

NO	DATE	REVISION
5	6Oct/25	Issued for Construction
4	12Sep/25	Issued for Construction
3	12Jun/25	Re-issued for Building Permit
2	14Nov/23	Issued for Permit
1	23Jan/23	Issued for Pricing

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Phone: 604-990-0546
ramconsulting.com/geo
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Engineers and Geoscientists British Columbia
Permit to Practice Number: 1002292

ACTION LINE HOUSING SOCIETY

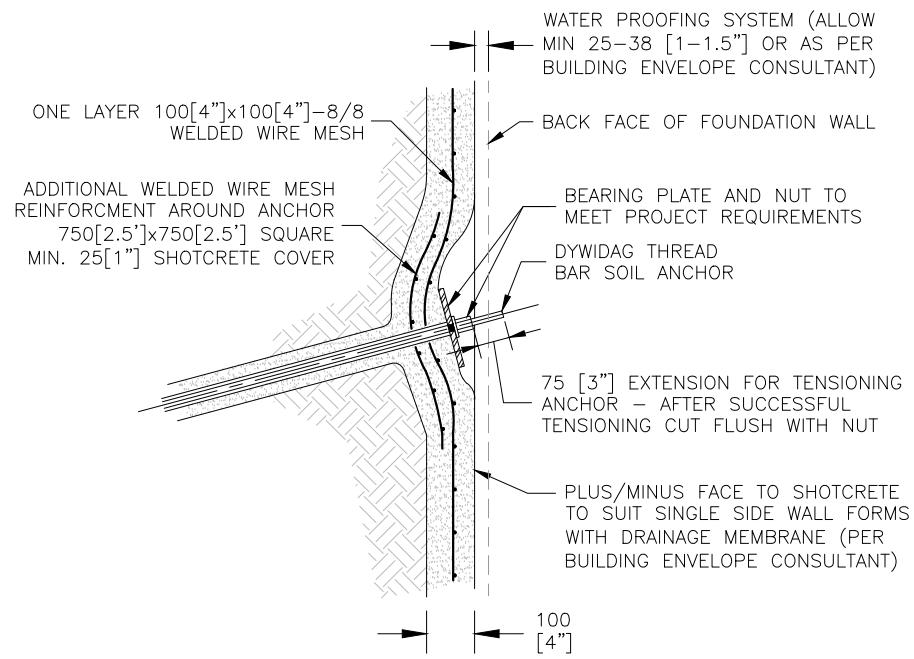
3755 McGill St,
Burnaby, BC

**SETON VILLA SENIORS
INFILL HOUSING**
3755 McGill St,
Burnaby, BC

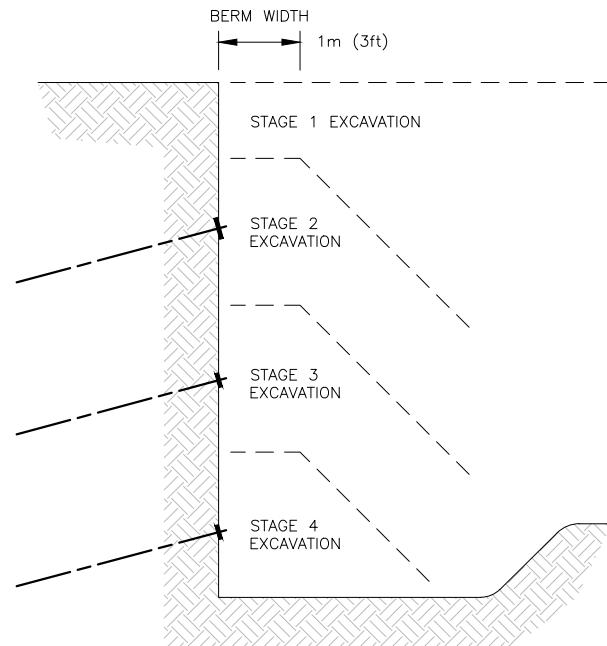
Temporary Excavation Support SITE PLAN

SCALE 1:250 DATE NOV/2022
DESIGN HB DRAWN RaB CHECKED KS

FIGURE G1 OF 7
FILE NUMBER 120-4748

RECESSED ANCHOR HEAD DETAIL

SCALE: NOT TO SCALE

TYPICAL EXCAVATION STAGES

SCALE: NOT TO SCALE

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ACTION LINE
HOUSING SOCIETY
3755 McGill St,
Burnaby, BC

SETON VILLA SENIORS
INFILL HOUSING
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Temporary
Excavation Support
DETAILS, NORTH
ELEVATION &
SECTION A

SCALE	AS SHOWN	DATE	NOV/2022
DESIGN	HB	DRAWN	RaB

FIGURE

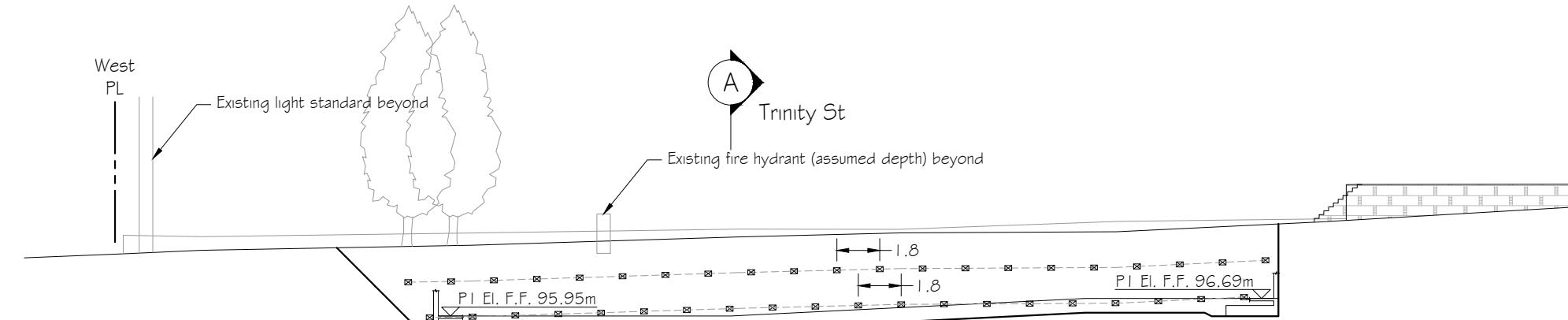
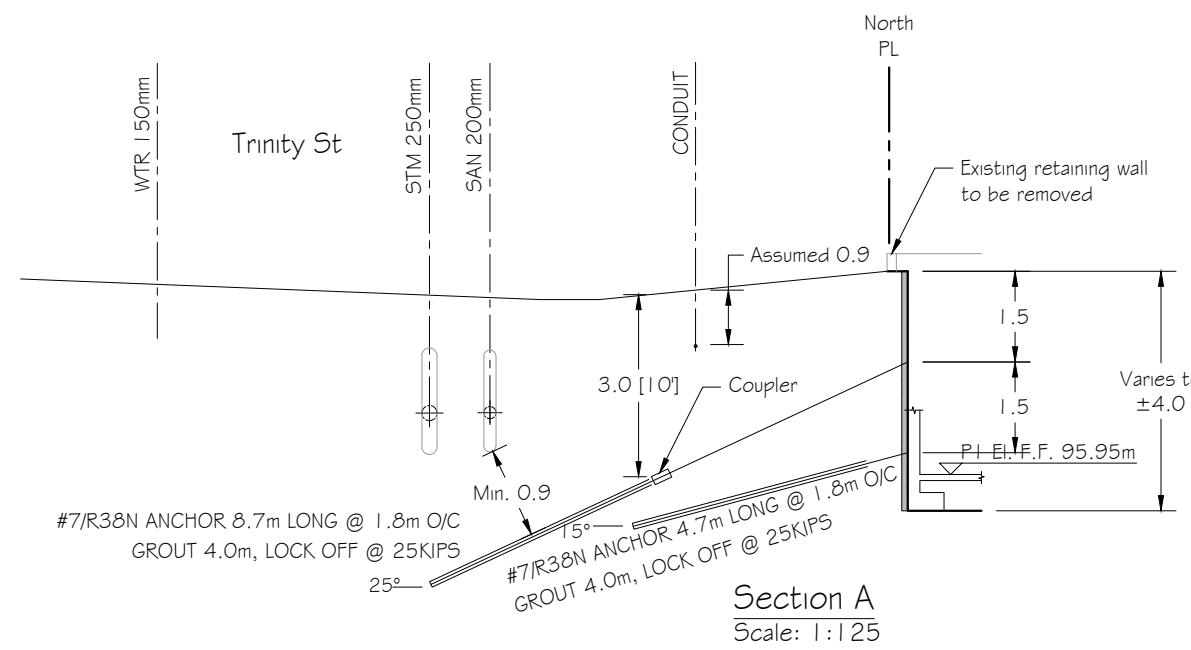
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SEE NOTES ON SHEET G1

G2

OF 7

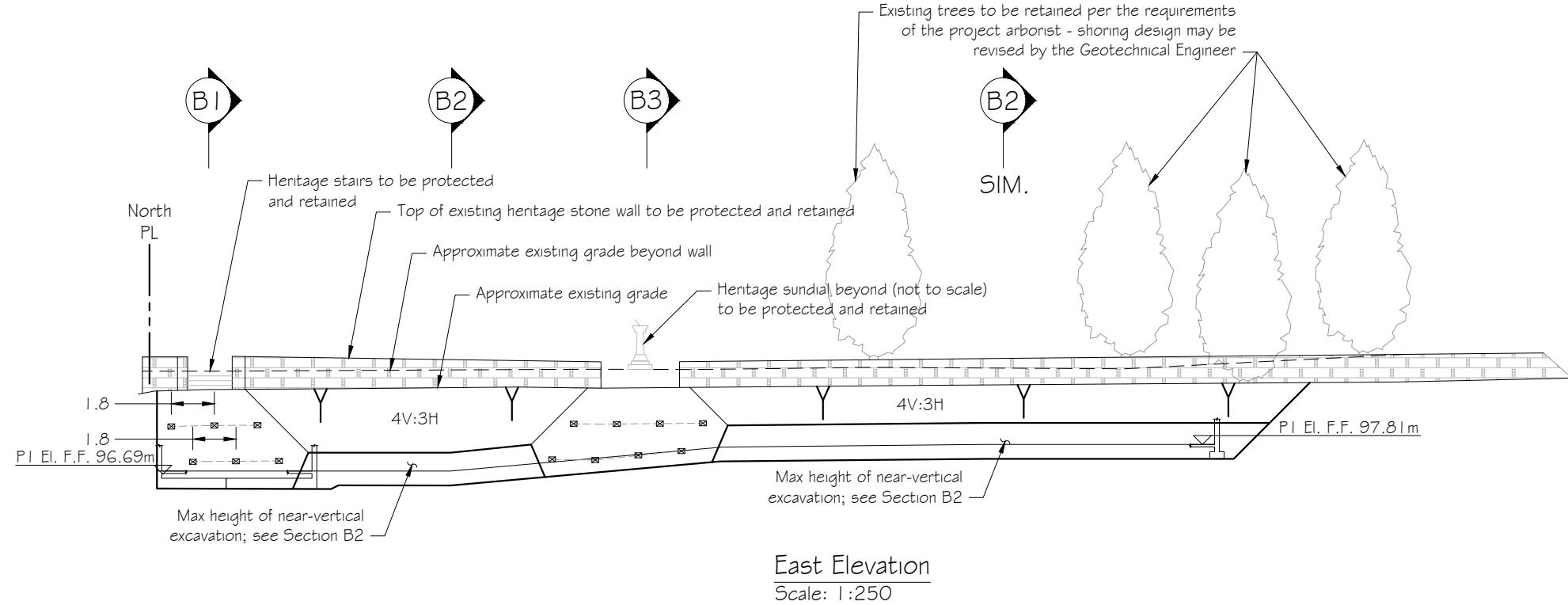
120-4748

North Elevation
Scale: 1:250

SEE NOTES ON SHEET G1

FILE NUMBER

120-4748



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info@ramconsulting.com

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ACTION LINE
HOUSING SOCIETY
3755 McGill St,
Burnaby, BC

SETON VILLA SENIORS
INFILL HOUSING
3755 McGill St,
Burnaby, BC

Temporary
Excavation Support
EAST ELEVATION &
SECTIONS B1 TO B3

SCALE	AS SHOWN	DATE	NOV/2022
DESIGN	HB	DRAWN	RaB

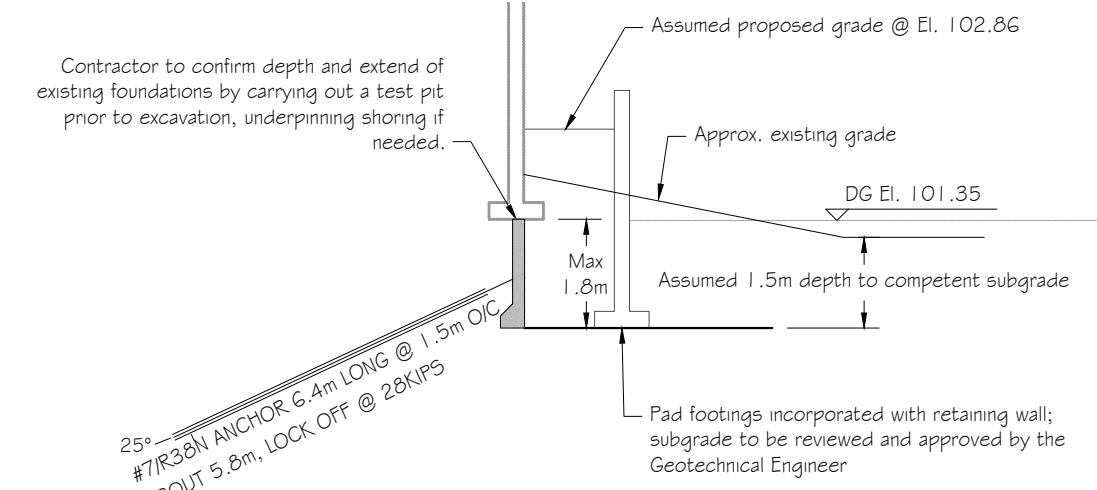
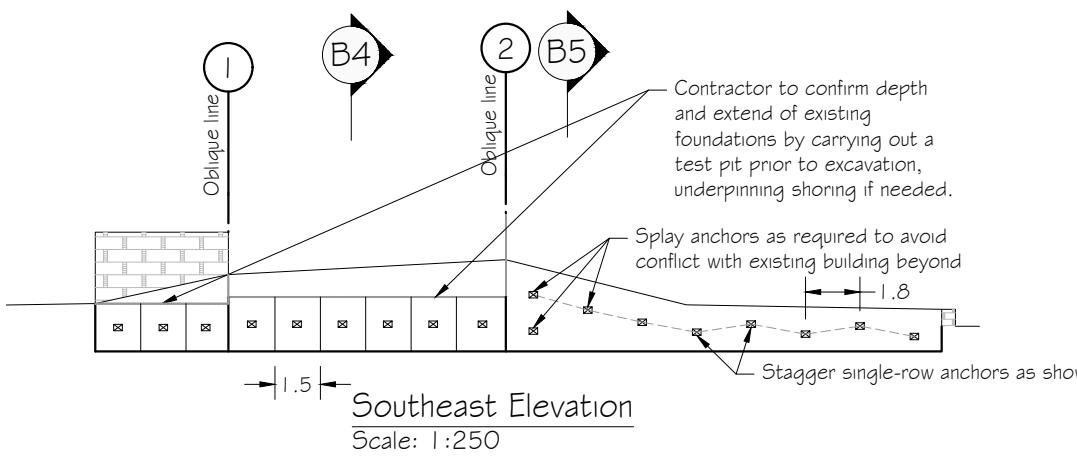
FIGURE

G3

OF 7

SEE NOTES ON SHEET G1

120-4748



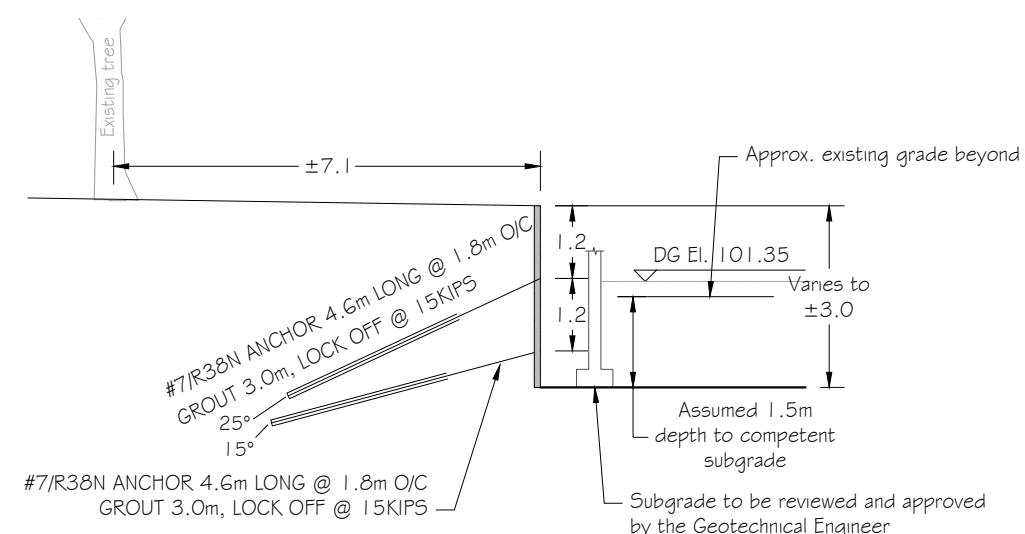
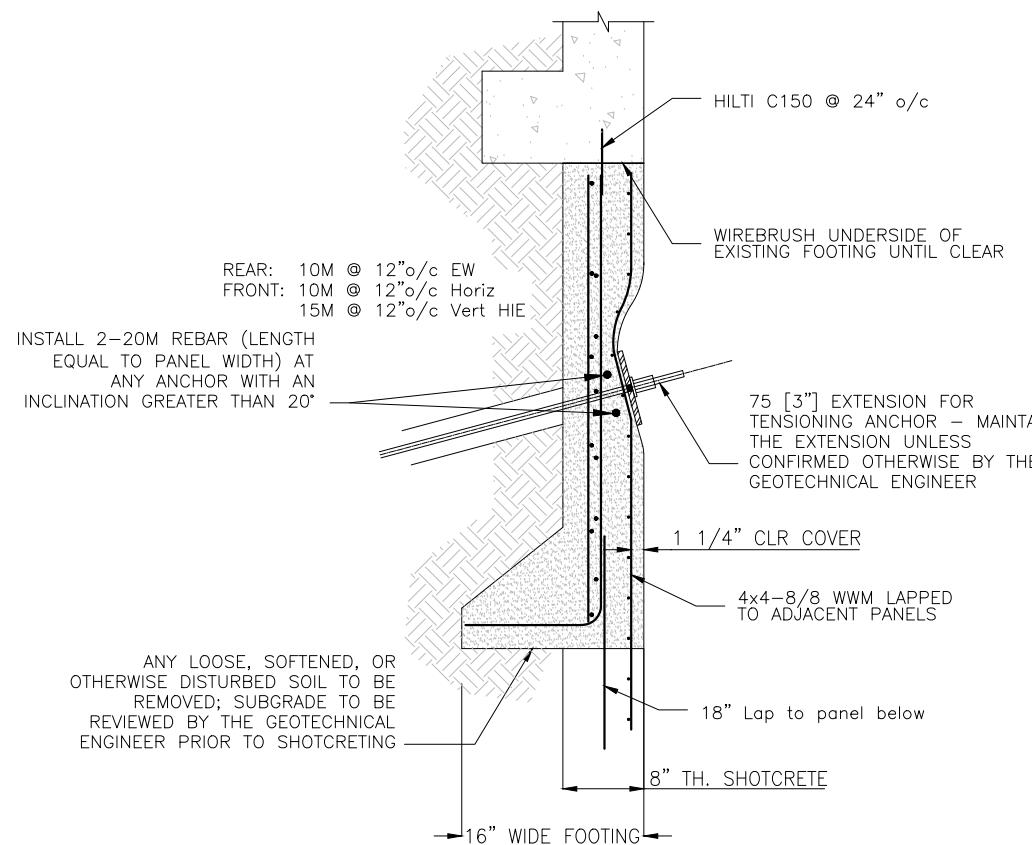
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ACTION LINE
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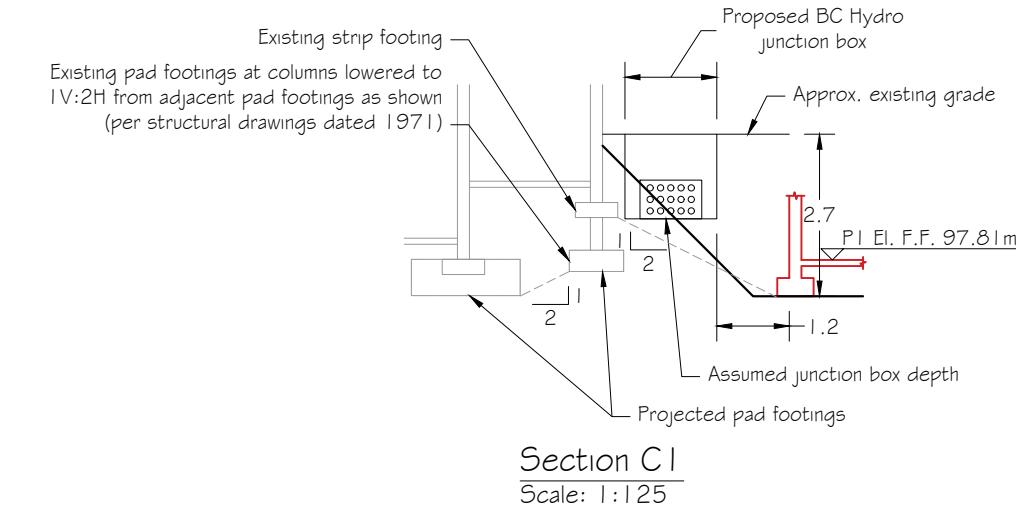
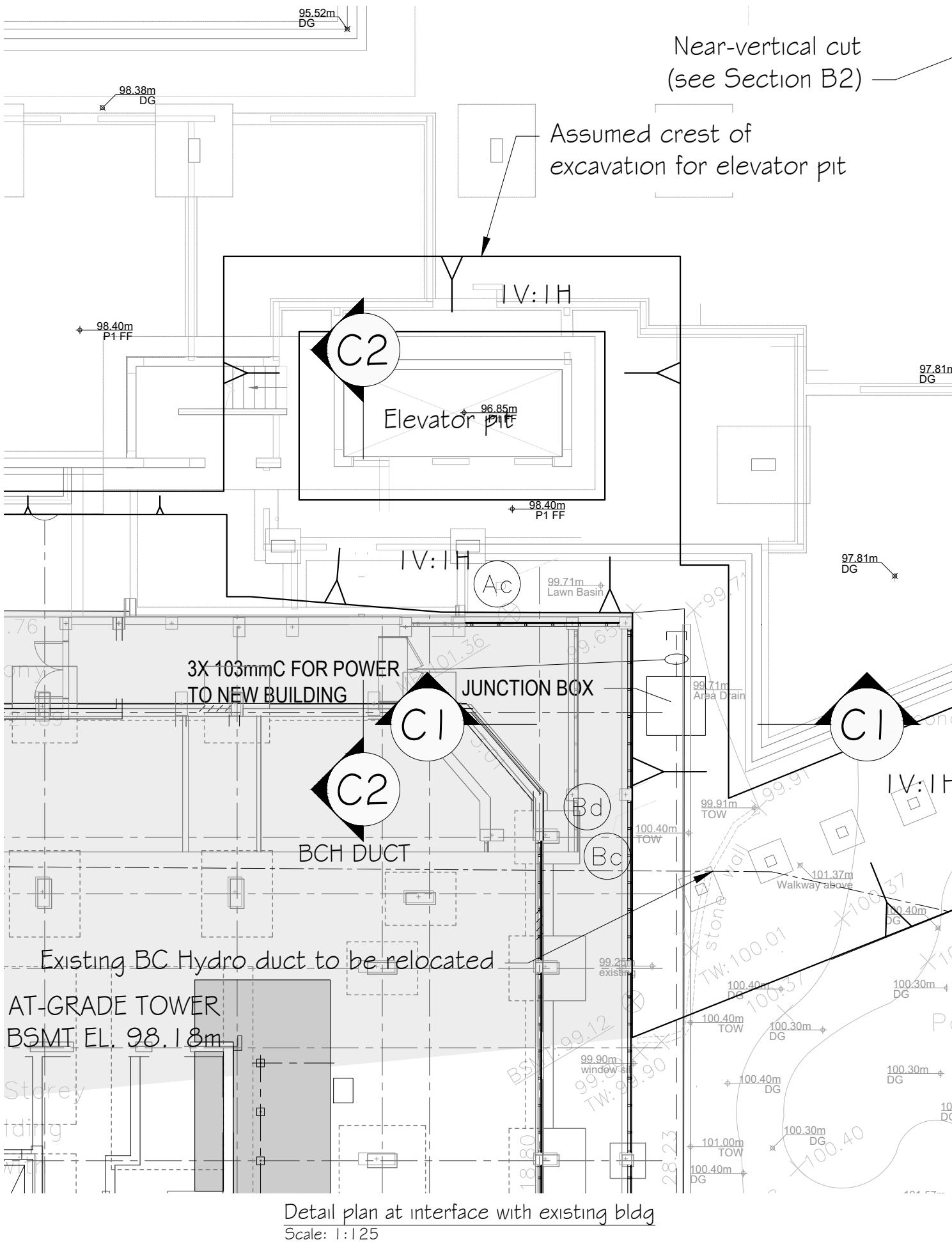
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Temporary
Excavation Support
SOUTHEAST ELEVATION
& SECTIONS

SCALE	AS SHOWN	DATE	NOV/2022		
DESIGN	HB	DRAWN	RaB	CHECKED	KS

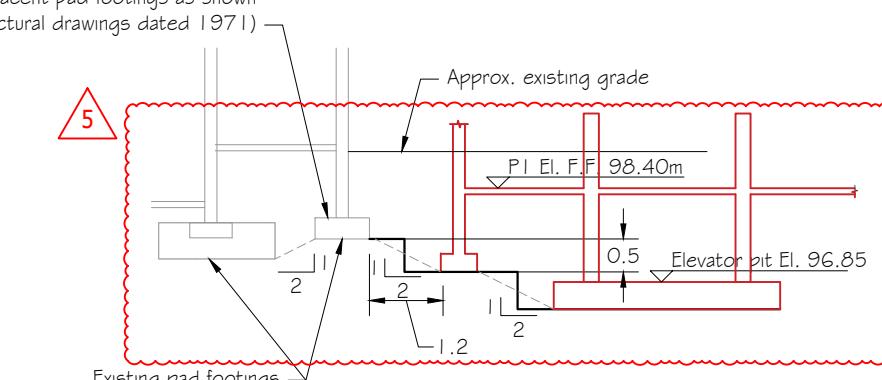
FIGURE
5 G4 OF 7
FILE NUMBER
120-4748

SEE NOTES ON SHEET G1



Proposed structure shown in red

Existing pad footings at columns lowered to IV:2H from adjacent pad footings as shown (per structural drawings dated 1971)



SEE NOTES ON SHEET G1

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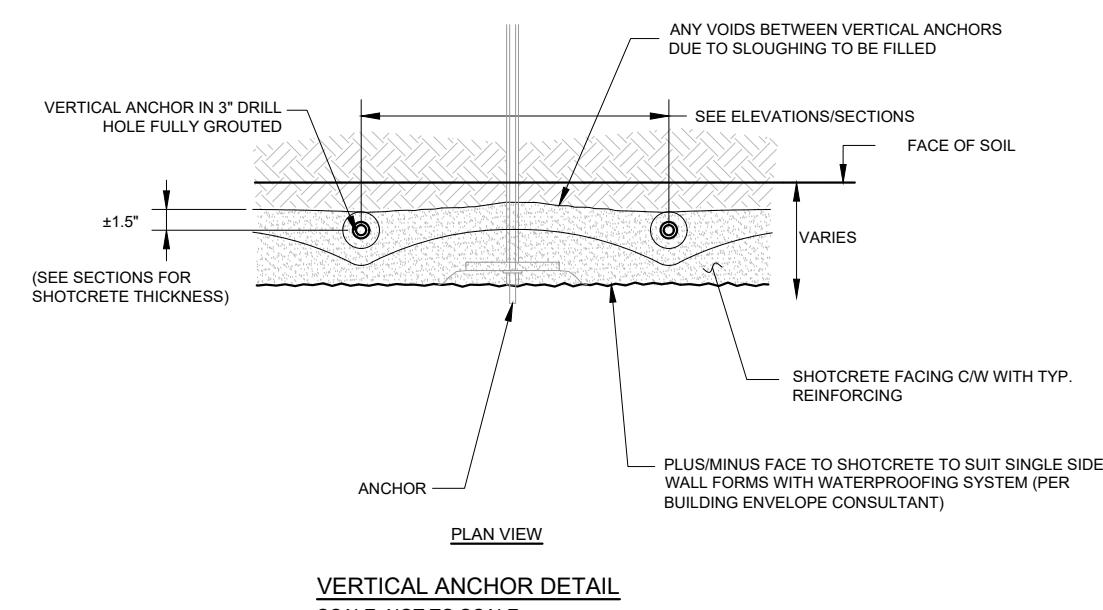
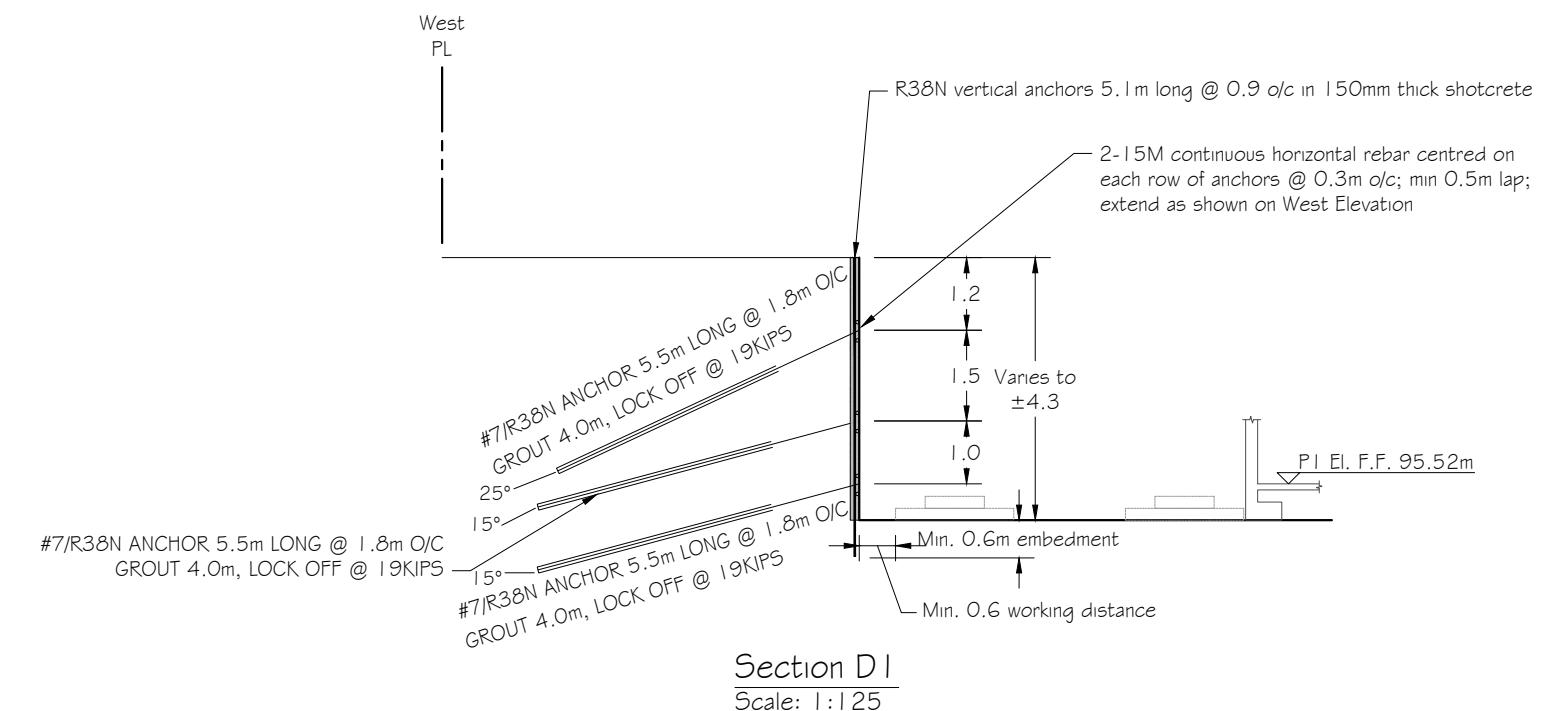
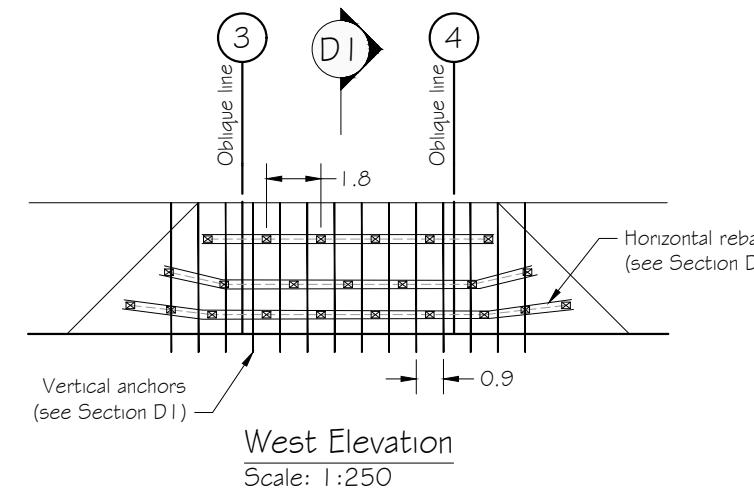
Engineers and Geoscientists British Columbia
Permit to Practice Number: 1002292

ACTION LINE
HOUSING SOCIETY
3755 McGill St,
Burnaby, BC

SETON VILLA SENIORS
INFILL HOUSING
3755 McGill St,
Burnaby, BC

Temporary
Excavation Support
SOUTH SECTIONS

SCALE	AS SHOWN		DATE	NOV/2022	
DESIGN	HB	DRAWN	RaB	CHECKED	KS
FIGURE					
G5 OF 7					



SEE NOTES ON SHEET G1

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ACTION LINE
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Temporary
Excavation Support
WEST ELEVATION &
SECTION

SCALE	AS SHOWN	DATE	NOV/2022
DESIGN	HB	DRAWN	RaB
			CHECKED
FIGURE	G6		
FILE NUMBER	5 OF 7		

TEMPORARY EXCAVATION SUPPORT SPECIFICATIONS

1.0 GENERAL

1.1 REFERENCED DRAWINGS

- Eitaro Hirota Architecture Inc, architectural drawings received 15 Sep 2025.
- Holistic Engineering Ltd, structural drawings received 15 Sep 2025.
- Topographic survey plan prepared by Ken K. Wong and Associates dated 20 Nov 2019.
- BCOneCall ticket no. 20224119266 dated 6 Oct 2022. Utility drawings received from BC Hydro, Fortis & Telus.
- City of Burnaby GIS utility data and engineering plates.

