

The First Use of ASCE 38-02 Standards on a Quebec Infrastructure Project



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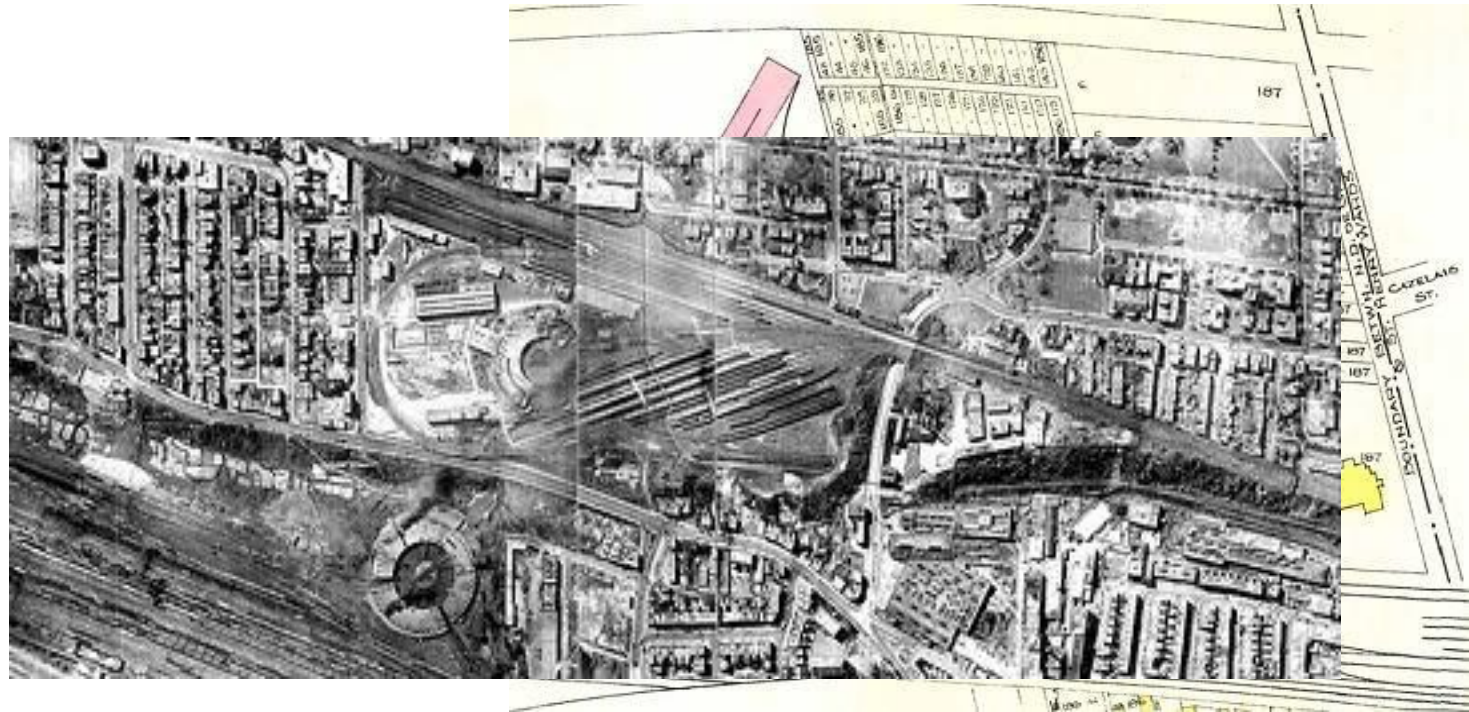
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Agenda

- Intro to Turcot Phase 0
- Why OE and CN chose SUE
- Use of the SUE standard
- The benefit for the use of SUE
- Conclusion



- 1905 – 1950's



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- 1960's Turcot Interchange
- The Turcot Interchange is built



