



1600 Sedlescomb Drive,
Mississauga, ON,
L4X 2C6
905-282-0739

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W/O# _____
Date 4/20/2024
PO# _____

Concrete Scanning & Private Utility Locating

Company Name: Resolve Tech Company Contact: Ben
Job Location: Credit valley hospital

Reason for Survey: to identify embedded and subsurface services

Description of Work Area: ground floor Photographs Taken: ☒

Marking Method: Paint ☐ Marker / Crayon ☐ Stakes / Flags ☐ Colour: green Other: ☒ tape

Limitations of Survey: Obstruction/ Limited Space ☐ Undetectable Utilities ☐ Congestion ☐ EM Distortion ☐ Signal Penetration ☐ Access to Utilities ☐ Other: ☐

Recommendations: X-Ray ☐ Hand Dig ☐ Remove/De-Energise Utilities ☒ **NO WORK** ☐ **POST SCAN MEETING** ☐ Other: ☐

NOTE: • **CONCRETE SCANNING:** To avoid damage stay clear by a minimum of 12" measured horizontally on either side of field markings.
• **PRIVATE LOCATES:** To avoid damage Hand Dig by a minimum of 1m (3.28 ft) measured horizontally on either side of field markings.
• **PUBLIC UTILITIES:** Must be marked / cleared by others prior to this survey.

LEGEND

Limits of Work Area
Bore Hole / Drill Location

SURVEY INTERPRETATION

Electrical - E -
Water Line - W -
Sewer - S -
Gas - G -
Telecom - T -
CATV - TV -
Conduit - C -
Rebar - R -
Unknown Utility - ? -
GPR Anomaly - GPR -
Hand Dig/ No Cut Zone

SITE FEATURES

Light Standard
Transformer
Pedestal
Valve
Hydrant
Manhole
Catch Basin
Column
Clean Out
Fence Line - FL -
Curb Line - CL -
Wall Line

Survey Results & Sketch (not to scale)

North



Mixture of NDT techniques were used to identify and mark embedded and subsurface services that travel thru proposed work area.

GPR data shows slab to range from 5 - 7" thick with embedded wire mesh reinforcements.

Targets were observed at depths as shallow 3" to 12" and were marked in green tape per client request.

Induction clamping was used to tone the conductors, and path of signal was located to the areas where GPR data showed the services.

20 services in multiple electrical/mechanical rooms were clamp and traced, and markings were left on floor and measurements were transferred to drawings Ben had printed.

Tape was removed at end of day. The need to properly mark services may be required when areas are converted into construction spaces.

Photos attached to report to summarize field markings and site conditions.

Photos of mocked up drawings will be provided, and are in Ben's possession.

I will plot the locations onto pdf version of drawing for final submission.

Highly recommend shutting power to services when work is conducted, especially 600V feeder cables if feasible.

Thank you for choosing Grizzly.

For Post Scan Meeting and/ or Clarification of this Report contact the Technician at: Rnh 647-964-9479

CORE DRILL REPORT

Date

Technician

Assistant

NO. OF HOLES	DIA	WALL	FLOOR	DEPTH	MATERIAL	Login:	Login:
						OnJob:	OnJob:
						OffJob:	OffJob:
						LogOut:	LogOut:
						Radar Time Allotment:	hrs
						Core Drill Time Allotment:	hrs

Any subsequent damage to any utilities based on this survey please call 905-282-0739 immediately.

Accepted By (print): Ben Signature: _____

Customer Acknowledgement: I have read and understood the information in this report and the associated Grizzly Terms & Conditions and hereby accept these conditions as stated on the reverse of the Primary Field Report.

COMMERCIAL GENERAL LIABILITY FORM

GRIZZLY DISCLAIMER – TERMS AND CONDITIONS

The Service

The Grizzly Concrete Cutting and Coring Scan service employs electromagnetic (EM) equipment and technologies for the purpose of locating embedded or subsurface objects for our client or client's representative (Client). This service is provided as a guide and no guarantee is made or implied that it represents anything other than the inferred interpretation of acquired data in an attempt to locate anomalies / Features as requested by the Client. Grizzly Concrete Cutting and Coring (The Company), affiliated companies and their employees are not liable for any damages that result in the disturbance of any buried or embedded service(s) or object(s) based on the information provided by this service. Every attempt is made to ensure the accuracy of this service; however, there are limitations that can inherently affect the results of the survey. Therefore, it is The Company's responsibly to inform our Client that these results may be rendered inconclusive or inaccurate due to these limitations and not due to The Company's negligence.

