



GYE + ASSOCIATES

Consultants in Urban Forestry and Arboriculture

Summary Arborist Report

Telus Place 749 – 767 Douglas Street, Victoria, BC

Date of Report: December 18, 2020

Dates of Field Work: June 11, 2020

Prepared by Jeremy Gye, Senior Consultant
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EXECUTIVE SUMMARY

The Telus Ocean project is a midrise (10 storey) commercial building development that includes extensive works along the street frontage.

- All of the trees within the site boundaries (eight in total, six of which are bylaw-protected) will be cleared and replaced at landscape phase to make way for the building and parkade excavation.
- In addition, seven public boulevard trees will be removed and replaced to make way for improvements within the road right-of-way along both Douglas and Humboldt.
- Five off-site trees and three boulevard trees shall be retained and protected.
- A minimum of twelve new replacement trees shall be planted at landscape phase in compliance with the 2:1 replacement ratio in the City's Tree Preservation Bylaw. In addition, numerous well-sized boulevard tree plantings are proposed. (See the Landscape Planting Plan prepared by PFS Studio)

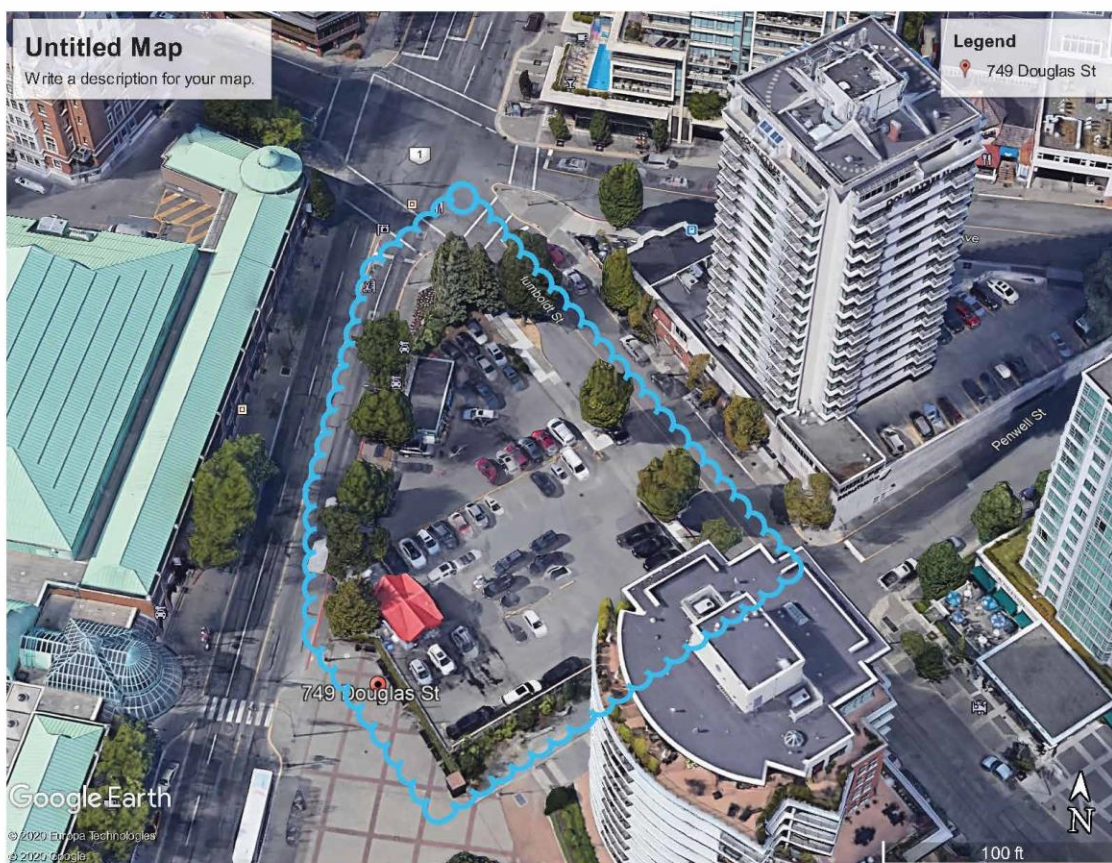


Figure-1 Site context image

BACKGROUND

Telus BC is applying for rezoning and a development permit for a midrise (10 storey) commercial building at 749 and 767 Douglas Street. The development anticipates extensive works along the street frontages of both Douglas and Humboldt streets.