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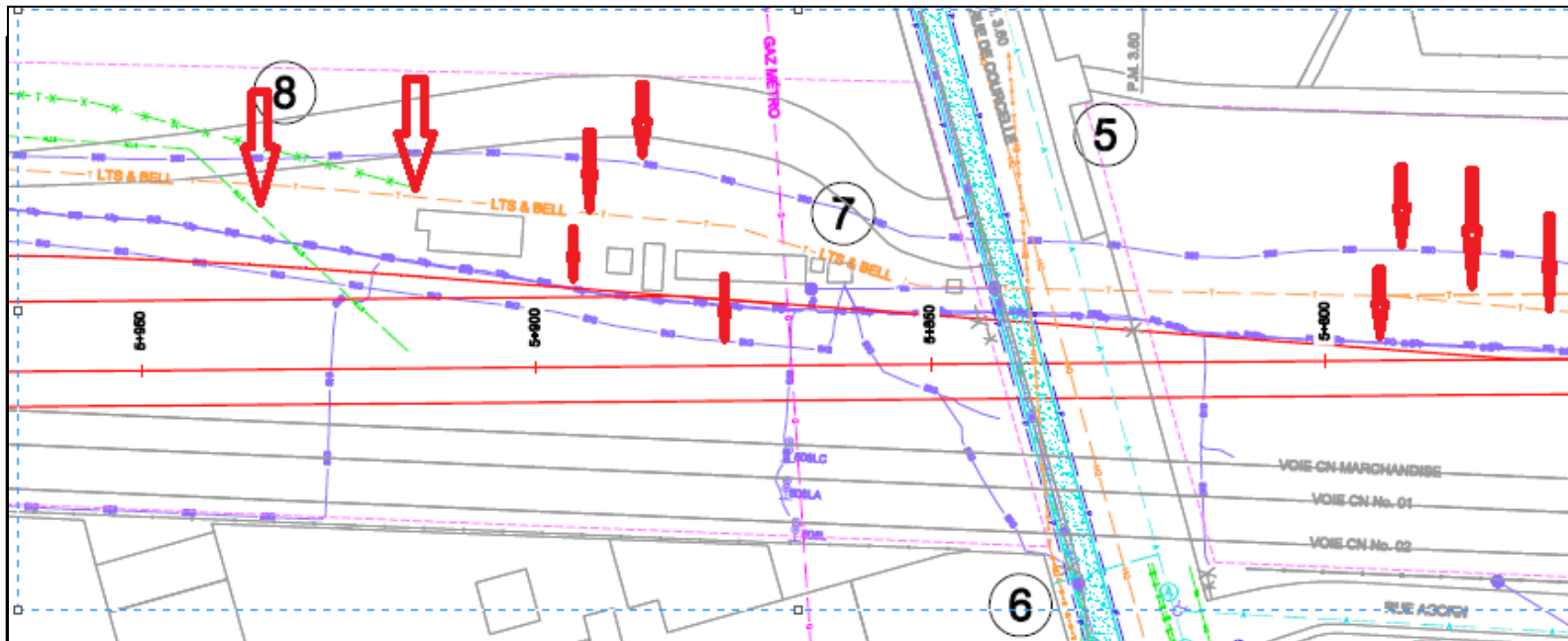
2005