Service Limitations – GPR

The Grizzly Concrete Cutting and Coring Scan service includes the use of Ground Penetrating Radar (GPR) which emits high frequency EM radio emissions that are used to interpret and observe features of survey materials either embedded or in the subsurface. Due to required interpretation, physical properties, operating aspects and multiple conditions outside of our control the results from using this technology may be inconclusive by the following factors (but not limited to):

Moisture Content/Conductivity- water and a survey material with high conductivity (clay, new concrete that hasn't fully hydrates or cured ect...) attenuate GPR signals and may limit signal penetration less than the target depth.

Restricted Survey Space- GPR requires adequate survey space to acquire and interpret data, surface obstructions such as walls, pipes etc... will limit the ability of GPR to locate embedded/target object(s).

Masking- metal filings, rebar, metal lathe, steel wire mesh, anvil toppings etc... may interfere, block and/or reflect GPR signals away from the target object(s).

Survey Surface- surface must be flat & smooth to allow GPR to couple to the surface and observe subsurface or embedded objects.

Data Resolution- objects spaced closely together or within the top 2.5" of the surface may not be individually resolved and/or may appear as one object (i.e PVC conduit tied to rebar)

Congestion- multiple subsurface or embedded objects spaced closely together may not be isolated/located and objects below this layer may not be located.

Target Composition- target objects object with a low contrasting dielectric constant such as PVC conduit may not be detected or masked by higher dielectric objects such as rebar / wire mesh.

Target Geometry/ Orientation- embedded/ subsurface objects that vary in orientation/ direction may not be located (coreflex / PVC conduit etc...).

Service Limitations – EM Utility Locator

The Grizzly Concrete Cutting and Coring Scan service includes the use of an EM Utility Locator to locate EM fields that concentrically surround an embedded or buried conductor that can be measured. Due to the required interpretation, physical properties, operating aspects and multiple conditions outside of our control, the results from using this technology may be inconclusive by the following factors (nut not limited to):

Distortion/ Signal Cancellation- Multiple EM fields/ conductors within the work area may distort target field and result in an inaccurate locate and/or cancellation of the target EM field.

Composition- nonconductive utilities cannot be located unless access the inside of pipe / drain is provided for transmitting sondes.

Restricted Survey Space- the measurement of EM fields requires adequate space to determine the inferred location, distortion and accuracy of the field measurement.

Metal Objects – induction properties of metallic materials may cause distortion or interfere with the target EM field.

Detectable Services - conductors that are not under load and do not have significant current running through it may not be located.

DIRECT ACCESS TO ALL UTILITIES THAT ARE LOCATED WITHIN THE SURVEY AREA MUST BE PROVIDED BY THE CLIENT (ELECTRICAL/UTILITY ROOMS ETC...)

Electrical Interference – all electrical devises, transformers, surface mounted conductors ect... could interfere with the ability to adequately locate the target field.

Intermittent Power – conductors that require intermitted power supply such as pumps, locks, electric motors, backup power etc... may not be detected at time of the service.

Documentation – All available site drawings, pictures and documentation on the location of all utilities (public & private) within the work area must be provided prior to start of survey.

ALL PUBLICLY OWNED UTILILTIES MUST BE LOCATED/ CLEARED BY OTHERS PRIOR TO THIS SERVICE.

COMMERCIAL GENERAL LIABILITY FORM
GRIZZLY DISCLAIMER – TERMS AND CONDITIONS CONTINUED

Expiry

The results of the Grizzly Concrete Cutting and Coring Scan service will not be valid/ expire based on the following:

- 30 days has passed from the day service was provided.
- Any site markings have been removed or worn down.
- The Stakeout/ field report has been lost or removed from job site.
- The Intended scope of work has changed since completion of this service.

Indemnification

Based on the information provided by this service the Client must hereby indemnify and holds harmless the Company against any and all claims, demands, actions, suits, losses, associated costs, charges, expenses, damages and liabilities whatsoever.

