



September 21, 2020

**City of West Kelowna**  
1760 Cameron Road,  
West Kelowna, B.C.

**Re: Response to Comprehensive letter for Development at Lot A, DL 2924, ODYD,  
Plan KAP46732, 657 WESTSIDE RD**

**Letter of Response for Information Request:**

In June 2020 the undersigned of Lakestream Environmental Services was retained by Apchin Design Corp. and subject property owner Karen Lobello to undertake the preparation of environmental approval applications and specifically an Environmental Impact Assessment related to:

- Replacement of the existing two storey home, attached garage and carport with a three storey home with two attached garages;
- Reconstruction and realignment of the swimming pool;
- Repair of the staircase that leads from the pool deck to the dock;
- Restoration and planting of native shrubs and trees within the Streamside Protection and Enhancement Area.

Lakestream Environmental Services, acting as agent for the owner, prepared and submitted an Environmental Impact Assessment and Management Plan which provides full details of the environmental development plan. This plan was provided to Apchin Design who included it with their Development Permit application for works on the property.

Following review of the project development Permit application by the City of West Kelowna Development Services a letter of review as prepared by Hailey Rilkoﬀ, planner was received by Apchin Design Corp. which included a request for the following:

- Request for additional information related to Environmental Monitoring and a cost estimate for the proposed restoration works and landscaping including plantings, irrigation, labour, inspections, monitoring and maintenance.

As requested, we have now prepared an estimate for the proposed restoration works and have prepared an Environmental Monitoring Plan.

### **1.0 Environmental Landscape Planting Proposal**

This letter provides detail, as required by the City of West Kelowna Planning Department, of the cost estimates for preparation of a landscaping plan, the purchase and placement of plants and preparation of a final monitoring report. A professional landscaping company will be responsible for supply of planting stock, preparation of planting beds and installation of the plants.

This project proposes a number of property modifications as described earlier in this letter. Some of these modifications include repairs or replacement of features within the Streamside Protection and Enhancement Area (SPEA). As mitigation for the disturbance caused we have prepared a landscape planting plan which is shown in Figure 3. Our proposal includes the addition of 92 shrubs and 3 trees, all of native origin and well suited to the biogeoclimatic conditions at the subject property.

The plant selection and location may vary slightly from our prescription depending on plant availability and advice from the landscaper on plant pairing and compatibility. We will work with the landscaper to achieve the best options. Our goal is to improve the ecosystem characteristics on the property and to provide for their protection in the event of future flooding similar to what took place in the spring of 2017 when Okanagan Lake reached levels of 343.27m above sea level.

A steep bank which currently connects the upper home level and the lower retaining wall and deck area will be a challenge. Our goal is to plant species that will provide coverage, bind the loose bank materials together and hold the banks in place.

Once the grass sod has been removed from other areas topsoil will be placed to provide a planting medium for nursery stock. Landscape cloth will be placed along with an irrigation system followed by a layer of rock or bark mulch. Pathways composed of packed crush gravel will then be placed which will allow access to newly planted areas for maintenance purposes.

Total estimate of plant stock .....	\$780.00
Bark mulch .....	\$320.00
Topsoil .....	\$500.00
Irrigation system .....	\$850.00
Preparation of a landscape plan (Lakestream Environmental).....	\$575.00
Monitoring of project works and preparation of final report.....	<u>\$925.00</u>
<b>Total estimate of project costs .....</b>	<b>\$3950.00</b>

According to our calculations the City of West Kelowna will require a bond security of  
 $\$3950 \times 125\% = \$4937.50$

Lakestream verifies that if the development is completed as proposed the features, functions and conditions of the riparian area will remain intact with significant potential for improvement. It is also our opinion that this project as proposed will not result in a harmful alteration, disruption, or destruction to fish habitat. We confirm that the proposed development meets the riparian protection standards of the Riparian Area Protection Regulation and that appropriate measures to protect the SPEA will be applied.

### **2.0 Repair/replacement of Lakefront Retaining Wall**

It is noted that the City of West Kelowna response to comprehensive letter for development of the subject property included a reference to the failing condition of the lakefront retaining wall. We recognize that this repair/replacement of the aged retaining wall is necessary and any replacement works applications are currently under the jurisdiction of Provincial Crown Lands. Accordingly, Lakestream Environmental has prepared and submitted a Section 11 Water Sustainability Act Notification Application. This notification is currently under initial review by Front Counter BC staff. If we are successful in obtaining a Water Act Notification Authorization we will advise the City of West Kelowna of this outcome.

### **3.0 Roof Drain and Rock Pit Design**

Apchin design has received drawings from CTQ Consultants Limited prepared by Murray Noble P.Eng. regarding location of a rock pit distribution system for roof drainage (Figure 4). The design proposes that rain water be collected from roof down spouts and piped to the lower level of the property. It has been earlier proposed in the Environmental Impact Assessment that this distribution area be redesigned from its present use as lawn area to an area of planted shrubs.