2013



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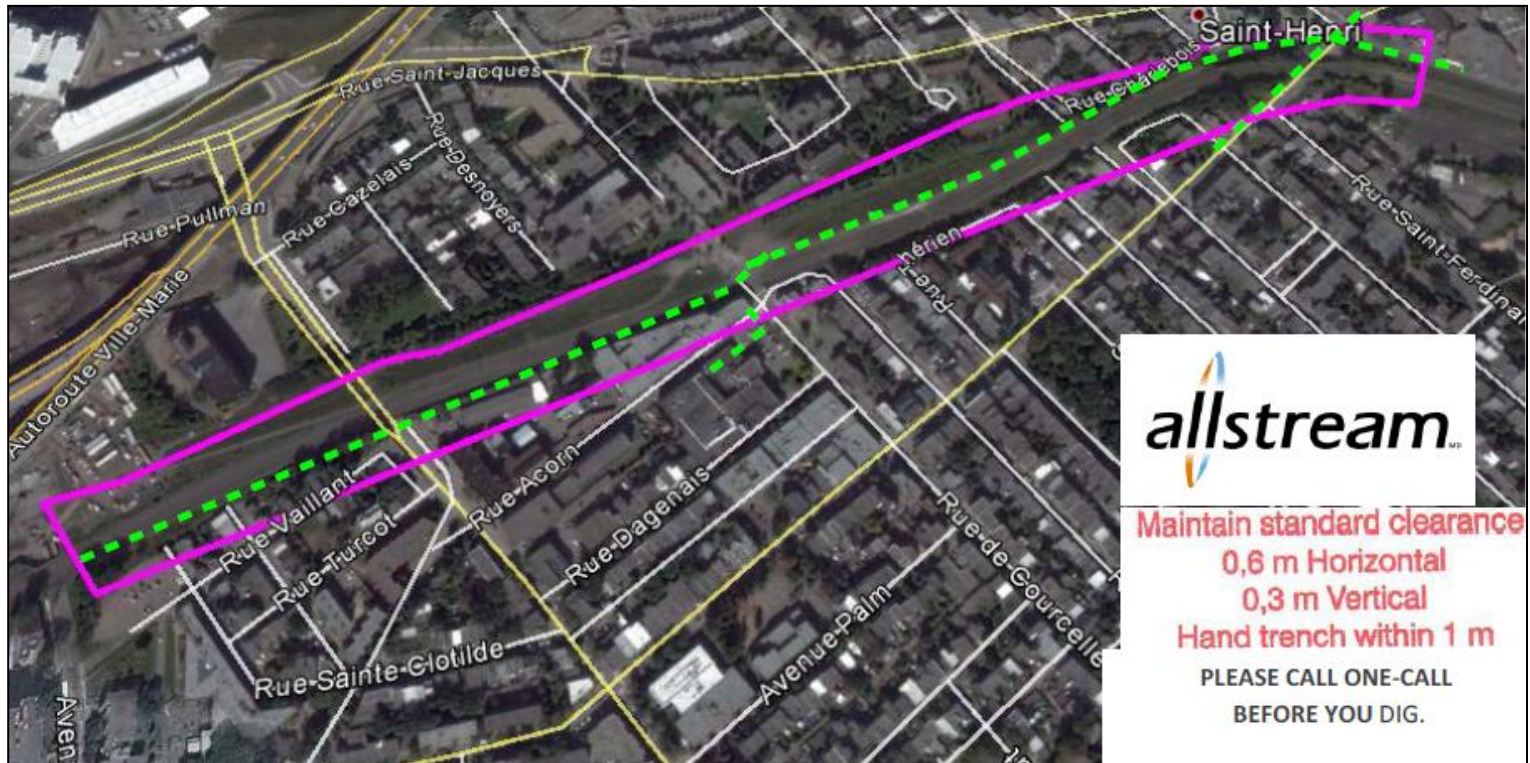
- Over the Years The tracks were moved from the north to the south to accommodate the Then new Turcotte



