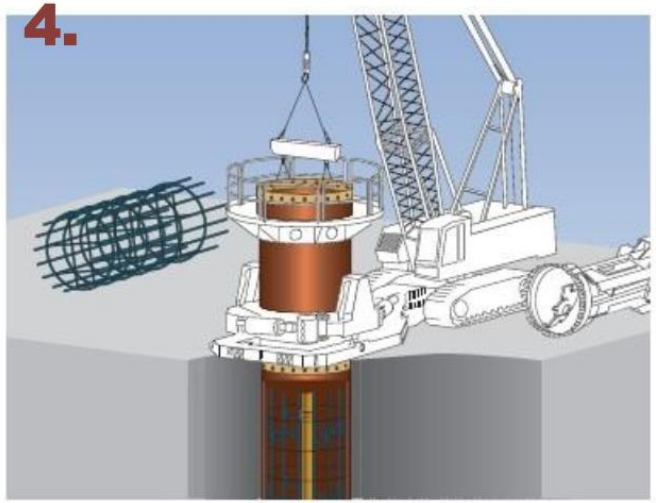
Excavate soil continuously during casing installation. Maintain water head inside casing to balance external hydrostatic head at all times.

3.



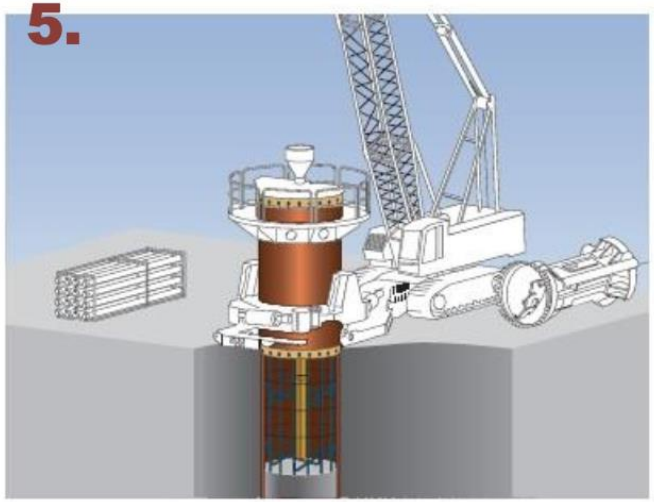
Add new casing sections until pile has been excavated to depth. Keep casing tip ahead of excavation at all times.

4.



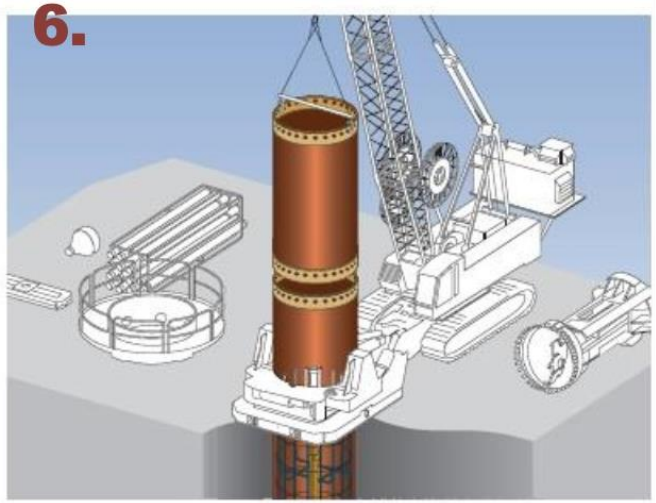
Install reinforcement cage and suspend at proper elevation.

5.



Pour concrete using sectional tremie pipe. Maintain concrete head above casing tip at all times.

6.



Remove casing and tremie pipe sections simultaneously as concrete is poured.

BNSF Railroad BR 482.1 West Approach Replacement

Bosworth, MO, USA

Contractor	OCCI, Inc.
Casing Diameter	2,200 mm and 3,352mm
Shaft Depth	37 m (120')
Equipment	C250 and C3352G Oscillators

Replacement was needed of an old BNSF railroad bridge over the Grand River in Bosworth, MO. The new bridge foundations, built from a specially designed trestle and reaction frame, were installed slightly outside and under the foundations of the existing bridge while the old bridge was still being used. The extremely tight access and frequent flooding made this a challenging project.

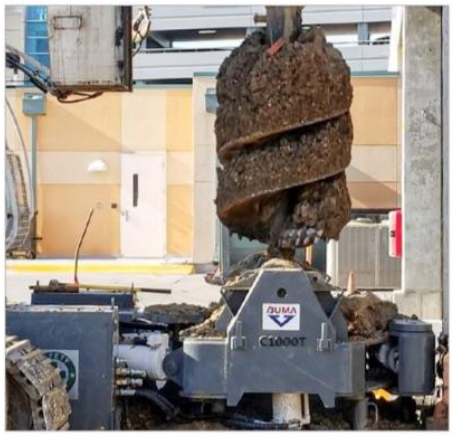
Once new foundations and falsework were complete, the contractor only had a 16-hour window to remove the existing span and place the new span before new bridge would see its first traffic.

