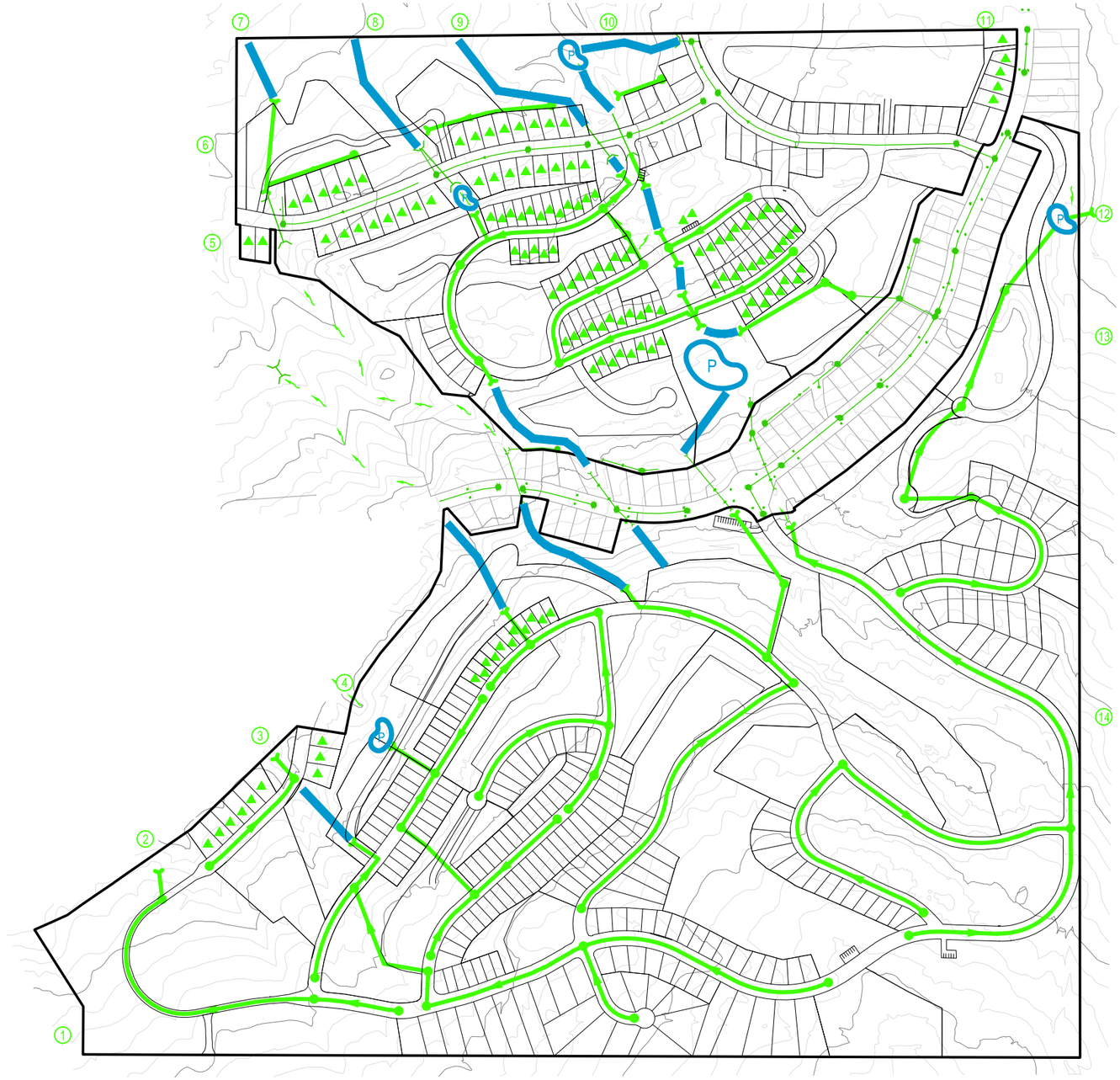


N

LEGEND

- Existing Drain Main
- Proposed Drain Main
- (11) Outfall ID
- P Pond
- Single Family, On-Lot Detention
- Open Channel