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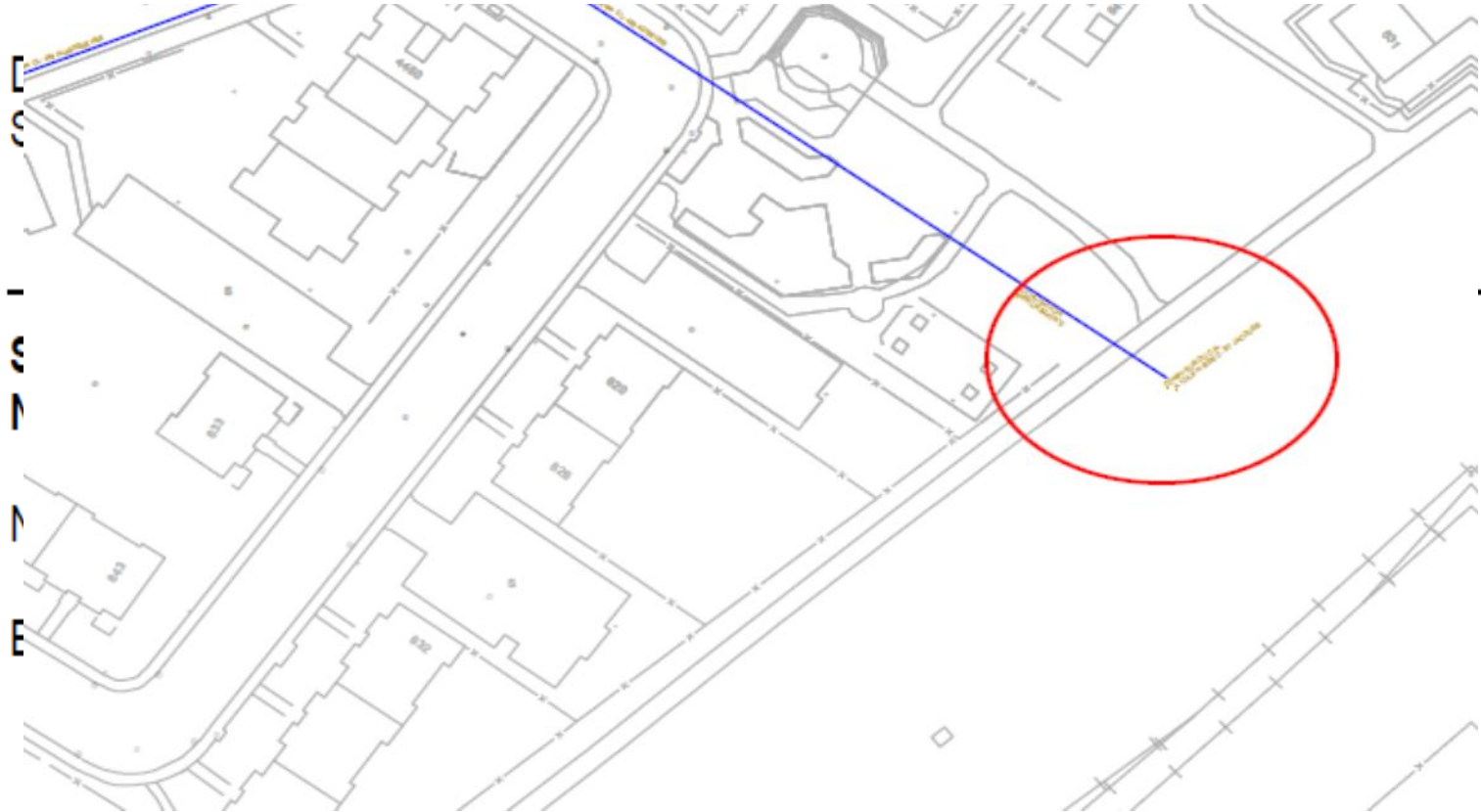
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No. Acquiescement : 502838433

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- Test Holes



00016.MTS

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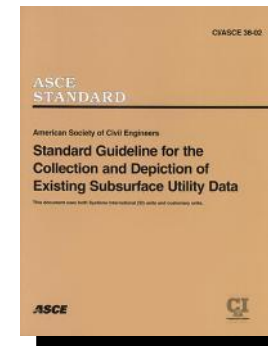
- Which one is right????



What is SUE

A branch of engineering practice that involves managing certain risks associated with utility mapping at appropriate quality levels, utility coordination, utility relocation design and coordination, utility condition assessment, communication of utility data to concerned parties, utility relocation cost estimates, implementation of utility accommodation policies and utility design.