The undersigned has reviewed this proposal and it is our opinion that dispersion of rain and melt waters will be compatible with the proposed renovation of the distribution area. It is noted that this distribution area is located with the property riparian zone, however, this situation cannot be avoided given the nature of the property landforms. In our opinion this treatment will have minimum effects and will not cause any negative impact to features and function of the riparian area. This development will be included with the environmental monitoring process as defined below.

#### **4.0 Environmental Monitoring**

To insure compliance with BMPs and minimize risks to terrestrial ecosystems the undersigned has been retained as environmental monitor (EM) during construction activities. The EM will document compliance with BMPs and mitigation measures and provide guidance for implementation of operational best management practices such as erosion and sediment control. If greater disturbance occurs due to unforeseen circumstances, such as weather events, the EM will recommend further measures to protect/restore ecosystem values of the site. Lakestream Environmental will adhere to the following criteria:

- A preconstruction meeting will be held between the EM and the contractors undertaking the work to insure compliance of mitigation measures required to maintain environmental integrity and protection on the site.
- The EM is an appropriately qualified environmental professional authorized to halt construction activities should an incident arise that is causing undue harm to terrestrial, aquatic or riparian resource values.
- Construction activities should be monitored weekly during start-up and any high-risk activities within proximity to environmentally areas, and on a minimum monthly basis during other construction activities to completion of the project.
- Monitoring reports will be submitted to all relevant contractors and regulatory agencies. A final report will be prepared upon the completion of construction works summarizing the construction activities and listing any deficiencies noted throughout the works.
- A spill containment kit will be on hand in case of equipment failure and all machinery will be fueled and serviced at least 30m away from the high water mark.
- A silt fence will be required between the lake edge and the construction area to prevent any movement of materials to the lake.

- Protection of existing trees will be insured while machinery is in operation at the site.

Construction methods near and within the 15m SPEA zone will be adhered to following the guidelines of:

- Ministry of Environment Develop With Care
- Standards and Best Practices for In-stream works
- Fisheries and Oceans Canada Working Near Water, and
- A Users Guide to Working In and Around Water.

If you require any additional information please do not hesitate to contact the undersigned.

Respectfully submitted,



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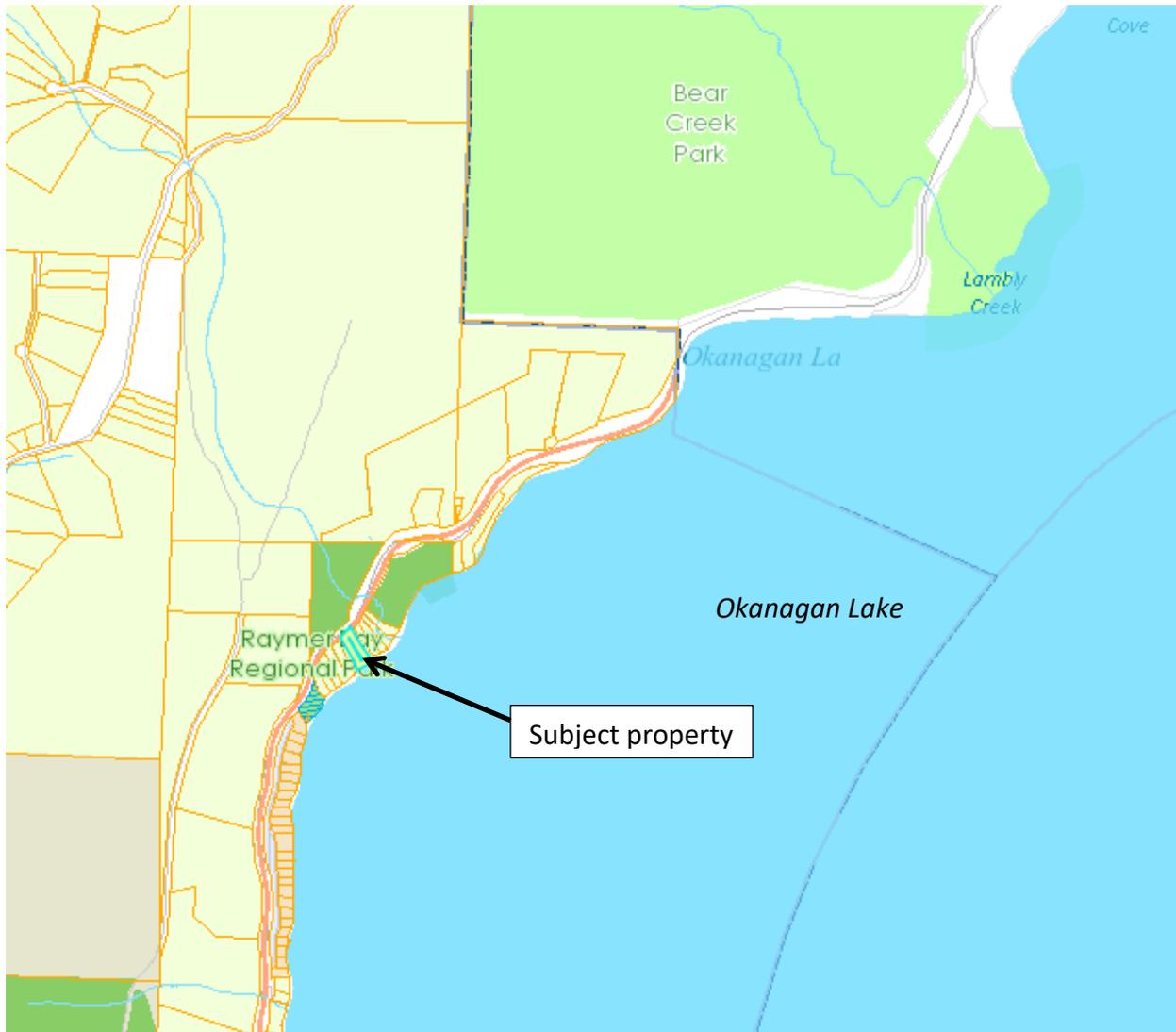