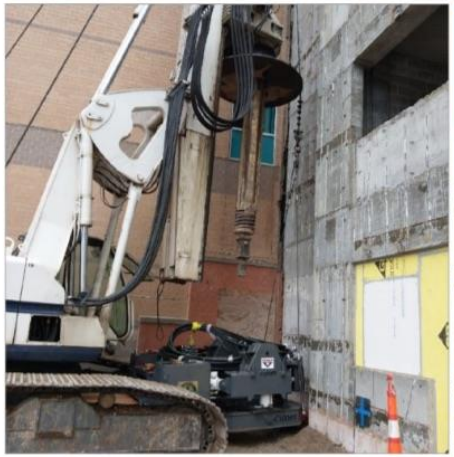
Omaha Children's Hospital Expansion Project

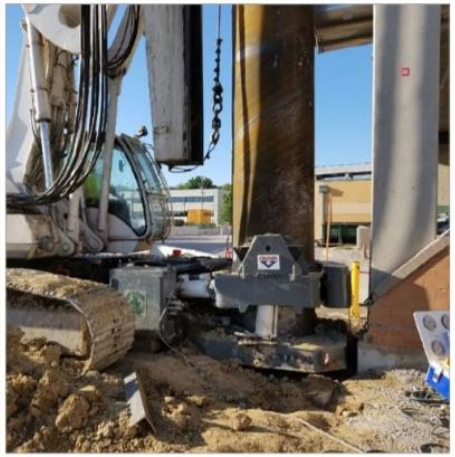
Omaha, NE, USA

Contractor	Hayes Drilling
Casing Diameter	1,000 mm and 1,300 mm
Shaft Depth	28m (90')
Equipment	C1000T and C1300T

A large expansion to the Omaha Children's Hospital called for specialized equipment to install the foundations due to potential caving, limited access, and placement right outside existing hospital walls where services and surgery was still being performed during construction .







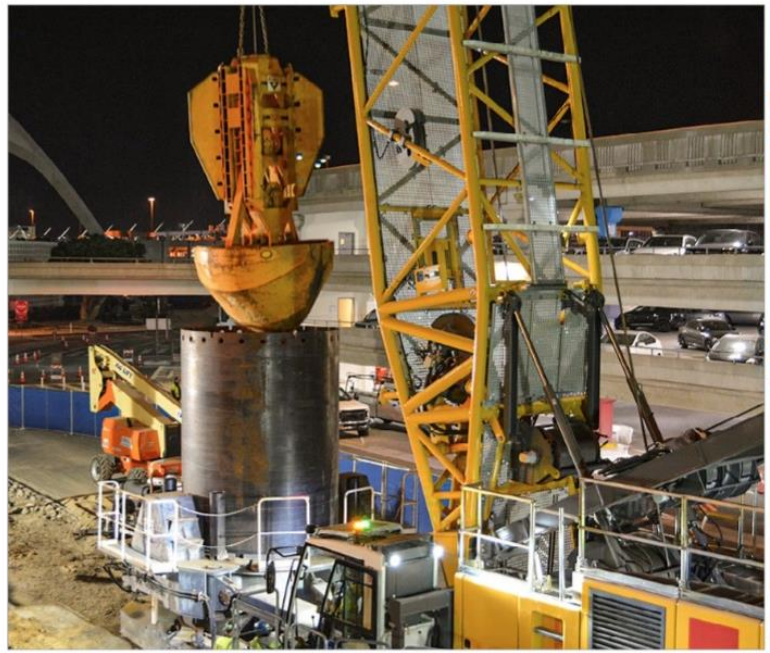
LAX International Airport Automated People Mover Project