ASSIGNMENT

Gye and Associates (G&A) have been retained to Prepare a Tree Preservation Plan (TPP) and written summary for the project, in accordance with the City's published Terms of Reference. The TPP addresses all phases of the development requiring tree protection, including site preparation, on-site servicing, construction, landscaping and post-construction care.

METHODOLOGY

A visual assessment of the site and associated trees was completed in June of 2020. Trees growing on the site, boulevard trees and trees growing on private land immediately adjacent to the site were inventoried, measured and assessed for health and structural integrity. Site conditions associated with these trees were also assessed, including impervious surface, topography, and indications of prior land use and disturbance.

The species, age and condition of the trees, along with their associated site conditions, were considered in assessing constraints to the growing environments of the trees affecting the extent, configuration and productivity of their root systems.

A legal topographic survey plan and architectural site plan drawings were used as a base to develop the tree plan drawing to scale in CAD and analyse potential conflicts between trees and built elements, including site grading. G&A consulted with the project design consultants and staff from the City of Victoria Parks department in assessing opportunities for tree retention.

OBSERVATIONS

The site has been used for many years to as a location for an automotive rental business. Most of the site is covered in asphalt or concrete. The grade of the site drops by approximately 2m from north to south and east to west.

Most of the trees associated with the site are located around the periphery and include both on-site, private off-site and boulevard trees. Tree genera are non-native and diverse, including oak, maple, honeylocust, hornbeam, pine and false-cypress. Stem size ranges from 6 – 54cm diameter, measured 1.4m above grade. Most of the trees are in fair - good condition.



Figure-2 Boulevard maples looking north along Humboldt Street



Figure-3 Neighbouring trees along south boundary of site



Site plan review:

The proposed site plan proposes a “boundary-to-boundary” build out to make way for underground parking beneath a 10 storey commercial building. The amount of disturbance and soil removal associated with excavating for the parkade and building foundation, as well as associated underground servicing and street-frontage improvements, minimizes opportunities for mature tree preservation.

- All of the trees within the site boundaries (eight in total, six of which are bylaw-protected) will be cleared and replaced at landscape phase to make way for the building and parkade excavation.
- In addition, seven public boulevard trees will be removed and replaced to make way for improvements within the road right-of-way along both Douglas and Humboldt.
- Five off-site trees and three boulevard trees shall be retained and protected.
- A minimum of twelve new replacement trees shall be planted at landscape phase (see PFS Landscape Planting Plan).

DISCUSSION

While opportunities for tree preservation with this project are limited, it presents opportunities to establish viable planting environments within which to grow medium-sized trees that will be well-suited to the new land use, the challenges of a highly built urban environment and a changing climate. Irrigated Planting vaults, interconnected where possible, with generous volumes of a sandy-loam mineral soil will support new tree plantings to thrive and develop to their full mature potential.

TREE MANAGEMENT MEASURES

Role of the Arborist

- **Design and permitting:** During the design and permitting phase of this project, the role of the arborist is to assist the design team to take account of the existing tree resource in their site planning and design, as required by the City’s Tree Preservation Bylaw. The arborist does this by providing scaled renderings of the trees’ canopies and root zones in plan view and noting points of potential conflict.
- **On-site Services:** During construction, the role of the arborist is to ensure that the general contractor is aware of the building permit’s requirements to protect existing trees, where indicated, and to review the tree protection measures specified on the Tree Preservation Plan drawing. Prior to demolition or site preparation, the contractor shall meet with the arborist to review the tree plan, including the layout and standard for tree protection fencing, any soil armoring that may be required and to clearly identify trees designated for removal.
- **Blasting and rock removal:** Should rock blasting be required as part of site preparation in the vicinity of existing trees, the arborist will meet again with the general contractor and the blasting contractor to develop a blasting plan that will minimize impacts to the tree habitat. Special measures may include modifying

the type of explosive, size of charges, detonation timing, pre-shearing and order of rock removal to create relief for the blast wave away from the protected trees.