Contractor to refer to current architectural and structural drawings. Bring any discrepancies between these and information contained herein to the attention of the Geotechnical Engineer. Contractor to confirm building (proposed and existing) and utility offsets and depths, and existing backfill type prior to excavating or installing shoring.

1.2 GEOTECHNICAL ENGINEER

The Geotechnical Engineer is RAM Engineering Ltd.
Phone: 604 990 0546

1.3 SOIL CONDITIONS

Refer to the Geotechnical Investigation Report by RAM Engineering Ltd. dated 17 Feb 2022.

1.4 PERMITS & PERMISSIONS

If required, the owner obtains permits and permissions for excavation and construction of the shoring system and its encroachment onto adjacent public and private properties. Copies of the encroachment agreements with owners of adjacent private properties to be provided by the owner to the Geotechnical Engineer prior to commencement of construction.

If required by the municipality, the contractor shall provide a pre-construction video of the adjacent sewers that could be affected by the excavation work.

1.5 ADHERENCE TO REGULATIONS

The contractor shall comply with the requirements of all regulatory statutes, federal, provincial and municipal, and comply with the requirements of all government departments including the Department of Fisheries and Oceans, Canada (DFO), the British Columbia Ministry of Environment, and the municipality for the protection of aquatic habitat and municipality plant during construction of the works. Specifically, the contractor shall ensure that all excavation and construction procedures are undertaken in such a manner as to prevent silt-laden runoff from the work site from entering the downstream drainage system, and shall follow procedures as recommended in the publication, "Land Development Guidelines for the Protection of Aquatic Habitat", as issued by the DFO and the Ministry of Environment, Lands and Parks.

1.6 STABILITY & GROUND MOVEMENT

Some movement of the ground surrounding the excavation must be expected. Any signs of ground movement or deterioration must be reported immediately to the Geotechnical Engineer.

1.7 HOARDING

Hoardings should meet the minimum requirements of the municipality.

1.8 EROSION CONTROL

Unless noted or directed otherwise an allowance shall be made for protecting all exposed slopes with 6 x 6 x 10/10 WWM on 6 mil poly sheeting. Mesh is to be tied to 10M pins driven 0.6m (2ft) into soil at 6.1m (20ft) centres each way.

1.9 UTILITIES

Contractor must verify utility information by independently collecting relevant reference drawings and field verification as required. All work indicated on these drawings must be carried out without disturbance to the existing utilities.

2.0 MATERIALS

Samples and technical specifications for proposed alternative materials may be submitted to the Geotechnical Engineer for technical review.

2.1 ANCHORS

2.1.1 Tendons

Anchors shall be Dywidag Threadbar or approved equivalent, sized in accordance with the anchor tables or as indicated on the sections. All anchors shall be supplied with compatible nuts and couplers as required, to CSA G30.18-21 (ASTM A615/615A-20). Supplier to provide mill certificate. Anchors to be installed with manufacturer centralizers at 2.4m (8ft) centres along the total anchor length and couplers as indicated. Note that the overall length indicated on the drawings does not include an allowance for anchorage and stressing.

2.1.2 Bearing Plates: Bearing plates to be to CSA G40.21 as follows: - 190mm (7.5") x 290mm (11.5") railway tie plate unless noted otherwise.

2.2 GROUT

2.2.1 Non Shrink Cementitious: Shall be 'Microsil' grout as supplied by Ocean Construction

Supplies, or approved equivalent, batched in accordance with manufacturers specifications. Grout shall have a minimum compressive strength of 21 MPa (3.0 ksi) after 24 hours and 35 MPa (5.0 ksi) in 28 days. Grout strength at time of stressing shall be at least 21 MPa (3.0 ksi).

2.2.2 Epoxy: Shall be Hilti HIT HY 150 Adhesive capsules inserted into a clean, drilled hole of minimum diameter and embedment as indicated.

2.3 REINFORCEMENT

2.3.1 Welded Wire Mesh (WWM): CSA-G30.5M 1983 grade 400 Mesh to be continuous across all shotcrete joints, unless noted otherwise. Minimum mesh lap shall be 2 squares.

2.3.1.1 Shoring: One layer of 4 x 4 x 8/8 WWM unless noted otherwise.

2.3.2 Reinforcing Steel: CSA-G30.18 R2014. Bar lengths and minimum laps are indicated on the drawings.

2.3.2.1 Shoring: As indicated on the drawings.

2.3.2.2 Underpinning: As indicated on the drawings.

2.4 SOIL DRAINAGE

2.4.1 Construction Dewatering: Temporary construction dewatering such as vacuum suction (well points) or pumping wells to be installed by others (if required) at the direction of the Geotechnical Engineer.

2.4.2 Weep Holes: Weep holes shall be suitably equipped with PVC pipe and filter cloth or drainage membrane, as required.

2.4.3 Horizontal Drains: Horizontal drain to consist of slotted, 38mm (1.5") dia. rigid plastic PVC pipe with one end capped. Any gap at shotcrete shall be filled with filter fabric or otherwise suitably filtered/sealed to the requirements of the project.

2.4.4 Filter Fabric Non-woven needle punched Nilex 4545, or approved equivalent.

2.4.5 Drainage Membrane: Nudrain WD15 or approved equivalent. Minimum 150mm (6") lap. Laps to be completely sealed with continuous taping.

2.5 SHOTCRETE

Shotcrete support membrane material shall conform to the material specification of ACI 506.2-13. "Specifications for Shotcrete" published by the American Concrete Institute. Minimum compressive strength shall be 30 Mpa (4.4 ksi) at 28 days, 14 Mpa (2.0 ksi) at 3 days and 7 Mpa (1.0 ksi) at 24 hours.

2.5.1 Shoring/Underpinning

The shoring and underpinning shall consist of 100mm (4") and 200mm (8") thicknesses of shotcrete respectively, complete with layers of wire mesh and reinforcing as indicated on the drawings.

2.6 BACKFILL

All backfilling shall comply with the municipality's criteria.

3.0 INSTALLATION

Contractor to perform daily site reconnaissance around the excavation and perimeter for the express purpose of noting any signs of movement of the soil around the excavation or deterioration of the soil in any way. Any such signs should be reported to the Geotechnical Engineer immediately.

3.1 EXCAVATION

Prior to excavating the Contractor shall: Consult with the Authorities Having Jurisdiction for appropriate methods of locating utilities. Determine the locations of all structures and underground services that may be affected by the work. The Geotechnical Engineer must be notified at least 48 hours prior to starting the work.

3.2 ANCHORS

A minimum of forty-eight (48) hours prior to the installation of the earth anchors, contact is to be made with Fortis, BC Hydro, Telus, Shaw, Burnaby Engineering Department, and any other utility company whose utilities are within the fronting rights-of-way.

Storage, handling and installation procedures shall ensure that anchors are completely undamaged and free of deleterious materials at the time of installation.

3.2.1 Drilling

3.2.1.1 Inclination: The anchors shall be installed at the inclination indicated on these drawings, except where there may be an underground service. In such circumstances the Geotechnical Engineer shall be notified in order to provide alternative design recommendations.

3.2.1.2 Splay: the anchors shall be installed perpendicular to the face of the excavation unless noted otherwise.

3.2.2 Grouting: All grout shall be introduced at the bottom of the drill hole. Where required, special techniques such as drilling with a casing and pressure injecting the grout or self grouting anchors may be used. Any grout extending into the free length shall be removed before the grout hydrates. If the total grout volume used at any given anchor location exceeds three times the theoretical volume required, the Geotechnical Engineer shall be notified immediately.

3.3.1 Shoring Installation Procedures - Typical:

1. Execute Stage 1 as indicated on the design sections and install first row of anchors. Line drill existing wall or excavation slope as required.

2. Place reinforcement, shotcrete and bearing plates and nuts. Tension anchors the following day. Proceed with the same detail between other anchors, such that the work is carried out in a three day sequence.

3. When all anchors have been tested and proven to meet the testing requirements, excavate for Stage 2, repeat procedures.

4. Repeat procedures for successive stages of excavation and shoring to final excavation grade.

5. After-grout free length of anchors.

3.3.2. Typical Underpinning Installation Procedures (in addition to 3.3.1):

1. Excavate to the Stage 1 elevation maintaining slope and berm shown and install the top row of anchors at horizontal centres detailed.

2. Working in a three day sequence, excavate vertically to Stage 1 elevation and install reinforced shotcrete underpinning panels. Tension panel anchors the following day before proceeding to next panel in sequence. Stage 1 slopes and berms to be maintained except at working faces.

3. Panel edges and footing subgrades for the tops and bases of underpinning panels to be cleaned prior to shotcreting.

Repeat procedures as detailed for successive stages of excavation.

4.0 DECOMMISSIONING

Refer to City of Burnaby Letter "Hoarding & Shoring Requirements (Revised)", dated: 2011 May 03, File: 48000 08.

CITY OF BURNABY REQUIREMENTS:

Backfill Material: Any backfill material placed within the City rights-of-way to be well graded pit run gravel conforming to Section 02226 of the Master Municipal Specifications and the Burnaby Standard Supplemental Specifications.

City Standards: Place granular backfill and compact to the following Modified Proctor Densities in compliance with ASTM D1557:

1. Boulevards and rights-of-way to minimum 90%.

2. Roads, driveways, shoulders, re-shaped ditches and sidewalks to minimum 95%.

DETENSIONING: All Anchors must be detensioned in accordance with the requirements and specifications of the Authority Having Jurisdiction.

SHOTCRETE REMOVAL: Any shotcrete encroaching onto adjacent property should be removed in accordance with the Encroachment Agreement and/or the Authority Having Jurisdiction.

CITY OF BURNABY REQUIREMENTS:

Any earth anchoring rods encroaching City rights-of-way are to be removed to within 3.0m of the surface.

Any earth anchoring rods within 1.0m of any underground utility below 3.0m are to be removed. Shotcrete placed within statutory rights-of-way must be removed to a minimum depth of 1.5 m, or 1.5 m below any utilities, whichever is greater.

Shotcrete placed within statutory rights-of-ways must be removed to a minimum depth of 1.0 m if only a sidewalk exists.

Shotcrete placed within City road rights-of-way must be removed to a minimum depth of 1.5 m, or 1.5 m below any utilities, whichever is greater.

4.1 BACKFILLING: All backfilling shall comply with the municipality requirements.

5.0 QUALITY CONTROL AND TESTING

5.1 SURVEY MONITORING

Northing, easting and elevation survey monitoring of buildings and shoring faces will be required at locations and time intervals as indicated on the Elevations and/or as directed on site by the Geotechnical Engineer. Shoring contractor to provide trowel-finished surface at each of the proposed monitoring locations.

5.2 TENDONS

The Contractor shall provide a supplier's mill certificate.

5.3 ANCHOR TESTING

All anchors shall be proof or performance tested in accordance with the Post-Tensioning Institute's (PTI) recommendations for soil anchors. In the circumstance that any anchors that do not meet the PTI requirements the Geotechnical Engineer should be notified prior to work proceeding.

5.4 GROUT

Should there be any "failed" anchors or any uncertainty regarding the quality of the grout, sampling and testing of grout by an approved qualified testing agency may be arranged by others. Contractor to allow for one flow test and collection and testing of one set of grout cubes.

5.5 SHOTCRETE

Contractor should allow for the preparation of at least one test panel if requested by the Geotechnical Engineer. Subsequent laboratory of the test panel would be carried in accordance with applicable ASTM test procedures.

5.6 BACKFILLING

The Geotechnical Engineer must review the backfilling placement and compaction work. Depending upon the backfill material and method of compaction, a material testing laboratory may carry out insitu density testing and the associated laboratory analyses.

REFERENCE DRAWINGS
See Specifications.



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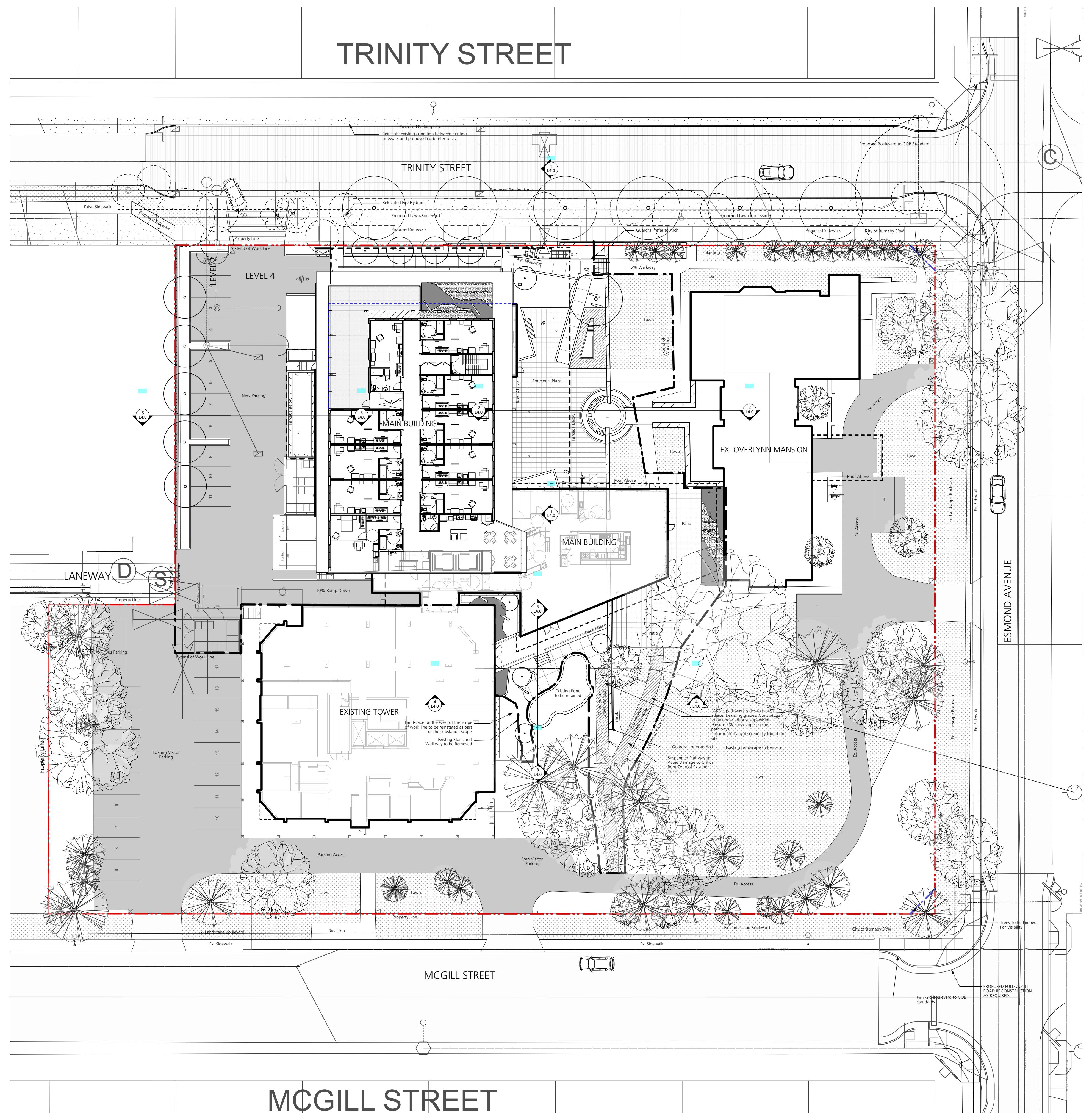
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SETON VILLA SENIORS
INFILL HOUSING
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Temporary
Excavation Support
SPECIFICATIONS

SCALE DATE
DESIGN DRAWN NOV/2022
FIGURE CHECKED
HB RaB KS

G7 OF 7
FILE NUMBER 120-4748



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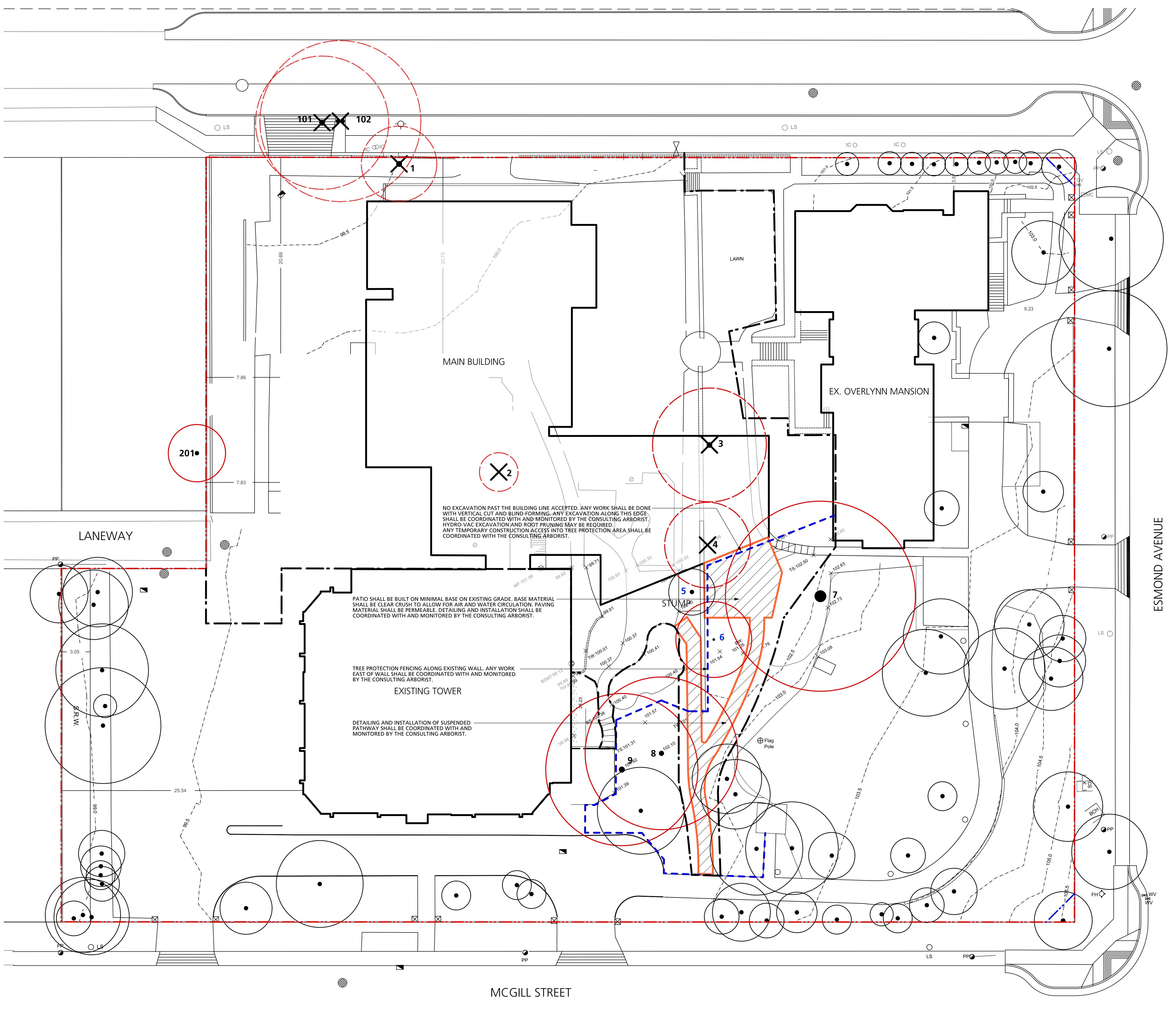
Client:
Action Line Housing Society

Project Title:
Seton Villa

Drawing Title:
3755 McGill Street, Burnaby, BC

Drawing Title:
Landscape Context Plan

Project North: PN Drawn By: SJ
Checked By: JP
Scale: 1:250 Job No.: 22-006
Sheet No.: 001



EXISTING TREE LEGEND		
	EXISTING TREE TO REMOVE	
	EXTENT OF DRIP LINE	
	EXISTING TREE TO RETAIN	
	EXISTING TREE OUTSIDE OF THE CRITICAL ROOT ZONE	
	TREE PROTECTION BARRIER	
	PROPOSED LANDSCAPE IMPROVEMENTS WITHIN CRITICAL ROOT ZONE	
	EXTENT OF WORK ZONE	
3	TREE NUMBER - BY-LAW SIZE TREE	
6	TREE NUMBER - NON-BY-LAW SIZE TREE	
NOTES:		
1. REFER TO ARBORIST TREE MANAGEMENT PLAN AND REPORT FOR REMOVAL AND REPLACEMENT TOTALS.		
2. REFER TO ARBORIST TREE MANAGEMENT PLAN AND REPORT FOR DETAIL TREE RETENTION MEASURINGS.		
3. ALL WORK WITHIN THE EXTEND OF CRITICAL ROOT ZONE TO BE COORDINATED WITH CONSULTING ARBORIST.		
4. REFER TO ARBORIST MANAGEMENT PLAN FOR TREE PROTECTION OUTSIDE OF THE ACTIVE CONSTRUCTION AREA.		
5. TREE PROTECTION TO CITY STANDARDS.		
TREE PROTECTION NOTES OUTSIDE OF ACTIVE CONSTRUCTION AREA:		
A. NO CONSTRUCTION ACCESS OR STAGING OUTSIDE OF ACTIVE CONSTRUCTION AREA (HATCHED AREA).		
B. MINOR LANDSCAPE IMPROVEMENTS OUTSIDE OF ACTIVE CONSTRUCTION AREA SHALL BE COORDINATED WITH AND DONE UNDER THE SUPERVISION OF THE CONSULTING ARBORIST.		

No.	Description	Date
1	Issued for SpD	2022/03/14
2	Issued for Coordination	2022/03/03
3	Issued for the 3rd Reading	2023/01/03
4	Issued for PPA	2023/01/06
5	Issued for Building Permit	2023/11/10
6	Reissued for PPA	2024/05/23
7	Reissued for PPA	2024/09/13
8	Issued for Tender Draft	2024/09/16
9	Issued for Tender	2025/03/07
10	Issued for Post Tender Addendum	2025/03/07
11	Issued for IFC	2025/06/12
12	Re-issued for Building Permit	2025/08/20
13	Issued for PTA #2	2025/09/12
14	Issued for IFC	2025/09/12

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Action Line Housing Society

Project Title:
Seton Villa

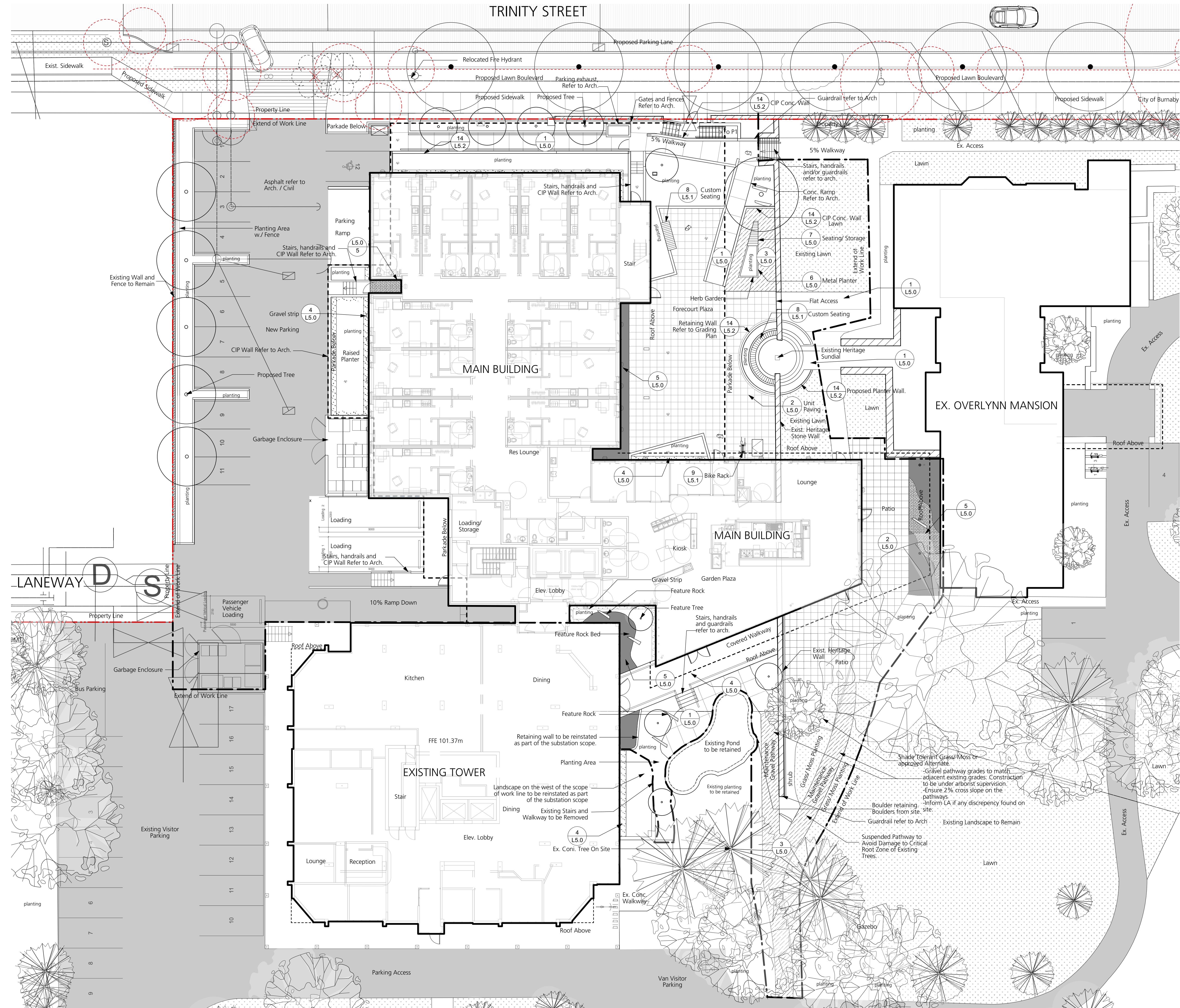
3755 McGill Street, Burnaby, BC

Drawing Title:
Tree Management Coordination Plan

Project North: PN Drawn By: SJ
Checked By: JP

Scale: 1:200 Job No.: 22-006
Sheet No.: L0.1

TRINITY STREET



DETAIL KEY

1 L5.0	C.I.P CONCRETE PAVING
2 L5.0	HYDRAPRESSED UNIT PAVING
3 L5.0	GRANULAR PAVING
4 L5.0	GRAVEL STRIP
5 L5.0	FEATURE ROCK AND ROCK GARDEN
6 L5.0	PREFABRICATED METAL PLANTER
7 L5.0	TOOL STORAGE W. BENCH
8 L5.1	CUSTOM BENCH
9 L5.1	BIKE RACK
10 L5.1	REMOVED
11 L5.2	REMOVED
12 L5.2	SHRUB PLANTING
13 L5.2	TREE PLANTING
14 L5.2	CIP CONCRETE RETAINING WALL
15 L5.2	6' HT. WOOD FENCE

1727

	CONCRETE PAVING WITH SCORE LINES
	HYDRAPRESSED UNIT PAVING
	GRANULAR PAVING
	GRAVEL STRIP
	ROCK GARDEN - COLOR A
	ROCK GARDEN - COLOR B
	LAWN PLANTING
	SHRUB PLANTING
	PROPOSED TREE
	EXISTING DECIDUOUS TREE
	EXISTING CONIFEROUS TREE
	MINIMUM CLEARANCE FROM UTILITY
	EXISTING HERITAGE WALL
	PROPOSED WALL / CURB