Definition from CI/ASCE 38-02



Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data

This document uses both Systeme International (SI) units and customary units.

ASCE

Mapping of underground utility infrastructure



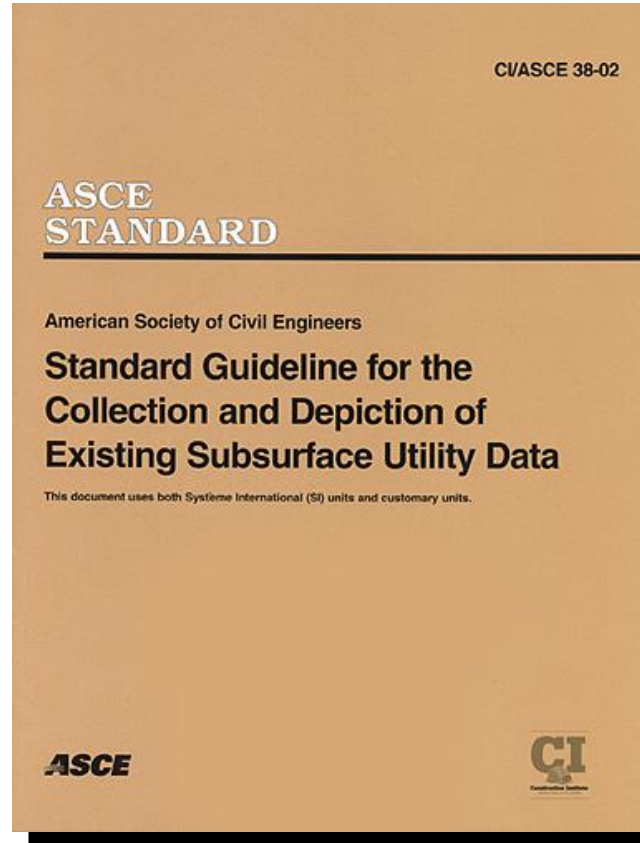
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**CONGRÈS
INFRA
2015** 30 novembre
au 2 décembre
Centre des congrès de Québec

