



CONCRETE INSPECTION SYSTEMS



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ABOUT GSSI



THE STANDARD IN CONCRETE SCANNING

Every jobsite has hidden challenges. Before cutting, coring, or drilling into concrete, it's critical to know what lies below the surface. Striking rebar, post-tension cables, or live conduits doesn't just delay work—it endangers lives and reputations.

WHY CONCRETE SCANNING MATTERS

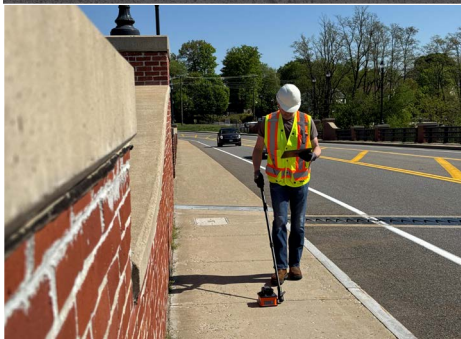
- **Avoid Costly Mistakes:** Prevent damage to embedded structural elements and utilities.
- **Enhance Safety:** Minimize the risk of injury from hitting live conduits or tensioned cables.
- **Keep Projects on Track:** Reduce unplanned delays and rework by knowing what's below.

TRUSTED WORLDWIDE

With GSSI's advanced concrete scanning systems, you gain the confidence to work faster, smarter, and safer — protecting both your team and your reputation.

TYPICAL USES

- Structural Analysis and As-Built Verification
- Rebar and Conduit Detection
- Post-Tensioned Cable Locating
- Concrete Thickness Measurement
- Void and Delamination Detection



FLEX^{NX}

Flex NX[®] delivers all-in-one simplicity, minimal navigation, and innovative data collection.

Powered by Nexus, Flex NX is today's most capable and efficient concrete scanner, and it is brought to you by the most trusted name in the industry.

- Dual antennas
- Rapid 3D visualization
- Wireless connectivity to satellite antennas
- No subscription required





WIRELESS MADE EASY

Flex NX® allows for effortless pairing of wireless NX accessory antennas using Tap-to-Connect technology as well as wireless data transfer.

GET THE FULL PICTURE

Get the full picture using our one-pass cross polarization design to quickly and easily locate and identify targets.

MAKE THE COMPLEX SIMPLE

Use Flex NX's innovative Flex Mode to quickly highlight areas of interest in real-time without grids.

DELIVER RESULTS

Accurately mark your findings on the ground, then use GSSI Fusion to create and send interactive reports before you leave the jobsite.

SIMPLE



TACKLE ANY JOB

The flexibility of your Flex NX and NX wireless antennas allows you to succeed no matter what the jobsite throws at you. Combine NX25 or NX15 with Flex NX, or use them independently as standalone systems.

CHOOSE YOUR SETUP

Flex NX and NX antennas are designed with a universal mount to help reduce fatigue and provide better ergonomics. Switch between the handle, extension pole or off-the-shelf mounting accessories.

COMPLEX PROBLEMS, MANY SOLUTIONS

GPR data needs to be easy to collect and view. Flex NX provides multiple data collection and visualization modes, including the innovative and powerful Flex Mode. Now you have the flexibility you need to deliver trusted results.

YOUR TRUSTED PARTNER

You trust GSSI, the equipment we make and the results that you get from your system. In return, your customer trusts you and the results you deliver.

Every product we offer, including Flex NX, is built and tested with your jobsite environment in mind. Extreme heat, cold, dust and water are no match for your Flex NX system.

JOBSITE PROVEN

- Rated IP65
- -20°C to 50°C (-4°F to 122°F)
- High capacity Lithium-ion batteries

WE'VE GOT YOUR BACK

In addition to our industry-leading two year equipment warranty, our promise to you is to provide comprehensive training, unrivaled customer support and world class expertise.



TRUSTED

FLEX^{LT}®

Flex LT®, powered by Nexus, is a handheld concrete scanning system designed for contractors who need to locate and mark targets quickly and accurately—without compromising on performance or cost.

The simplicity of Flex LT means that you can complete your work faster without the need for complex setups or additional equipment. Just scan, mark and go.



SIMPLE



ALL-IN-ONE SIMPLICITY

Flex LT has an easy to use interface with minimal navigation, no wireless pairing, 7-inch integrated touchscreen and requires no subscription.

GET THE FULL PICTURE

Flex LT provides a complete view with one-pass cross polarization for efficient and accurate location of targets within concrete.

NO REGULATORY RESTRICTIONS

Flex LT meets strict regulatory requirements, ensuring smooth operation on any jobsite. With no camera or wireless connectivity, it is ideal for government sites and other secure environments.

DELIVER RESULTS

Accurately mark your findings on the ground, then use GSSI Fusion to create and send interactive reports before you leave the jobsite.

GRAB AND GO

Flex LT fits easily into our new lightweight backpack for effortless deployment on the jobsite. Say goodbye to carrying heavy cases up flights of stairs.

ENHANCED FLEXIBILITY

Need to see deeper or access small areas? Connect Flex LT to NX25 and NX15 satellite antennas using our optional wired NX Tether Module. Make your Flex LT a kit with an NX25, NX15 or both.

CHOOSE YOUR SETUP

The repositionable handle and universal mount are designed to improve ergonomics and reduce fatigue, giving you greater comfort and flexibility during field operations.



TRUSTED



YOUR TRUSTED PARTNER

You trust GSSI, the equipment we make and the results that you get from your system. In return, your customer trusts you and the results you deliver.

Every product we offer, including Flex LT, is built and tested with your jobsite environment in mind. Extreme heat, cold, dust and water are no match for your Flex LT system.

JOBSITE PROVEN

- Rated IP65
- -20°C to 50°C (-4°F to 122°F)
- High capacity Lithium-ion batteries

WE'VE GOT YOUR BACK

In addition to our industry-leading two year equipment warranty, our promise to you is to provide comprehensive training, unrivaled customer support and world class expertise.

ONE PASS CROSS POLARIZATION

Flex NX and Flex LT use two antennas - standard and cross polarized - to maximize target identification and overcome the challenges of complex scanning jobs.

Don't settle for an incomplete image:
See two datasets simultaneously and get the full picture!

SIMPLE CONCRETE ENVIRONMENTS:

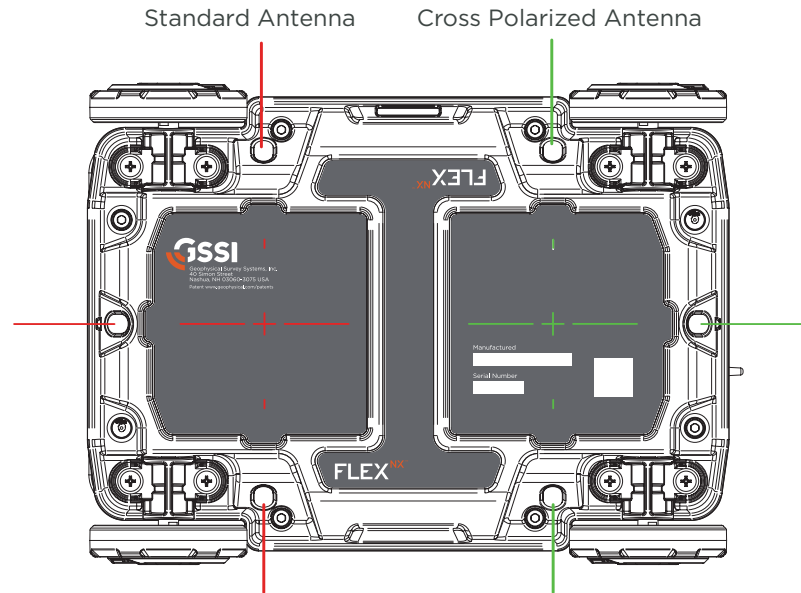
Use the standard orientation antenna in simple concrete environments to quickly highlight metallic targets.

