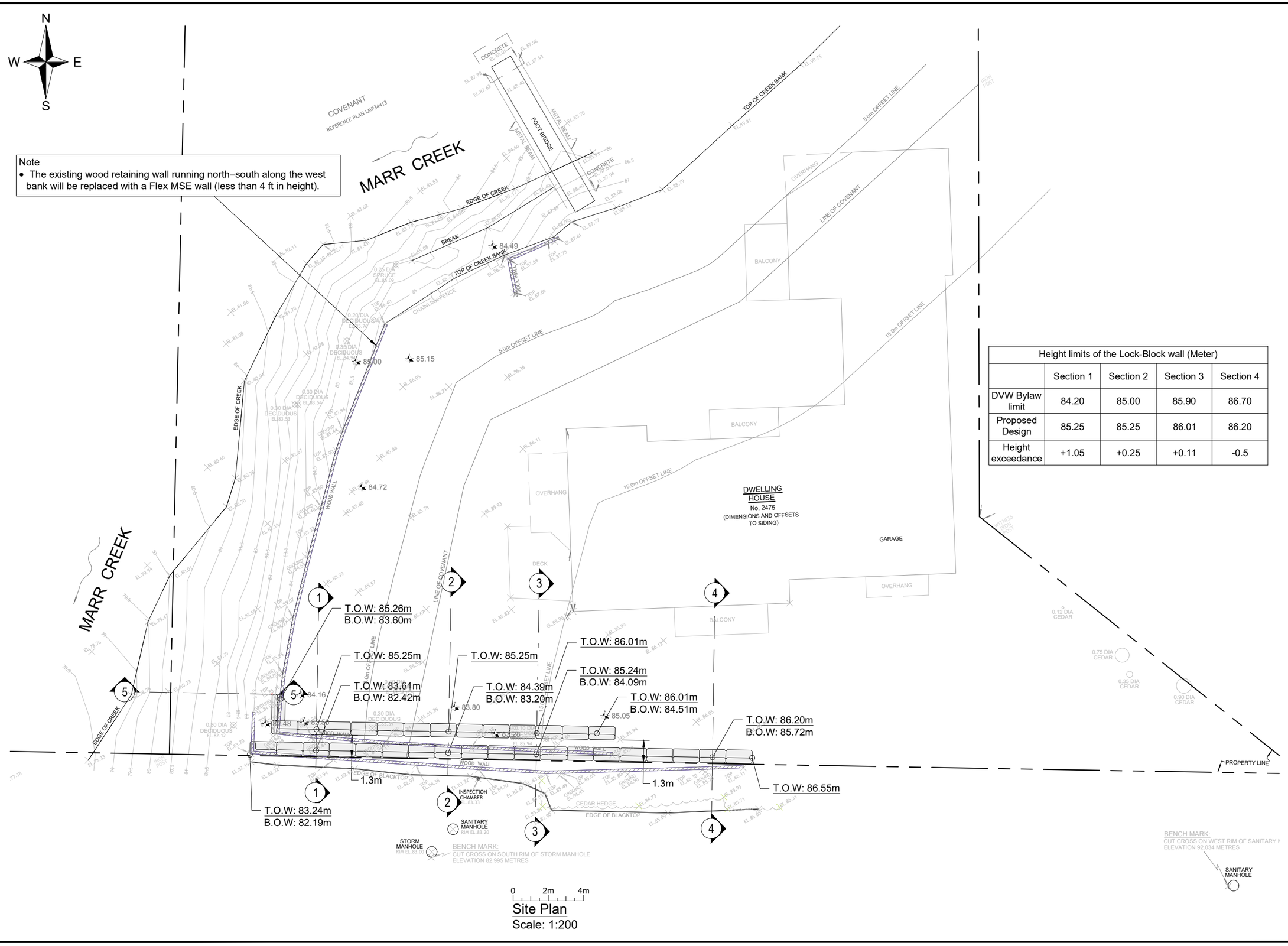

Height limits of the Lock-Block wall (Meter)				
	Section 1	Section 2	Section 3	Section 4
DVW Bylaw limit	84.20	85.00	85.90	86.70
Proposed Design	85.25	85.25	86.01	86.20
Height exceedance	+1.05	+0.25	+0.11	-0.5

General notes:
- Original in grayscale.
- Sheet size: 11"x17".
- Numerical scales require full size print.

