



Nanaimo Fire Station #1 Replacement
666 FITZWILLIAM STREET, NANAIMO, BRITISH COLUMBIA
City of Nanaimo



NOT FOR
CONSTRUCTION

Verify all dimensions, elevations and datums, and report any discrepancies to the Architect prior to construction. Dimensions are taken to face of exterior sheathing, face of concrete block, face of stud for interior partitions, and centerline of demising walls, unless noted otherwise on the drawing.

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REVISIONS		DATE
1	DEVELOPMENT PERMIT	10.08.07
2	*	
3	*	
4	*	
SCALE		AS NOTED
DATE		19.08.07
DRAWN BY		GJ
CHECKED BY		PDG

DRAWING NO.

L1.01

PLANT LIST				
Sym	Qty	Botanical Name	Common Name	Schd. Size / Plant Spacing
TREES:				
ATC	3	<i>Acer x freemanii</i> 'Celebration'	Celebration Maple	6.0m clm, b&b
AUC	1	<i>Aesculus x rubra</i>	Red Horsechestnut	6.0m clm, b&b
Qub	1	<i>Quercus menziesii</i>	Douglas Fir	2.0m clm, b&b
Qub	3	<i>Quercus rubra</i>	Northern Red Oak	6.0m clm, b&b
SHRUBS:				
AGF	15	<i>Abies x grandiflora</i> 'Francis Mason'	Rose Creek Abelia	#4 pot
Bbv	16	<i>Berberis verruculosa</i>	Barby Barberry	#1 pot
Brs	17	<i>Brachyglottis 'sunshine'</i>	Brachyglottis 'sunshine'	#2 pot
BMG	67	<i>Buxus 'Green Brazil'</i>	Green Beauty Boxwood	#1 pot
CFV	253	<i>Calluna vulgaris</i> 'Fragrant Clouds'	Scotch Heather	#1 pot
CP	383	<i>Carex testacea</i> 'Prairie Fire'	Prairie Fire Sedge	Sp/3 / 30 cm O.C.
CVR	11	<i>Cornus verticillata</i> 'Red Satin'	Thread-Leaf Dogwood	#1 pot
CM	40	<i>Cornus sanguinea</i> 'Midwinter Fire'	Midwinter Fire Dogwood	#1 pot
Env	107	<i>Eucalyptus</i> 'Newport Dwarf'	Newport Dwarf Eucalyptus	#1 pot
Jgr	370	<i>Juniper 'Carmen's Grace'</i>	Salt-Cornum Juniper	#1 pot
LSB	65	<i>Leucanthemum x superbum</i> 'Becky'	Shasta Daisy	#2 pot
Lj	16	<i>Ligustrum japonicum</i> 'Tetanus'	Walden Privet	#1 pot
Sc	92	<i>Scytostyle coccinea</i> 'Oregon Sunset'	Crimson Jal	#1 pot



1 Landscape Plan
Scale: 1:150

DRAWING NOTES

- DRAWING NOTES:**
1. **DATE OF DRAWING:** Verify all property lines and existing structures/vegetation to remain, prior to commencing work.
 2. All plan dimensions in metres and all detail dimensions in millimetres.
 3. Plant quantities on Plans shall take precedence over plant list quantities.
 4. Contractor to confirm location and elevation of all existing services and utilities prior to start of construction.
 5. Provide layout of all work for approval by Landscape Architect prior to proceeding with work.
 6. Contractor to provide irrigation system for all planted areas to current local authority water supply regulations.
 7. Landscape installation to carry a 1 year warranty from date of acceptance.
 8. All material, installation and maintenance to conform to the current edition of the Canadian Landscape Standard.
 9. General Contractor and/or sub-contractors are responsible for all costs related to production of drawings and to consultant of all landscape as-built information including irrigation.
 10. Tree protection fencing, for existing trees, to be installed prior to

