

GPR METHOD FOR REBAR, POST TENSION CABLE AND CONDUIT DETECTION IN CONCRETE



Ground-penetrating radar (GPR) is a high-frequency electromagnetic method that **GEOVision** commonly applies to a number of engineering problems associated with both new and aging concrete structures.

A GPR system radiates short pulses of high-frequency EM energy into the ground from a transmitting antenna. This EM wave propagates in the ground at a velocity that is primarily a function of the relative dielectric permittivity of subsurface materials. When this wave encounters the interface of two materials having different dielectric properties, a portion of the energy is reflected back to the surface, where it is detected by a receiver antenna and transmitted to a control unit for processing and display.

Benefits of GPR Methods in Concrete:

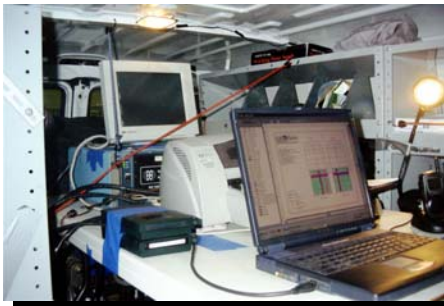
- Map rebar/PT cable/conduit position accurately
- Determine depth to rebar/PT cable/conduit
- No harmful emissions
- Detect PVC Conduit
- Rapid data collection/cost effective
- Only access to one side of concrete required
- Onsite results/ full scale printouts



No Access to Back of Concrete



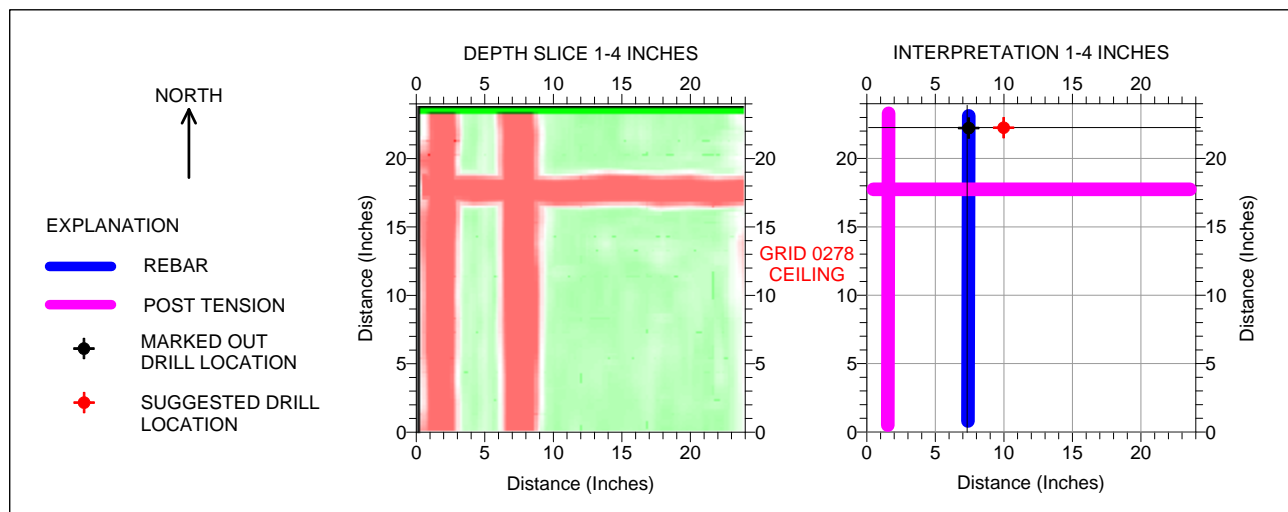
Portable Data Collection



Onsite Processing



Detect PVC Conduit



Sample 3D Structure Scan Data with Interpretation