

# SCHEDULE 7

## CIVIL INFRASTRUCTURE

### GENERAL POLICY

- A. This section describes how the remaining parts of the Proposed Development will be serviced.
- B. Major access and storm obligations are detailed in section 7.1.
- C. The onsite servicing concept plans are detailed in section 7.2.

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## 7.1 – MAJOR AND OFFSITE WORKS

### GENERAL POLICY

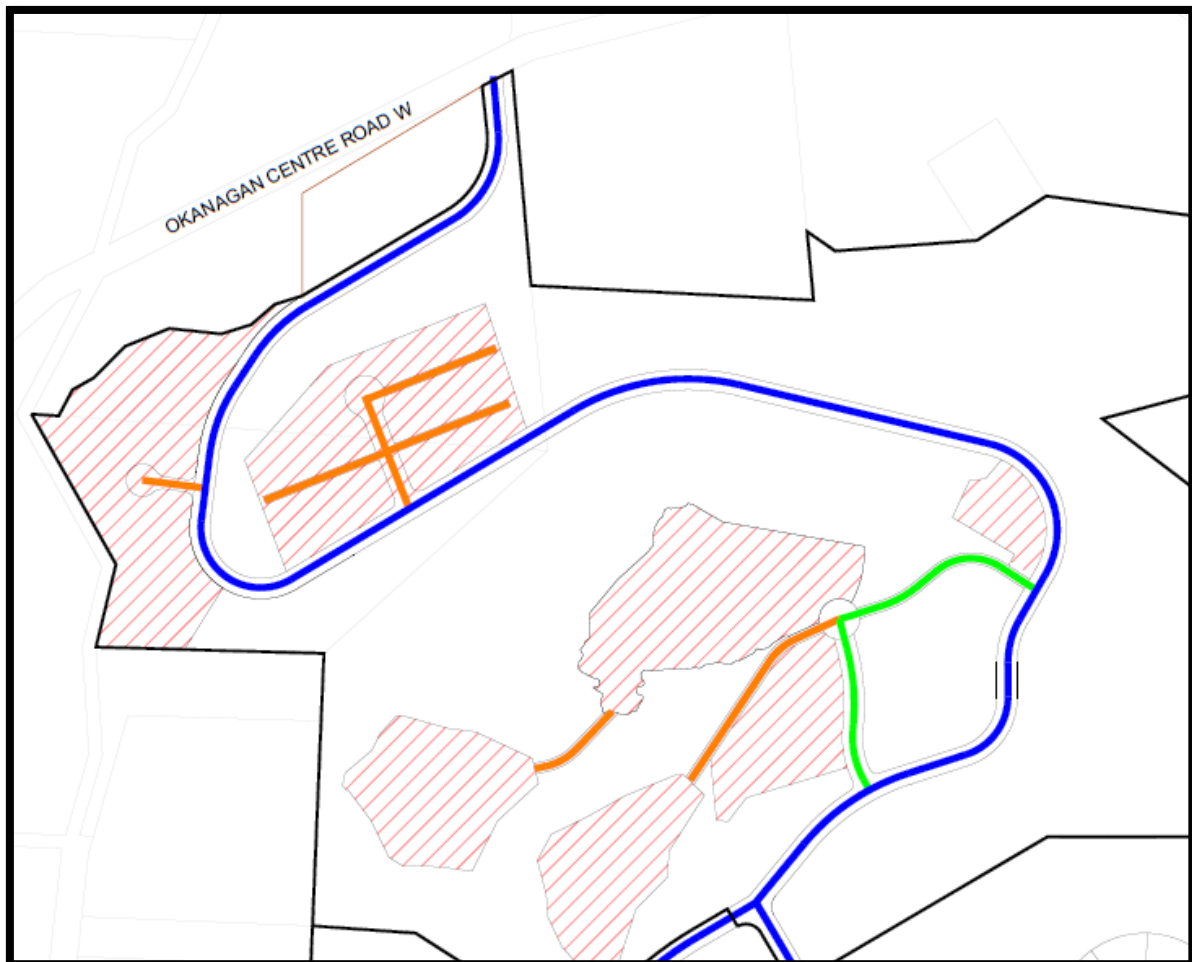
- A. The Proposed Development requires several necessary major pieces of infrastructure (“Major Works”)which will integrate with the District’s existing infrastructure.
- B. If the obligation to construct Major Works is triggered by development of a Phase in the Proposed Development, completion of these Works will be written as a condition in the PLR for the applicable Subdivision.
- C. Construction of these Major Works may happen concurrently with the construction of development within Phases.
- D. The Developer MAY complete the Major Works described in this schedule at any time prior to them being required.
- E. Concept designs are shown throughout; detailed designs will be completed in accordance with the Servicing Bylaw supplied in Schedule 6 except for the noted attributes in the unique specifications / variances section below or varied by Schedule 8.
- F. Any deviation from the specifications shown in this Agreement would require the mutual agreement of the Developer and the District Engineer.