- Valorisation des infrastructures dans l'espace public

Standards- ASCE 38-02



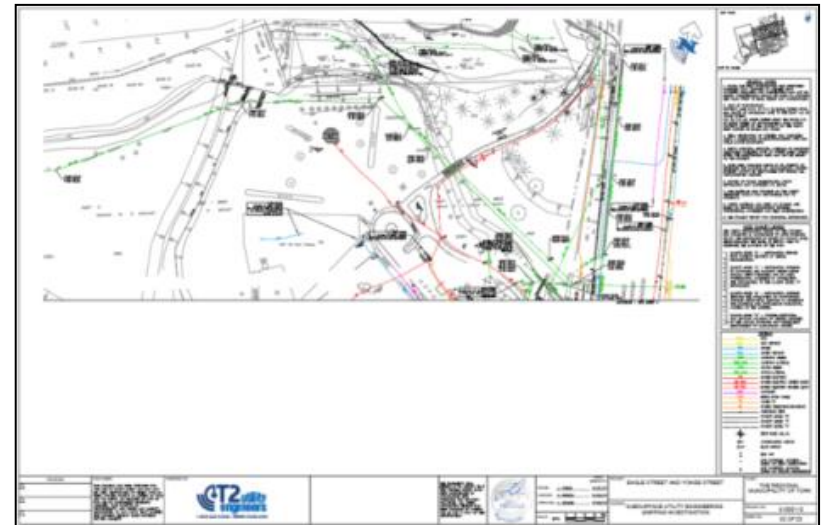
SUE Quality Levels

A, B, C, D



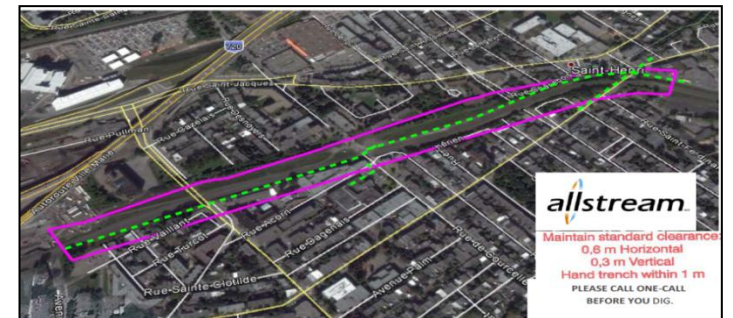
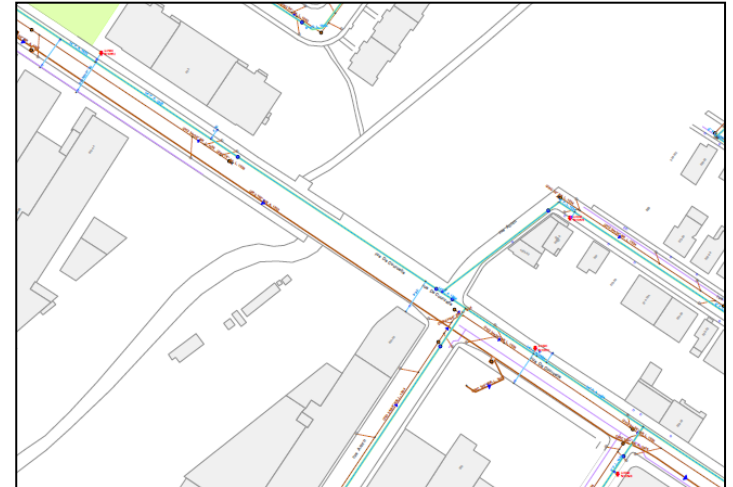
Most Accurate Least Accurate

NOTES	
THE UTILITY INFORMATION SHOWN ON THIS DRAWING WAS COLLECTED IN ACCORDANCE TO ASCE STANDARD 38-02. THE INFORMATION IS SHOWN BY QUALITY LEVEL WHICH INDICATES THE LEVEL OF EFFORT USED TO DETERMINE THE LOCATION OF THE DATA	
I N C R E A S E D Q U A L I T Y	QUALITY LEVEL "D" – INFORMATION DERIVED FROM EXISTING RECORDS OR VERBAL RECOLLECTIONS.
	QUALITY LEVEL "C" – INFORMATION OBTAINED BY SURVEYING AND PLOTTING VISIBLE ABOVE GROUND UTILITY FEATURES AND BY USING PROFESSIONAL JUDGEMENT IN CORRELATING THIS INFORMATION TO THE QUALITY LEVEL "D" INFORMATION.
	QUALITY LEVEL "B" – INFORMATION OBTAINED THROUGH THE APPLICATION OF APPROPRIATE SURFACE GEOPHYSICAL METHODS TO DETERMINE THE EXISTENCE AND APPROXIMATE HORIZONTAL POSITION OF THE UTILITIES.
	QUALITY LEVEL "A" – PRECISE HORIZONTAL AND VERTICAL LOCATION OF UTILITIES OBTAINED BY THE ACTUAL EXPOSURE AND SUBSEQUENT MEASUREMENT OF SUBSURFACE UTILITIES.