Figure 1. Location of subject property in West Kelowna.



Figure 2. Subject property ortho location. Image source City of West Kelowna mapping website.

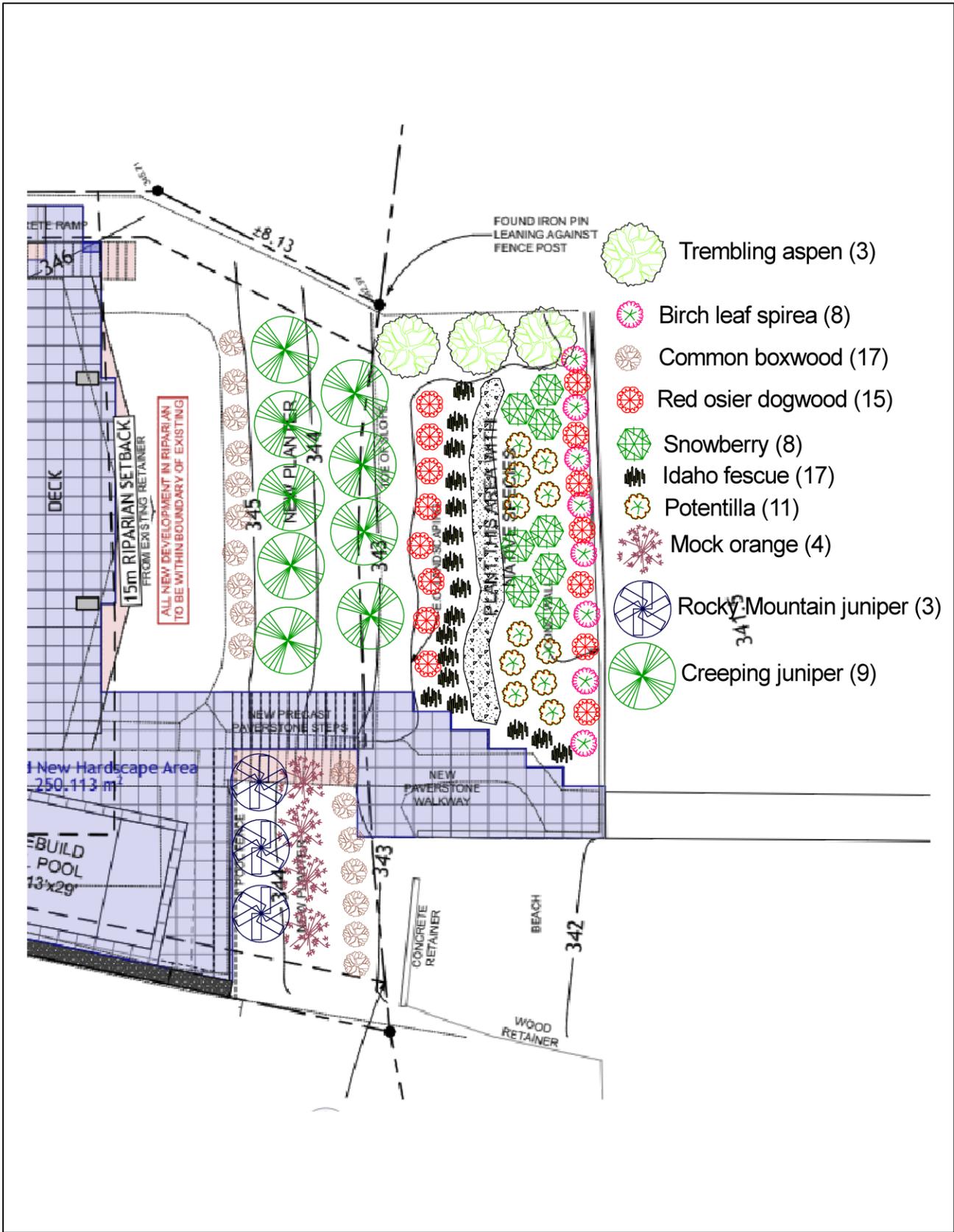