COMPLEX CONCRETE SETTINGS:

Use the cross-polarized antenna in situations where reinforcement is dense and other targets are expected within and below the slab.

ALL SITUATIONS:

Scan with both antennas every time and be confident that nothing was missed.

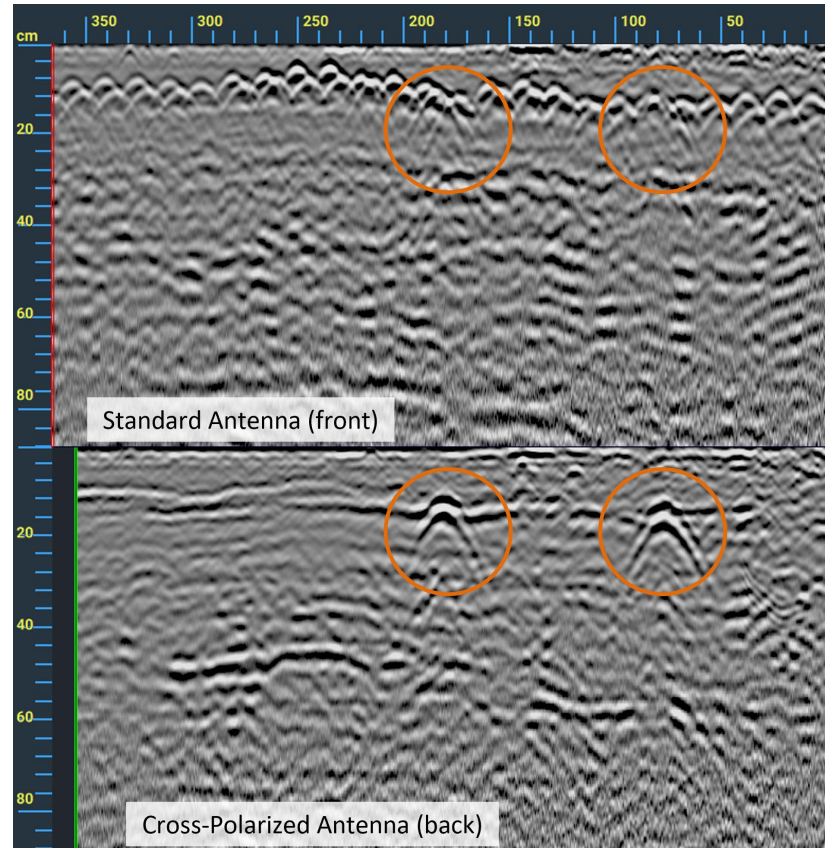


NOTE: Flex NX has lasers and Flex LT has colored markers

GET THE FULL PICTURE

Flex NX and Flex LT are unrivaled in their ability to find **hidden** and **obscured** targets. Each system incorporates two built-in antennas for effortless one-pass cross polarization. Using two different, but complimentary, antennas increases the likelihood of detecting every target in the slab.

Flex systems are especially effective at distinguishing **post-tension cables** from rebar, locating **plastic conduits**, and confirming **slab thickness** in congested areas. Scan with two antennas every time, and ensure that no detail goes unnoticed.



EVERYTHING YOU NEED, READY TO GO

Each Flex NX and Flex LT system is bundled with the essentials to keep you working efficiently all day long. Every system includes:

- A dual-bay battery **charger**
- **Two high-capacity Lithium-ion batteries** for extended field use
- Your choice of transport:
 - A **rugged transit case** for maximum protection, or
 - Our newly-designed **Flex backpack**, ideal for hands-free mobility across the jobsite

Plus, for added comfort and convenience, an **accessory extension pole** is available.



Flex NX with Backpack Option



Flex LT with Transit Case Option



THE ULTIMATE FLEXIBILITY FOR 3D DATA COLLECTION

FLEX MODE & FLEX GRID

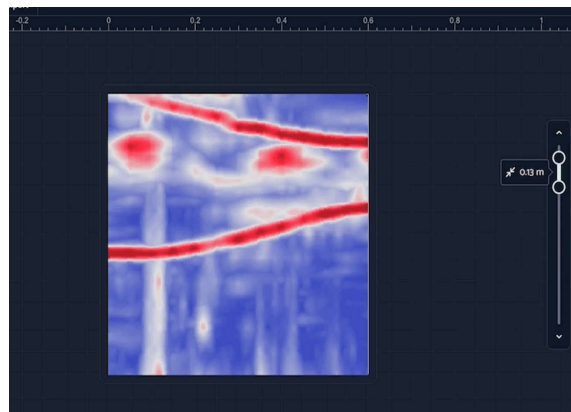
Today's clients demand more realistic GPR deliverables and sometimes 2D profiles are difficult to read. That's why we offer two 3D data collection modes, Flex Mode and Flex Grid, to deliver impactful results that all customers can understand.

FLEX MODE, exclusive to Flex NX, is a quick and easy rough-out tool for enhancing your GPR toolkit. Traditional 2D scanning is challenging for targets at multiple depths and orientations. Flex Mode reveals the layout of targets without the need for grids.

FLEX GRID is ideal for advanced real-time 3D visualization, transferring accurate measurements back to the surface, and organizing grid scans for post-processing. Mark immediately and cut with confidence, create impactful report visuals, or dive into advanced analyses off site. No matter your project needs, Flex Grid adapts to your workflow.



Flex Mode data on Flex NX.



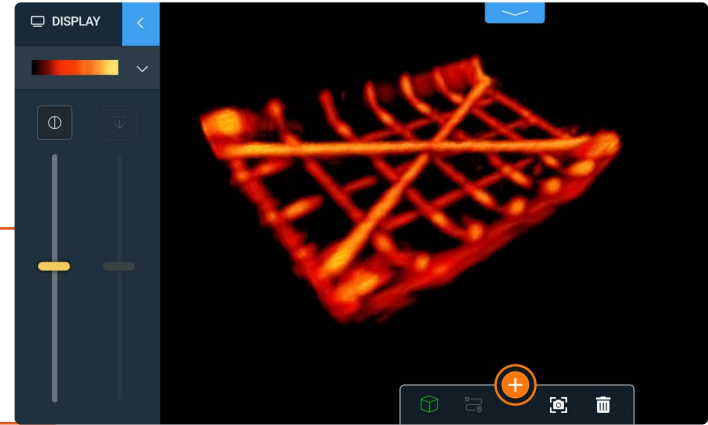
Detailed Flex Grid data processed in Geolitic.

