

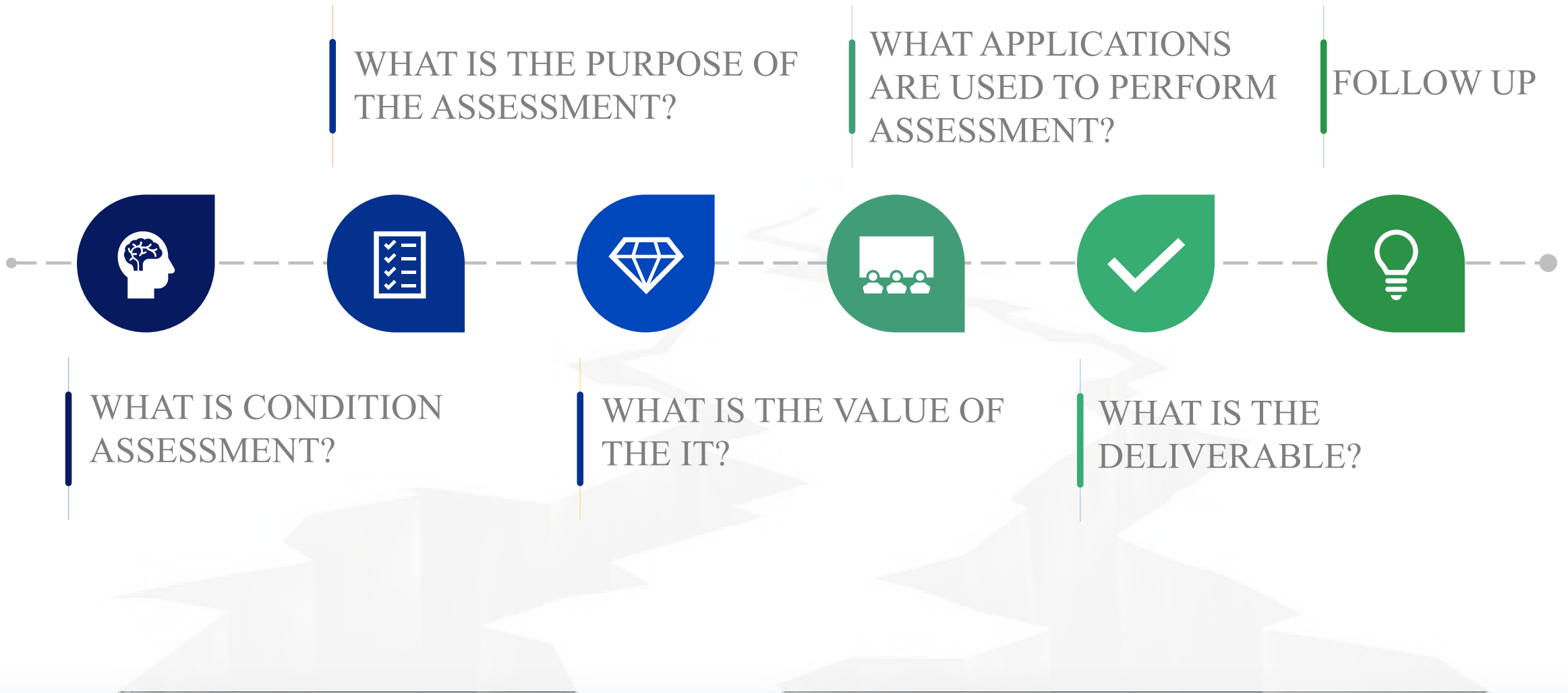


SCA SUBSURFACE CONDITION ASSESSMENTS

QLB: Qualitative Approach

04/13/2022





Subsurface Condition Failure

UG Pipes



Leak – Washout – Unstable Ground – Void/Sinkhole

UG Pipes



RESULT OF COMPLACENCY



Life risk or near misses



Lost time on production



