CALGARY RIVER VALLEYS

Calgary River Valleys champions and engages the public in the protection, appreciation and stewardship of Calgary's rivers, creeks, wetlands and watershed resources.

We are the voice of our rivers.

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October 14, 2015

Attention: Calgary Planning Commission

Re: DRAFT Providence Area Structure Plan (ASP)

Calgary River Valleys is pleased to have been provided the opportunity to meet with City staff to review the background materials and to have been circulated the final draft Providence ASP for comment. Calgary River Valleys (CRV) as part of its mandate provides a platform for our members and partners to provide comments on development in the Calgary area. These comments have been generated through discussions with our membership and staff.

The lands addressed by the Providence Area Structure Plan includes three drainage basins; Fish Creek, Pine Creek and Radio Tower Creek and is characterized by an extensive system of wetlands, covering 121 acres. This system does create challenges for the development of an appropriate land use pattern and stormwater management that ensures the ongoing ecological function and maintenance of predevelopment hydrology.

Members of the Calgary River Valleys who reviewed the draft ASP do support a number of principles and policies set out in the draft Providence ASP that support the protection of the City's riparian resources and natural amenities including in particular, the following examples:

1. In the Vision and Core Ideas, the aspiration of creating a Complete Community that offers residential, commercial, and industrial land uses, efficient transportation and transit, as well as the full range of community services and amenities. Street patterns have been modified to minimize crossing of the Environment Open Space (EOS) Study Area while maintaining grid pattern.

2. The use of a grid network as adopted by the Providence ASP offers the optimal pattern for sustainable infrastructure and efficient transportation.

3. The alignment of the main transportation corridor along 162 Ave. SW is perhaps least disruptive to wetlands and significant areas. The Land Use Concept appears to result in minimal crossings of the proposed Environmental Open Space Study Area.

4. The draft ASP acknowledges the need for special treatment of interface areas. It is noted however with the exception of a general reference to protection of watercourses leading to and flowing through the Tsuut'ina Nation, the interface areas do not discuss connectivity of ecological function to lands outside of plan area.

5. The draft ASP includes policies requiring adherence to City's Design Guidelines for Street Lighting, Illuminating Engineering Society of North America Guidelines, and Transportation Association of Canada Guide for the Design of Roadways helping to protect dark skies.

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The following questions or concerns are raised by the draft Providence ASP:

1. Stormwater Management - This is a complex area, at the headwaters of three drainage basins – Fish Creek, Pine Creek and Radio Tower Creek. The area contains 121 acres of wetlands, has a minimally has a minimally developed surface drainage system, with large areas of internal drainage. The lack of permanent water bodies implies that the natural hydrological regime operates by absorbing most of the natural rainfall and snowmelt, without discharging it to adjacent streams by overland flow. In addition, the absence of first order streams suggests that the natural surface volume discharge from this area is very small. To impose a traditional stormwater system that connects large areas of impermeable area to the streams on adjacent parcels of land would be contrary to the City's Stormwater Management Policy that requires attenuated peaks and net zero discharge of volume in new Area Structure Plans. Until the hydrological modelling and stormwater management plan is completed, the proponent and City review staff will not be able to determine how much land must be dedicated to stormwater storage to facilitate soil and groundwater recharge, to manage the stormwater within the Providence Area.

   Current City stormwater management policy requires the proponent to manage the 100 year stormwater event inside the Area. The proponent has multiple Low Impact Development options to choose from that can include lot, neighbourhood or regional storage and re-use, absorbent landscape such as deep topsoil, bioretention ponds, rain gardens. A combination of constructed wetland areas, storm ponds and stormwater re-use can be considered to keep the discharge of stormwater close to the same rate and volume as natural conditions. If the proponent intends to design the stormwater management system after the Area Structure Plan is completed, they may find that the ASP has to be re-done, almost from the beginning, to incorporate these basic principles of Low Impact Development. The approval of an ASP creates expectations for approval at the next stage, and the 9.4.1 Map interpretation will encourage the proponent to continue planning in ways that will not enable sustainable stormwater management, even if at a later date further study suggests otherwise.

2. Section 9.4.1 implies that where the Environmental Open Space (EOS) Study Area boundaries are adjusted, the policies of the adjacent Land Use Area apply without amendment to the maps within the ASP. Should it be understood that refinement of the EOS Study Area boundary does not require an amendment to the ASP? While it might be reasonable to apply this policy to minor adjustments and refinements of the EOS Study Area boundaries, a policy should be added to clarify that significant adjustments or elimination of EOS Study Areas should be subject to due process and an amendment to the ASP.