Quality Level “D”

- Records Research



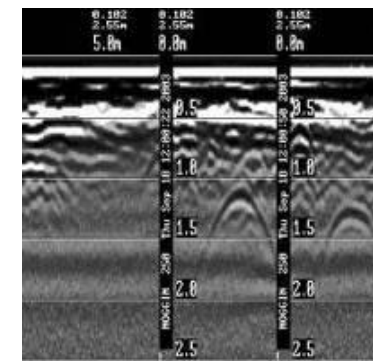
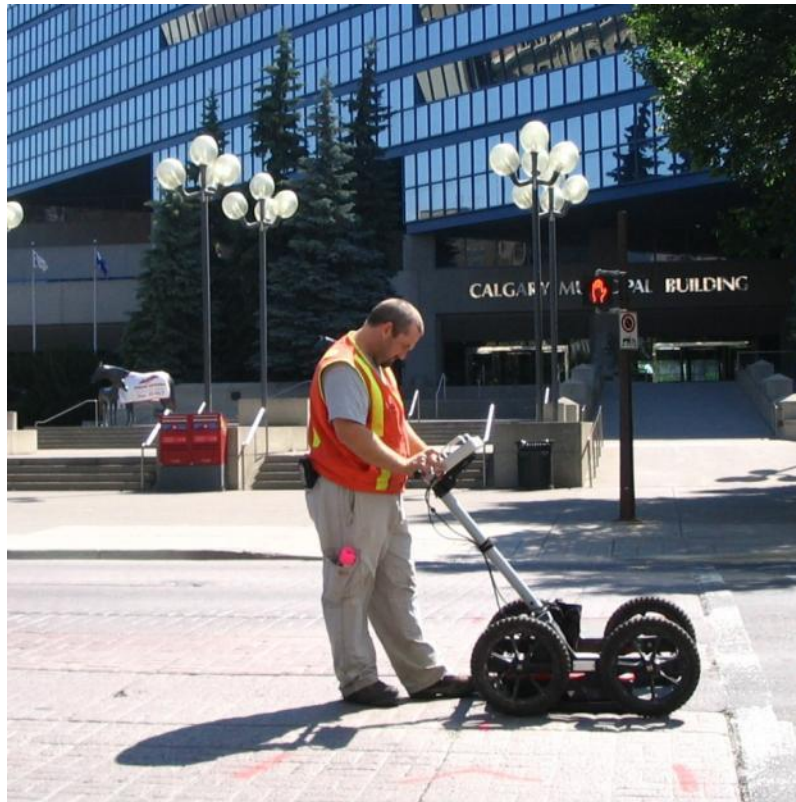
Quality Level “C”

- Visible Features



Quality Level “B”

- Designating (Horizontal Position)




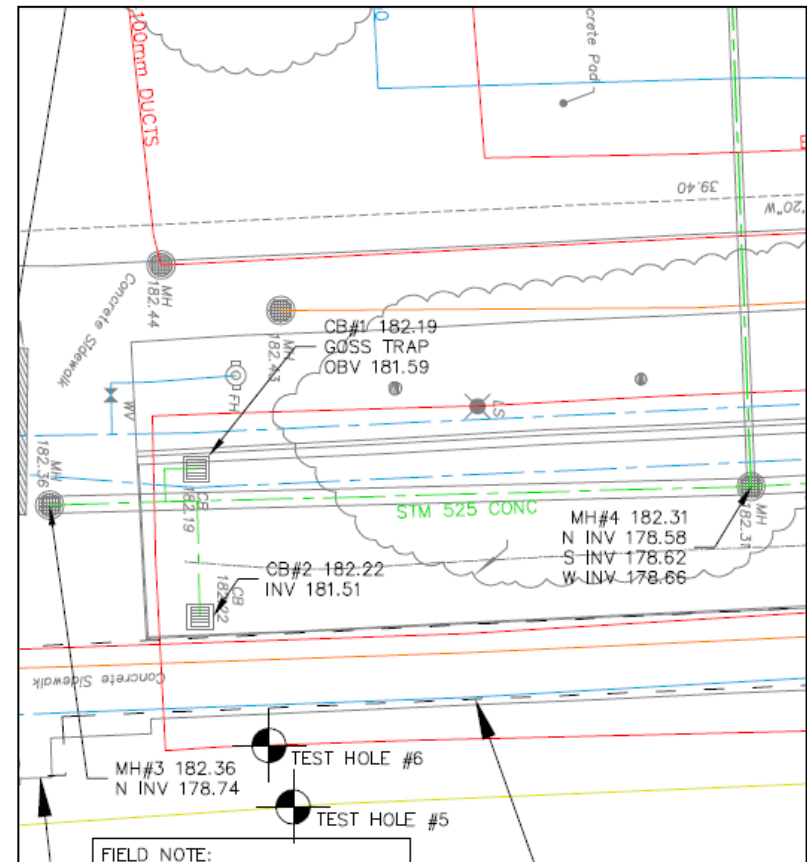
Quality Level “A”