Figure 3. Site landscape prescription plan as prepared by Lakestream Environmental showing selection and location of native planting placement.

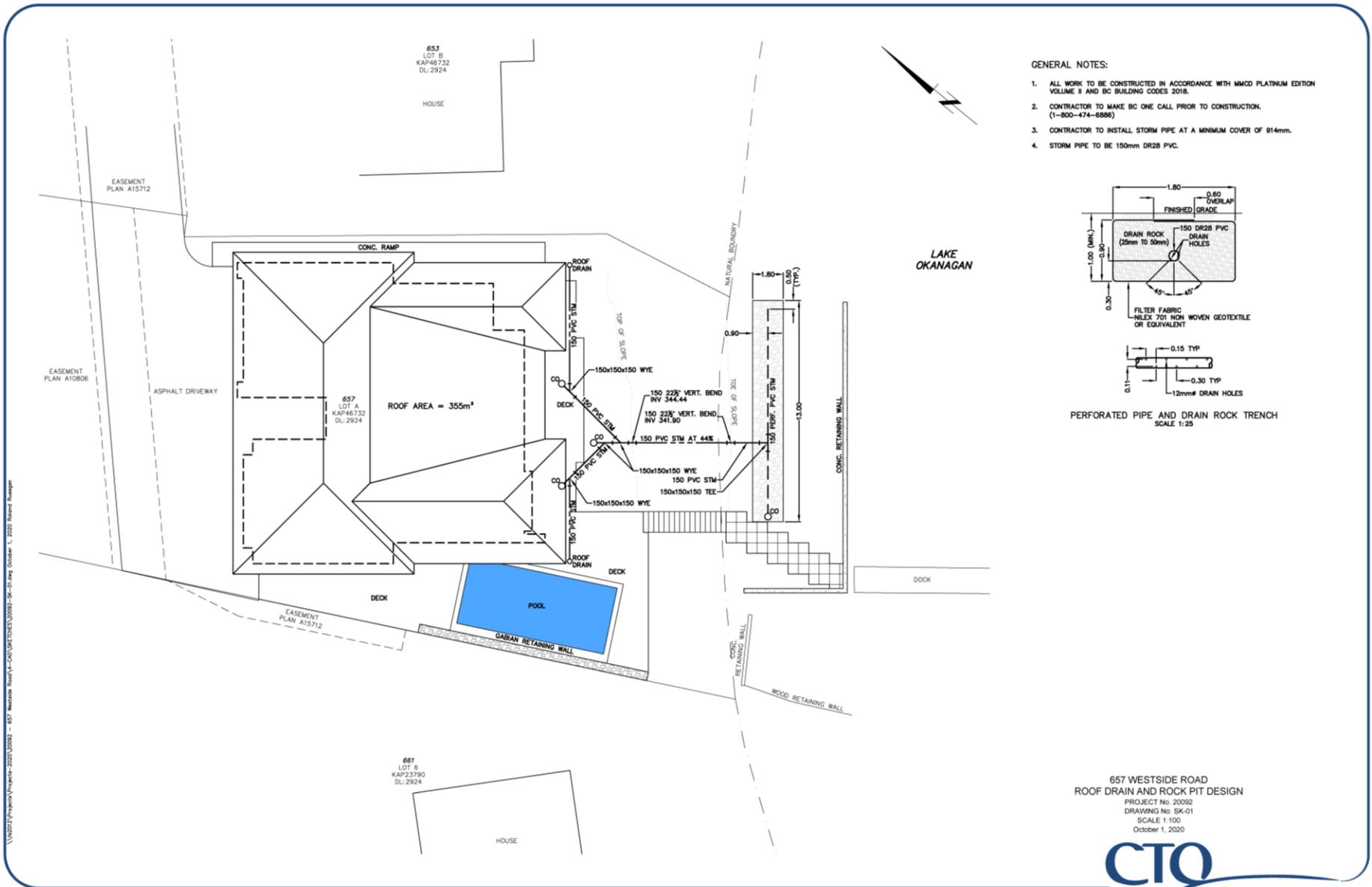


Figure 4. Proposed roof drain water treatment design.