- **Excavating around trees:** The arborist shall supervise all excavation adjacent to protected tree areas. Any impacted tree roots will be pruned cleanly back to undamaged tissue. Excavated cuts will be securely covered by the contractor with an impermeable fabric to prevent dessication and erosion of the soils.
- **Landscaping:** The limited opportunities for mature tree preservation and the City's Urban Forest policies for re-greening (see the City of Victoria Urban Forest Master Plan) place significant onus on the project and its landscape design to ensure generous levels of new tree planting where space allows.

This goal includes the need to ensure that the growing environments needed to support the development of the trees to maturity are also designed and constructed. The project arborist shall work with the Landscape Architect to ensure that these performance outcomes are met. This includes oversight of tree selection, placement, planting, irrigation, mulching and periodic monitoring during the establishment period (2 dry seasons).

At landscape construction stage, the arborist shall meet with the general contractor, the landscape architect and the landscape contractor to review proposed landscaping and best practices within or adjacent to protected trees.

- **Site inspections:** The arborist will conduct regular site inspections throughout the duration of the project to ensure that tree protection measures are being complied with and any deficiencies are remedied in a timely manner.
- **A complete list of tree protection measures is included in the Tree Plan drawing.**

CERTIFICATION

This report and the opinions expressed within it have been prepared in good faith and to accepted arboricultural standards within the scope afforded by its terms of reference and the resources made available to the consultant.