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Client:

Action Line Housing Society

Project Title:

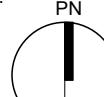
Seton Villa

3755 McGill Street, Burnaby, BC

Drawing Title:

Landscape Layout and Key Plan - Ground Level

Project North: PN Drawn By: SJ

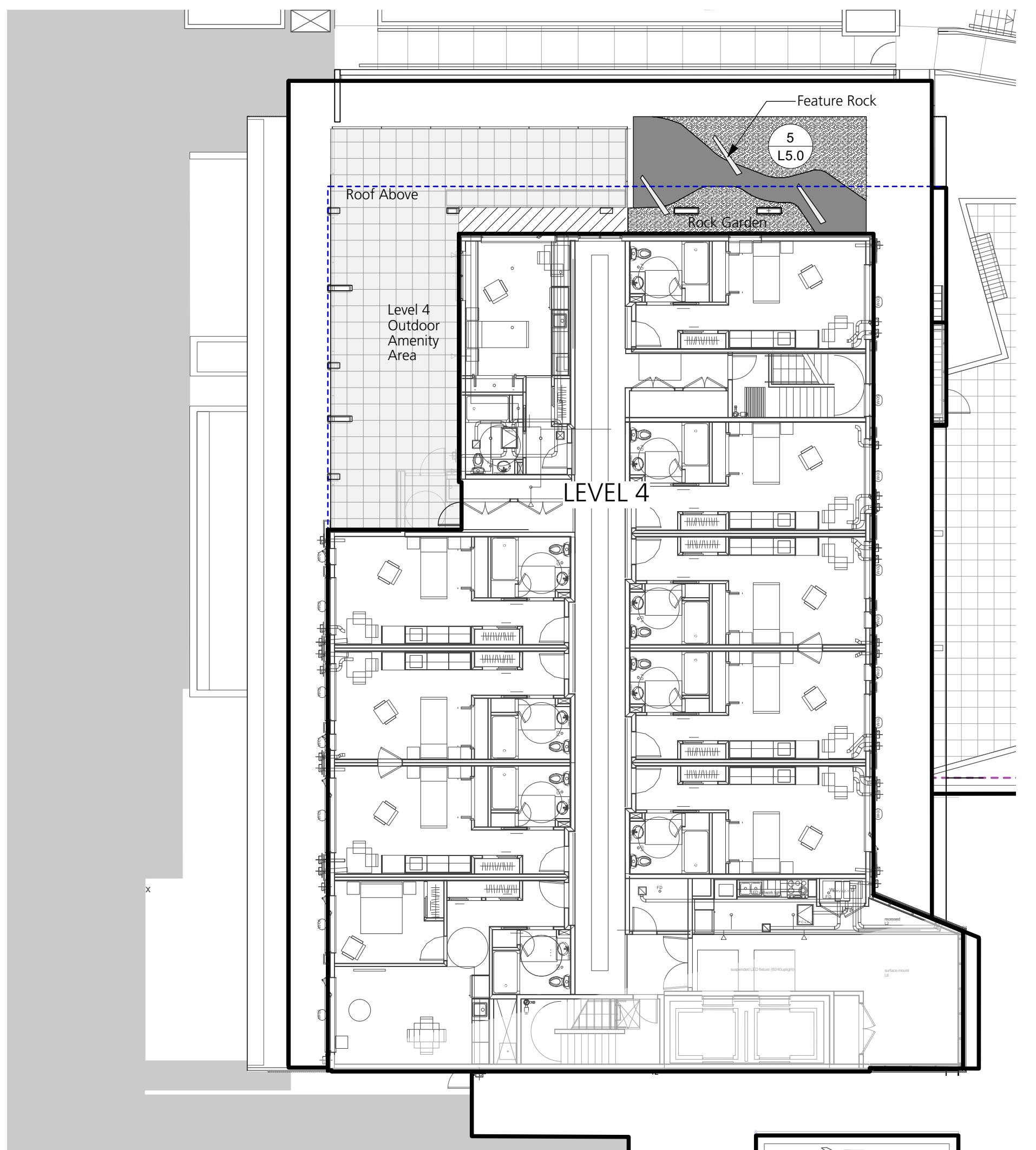


Checked By: JP

Scale: Job No.: 1:150 22-006

Sheet No.:

L1.0



Level 4 - Roof Top Patio 1:150

LEGEND	
	CONCRETE PAVING WITH SCORE LINES
	HYDRAPRESSED UNIT PAVING
	GRANULAR PAVING
	GRAVEL STRIP
	ROCK GARDEN - COLOR A
	ROCK GARDEN - COLOR B
	LAWN PLANTING
	SHRUB PLANTING
	PROPOSED TREE
	EXISTING DECIDUOUS TREE
	EXISTING CONIFEROUS TREE

DETAIL KEY	
	C.I.P. CONCRETE PAVING
	HYDRAPRESSED UNIT PAVING
	GRANULAR PAVING
	GRAVEL STRIP
	ROCK GARDEN - COLOR A
	ROCK GARDEN - COLOR B
	LAWN PLANTING
	SHRUB PLANTING
	PROPOSED TREE
	EXISTING DECIDUOUS TREE
	EXISTING CONIFEROUS TREE
	TOOL STORAGE W. BENCH
	CUSTOM BENCH
	BIKE RACK
	REMOVED
	SHRUB PLANTING
	TREE PLANTING
	C.I.P. CONCRETE RETAINING WALL
	6' HT. WOOD FENCE

Issues	Description	Date
1	Issued for SpO	2022/03/14
2	Issued for Coordination	2022/03/31
3	Issued for the 3rd Reading	2023/01/03
4	Issued for PPA	2023/01/06
5	Issued for Building Permit	2023/11/10
6	Reissued for PPA	2024/05/23
7	Reissued for PPA	2024/09/13
8	Issued for Tender Draft	2024/09/16
9	Issued for Tender	2025/03/07
10	Issued for Post Tender Addendum	2025/03/07
11	Issued for IFC	2025/06/12
12	Re-issued for Building Permit	2025/08/20
13	Issued for PTA #2	2025/09/12
14	Issued for IFC	2025/09/12

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Client:

**Action Line
Housing Society**

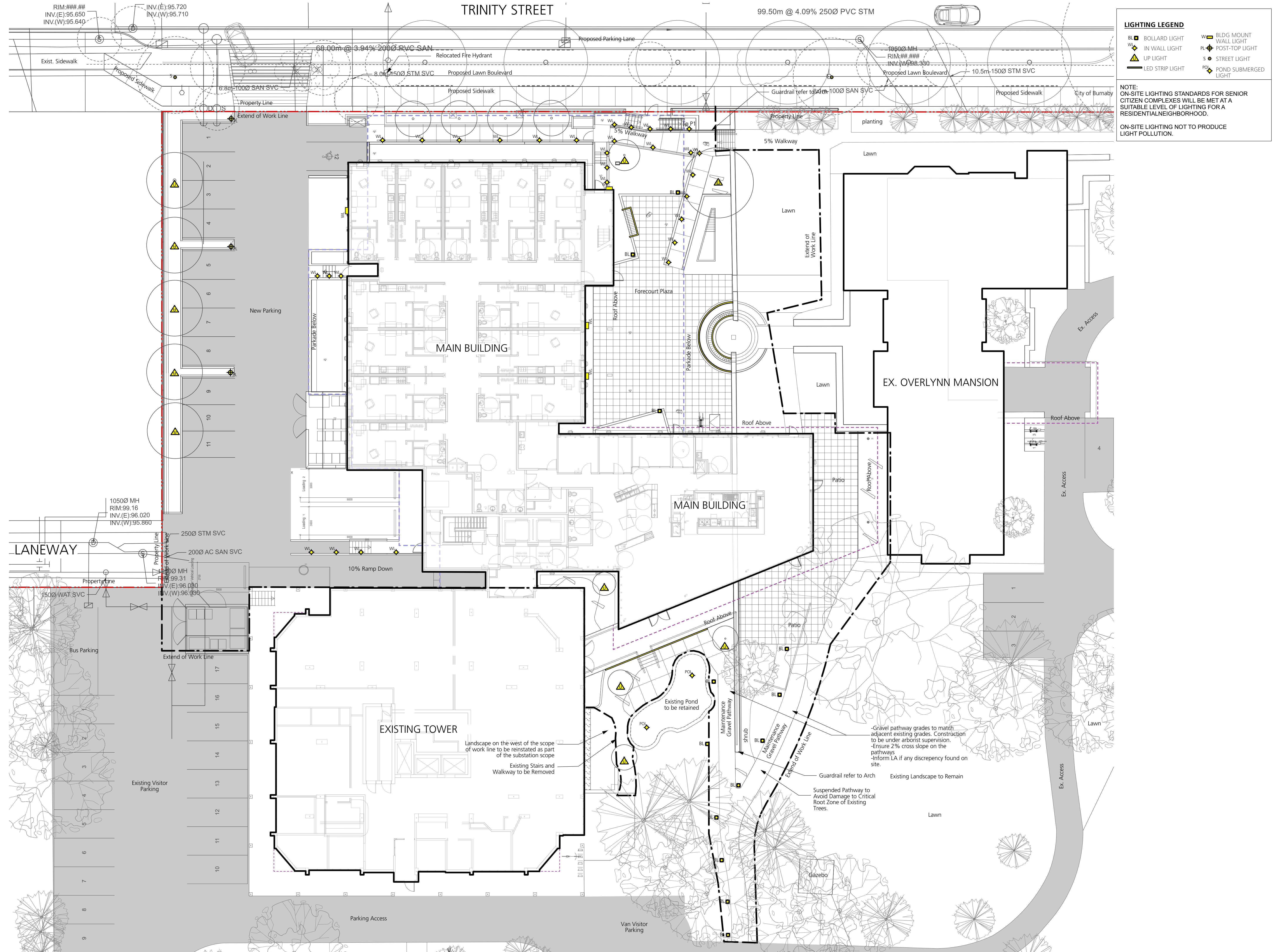
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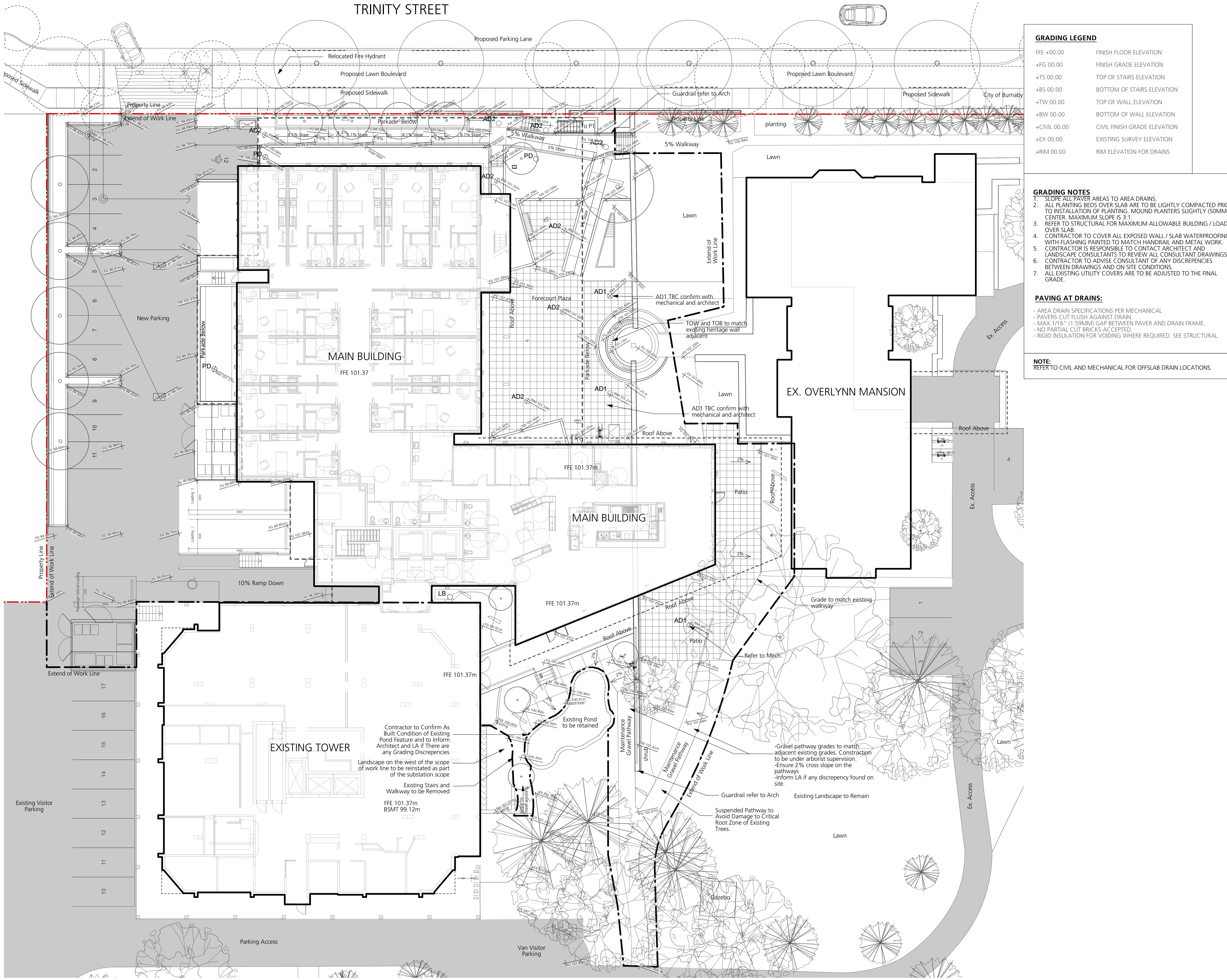
Seton Villa

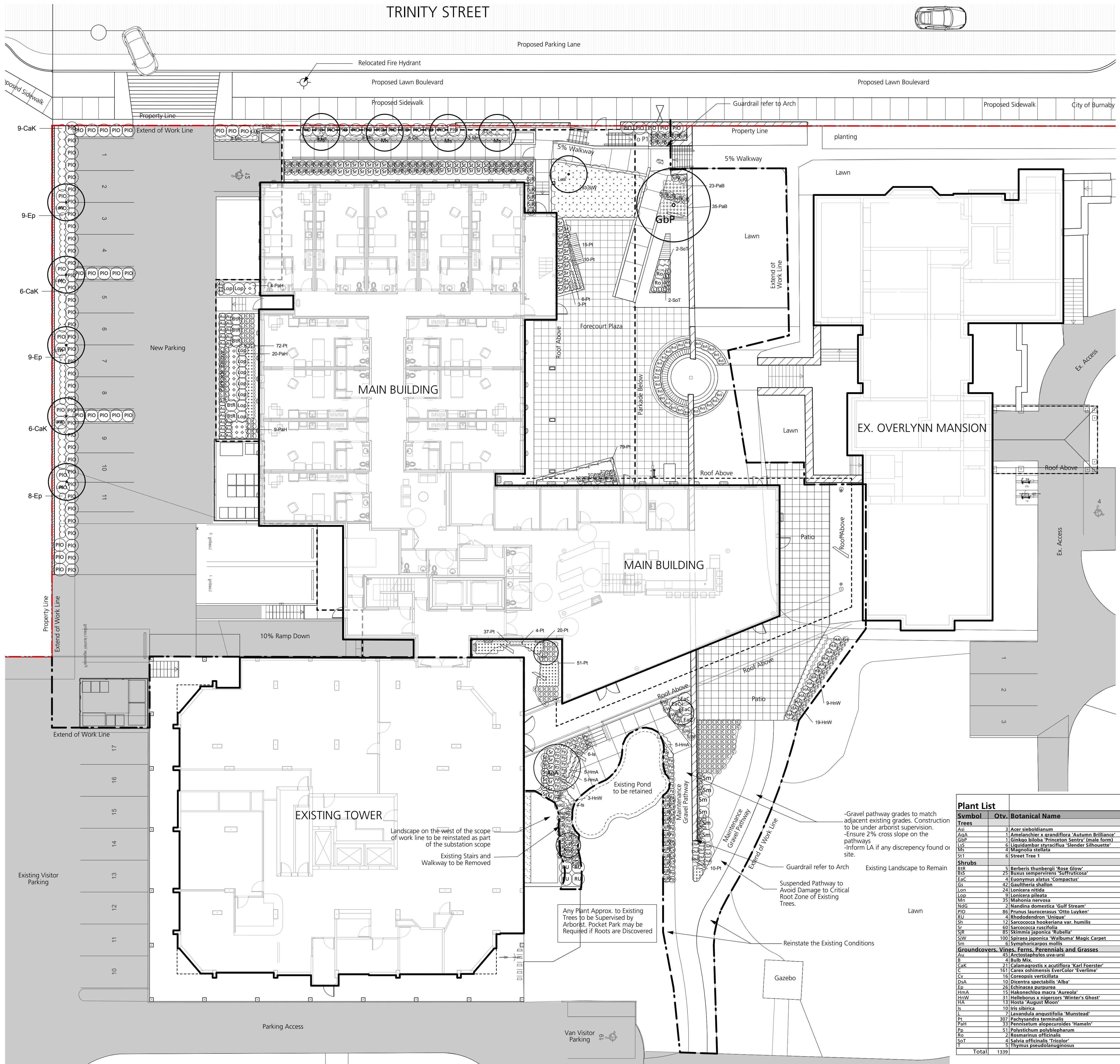
3755 McGill Street, Burnaby, BC

Drawing Title:
**Landscape Layout and
Key Plan - Level 4**

Project North: Drawn By: SJ
Checked By: JP
Scale: 1:150 Job No.: 22-006
Sheet No.: L1.1







PLANTING NOTES

- 1) All planting and landscape installation to meet or exceed the BCSLA/BCLNA - CSLA landscape standards
- 2) As a minimal acceptable standard:
 - a) Sizes on the plant list shall be considered minimum sizes
 - b) Root ball to be free of pernicious weeds
- 3) Contractor to ensure all plant material delivered to site is from nurseries certified to be free from the phytophthora ramorum virus (sudden oak death) removal and replacement of plant material found to contain the virus to be at the contractor's expense.
- 4) All plant material shall be approved at the nursery by the project landscape architect.
- 5) The contractor shall supply all plant materials shown on all drawings.
- 6) No container grown stock will be accepted if it is root bound. All root wrapping material made of synthetics or plastics shall be removed at time of planting.
- 7) Container grown stock, shall have the container removed and the rootball clearly scored in two vertical locations.
- 8) Contractor to submit a representative sample of the proposed topsoil for testing to Pacific Soil Analysis. Contractor is responsible for arranging and payment of soil analysis and amendments to growing medium as determined. Contractor shall instruct soil testing lab to submit results directly to the consultant for approval prior to commencement of work. Generic analysis is not acceptable.
- 9) Contractor to provide landscape architect a copy of all packing slips received from nursery listing names and quantities of all plant stock supplied to site prior to planting.
- 10) The contractor shall locate and verify the existence of all utilities prior to starting work.
- 11) All planting beds to have min 50 mm depth of 25mm minus screened composted bark mulch (not on groundcover areas).
- 12) All plants shall be watered thoroughly twice during the first 24-hour period after planting. All plants shall then be watered as necessary.
- 13) The landscape contractor shall refer to the contract specifications for additional requirements.
- 14) All sod to be unnetted and grown on sand.
- 15) Plant Search area to include BC, WA , OR & CA.
- 16) Imported growing medium to be free from all mushroom / fungi growth
- 17) Soil depths refer to L3.2 soil depth plan and project specifications.
- 18) Contractor is responsible to obtain and be familiar with the relevant project specifications

NOTES

- 1) Any planting within tree protection areas shall be done as pocket planting into existing grade and topping of composted mulch. Pot size should be kept to #1 pot max.
- 2) Off-site Landscape Layout see Landscape offsite submission. Off-site tree species to be specified by City of Burnaby.

Issues

No.	Description	Date
1	Issued for SpD	2022/03/14
2	Issued for Coordination	2022/03/31
3	Issued for the 3rd Reading	2023/01/03
4	Issued for PPA	2023/01/06
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11	Issued for IFC	2025/06/12
12	Re-issued for Building Permit	2025/08/20
13	Issued for PTA #2	2025/09/12
14	Issued for IFC	2025/09/12

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Client:

Action Line
Housing Society

Project Title:

Seton Villa

3755 McGill Street, Burnaby, BC

Drawing Title:

Landscape Planting Plan

Project North:

Drawn By: SJ
Checked By: JP

Scale:

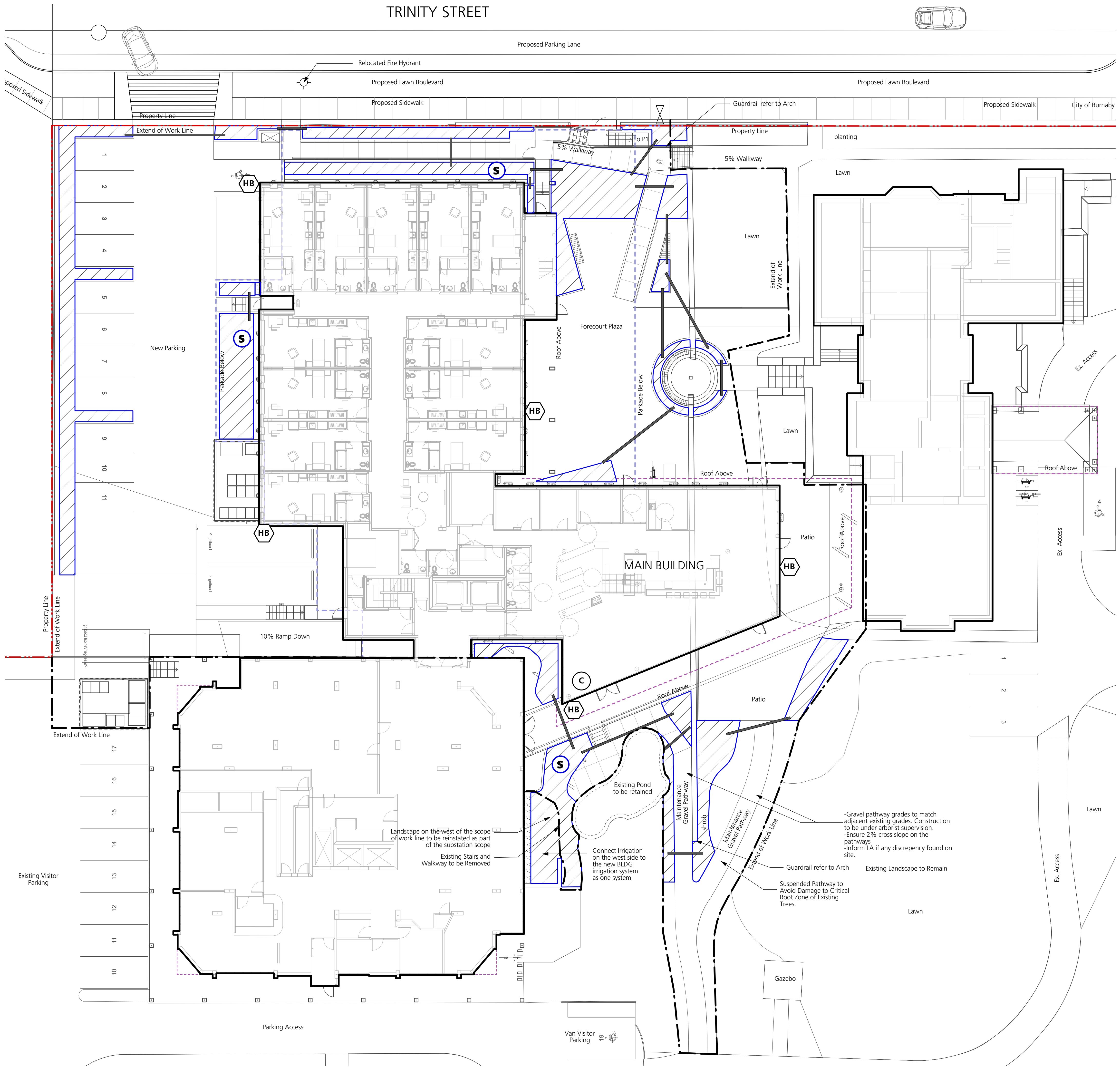
Job No.: 1:150 22-006

Sheet No.:

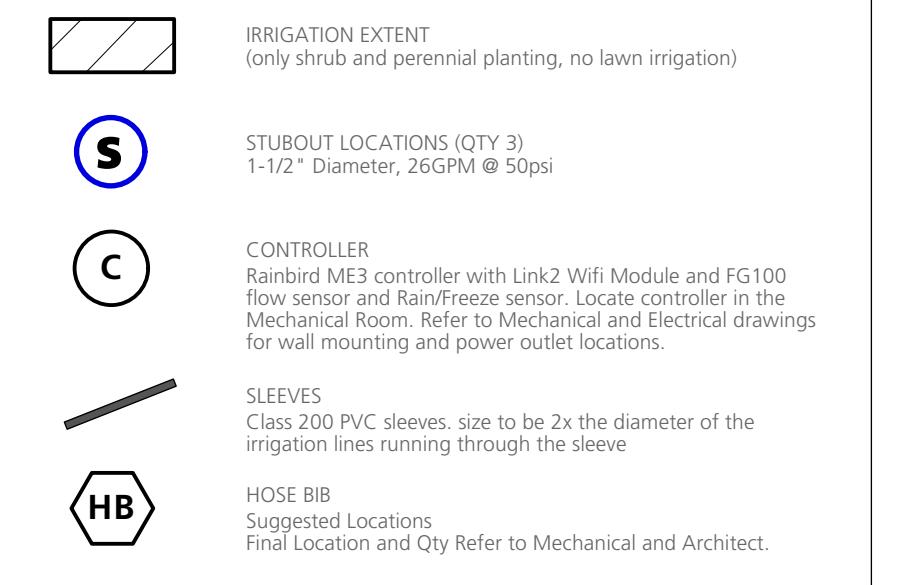
Plant List		Common Name	Scheduled Size	Remarks
Trees				
As1	1 Acer diabolicum	Siebold Maple	2.5m ht, 8.8m	Multi-Stem
As2	1 Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Serviceberry	2.5m ht, WB	
GpB	1 Ginkgo biloba 'Princeton Sentry' (male form)	Princeton Sentry Maidenhair Tree	6cm cal, WB	Single Trunk
Ls5	6 Liquidambar styraciflua 'Slender Silhouette'	Slender Silhouette Sweet Gum	6cm cal, WB	
Mn	10 Magnolia stellata	Star Magnolia	2.5m ht, WB	
St1	6 Sassafras	Street Tree	7cm cal	T.B.C. by the City of Burnaby
BtR	8 Berberis thunbergii 'Rose Glow'	Rose Glow Japanese Barberry	#3 pot	
BrS	25 Buxus sempervirens 'Suffruticosa'	Edging Boxwood	#3 pot	
EaC	4 Euonymus alatus 'Compactus'	Dwarf Winged Burning Bush	#5 pot	
Gs	4/2 Gaultheria shallon	Salal	#2 pot	
Lon	24 Lonicera nitida	Boxleaf Honeysuckle	#2 pot	*native
Lop	10 Lonicera periclymenum	Dwarf Honeysuckle	#3 pot	
Mn	35 Mahonia nervosa	Longleaf Mahonia	#2 pot	
NdG	2 Nandina domestica 'Gulf Stream'	Gulf Stream Heavenly Bamboo	#3 pot	
PoD	8 Pittosporum tenuifolium 'Ota Lukken'	Otakimaki Pittosporum	#3 pot	
RU	4 Rhododendron 'Unique'	Unique Rhododendron	#3 pot	
Sh	12 Sarcococca hookeriana var. humilis	Dwarf Sweet Box	#2 pot	
Sp	65 Skimmia japonica	Frangipani Sarcococca	#3 pot	
SjR	85 Skimmia japonica 'Rubella'	Skimmia	#3 pot	
SiW	100 Spiraea japonica 'Walbunga' 'Magic Carpet'	Magic Carpet Spirea	#3 pot	
Sm	65 Staphysagriae major	Creeping Snowberry	#2 pot	
Au	45 Arctostaphylos uva-ursi	Kinnikinnick	#2 pot	
B	4 Bulb Mix	Bulb Mix	#1 pot	
CaK	27 Carex oshimensis 'Koi' Fritschii'	Fragrant Threadleaf Grass	#1 pot	
C	16 Carex oshimensis 'EverColor Everlime'	Everlime Sedge	#1 pot	
Cv	16 Careopsis verticillata	Threadleaf Coneflower	#1 pot	
DsA	12 Dicentra spectabilis 'Alba'	Bleeding Heart	#1 pot	
Fls	20 Digitalis purpurea	Purple Foxglove	#2.5 pot	
HmA	15 Hakonechloa macra 'Aureola'	Japanese Forest Grass	#1 pot	
HnW	31 Helleborus niger 'Cecile Moon'	Winter's Ghost Hellebore	#1 pot	
ItA	17 Iris lactea 'Variegata'	August Moon Iris	#1 pot	
Is	10 Iris sibirica	Siberian Iris	#1 pot	
L	7 Lavandula angustifolia 'Munstead'	English Lavender	#1 pot	
Pt	30 Linaria reticulata 'Cambridge'	Linaria	#1 pot	Groundcover
PaH	32 Pennisetum alopecuroides 'Hameln'	Hamelin Fountain Grass	#1 pot	
Pp	51 Polystichum polyblepharum	Japanese Tassel Fern	#1 pot	
Ro	48 Rosmarinus officinalis	Rosemary	#2 pot	
SjC	41 Salvia officinalis 'Tricolor'	Tricolor Common Sage	#1 pot	
SjP	51 Thymus pseudolanuginosus	Woody Thyme	#1 pot	Groundcover
Total	1339			

L3.0

TRINITY STREET



IRRIGATION LEGEND



Issues

No.	Description	Date
1	Reissued for PPA	2024/09/13
2	Issued for Tender Draft	2024/09/16
3	Issued for Tender	2024/09/23
4	Issued for Post Tender Addendum	2025/03/07
5	Issued for IFC	2025/03/07
6	Re-issued for Building Permit	2025/06/12
7	Issued for PTA #2	2025/08/20
8	Issued for IFC	2025/09/12

General Irrigation Notes:

- The irrigation contractor to provide a complete and functioning high efficiency design-build irrigation system.
- The irrigation contractor shall confirm on site the locations of the stub-outs provided by the mechanical contractor.
- Provide space to wall mount the irrigation controller in the mechanical room and provide a 120V outlet.
- The electrical contractor shall supply a 120V outlet in the mechanical room and run a 1" conduit with pull string from the water entry room to all stub-out locations.
- The irrigation contractor shall install the irrigation controller in the Mechanical room and run all low voltage wires to the solenoid valves.
- Provide backflow preventer for irrigation system. Location to be coordinated with Landscape Architect and General contractor.
- Flow through all piping not to exceed 5ft/sec.
- Irrigation contractor to ensure all sleeves, conduits, and location of the rain/freeze sensor are coordinated with general contractor.
- The irrigation drawings shall be read in conjunction with the landscape architect's drawings.
- The irrigation system shall be installed as per the landscape architect's specifications and applicable standards.
- The mechanical contractor shall install the backflow preventer, pressure reducing valve, and blow-out tee in the mechanical room and run supply lines to all stub-out locations.
- The irrigation contractor to submit shop drawings and detail irrigation design for approval by Landscape Architect prior to installation.
- The irrigation contractor to provide as-built drawings following construction.