## 7.1.1 - SPINE ROAD

### GENERAL CRITERIA

1. The southern access road or “Spine Road” is the road connection between the upper Phases of the Proposed Development down the southern slope of the property to Okanagan Centre Road West (shown as a blue line below).

### OVERVIEW IMAGE



## UNIQUE SPECIFICATIONS / VARIANCES

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### HIGHWAYS AND WALKWAYS

#### **Cross section:**

The applicable cross section is the “Lakestone Collector Road x-sec” defined in **Schedule 8.2 “Road Cross Sections”**.

#### **Intersections:**

Due to hillside constraints, all intersections will be standard four way or three-way intersections (not roundabouts).

#### **Landscaping**

*Affecting: Schedule H.1.5, H.5.2(b), H.5.2(d), H.5.6 and H.6 of the Servicing Bylaw*

The spine road is expected to be built largely out of rocky terrain where space will be limited for street trees, and the rocky ground is not conducive to trees surviving.

The Developer will be required to plant street trees only in areas where soil conditions are conducive to the survival of trees and where there is at least 2.5m of width between retaining walls and the road curb, and at a distance of 5m of utility lines. When planting trees is possible pursuant to the above, street trees will be planted at a minimum of 10 meters and a maximum of 15 meters from each other. No automated irrigation lines will be required to be installed.

## DRAWINGS

Drawing number. Drawing name

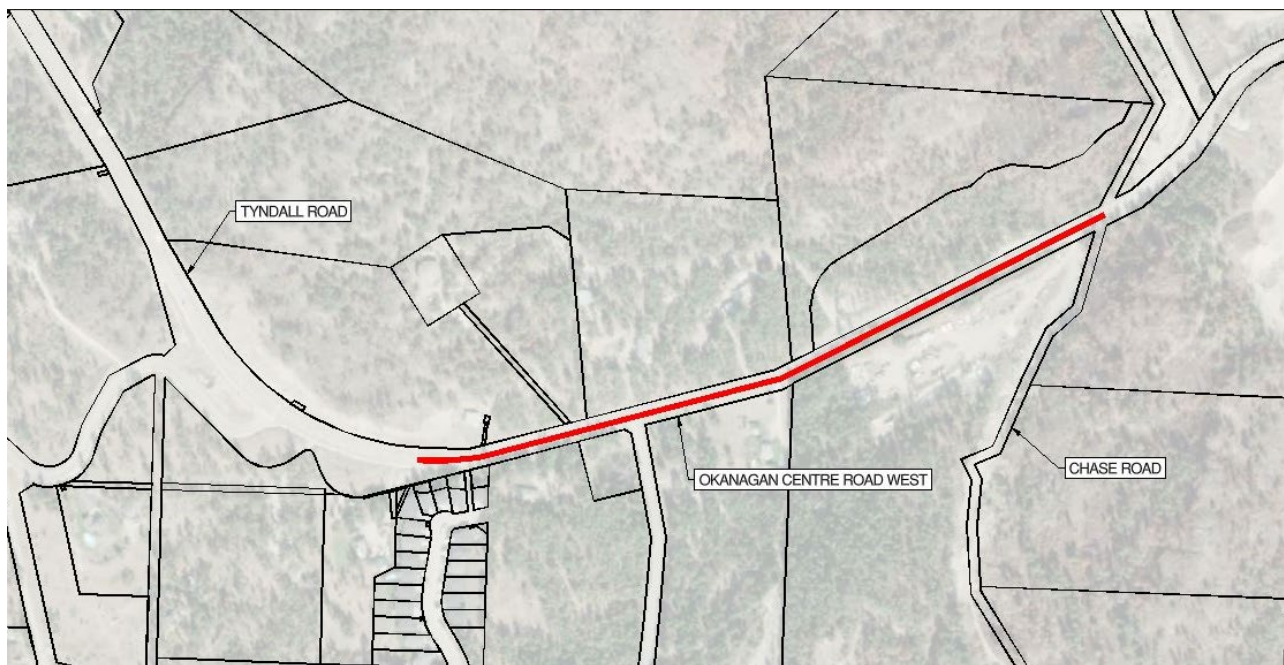
- 07.01.01 - Spine Plan View
- 07.01.02 - Intersection - Southern Access & OKCRW
- 07.01.03 - Intersection Beacon Hill Spine Road
- 07.01.04 - Spine Road - Profile View
- 07.01.05 - Spine Road - Walls and rock cuts – Highlands South

## 7.1.2 - OK CENTRE ROAD WEST

### GENERAL CRITERIA

1. OK Centre Road West upgrades are a DCC project and will be built to the cross section shown in Schedule 8.2 (Okanagan Centre Road West – Typical Section). Components of the upgraded road that intersect with roads the Developer is responsible for (Spine Road to Highlands, and Chase Road East to the Glenmore Residential phase) are shown in the referenced appendix drawings.
2. The intersection at OK Centre Road and the Spine Road is to be sign controlled. This is in agreement with the direction from the District consultant, Align Engineering and is designed to accommodate the traffic loads.
3. The Intersection at OK Centre Road and Chase Road East (pending any renaming) is to be sign controlled. This is in agreement with the direction from the District consultant, Align and is designed to accommodate the traffic loads.

