Peoples Official Plan Coalition

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Submission from the Peoples Official Plan Coalition on the draft Infrastructure Master Plan

We applaud the policies and actions proposed in this Plan to support intensification in built-up areas. This is vital for the objectives of the new Official Plan to be achieved and to build a more sustainable and livable future.

We are writing today in response to the draft Infrastructure Master Plan. We would like to raise points on the following:

- Hardening Critical and Vulnerable Infrastructure – Project Plans
- New technical specifications to build better for climate resiliency
- Green infrastructure used for stormwater management
- Integrating urban forestry objectives and stormwater management
- Carbon lens on infrastructure projects
- District energy systems
- Beaver habitat management
- Tewin infrastructure

1. Hardening Critical and Vulnerable Infrastructure - Project Plans

The City has undertaken a Climate Vulnerability and Risk Assessment and identified critical infrastructures that are vulnerable to projected climate change impacts. We also understand that installation-specific vulnerability and risk assessments have been completed (including of the Water purification and wastewater treatment plants). We would like to see projects and high level budgets for these actions to bolster critical infrastructures and mitigate these risks. We would like to see both temporary solutions and emergency plans, as well as permanent solutions to harden the infrastructure. We suggest showing these pieces separately so that the city will be proposal-ready if there are funding opportunities from other levels of government.

2. **New technical specifications to build better for climate resiliency**

We understand that technical specifications were changed in recognition of climate change impacts. We would like to see the resiliency modelling that the city has undertaken in regards to infrastructure, as well as information on how estimates in climate projections are reflected in the modelling. Further, we would like to see what changes are planned for specifications on infrastructure as a result of climate impacts.

3. **Green Infrastructure used for stormwater management**

We are excited and supportive that the draft IMP presages a systematic approach identifying opportunities for natural drainage systems and low impact development approaches.

Wetlands are not mentioned as a valued municipal infrastructure needed for water preservation, purification, and distribution, flood and drought management, part of community design plans similar to stormwater management, a nature based solution for intensification and quality of life now that we are well into extreme weather conditions. Natural water features are an essential asset as part of future water infrastructure and a financial benefit to the Long-Term Financial Plan, especially in today's reality of a "renewal deficit". The new draft talks about the need for a "non-financial range of options" for water and wastewater to close financial gaps. It also talks about the need for better run-off volume controls and a "wet weather Infrastructure management plan." The IMP could elaborate on the value and importance of wetlands in "service specific sections." The City's IMP can help us to move beyond higher-priced human-made pipes and their maintenance.

We understand that the city has undertaken a limited number of green infrastructure pilot projects. We would like to see detailed plans to employ a much larger balance of green infrastructure for stormwater management. There are many examples internationally that can be drawn upon.

4. **Integrating urban forestry objectives and stormwater management**

We would like to see a pilot project on a significant scale that integrates urban forestry objectives and stormwater management in the inner urban area. Currently the Urban Forestry Management Plan and the Infrastructure Master Plan do not connect. Ottawa's Rain Ready program talks about soakway pits and rain gardens graced by pollinator plants. The UFMP talks about future deliverables of tree establishment guidelines in urban hardscapes. From the consultations, it appears that in the view of IMP engineers, the SWM potential of turf grass and treed areas are identical: they are "permeable." There are detailed effective practice resources that explain how SWM and UFM objectives can be obtained through combined green engineering solutions. See US EPA Engineering Urban Forests for Stormwater Management, Tree Canada Stormwater Management and Urban Forests; The Mersey Forest (UK): Urban Catchment Forestry.

5. **Carbon lens on infrastructure projects**

For the first time ever, the city incorporated a climate lens to the 2023 budget capital projects, which we applaud. We would like to see improvements to this lens, namely by recognizing both positive and negative impacts, i.e., also accounting for whether projects are *increasing* emissions through new carbon lock-ins. The lens should take a lifecycle approach to emissions and include embodied carbon. Regarding municipal procurement, the federal government is making significant efforts through the Standard on Embodied Carbon in Construction, which the City of Ottawa should adopt into our specifications.