Irrigation Coordination:

- Mechanical:**
- Provide backflow preventer, pressure reducing valve and blowout tee located in Mechanical room.
 - Provide piping from backflow preventer to all stubout locations indicated on this drawing.
 - Provide copper to PVC fitting at each stubout.
- Electrical:**
- Provide 120V power source for irrigation controller in Mechanical room.
 - Provide conduit (for low voltage wiring by Irrigation Contractor) from Mechanical room to all stubout locations.

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Client:

Action Line
Housing Society

Project Title:

Seton Villa

3755 McGill Street, Burnaby, BC

Drawing Title:

Landscape Irrigation
Coordination Plan

Project North:

PN Drawn By:
SJ
Checked By:
JP

Scale:

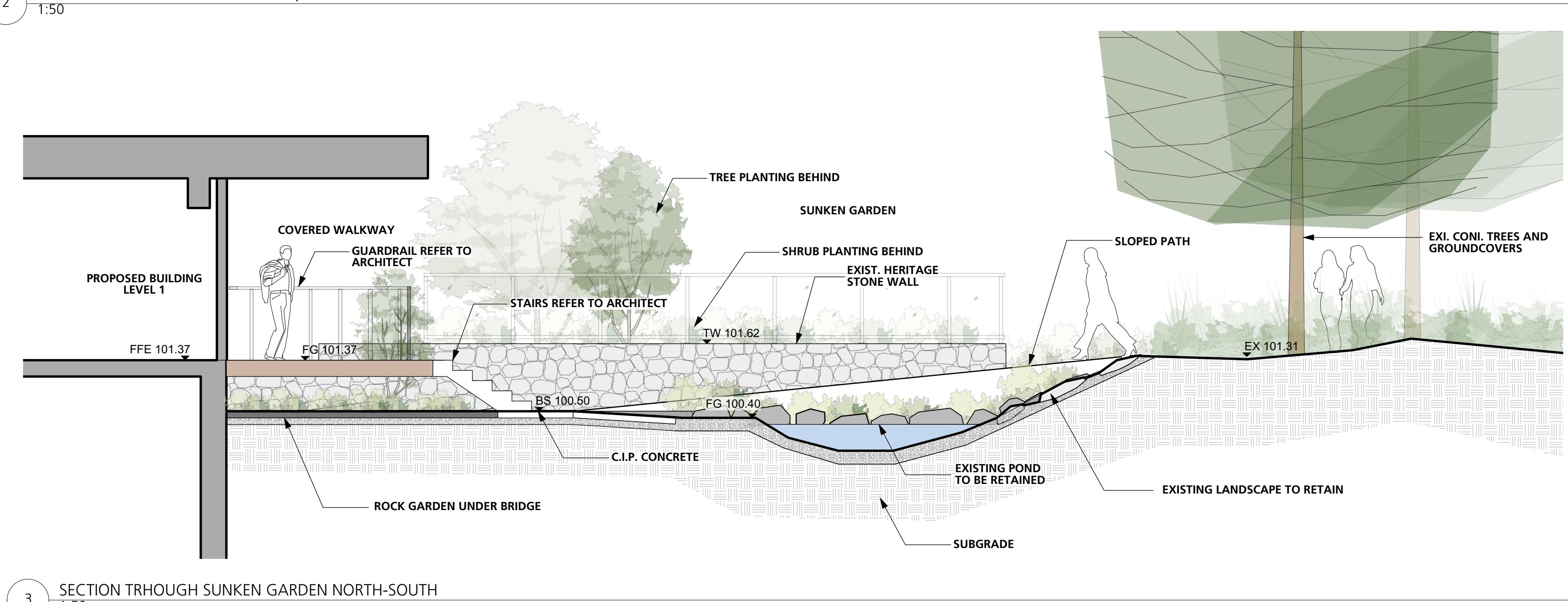
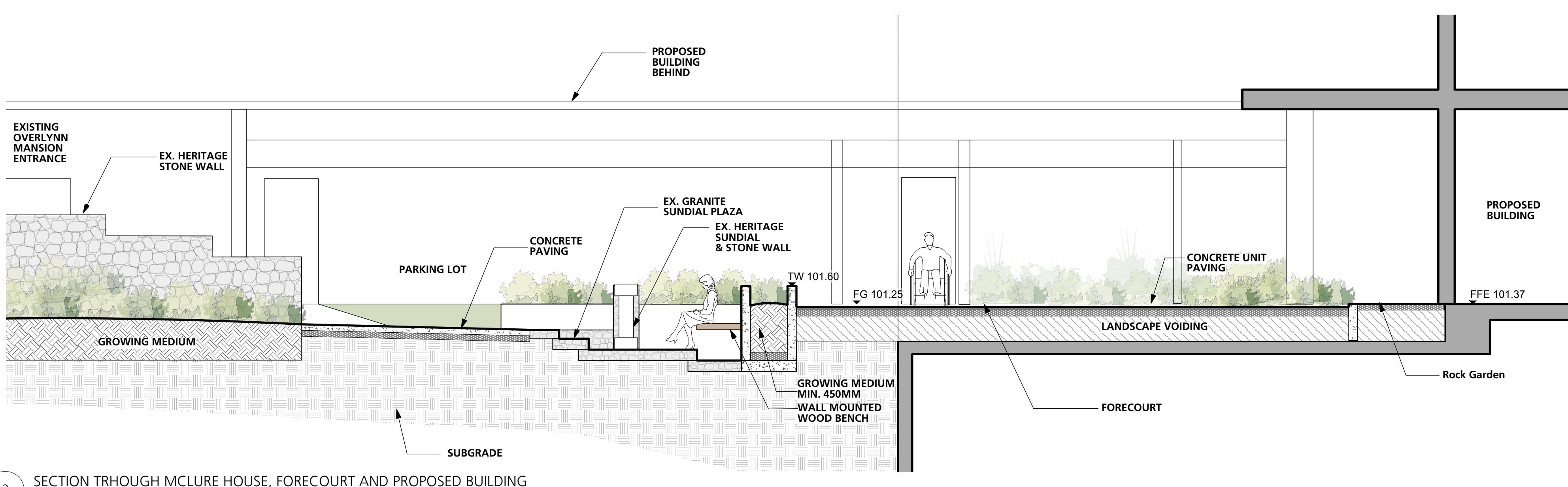
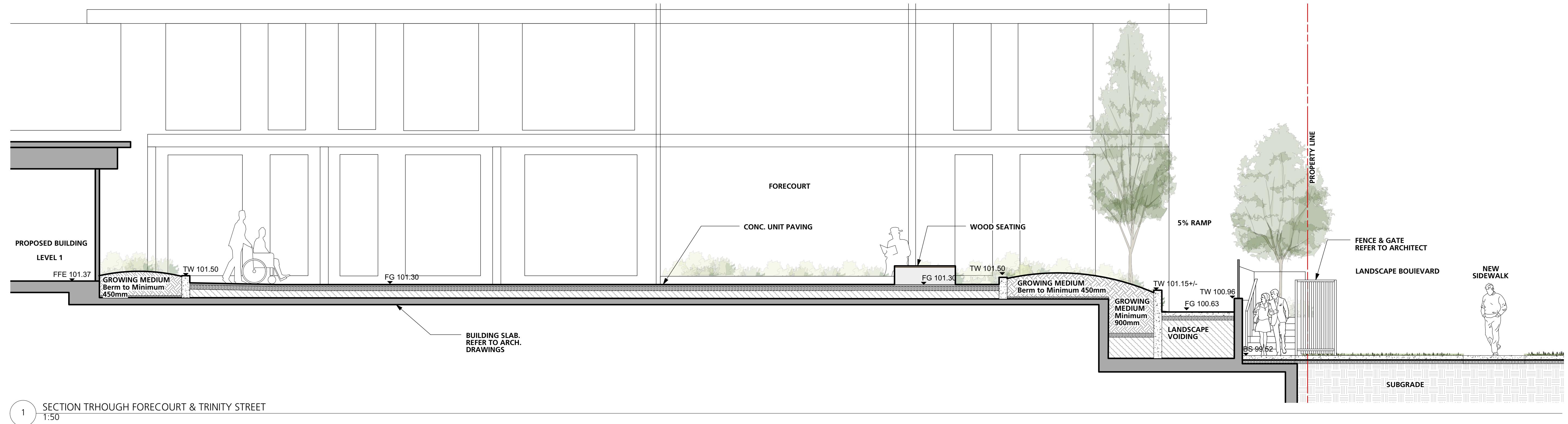
Job No.:
22-006

Sheet No.:

L3.1



No.	Description	Date
5	Issued for Building Permit	2023/11/10
6	Reissued for PPA	2024/09/13
7	Issued for Tender Draft	2024/09/16
8	Issued for Tender	2024/09/23
9	Issued for Tender Addendum	2024/11/12
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13	Issued for PTA #2	2025/08/20
14	Issued for IFC	2025/09/12



Project Title:
Seton Villa

3755 McGill Street, Burnaby, BC

Drawing Title:
Landscape Sections

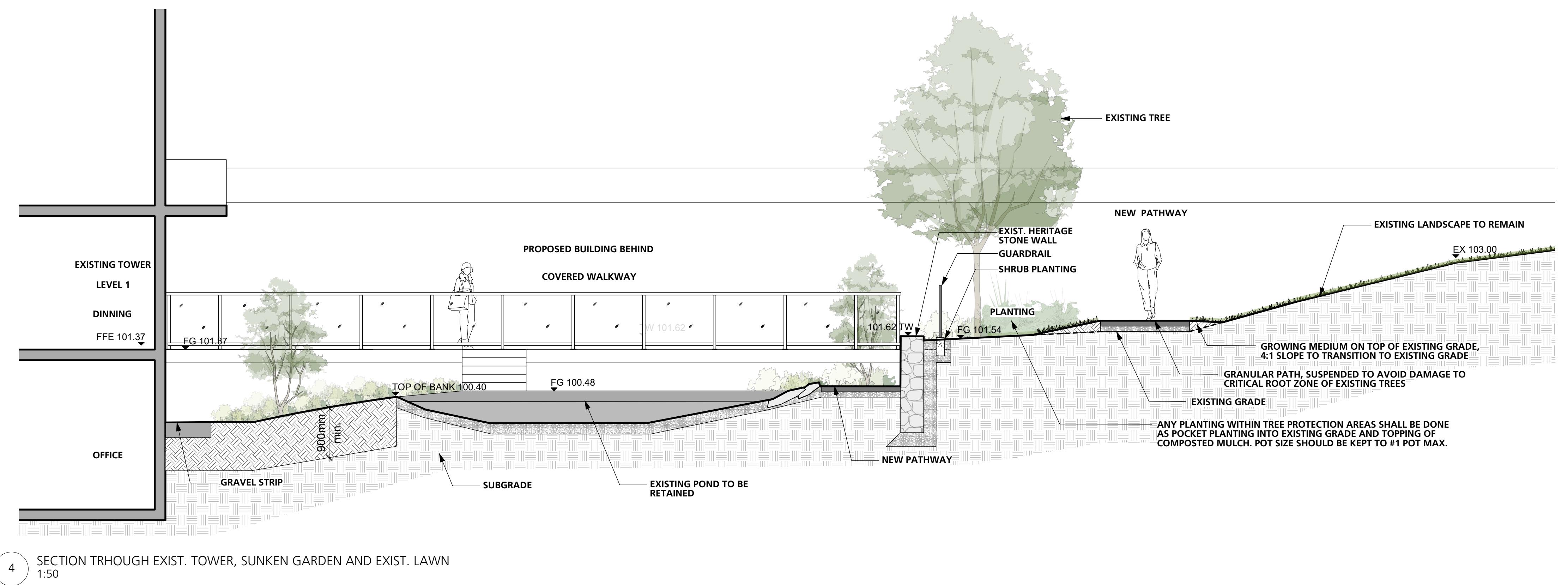
Project North: Drawn By:
SJ
Checked By:
JP

Scale: Job No.:
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Sheet No.:

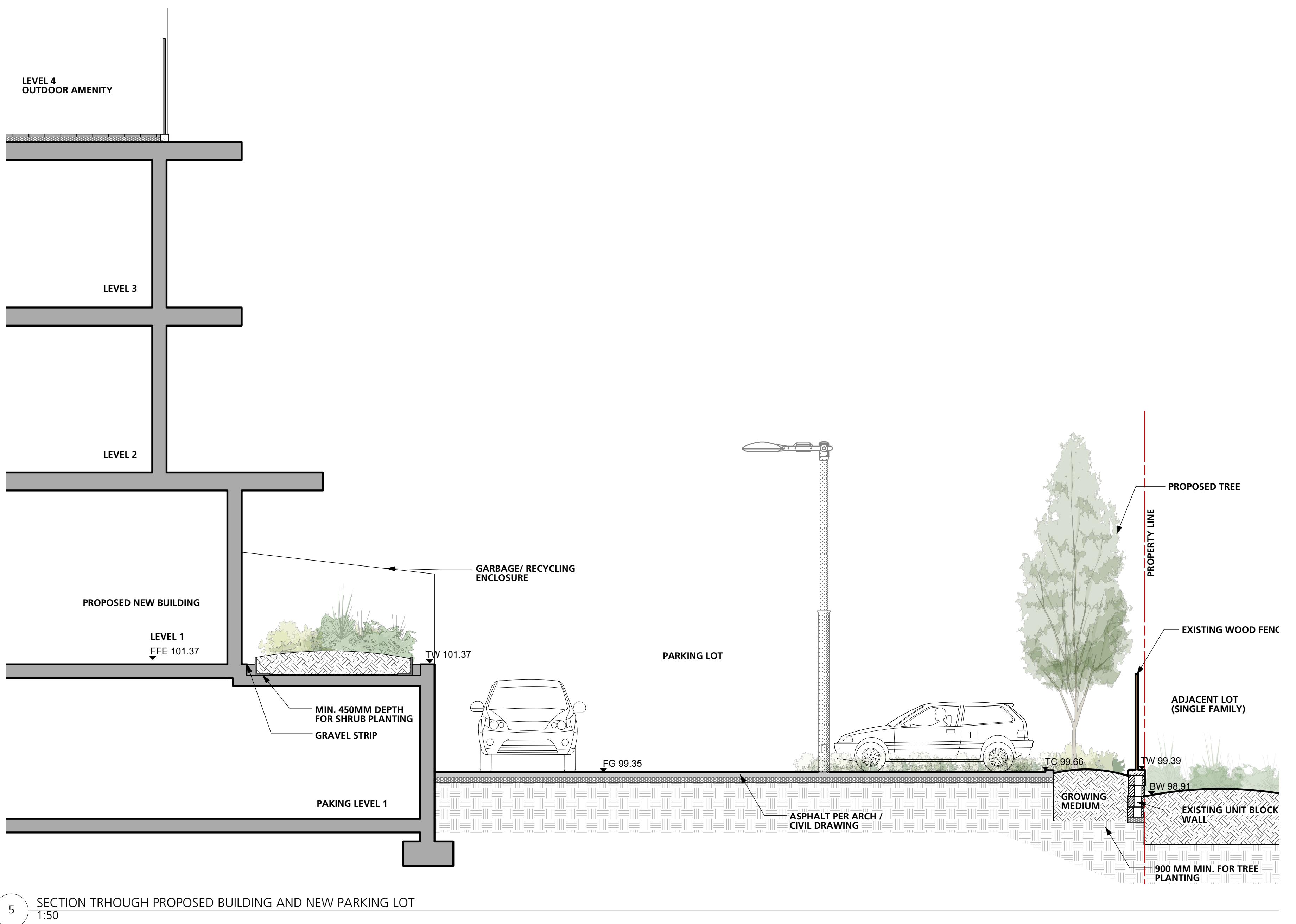
L4.0

Client: **Action Line Housing Society**

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No.	Description	Date
3	Issued for 3rd Reading	2023/01/03
4	Issued for PPA	2023/01/26
5	Reissued for PPA	2024/09/13
6	Issued for Tender Draft	2024/09/16
7	Issued for Tender	2024/09/23
8	Issued for Post Tender Addendum	2025/03/07
9	Issued for Construction	2025/06/12
10	Re-issued for Building Permit	2025/08/20
11	Issued for PTA #2	2025/09/12
12	Issued for IFC	2025/09/12



L4.1

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Client:
Action Line Housing Society

Project Title:
Seton Villa

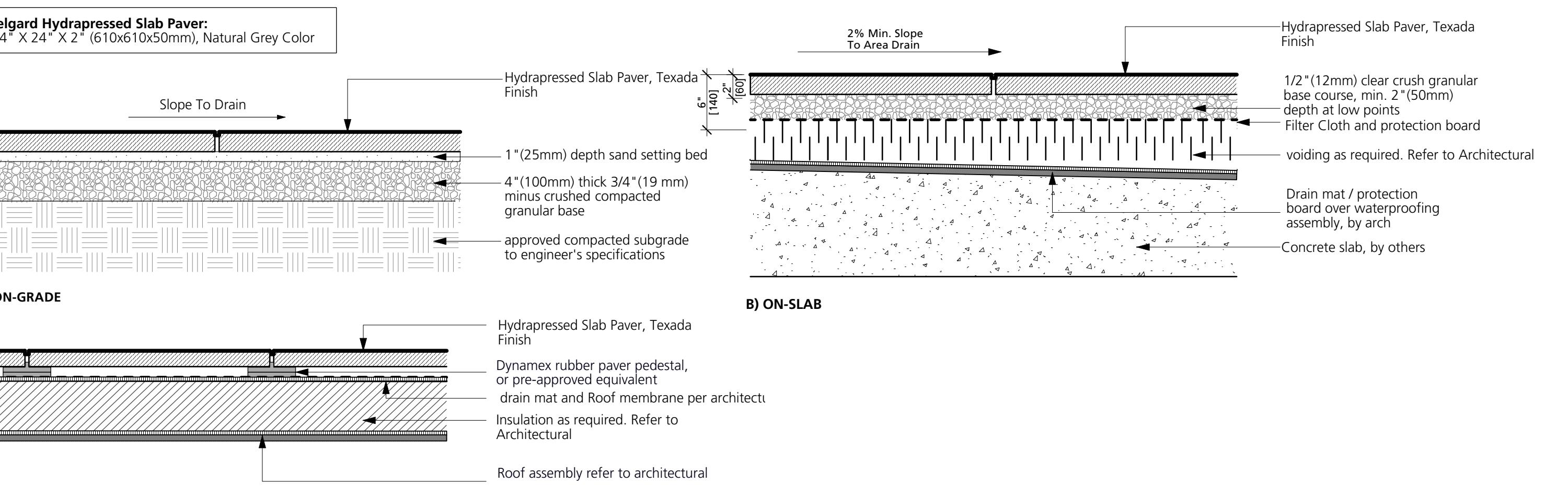
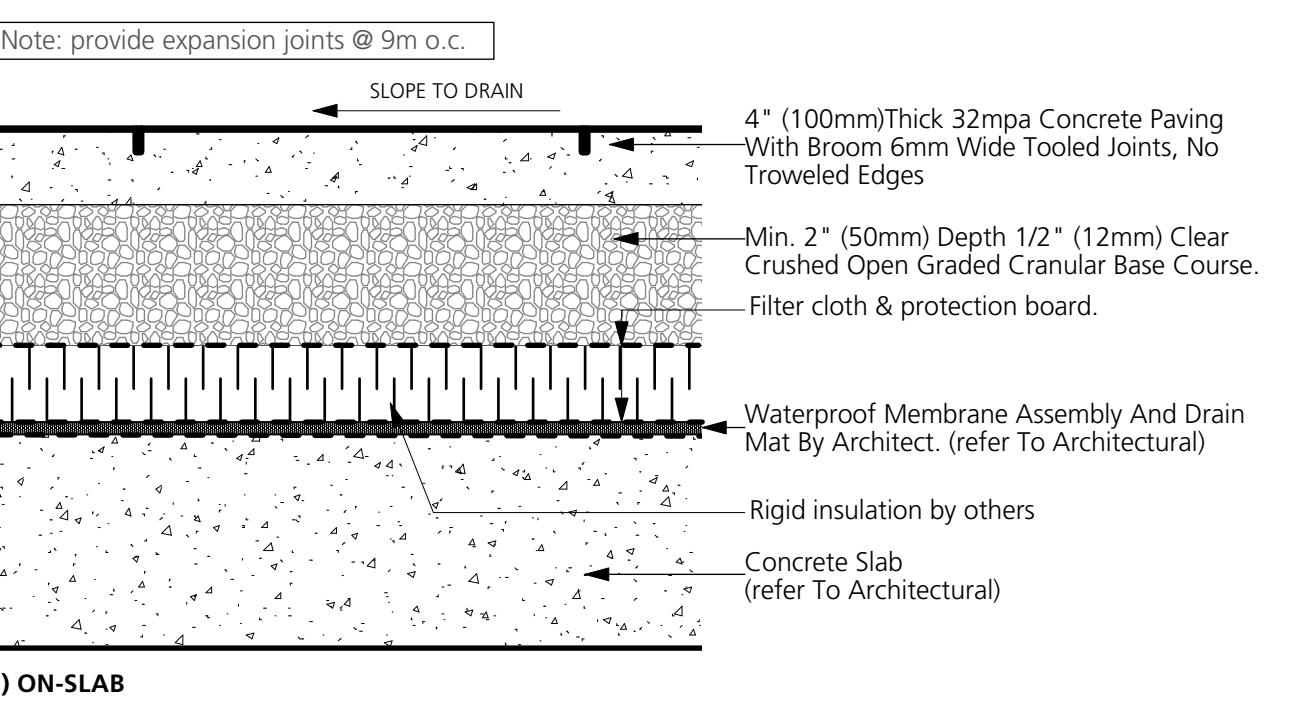
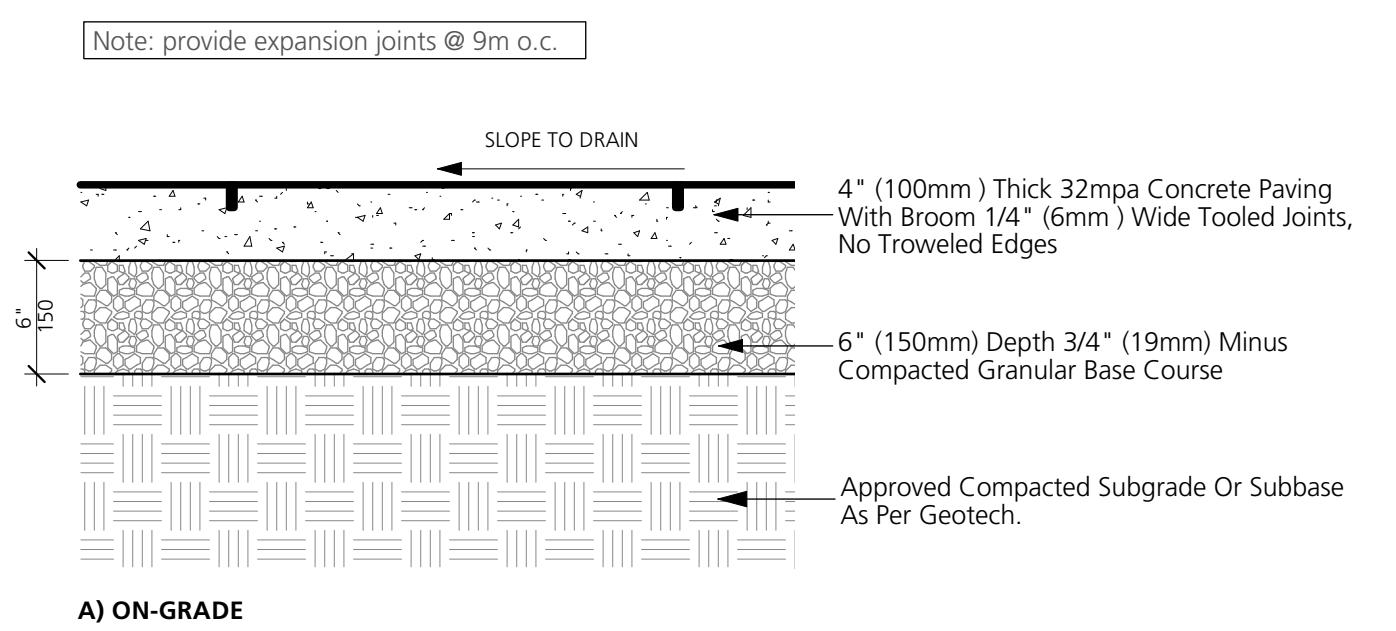
Drawing Title:
3755 McGill Street, Burnaby, BC

Project North: Drawn By:
SJ

Checked By:
JP

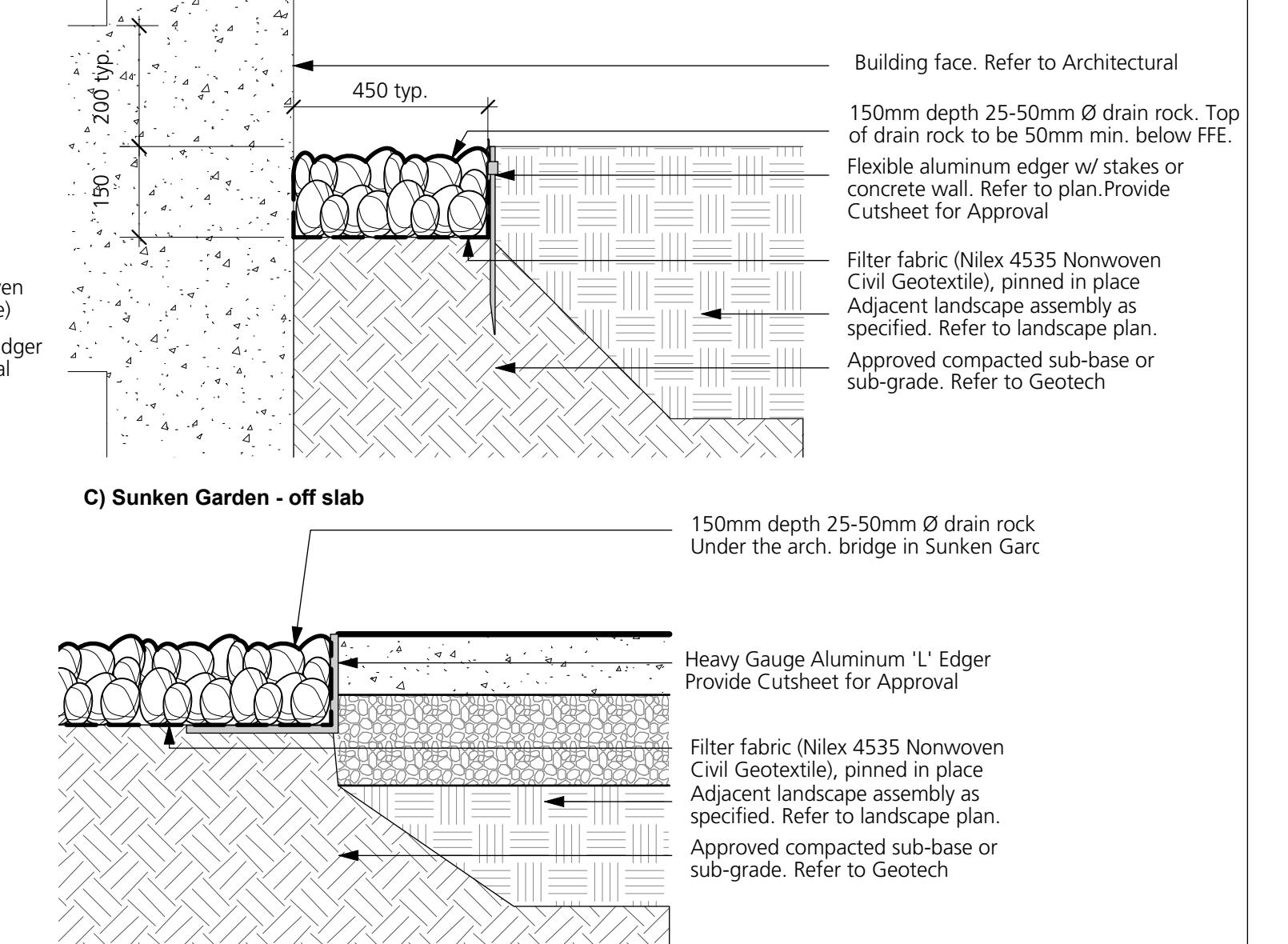
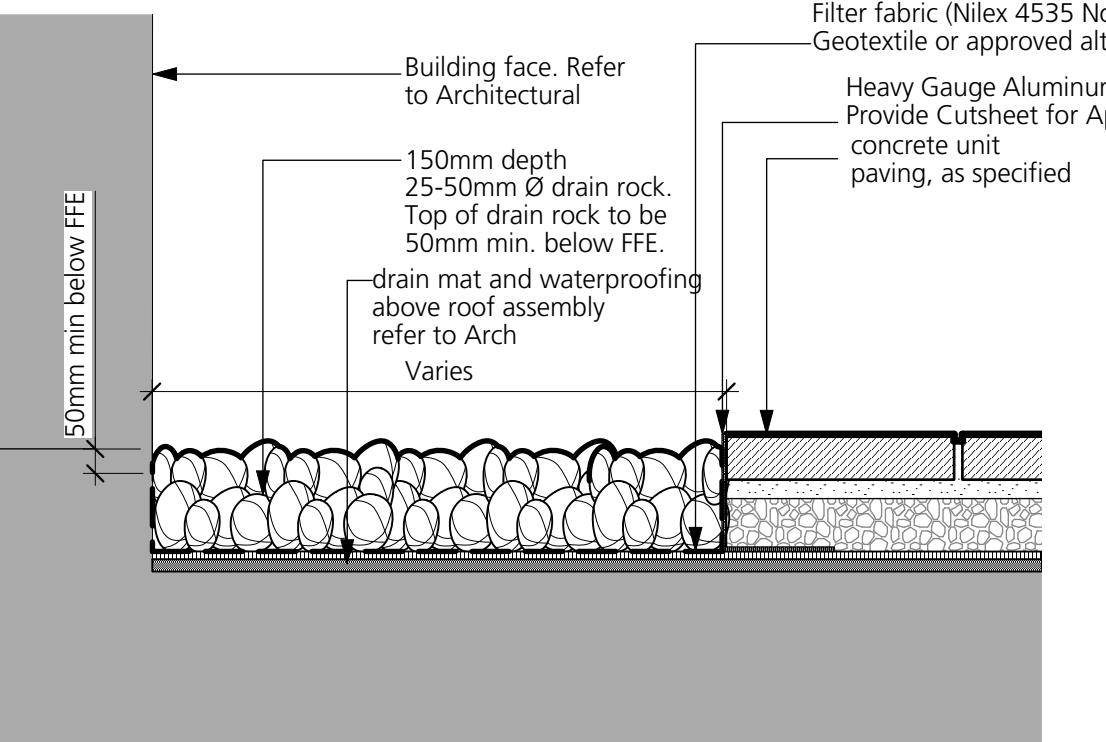
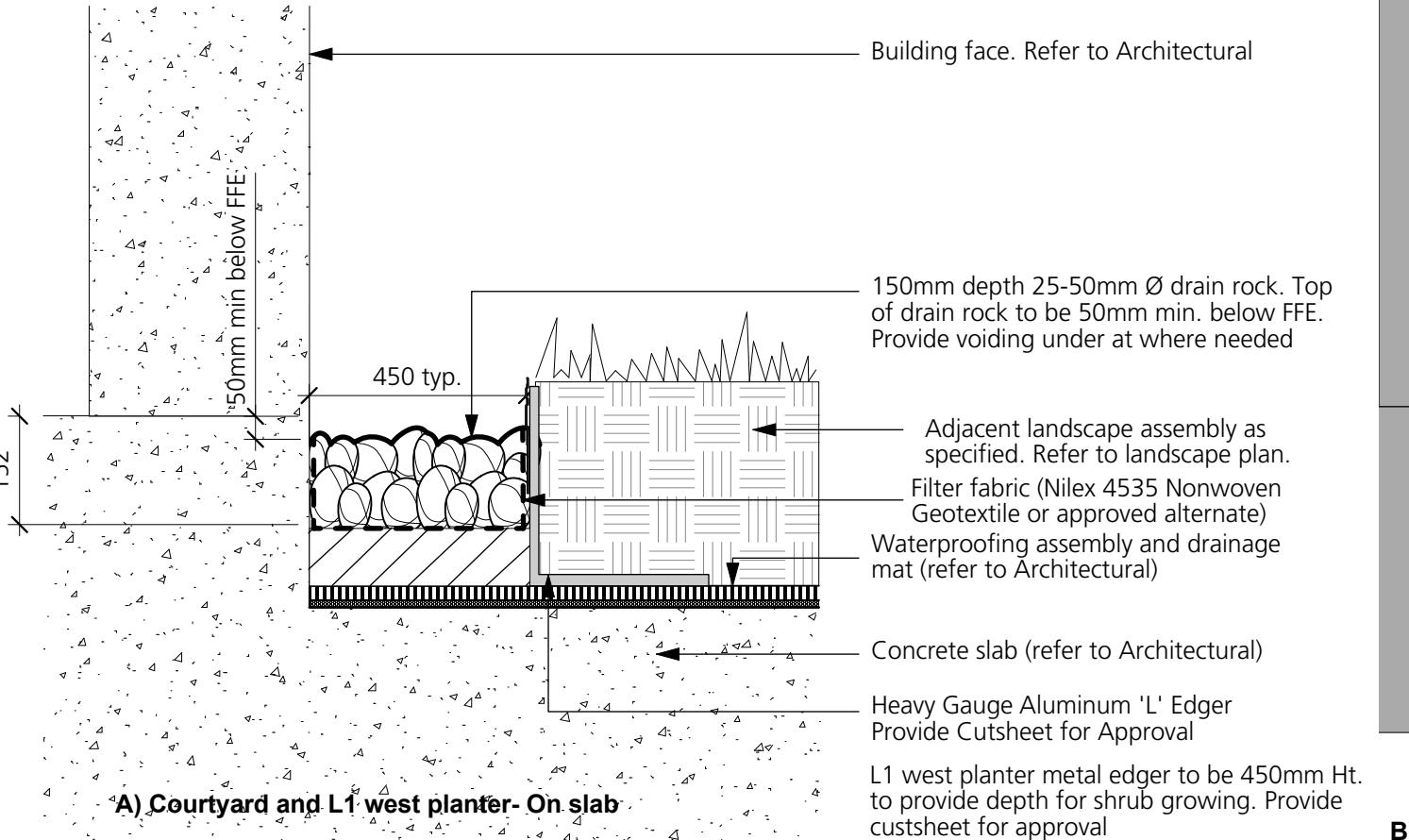
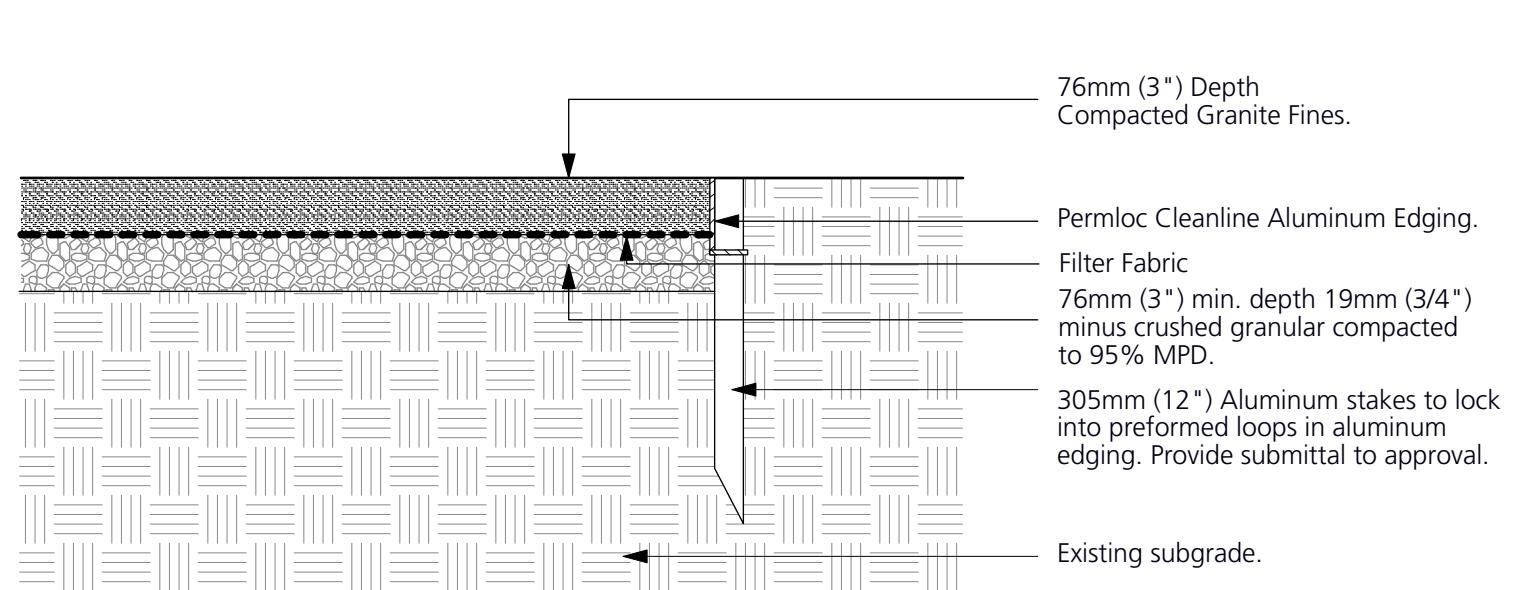
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1:50 22-006