Subrogation

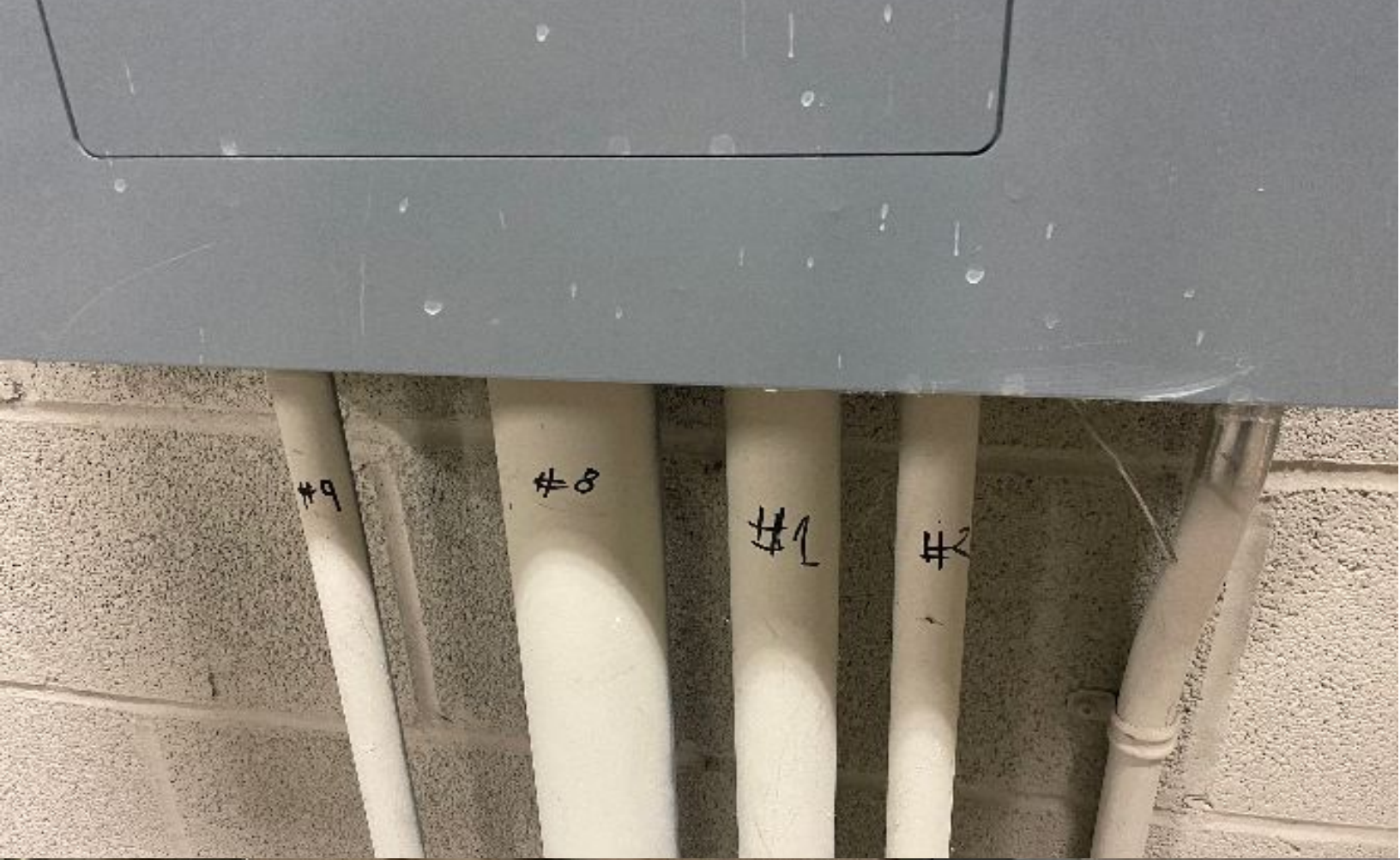
The Client/ clients' representative hereby waive their right to subrogate against The Company with respect to the work order number for this survey for "bodily injury", "property damages", "personal and advertising injury" and "business interruption and / or and financial losses" for which a claim has been paid under this form & service. Except as otherwise provided in this waiver of subrogation statement, all terms, provisions and conditions of the Commercial General Liability Form shall have full force and effect.