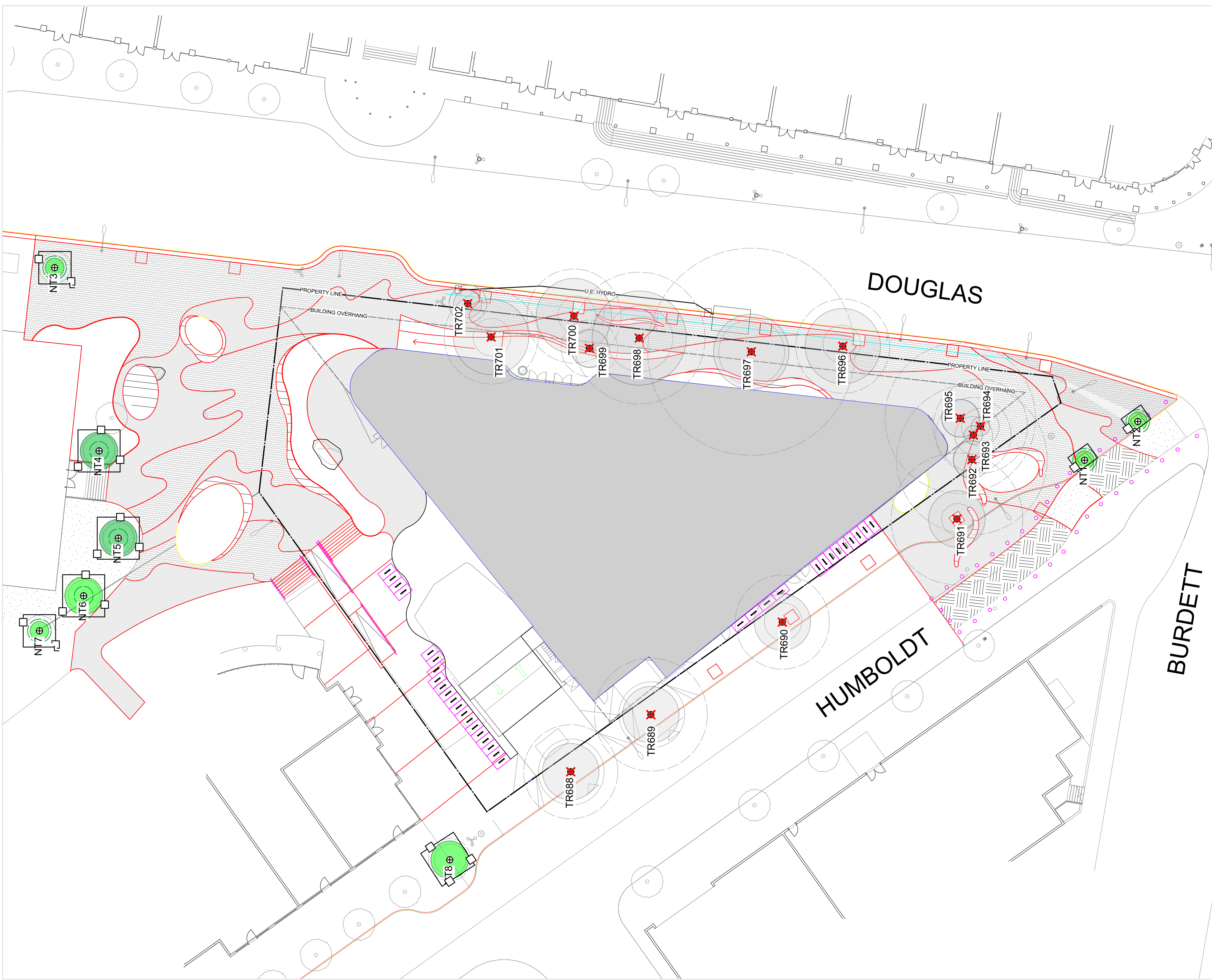
APPENDICE Tree Management Plan drawing

Respectfully submitted,



Jeremy Gye – Senior Consultant
Gye and Associates, Urban Forestry Consultants Ltd.

Consulting Arborist (Diploma, American Society of Consulting Arborists, 1997)
ISA Certified Arborist (Certification No. PN-0144A)
ISA Municipal Specialist (Certification No. PN-0144AM)
ISA Tree Risk Assessment Qualified



TREE INVENTORY TABLE

Tree Tag No.	Common Name	DBH (cm)	PRZr (m)	Crown Radius (m)	Health	Structural Condition	Bylaw or Public Tree?	Notes	Action
688	Bohall red maple	33	5	3	Fair	Good	Public	Tree is in state of early decline; possible root damage by sidewalk adjustment.	Remove - construction conflict
689	Bohall red maple	38	6	3	Good	Good	Public	Indications of recent sidewalk adjustment	Remove - construction conflict
690	Bohall red maple	35	5	3	Good	Good	Public	Indications of recent sidewalk adjustment	Remove - construction conflict
691	Bohall red maple	48	7	3	Good	Good	Public	Indications of recent sidewalk adjustment	Remove - construction conflict
692	Lawson cypress	54	8	2	Good	Poor	Yes	Codominant stems with included bark; moderate defect	Remove - construction conflict
693	Lawson cypress	26	4	1	Fair	Good	No		Remove - construction conflict
694	Lawson cypress	35	5	1	Good	Good	Yes		Remove - construction conflict
695	Lawson cypress	53	8	2	Good	Fair	Yes	Two stems	Remove - construction conflict
696	English oak 'Fasitigiata'	34	5	4	Fair	Fair	Public		Remove - construction conflict
697	European hornbeam 'Fastigata'	73	11	4	Good	Good	Yes	Mult-stemmed	Remove - construction conflict
698	European hornbeam 'Fastigata'	44	7	5	Good	Good	Yes	Three stems	Remove - construction conflict
699	Red cedar	22	3	2	Good	Poor	No	Topped for sign clearance	Remove - construction conflict
700	English oak 'Fasitigiata'	31	5	4	Good	Good	Public		Remove - construction conflict
701	Red cedar	36	5	4	Good	Good	Yes		Remove - construction conflict
702	Flowering cherry	15	2	1.5	Dead	n/a	Public		Remove - construction conflict
NT1	Honey locust	6	1	1	Fair	Good	Public	Newly planted tree	Retain
NT2	Honey locust	6	1	1	Fair	Good	Public	Newly planted tree	Retain
NT3	Persian ironwood 'Vanessa'	6	1	1	Good	Fair	No	Recent stem wound	Retain
NT4	Pinus contorta	8	1	2	Good	Good	No		Retain
NT5	Pinus contorta	8	1	2	Good	Good	No		Retain
NT6	Arbutus 'Maritima'	7	1	2	Good	Good	No		Retain
NT7	Arbutus 'Maritima'	9	1	1	Good	Fair	No	Two stems	Retain
NT8	Arbutus 'Maritima'	15	2	2	Good	Good	Public	Two stems	Retain