Sheet No.:



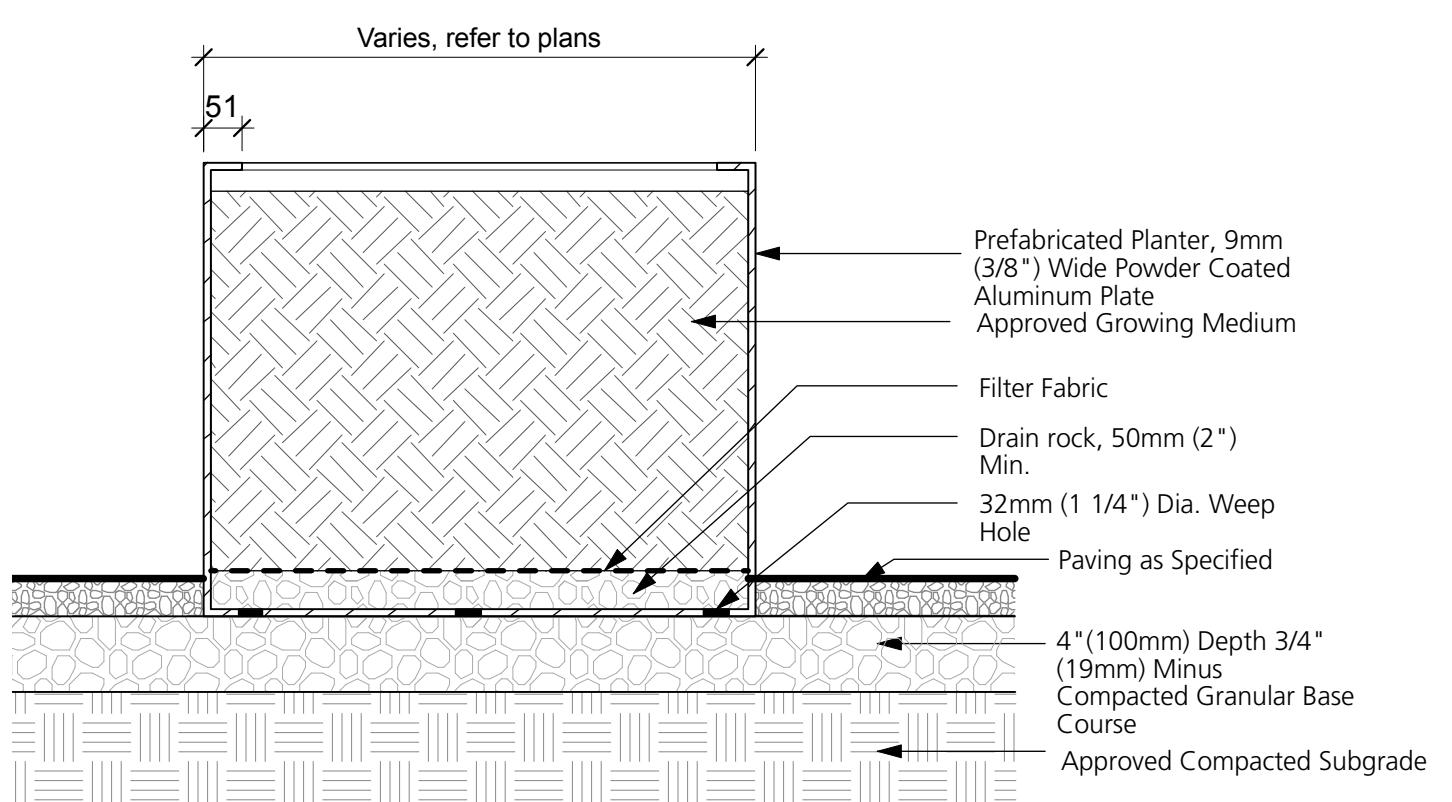
Issues		
No.	Description	Date
1	Issued for PPA	2023/10/26
2	Issued for Building Permit	2023/11/10
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9	Issued for IFC	2025/09/12

1 CIP CONCRETE PAVING
L5.0 1:10



2 GRANULAR PAVING
L5.0 1:10

Model: Join Modular Planter
Supplier: Green Theory
Contact: <https://www.greentheory.com/>
Colour: Pewter
Note: Provide cutsheets and shop drawings for all components for approval



Provide Heavy Gauge L shape Aluminum edger at the edge. Provide submittal for approval

NOTE:
AVOID USING BOULDERS WITH SHARP EDGES.

1200-1800MM L. BASALT COLUMN REFER TO PLAN. EMBEDDED 1/3 OF THE BOULDER, EXPOSED HEIGHT TO BE 250-500MM. REFER TO PLAN FOR SIZE AND LOCATION.

NOTE:
AVOID USING BOULDERS WITH SHARP EDGES.

BOULDERS AND ARRANGEMENT TO BE PRE-APPROVED BY LANDSCAPE ARCHITECT.

CLEAR WASHED FEATURE STONE DEPTH 100MM. REFER TO PLANS AND SAMPLE PHOTOS BELOW

FILTER FABRIC

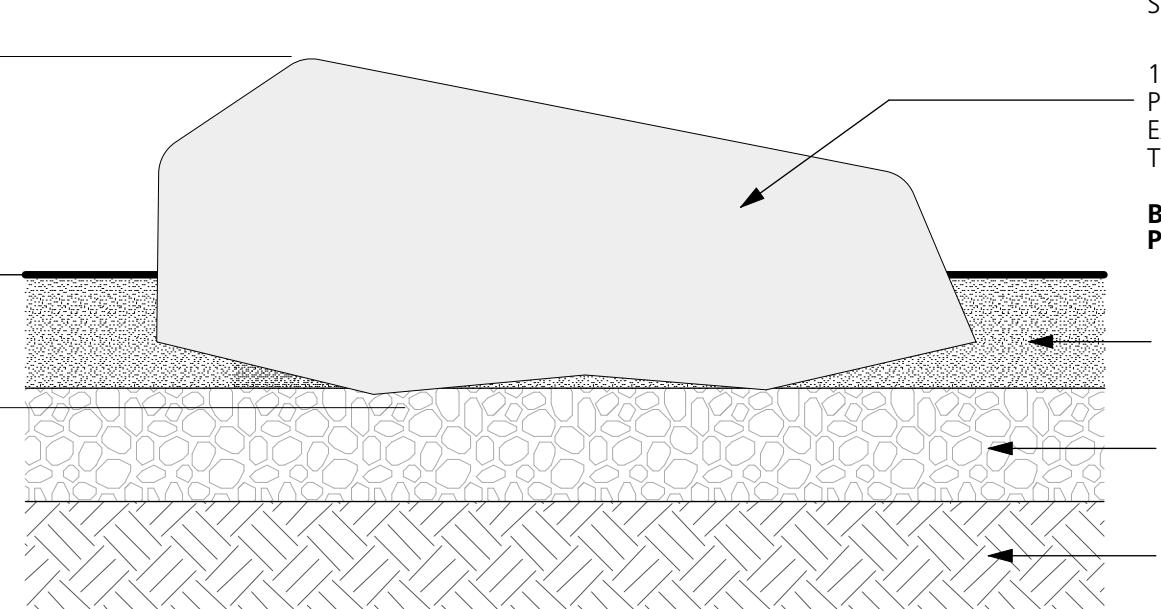
100MM MIN. DEPTH CRUSHED AGGREGATE LEVELING BASE BELOW BOULDER

HIGH COMPRESSION STRENGTH VOIDING AT WHERE NEEDED. PROVIDE SUBMITTAL FOR APPROVAL

APPROVED DRAIN MAT

WATERPROOF MEMBRANE ASSEMBLY BY OTHERS

CONCRETE SLAB (BY OTHERS)



5 REATURE ROCK AND ROCK GARDEN
L5.0 1:10

BASALT COLUMN FEATURE STONE
LARGE BCL SIZE FROM NW LANDSCAPE SUPPLY OR APPROVED ALTERNATE QUANTITY: 10.
4'-6" L. THROUGH SUBMITTAL REVIEW
PROVIDE SUBMITTALS WITH BOULDER PHOTOS FOR REVIEW.
DETAILED LOCATION TBD ON SITE



FEATURE CRUSHED STONE MATERIAL TYPE A
- SAN JUAN TUMBLED FLAGSTONE, DARK GREY FROM NW LANDSCAPE SUPPLY OR APPROVED ALTERNATE AREA REFER TO PLAN.
2' - 6" SIZE. SIZE TBD THROUGH SHOP DRAWINGS REVIEW
PROVIDE CUTSHEET WITH PHOTO FOR REVIEW



FEATURE CRUSHED STONE MATERIAL TYPE B
19-25MM CLEAR CRUSHED GRAVEL, LIGHT GREY COLOR.
BASALTIC FROM NW LANDSCAPE SUPPLY OR APPROVED ALTERNATE AREA REFER TO PLAN.
PROVIDE CUTSHEET WITH PHOTO FOR REVIEW

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Client:

Action Line
Housing Society

Project Title:

Seton Villa

3755 McGill Street, Burnaby, BC

Drawing Title:

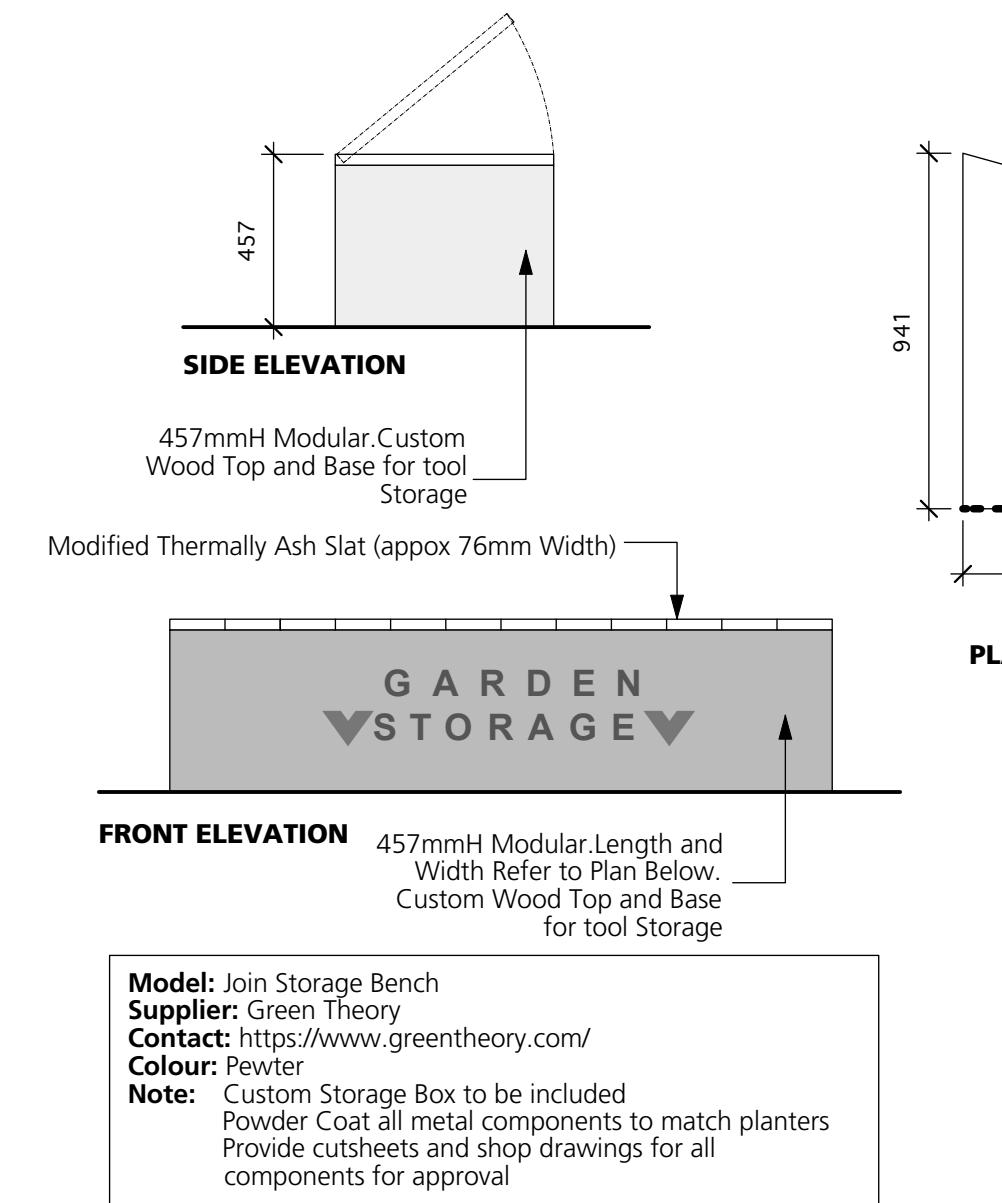
Landscape Details

Project North: PN Drawn By: SJ

Checked By: JP

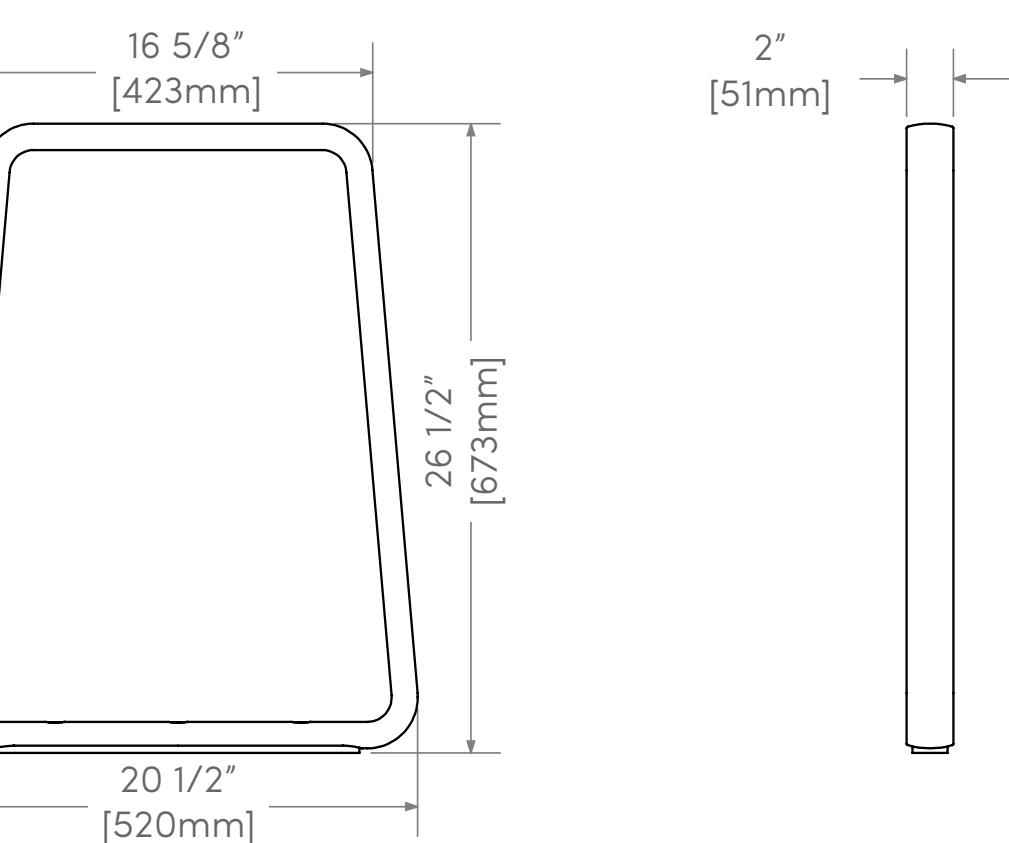
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Sheet No.:

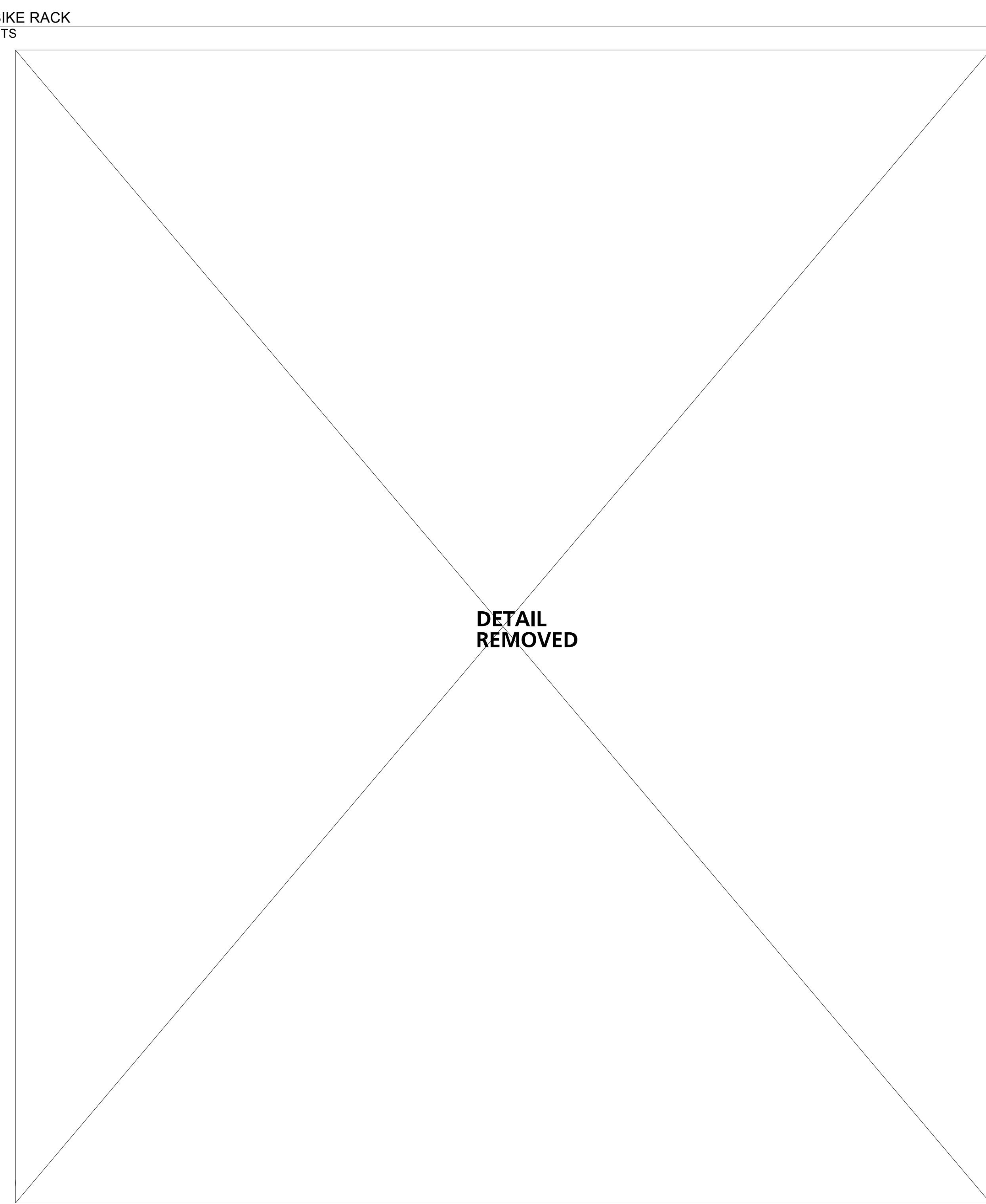
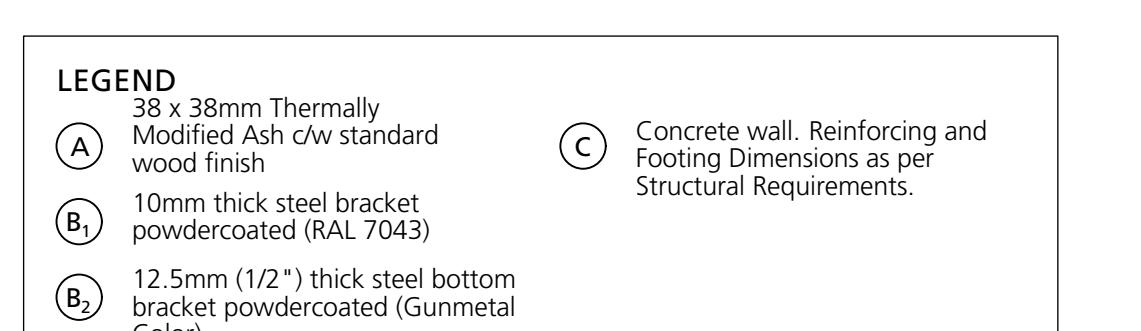
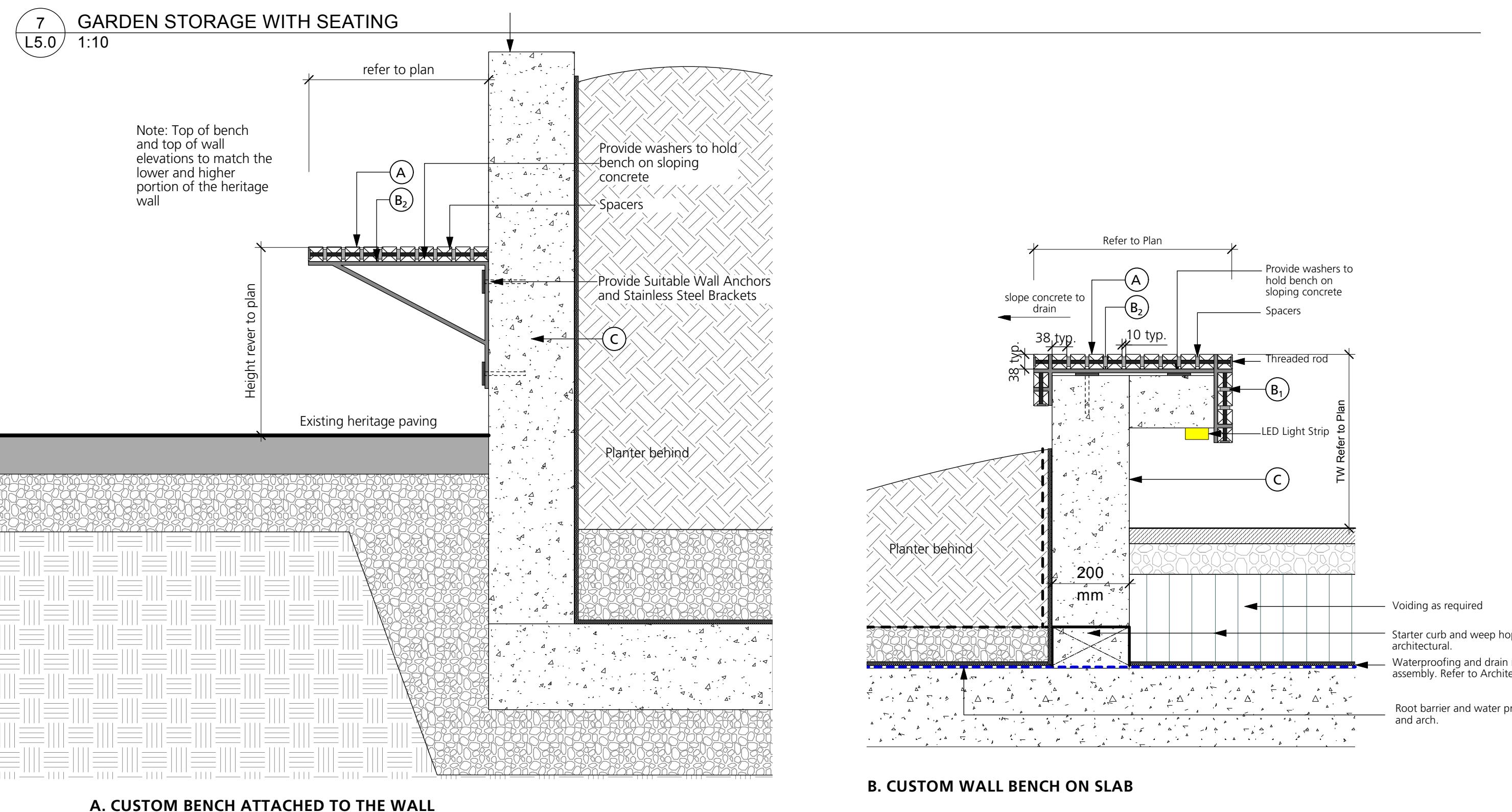


Model: Iconic Rack
Manufacturer: Maglin
Material: Powdercoated Aluminum
Colour: Pewter
Cost: <https://maglin.com/>
Installation: Surface Mount with tamper-proof bolt as per manufacturer's specifications
Quantity: 1

Note: Provide submittal for approval.