### OVERVIEW IMAGE



## UNIQUE SPECIFICATIONS / VARIANCES

### HIGHWAYS AND WALKWAYS

#### **OK Center Road and Southern access / Spine Road intersection.**

Per Align Engineering report, though not likely, there may be the need for a left-hand turning lane from OK Center Road eastbound into the Spine Road of the Proposed Development. Both options (with and without the turning lane) are shown in the attachments. The choice of options is the District's, and any additional cost to build the turning lane will be part of the DCC refunded cost.

### STORM DRAINAGE

The storm drainage flows under this road are described in their own sub section (7.1.8)

## DRAWINGS

Drawing number. Drawing name

- 07.02.01 - OKCRW Alignment
- 07.02.02 – Chase Road & OKCRW Intersection Overview
- 07.02.03 - Intersection - Spine and OKCRW

## 7.1.3 – RESERVED SECTION

This section is intentionally left blank

## 7.1.4 – 10080 CHASE ROAD ACCESS

(EASTERN ACCESS)

### GENERAL CRITERIA

1. One of the permanent road connections identified in the 2022 District of Lake Country Mobility Improvement Program is a proposed minor collector street linking Beacon Hill Drive to Chase Road, traversing the parcel located at 10080 Chase Road. The construction of this connection will be a condition of any future redevelopment of that parcel.
2. Completion of this road would provide an additional access point for the Proposed Development. However, as 10080 Chase Road is privately owned and not under the control of the Developer, this road connection shall be considered a beneficial future option only, and its construction is not an explicit requirement of the Proposed Development.

### OVERVIEW IMAGE



UNIQUE SPECIFICATIONS / VARIANCES

*No unique specification or variances are applicable to this item.*

DRAWINGS

*No detailed drawings are applicable to this item.*

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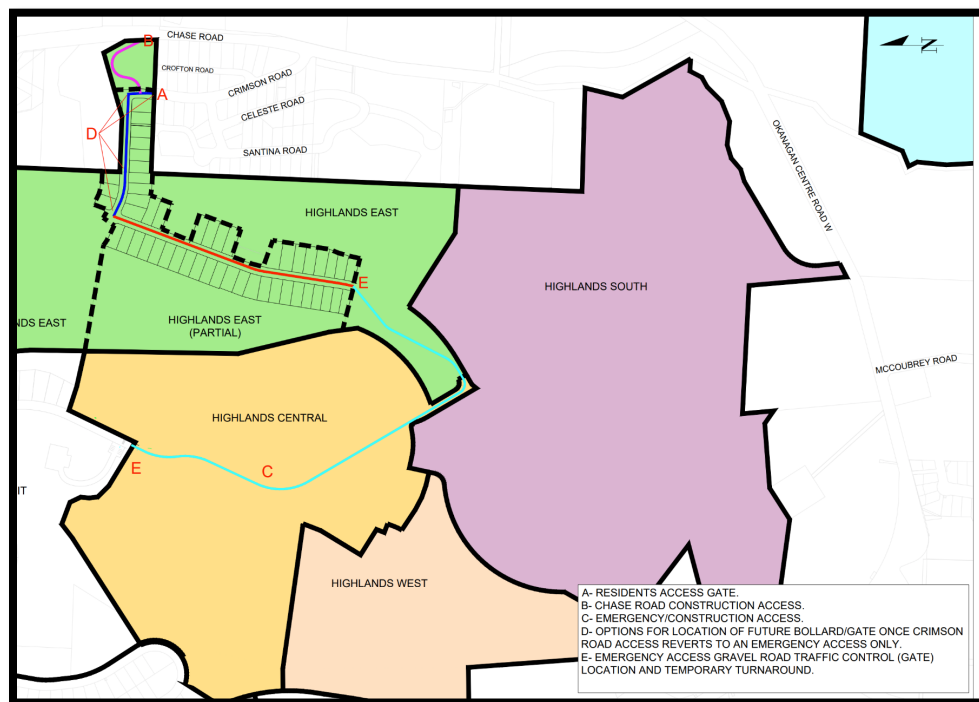
## 7.1.5 – PERMANENT EMERGENCY ACCESS

(EASTERN ACCESS)

### GENERAL CRITERIA

1. The 2012 Masterplan gives the Proposed Development the right and obligation to construct an emergency access to Sage Glenn via the northwest corner of that subdivision (Santina Park). This connection currently exists.
2. Road access will be constructed connecting the Proposed Development to Crimson Road as part of the temporary access described in Section 5.2. Once complete the Lakestone Emergency Access Road connection to Sage Glenn via Santina Park will be phased out.
3. Once a second full road access connection is made (Section 7.1.1 or Section 7.1.4), the temporary access as described in Section 5.2 will be blocked off with a gate or bollard. This access location will then be assigned as emergency access, creating a second emergency egress option.
4. Road construction must be completed in a way that provides adequate access for emergency response and minimizes disturbance and delays to the public and District operational staff. The Developer must ensure that its contractors follow the Servicing Bylaw and all applicable Council policies.