SUMMARY TREE STATISTICS

CATEGORY	# OF TREES
Total number of trees indicated on Tree Management Plan	23
(Boulevard Trees)	10
(Adjacent Off-site Trees)	5
(On-site Unprotected Trees)	2
(On-site Bylaw-Protected Trees)	6
Requested Protected Tree Removals from site	6
Requested Public Tree Removals	7
Requested Tree Removals from adjacent properties	0
Total Residual Number of On-site Protected Trees	0
Replacement Trees Required by Tree Bylaw	12
See Landscape Plan for proposed street tree plantings	

TREE PROTECTION FENCING SIGNAGE

(Signs shall be 16x24" and made to sustain all weather conditions)



TREE PRESERVATION MEASURES

- 1. Pre-construction meeting:** Before demolition or site preparation begins, the owner and contractor shall meet with the arborist to review the placement of fencing and other tree protection measures within this plan. The Project Arborist shall clearly mark the boundaries of all areas to be fenced and protected.
- 2. Tree Fencing:**
 - a) Tree protection fencing and all-weather signage shall be installed to City of Victoria standards at the locations indicated on this drawing prior to demolition or building permit being issued (see fencing and signage detail on plan).
 - b) Tree protection fencing shall be maintained in good condition throughout the duration of the project.
 - c) Requests to temporarily remove or move tree fencing must be reviewed by the project arborist for approval.
- 3. Root & branch pruning and protection:**
 - a) Any tree roots or branches damaged during site work shall be pruned back to undamaged tissue by the arborist.
 - b) The vertical face of excavated cuts adjacent to the TPAs shall be securely covered with non-permeable fabric by the project arborist to prevent soil desiccation and erosion.
- 4. Irrigation:** Retained trees shall be irrigated twice weekly during the dry summer period to a minimum effective depth of 30cm.
- 5. Temporary access:** If temporary access is required within a tree protection area (TPA), the contractor shall notify the project arborist in advance and review the access requirements and any additional protective measures prescribed by the arborist.
- 6. Soil armouring:** If it is not possible to fence the entire PRZ, the unprotected portion of the PRZ shall be armoured with a double-layer of 3/4" plywood or 1/2" metal plate.
- 7. Storage restrictions:** No equipment, materials or excavated soil shall be placed or stored within the TPA.
- 8. Procedure for rock removal near tree root zones:**
 - a) The general contractor will convene a meeting with the arborist and blasting contractor prior to drilling to develop a work plan that minimizes rock removal impacts to protected trees.
 - b) Where considered necessary by the arborist, alternate rock removal techniques, such as hoe-ramping, shall be used in place of blasting.
 - c) Blasting vibrations in the vicinity of the Tree Protection Areas are not to exceed a measured peak particle velocity of 25 mm/sec.