FLEX MODE

A NEW DIMENSION OF ANALYSIS

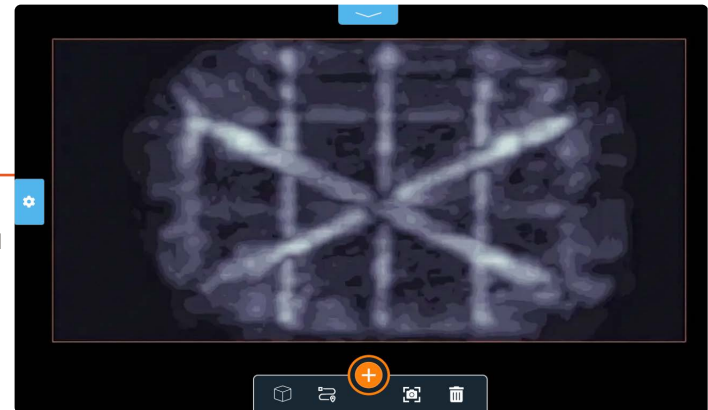
Flex Mode incorporates a fully rotatable **3D Volume View** enabling you to observe your data at different angles. This feature adds a new dimension to field analysis by revealing vertical relationships between targets.

Using Flex Mode's 3D volume view, rotating the model proved that the crossing conduits were installed above the rebar mat.



Flex Mode allows you to scan without using a grid, whether you want to capture a broader context for targets or focus directly on your area of interest. Use Flex Mode to scan a smaller area with no loss of resolution or image quality.

Flex Mode scan in Top Down View. The scan did not fill the entire 4 ft x 2 ft (120 cm x 60 cm) area, but revealed enough detail to set the stage for a traditional 2D mark out.



FLEX GRID

ADVANCED IMAGING FOR ACCURATE MARKOUTS

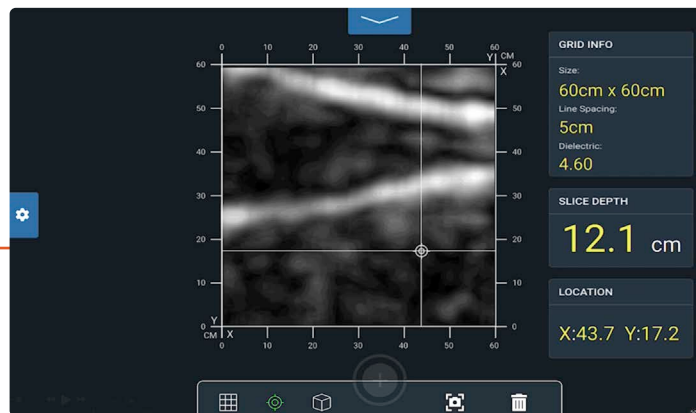
Leverage Flex Grid for more comprehensive analysis and visualization on either Flex NX or Flex LT. This grid-based collection method features advanced on-screen 3D visualization. View target orientation using top-down slices or freely rotate your volumetric data.

Rotate your data to better understand the orientation of complex targets and features.



Mark with confidence using accurate on-device measurements. Export screengrabs for basic reports or 3D grid-based data to RADAN or Geolitix for advanced deliverables.

View top-down slices and position the on-screen cursor for added precision on your markouts.



NX25[®]

SMALL AREA SYSTEM

NX25[®], powered by Nexus™, makes scanning easier than ever. This lightweight and compact antenna is purpose-built for reaching walls and ceilings and accessing tight spaces. With its intuitive design, the new Nexus Elements™ Interface simplifies routine tasks and ensures that even basic operations are seamless and efficient.

- Effortlessly pair NX25 to any modern phone or tablet. No app required - directly connect through Wi-Fi and a web browser and you are good to go.
- NX25 was designed with your job conditions at the forefront. Use the adjustable survey wheel to easily switch between standard, cross polarized, and side car scanning based on the task at hand.
- NX25 is ready for work and includes two Lithium-Ion batteries that provide a combined battery life of 10+ hours.

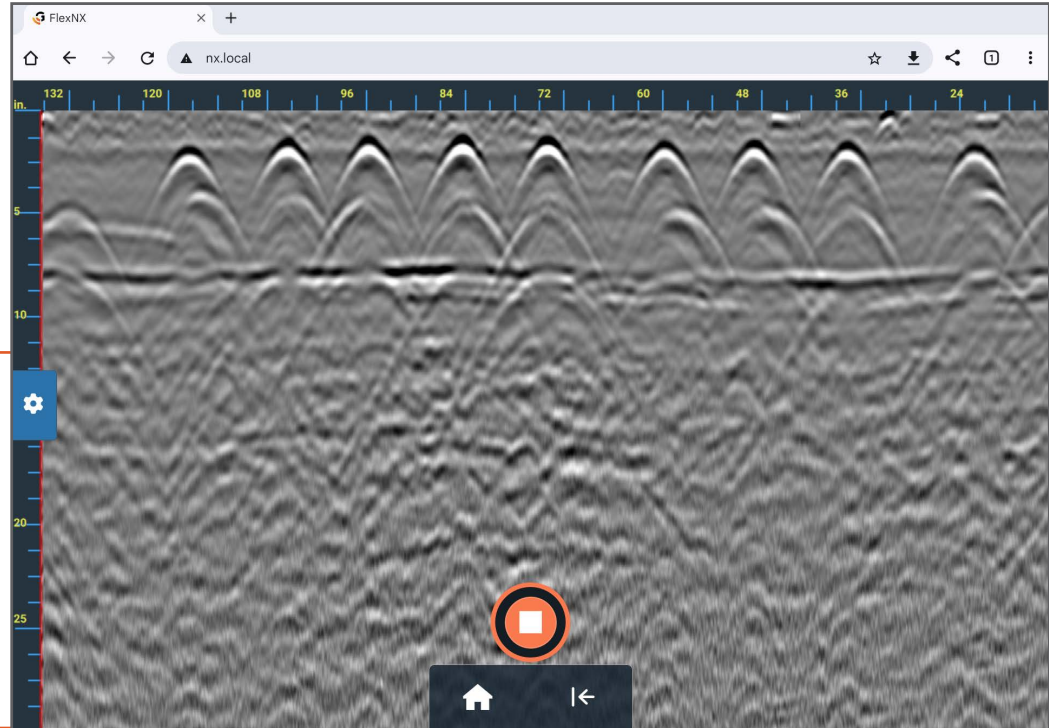
Note: NX25 Small Area System cannot save data on its own without being connected to Flex NX or Flex LT.



NX25 BEST IN CLASS PERFORMANCE IN A COMPACT SIZE

This data is a screen shot taken from a tablet using NX25 Nexus Elements.

GPR data was collected on a vertical concrete wall showing two layers of rebar and a possible air void behind the wall.



NX15[®]

DEEP TARGET SYSTEM

Inspecting thick slabs, slab-on-grade surfaces, and vertical columns has never been easier. Engineered for enhanced penetration, the NX15[®] offers a typical depth range of 0-150 cm (0-60 in) depending on site conditions.

Purpose-built for scanning thick concrete and locating utilities below grade, NX15 pairs intuitive operation with the new Nexus Elements™ Interface. Scan, mark, and move quickly from one task to the next, streamlining your workflow on-site.

- Effortlessly pair NX15 to any modern phone or tablet. No app required - directly connect through Wi-Fi and a web browser and you are good to go.
- NX15 was designed with your job conditions at the forefront. Use the adjustable survey wheel to easily switch between standard, cross polarized, and side car scanning based on the task at hand.
- NX15 is ready for work and includes two Lithium-Ion batteries that provide a combined battery life of 10+ hours.

