

W.C. MALONEY

Premier Demolition Experts

GPR Scanning

Overview

Ground-penetrating radar (GPR) is a key service provided by W.C. Maloney (WCM). It is a non-destructive testing technique that uses electromagnetic waves to image the subsurface of concrete structures. GPR scanning of concrete is a valuable tool for inspecting and evaluating the condition of concrete, detecting defects, and locating rebar and other embedded objects.

During GPR scanning, a GPR system is used to transmit high-frequency electromagnetic waves into the concrete, and the reflected signals are recorded and analyzed. The time delay between the transmitted and received signals, as well as the strength of the reflected signals, are used to determine the depth and characteristics of the subsurface features.

Detectable subsurface features include:

- Embedded objects such as rebar, pipes, and conduits.
- Air pockets and voids in concrete, as well as delamination's between layers of concrete.
- Cracks and fractures.

GPR scanning of concrete is commonly used in construction and civil engineering projects, as well as for maintenance and repair of existing structures.

The Benefits

Understanding what lies beneath the service of structures and soils designated for demolition or excavation has obvious benefits from a financial and efficiency standpoint.

- Identify and avoid sub-surface pitfalls to reduce business risks, project delays, and interruptions.
- Avoid damaging critical infrastructure by tracing rebar, utilities, electrical conduits, cables, voids, and other risk-carrying materials.
- Ensure an accurate project plan to minimize costly project threats.
- Avoid expensive repairs.





Our Expertise

During a demolition or site clearing project, it is critical to find a subcontractor who can uncover problems and complexities within the various surfaces. W.C. Maloney (WCM) utilizes leading-edge GPR Scanning technology and has trained technicians who can accurately identify channels for cutting and areas to be avoided when demolishing a structure.

Concrete structures are often quite complex internally, containing a variety of rebar, anchors, channels for utilities, and non-metallic objects. Identifying these risk areas is important when undertaking projects large and small. GPR Scanning is a complementary service to WCM's concrete cutting and core drilling capabilities.

A Case in Point

Sutter Middle School (Sacramento)

W.C. Maloney's GPR scanning expertise was highlighted in a recent HVAC upgrade project at Sutter Middle School. Initially brought in by Otto Construction for demo and abatement of old hydronic piping and heater units, we were able to respond to an urgent need for GPR scanning. Reacting quickly, our team had the tools in place to scan, core drill, and saw cut; we were able to keep the project on schedule and moving forward successfully. We seamlessly adapted to numerous additional onsite project changes, showcasing the synergies and teamwork inherent in our wide range of capabilities.

Our responsiveness and skillset led to becoming the priority for GPR scanning for the general contractor, and the project electricians and mechanical subs complimented the team on the detailed and precise output of the scans compared to the competition.