Talbot Mackenzie & Associates
Consulting Arborists

August 15, 2020

Magellan Holdings Ltd.
1271 Mt. Newton Cross Road
Saanichton, BC
V8M 1S1

Re: 1114 Rockland Avenue - Addendum for November 01, 2019 Tree Protection report

Summary: : Based on our observations and findings from our exploratory excavation, it is our opinion that it will be possible to mitigate the impacts on the subject Sequoia tree if the excavation can be limited to the depth and location of our exploratory excavation and adheres to the precautions outlined in the conclusion section of this report.
Should excavation be required that extends beyond or is deeper or closer to the tree, than is outlined in the conclusions section additional mechanical excavation will be required under arborist supervision to determine if additional excavation is possible or if alternate methods of construction will be required to limit further encroachment into the root zone area of this tree.

Exploratory Excavation Completed: During our July 31, 2020 site visit, we conducted an exploratory excavation within the defined critical root zone area of a single 122 cm d.b.h. Coast Redwood that is located on the adjacent property at 1126 Rockland Avenue. The excavation that was performed was conducted using hand implements.

Limitations:

1. The property boundaries had not been marked out onsite, but we assume from the plans reviewed that the existing fencing and retaining walls are located on these boundaries and all measurements were taken from the fence locations.
2. The layout for the building footprint was not located or marked on the site. For our purpose, the building footprint location was measured from the existing fence lines, based on the setbacks indicated on the architectural drawings.
3. The depth of bearing materials required to support the depth and width of the footings had not been determined by a geotechnical engineer at the time we conducted our exploratory work, therefore the location of our excavation was based on our best estimation of the area of excavation required. Should footings or excavation be required that extend beyond the parameters of our exploratory excavation or are deeper or closer to the tree, additional mechanical exploratory excavation will be required under arborist supervision.

Observations: From our review of the drawings we determined that the setbacks for the building footprint are:

- From the rear property line, the setback to the above grade parking slab is 5.90 metres and 3.33 metres to the stair well structure.
- From the east property line, the setback is over 3.0 metres to the building, 1.3 metres to the above grade parking slab and approximately 5.0 metres to the stairwell structure with a strip footing that extends from this structure to approximately 3 metres from this property boundary
- The other footings are located at the edge of the underground portion of the building and within the footprint of the existing building. The upper level of the building is to be suspended above the above grade parking area between the footing locations in the basement and the stairwell/corridor. No other pier or strip footings were indicated within the critical root zone of this tree.
- A Corridor at the basement level of the building extends between the basement area and the stairwell structure and where it is approximately 8.5 metres from the east property boundary.

Findings: Our exploratory excavation was conducted with hand implements and was offset from the parking slab, strip footing and stairwell wall to account for working room around these structures:

- Our excavation was 1.3 metres from the east fence line and 5.0 metres from the north fence line at the north east building corner. It extended several metres to the south and extended along the north side of the building, up to the stairwell structure. The excavation was offset 1.0 metre outside the strip footing and stairwell structure wall.
- The excavation was to a depth of 60 cm below the existing grade. A permeable topsoil layer comprised this upper layer of soil. At 60 cm in depth, a hard clay layer was encountered that made hand excavation difficult. This layer should be sufficient to provide bearing beneath the parking slab and may be suitable for bearing beneath the strip footing (suitability to be determined by a geotechnical engineer).
- There were few Sequoia (Redwood) roots encountered in the upper soil layers; 1 x thirteen 13 cm diameter root was encountered 20 cm below grade at the north east corner of the excavation , 2.8 metres from the subject tree and one 1 x six 6 cm diameter surface root was encountered along the east side of the excavation 3.5 metres from the subject tree. There were no other roots over 1 cm diameter encountered in the upper soil layer. Small root growth was visible within the upper surface of the clay layer that was encountered at the 60 cm depth, but we did not excavate deeper into this layer until it is known whether it is a suitable bearing layer for the strip footing and parking grade.
- The underground corridor is located at the edge of and outside the critical root zone of the sequoia tree and where it should not impact this tree significantly. It may be necessary to use shoring or sheet piles along the east side of the corridor wall if roots are visible and stability is an issue, requiring a cut slope along this soil cut.

Conclusions: Based on our observations and findings from our exploratory excavation, it is our opinion that it will be possible to mitigate the impacts on the subject Sequoia tree if:

- The excavation for the strip footing that extends from the stairwell is limited to a depth of 60 cm below the existing grade and 1-metre outside the footing location.
- The excavation for the stairwell is limited to the footprint of this stairwell and 1 metre outside the stairwell footprint.
- The excavation for the above-grade parking beneath the portion of the building that extends from the north and east sides of the parking footprint and up to the underground and underground corridor footprints would is limited to a maximum depth of 60 cm beneath the existing grade and less if possible. The depth of excavation to be determined by the project arborist at the time of excavation. The parking surface is to be permeable to air and water. Pruning of the 13 cm and 6 cm roots encountered at the north east corner of the parking footprint will be acceptable if additional roots critical to the tree survival are not pruned to accommodate the footing locations.
- The excavation for the underground corridor between the stairwell and the underground level is to be limited to the east wall of this corridor with no additional excavation for a cut-slope, if critical root structures are encountered at the edge of the excavation. The project arborist will advise at the time of excavation, based on the number, size and density of roots encountered, whether a cut-slope is possible of whether the use of shoring or sheet piles is required to limit the excavation.

Should excavation be required that extends beyond or is deeper or closer to the tree, than is outlined in the preceding conclusions section additional mechanical excavation will be required under arborist supervision to determine if a wider or deeper excavation is possible or if alternate methods of construction will be required to limit further encroachment into the root zone area of this tree.

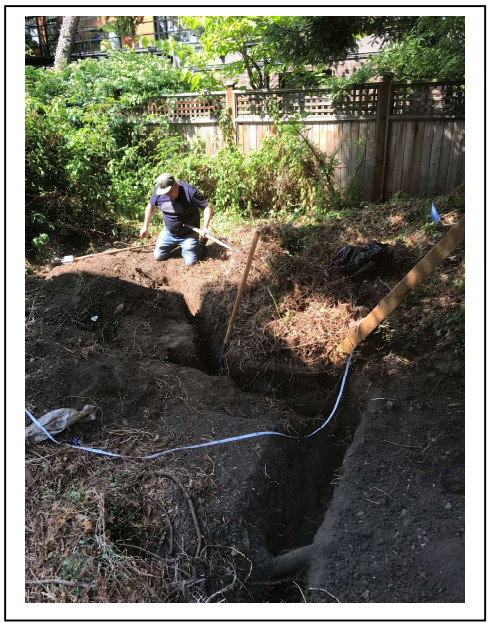
Please do not hesitate to call us at (250) 479-8733 should you have any further questions. Thank You.

Yours truly,
Talbot Mackenzie & Associates

Tom Talbot & Graham Mackenzie
ISA Certified, & Consulting Arborists
PN 0211A – TRAQ Qualified

Box 48153 RPO Uptown
Victoria, BC V8Z 7H6
Ph: (250) 479-8733 ~ Fax: (250) 479-7050
Email: tmtreehelp@gmail.com

Excavation viewed from north west



Excavation viewed from south east

Roots encountered at north east corner

Box 48153 RPO Uptown
Victoria, BC V8Z 7H6
Ph: (250) 479-8733 ~ Fax: (250) 479-7050
Email: tmtreehelp@gmail.com