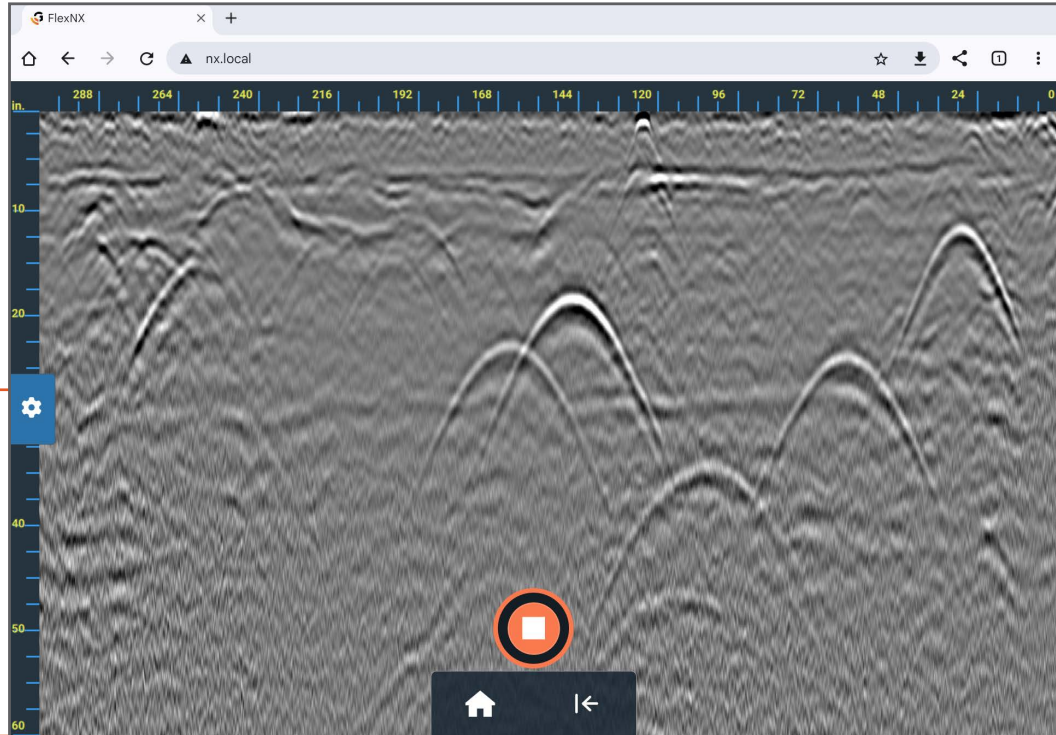
Note: NX15 Deep Target System cannot save data on its own without being connected to Flex NX or Flex LT.



NX15 DELIVERING RESOLUTION AND DEPTH

Important targets could be installed below a concrete slab.

Gain extra depth penetration while still resolving small, shallow targets inside the slab.





DELIVER RESULTS

You take pride in a job well done. Showcase your commitment to excellence and rise above the competition by delivering reports that are as high quality as your markouts.

GSSI Fusion is an easy-to-use reporting tool that delivers professional results directly from the field.

PURPOSE-BUILT REPORTING

A dedicated platform with a modern interface for creating polished, professional-grade reports tailored to client needs.

FLEXIBLE & AFFORDABLE

Offers a free tier for single users and scalable pricing for teams, ensuring you pay only for what you need.

OPTIMIZE DATA MANAGEMENT

Seamlessly imports Nexus project data, supports legacy datasets, and provides tools to edit, reorganize, and describe results with ease, all while keeping your data safe and secure.

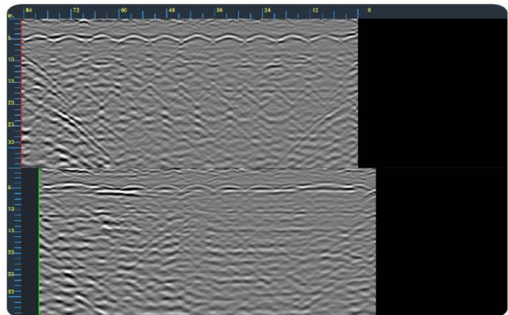
ON-SITE EFFICIENCY

Enables report creation and delivery directly from the field, saving time and ensuring timely communication with clients. Supports individual and team workflows, ensuring high-quality, visually impactful reports every time.

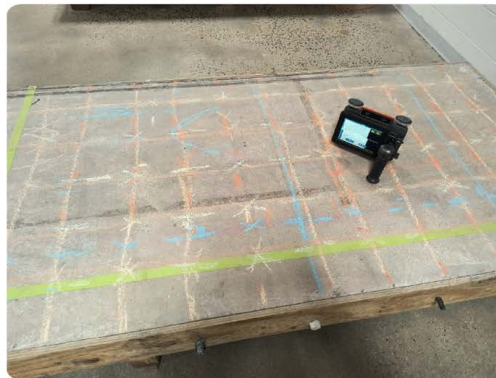
GSSI FUSION

EASY TO USE REPORT BUILDING FOR PROFESSIONAL RESULTS

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AOL_2



AREA FINDINGS

Ground-penetrating radar (GPR) is a valuable tool for locating both rebar and PEX pipe within a concrete slab. This technology is essential for avoiding accidental damage during construction or renovation projects. GPR works by sending radio waves into the slab and analyzing the reflections to identify subsurface objects. The distinct reflection patterns allow technicians to differentiate between metallic objects like rebar and non-metallic materials like PEX. This information helps create a clear map of the slab's interior, showing the precise location and depth of both rebar and PEX, allowing for safe and efficient drilling, coring, or cutting.

**TRY GSSI
FUSION
FOR FREE!**



POWERFUL, ACCURATE GPR DATA ANALYSIS



Geolitix was designed to simplify and automate nearly every step in GPR project workflows, from importing your field data to producing a final report. Geolitix is ideal for forward thinking organizations that value flexibility in data collection and expect a modern interface and streamlined data management.

IMPROVE EFFICIENCY

- Handle large, complex datasets without an expensive high-performance computer
- Complete advanced processing & 3D intensive tasks faster with intelligent automations

POWER AND SIMPLICITY

- Modern, user-friendly interface simplifies every step of the workflow from data import to final export
- New users can become proficient quickly

ROBUST MAPPING VISUALIZATION

- Instantly overlay GPR interpretations on satellite imagery, site plans, etc. for more context & understanding

EASY DATA MANAGEMENT & COLLABORATION

- Field crews can upload data directly from the job site
- Project files are stored securely and are accessible by authorized team members and/or clients from any location

