CASE STUDY:

EDMONTON WASTEWATER EXPANSION

CLIENT

CITY OF EDMONTON, ALBERTA CANADA

PROBLEM

Restore and provide semi-structural corrosion protection for two wastewater maintenance holes, each over 100' in depth.

SOLUTION

SprayShield® Green was chosen to protect the assets from hydrostatic pressure and H_2s corrosion.

The City of Edmonton in Alberta, Canada, continues to grow. This ongoing expansion of the city has increased the load on the city's wastewater infrastructure, and as such, city engineers elected to serve their growing wastewater needs on the city's west side by re-activating an underutilized trunk system buried 100' below the surface.

Working with general contractor CKB Construction, labor began on connecting existing local and side sewer pipes to the deeper trunk system. CKB contracted Empire Solutions, a Sprayroq® Certified Partner, to provide corrosion protection in two key maintenance holes in the system.
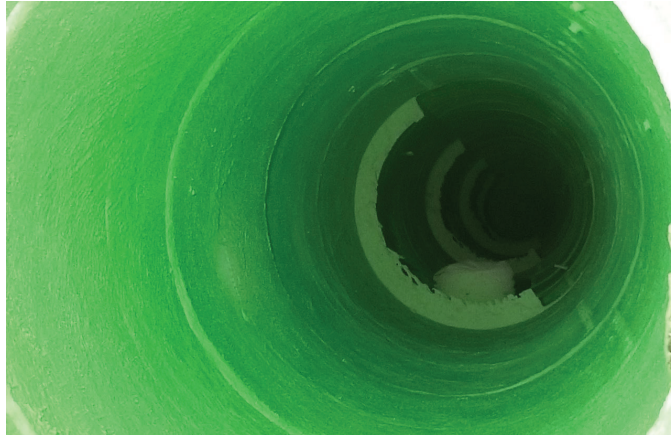
The holes presented significant challenges: 1) The depth of the structures reached over 100' below the surface. The depth alone presented new safety and labor challenges.

2) Due to Alberta's harsh winters and the project's production schedule, the work was to be completed when ambient temperatures were steadily sitting around -5°.

3) Preparation for the project was extensive. To gain access to the bottom of the structure, cast-in-place steel platforms were removed. In addition, extensive measures were taken to ensure proper adhesion of material and consistent substrate temperature across the varying depths.

DIVING DEEP TO FIND THE PERFECT SOLUTION

This project was completed in just three days. Empipe utilized water jetting to profile the structures to a concrete surface profile (CSP) of 5-6. While not typically required in a cylindrical structure, keyways were added every six feet in depth to ensure the weight of the applied material would not cause any risk of disbondment.

CONCLUSION

Despite the operational challenges, this project shows the versatility of Sprayroq® SprayShield Green, and the incredible applications the coating can be used in.