

Date: January 6, 2006



**TO: Board Members – Vancouver Park Board**  
**FROM: General Manager – Parks and Recreation**  
**SUBJECT: Vivian Creek (Fraserview) Reinstatement Plan:  
Appointment of Consultant**

---

## **RECOMMENDATION**

- A. THAT the Board award the contract to act as design and engineering consultant for the day lighting of Vivian Creek through #1 fairway, including both geotechnical and environmental components to Kerr Wood Leidel for the fee, and disbursements of \$56,400 plus GST, with the source of funding to be the Golf Course capital reserve.***
- B. THAT no legal rights shall arise hereby, and none shall arise until execution of the contemplated contract. The Board may rescind this resolution at any time up to the execution of the contemplated contract.***

## **POLICY**

Consultant contracts in excess of \$30,000 are awarded by the Board.

## **BACKGROUND**

The west arm of Vivian Creek inflows into Fraserview Golf Course at 57<sup>th</sup> Avenue and Vivian Drive, and the east arm inflows at Rupert Street and Rosemont Drive. Vivian Creek is fed from the City of Vancouver storm water system and passes through the golf course, using both natural stream beds and day lighted creeks. In some sections, it flows through wood stave culverts, which date from the 1930's. The creek exits in the 2700 block of SE Marine Drive.

Steady rains throughout October and early November created high water levels and caused debris to accumulate on a metal grate at the north end of the wooden culvert at #1 fairway. The grate is inspected daily and cleared when necessary. During periods of heavy rain, the grate can become plugged with debris, causing the creek level to rise, which makes full clearing of the screen very difficult.

On November 4<sup>th</sup> and 5<sup>th</sup>, following heavy rains, the wood stave culvert under the #1 fairway failed. The inflow to the culvert is from an open portion of Vivian Creek and the outflow is to a corrugated metal culvert installed in the 1960's which feeds into another open portion of the creek.

Following the failure of the culvert, the culvert head box, along with part of the path and fairway, were washed away. Additional sections of the fairway subsequently collapsed (sinkholes), due to washout of the soil surrounding the culvert.

The water is currently being successfully diverted through the use of a large rented water pump and the washed out area has been stabilized with a temporary infill of approximately 100 cubic yards of crushed rock. To ensure that the ground is stable and safe, an excavator uncovered and removed/demolished the remainder of the wooden culvert, located at a depth of 24 – 30 feet below grade, backfilling the site with the existing soil.

## **DISCUSSION**

Vivian Creek has to be re-established in a permanent manner, ideally before the start of the busy golfing season (April). A consultant is required to briefly study and provide initial options for the reinstatement, carry out a high level review of those options in conjunction with Park Board staff and then produce a final design. The review will include a significant environmental component and also consider methods to increase storm water storage for irrigation purposes.

A call for proposals to qualified consultants was issued in late November. Three companies were invited to submit proposals. One subsequently withdrew as they could not meet the envisaged schedule, the remaining two submitted proposals by the deadline of December 16.

Park Board staff have reviewed the proposals and both companies have the technical credentials and project portfolio that would allow them to carry out the work, including geotechnical and environmental enhancement components. It is considered that the proposal from Kerr Wood Leidel (KWL) provided a more comprehensive initial opportunity to address environmental issues, and offered services at a lower cost.

KWL has worked on a number of day lighted creeks and similar projects: Still Creek (Vancouver), Bear Creek (Surrey), Panorama Creek, Mission Creek (North Vancouver).

KWL has also worked on a number of PB projects, including the Lost Lagoon Storm Water Treatment system and foreshore projects at Jericho, Kitsilano and New Brighton.

## **NEXT STEPS**

It is highly desirable that the creek is reinstated soon; ideally before the start of the busy golfing season in April. To facilitate this, the consultant should be appointed quickly, to ensure that there is sufficient time to consider options with their associated environmental benefits before committing to a final design concept. It is estimated that the construction period will be approximately four weeks.

## **FINANCIAL IMPLICATIONS**

The source of funding for consultancy will come from the Golf Course capital reserve. The balance in this reserve is approximately \$100,000.

There is a Provincial Government local government grant program (Infrastructure Planning up to \$10k) to facilitate the study of environmental options and a request for this grant, to offset the consultant's fees, is being made. The intention of the grant is to increase the scope of environmental issues and design being considered during the study period of the work.

The funding of the construction part of this project needs to be addressed in the next few months. The total costs are likely to be in the hundreds of thousands of dollars, and initial cost sharing discussions with the City Engineering department have taken place.

## **SUMMARY**

This report recommends that KWL be awarded the contract to act as design and engineering consultant for the day lighting of Vivian creek through #1 fairway, including both geotechnical and environmental components.

Prepared by:

Ian Harvey, P.Eng.  
Planning and Operations  
Vancouver Board of Parks and Recreation  
Vancouver, BC