**LEARN MORE
ABOUT GEOLITIX
SOFTWARE**

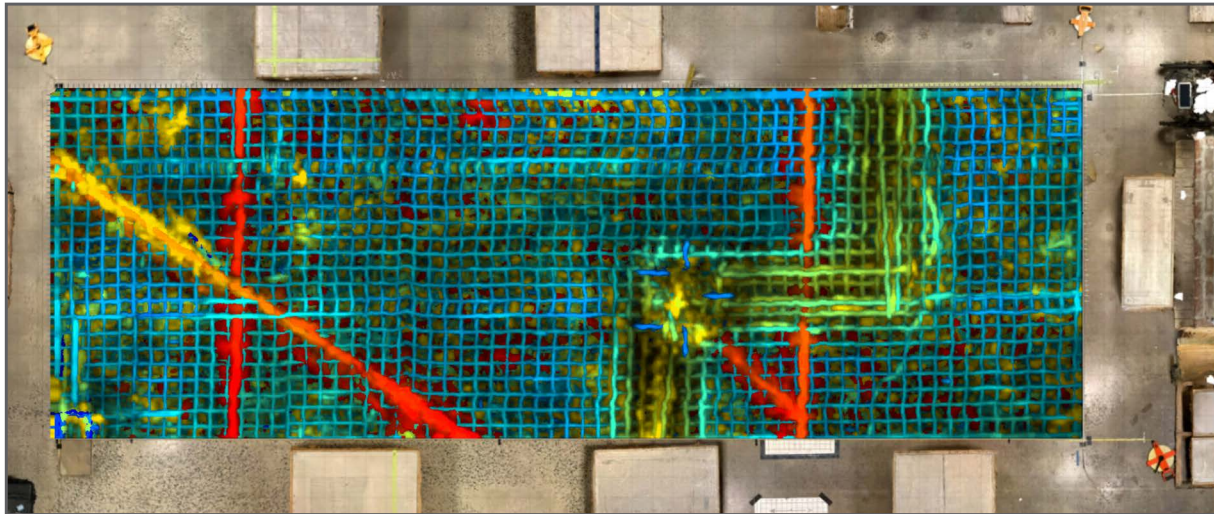


REVEAL WHAT'S HIDDEN

A large concrete grid, with 269 individual profiles totaling 4 GB, was collected with Flex NX and assembled in Geolitic.

The data revealed highly detailed information about previous saw cuts and wire mesh layout, and helped to visualize an area of thicker concrete with rebar or conduit running along the bottom of an area of dipping mesh. Below the slab were multiple PVC pipes and a rodent burrow.

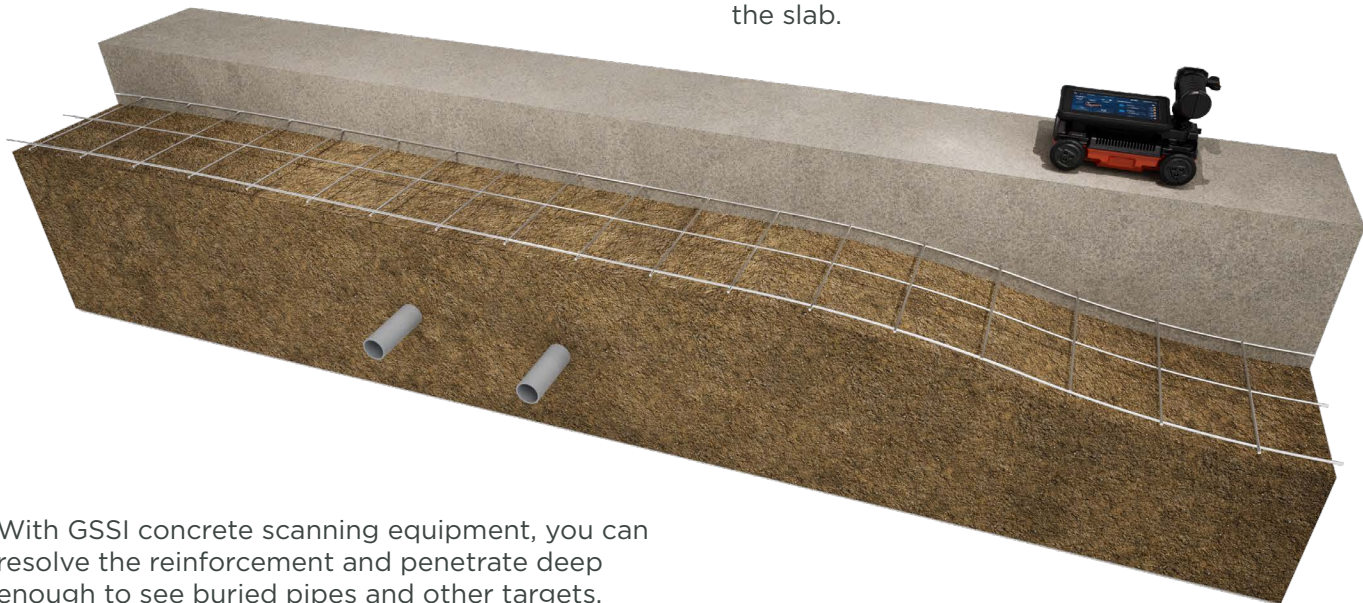
The Multislice feature in Geolitic provided a full top-to-bottom view of the GPR slices by assigning different colors to targets at various depths. The resulting image provided a powerful mission-planning tool for any subsequent cutting, coring, or drilling projects.



SCANNING SCENARIO #1:

Dipping Wire Mesh and Subgrade Utilities

Wire mesh is a common reinforcement option for concrete, and is regularly spaced and arranged in a grid pattern. Unlike rebar, wire mesh is somewhat flexible and can occur at different depths across the slab.



With GSSI concrete scanning equipment, you can resolve the reinforcement and penetrate deep enough to see buried pipes and other targets.

A common slab scenario is wire mesh reinforcement. Wire mesh targets are regularly spaced and are typically closer together than rebar. Each strand of wire creates a target.

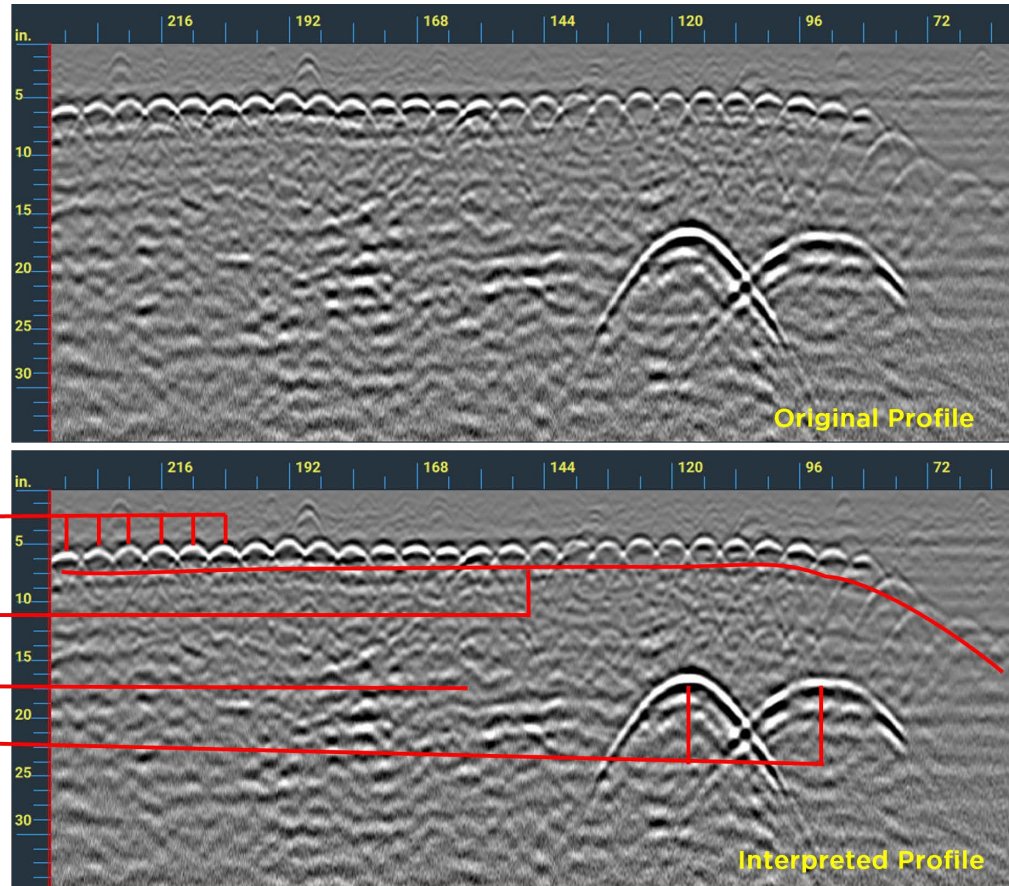
In some cases, scanning jobs require more than just identifying what is in the slab. Flex NX and Flex LT let you see what is below the slab, helping to prevent unintentional damage to buried utilities.

