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Lessening the Uphill Battle.

*Using the public realm as a tool to collect water towards a reduced dependency on inefficient infrastructure in Montreal's well-established and historic urban core.*

Abstract:

At the beginning of the 1900s, the financial core of Canada was the city of Montreal. The study site chosen for this project is The Golden Square Mile. Now located downtown, it was once the neighborhood of major national investors of the time. Residents included prominent figures such as Sir William Cornelius Van Horne who oversaw the construction of the first Canadian transcontinental Railway, and John Redpath who owes much of his reputation to the sugar refining empire he built in this country. This area was one of the first to receive plumbing because of its affluent inhabitants. This is therefore one of the oldest parts of the system dating back to 1876, and it requires significant, and a challenging maintenance scheme. It therefore offers intriguing opportunity for investigation into the compatibility of modern water needs, and historic contexts.

Much of the original infrastructure is still in use, and continues to age. This has led to the city having one of the most wasteful water infrastructure systems in North America leaking 40% of filtered water. This project is inspired by a growing need to utilize urban water resources more efficiently, as maintenance and economic investment are making standard approaches a less feasible option for the future. As like in most conventional metropolitan water systems, Montrealers have little responsibility for water management, as infrastructure is concealed underground and maintained solely by the city. Through research of unconventional water harvesting techniques, suggestions are made for onsite locations that are appropriate for integration into the highly trafficked and mixed-use centre. These suggestions are based on integrating historic relevance, visibility, usability, and awareness, as prime objectives. This project suggests alternatives to conventional infrastructure, and challenges water resource management for future development in established historic urban centres.