### OVERVIEW IMAGE



## UNIQUE SPECIFICATIONS / VARIANCES

*No unique specification or variances are applicable to this item.*

## DRAWINGS

Drawing number. Drawing name

- 05.03A.01 - Roads Phasing – Highlands East (Partial)

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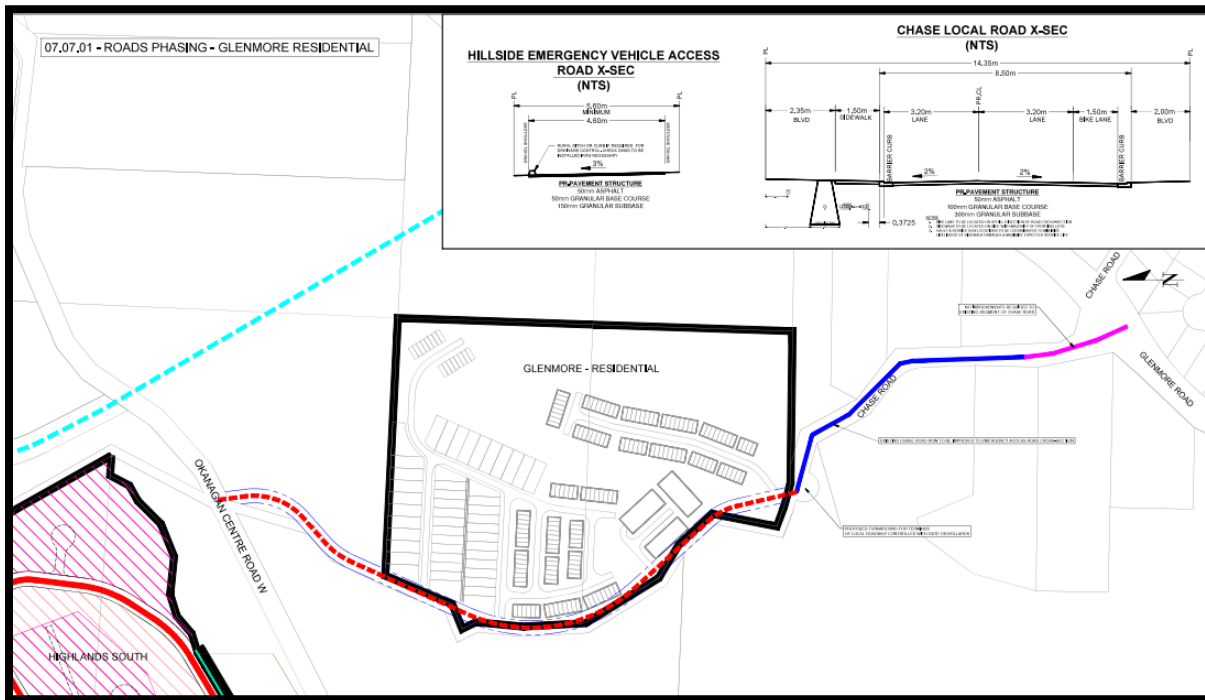
## 7.1.6 – GLENMORE RESIDENTIAL ACCESS

### GENERAL CRITERIA

1. Chase Road (which may be renamed in the future) will connect OK Centre Road West to the Glenmore Residential Phase and must be upgraded to provide access to this phase.
2. Completion of these works is a prerequisite to subdivision of the Glenmore Residential phase, but also will benefit other land owners as well as be an improvement to the overall District transportation network.
3. The work itself could be conducted and paid for by the Developer (and other benefiting parcels would owe latecomers), neighbouring parcel owners (in which case the Developer would owe latecomers), the District (in which case the Developer would owe latecomers or DCCs), or some combination of contributors.
4. The “Chase Local Road X-Section” (Schedule 8.2) upgrade will extend from OK Centre Road to the southern edge of the property boundary of Glenmore Residential at the current local road cul-de-sac (dashed red line).
5. Chase Road from Glenmore Road to the southern boundary of Glenmore Residential will be upgraded to Hillside Emergency Vehicle Access Road standards as shown in Appendix 07.07.01 – Roads Phasing – Glenmore Residential (solid blue).

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## OVERVIEW IMAGE



Appendix 07.07.01 Roads Phasing – Glenmore Residential

## UNIQUE SPECIFICATIONS / VARIANCES

## HIGHWAYS AND WALKWAYS

1. Lakestone Local Road cross section (Sched. 8.2) will be applicable from OK Centre Road up to the entrance of this Phase.
2. The Developer is required to provide an emergency egress (with gate) road connection to the existing Chase Road.
3. The Developer is required to improve the existing Chase Road from the emergency access road to the 5474 Chase Road property driveway to the south.