Issues		
No.	Description	Date
1	Issued for PPA	2023/10/26
2	Issued for Building Permit	2023/11/10
3	Reissued for PPA	2024/09/13
4	Issued for Tender Draft	2024/09/16
5	Issued for Tender	2024/09/23
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8	Issued for PTA #2	2025/08/20
9	Issued for IFC	2025/09/12

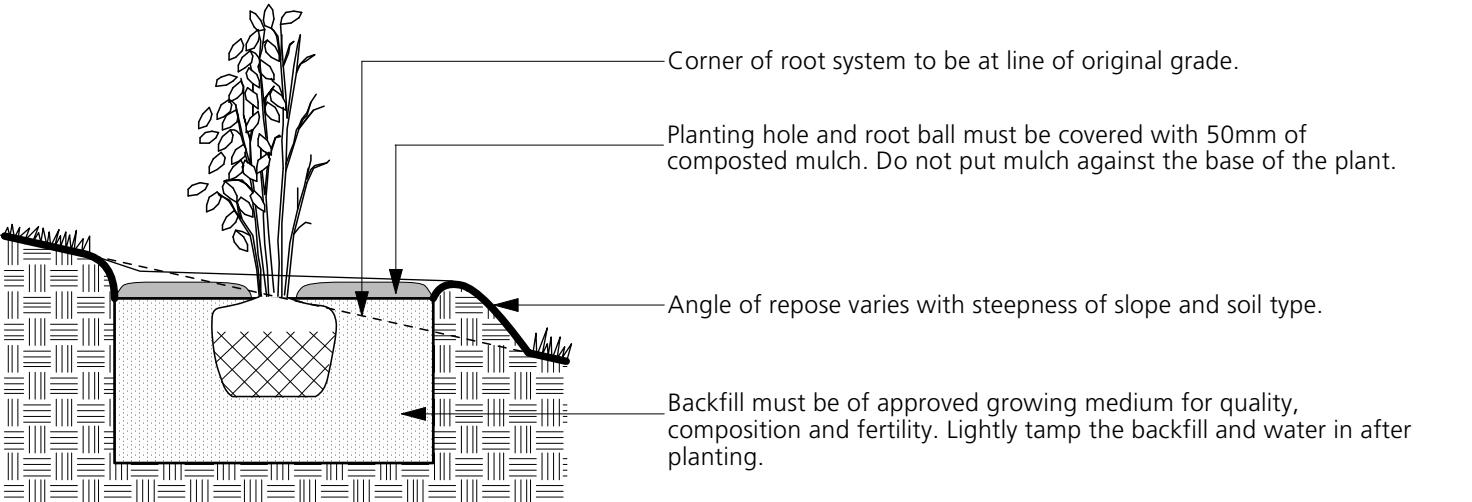
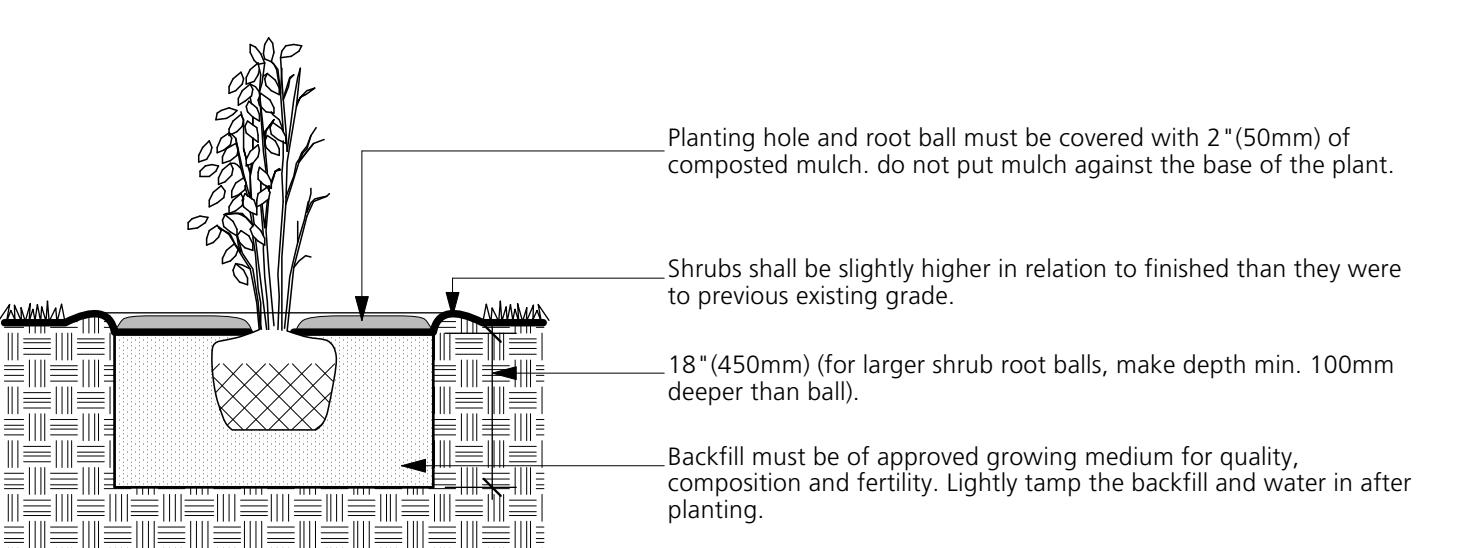


Issues		
No.	Description	Date
1	Issued for PPA	2023/10/26
2	Issued for Building Permit	2023/11/10
3	Reissued for PPA	2024/09/13
4	Issued for Tender Draft	2024/09/16
5	Issued for Tender	2024/09/23
6	Issued for Post Tender Addendum	2025/03/07
7	Re-issued for Building Permit	2025/06/12
8	Issued for PTA #2	2025/08/20
9	Issued for IFC	2025/09/12

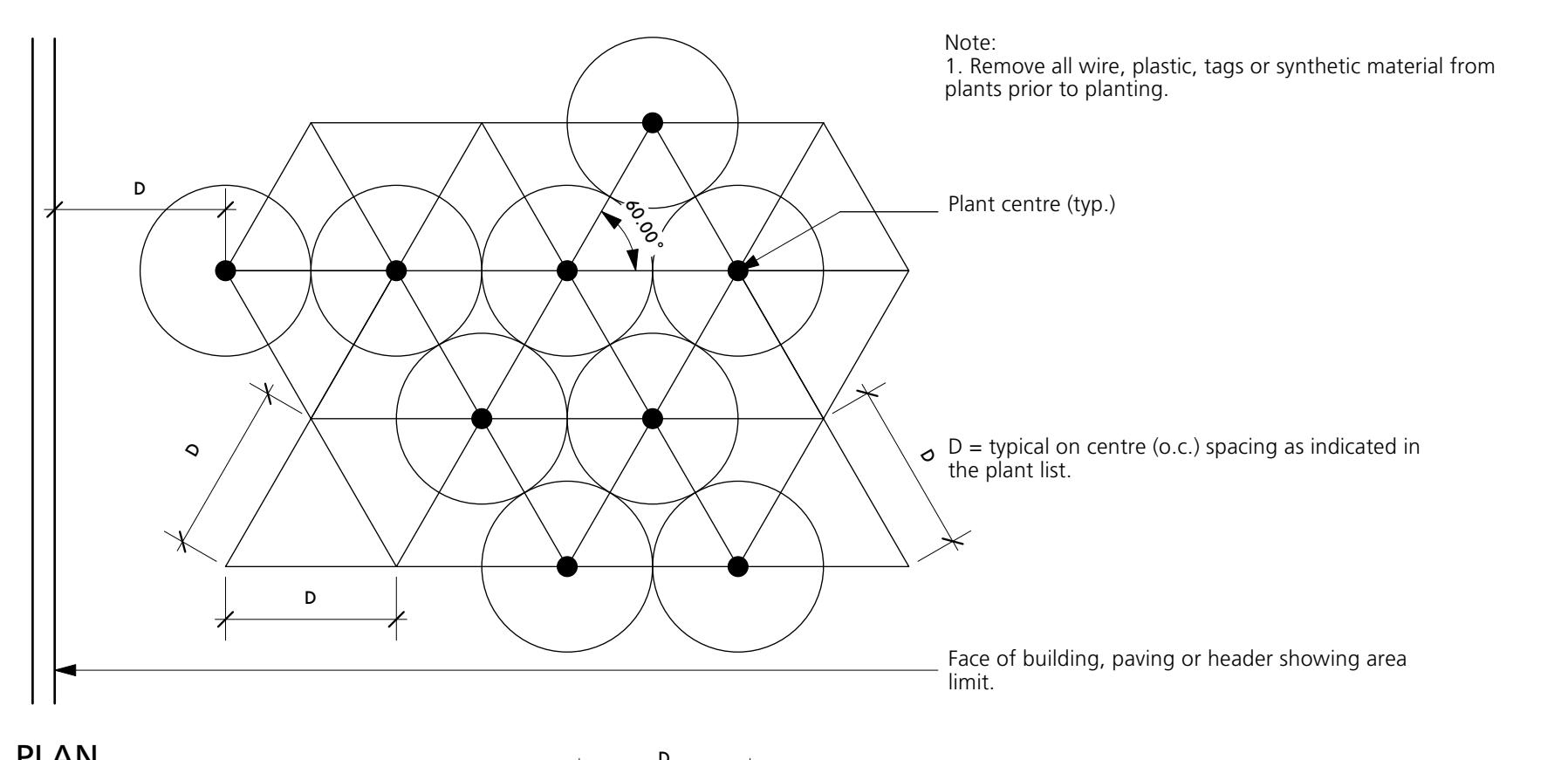
DETAIL
REMOVED

Minimum medium growing depth:
-Sedded Lawn: 12" (300mm)
-Shrubs and perennials: 18" (450mm)
-Trees: 3' (900mm)

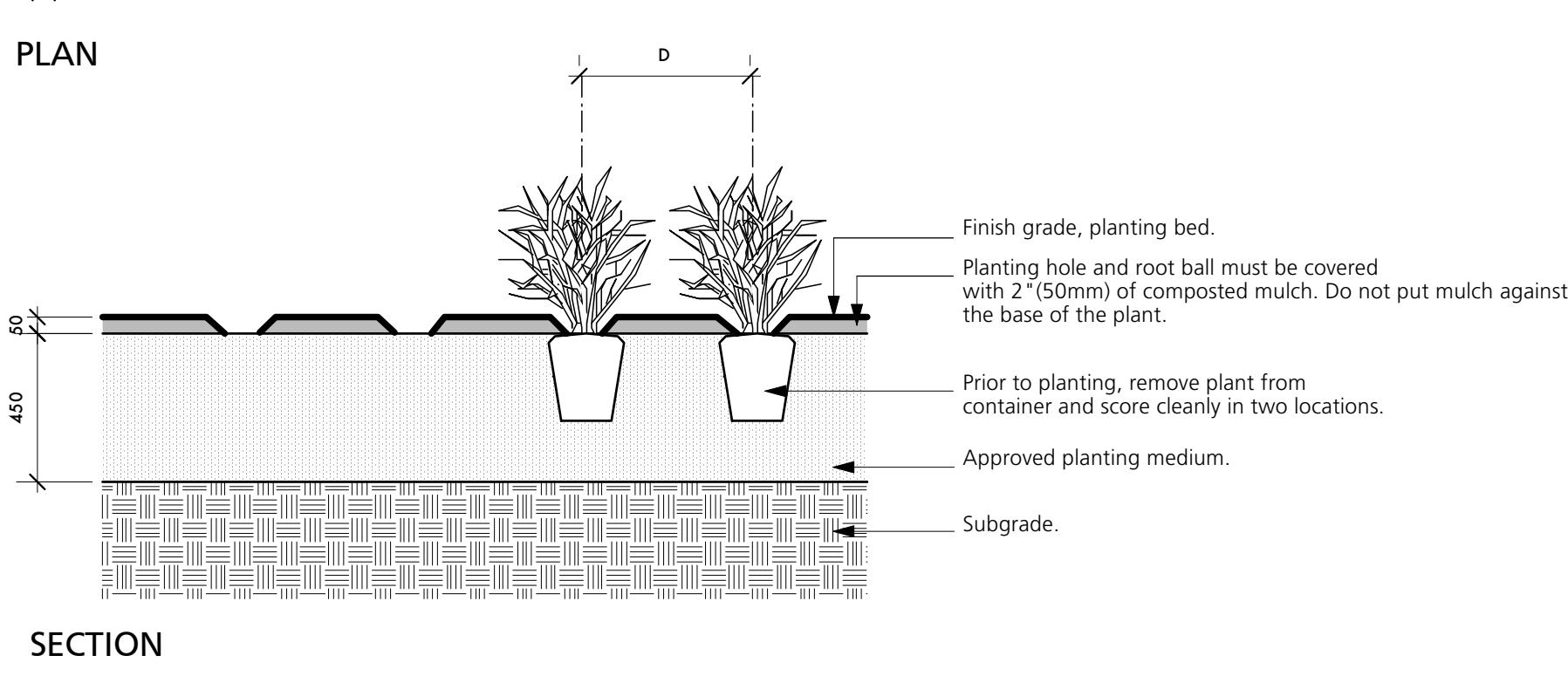
Note:
1. Min. root spread to be in accordance with "Canadian standards for nursery stock."
2. For container-grown shrubs, use fingers or small hand tools to pull the roots out of the outer layer of potting soil; then cut or pull away any roots that circle the perimeter of the container. Prune all damaged, diseased, or weak limbs and roots.
3. Cleanly prune all damaged root ends.
4. Fold burlap from top of root ball down into ground set top of ball flush with finish grade.
5. Do not allow roots to dry out during installation process.
6. Soak roots in water overnight before planting.



12 SHRUB PLANTING
L5.2 1:20

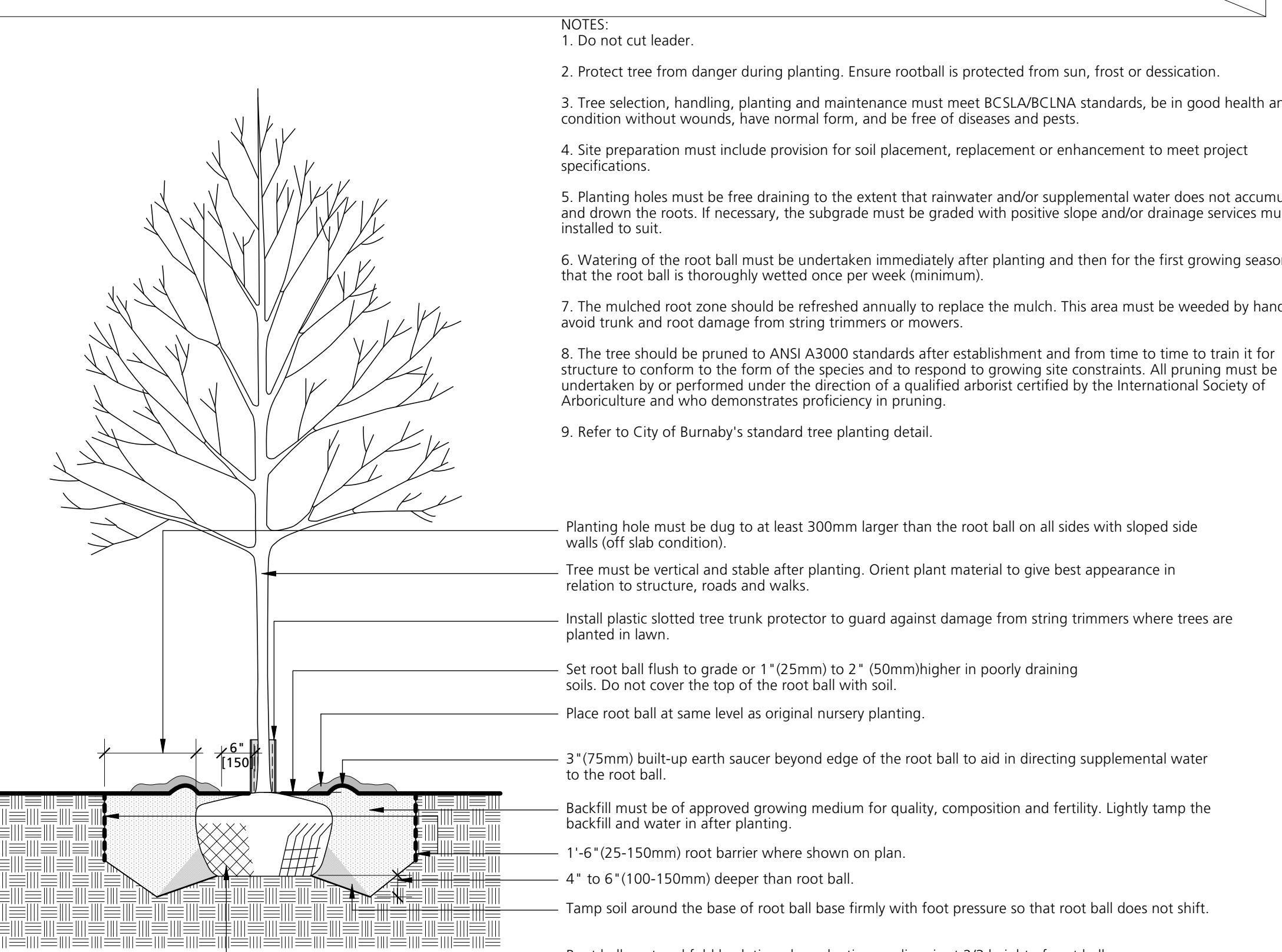


PLAN



SECTION

13 TREE PLANTING
L5.2 1:20



NOTES:
1. Do not cut leader.
2. Protect tree from danger during planting. Ensure rootball is protected from sun, frost or dessication.
3. Tree selection, handling, planting and maintenance must meet BCSLA/BCLNA standards, be in good health and condition without wounds, have normal form, and be free of diseases and pests.
4. Site preparation must include provision for soil placement, replacement or enhancement to meet project specifications.
5. Planting holes must be free draining to the extent that rainwater and/or supplemental water does not accumulate and drown the roots. If necessary, the subgrade must be graded with positive slope and/or drainage services must be installed to suit.
6. Watering of the root ball must be undertaken immediately after planting and then for the first growing season so that the root ball is thoroughly wetted once per week (minimum).
7. The mulched root zone should be refreshed annually to replace the mulch. This area must be weeded by hand to avoid trunk and root damage from string trimmers or mowers.
8. The tree should be pruned to ANSI A3000 standards after establishment and from time to time to train it for structure to conform to the form of the species and to respond to growing site constraints. All pruning must be undertaken by or performed under the direction of a qualified arborist certified by the International Society of Arboriculture and who demonstrates proficiency in pruning.
9. Refer to City of Burnaby's standard tree planting detail.

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Client:
Action Line Housing Society

Seton Villa

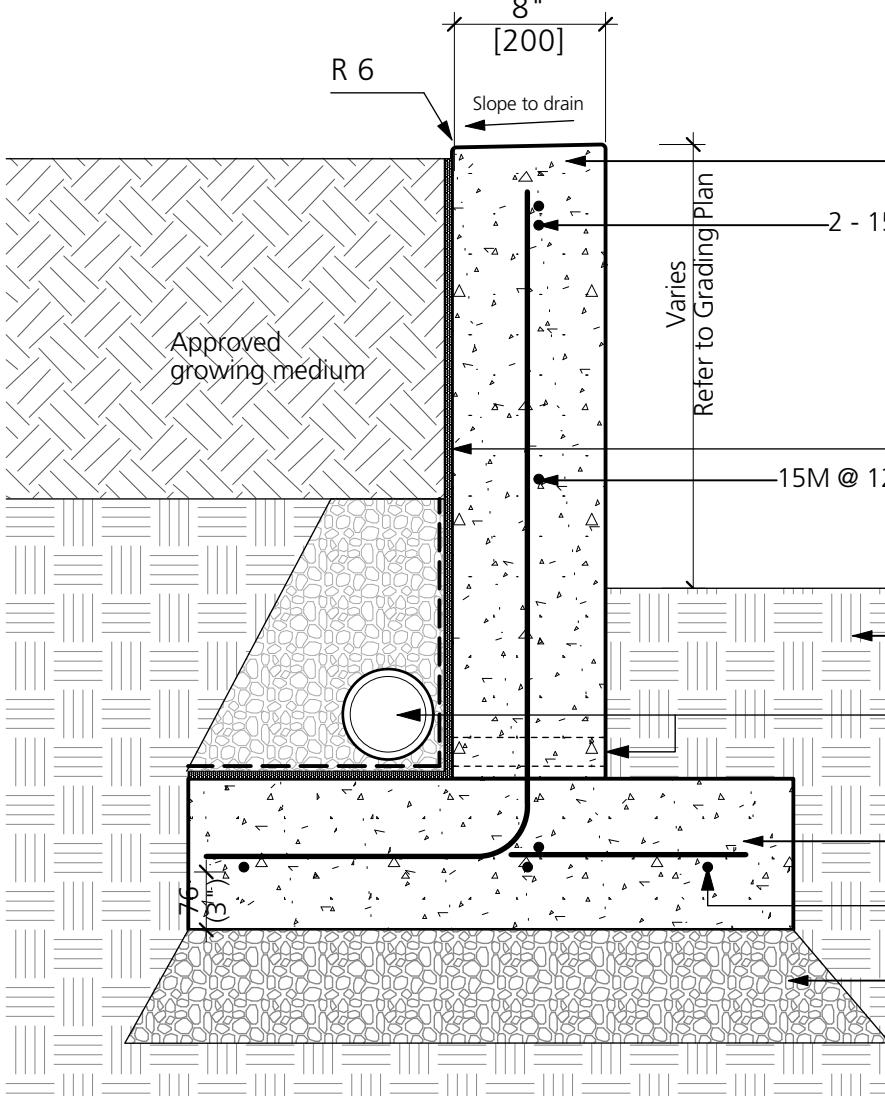
3755 McGill Street, Burnaby, BC

Drawing Title:
Landscape Details

Project North: PN Drawn By: SJ
Checked By: JP
Scale: As Shown Job No.: 22-006
Sheet No.: L5.2

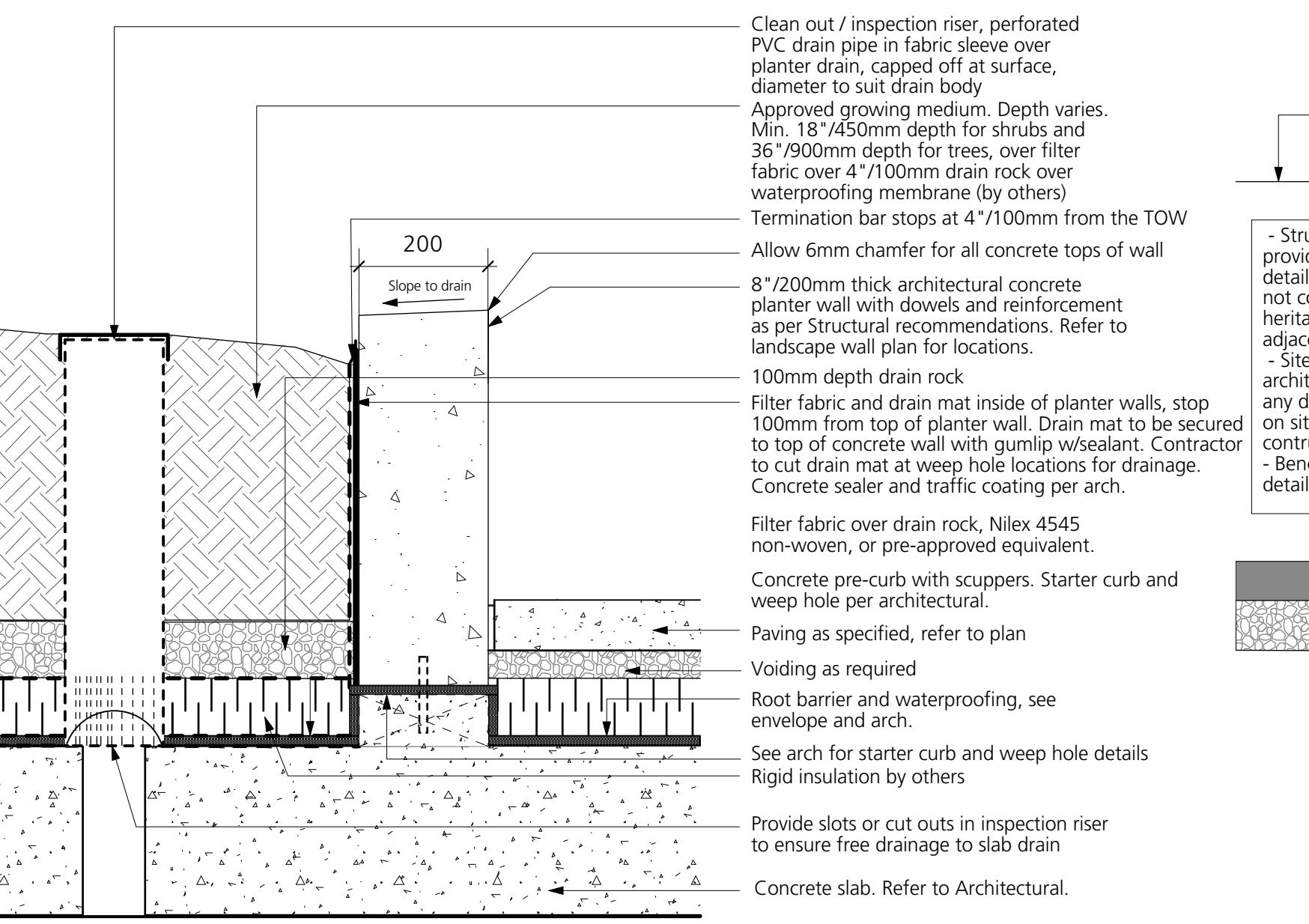
L5.2

Note:
Structural to provide details for retaining wall that over 4' /1.2m in height.

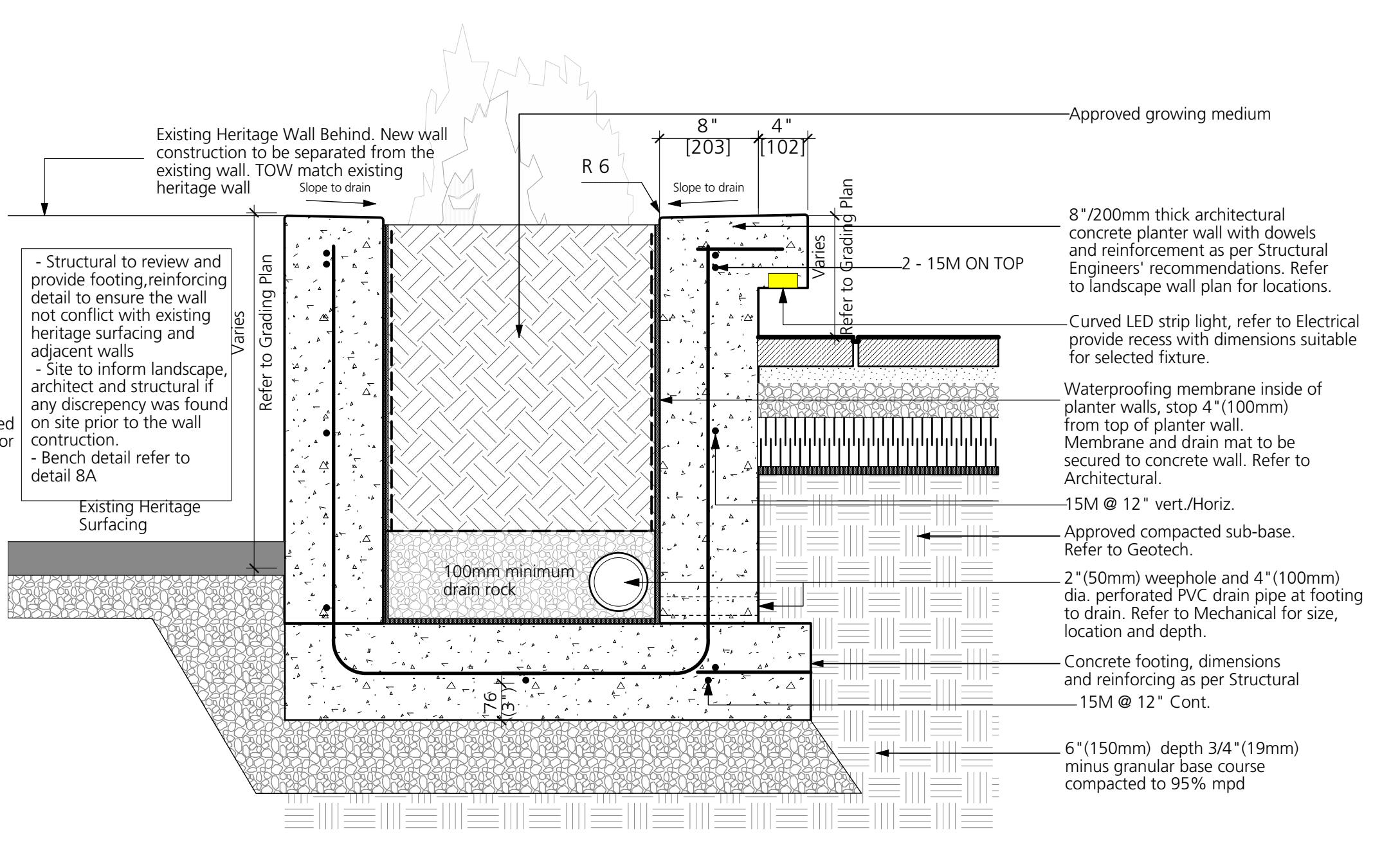


A) ON-GRADE

Note:
Contractor to cover all exposed wall/slab waterproofing with flashing painted to match handrail and metal work.