Individual Wire
Mesh Strand

Wire Mesh Layer

Subgrade Soil
Layers

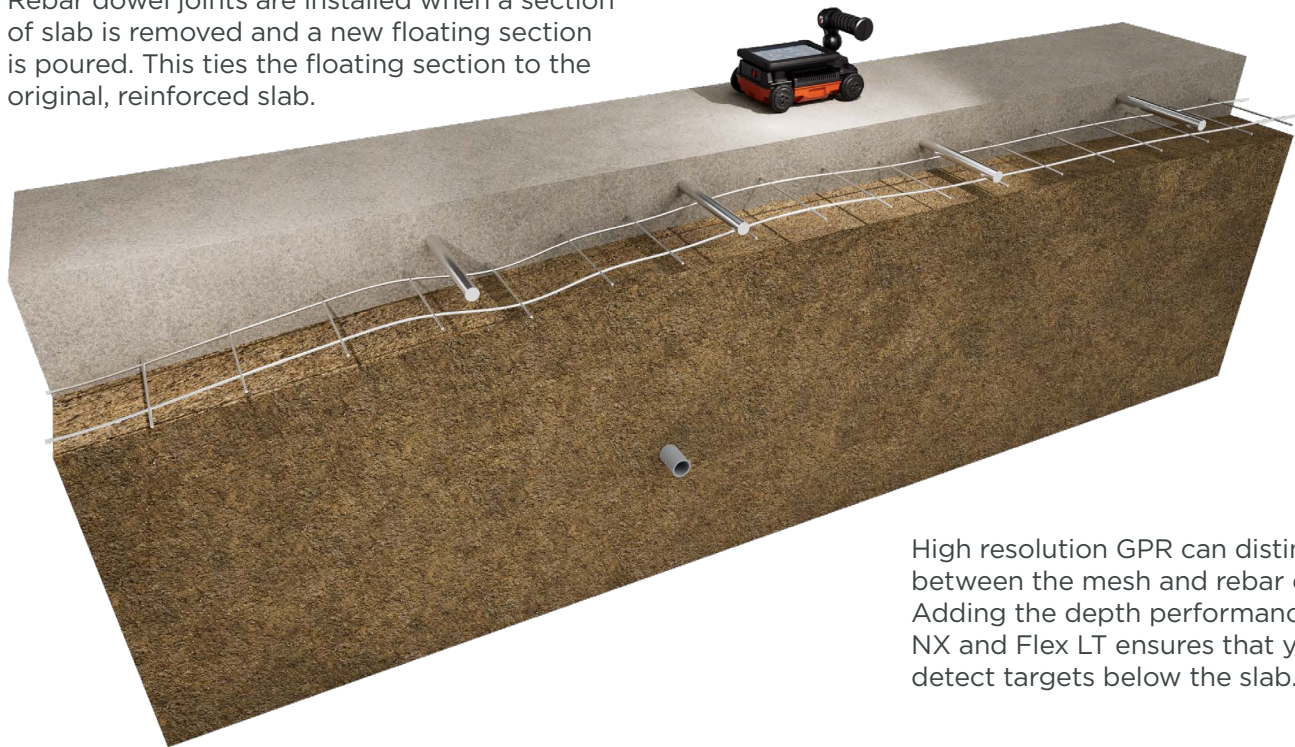
Subgrade
Utility Lines



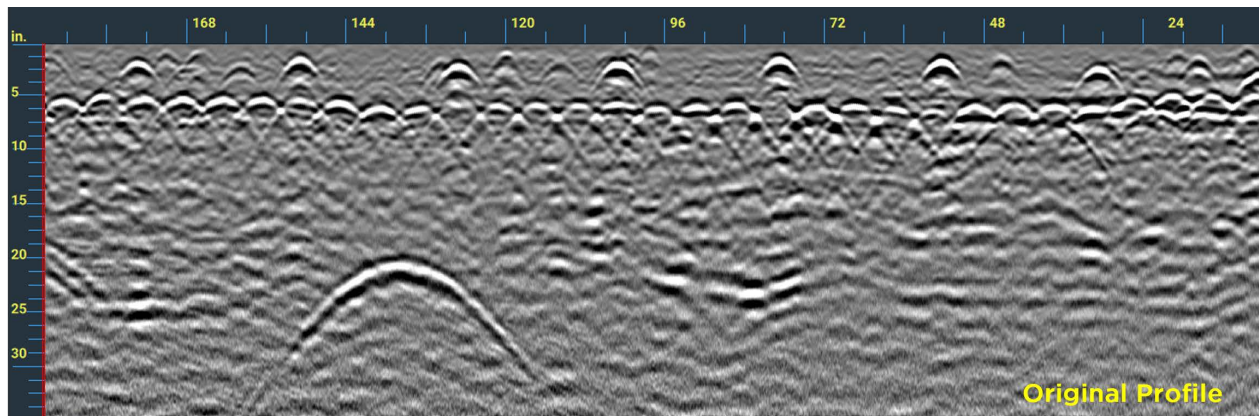
SCANNING SCENARIO #2:

Concrete Slab with Wire Mesh and Rebar Dowel Joints

Rebar dowel joints are installed when a section of slab is removed and a new floating section is poured. This ties the floating section to the original, reinforced slab.



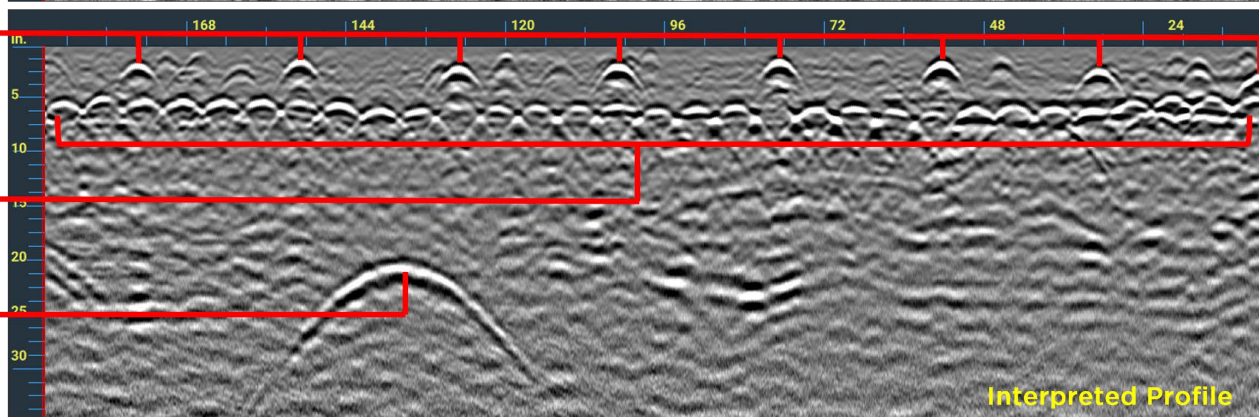
High resolution GPR can distinguish between the mesh and rebar dowel joints. Adding the depth performance of Flex NX and Flex LT ensures that you will also detect targets below the slab.