Lost time due to repairs



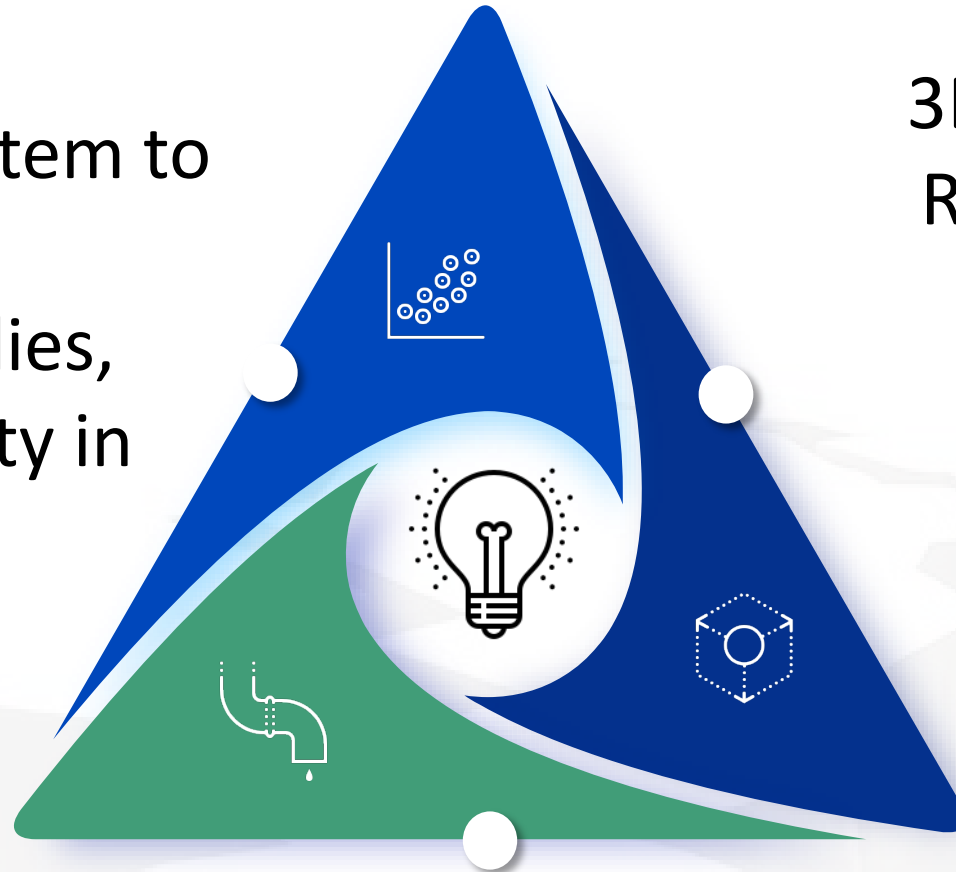
Property damage to the facility





SOLUTIONS

Joint Geophysical system to find and locate underground anomalies, defects or abnormality in the ground



3D LiDAR combined with RTK GNSS; creating base map with survey grade accurate coordinates