Figure D.1
Storm Drain Schematic - Drainage Channels
Kingsview at Maple Bay
1:6000

WSP

4 April, 2014

**STATEMENT OF COMMITMENT FOR PREPARATION AND APPROVAL OF A STORMWATER MANAGEMENT PLAN FOR "KINGSVIEW"**

For the referenced project, this document is offered by the owner (Strandlund Investments Ltd.) to the Municipality of North Cowichan (MNC) as a Statement of Commitment (SoC) to complete a Stormwater Management Plan (SWMP) to the satisfaction and approval of MNC as a condition to approval of a new CDP and zoning for the subject property

The following will be included in the final SWMP document ("pre-development" and "original" refers to before land-clearing for the project original known as 'The Cliffs Over Maple Bay'):

1. A list and discussion on the goals that are to be achieved by the SWMP, including:
    a. Limit flows from the site to pre-development rates,
    b. Maintain existing downstream drainage flow patterns,
    c. Minimize sediments and pollutants from entering downstream systems,
    d. Wherever practical, maximize runoff infiltration to recharge groundwater.
2. A report on pre-development conditions as best as they can be determined, including but not limited to:
    i. Ground cover,
    ii. Watercourses,
    iii. Estimated stormwater flow rates from the site.
3. A report on existing conditions:
    i. Infrastructure already in place, such as:
        1. Roads,
        2. Piped drainage systems,
        3. Culverts,
        4. Flow-through drains,
        5. Ponds and channels (albeit they may be temporary).
    ii. Groundwater and locations of groundwater breakout,
    iii. Soil and vegetation groundcover.
4. A discussion on the proposed land use and phasing of the development,
5. A drainage model of the original conditions,
6. A drainage model of the proposed development, including a revised topographic plan of the current site,
7. Submit and have approved by MNC the final Stormwater Management Plan, including recommendations on what is required to achieve the stated goals. The SWMP is to be approved prior to the start of construction of any phase of the project. The SWMP is to include specific infrastructure requirements that need to be in place where practical for treatment requirements during the land development process.

To complete the SWMP, at a minimum the following tasks will be performed:

1. Identify what work previously undertaken in the February 2008 by Bullock Baur SWMP is still relevant and which can be used for the new SWMP. Previously completed work includes:
    a. Hydrogeology study results,
    b. Geotechnical testing results,
    c. With discussion and agreement with MNC:
        i. assignment of values used for the new SWMM model (such as: surface runoff coefficients, groundwater flow estimates, hydraulic conductivity, SCS infiltration curves, Soil Group numbers), for both pre-development and development scenarios,
        ii. confirmation of original catchment characteristics (including areas, slopes, groundcover),
    d. Original points of discharge from the site, and cataloging receiving structures,
    e. Original pre-development flows,
    f. Rainfall data,
    g. Water quality data,
    h. Environmental protection plans (with modifications and additions as needed):
        i. Spill prevention and spill response plans,
        ii. Sediment and erosion control plan,
        iii. Tree protection plan,
        iv. Sensitive ecosystem protection plan,
        v. Fertilizer and pesticide management plan.
2. Meet with MNC, other consultants and stakeholders to discuss and understand historical and current conditions related to the changes in stormwater characteristics brought by changes to the site. Include discussions as required with the Ministry of Environment on the status of Section 9 approvals.
3. Meet with MNC to discuss and resolve stream replacement issues,
4. Collect data:
    a. With consultation with MNC and other stakeholders, compile a list of complaints and observations from downstream residents,
    b. Gather maintenance records (as related to downstream drainage) from MNC public works and engineering staff,
    c. With assistance from a QEP, record visual observations from the subject site and downstream watercourses (preferably scheduled during a dry period and during or immediately following a heavy rainfall):
        i. Identify new watercourses, if any,
        ii. Record locations and approximate flow rates of groundwater breakout,
        iii. Confirm operation of existing flow-through-drains,
        iv. Observe and record areas of ponding,
        v. Observe and record effectiveness of existing controls such as channels, ponds, and dams.

END