- Locating (exact horizontal and vertical position)
- Usually using Vacuum Excavation



Quality Levels on Drawings

LEGEND	
—	GAS
—	GAS SERVICE
—	WM
—	W.S.
—	SAN
—	SAN LAT.
—	STM
—	STM LAT.
—	BE
—	BE (SL)
—	UNK
—	FOC
—	TV
—	BT
—	QUALITY LEVEL "B"
---	QUALITY LEVEL "C"
---	QUALITY LEVEL "D"
	TEST HOLE (QL-A)
()	BRACKETS INDICATE INFORMATION OBTAINED FROM RECORDS
•	NOT SURVEYED, BASED ON FIELD OBSERVATION



SUE Deliverables

AECOM - CN

Turcot Phase 0

Report

Subsurface Utility Engineering Services

Project #61000542



Report Date: May 20, 2015

[illegible]

AECOM
Exchange Turbot Phase 0 of turbine 3 investigation FO 160
Report for Subsurface Utility Engineering Services

Appendix C - Test Hole Photos



TH#2AA



TH#2AA-

[illegible]

ABCOM-CN
Turret Phase 0
Report for Subsurface Utility Engineering Services
May 20, 2014

Report Revision Log

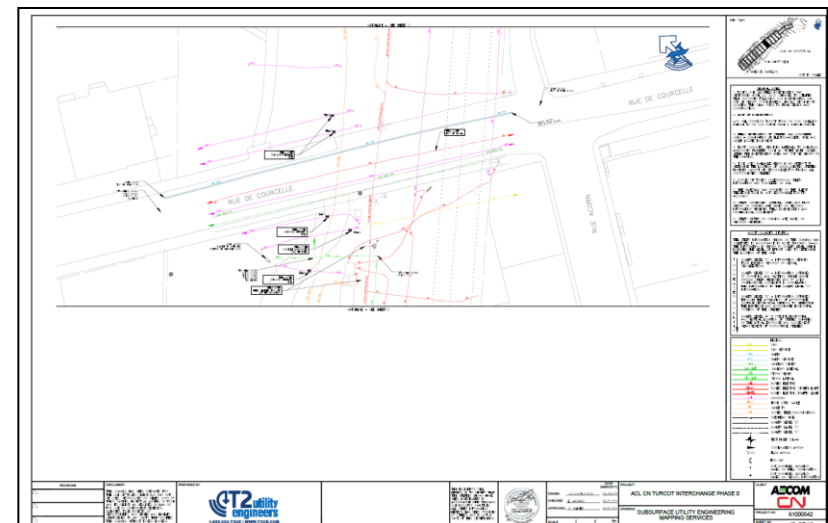
Revision #	Revised By	Date	Issue / Revision Description

Signatures

Osprey

Report Prepared By: Ophir Weiner B. Sc
Business Development Manager

Report Reviewed By: Lawrence Arcand, P. Eng
President



Why use SUE

- Provides designers and engineers with valuable information during design stage.
- Recognized Standards.
- Clearly defines conflicts and relocations.
- Reduce re-design costs.
- Contractors reduce bid prices.
- Reduce project delays.
- Improves project safety.
- Reduces clients overall **RISK.**

Conclusions

- Working with the right information Is Paramount to success.
- All infrastructure projects are like a line of dominos.
- ASCE 38-02 is the basis for a strong foundation



Questions?



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Merci!