Seal:

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA K. E. SAVAGE

2026-04-24

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C	Issued for Discussion	2026-04-24
B	Issued for Discussion	2025-07-14
A	Issued for Discussion	2025-06-17
R	Description	YYYY-MM-DD

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info@ramconsulting.com

Engineers and Geoscientists British Columbia
Permit to Practice Number: **1002292**

Client:
ADAM AND ANDREA BROVENDER
2475 Palmerston Ave,
West Vancouver, BC

Project:
PROPOSED RETAINING WALL
2475 Palmerston Ave,
West Vancouver, BC

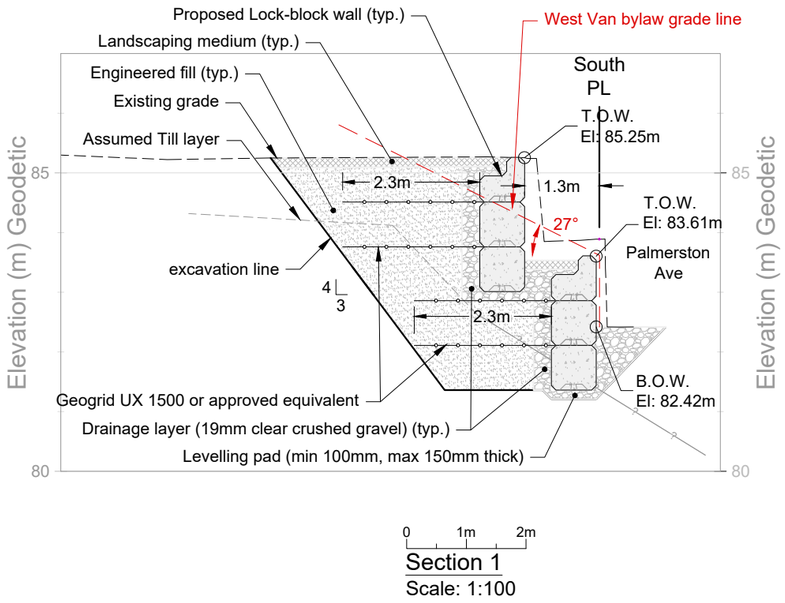
Sheet title:
RETAINING WALL DESIGN
Site Plan