6. District energy systems

District energy systems (DES) centralize the production of heating or cooling for a neighbourhood or community. District steam heating plants in North America go back over a century; now, district systems are one of the potential solutions to our energy and emissions challenges. Water, steam and sewage can all be conveyances for heating and cooling resulting in remarkable gains in energy efficiency as well as energy resiliency when combined with geothermal assets .

The IMP is silent on DES, despite plans for a sewage waste heat recovery system at Lebreton, possible plans for the Gladstone re-development, and remarkable opportunities in planning Ottawa's growth. Given that the IMP is our long range masterplan, this is precisely the document where we would expect to see forward-looking strategies, policies and approaches to DES. It would also appear that Ottawa hosts significant talent and expertise in the area in view of the Zibi zero-carbon district energy system, the refurbishment of the Parliamentary district energy loop and the University of Ottawa district energy heating and cooling system.

7. Beaver habitat management

The City's management of beavers and their habitat continues to be seriously flawed. The climate emergency underscores the importance of protecting wetlands. Beavers, as a keystone species, are the single most important influence in maintaining wetlands, so killing 150 beavers annually in Ottawa makes no sense.

Canada's best known wetland scientist states: *"Removal of Beaver should be considered an environmental disturbance on par with in-filling, peat mining and industrial water extraction"* (Dr. Glynnis Hood, University of Alberta Wetland Research Scientist).

Proper design and installation of flow devices in stormwater ponds can resolve beaver conflicts and eliminate potential damage to infrastructure while keeping beavers and their essential ecological services on the landscape, saving tax dollars in the process, as seen in municipalities such as London, ON and in Ottawa on the Carling Campus.

A 20-Year Study published by the Association of Massachusetts Wetland Scientists in 2019 shows the long-term effectiveness of flow devices:
https://www.beaverleavers.com/uploads/1/3/0/9/130963382/billerica-beaver-study-2019.pdf

"A total of 55 beaver conflict sites were studied from 2000 through 2019. This first of its kind study revealed that the sites managed with nonlethal control methods cost significantly less than sites that were managed with beaver removal. In addition, nonlethal control methods provided millions of dollars of ecological services to the town annually that would have been lost with beaver removal"

Detailed flow device installation for culverts and drains:
https://www.beaverinstitute.org/wp-content/uploads/2023/03/BI-Self-Help-Culverts-Drains.pdf

A modern approach to beaver management in the City of Ottawa requires:

1) Drainage engineering staff be part of an open dialogue with flow-device experts such as Mike Callahan of Beaver Solutions and/or the City of London and Upper Thames River Conservation Authority, which have been installing flow devices in that city since 2015.

2) Drainage staff to produce an estimate of the number of times they clear culverts and remove dams at beaver conflict sites to assess the real cost of beaver management in Ottawa.

8. Tewin Infrastructure

Regardless of the provisions of Annex 10 of the new Official Plan, there is still a huge concern that Tewin will not pay for Tewin. Our understanding is that OP annexes do not have the force of law, and further elaboration of these implications for the IMP, which is explicitly referenced in the Annex, would be appreciated. The cost of water infrastructure per person added to the estimated growth for Ottawa till 2046 is $2,042 per person in the non Tewin expansion and is $29,300 for the 17 thousand people that will live in Tewin. This is a factor of 14 times.

We hope you will consider our recommendations, which aim to enhance the effectiveness and sustainability of the Infrastructure Master Plan, positioning the city for success in the face of climate challenges while bolstering infrastructure for our growing city.

Yours sincerely,

Peoples Official Plan Coalition

About POP
The Peoples Official Plan (POP) coalition is composed of over 20 not-for-profit organizations representing tens of thousands of Ottawans. We advocate at Ottawa City Hall for better transit, greater walkability and active transportation, greenspace for all, housing equity, climate change mitigation and adaptation, equity and inclusion, sustainable waste management, and food security, all sought through ethical city planning practices.