3. In areas with more defined watercourse and drainage patterns one can identify and buffer the water features. However, it is more difficult to understand and "manage" wetland complexes and linear depressions that convey surface and subsurface water between wetlands. The identification of the EOS Study area may be insufficient to address the protection of the wetlands and ecological function. These wetland areas and depression storage areas make up the bulk of the natural stormwater storage. The fact that they are

not permanent water bodies implies that they are sources of recharge for the local watersheds. Their ephemeral nature suggests that the majority of the recharge occurs with the spring snowmelt, or immediately after large rainfall events. This natural recharge is critical to the health of the streams that are supported by the stormwater and snowmelt. A full geophysical and hydrological investigation is required before decisions can be made that will enable the development's stormwater infrastructure to mimic natural hydrological conditions.

The Southwest Regional Policy Plan (2007) 7.8.1.(1) (a) recommends that "a Master Drainage Plan for the Plan area should be submitted at the ASP Preparation Stage. The Master Drainage Plan should address the stormwater engineering solutions to be introduced to ensure the sustainability of natural wetlands that are to be conserved as well as the rest of the hydrological cycle that will impact downstream watercourses. This ASP requires a study of the drainage characteristics of the site in order to comply with the City of Calgary Stormwater Management Policy, the Nose Creek Watershed Management Plan, the Bow River Basin Water Management Plan, and ultimately the City's licence to operate that requires adequate stormwater management in terms of water quality. Increased volumes and peak flow of stormwater cannot simply be piped to Fish Creek, Pine Creek or Radio Tower Creek, without significant environmental impact, including erosion, sediment loads and water quality.

4. There is a very large wetland just west of the ASP that has surface and probably subsurface connection to wetlands within the Providence area. An adequate stormwater management plan is required to give assurance that treatment of connected wetland and the surrounding development will not negatively impact this large wetland.

5. The Environmental Open Space Study Area does seem to incorporate at least the Class Three and above wetlands as well as Environmentally Significant Areas (ESAs) as identified in the Biophysical Inventory with the exception of a sizable and highly ranked ESA located in the quadrant bounded by 154 Ave. SW to the north and 45 St SW to the west. We have been advised by staff that it was the intention that this wetland be included in the EOS Study Area and hope that revision is included in the ASP presented to Calgary Planning Commission and City Council.

6. How does the EOS Study Area address wildlife corridors within and beyond the Plan area? While the lands have been cultivated minimizing wildlife corridors, the green corridors offer an opportunity to re-establish these corridors. Is the EOS Study Area sufficiently wide and connected to allow for the reestablishment of these wildlife corridors as well as accommodate and support ecological function of wetlands, and public pathways. How will Green Corridors of Providence connect with Fish Creek Provincial Park? There appears to be a regional pathway that aligns with the Southwest Ring Road interchange. How will wildlife movement be accommodated?

7. Section 6.7.1 that allows for any additional EOS crossings with roads should be deleted. The street pattern looks to be sufficient and appears to have been designed to avoid EOS areas.

Any additional roads should also avoid EOS crossings. Having a Master Drainage Plan study in place would allow a much better assessment in this kind of decision-making.

8. The complex wetland system would benefit from use of Low Impact Development practices in most circumstances and such approaches should be promoted with specific policies in the ASP. The opportunity for infiltration should be maximized by overall development layout and design.

9. Section 6.5 speaks to a Green Corridor connecting areas of environmental significance. While it is understood that the ASP identifies *potential* corridors, it is recommended that a policy be added to the ASP that the more detailed study of the EOS Study Area at the Land Use Amendment/Outline Plan stage will determine whether a pedestrian and bike paths are in fact appropriate along the wetland feature and/or in the ESA given the sensitivity of the area. Further study should also address location and landscape treatment of corridors to minimize, if not negate, any negative impact on the environmental feature and its function. For example, pathways do not need to be provided to *all* natural features. An assessment needs to be undertaken to determine what areas should not be accessed and which development designs that would discourage access as warranted by the sensitive characteristics of the feature.

Calgary River Valleys members who reviewed this Area Structure Plan are pleased that the principles and policies support the creation of a Complete Community integrating a full complement of community services and amenities, paths and parks. Calgary River Valleys appreciates the opportunity to offer input on the draft Providence Area Structure Plan and your consideration of these comments.

Sincerely,

Steve Meadows
President, Calgary River Valleys

Bill Morrison
Chair, Watershed Policy and Planning Committee, Calgary River Valleys

cc: Jill Sonego, Providence ASP Project Manager
CRV circulation