Line Locator is additionally used to locate shallow ground pipes

APPLICATIONS

#1 GROUND CONDITIONS



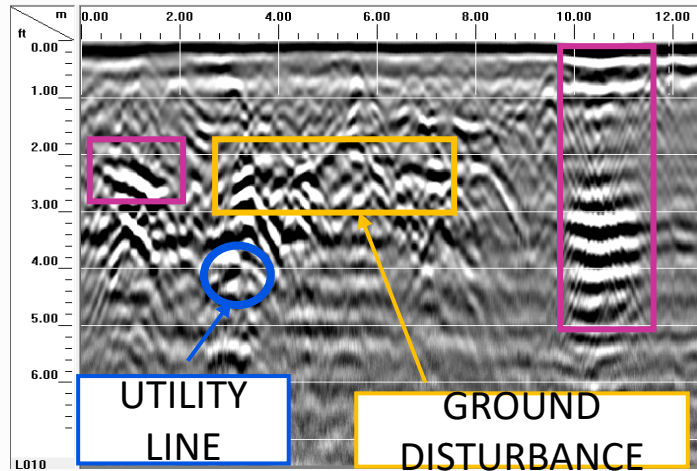
EM31-MK2 Ground Conductivity meter



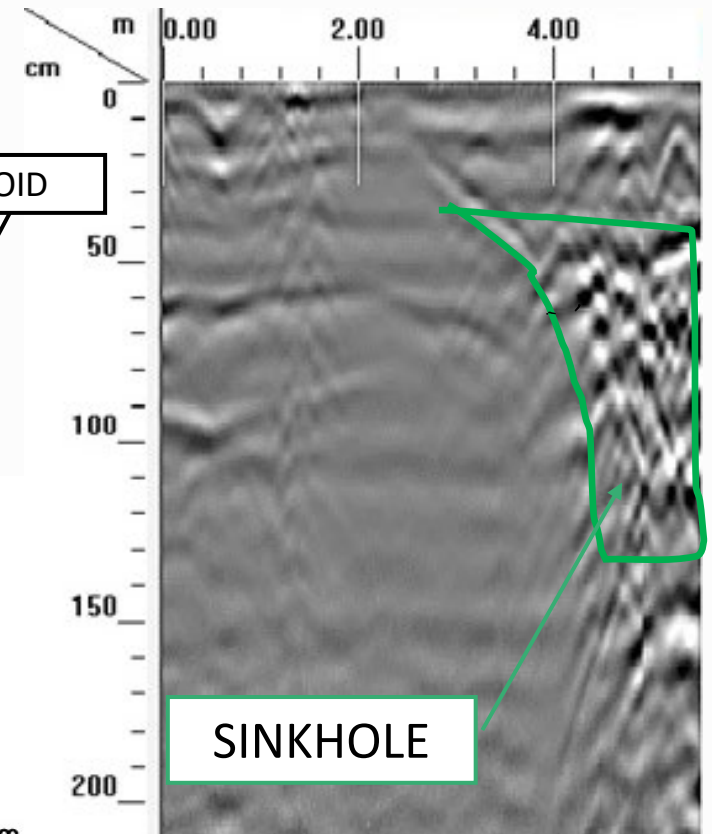
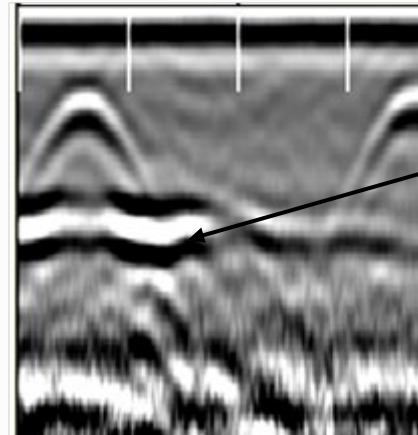
Hyper Stacking GPR Survey Unit