## DRAWINGS

Drawing number. Drawing name

- 07.07.01 Roads Phasing - Glenmore Residential

- 07.07.02 - Chase Road ROW - Existing and Proposed
- 07.02.02 - Chase OKCRW Intersection Overview

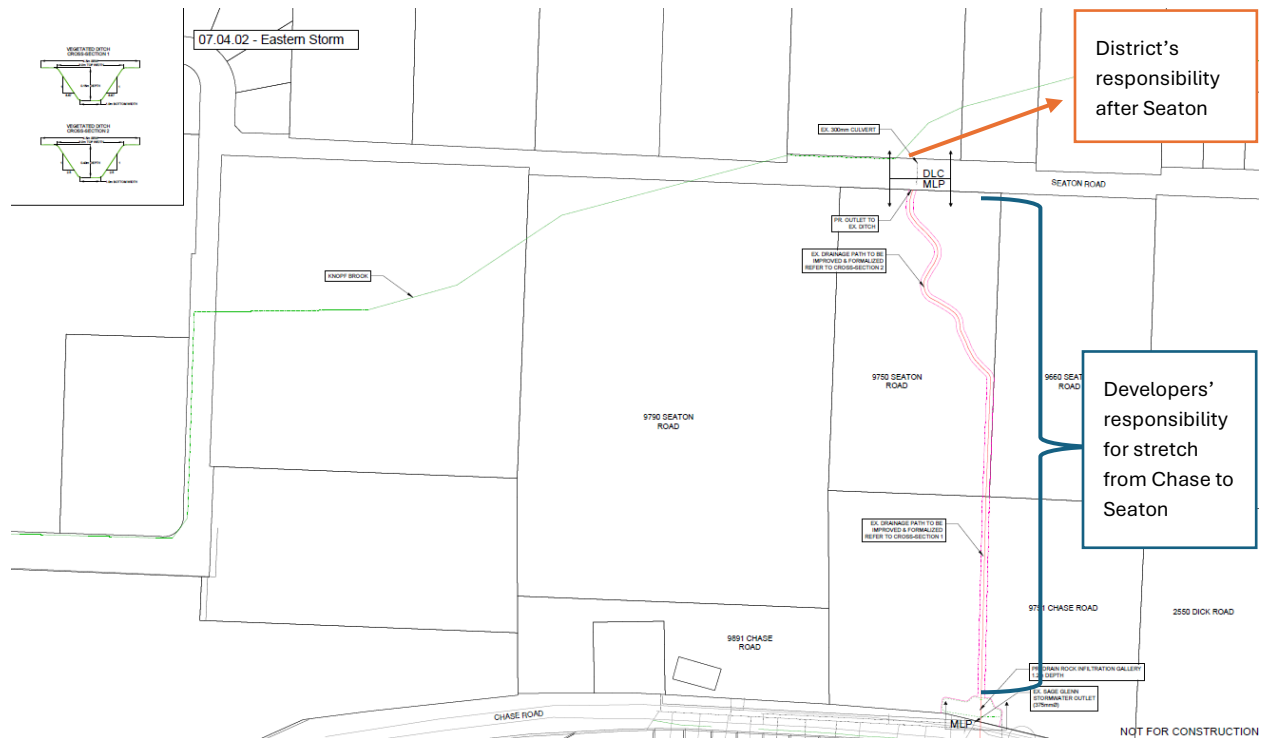
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## 7.1.7 - EASTERN STORM ROUTE

### GENERAL CRITERIA

1. Stormwater runoff from the Highlands Central and Highlands East Phases will be directed east to the Sage Glenn subdivision. Water will convey through the Sage Glenn storm system and daylight at Chase Road via existing piping.
2. The District will formalize their access and rights to the existing flow path of water through the two private parcels from Chase Road to Seaton Road.
3. The Developer will improve the existing flow path of water (generally speaking, deepening) to channel flow from Chase Road to Seaton Road. The Developer will also create opportunities for infiltration.

### OVERVIEW IMAGE



## UNIQUE SPECIFICATIONS / VARIANCES

### M – STORM DRAINAGE

The solutions described in this subsection and the servicing brief (Appendix 07.04.01 – Eastern Storm routing brief) is accepted as the pre-design step of the approval procedure of the Servicing Bylaw as related to storm water requirements. Associated detailed design drawing will still need to be submitted by the Developer for the District’s review to assure the construction plans represent the pre-design concept described here.

The overland flow route will be built to accommodate a flow rate of 1.5L/second per hectare which is derived from the Urban Systems prescribed Unit Runoff rate (“URR”).

In the current undeveloped condition, most of the storm water is infiltrating. Storm water flowing from Highlands Central and Highlands East will be infiltrated into the ground as much as is practical to mimic the predevelopment condition. This will be done with the use of perforated storm water pipes and drywells in multiple locations that are shown to be amenable to infiltration based on geotechnical investigations.

The outlet from the Proposed Development will be into the existing Chase Road storm system either through new pipes directly into it or via pipes in the existing Sage Glenn subdivision.

The Developer will be further responsible for constructing an overland flow route to convey flows from the Chase Road outlet to Seaton Road per Table 2.4.1. (Schedule 2, p. 9,10). The overland flow route will incorporate ditches or swales along with infiltration and outlet/flow control protection as necessary to minimize downstream flows and manage erosion. This is the limit of the Developer’s offsite obligations for storm water.