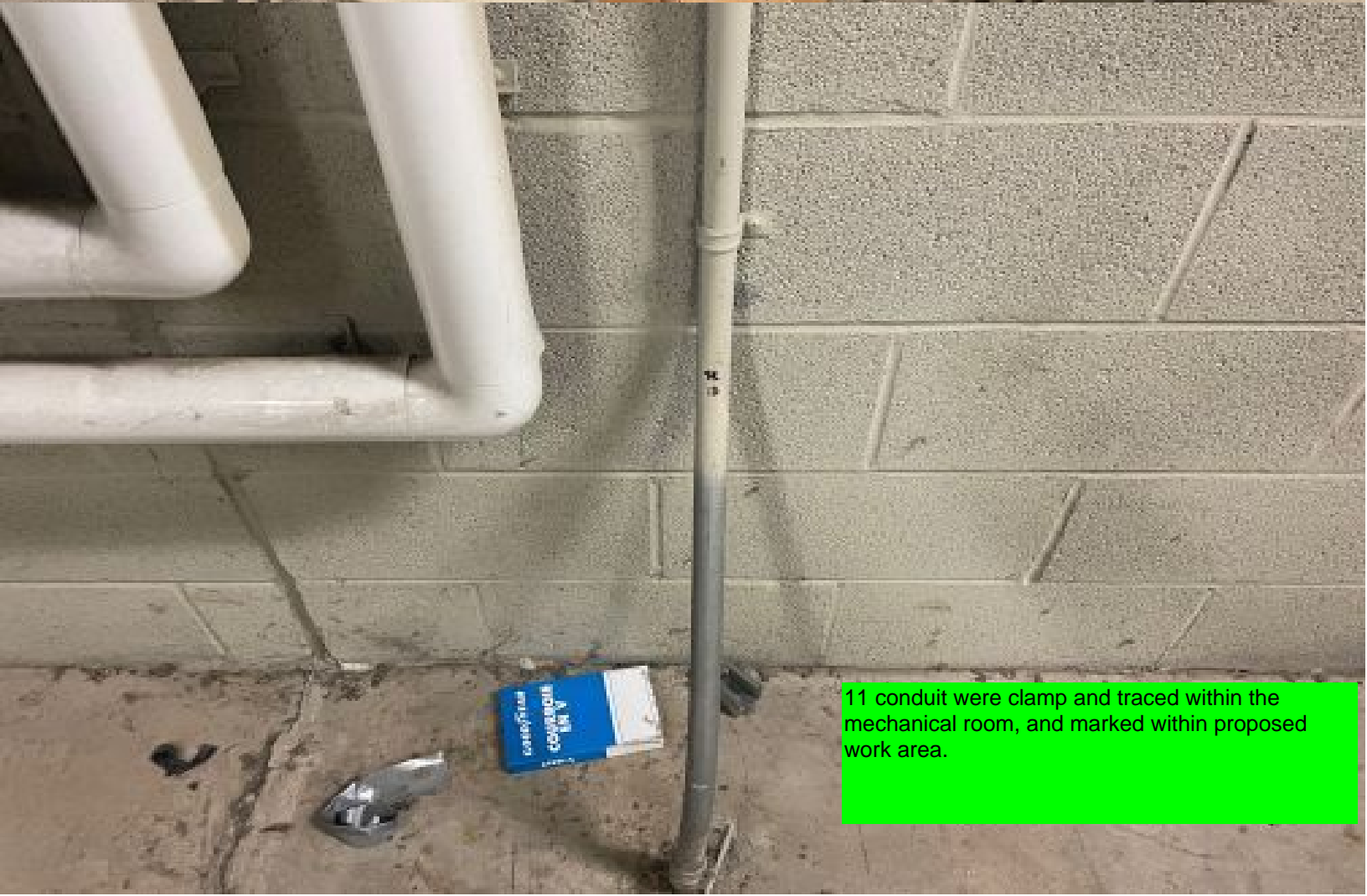
It is understood and agreed upon that The Company, affiliated companies and/ or any employee will not be held liable for any damage to property and/ or personal injury / death associated with service. This service is not valid without the consent of the Client/ Client's representative prior to the commencement of the survey.

Date: 4/20/2024

Initials:







11 conduit were clamp and traced within the mechanical room, and marked within proposed work area.