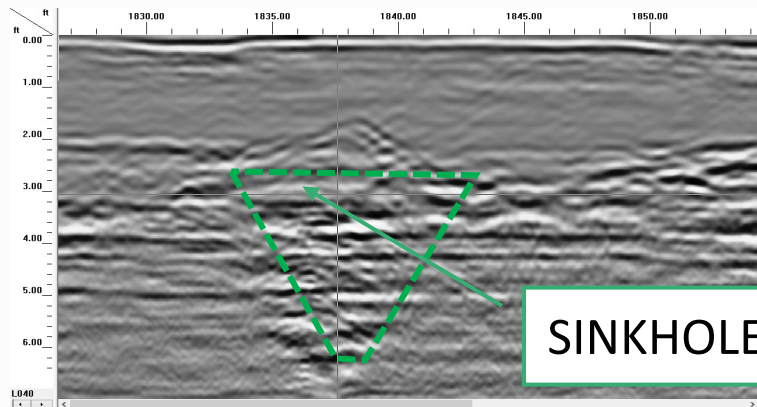
ASSESSMENT #1



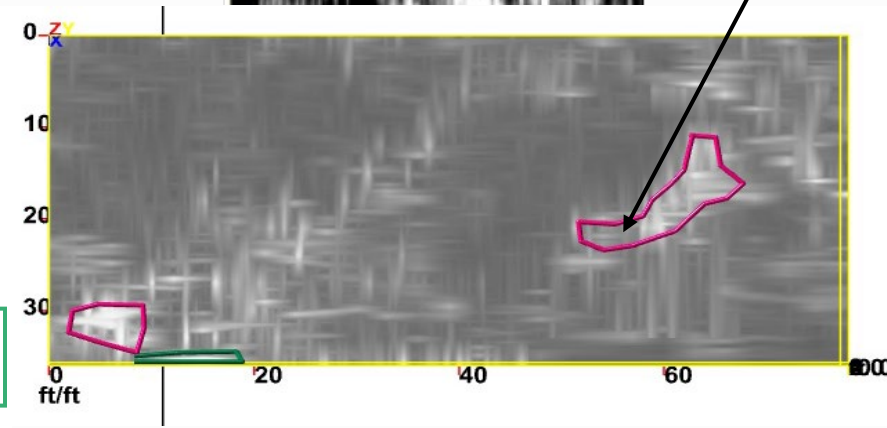
Cross section



Cross section



Cross section



Plan view image

APPLICATIONS #2



Direct and indirect mode of locating UG pipes or utilities

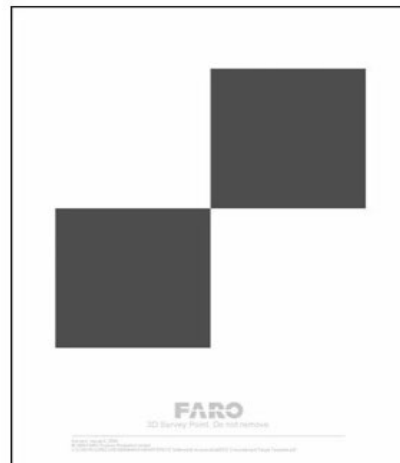


Quick and reliable assessment



Shallow ground utility identification with added calculated depth info





APPLICATIONS#3

3D LiDAR/LASER SCANNER / RTK READY GNSS RECEIVER

ASSESSMENT #3



Site documentation in 3D



Instant measurements in cartesian coordinate system



High precision dimensions



Cloud service and optimized processing





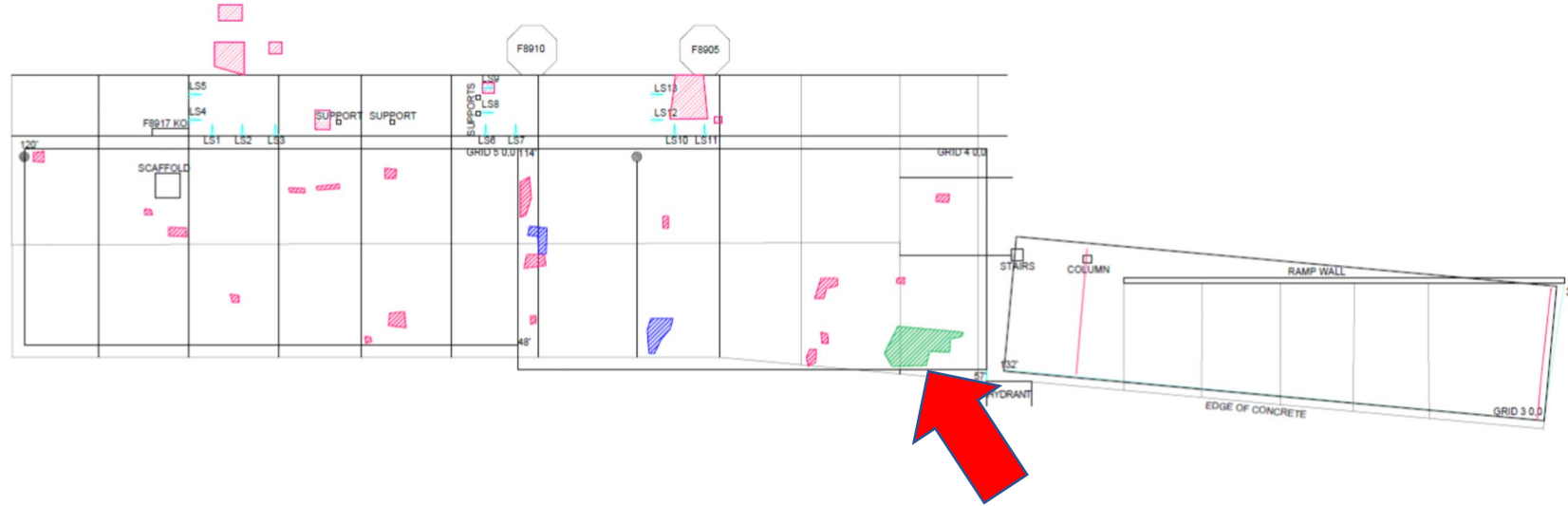
DELIVERABLE

- Comprehensive technical written report
- Scaled AutoCAD map, ready to print version
- GIS file, kml/kmz/shp (survey grade accuracy)