## DRAWINGS

Drawing number. Drawing name

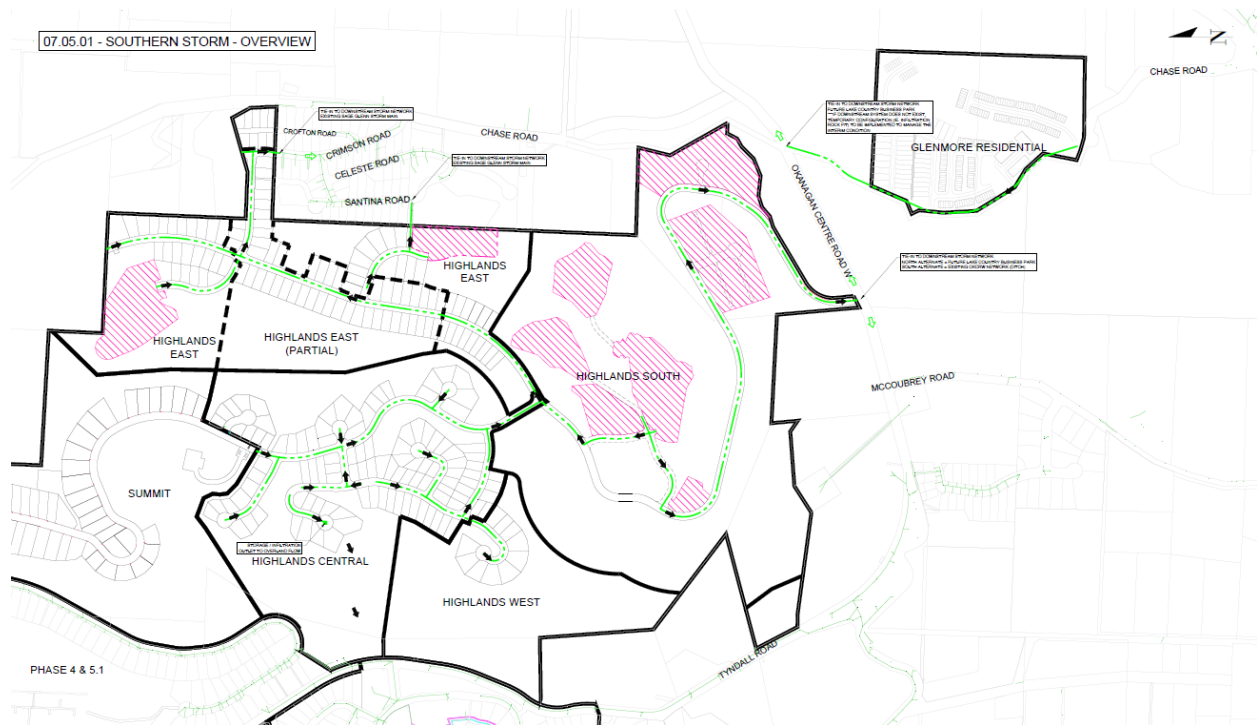
- 07.04.01 Eastern Storm Routing Brief
- 07.04.02 – Eastern Storm Routing and Swale Cross Section

## 7.1.8 – SOUTHERN STORM ROUTE

### GENERAL CRITERIA

1. Topographical restrictions with specific highpoints dictate that the storm flows from the Highlands South phase will, in all likelihood, be routed with the southern access road (Spine Road) to OK Centre Road. Storm water may be directed either west on OK Centre Road to existing infrastructure or alternatively storm water may be directed east on OK Centre Road to connect with future District planned stormwater system. Stormwater system design will be in alignment with the Servicing Bylaw.

### OVERVIEW IMAGE



Appendix 07.05.01 Southern Storm Overview

## UNIQUE SPECIFICATIONS / VARIANCES

### STORM DRAINAGE

#### **Direction of flows**

The future Spine Road and its storm piping will meet OK Centre Road West at its high point, allowing storm water to gravity flow east or west. The District and the Developer agree that both directions are acceptable provided that the downstream infrastructure can accommodate storm water flows to either Middle Vernon Creek (east) or Okanagan Lake (west).

The District is working on stormwater upgrades of known existing downstream deficiencies in both directions. The expectation is that the Developer will connect into one of these upgraded systems. This work is expected to be paid for via DCC contributions. Expected flows into the storm network are based on the Districts consultant Urban Systems report Titled “TECHNICAL MEMORANDUM - LAKESTONE AREA STORMWATER SERVICING PLAN dated: Dec 16, 2024.

