



Date: July 18, 2016

## RFP-2016-03 Ocean Boulevard Pump Station Relocation Plan

### Responses to Consultants' Questions

The following is a summary of questions posed by parties interested in City of Colwood RFP-2016-03 to date and corresponding answers.

1. Q: Regarding the "Tsunami Flood Construction Level" discussed in section 4.2.a of the RFP, will Colwood require the consultant to model a Tsunami occurring in different scenarios to estimate the Tsunami Construction Level, or is it acceptable to use existing data and reports to estimate the Tsunami Construction Level?

A: There is an existing CRD study on anticipated Tsunami levels around the coastline of the CRD but it is believed that there are disclaimers on that information alluding to the fact that each piece of coastline has different shapes and other factors that might make a difference. Therefore, while we would expect the CRD study would make a good starting point, some thought will have to be given to whether the particular factors at this beach lead to a greater potential reach for the Tsunami or a lesser reach.

Perhaps an iterative approach might work best here as in:

Use the existing studies and some examination of the other factors to arrive at a rough idea of what the worst case might be for tsunami level and then if it makes no real difference to the pump station location, i.e., it is just as easy to allow for the worst case as it would be to allow for the best case then there is no need to refine the calculation. If there is a big difference then is it enough to justify the cost of modelling?

2. Q: If it is agreeable to the City, [one consultant said they] will write in to the proposal that when the time comes, [they] will discuss with the City of Colwood, after [they] have looked at the CRD (and other relevant) studies,

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what will be acceptable for the Tsunami considerations when [they] make [their] estimate of the Tsunami flood construction levels for the scenarios.

A: That sounds reasonable. We assume that the CRD study made an explicit assumption about the magnitude and location of the earthquake and we have no reason to think we should try to second guess that.

3. Q: Section 4.1.d of the RFP refers to 3 options with reference to sea level rise (SLR) scenarios. Section 4.2.b refers to 3 proposed locations for relocation of the pump station. Do the 2 clauses refer to the same thing, i.e. 3 SLR scenarios, or does it suggest 3 locations for each SLR scenario (i.e. 9 combinations)?

A: Only 3 total locations need to be identified. 4.1.d and 4.2.b refer to the same three options.

4. Q: Ref. Section 4.1.3 states that a total of 3 options will be developed:
- i. Option 1 – for 1m SLR
  - ii. Option 2 – for 2m SLR
  - iii. Option 3 – will be determined after Options 1 & 2 have been identified.

To what level of detail do Option 1 and Option 2 need to be defined, before identifying Option 3?

A: This idea of retreating infrastructure is very new to us and we feel the situation is complicated by the Lagoon making it difficult to know how much effort is involved in getting to some of the answers. We're assuming that trying to work out how far inland the pump station must be moved to be safe from storms in a 1 metre sea level rise scenario would be complicated by needing to know how the peninsula will change after it reaches the point where storm waves at high water regularly cross the peninsula. After the change how much protection will it provide to the properties on the west shore of the Lagoon? If one has made the forgoing calculations does it then become easier to make the same calculation for a 2 metre scenario? Given our level of ignorance on these questions, unlike in more normal scenarios such as road or sewer projects, we do not know how big a thing we are asking of the consultant.

Having said all that, we think all we can do is define the importance of defining the location. The easiest place to put the pump station appears to

be in the land known as “Pit House Park” north of Lagoon Road and Goldfinch Road (no space constraints for excavation, no existing infrastructure to get in the way and easy to get a reasonable distance from the neighbours). However, given that the sewer mains go up and down Lagoon Rd, the ideal location would be either opposite the end of Anchorage, near Goldfinch or adjacent Lagoon Rd to make it easier to divert the mains on Lagoon to the pump station. Therefore it appears to be important to be accurate enough to know whether the end of Anchorage is viable or not. After that, precisely where the pump station is does not seem to make a lot of difference in terms of cost of the relocation or desirability of location until the western boundary of the park. At that point the land becomes private land introducing complications. Therefore it appears to be important to be accurate enough to know whether we need to cross that boundary. Once across the boundary the proposed housing layout in the private land and other factors appears to make the best location northwest of the Lagoon Road/Goldfinch Road junction tucked in against the road embankment. That location would appear to be defensible against any sensible sea level rise scenario.

5. Q: We understand that some costing is needed for the Report (Section 4.2.b) and Public Consultation (Section 4.2.c). We also note that a preferred Council option is to be developed to a conceptual design level in section 4.1.d.

Assuming that this preferred option is essentially one of the options presented to the Public (and Council), does “Conceptual Design” suggest that the level of detail at the Public Consultation is more like Scoping or Order of Magnitude development?

A: For the Public Consultation, the consultant shall provide Class C cost estimates ( $\pm 25-40\%$ ) for the design concepts.