Tree Protection Fencing Detail

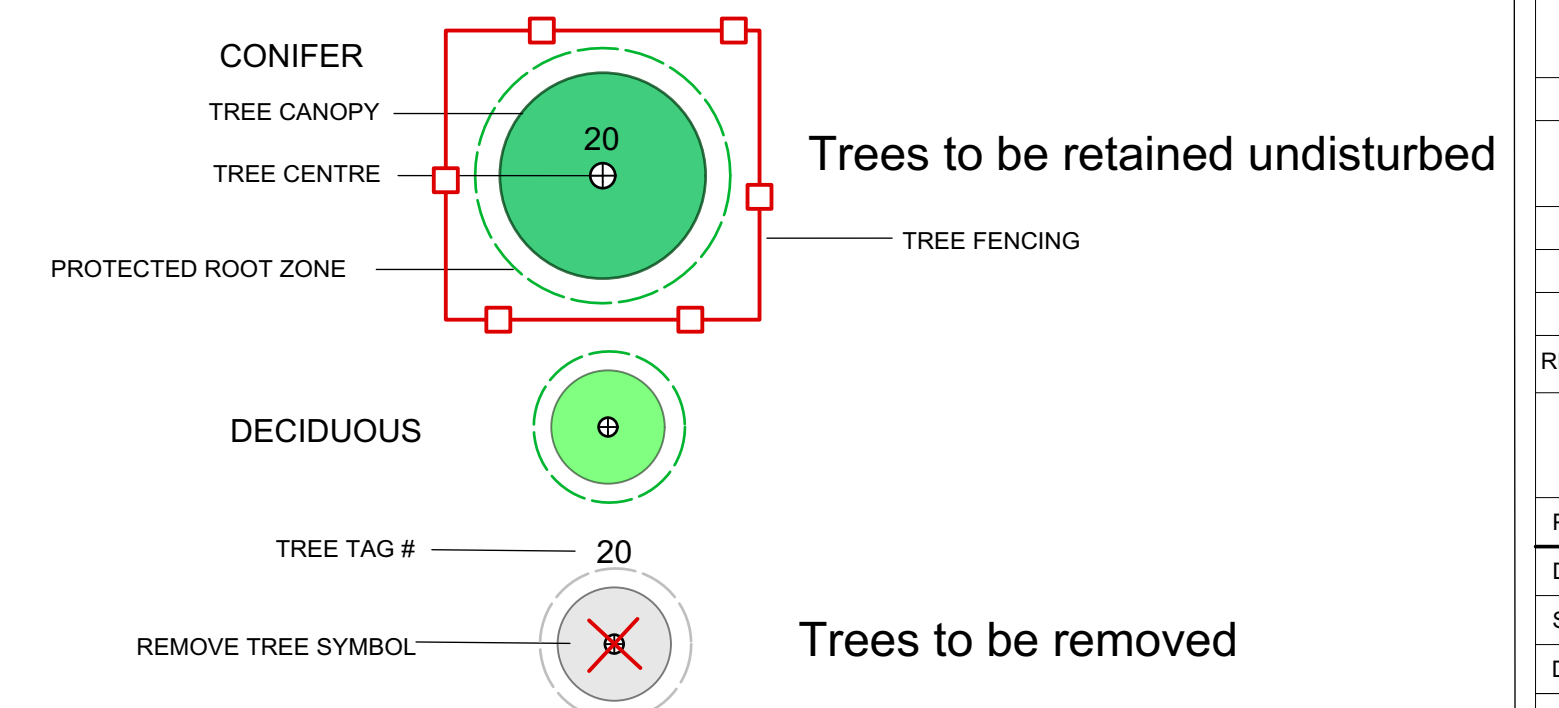
Modular steel panel fencing is recommended in order to reduce land-fill waste post-construction. Fencing panels shall be secured to the ground with rebar wired to panel frame.

16 x 24" all-weather signage will be attached with the following wording:
For protected trees: DO NOT ENTER – Tree Protection Zone
For replacement/landscape tree planting sites: DO NOT ENTER – Future Tree Planting Zone

In cases where steel-panel fencing is not practical or available, fencing shall be constructed with a wooden 2x4 frame (side, top and bottom rails) and back-bracing supports as required to ensure robust placement. Snow-fencing will then be affixed to the frame using battens, zip-ties, staples, wire or nails.



LEGEND



PROJECT
TELUS OCEAN
 749 - 767 Douglas Street
 Victoria, BC

SHEET TITLE
Tree Management Plan

REV NO	DESCRIPTION	DATE
0	FOR REVIEW	

PROJECT NO. 20-027
 DATE December 18, 2020
 SCALE 1:250
 DRAWN BY JG
 SHEET NO. T - 1