Rebar dowel
joints 24
inches on
center

Wire Mesh

Subgrade
Target

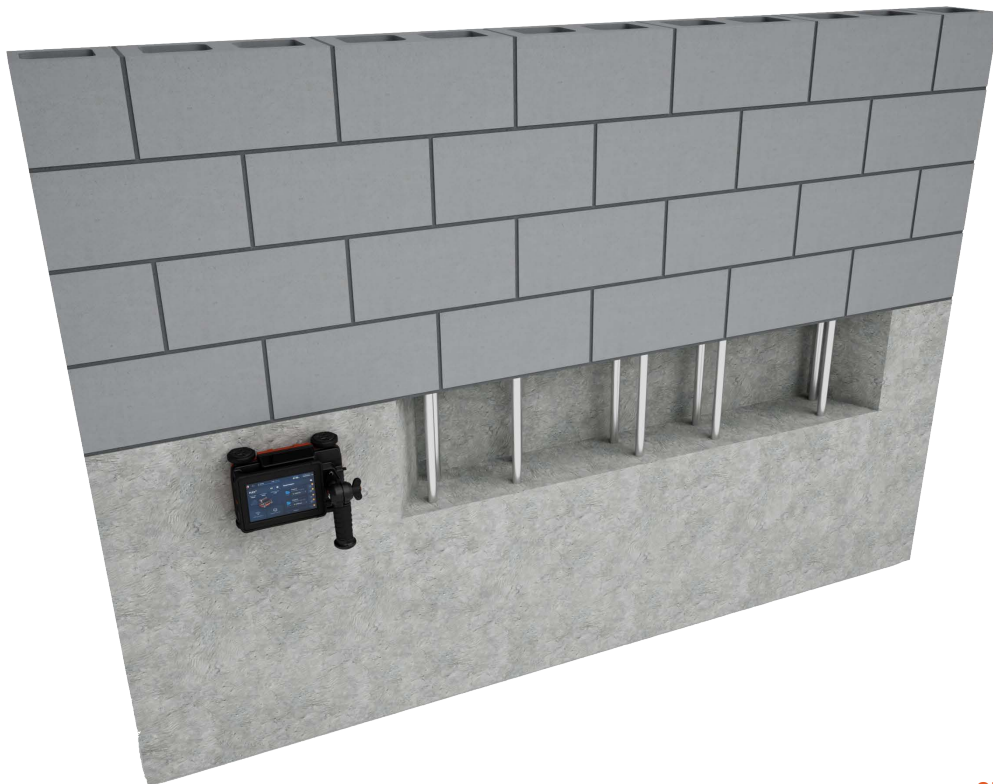


SCANNING SCENARIO #3:

Double Rebar Layer in a Poured Concrete Wall

Structural walls must be heavily-reinforced to ensure proper load-bearing capabilities. But what if you are rehabbing a building and want to cut, core, or drill through a reinforced wall?

Flex NX offers the perfect combination of resolution and depth to ensure that each reinforcement target is individually identified, regardless of the wall thickness. In most cases, penetrating behind the wall can show unexpected targets and help you avoid them.



Flex NX can image multiple rebar layers and the spacing between individual bars. Additionally, Flex NX can image the back of the slab and help you determine thickness.

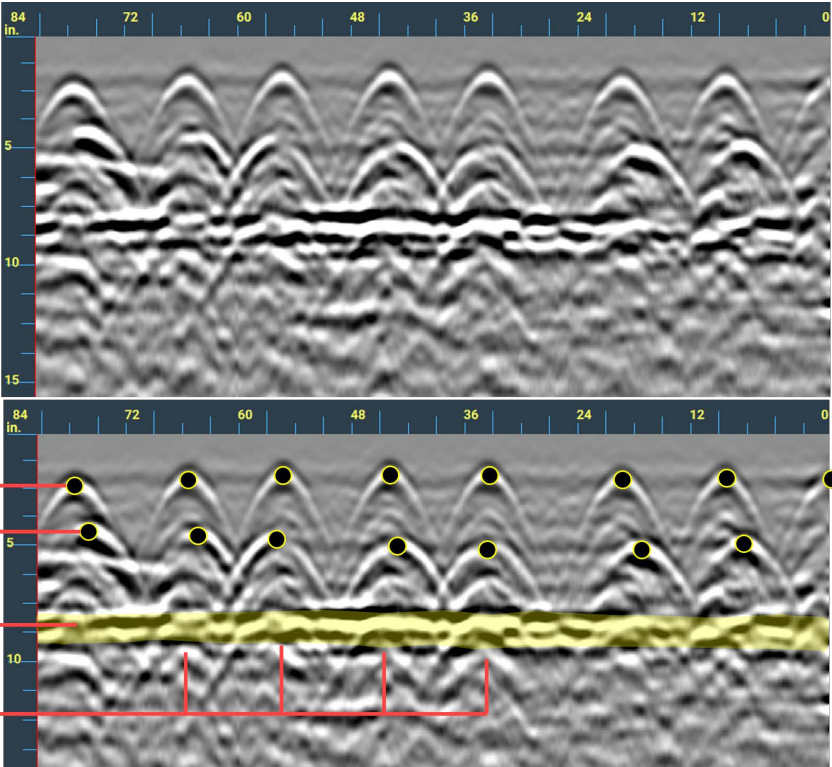
In this case, Flex NX revealed all of the rebar and the back of the concrete wall. It also identified an air void between the wall and the soil layers behind it, which could be a structural hazard in some buildings. Possible targets may be present behind the wall, which would require additional scanning.

