

City of Winnipeg GIS system



Survey monument destruction



Effectively managing the 'silent infrastructure'

By Steve Bossenmaier, City of Winnipeg

Survey monuments, unlike utility plants, are the 'silent infrastructure.' Although not readily visible, the monuments quietly provide each of us with secure land ownership by accurately defining property boundaries. Damage to the infrastructure does not generally result in any noticeable physical event (i.e., injury, explosion, power outage or immediately noticeable loss of service) and may not be recognized for many years, but this does not diminish their importance.

FACTS:

- Under legislation, municipalities are responsible for remedying any disturbance to survey monuments upon notification from a Manitoba Land Surveyor;
- Depending on the size and location of the municipality, there may be thousands of survey monuments for which a municipality may be responsible;
- Municipalities are currently liable for tens of millions of dollars worth of damaged survey monuments;
- Countless monuments continue to be damaged each year due to unregulated construction activity.

Under the provincial Survey Outline Monument Restoration Program, survey monuments are replaced and the municipality's expenses are offset by a provincial contribution. This is a good thing. The fact that the monument you paid to have replaced today may be damaged tomorrow is a bad thing.

Damage to survey monuments typically occurs due to unregulated or under-regulated construction and development in areas within or adjacent to public rights-of-ways and road allowances. Utility installation and facility maintenance, roadwork, ditching, landscaping, agricultural activity, logging operations, new housing and improvements within developed areas are some of the leading factors contributing to the damage.

SOLUTION:

Provincial legislation also offers the solution to the re-occurring problem of monument damage. It provides that all persons and municipalities undertaking construction are responsible for protecting the survey monuments and for replacement if monuments are damaged as a result of their activity. The problem centres on ensuring

those responsible are living up to their legal obligations.

Identification of the location of the survey monuments and the location of construction within the municipality are essential to maintaining the infrastructure. The City of Winnipeg utilizes several methods to manage these elements to successfully protect the survey monuments and to ensure those who cause the damage pay for the replacement.

Development/Servicing Agreements

These agreements, between the City and the developer, involve maintaining letters of credit to secure developer responsibilities regarding survey monuments in areas of development. Typically, once the final landscaping is complete, the developer has their land surveyor replace any damaged survey monuments at their expense, after which the letters of credit are released.

Survey Infrastructure Protection Program

The City utilizes a GIS system to map and maintain all survey monuments within its bounds. Persons undertaking construction are requested to notify the City prior to their project. Construction sites are compared to survey monument locations for potential conflict. When there is a possibility of damage, the survey monuments are physically marked prior to the work and inspected after construction. Any damages are then attributed to the construction project.

For municipalities of all sizes, there are solutions to minimizing survey monument damage which are inexpensive and effective in controlling the associated liabilities. 💡

REFERENCES:

- www.winnipeg.ca/ppd/surveys.stm
- www.winnipeg.ca/ppd/subdivision.stm



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