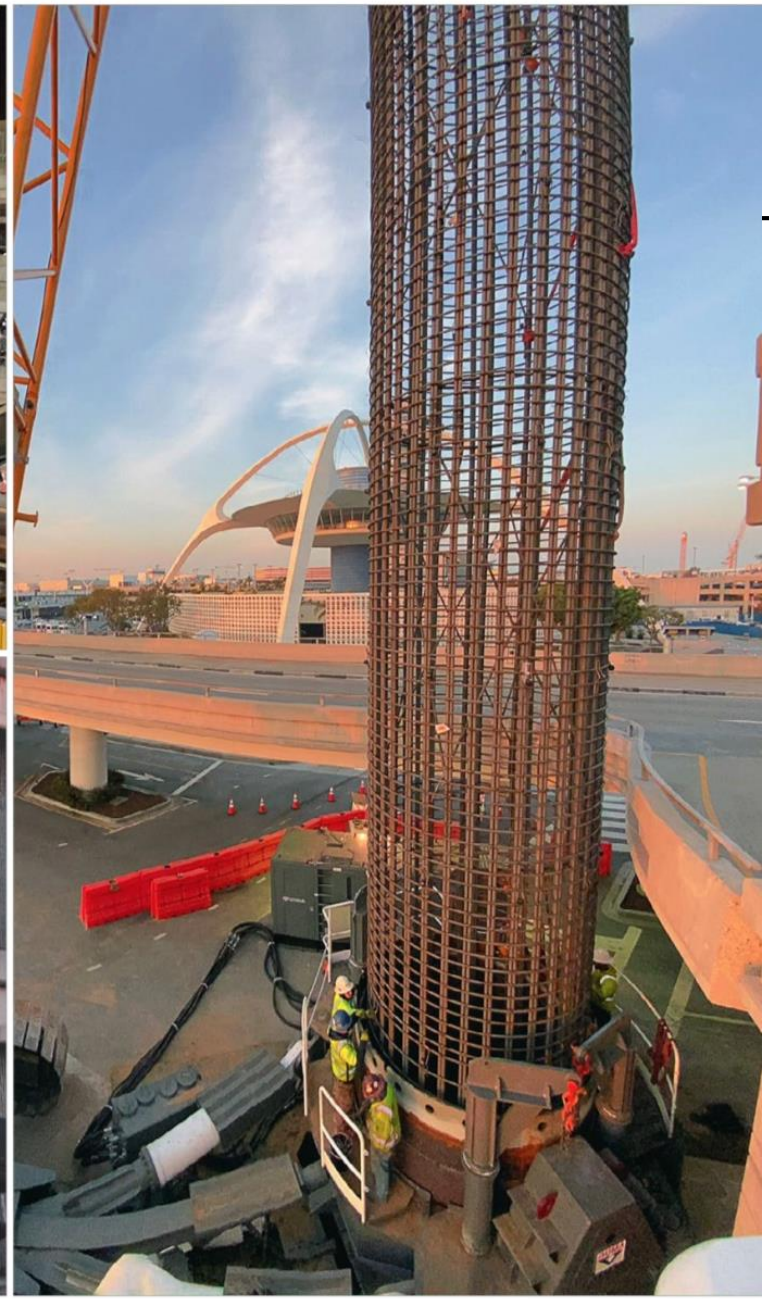
Once completed, the automated people mover at LAX will run every two minutes and serve a total of six stations above ground, with three stations being at the LAX's central terminal area. The other three will be at a future ground transportation hub for shuttles and taxis, a future consolidated rental car facility, and a future light rail station on the Metro Crenshaw Line.

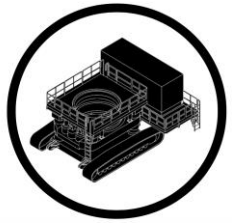
Foundations are currently under construction using both temporary and permanent casing ranging from 6' to 11', being installed by multiple casing oscillators.

Los Angeles, CA, USA

Contractor	Legacy Foundations
Casing Diameter	2,000 mm – 3,352mm
Casing Driving Depth	30 m (100')
Equipment	C2,000T, C2500H, C3,000G, and C3352G Oscillators







Rotators

Shaft Diameters 1000mm to 4000mm (3ft to13ft)

- Secant Walls
- Buttress Piles
- Large Boulders
- Removal of Existing Piles

Gerald Desmond Bridge Replacement

Replacement of the bridge connecting downtown Long Beach to Terminal Island was needed to accommodate increased traffic and provide clearance for larger vessels since it was first build in the 1960s. The new cable-stayed design required 351 CIDH piles, ranging from 1.5-2.5m in diameter and reaching depths of 31-56m. To drill the CIDH piles, the foundation team used casing oscillators and rotators to advance temporary steel casing through the many soil types found at the site.

Long Beach CA, USA

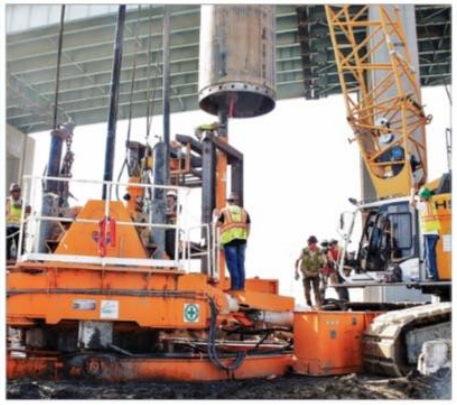
Contractor	SFI JV
Casing Diameter	1,500 mm, 1,800 mm, 2,500 mm
Equipment	CR2500 Rotator, C2500H and C3,000H Oscillators

Various Applications

- Removing Previous Concrete Piles in Remodeling Construction

- Overlap Cutting in Secant Piling

- If there is inclined rock layer required to be penetrated
- If there is big boulder required to be penetrated



HART Airport Guideways and Stations Project

The second phase of the Honolulu Rail Transit Project is currently under construction in Honolulu. Designed as a mostly-elevated system, featuring elements from both heavy rail systems and light metros, this urban rail system is being built to mitigate traffic congestion issues on the island.

The current phase includes over 5 miles of rail between the Middle Street Transit Center Station and Aloha Stadium. The urban location and soil conditions ranging from extremely hard rock to very poor soils have made for challenging foundation installation.

Honolulu HI, USA

Contractor	STG JV
Casing Diameter	2,200 mm, 3,000 mm, 3,600 mm
Casing Driving Depth	57 m
Equipment	CR3,000 Rotators, C3600H Oscillator, and C2200T Oscillator

Questions?

For More Information

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