### DRAWINGS

Drawing number. Drawing name

- 07.05.01 - Southern Storm – Overview

## 7.2 – CONCEPT SERVICING PLAN

### GENERAL POLICY

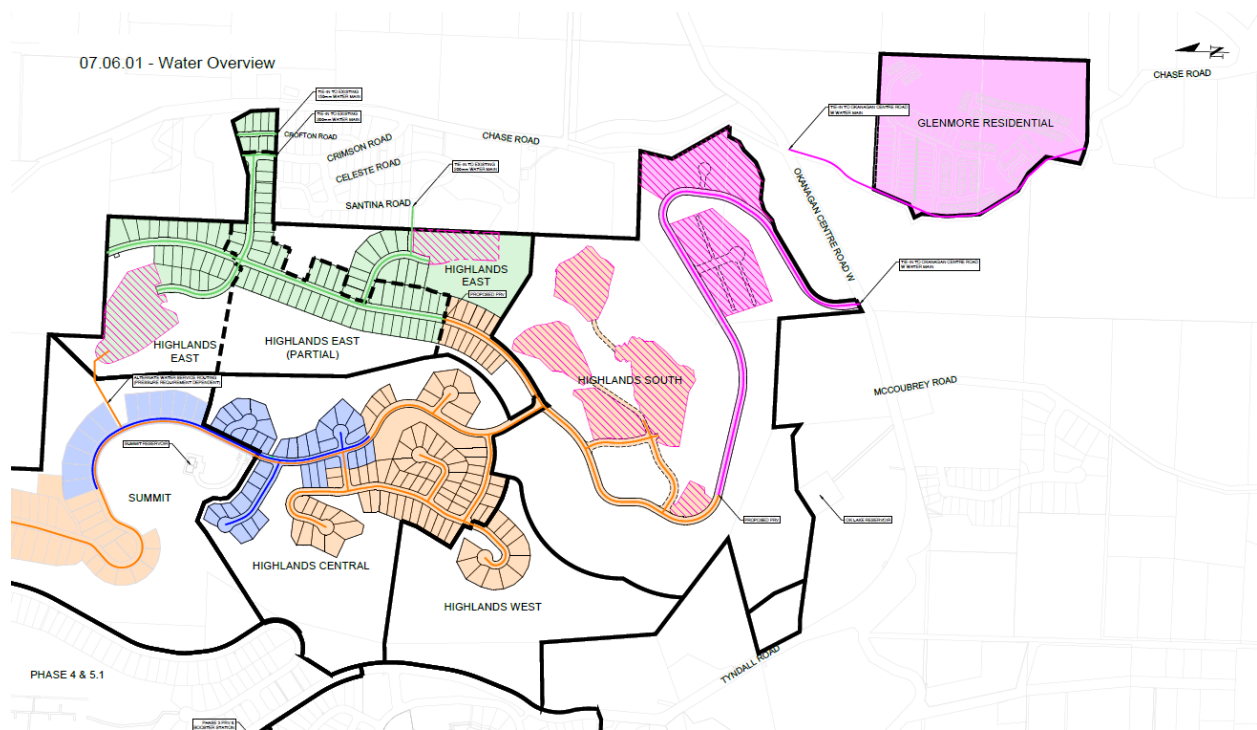
- A. The Proposed Development consists of onsite servicing. The concept design for water, sanitary and storm services are described in this section.

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## 7.2.1 – WATER SERVICING

### GENERAL POLICY

1. The Developer constructed a reservoir in the Summit Phase that will ultimately be interconnected to the Chase Road and Okanagan Centre Road West water networks and will service Highlands Central, Highlands South, and Highlands East. This results in sufficient water servicing for a total anticipated 229 single family residences and 329 multifamily residences.
2. All water services constructed on the Lands will be constructed pursuant to the Servicing Bylaw.