RESULT OF DOCUMENTATION - GIS

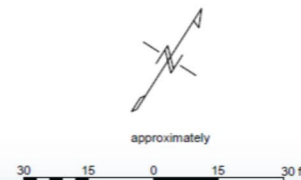


RESULT OF DOCUMENTATION- CAD

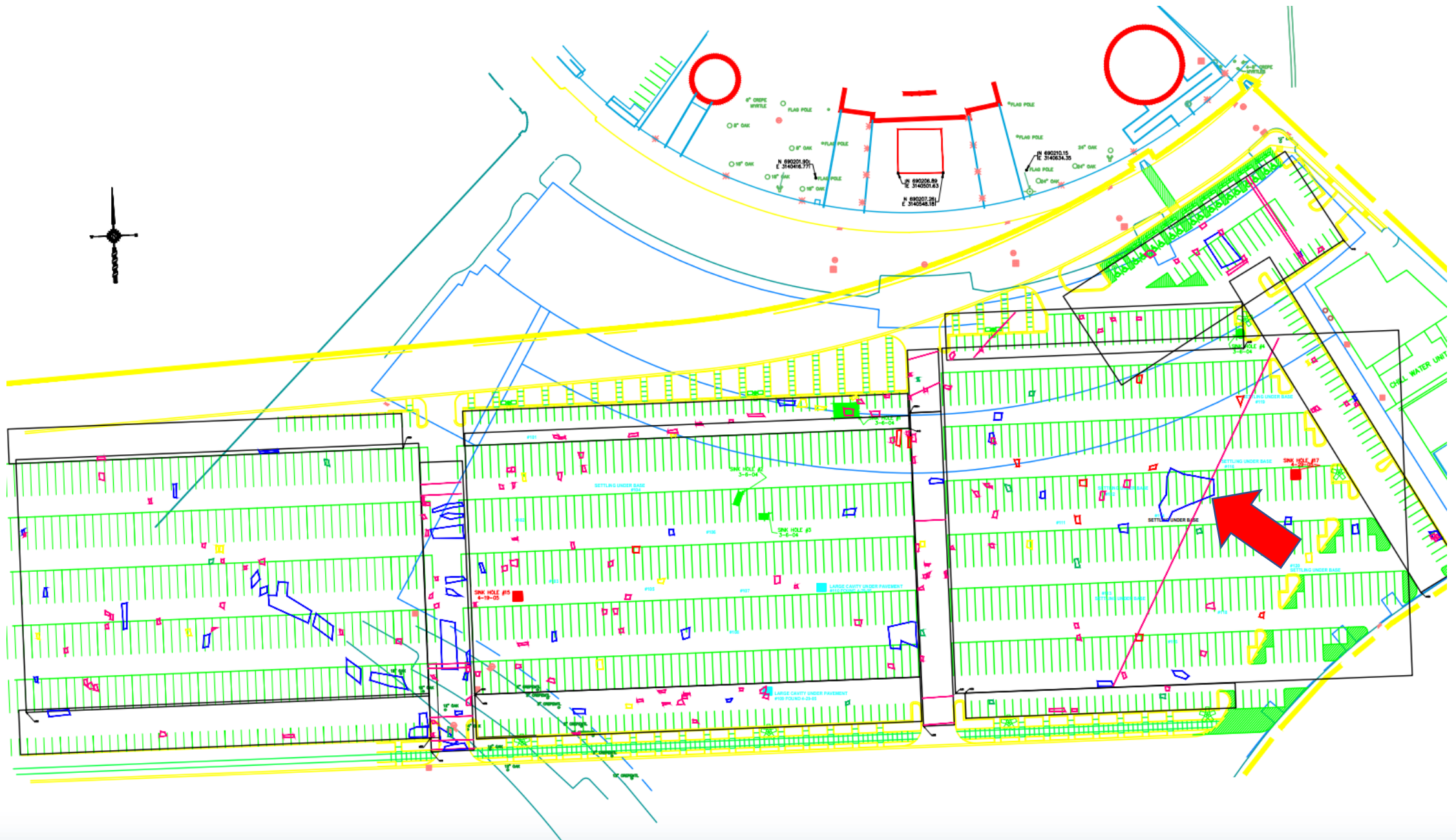


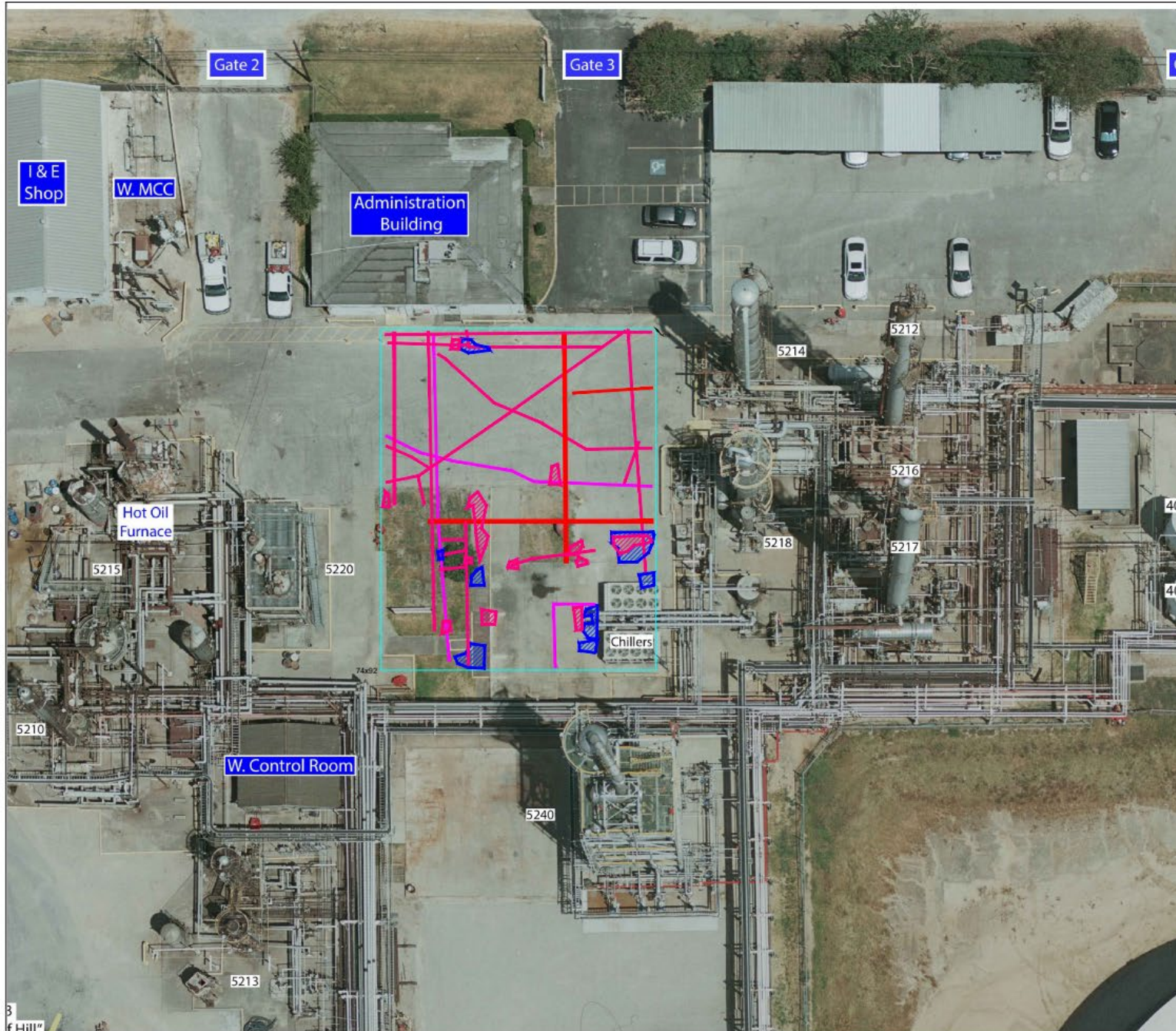
LEGEND

gpr	gpr scan
GPR	shallow ground utility line - 10-12" deep
w	water
e	electric line
ss	sewer line
●	manhole
○	bollard
□	suspect void - 8-11" deep
□	high moisture saturation - 8-15" deep



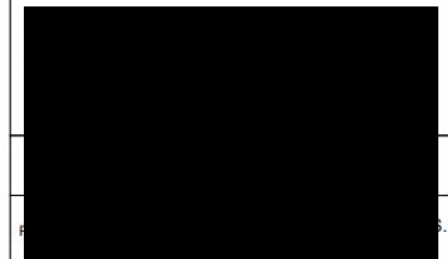
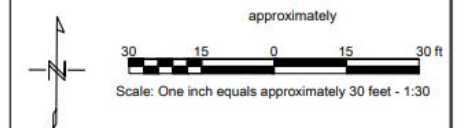