Shallow rebar layer

Deeper rebar layer

Likely air void
behind wall

Possible targets
behind wall

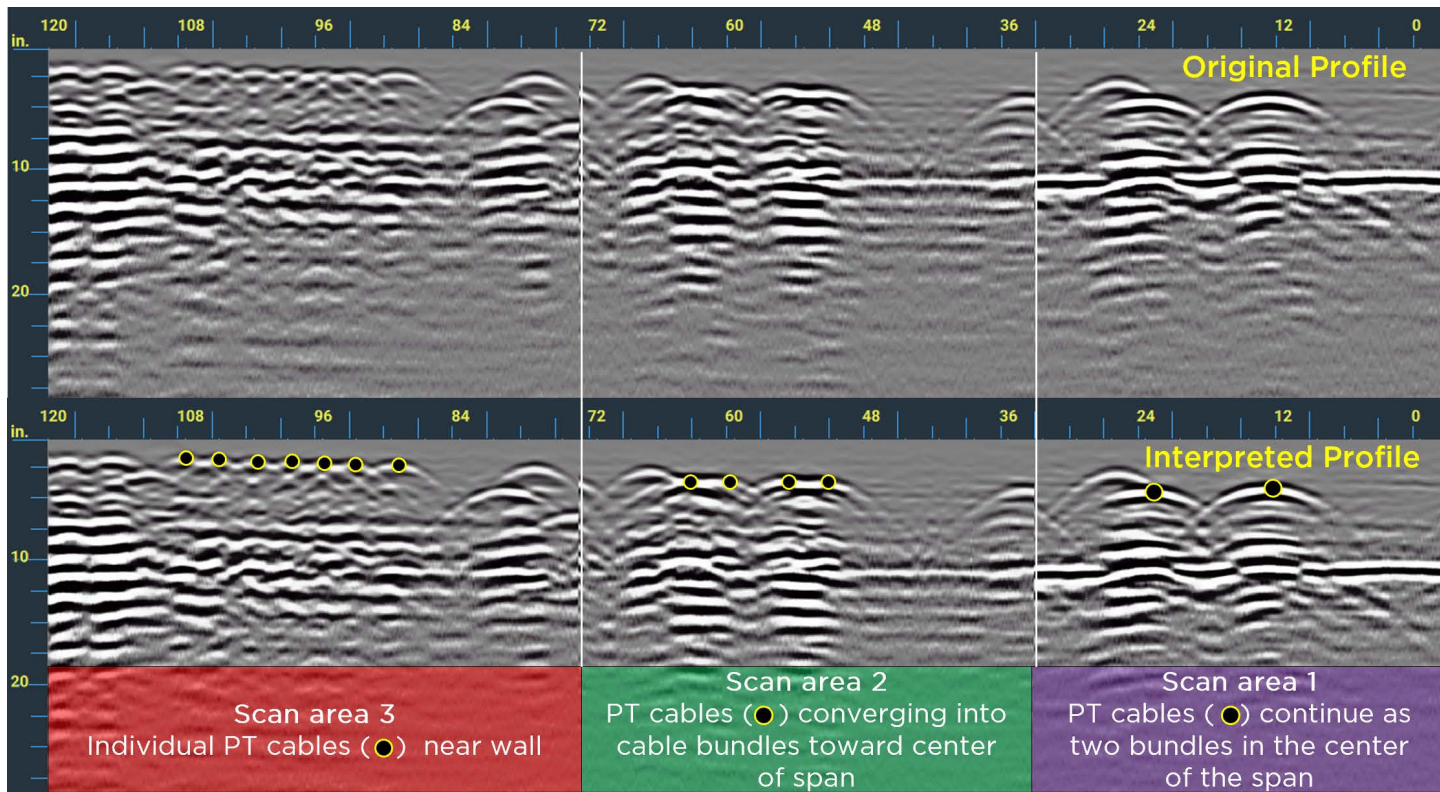


SCANNING SCENARIO #4:

Post-Tensioned Cables in a Parking Deck

Use your Flex NX or Flex LT to identify the concrete structures, and their characteristics, for any given jobsite. These concrete scanning systems help you find, identify, and avoid PT cables but it is important to have a thorough understanding of the relevant construction techniques and the unique information that GPR provides.





SPECIFICATIONS



	Flex NX®	Flex LT®	NX25™	NX15™
Depth range (in ideal conditions)	0-75 cm (0-30 in)	0-75 cm (0-30 in)	0-75 cm (0-30 in)	0-150 cm (0-60 in)
Cross pol scanning capable	One-pass	One-pass	✓	✓
Wireless remote control / viewing	✓		✓	✓
3-Dimensional imaging capabilities	Flex Mode, Flex Grid	Flex Grid		
Marking guides	Lasers	Colored Markers	Skid Plate Indents	Skid Plate Indents
Wireless project export	✓		with Flex NX	with Flex NX
USB project export	✓	✓	with Flex NX/LT	with Flex NX/LT
Onboard file storage	200GB	50GB	N/A	N/A
Ergonomic repositionable handle	✓	✓		
17.8 cm (7 in) High Resolution Touchscreen	✓	✓		
GSSI Fusion™ (.fsn) export	✓	✓	with Flex NX/LT	with Flex NX/LT
Software update via USB	✓	✓	with Flex NX/LT	with Flex NX/LT
Wireless software update			✓	✓
Extension pole compatible	✓	✓	✓	✓
Battery life in hours (commercially available 5Ah)	3	3	5	5
Free software upgrades	✓	✓	✓	✓
Warranty	Two Years	Two Years	Two Years	Two Years
Subscription required	No	No	No	No

TRAINING IS A BIG PART OF WHAT WE DO

2

NUMBER OF
FULL TIME
TRAINERS

46

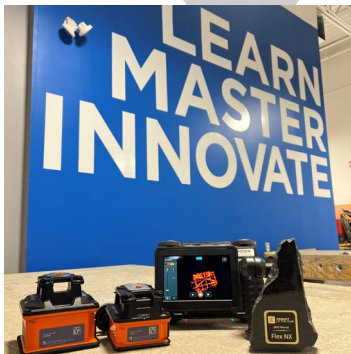
YEARS OF
EXPERIENCE
IN TEAM

100
+

NUMBER OF
CLASSES,
YEARLY

5K

DEDICATED
TRAINING SPACE
(SQ. FT.)



WHY GSSI

Geophysical Survey Systems, Inc. (GSSI) is a leading manufacturer of ground penetrating radar (GPR) equipment, headquartered in Nashua, New Hampshire. Established in 1970, GSSI pioneered the development of commercial GPR systems. Over the past 55 years, GSSI has consistently led the industry with innovations, including the first digital GPR system and the first high-frequency GPR system specifically designed for concrete scanning.

GSSI's products are utilized worldwide across various sectors, including concrete inspection, utility locating, road and bridge evaluation, geophysics, archaeology, and environmental assessment. Our equipment is renowned for its accuracy, quality, and reliability, providing non-destructive solutions for subsurface exploration and infrastructure inspection.

With a commitment to innovation and customer support, GSSI continues to offer a broad range of GPR equipment, serving clients on all seven continents.

NEPAL



PERU



INDONESIA



WE'VE GOT YOU COVERED



FIELD SERVICE & REPAIRS

We proudly build and repair all our systems in the USA

APPLICATION EXPERTISE

Talk with specialists and build a personal relationship



LET'S TALK ABOUT CONCRETE SOLUTIONS!

Whether you're scanning for rebar, post-tension cables, conduits, or voids—GSSI's concrete solutions are built to deliver accuracy, efficiency, and confidence on every jobsite.

Ready to see these products on your jobsite?

- Schedule a demo with us today - sales@geophysical.com
- Call us to talk to a concrete scanning expert - [800.524.3011](tel:800.524.3011)

Stay connected with us for tips, updates, real-world success stories and things happening at GSSI.



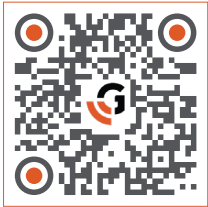
READY FOR MORE INFORMATION?



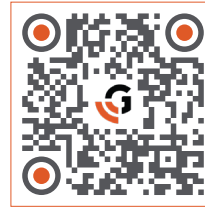
Let us help you select
your new GSSI concrete
scanning system



Try GSSI Fusion™
for **FREE!**



Check out the GSSI
Training Academy
videos on the Flex &
Nexus systems



Learn more
about Geolitix
software



Let us help you select
your new GSSI concrete
scanning system!

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