B) ON-SLAB



C) ROUND PLANTER ON-GRADE

14 CIP CONCRETE RETAINING WALLS
L5.3 1:10

No.	Description	Date
1	Issued for PPA	2023/10/26
2	Issued for Building Permit	2023/11/10
3	Reissued for PPA	2024/09/13
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Client:

Action Line
Housing Society

Project Title:

Seton Villa

3755 McGill Street, Burnaby, BC

Drawing Title:

Landscape Details

Project North:	Drawn By:
	SJ
Checked By:	
Scale:	Job No.:
As Shown	22-006
Sheet No.:	

<p>SETON VILLA Project No.: 22-006</p> <p>GRANULAR BASE</p> <p>32 11 23 Page: 1 of 5</p> <p>PART 1 - GENERAL</p> <p>1.1 DESCRIPTION:</p> <p>Provide all labour, materials, equipment and services required for granular base including but not limited to:</p> <ul style="list-style-type: none"> .1 All paved areas indicated on the landscape plans. <p>1.2 RELATED WORK:</p> <ul style="list-style-type: none"> .1 Site Grading Section 32 13 00 .2 Unit paving Section 32 14 01 .3 Concrete Walks and Curbs Section 32 13 15 <p>1.3 REFERENCE STANDARDS:</p> <ul style="list-style-type: none"> .1 ASTM C186/C186M-14 Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates. .2 ASTM C117-13 Standard Test Method Materials Finer than [200] Sieve. .3 CAN/CGSB-88 Canadian Metric Sieve Series. .4 ASTM D4318 Standard Test Methods for Liquid Limit, Plastic Limit, and Plastic Index of Soils. .5 ASTM D 448-18 Standard Classification for Sizes of Aggregate for Road and Bridge Construction. <p>1.4 TESTING GRANULAR MATERIAL:</p> <ul style="list-style-type: none"> .1 Preliminary approval of the granular material shall not constitute general acceptance of all material in the deposit or source of supply; and acceptance shall be subject to field tests taken at the discretion of the Consultant. Materials may be considered suitable even though particle sizes are within the limits of the gradation sizes required if particle shapes are thin or elongated or any other characteristic precludes satisfactory compaction. Rejected material will not be paid for. The acceptability of the final material will be determined by the Consultant. .2 Field density, moisture content, and sieve analysis will be carried out by an independent testing agency paid for by the Owner. 	<p>SETON VILLA Project No.: 22-006</p> <p>GRANULAR BASE</p> <p>32 11 23 Page: 2 of 5</p> <p>PART 2 - PRODUCTS</p> <p>2.1 MATERIALS:</p> <p>.1 Granular sub-base:</p> <ul style="list-style-type: none"> .1 Crushed, pit run or screened stone, gravel or sand consisting of hard durable particles free from clay lumps, cementation, organic material, frozen material and other deleterious materials. .2 Gradations: within limits specified when tested to ASTM C186 and ASTM C117. Sieve sizes to CAN/CGSB 8.1 rather than ASTM E11. <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Sieve Designation</th> <th>% Passing</th> </tr> </thead> <tbody> <tr> <td>75</td> <td>mm 100</td> </tr> <tr> <td>47.5</td> <td>mm 25-85</td> </tr> <tr> <td>0.425</td> <td>mm 5-10</td> </tr> <tr> <td>0.075</td> <td>mm 0.10</td> </tr> </tbody> </table> <p>.2 Granular base 18mm minus:</p> <ul style="list-style-type: none"> .1 Crushed stone or gravel; hard, durable, angular particles, free from clay lumps, cementation, organic material, frozen material and other deleterious materials. .2 Gradations: within limits specified when tested to ASTM C186 and ASTM C117. Sieve sizes to CAN/CGSB 8.1 rather than ASTM E11. <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Sieve Designation</th> <th>% Passing</th> </tr> </thead> <tbody> <tr> <td>19</td> <td>mm 100</td> </tr> <tr> <td>12.5</td> <td>mm 70-100</td> </tr> <tr> <td>4.75</td> <td>mm 40-70</td> </tr> <tr> <td>2.00</td> <td>mm 23-50</td> </tr> <tr> <td>0.425</td> <td>mm 7-25</td> </tr> <tr> <td>0.075</td> <td>mm 3-8</td> </tr> </tbody> </table> <p>.3 Liquid Limit ASTM D4318 Maximum 25</p> <p>.4 Plasticity Index ASTM D4318 Maximum 6</p> <p>.5 Granular base 19 mm clear crush open graded:</p> <ul style="list-style-type: none"> .1 Crushed stone or gravel; hard, durable, angular particles, free from clay lumps, cementation, organic material, frozen material and other deleterious materials. .2 Gradations: The 18mm clear crush shall comply with the following gradation envelope: <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Sieve Designation</th> <th>% Passing</th> </tr> </thead> <tbody> <tr> <td>37.5</td> <td>mm 100</td> </tr> <tr> <td>25</td> <td>mm 90-100</td> </tr> <tr> <td>19</td> <td>mm 40-85</td> </tr> <tr> <td>12.5</td> <td>mm 10-40</td> </tr> <tr> <td>9.5</td> <td>mm 0-15</td> </tr> </tbody> </table>	Sieve Designation	% Passing	75	mm 100	47.5	mm 25-85	0.425	mm 5-10	0.075	mm 0.10	Sieve Designation	% Passing	19	mm 100	12.5	mm 70-100	4.75	mm 40-70	2.00	mm 23-50	0.425	mm 7-25	0.075	mm 3-8	Sieve Designation	% Passing	37.5	mm 100	25	mm 90-100	19	mm 40-85	12.5	mm 10-40	9.5	mm 0-15	<p>SETON VILLA Project No.: 22-006</p> <p>GRANULAR BASE</p> <p>32 11 23 Page: 3 of 5</p> <p style="text-align: center;">4.75 mm 0.5</p> <p>.4 However, should the Contractor be able to produce an aggregate differently graded than specified above and the Consultant is satisfied that stability, permeability, and workability requirements can be met and that the use of coarser grade aggregate will lead to the maximum utilization of the aggregate source, the Consultant may direct in writing that the coarser grade aggregate can and shall be used.</p> <p>.5 Once a crushed aggregate gradation has been accepted, the maximum permissible variation of the mean of any 4 consecutive tests from the accepted gradation curve shall be within the limits specified below:</p> <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Sieve Size</th> <th>Variation Limits % Passing</th> </tr> </thead> <tbody> <tr> <td>No. 4 and larger - 4.75 mm and larger</td> <td>+5</td> </tr> <tr> <td>No. 16 to No. 4 - 1.18 mm to 4.75 mm</td> <td>+3.5</td> </tr> <tr> <td>No. 30 to No. 16 - 0.390 mm to 1.18 mm</td> <td>+2</td> </tr> <tr> <td>No. 20 to No. 30 - 0.075 mm to 0.390 mm</td> <td>+1</td> </tr> </tbody> </table> <p>Should there be a substantial change in the type of aggregate exposed as the work proceeds, the Consultant may authorize a change in the mean gradation.</p> <p>.6 At least 50% by numerical count of all aggregate particles retained on the No. 4.75 mm sieve shall have at least one fractured face or shall be naturally angular with sharp edges. If this requirement cannot be met for a specified aggregate type then the Contractor shall, at no additional charge, crush aggregate to the next smaller size or such intermediate size as the Consultant may direct in order that the crushed granular aggregate shall meet the requirement.</p> <p>.7 Plasticity Index 04318-84 for crushed gravel shall not exceed 6.</p>	Sieve Size	Variation Limits % Passing	No. 4 and larger - 4.75 mm and larger	+5	No. 16 to No. 4 - 1.18 mm to 4.75 mm	+3.5	No. 30 to No. 16 - 0.390 mm to 1.18 mm	+2	No. 20 to No. 30 - 0.075 mm to 0.390 mm	+1	<p>SETON VILLA Project No.: 22-006</p> <p>GRANULAR BASE</p> <p>32 11 23 Page: 4 of 5</p> <p>3.1 INSPECTION OF UNDERLYING SUB-GRADE:</p> <p>.1 After the sub-grade has been approved by the Consultant, the placing of crushed granular base material shall proceed as quickly as practicable to preserve and prevent drying out the surface of the sub-grade.</p> <p>3.2 PLACING:</p> <p>.1 Place material only on clean unfrozen surface, properly shaped and compacted and free from snow and ice.</p> <p>.2 The crushed granular base shall be constructed in such a manner that the aggregate is neither segregated, contaminated, nor degraded. End dumping will not be permitted.</p> <p>.3 The thickness of the crushed granular surfacing shall be substantially uniform and the minimum thickness shall be less than the nominal thickness shown on the drawings or ordered by the Consultant.</p> <p>.4 If the Contractor is unable to provide adequate manually operated equipment or workers of sufficient skill to lay the crushed granular base within the tolerances specified, the Consultant may require that the contractor lay the aggregate through an approved electronically controlled spreading machine. In such an event the Contractor will set out the necessary reference line required to guide the electronic control equipment and the spreading machine.</p> <p>.5 Place material to full width in uniform layers not exceeding 150 mm compacted thickness. Consultant may authorize thicker lifts if specified compaction can be achieved.</p> <p>3.3 COMPACTING:</p> <p>.1 Immediately following spreading, the crushed granular base aggregate shall be compacted to a minimum of 100% of corrected maximum dry density.</p> <p>.2 The method of compaction to be employed may be selected by the Contractor but shall be subject to review or alteration by the Consultant. If the Contractor is unable to obtain the specified density, the crushed granular base shall be compacted in lifts less than 75 mm in thickness until the specified density is obtained.</p> <p>.3 Apply water as necessary during compacting to obtain specified density. If material is excessively moist, aerate by scarifying with suitable equipment until moisture content is corrected.</p>	<p>SETON VILLA Project No.: 22-006</p> <p>GRANULAR BASE</p> <p>32 11 23 Page: 5 of 5</p> <p>.4 In areas not accessible to rolling equipment, compact to specified density with approved mechanical tampers.</p> <p>3.4 SHAPING:</p> <p>.1 The completed surface of the crushed granular base course shall conform to the required line, cross-section and grade within a tolerance of plus or minus 15 mm.</p> <p>3.5 INSPECTION:</p> <p>.1 Before approval by the Consultant, the crushed granular base course surface shall be true to cross-section and grade, and shall conform to the density specified.</p> <p>END OF SECTION 32 11 23</p>
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<p>SETON VILLA Project No.: 22-006</p> <p>CONCRETE WALKS AND CURBS</p> <p>32 13 15 Page: 1</p> <p>PART 1 - GENERAL</p> <p>1.1 DESCRIPTION:</p> <p>Provide all labour, materials, equipment and services required for cast-in-place concrete including but not limited to:</p> <ul style="list-style-type: none"> .1 Pathways and miscellaneous concrete indicated on landscape plans and details. <p>1.2 RELATED WORK:</p> <ul style="list-style-type: none"> .1 Granular base Section 32 11 23 <p>1.3 REFERENCES:</p> <ul style="list-style-type: none"> .1 BC Building Code 2012. .2 ASTM C494/C494M-15 - Chemical Admixtures for Concrete. .3 CAN/CSA-A3000-13 - Cementitious Materials Compendium. .4 CAN/CSA-S209.3 M92 (R2013) - Concrete Formwork. .5 CAN/CSA-474-04 (R2014) - Concrete Structures. .6 CSA-A23.1-09/A23.2-08 (R2014) - Concrete Materials and Methods of Concrete Construction / Methods of Test and Standard Practices for Concrete. <p>PART 2 - PRODUCTS</p> <p>2.1 MATERIALS:</p> <ul style="list-style-type: none"> .1 Non-staining type form release agent: chemically active release agents containing compounds that react with free lime to provide water soluble soap. .2 Concrete mixes and materials with the following criteria specific to this Section: <ul style="list-style-type: none"> .1 Hand-formed and hand-placed concrete: Slump: 74mm Air entrainment: 4 to 6% Maximum aggregate size: 19mm Minimum cement content: 350kg/m³ Minimum 28 day compressive strength: 30MPa. 	<p>SETON VILLA Project No.: 22-006</p> <p>CONCRETE WALKS AND CURBS</p> <p>32 13 15 Page: 2</p> <p>PART 3 - EXECUTION</p> <p>3.1 FORMWORK:</p> <ul style="list-style-type: none"> .1 Steel forms to be approved design and free from twists and warp. .2 Wood forms to be of select dressed lumber, straight and free from defects and thoroughly cleaned. .3 Flexible forms to be used for all curves less than 60m radius. <p>.4 After obtaining approval of compacted base, set forms to line and grade as shown on landscape drawings, free from waves or irregularities in line or grade.</p> <p>.5 Set special forms as required around catch basins, manholes, poles or other objects as shown on landscape drawings.</p> <p>.6 Tolerances: <ul style="list-style-type: none"> Maximum Horizontal deviation: 6mm Maximum vertical deviation: 6mm Maximum deflection from horizontal or vertical alignment to be 6mm in 3m. </p> <p>.7 Adequately brace forms to maintain specified tolerances after the concrete is placed.</p> <p>.8 Treat forms lightly with approved form release agent and remove the surplus agent.</p> <p>3.2 INSPECTION:</p> <ul style="list-style-type: none"> .1 Immediately prior to placement of concrete, carefully inspect all formwork to ensure forms are properly set at required horizontal and vertical alignment, sufficiently rigid, clean, surface treated, and ready for placement of concrete. Obtain approval of formwork and compacted base. .2 Contractor to provide a representative test section of cast concrete work min. 2mx2m in size for inspection by the architect and landscape architect prior to commencement of work. 	<p>SETON VILLA Project No.: 22-006</p> <p>CONCRETE WALKS AND CURBS</p> <p>32 13 15 Page: 3</p> <p>3.3 CONCRETE PLACEMENT:</p> <ul style="list-style-type: none"> .1 Place concrete to the following criteria specific to this Section. .2 Do not place concrete during rain or on wet or frozen base. .3 Do not place concrete when air temperature appears likely to fall below 5 degrees Celsius within 24 hours, unless specified precautions are taken and approved by Consultant. <p>.4 Schedule concrete placement to ensure sufficient daylight hours available to permit edging and finishing.</p> <p>.5 Monitor granular base immediately prior to placing concrete.</p> <p>.6 Place concrete within 1.5 hours of batching time.</p> <p>.7 Place concrete in forms, ensuring no segregation of aggregate and consolidate with approved mechanical vibrator or power screed.</p> <p>.8 Concrete to be placed in continuous operation until entire panel or section completed. Do not place fresh concrete which has achieved partial set.</p> <p>.9 Incorporate all castings into concrete at time of placement.</p> <p>.10 Discontinue placement at expansion, construction or isolation joints only.</p> <p>.11 Remove face forms as soon as practical to permit face finishing. Do not leave face forms in place overnight.</p> <p>3.4 EXPANSION JOINTS:</p> <ul style="list-style-type: none"> .1 Form transverse expansion joints at a maximum spacing of 10m for sidewalks and at tangent points on circular walks. .2 Extend through full depth of concrete. .3 Fill with 13mm approved expansion joint material. .4 Bond break compound may be used in lieu of expansion joint between sidewalk and back of abutting curb and gutter. 	<p>SETON VILLA Project No.: 22-006</p> <p>CONCRETE WALKS AND CURBS</p> <p>32 13 15 Page: 4</p> <p>3.5 CONTROL JOINTS:</p> <ul style="list-style-type: none"> .1 In sidewalks, sawcut control joints as per plans. .2 In curb or curb gutter, construct control joints at maximum 3m intervals and match with control joints in abutting sidewalk. .3 Construct to minimum 1/4 depth of concrete section at point of cut. <p>3.6 ISOLATION JOINTS:</p> <ul style="list-style-type: none"> .1 Form isolation joints around all poles, hydrants, manholes and all structures or fixed objects located within the concrete section by using approved bond breaking compound. .2 Form longitudinal isolation joints between sidewalk and abutting curb and gutter, abutting utility strips, abutting structures using 13mm approved joint filling material. .3 Use 13mm pre-molded hardboard joint material to form isolation joints between sidewalks and abutting walk and structures. .4 Bond break compound may be used in lieu of joint filler material between sidewalk and back of abutting curb and gutter. <p>3.7 FINISHING:</p> <ul style="list-style-type: none"> .1 Finish surface of concrete sidewalks and utility strips to smooth surface with magnesium or wood float trowel and broom finish to provide uniform non-skid surface with no visible trowel marks. .2 Sawcuts used for aesthetic purposes as shown on the landscape drawings to be marked with proper tools and set to depth as noted. .3 Under no circumstances is concrete to be overworked by troweling, dusted with dry cement or finished with a mortar coat. .4 Finished surface to be as specified and to satisfaction of Consultant. <p>3.8 PROTECTION:</p>	<p>SETON VILLA Project No.: 22-006</p> <p>CONCRETE WALKS AND CURBS</p> <p>32 13 15 Page: 5</p> <p>.1 Protect freshly finished concrete from dust, rain or frost by using tarps or other suitable protective coverings. Keep clear of finished surfaces.</p> <p>.2 Place and maintain suitable barriers to protect finished concrete from equipment, vehicles or pedestrian traffic.</p> <p>.3 Provide personnel as required to prevent vandalism until concrete has set.</p> <p>.4 Do not run vehicles or construction equipment on concrete for at least 7 days.</p> <p>3.9 CURING:</p> <ul style="list-style-type: none"> .1 Apply approved curing compound to all exposed concrete surfaces at rate recommended by manufacturer or alternatively, use moist curing procedures for a minimum of 7 days. .2 When temperature is below 5 degrees Celsius maintain all concrete at temperatures not less than 10 degrees Celsius for at least 72 hours and protect from freezing for at least another 72 hours or such time as required to ensure proper curing of concrete. Admixtures are not to be used for prevention of freezing. <p>3.10 ACCEPTANCE:</p> <ul style="list-style-type: none"> .1 Before acceptance of finished concrete, all irregular, cracked or otherwise defective sections to be entirely removed and replaced to satisfaction of Consultant. <p>END OF SECTION 32 13 15</p>																																														
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<p>SETON VILLA Project No.: 22-006</p> <p>UNIT PAVING</p> <p>SECTION 32 14 00 Page 1 of 4</p> <p>SECTION 32 14 00 UNIT PAVING</p> <p>PART 1 - GENERAL</p> <p>1.1 DESCRIPTION:</p> <p>Provide all labour, materials, equipment and services required for unit paving and surfacing including but not limited to:</p> <ul style="list-style-type: none"> .1 Hydrasphalt Slab in areas indicated on landscape plans and details. .2 Exterior rated porcelain tile to match lobby interior tile (t.b.d.), mortared to 4" concrete slab below. <p>1.2 REFERENCES:</p> <ul style="list-style-type: none"> .1 ASTM C396/C396M-09 Standard Specification for Solid Concrete Interlocking Paving Units. .2 CSA A23.1-14 / CSA A23.1-14 Precast Concrete Paving Slabs / Precast Concrete Pavers .3 ASTM D 448-12 Standard Classification for Sizes of Aggregate for Road and Bridge Construction <p>1.3 SAMPLES:</p> <ul style="list-style-type: none"> .1 Submit full size sample of each type of paving unit specified for approval. <p>1.4 DELIVERY, STORAGE AND HANDLING:</p> <ul style="list-style-type: none"> .1 Pavers shall be delivered to and stored at the work site on pallets, metal strapped, or shrink-wrapped PVC packaged by the paving manufacturer. <p>1.5 PROTECTION:</p> <ul style="list-style-type: none"> .1 Prevent damage to landscaping, structures, curbs, sidewalks, trees, roads and adjacent property. Make good any damage. <p>1.6 WARRANTY:</p> <ul style="list-style-type: none"> .1 The manufacturer of Landseaf Safety Rubber Surfacing will provide a three-year warranty against, delamination, premature wear and colorfastness. <p>PART 2 - PRODUCTS</p>	<p>SETON VILLA Project No.: 22-006</p> <p>UNIT PAVING</p> <p>SECTION 32 14 00 Page 2 of 4</p> <p>2.1 MATERIALS:</p> <ul style="list-style-type: none"> .1 Concrete unit pavers / slabs: uniform in material, colour, size, from one manufacturer. .2 Hydrasphalt Slab by Belgard, or pre-approved equal. <p>Location: Courtyard, east of main building patio and rooftops Size: 60 x 60 x 50 mm thick Colour: Tan Finish: Textured Pattern: Stack Bond</p> <p>2.2 BEDDING COURSE MATERIALS:</p> <ul style="list-style-type: none"> .1 For on-grade pavers - Sand bedding course: hard, durable, angular particles, free from clay lumps, cementation, organic material, frozen material and other deleterious materials. Sand shall conform to the following gradations envelope: <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Sieve Designation</th> <th>% Passing</th> </tr> </thead> <tbody> <tr> <td>9.5 mm</td> <td>100</td> </tr> <tr> <td>4.75 mm</td> <td>95-100</td> </tr> <tr> <td>2.36 mm</td> <td>80-100</td> </tr> <tr> <td>1.18 mm</td> <td>50-65</td> </tr> <tr> <td>600 microns</td> <td>25-60</td> </tr> <tr> <td>300 microns</td> <td>10-30</td> </tr> <tr> <td>150 microns</td> <td>5-15</td> </tr> </tbody> </table> <p>2.3 JOINTING MATERIALS:</p> <ul style="list-style-type: none"> .1 For on-grade pavers <p>Jointing sand, excepting for pavers shall meet the requirements for the laying course. The sand shall comply with the following gradation envelope, laying sand shall not be used.</p> <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Sieve Designation</th> <th>% Passing</th> </tr> </thead> <tbody> <tr> <td>2.36 mm</td> <td>100</td> </tr> <tr> <td>1.18 mm</td> <td>50-100</td> </tr> <tr> <td>600 microns</td> <td>60-90</td> </tr> <tr> <td>300 microns</td> <td>30-60</td> </tr> <tr> <td>150 microns</td> <td>15-30</td> </tr> <tr> <td>75 microns</td> <td>5-10</td> </tr> </tbody> </table> <p>2.4 UNIT PAVER CUTS:</p> <ul style="list-style-type: none"> .1 All cuts to be completed with stone or tile saw, not guillotine. .2 Contractor to ensure that all cuts do not exceed 2/3 the original size of unit paving dimension. No paver slivers will be accepted. .3 Paver cuts made to accommodate existing structures, valves, drains to be have consistent spacing around object at max 5mm joint width. <p>2.5 SURFACE COURSE (UNIT PAVERS):</p> <ul style="list-style-type: none"> .1 Ensure bedding course is dry, 4-8% moisture content, prior to placement of unit pavers. .2 Install unit paving true to grade, in location, layout and pattern as indicated. .3 Where required, cut units accurately without damaging edges. .4 Unit pavers: 	Sieve Designation	% Passing	9.5 mm	100	4.75 mm	95-100	2.36 mm	80-100	1.18 mm	50-65	600 microns	25-60	300 microns	10-30	150 microns	5-15	Sieve Designation	% Passing	2.36 mm	100	1.18 mm	50-100	600 microns	60-90	300 microns	30-60	150 microns	15-30	75 microns	5-10	<p>SETON VILLA Project No.: 22-006</p> <p>UNIT PAVING</p> <p>SECTION 32 14 00 Page 3 of 4</p> <p>.1 Install pavers with butt joints.</p> <p>.2 Tamp down and level pavers with mechanical plate vibrator until pavers are true to grade and free of movement. For vehicular traffic surfaces, tamp and level pavers with rubber-tired roller.</p> <p>.3 Fill spaces between pavers by sweeping in jointing aggregate where indicated.</p> <p>.4 Pass mechanical plate vibrator on sand cushion over surface course.</p> <p>.5 Surface of finished pavement: free from depressions exceeding 3 mm as measured with 3m straight edge.</p> <p>.6 Sweep surface course clean.</p> <p>2.6 ADJUST AND CLEAN:</p> <ul style="list-style-type: none"> .1 Ensure that sub-base installation / sub grade conforms to levels and compaction to allow for installation of paver base. .2 Excess sand or soil remaining on the paved surface shall be brushed away and removed from the work site. <p>END OF SECTION 32 14 00</p>	<p>SETON VILLA Project No.: 22-006</p> <p>SITE FURNISHINGS</p> <p>SECTION 32 13 00 Page 1 of 3</p> <p>PART 1 - GENERAL</p> <p>1.1 DESCRIPTION:</p> <p>Provide all labour, materials, equipment, and services required for site furnishings, including but not limited to:</p> <ul style="list-style-type: none"> .1 Metal Planters, Benches, and Bike Racks as indicated on landscape drawings and details, and all related landscape plans and details. <p>1.2 SUBMITTALS:</p> <ul style="list-style-type: none"> .1 Provide cut sheets for all elements listed under this specification for approval .2 Provide colour samples as directed in landscape details .3 Provide product samples as directed in landscape details <p>PART 2 - PRODUCTS</p> <p>2.1 PREFABRICATED METAL PLANTER:</p> <p>Available at Green Theory or Approved Alternate [greentheory.com] Product: Jon Modular Metal Planter Material: Powder coated Aluminum Color: Pewter Dimensions: Refer to plan Installation: As per landscape detail 6 and manufacturer's specifications. Provide Submittal for approval Qty: 1</p> <p>2.2 PREFABRICATED METAL STORAGE SEATING:</p> <p>Available at Green Theory or Approved Alternate [greentheory.com] Product: Jon Storage Se</p>																	
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Issues	No.	Description	Date
	1	Issued for Tender Draft	2024/09/16
	2	Issued for Tender	2024/09/23
	3	Issued for Post Tender Addendum	2025/03/07
	4	Re-issued for Building Permit	2025/06/12
	5	Issued for PTA #2	2025/08/20
	6	Issued for IFC	2025/09/12