LEGEND

gpr	gpr scan are grid - 74x92 ft
	possible void location - 1.5-3ft
	increased moisture saturation - 3-5ft
?	unknown line - 4-6ft
?	unknown line - 2-4ft
?	unknown line - 1-1.5ft
	manhole
	utility pole
	bollard
	fire hydrant

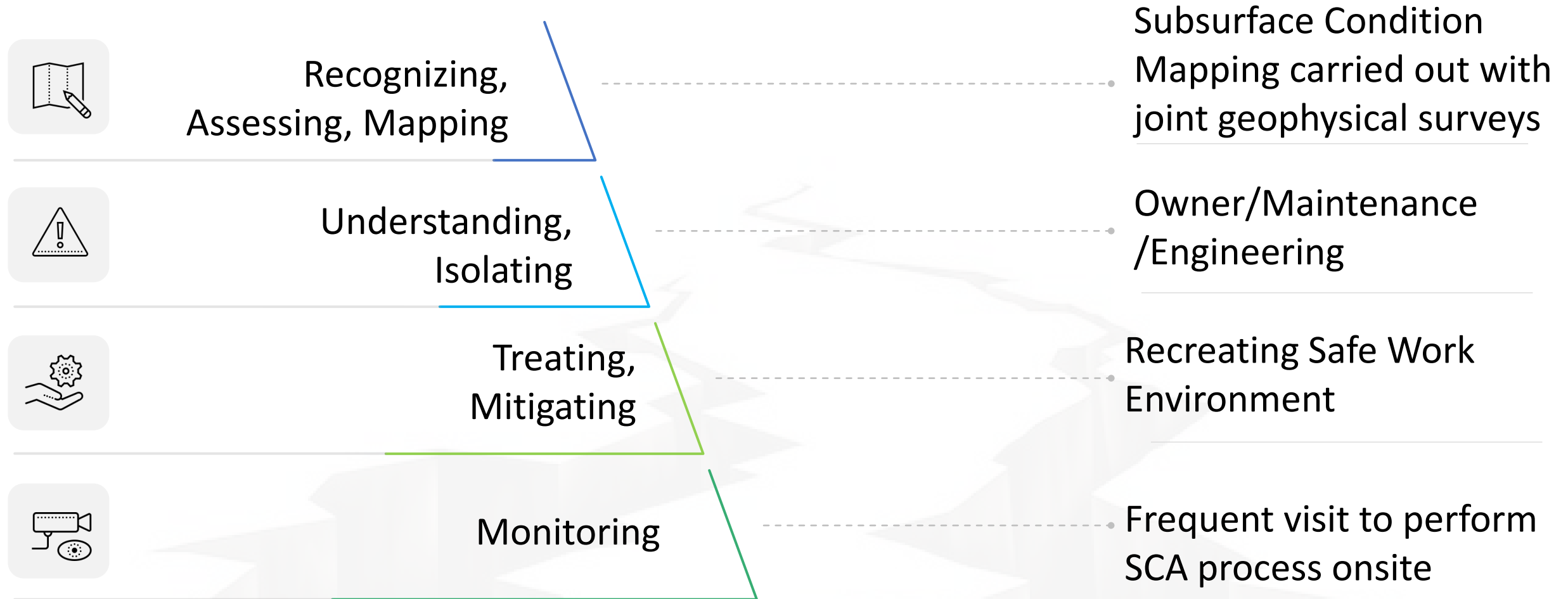


OmniVueNDT
GPR, BIM & Non Destructive Testing

1-281-254-9514
Nationwide Services

ALL UNDERGROUND FACILITIES MAY NOT BE DEPICTED ON THIS MAP

Responsibilities And Process



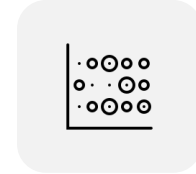
ADVANTAGES



Data acquisition on large area within a short period of time



3D imagery and GIS database



High accuracy anomaly map – RTK Correct



Reducing the chance of accidents or incidents to support safe work



Non-Destructive Engineering



YOUR SUPPORT IS HIGHLY VALUED

ANY QUESTIONS?

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