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DP1156
2019-AUG-16

ALL DRAWINGS TO BE READ IN ASSOCIATION WITH LANDSCAPE SPECIFICATIONS DOCUMENT

LEGEND

	PROPERTY LINE
	EXTENT OF ROOF / CANOPY LINE (INDICATIVE)
	RAIN GARDEN - TOP OF POOL
	RAIN GARDEN - BOTTOM OF POOL
	DIRECTION OF FLOW
	RAIN GARDEN ON GRADE
	LANDSCAPE AREA DRAIN
	CIVIL GRADES- REFERENCE ONLY
	LANDSCAPE GRADES
	TP Top of Pool
	BP Bottom of Pool
	RAINGARDEN UNDERDRAIN
	HYDRAPRESSED SLABS- WASHOUT AREA FROM DRAUGHT WALL
IMPERVIOUS AREAS	
	FIRE TRUCK APRON (A)
	PARKING (B)
IRRIGATION	
	AREAS TO BE IRRIGATED WITH PERMANENT SYSTEM- ALL PLANTED AREAS INCLUDING RAINGARDENS
	POINT OF CONNECTION
	HOSE BIBB
	IRRIGATION SLEEVE

RAIN WATER MANAGEMENT NOTES

Water collected from paved areas flow to the rain gardens located throughout the site.

Rain gardens are integrated and resilient stormwater management infrastructure designed to capture, slow flows, and treat runoff from hard surfaces.

Rain gardens are designed with underdrains and a high capacity overflow drains that connect to the onsite piped stormwater drainage system by the civil engineer.

The rain gardens are sized such that the bottom of the rain garden is 5% of the impervious area.

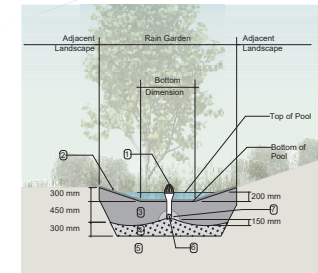
Stormwater Calculations			
Stormwater Storage Calculations			
Catchment Area	Impervious Area (sq.m.)	Required Storage Volume (based on 100 cu m / ha)	
A	795	7.9	
B	360	3.6	
total	1145.0	11.5	
Rain Garden and Swale Storage Calculations			
	Area (sq.m.)	Storage per sq.m. (cu m)	Total Storage (cu m)
Rain Garden	60.0	0.84	50.4
total			50.4
Assumptions			
1) Rain Garden design based on 150 mm ponding plus 450 mm of sand/compost rain garden growing medium (20% void space) and infiltration through underdrain at 2.5 cm per hour			
2) Required Storage Volume based on 100 cu m / ha impervious area			



1 Stormwater and Irrigation Plan
Scale: 1:150

IRRIGATION NOTES

- All specified work to meet the project specifications, and all standards or specifications established in the latest edition of the Canadian Landscape Standard and IABC standards.
- Contractor to verify pressure and flow prior to installation of irrigation and notify owner's representative in writing if such data adversely affects the operation of the system.
- Sleeves shall be installed at the necessary depths, prior to pavement construction. Sleeving shall extend 300 mm from edge of paving into planting area, and shall have ends marked above grade unless otherwise shown.
- Utilities - Contractor to verify location of all on-site utilities, prior to construction. Restoration of damaged utilities shall be made at the contractor's expense, to the satisfaction of the owner's representative.
- Refer to mechanical drawings for irrigation point of connection.
- Refer to electrical drawings for electrical service.
- Contractor to field fit irrigation system around existing trees, to limit disturbance to root systems.
- At various milestones during construction, inspection and testing of components will be required to ensure that the performance of irrigation system meets standards and specifications. Contractor to provide equipment and personnel necessary for performance of inspections and tests. Conduct all inspections and tests in the presence of the contract administrator. Keep work uncovered and accessible until successful completion of inspection or test.
- Trees within shrub or rain garden areas to be irrigated with spray heads.
- Over spray onto hardscape areas to be minimized. Use drip irrigation within small planting areas to avoid overspray.
- Irrigation in sidewalk right of way to be installed by project contractor and maintained and paid for by Fire Department unless otherwise informed by the project manager.



RAIN GARDEN MATERIALS

- Overflow drain, 200 mm domed grate + adapter
- Composted mulch, 50-70 mm depth
- Bio-retention growing medium, 450 mm depth
- Scarified subgrade, 300 mm depth
- Existing subgrade/native material
- 100 mm diameter (min) perforated pipe
- 25 mm diameter drain rock, 100 mm depth

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CURRENT PLANNING

2 Typical Rain Garden
Scale: 1:50



LANDSCAPE STORMWATER MANAGEMENT AND IRRIGATION

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