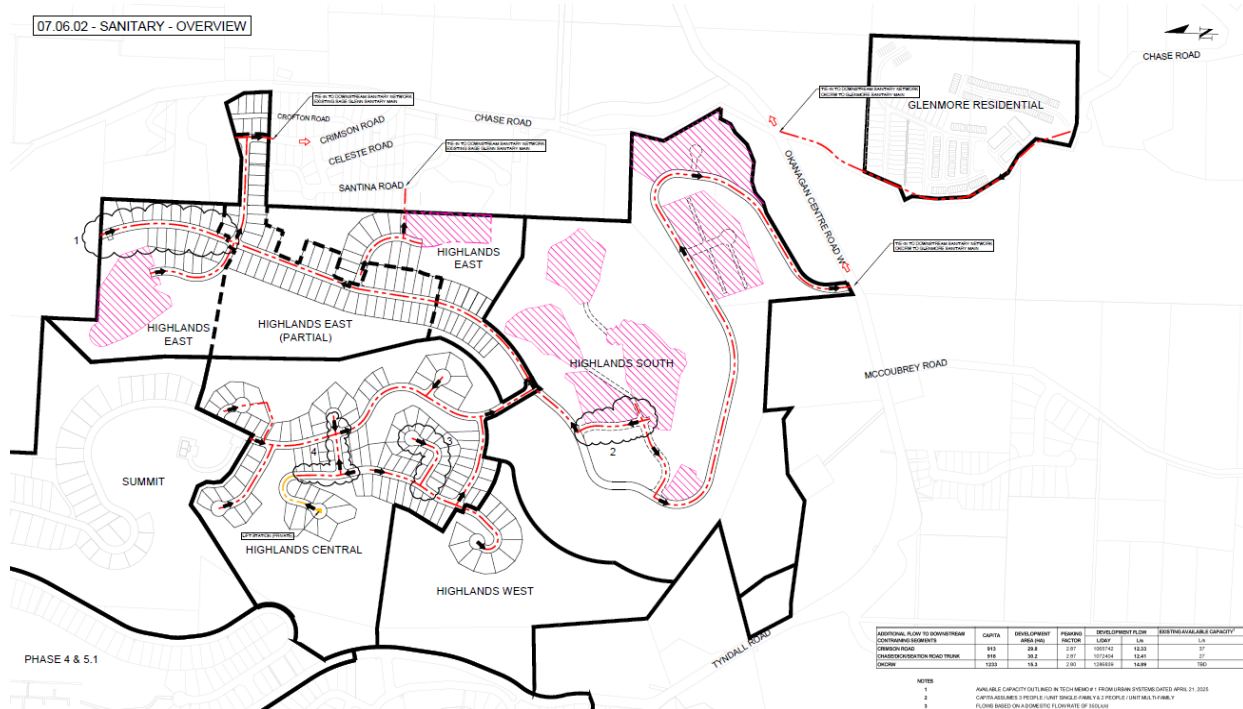
Appendix 07.06.01 - Water Overview

## 7.2.2 – SANITARY SERVICING

### GENERAL POLICY

1. The District will receive sanitary from the Proposed Development to the east, anticipated to be 213 single family residences and 62 multifamily residences.
2. The District will receive sanitary from the Proposed Development to the south, anticipated to be 59 single family residences and 536 multifamily residences.
3. All offsite Works and Services related to sanitary services are not at the Developers expense other than what is stated in this Agreement. All onsite sanitary flows have been calculated in accordance with Schedule K of the frozen Servicing Bylaw.

### SANITARY SERVICE ROUTING OVERVIEW



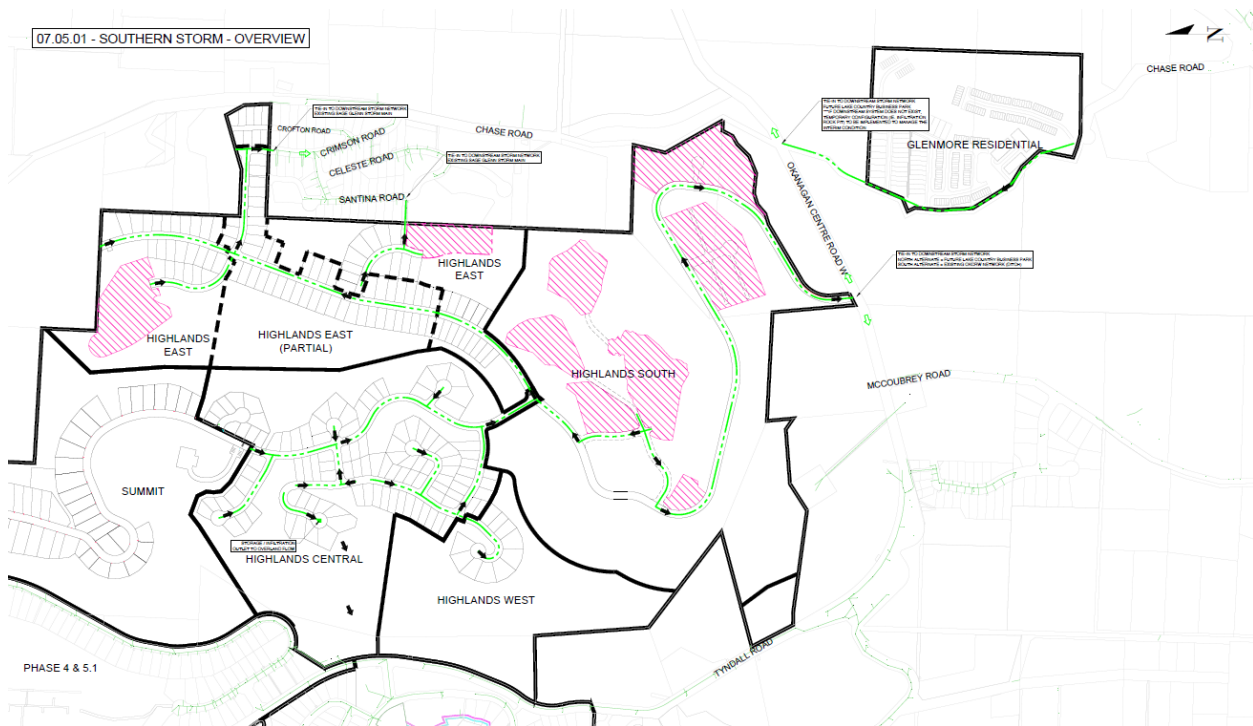
Appendix 07.06.02 – Sanitary - Overview

## 7.2.3 – STORM SERVICING

### GENERAL POLICY

4. The District will receive storm water to the east in a manner described in Section 7.1.7
5. The District will receive storm water to the south in a manner described in Section 7.1.8

### STORM WATER ROUTING OVERVIEW



Appendix 07.05.01 Southern Storm - Overview