



**CENTRAS**  
Engineering Ltd

# STORM WATER DRAINAGE MEMO

Outdoor Lumber Storage Yard

10880 Dyke Road  
Surrey, BC

Submitted to:  
Goodrich Terminal  
9985 Grace Road  
Surrey, BC V3V 3V7

Prepared by:  
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## 1. INTENT

The intent of this memo is to summarize and comment regarding the existing underground storm water drainage infrastructure located at 10880 Dyke Road, site review to confirm its current condition and advise regarding the adequacy of this drainage infrastructure for the intended use of the property for outdoor lumber storage.

## 2. DRAINAGE RECORD DRAWINGS

Unfortunately, there are no historical engineering as-built drawing records available illustrating the locations of the existing drainage infrastructure on the subject site. An initial site visit was conducted by Centras Engineering on October 23, 2018 and it determined there were numerous storm water drainage catch basins within the paved yard areas and five storm water drainage outfalls into the Fraser River.

It was discussed at the initial site visit with the Vancouver Port Authorities that a drawing displaying the extent and outfalls of the storm water drainage infrastructure on the subject site are required to be submitted to the Port Authorities. The Port Authorities advised they also have no records for any drainage works located on the subject site.

In summary, to prepare a record drawing of the site features including the existing underground storm water drainage infrastructure, buildings, contours, etc., it was recommended to engage a surveyor to prepare a topographic survey plan on the subject site.

## 3. CIVIL KEY PLAN

South Fraser Land Surveying completed a detailed topographic survey plan on the subject site early December 2018. Please refer to **Appendix A** for a copy of the civil engineering base plan drawing.

After the topographic survey plan was completed, a follow up site visit was conducted by Centras Engineering on December 14, 2018 to site review and confirm all the existing underground storm water drainage catch basins and storm sewer outfalls into the Fraser River. Catch basin grates were opened up and inspected to confirm storm sewer outlet pipe sizes and pipe directions. The enclosed civil engineering base plan in **Appendix A** summarizes all the existing underground storm water drainage infrastructure on the site.

## 4. RECOMMENDATIONS

At the second site visit, it was noted after opening the catch basin rim casting covers, the existing catch basins were filled with accumulated sediment and debris.

It appears the existing drainage infrastructure onsite has not been maintained by the previous tenant. Vacuuming out the catch basins and internally pressure washing the storm sewer pipes will greatly increase the current capacity of the onsite drainage system.

It was recommended by Centras Engineering for all the catch basin sumps and storm sewer leaders to be flushed out to good operating conditions. On March 21, 2019, A&A Testing vacuumed out all the catch basin sediment traps and flushed all the storm sewer leads.

It was also recommended to surface sweep the paved yard area free of debris and sediment to further avoid future sediment entering into the onsite storm water drainage facilities. Centras Engineering have been advised by Goodrich the surface sweeping of the paved yard area has been completed and that Goodrich owns a sweeper and regularly sweeps their yard area on a weekly basis to prevent any issues with the operations of fork lifts within the property.

## 5. MINIMUM BUILDING ELEVATION

Based on the latest Fraser River flood elevation profile of June 1, 2011 including freeboard, the minimum building elevation (MBE) for this subject site is approximately **4.6m** geodetic. It was discussed at the second site visit that a possible future site office trailer would be located in the southwest corner of the site.

It is recommended to establish the finished elevation of site office trailer and also any onsite hydro transformers, electrical closets, etc. at the minimum building elevation of **4.6m**.

## 6. CONCLUSIONS

In summary, based on the topographic survey information, a site visit after a rainfall event, conversations with the existing tenant on the subject property, the completion of the vacuum and flush of all the onsite drainage infrastructure, it can be concluded the existing drainage infrastructure on the subject site is suitable for the proposed intended use of an outdoor lumber storage yard.

If there are any questions or comments regarding the storm water management report, please contact me at 604-782-6927 or by email at [steve@centras.ca](mailto:steve@centras.ca).

Yours Truly,  
**CENTRAS ENGINEERING LTD.**

Steve O'Connell, P.Eng.

Enclosures

## Appendix A – Civil Key Plan