<p>SETON VILLA Project No.: 22-006</p> <p>SITE FURNISHINGS</p> <p>SECTION 32 33.00 Page: 2 of 3</p> <p>Installation: To be installed as shown on the plan and per detail 8. Provide Submittal for approval. Qty: Type A-1; Type B-1; Type C-1; Refer to detail 8 for all three types.</p> <p>REMOVED</p> <p>ICONIC BIKE RACK Available at Maphin (maphin.com) Product: iconic Bike Rack Finish: Powder coated Aluminum Color: Pewter Instruction: To be installed individually, in a row, as shown on the plan. Surface mount with tamper-proof hardware as per manufacturer's specifications. Provide Submittal for approval. Qty: 1</p> <p>BASALT COLUMN STONE Available at Northwest Landscape Supply Product: Basalt Columns Instruction: Refer to Plans Installation: Per landscape details and manufacturer's specifications. Provide Submittal for approval.</p> <p>Perry + Associates</p>	<p>SETON VILLA Project No.: 22-006</p> <p>SITE FURNISHINGS</p> <p>SECTION 32 33.00 Page: 3 of 3</p> <p>Otto: 10</p> <p>2.10 FEATURE CRUSHED STONE MATERIAL TYPE A Available at Northwest Landscape Supply Product: San Juan Tumbled Stone 2-6" Dia. or Approved Alternate Installation: Per landscape details and manufacturer's specifications. Provide Submittal for approval. Qty: Refer to Plan</p> <p>2.11 FEATURE CRUSHED STONE MATERIAL TYPE B Available at Northwest Landscape Supply Product: 15mm Clean Base Crushed Gravel or Approved Alternate Installation: Per landscape details and manufacturer's specifications. Provide Submittal for approval. Qty: Refer to Plan</p> <p>2.12 CUSTOM CRUSHED TOP Available at Frances Andre Site Furnishing Material: Thermally Modified Ash and matched bottom assembly Instruction: Per landscape details and manufacturer's specifications. Provide Submittal for approval. Qty: Refer to Plan</p> <p>PART 3 - EXECUTION</p> <p>3.1 FITTINGS AND FASTENINGS .1 Use hot-dipped galvanized to ASTM A123 / A123M after fabrication metal or better.</p> <p>3.2 PREPARATION .1 Locations shown on drawings are general. Stake out locations of each bicycle rack and obtain Owner's approval prior to installing.</p> <p>3.3 INSTALLATION - GENERAL .1 Assemble furnishings in accordance with manufacturer's instructions. .2 Install furnishings true, plumb, anchored firmly supported, as per manufacturer's specification. .3 Touch-up damaged finishes to approval of Consultant. .4 Install root barrier to be level with the mid point of the depth of the adjacent hard surface. For 100mm deep concrete sidewalk the root barrier should be no more than 50mm below the top of finished concrete surface.</p> <p>Perry + Associates</p>	<p>SETON VILLA Project No.: 22-006</p> <p>SITE FURNISHINGS</p> <p>SECTION 32 33.00 Page: 4 of 3</p> <p>.5 Install root barrier to be flush to the side of the adjacent concrete surface such that the gap between the root barrier and finished edge of sidewalk is 12mm or less. .6 Contractor to provide a temporary wood crib (or other) edge to maintain a vertical profile of the compacted structural soil where the root barrier is to be placed.</p> <p>3.4 CLEAN UP .1 Wash surfaces and leave clean and polished. Touch-up damaged finishes using materials supplied by the manufacturer to match specified finish and colour. Obtain approval of Consultant.</p> <p>END OF SECTION 32 33.00</p> <p>Perry + Associates</p>	<p>SETON VILLA Project No.: 22-006</p> <p>IRRIGATION</p> <p>SECTION 32 34.00 Page: 1 of 6</p> <p>PART 1 - GENERAL</p> <p>1.1 DESCRIPTION Provide a design build irrigation system to include detailed irrigation shop drawings, labour, materials, equipment and services required for irrigation including but not limited to: .1 all planted and seeded areas indicated</p> <p>1.2 RELATED WORKS: .1 Section 32 91.21 Topsoil and Finish Grading .2 Section 32 93.01 Planting of Trees, Shrubs and Ground Covers</p> <p>1.3 SCOPE: .1 This section provides guidelines for the design, supply, installation of all irrigation materials and equipment required to provide a complete and properly operating automatic irrigation system. In addition, the Irrigation Contractor shall: .1 Verify existing and proposed of any on-site utility. .2 Coordinate Owner or Consultant's direction as to procedure should any piping or utilities be encountered during excavation. .3 Co-operate with the Owner and utility companies in keeping their respective utility lines safe. .4 Protect existing buildings, equipment, sidewalks, landscaping reference points, monuments and markers. Make good any damage to same incurred during this work. .5 Provide complete shop drawings of irrigation system for approval. Drawing to include layout, heads, controllers, valves and all elements pertaining to an automatic system. Contractor to refer to attached City of Surrey Irrigation Design Guide. .6 Ensure irrigation pressure are to be irrigated by automatic spray heads with head to head coverage. .7 Irrigation design to be designed to achieve 50% potable water reduction. Contractor to provide documentation to show how 50% water reduction is achieved.</p> <p>1.4 QUALITY ASSURANCE: .1 All irrigation work shall be done by an experienced and competent irrigation contractor having the facilities and personnel adequate for the work specified.</p> <p>1.5 DELIVERY AND STORAGE: .1 Deliver and store materials in new condition and protect until installed. Deliver, handle and store pipe so as to avoid gouging, bending or cracking.</p> <p>Perry + Associates</p>	<p>SETON VILLA Project No.: 22-006</p> <p>IRRIGATION</p> <p>SECTION 32 34.00 Page: 2 of 6</p> <p>1.6 SUBMITTALS: .1 Shop drawings for review and approval prior to start of contract. .2 Submit to the Owner an as-built drawing (digital and hard copy) showing the location of all components, including all zoning information at time of final acceptance. .3 Documentation for check and confirmation of back flow test.</p> <p>1.7 GUARANTEE: .1 Guarantee the sprinkler system, or any part thereof against defective material and/or workmanship for one (1) year from the Date of Total Performance. Correct same without expense to the Owner. .2 Repair any setting of backfilled trenches occurring during the guarantee after Substantial Completion without expense to the Owner. Include complete restoration of all damaged planting, paving or other improvements of any kind.</p> <p>1.8 INSPECTION: .1 All work must remain uncovered for inspection of workmanship and materials. Notify the Consultant a minimum of forty-eight (48) hours prior to required inspections.</p> <p>1.9 ACCEPTANCE: .1 Total performance shall be given fifty-five (55) days after Substantial Completion provided that all deficiencies have been corrected to the satisfaction of the Owner and Consultant. The system must have been installed as specified, adjustments have been made and all submittals have been made to the satisfaction of the Owner.</p> <p>PART 2 - PRODUCTS</p> <p>2.1 PLASTIC PIPE AND FITTINGS: .1 Semi-rigid, extruded virgin PVC (polyvinyl chloride) plastic. .2 Continuously and legibly marked with at least the following information: Manufacturer's name or trademark, pressure rating and type of material. Pipe that is not marked or has the identification of the Landscaping Consultant will be rejected and shall be removed from the site. .3 Plastic Pipe: Minimum Classes .1 all 75 mm or less piping - 200 .2 all 32 mm or more piping - 160 .4 Fittings: Schedule 40 designed for solvent welding to PVC pipe. .5 Fittings for PVC pipe shall have 3/4 to 2/3 interface fit to ensure a fully seated joint. Individual fittings may be selected to ensure a proper fit, or rejected from the site.</p> <p>Perry + Associates</p>												
<p>SETON VILLA Project: 22-006</p> <p>IRRIGATION</p> <p>SECTION 32 34.00 Page: 3 of 6</p> <p>2.2 PIPE CEMENT: .1 As recommended by the manufacturer and CSA approved. Supplied to the site in sealed containers clearly marked with the name of the manufacturer and the lot number.</p> <p>2.3 SPRINKLER HEADS: .1 Irrigation heads to Rainbird with size and type to be indicated on the drawings. All irrigation heads shall be indicated by the specified manufacturer with distribution pattern shown on the drawings. Heads to be head to head .2 Control heads for irrigation to be 1/4 to 1/2 inch pop up .3 Spray heads for planter areas to be on 12 inch pop up</p> <p>2.4 AUTOMATIC CONTROL VALVES: .1 Automatic control valves Rainbird PVA series size and type indicated on the shop drawings. All valves to be as indicated by the specified manufacturer.</p> <p>2.5 LOW-VOLTAGE WIRING: .1 Fourteen gauge (14 g.) insulated wire, CSA approved for direct underground burial, with common ground. .2 Control wire to be housed in conduit from controller location to each stub out location. All conduits to have pull string.</p> <p>2.6 VALVE BOXES: .1 All valve boxes to be sized and type indicated on drawings.</p> <p>2.7 WIRE CONNECTORS: .1 Wire connectors shall be as recommended by CSA Standards.</p> <p>2.8 SLEEVES: .1 Schedule 40 PVC pipe. Sleevng shall be twice the size of lateral lines and three times the size of main lines.</p> <p>2.9 QUICK COUPLER VALVES: .1 Quick couple valves complete with key as indicated on the drawings. Allow for a minimum of 4 quick couple valves to be located throughout the park.</p> <p>2.10 AUTOMATIC CONTROLLERS:</p> <p>Perry + Associates</p>	<p>SETON VILLA Project: 22-006</p> <p>IRRIGATION</p> <p>SECTION 32 34.00 Page: 4 of 6</p> <p>1.1 AUTOMATIC CONTROLLERS: .1 Automatic controllers shall be shown on drawings, complete with all fittings for installation.</p> <p>2.11 THREAD LUBRICANT: .1 Thread lubricant of a type manufactured for plastic to metal connections such as Teflon tape or Permatex #2.</p> <p>2.12 RISERS: .1 Schedule 80 PVC on swing joint assembly.</p> <p>PART 3 - EXECUTION</p> <p>3.1 EXCAVATION AND BACKFILL: .1 Before starting excavation, the Contractor shall satisfy himself as to the extent of soil compaction in the lawn and planting areas. Excavate trenches for pipes, lay pipes and risers, then backfill, bringing surface to the adjacent grade.</p> <p>3.2 INSTALLATION: .1 While excavating, care shall be taken to avoid damage to the trench. The trench shall be at least 100mm wider than the outside diameter of the pipe(s) it contains. Excavated soil shall be carefully placed adjacent to the trench for convenient backfilling. Topsoil and subsoil shall be piled separately to avoid contamination of topsoil. .2 Excavate trenches where required to a depth of 300mm. This cover shall be measured from the top of the pipe to the final finished grade. The Contractor shall check with the Consultant to ensure that corrections to the surface grade, made after the trench is backfilled, will not reduce the cover below these minimum figures. .3 Bottom of trenches to be free of sharp and large rocks and any other material that may damage pipe. Holes below grade lines caused by removal of stones must be filled and compacted uniformly with the adjacent trench. .4 Carefully backfill the trench with the subsoil, followed by the topsoil, compacting both to the same density as the soil in the trench walls to minimize differential settlement.</p> <p>3.3 TESTING: .1 At the request of the Consultant, all plastic pipe and sprinklers shall be tested as follows: .1 After the pipe is in place in the bottom of the trench with risers in place, the riser shall be capped where the sprinklers will be attached and all pipe couplings and fittings exposed. .2 Apply a pressure of 70 psi to that section using an existing static line pressure. Ensure that all air is removed from the section of line being tested. All circuits shall be tested. Inspect visually for leaks at couplings and fittings, couplings and fittings exposed. .3 After approval by the Consultant, backfill the pipe. If there is any indication of a leak, the defective section shall be located and replaced. Leaks shall not be repaired by patching.</p> <p>Perry + Associates</p>	<p>SETON VILLA Project: 22-006</p> <p>IRRIGATION</p> <p>SECTION 32 34.00 Page: 5 of 6</p> <p>.4 Ensure that the pipe is not held down on any sharp stones or other sharp objects, or dragged along the ground. This shall apply to individual lengths of pipe while being handled above ground and also to assembled sections. The pipe must not be supported at intermediate points on stones, bricks or other hard material.</p> <p>.5 Avoid damaging pipe or fittings when using wrenches. Damaged materials shall be rejected by the Consultant.</p> <p>.6 Where pipe has been damaged, the damaged section shall be removed and new section shall be installed with new couplings.</p> <p>.7 All lines shall have a minimum cover of 300 mm. This cover shall be measured from the top of the pipe to the final finished grade. The Contractor shall check with the Consultant to ensure that corrections to the surface grade, made after the trench is backfilled, will not reduce the cover below these minimum figures.</p> <p>.8 Pipe shall be run in straight lines between fittings.</p> <p>.9 Install low-voltage wiring beneath pipe runs or protect by covering with 38 mm x 89 mm cedar boards before backfilling. Connect at controllers and solenoid valves. All connections to CSA Standards.</p> <p>.10 Install valves vertically and centered in the valve box. Valves to be mounted on section of pipe elevated off the mainline 150 mm to 200 mm and easily accessible for servicing.</p> <p>.11 Valve boxes are to be blocked with brick or concrete blocks so that blocking does not rest on piping below. The top of the valve box to be level and flush with grade. Provide 150 mm of 20 mm diameter drain rock at bottom of each valve box.</p> <p>.12 Install quick couple valve, where applicable, in locations shown on drawings. Quick couple to be inside of valve box or in separate boxes if necessary and upstream from the valves. Supply the Owner with a couple key.</p> <p>.13 Thrust blocking where applicable, shall be installed according to the drawings.</p> <p>3.4 ADJUSTMENT: .1 Adjust irrigation heads for optimum coverage and rate of flow. Set automatic controller to operate at times instructed by the Owner or Consultant.</p> <p>END OF SECTION 32 34.00</p> <p>Perry + Associates</p>	<p>SETON VILLA Project: 22-006</p> <p>IRRIGATION</p> <p>SECTION 32 34.00 Page: 5 of 6</p> <p>.4 Flush out the section to remove dirt and then attach the sprinklers.</p> <p>3.4 ADJUSTMENT: .1 Adjust irrigation heads for optimum coverage and rate of flow. Set automatic controller to operate at times instructed by the Owner or Consultant.</p> <p>END OF SECTION 32 34.00</p> <p>Perry + Associates</p>	<p>SETON VILLA Project: 22-006</p> <p>SITE PREPARATION & GRADING</p> <p>SECTION 32 39.00 Page: 1</p> <p>PART 1 - GENERAL</p> <p>1.1 DOCUMENTS .1 This section of the specification forms part of the Contract Documents and is to be read, interpreted and coordinated with the Landscape and Civil drawings, and MMCD latest version.</p> <p>1.2 DESCRIPTION Provide all labour, materials, equipment and services required for site grading including but not limited to: .1 All areas indicated on the plans</p> <p>1.3 RELATED WORK .1 Growing Medium and Finish Grading Section 32 19.21</p> <p>1.4 REFERENCES .1 ASTM D699-78, Test Methods for Moisture Density Relations of Soils and Soil Aggregate Mixtures Using 2.49 kg Hammer and 304.8 mm Drop.</p> <p>1.5 SITE CONDITIONS .1 Contractor shall establish location of underground utility lines or other buried objects and notify Consultant in writing before commencing work.</p> <p>1.6 PROTECTION .1 Prevent damage to fencing, trees, landscaping, natural features, bench marks, existing buildings, existing pavement, surface or underground utility lines which are to remain. Make good any damage.</p> <p>PART 2 - PRODUCTS</p> <p>2.1 MATERIALS .1 Materials for fill shall be from areas of cut and shall be free from mud, wood, brush, roots, sod, rubbish, topsoil or other organic matter and shall be of such a quality as required for proper compaction as specified.</p> <p>Perry + Associates</p>												
<p>SETON VILLA Project: 22-006</p> <p>SITE PREPARATION & GRADING</p> <p>SECTION 32 39.00 Page: 2</p> <p>.2 Obtain approval from Consultant of excavated or graded material used as fill for grading work. Protect approved material from contamination.</p> <p>PART 3 - EXECUTION</p> <p>3.1 STRIPPING OF TOPSOIL .1 Do not handle topsoil while in wet or frozen condition or in any manner in which soil structure is adversely affected.</p> <p>.2 Commence topsoil stripping of areas as directed by Consultant after area has been cleared of brush, weeds, grasses and removed from site.</p> <p>.3 Strip topsoil to depths as directed by Consultant. Avoid mixing topsoil with subsoil.</p> <p>.4 Strip topsoil in locations as directed by Consultant. Stockpile height not to exceed 2 m.</p> <p>.5 Dispose of unused topsoil off site as directed by Consultant.</p> <p>.6 Protect stockpiles from contamination and compaction.</p> <p>3.2 GRADING .1 Rough grade to levels, profiles, and contours allowing for surface treatment as indicated.</p> <p>.2 Rough grade to following depths below finish grades: .1 Hard surface areas as indicated.</p> <p>.3 Grade ditches to depth as indicated.</p> <p>.4 Prior to placing fill over existing ground, scarify surface to depth of 150 mm. Maintain fill and existing surface at approximately same moisture content to facilitate bonding.</p> <p>.5 Remove any accumulated water prior to placing fills.</p> <p>.6 Place compacted fill material to form fills in maximum 300 mm layers and compact filled and disturbed areas to standard density to ASTM D698, as follows: .1 85% under landscaped areas. .2 95% modified proctor (mpd) under paved and walk areas.</p> <p>.7 Maintain crown and drainage slopes during construction to ensure ready run-off of free water.</p> <p>Perry + Associates</p>	<p>SETON VILLA Project: 22-006</p> <p>GROWING MEDIUM AND FINISH GRADING</p> <p>SECTION 32 91.21 Page: 1 of 6</p> <p>PART 1 - GENERAL</p> <p>1.1 DESCRIPTION Provide all labour, materials, equipment, and services required for growing medium and finish grading including but not limited to: .1 All trees and shrubs/groundcover planted areas .2 All sodded areas</p> <p>1.2 SOURCE QUALITY CONTROL .1 Advise Consultant of sources of growing medium to be utilized 7 days in advance of starting work. .2 Growing medium shall meet BCSLA/BCLNA Landscape Standard, latest edition, unless otherwise specified.</p> <p>.3 Contractor is responsible to provide to consultant a soils test commissioned by the contractor specifically for this project. Soils analyses commissioned by the soils manufacturer will not be accepted. The consultant will designate the soil testing laboratory. Contractor is responsible for arranging for submission of samples for tests and sending them to the laboratory. Contractor shall retain copies of test results and testing laboratory to submit results directly to the consultant prior to commencement of work. Test results shall be provided to the consultant for review PRIOR to any growing medium delivery to site. The city may review and approve test results. The results of the test shall be the basis of the requirements for soil acceptance and soil amendments.</p> <p>.4 The Contractor shall guarantee that the growing medium submitted for laboratory analysis will be a representative sample of the growing medium delivered to the site. The Contractor shall provide receipts of request of the Consultant.</p> <p>.5 Failure to have the growing medium tested as indicated above may result in the removal of substandard soils at the Contractor's expense.</p> <p>PART 2 - PRODUCTS</p> <p>2.1 GROWING MEDIUM .1 Growing medium for planted areas: mixture of mineral particulates, micro-organisms and organic matter which provides suitable medium for supporting intended plant growth.</p> <p>.2 The growing medium shall be free from contamination of weed seeds and weeds. The Contractor shall be responsible for removal of weeds during plant establishment and the warranty period.*</p> <p>.3 Soil texture based on the Canadian System of Soil Classification, refer to table 1 for properties.</p> <p>Properties Shrub and Groundcover Areas High Traffic Lawns</p> <table border="1"> <thead> <tr> <th>TEXTURE:</th> <th colspan="2">Percent of Dry Weight of Total growing Medium (%)</th> </tr> </thead> <tbody> <tr> <td>Particle Size Classes by the Can. System Soil Class:</td> <td>0-5</td> <td>0-5</td> </tr> <tr> <td>greater than 2 mm less than 25 mm</td> <td>0-5</td> <td>0-5</td> </tr> <tr> <td>Sands</td> <td>Percent of Dry Weight of Total Growing Medium Excluding Gravel</td> <td></td> </tr> <tr> <td>greater than 0.05 mm less than 0.2 mm</td> <td>50-70</td> <td>80-90</td> </tr> </tbody> </table> <p>.4 The soil shall be free from contamination by excessive quantities of weed seeds. The Contractor shall be responsible for removal of weeds considered excessive to the Consultant during the 1-year plant warranty period.</p> <p>.5 Debris and stones.</p> <p>.6 Root-knot nematodes.</p> <p>.7 Salinity: the saturation extract conductivity shall not exceed 3.0 millimhos/cm at 25°C. In the event that this value is exceeded, leaching with fresh water may be required prior to planting.</p> <p>.8 Carbon to nitrogen ratio: shall not exceed 40:1.</p> <p>2.2 SOIL AMENDMENTS .1 Peat moss: .1.1 Peat moss from similar decomposed species of Sphagnum Mosses. .2.1 Horticultural peat, grown in colour.</p> <p>.2 Free of wood and deleterious material which could prohibit growth.</p> <p>.3 pH value as per Table 1, intended application.</p> <p>.4 Unplanned plant loss occurs before the warranty period expires, soil will be tested for toxicity and if toxicity is determined, Contractor will be responsible for removing the plant material and soil.</p> <p>.5 The soil shall be free from contamination by excessive quantities of weed seeds. The Contractor shall be responsible for removal of weeds considered excessive to the Consultant during the 1-year plant warranty period.</p> <p>2.3 LIMESTONE: .1 Ground dolomite limestone containing minimum calcium carbonate and magnesium carbonate of 95%.</p> <p>.2 Gradiation requirements: percentage passing 10.0 mm sieve, 20% passing 1.0 mm sieve, 20% passing 0.25 mm sieve or as detailed in the soil analysis report.</p> <p>2.4 FERTILIZER: .1 Complete, commercial blends meeting the requirements of the Canada Fertilizer Act, with a guaranteed N-P-K analysis and meeting the recommendations made after analysis by the soil testing laboratory.</p> <p>.2 All fertilizers shall be packaged in waterproof containers clearly marked with the name of the manufacturer.</p> <p>.3 Receipts and empty bags shall be provided upon the request of the Consultant.</p> <p>Perry + Associates</p>	TEXTURE:	Percent of Dry Weight of Total growing Medium (%)		Particle Size Classes by the Can. System Soil Class:	0-5	0-5	greater than 2 mm less than 25 mm	0-5	0-5	Sands	Percent of Dry Weight of Total Growing Medium Excluding Gravel		greater than 0.05 mm less than 0.2 mm	50-70	80-90
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<p>SETON VILLA Project: 22-006</p> <p>SITE PREPARATION & GRADING</p> <p>SECTION 32 39.00 Page: 3 of 6</p> <p>.2 Obtain approval from Consultant of excavated or graded material used as fill for grading work. Protect approved material from contamination.</p> <p>PART 3 - EXECUTION</p> <p>3.1 STRIPPING OF TOPSOIL .1 Do not handle topsoil while in wet or frozen condition or in any manner in which soil structure is adversely affected.</p> <p>.2 Commence topsoil stripping of areas as directed by Consultant after area has been cleared of brush, weeds, grasses and removed from site.</p> <p>.3 Strip topsoil to depths as indicated by Consultant. Avoid mixing topsoil with subsoil.</p> <p>.4 Strip topsoil in locations as directed by Consultant. Stockpile height not to exceed 2 m.</p> <p>.5 Dispose of unused topsoil off site as directed by Consultant.</p> <p>.6 Protect stockpiles from contamination and compaction.</p> <p>3.2 GRADING .1 Rough grade to levels, profiles, and contours allowing for surface treatment as indicated.</p> <p>.2 Rough grade to following depths below finish grades: .1 Hard surface areas as indicated.</p> <p>.3 Grade ditches to depth as indicated.</p> <p>.4 Prior to placing fill over existing ground, scarify surface to depth of 150 mm. Maintain fill and existing surface at approximately same moisture content to facilitate bonding.</p> <p>.5 Remove any accumulated water prior to placing fills.</p> <p>.6 Place compacted fill material to form fills in maximum 300 mm layers and compact filled and disturbed areas to standard density to ASTM D698, as follows: .1 85% under landscaped areas. .2 95% modified proctor (mpd) under</p>																

<p>SETON VILLA Project: 22-006</p> <p>GROWING MEDIUM AND FINISH GRADING</p> <p>SECTION 32 91.21 Page: 4 of 6</p> <p>.5 Organic Material: Shall be fully composted material, black/brown in colour. .1 Acceptable suppliers includes Harvest Power (Soil Amender), Eco-Soil, Veratec or pre-approved equivalent.</p> <p>.6 Wood Residuals: Where wood residuals such as fir or hemlock sawdust are present in the growing medium, their quantities and properties shall be such that the total carbon to total Nitrogen ratio is a maximum of 40:1. No cedar residuals shall be present.</p> <p>PART 3 - EXECUTION</p> <p>3.1 PREPARATION OF EXISTING GRADE</p> <p>.1 Verify that grades are correct. If discrepancies occur, notify Consultant and do not commence work until instructed by Consultant.</p> <p>.2 Grade soil, eliminating uneven areas and low spots, ensuring positive drainage.</p> <p>.3 Remove debris, roots, branches, stones, and other deleterious materials. Remove soil contaminated with calcium chloride, toxic materials, and petroleum products. Remove debris which protrudes above surface of existing grade. Dispose of removed material off site.</p> <p>.4 Course cultivate entire area which is to receive growing medium to depth of 100 mm. Cross cultivate those areas where equipment used for hauling and spreading has compacted soil. Remove debris, roots, branches, stone and other deleterious materials from cultivated area.</p> <p>.5 Areas over slab to place topsoil over approved filter cloth over granular drain layer.</p> <p>3.2 PLACING AND SPREADING OF GROWING MEDIUM</p> <p>.1 Commercial processing and mixing of growing medium components shall be done thoroughly by a mechanized screening process. No hand mixing shall occur unless specifically approved by the Owner's representative.</p> <p>.2 Place growing medium after Consultant has accepted subgrade.</p> <p>.3 Growing medium shall not be placed, moved or worked in a frozen or saturated condition or when moisture content of the growing medium may result in damage to soil structure.</p> <p>.4 Spread growing medium in uniform layers not exceeding 150 mm, over unfrozen subgrade free of standing water.</p> <p>.5 For sodded areas keep growing medium 15 mm below finished grade.</p>	<p>SETON VILLA Project: 22-006</p> <p>GROWING MEDIUM AND FINISH GRADING</p> <p>SECTION 32 91.21 Page: 5 of 6</p> <p>.6 For over-slab conditions growing medium to be placed over min 100mm (4") layer of drain rock</p> <p>.7 Spread growing medium to the minimum depths outlined in table 2 after settlement and 80% compaction: Note: For Topsoil blown into place, contractor to compact planting beds in 300mm (12") lifts to reduce compaction resulting from settlement.</p> <p>TABLE 2: MINIMUM GROWING MEDIUM DEPTHS</p> <table border="1"> <thead> <tr> <th>Application</th> <th>Minimum Growing Medium Depths After Settlement</th> </tr> </thead> <tbody> <tr> <td>Growing medium</td> <td> <ul style="list-style-type: none"> i. Sodded lawn 300mm ii. groundcover 450 mm iii. shrub areas 450 mm iv. trees 900 mm </td> </tr> </tbody> </table> <p>.8 Manually spread growing medium around trees, shrubs and obstacles.</p> <p>3.4 PLACEMENT OF GROWING MEDIUM</p> <p>.1 Do not place growing medium until Consultant has reviewed subgrade preparation.</p> <p>.2 The growing medium should be moderately compacted (e.g. 85-90% density).</p> <p>.3 The desired cross fall through a grass or planted boulevard to the curb is 4%; the allowable cross fall of a grass or planted boulevard shall be between 2% and 6% or as otherwise approved by the City Engineer. If there is settlement in the boulevard during the warranty period the areas must be re-graded/too-dressed to prevent trips (settlements over 6mm), particularly at the edge of curb and edge of sidewalk.</p> <p>.4 When excavating the soil trench, care must be taken to avoid disruption to the granular base structure of the curb and sidewalk.</p> <p>.5 Underground utilities and conduits shall maintain their required minimum granular cover as specified by the utility. In these areas, at least 150mm of boulevard growing medium shall be placed over the granular cover (300mm preferred).</p> <p>3.5 SOIL AMENDMENTS</p> <p>.1 For planting beds and turf apply and thoroughly mix soil amendments and fertilizer, as directed by soil analysis, into full specified depth of imported growing medium.</p> <p>3.6 FINISH GRADING</p>	Application	Minimum Growing Medium Depths After Settlement	Growing medium	<ul style="list-style-type: none"> i. Sodded lawn 300mm ii. groundcover 450 mm iii. shrub areas 450 mm iv. trees 900 mm 	<p>SETON VILLA Project: 22-006</p> <p>GROWING MEDIUM AND FINISH GRADING</p> <p>SECTION 32 91.21 Page: 6 of 6</p> <p>.1 Manually fine grade growing medium installations to contours and elevations shown on drawings or as directed by consultant. Eliminate rough spots and low areas to ensure positive drainage</p> <p>.2 Grade to eliminate rough spots and low areas and ensure positive drainage. Prepare loose friable bed by means of cultivation and subsequent raking.</p> <p>.3 Consolidate growing medium to required bulk density using equipment approved by Consultant. Leave surfaces smooth, uniform and firm against deep foot printing.</p> <p>3.7 ACCEPTANCE</p> <p>.1 Consultant will inspect growing medium in place and determine acceptance of material, depth and finish grading. Approval of growing medium material may be subject to soil testing and analysis.</p> <p>.2 Testing of growing medium will be carried out by testing laboratory designated by Consultant. Soil sampling, testing and analysis to be in accordance with Provincial regulations and standards.</p> <p>3.8 CLEANING AND REMOVAL OF SURPLUS MATERIAL</p> <p>.1 Disposal of materials not required off site.</p> <p>.2 Ensure all paved areas, adjacent surfaces have been thoroughly cleaned. Ensure all discoloration of adjacent surfaces as a result of growing medium installation has been removed.</p> <p>END OF SECTION 32 91.21</p>	<p>SETON VILLA Project: 22-006</p> <p>PLANTING OF TREES, SHRUBS AND GROUND COVERS</p> <p>SECTION 32 93.00 Page: 1 of 7</p> <p>PART 1 - GENERAL</p> <p>1.1 DESCRIPTION</p> <p>Provide all labour, materials, equipment and services required for planting of trees, shrubs and groundcovers including but not limited to:</p> <p>.1 All tree, shrub, and groundcover planting as shown on plan</p> <p>1.2 RELATED WORK:</p> <p>.1 Growing Medium and Finish Grading 32 91.21 .2 Irrigation 32 84.00</p> <p>1.3 REFERENCE STANDARDS</p> <p>.1 Do trees, shrubs and ground covers work in accordance with the Metric Guide Specification for Nursery Stock 1984 Edition of the Canadian Nursery Trades Association except where specified otherwise.</p> <p>1.4 SOURCE QUALITY CONTROL</p> <p>.1 Obtain approval from Consultant of plant material at source prior to shipping. Acceptance of plant material at its source does not prevent rejection on site prior to or after planting operations.</p> <p>.2 Imported plant material must be accompanied with necessary permits and import licenses. Conform to federal and provincial regulations.</p> <p>.3 All materials and execution to conform to the latest edition of the BC Landscaping and Nursery Association) and BCSLA Landscape Standard.</p> <p>.4 Trees delivered to site to be from nursery with current certification for Phytophthora.</p> <p>1.5 SCHEDULING</p> <p>.1 Obtain approval from Consultant of schedule 7 days in advance of shipment of plant material.</p> <p>.2 Schedule to include: <ul style="list-style-type: none"> 1 date for selection of representative sample at source by Consultant. 2 quantity and type of plant material. 3 shipping dates. 4 arrival dates on site. 5 planting dates. </p> <p>1.6 DELIVERY, STORAGE AND PROTECTION</p> <p>.1 Protect plant material from frost, excessive heat, wind and sun during delivery.</p> <p>.2 Immediately store and protect plant material which will not be installed within 1 hour after arrival at site in storage location approved by Consultant.</p> <p>.3 Protect plant material from damage during transportation: <ul style="list-style-type: none"> 1 When delivery distance is less than 30 km and vehicle travels at speeds under 80 km/h, tie tarps around plants or over vehicle body. 2 When delivery distance exceeds 30 km or vehicle travels at speeds over 80 km/h, tie tarps around plants or over vehicle body. </p> <p>.4 Protect stored plant material from frost, wind and sun and as follows: <ul style="list-style-type: none"> 1 For bare root plant material, preserve moisture around roots by heel-in or burying roots in topsoil and watering to full depth of root zone. 2 For pots and containers, maintain moisture level in containers. Heel-in fibre pots. 3 From damage. Maintain moisture level in root zones. </p> <p>1.7 WARRANTY</p> <p>.1 The Contractor hereby warrants that all plant material as itemized on plant list, will remain free of defects in accordance with BCNA/BCSLA standards for a period of one year from the date of substantial completion.</p> <p>.2 End-of-warranty inspection will be conducted by Consultant.</p> <p>.3 Consultant reserves the right to extend Contractor's warranty responsibilities for an additional one year, if at end of initial warranty period, leaf development and growth is not sufficient to ensure future survival.</p> <p>PART 2 - PRODUCTS</p> <p>2.1 PLANT MATERIAL</p> <p>.1 Type of root preparation, sizing, grading and quality; comply with Metric Guide Specification for Nursery Stock, 1984 Edition of Canadian Nursery Trades Association.</p> <p>.2 Source of plant material: grown in local hardiness zone in accordance with Agriculture Canada Plant Hardiness Zone Map.</p> <p>.3 Plant material: free of disease, insects, defects or injuries and structurally sound with strong fibrous root system.</p> <p>.4 Plant material: root pruned regularly, but not later than one growing season prior to</p>	<p>SETON VILLA Project: 22-006</p> <p>PLANTING OF TREES, SHRUBS AND GROUND COVERS</p> <p>SECTION 32 93.00 Page: 2 of 7</p> <p>2.2 PLANT MATERIAL</p> <p>.1 Type of root preparation, sizing, grading and quality; comply with Metric Guide Specification for Nursery Stock, 1984 Edition of Canadian Nursery Trades Association.</p> <p>.2 Source of plant material: grown in local hardiness zone in accordance with Agriculture Canada Plant Hardiness Zone Map.</p> <p>.3 Plant material: free of disease, insects, defects or injuries and structurally sound with strong fibrous root system.</p> <p>.4 Plant material: root pruned regularly, but not later than one growing season prior to</p>
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<p>SETON VILLA Project: 22-006</p> <p>PLANTING OF TREES, SHRUBS AND GROUND COVERS</p> <p>SECTION 32 93.00 Page: 3 of 7</p> <p>arrival on site.</p> <p>.5 Trees: with straight trunks, well and characteristically branched for species except where specified otherwise.</p> <p>.6 Bare root stock: nursery grown, in dormant stage, not balled and burlapped or container grown.</p> <p>.7 Collected stock: maximum 40 mm in caliper, with well developed crowns and characteristically branched; no more than 40% of overall height may be free of branches.</p> <p>.8 Plant material to be from nurseries certified to be free from the phytophthora ramorum virus (sudden oak death).</p> <p>.9 Plant material to be free of pernicious weeds.</p> <p>2.2 WATER</p> <p>.1 Potable, and free of impurities that would inhibit plant growth.</p> <p>2.3 WIRE TIGHTENER</p> <p>.1 Type 1: galvanized steel, stamped plate type, rod, triangular shape.</p> <p>.2 Type 2: turnbuckle, galvanized steel, 9.5 mm diameter with 270 mm open length.</p> <p>2.4 GUYING WIRE</p> <p>.1 Type 3: 3 mm diameter multi-wire steel cable – 4 cables per tree.</p> <p>.2 Any wire to be placed in 13mm dia. orange PVC tubing.</p> <p>2.5 CLAMPS</p> <p>.1 U-bolt: galvanized, 13 mm dia, c/w curved retaining bar and hex nuts.</p> <p>.2 Crimp type.</p> <p>2.6 GUYING COLLAR</p> <p>.1 Tube: plastic, 13 mm diameter, nylon reinforced.</p> <p>2.7 MULCH</p> <p>.1 Off Slab: Composted mulch, 2" depth of organic mulch. Soil amender by Fraser Richmond Biocycle Ltd or approved equal.</p>	<p>SETON VILLA Project: 22-006</p> <p>PLANTING OF TREES, SHRUBS AND GROUND COVERS</p> <p>SECTION 32 93.00 Page: 4 of 7</p> <p>.2 On Slab: Refer to section 07 33 23 Vegetated Roof Accessories</p> <p>2.8 FERTILIZER</p> <p>.1 Standard commercial brands, meeting the requirements of the Canada Fertilizer Act.</p> <p>2.9 ANTI-DESICCANT</p> <p>.1 Wax-like emulsion.</p> <p>2.10 FLAGGING TAPE</p> <p>.1 Fluorescent, colour.</p> <p>2.11 WOUND DRESSING</p> <p>.1 Horticulturally accepted non-toxic, non-hardening emulsion, registered for such use under Pest Control Products Act.</p> <p>PART 3 - EXECUTION</p> <p>3.1 PRE-PLANTING OPERATIONS</p> <p>.1 Ensure plant material acceptable to Consultant.</p> <p>.2 Remove damaged roots and branches from plant material. Trees damaged as a result of transportation and installation on site may be rejected by Consultant.</p> <p>.3 Apply anti-desiccant to conifers and deciduous trees in leaf as needed, in accordance with manufacturer's instructions.</p> <p>3.2 EXCAVATION AND PREPARATION OF PLANTING BEDS</p> <p>.1 Preparation of planting beds is specified in Section 32 91.21 – Growing Medium and Finish Grading.</p> <p>.2 For individual planting holes: <ul style="list-style-type: none"> .1 Stake out location and obtain approval from Consultant prior to excavating. .2 Excavate to depth and width as follows: <ul style="list-style-type: none"> 1 Trees: 300 mm clearance on either side of rootball. 150 mm depth below grade. 2 Shrubs: 150 mm clearance on all sides of rootball. 3 Remove soil, rocks, roots, debris and toxic material from excavated material that will be used as planting soil for trees and individual shrubs. Dispose of excess material. 4 Scarify sides of planting hole. .2 Refer to landscape details for on slab planting support. .3 Use 4 guy wires attached to tree grate for deciduous trees as directed by Consultant. <ul style="list-style-type: none"> 1 Use Type 2 guying wire with clamps for trees less than 75 mm in diameter and Type 3 guying wire with clamps for trees greater than 75 mm in diameter. </p>	<p>SETON VILLA Project: 22-006</p> <p>PLANTING OF TREES, SHRUBS AND GROUND COVERS</p> <p>SECTION 32 93.00 Page: 5 of 7</p> <p>.5 Remove water which enters excavations prior to planting. Notify Consultant if water source is ground water.</p> <p>.6 Protect bottom of excavations against freezing.</p> <p>3.3 PLANTING</p> <p>.1 For bare root stock, place 50 mm backfill soil in bottom of hole. Plant trees and shrubs with roots placed straight out in hole.</p> <p>.2 For jute burlap root balls, cut away top one third of wrapping and wire basket without damaging root ball. Do not pull burlap or rope from under root ball.</p> <p>.3 For container stock or root balls in non-degradable wrapping, remove entire container or wrapping without damaging root ball.</p> <p>.4 Plant vertically in locations as indicated. Orient plant material to give best appearance in relation to structure, roads and walks.</p> <p>.5 For trees and shrubs: <ul style="list-style-type: none"> .1 Backfill soil in 150 mm lifts. Tamp each lift to eliminate air pockets. When two thirds of depth of planting pit has been backfilled, fill remaining space with water. After water has penetrated into soil, backfill to final grade. .2 Place plant material to depth equal to depth they were originally growing in nursery. .3 Form a 100 mm deep watering saucer around the outer edge of hole. .4 For ground covers, backfill soil evenly to finish grade and tamp to eliminate</p>						