Drw by:	Des by:	Chk by:
HN/SH	AR	KS

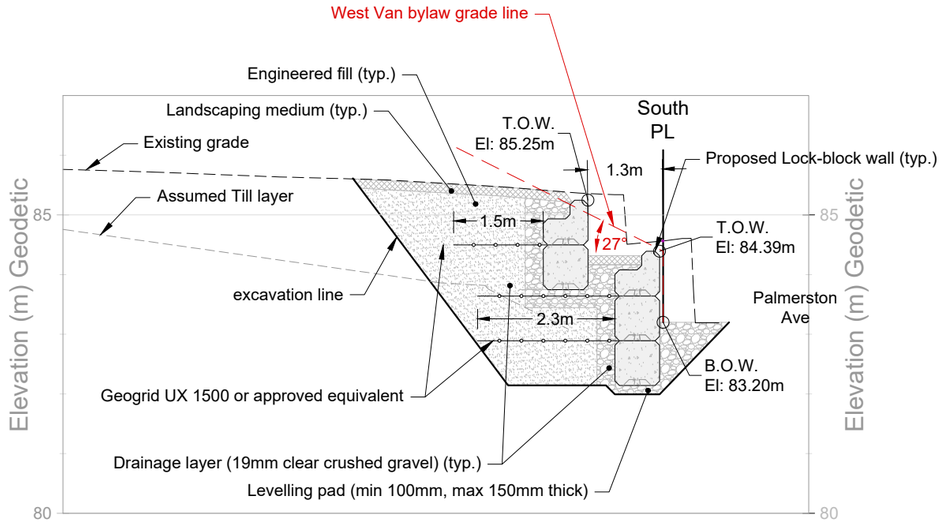
Scale:	File no:
AS SHOWN	121-4976

Sheet:
G1 of 4

Scale check: 10mm 1 inch



Section 1
Scale: 1:100



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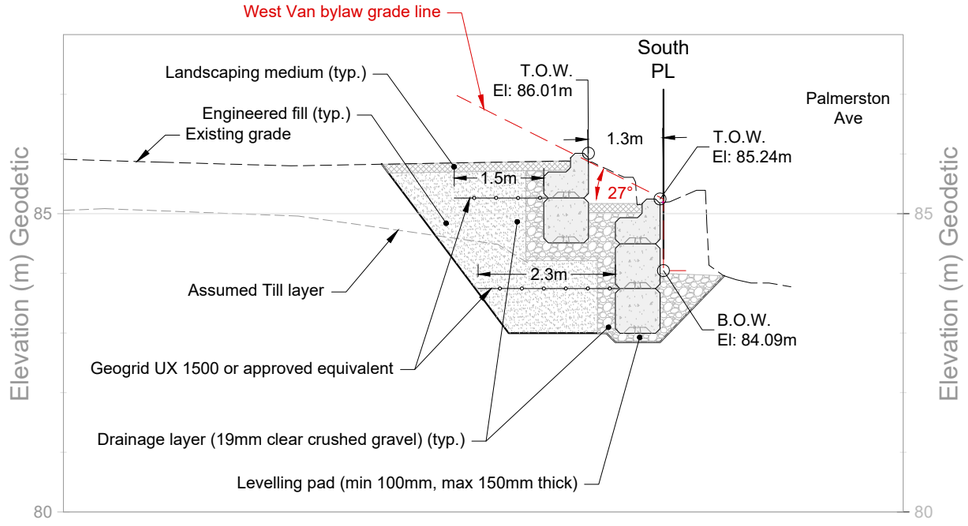
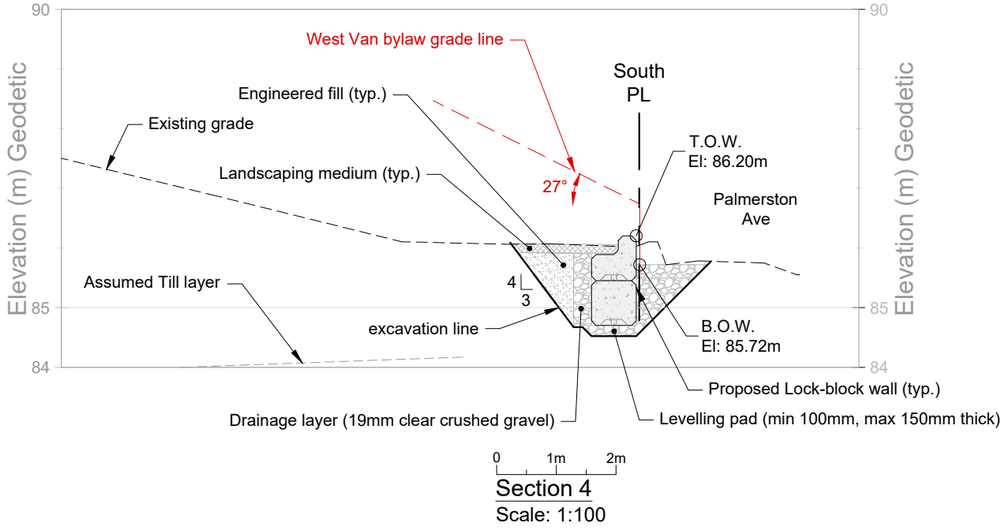


Section 3
Scale: 1:100



Section 4
Scale: 1:100

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Seal:

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Client:
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2475 Palmerston Ave,
West Vancouver, BC

Project:
PROPOSED RETAINING WALL
2475 Palmerston Ave,
West Vancouver, BC

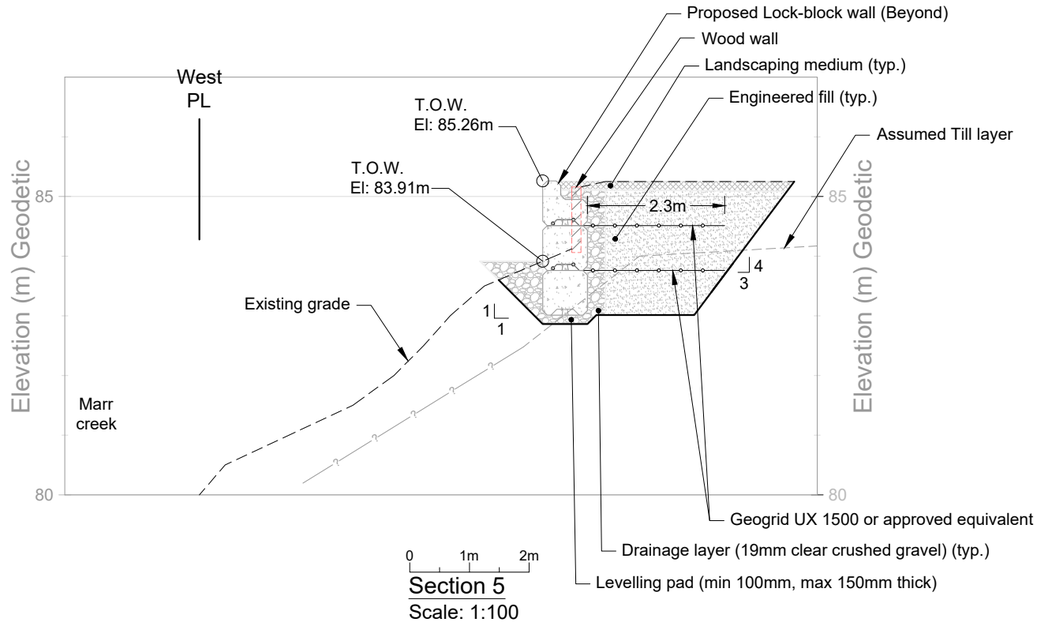
Sheet title:
RETAINING WALL DESIGN
Sections 1, 2, 3 and 4

Drw by:	Des by:	Chk by:
HN/SH	AR	KS

Scale:	File no:
AS SHOWN	121-4976

Sheet: G2 of 4

Scale check: 10mm 1 inch



Section 5
Scale: 1:100

General notes:
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Seal:

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Project:
PROPOSED RETAINING WALL
2475 Palmerston Ave,
West Vancouver, BC

Sheet title:
RETAINING WALL DESIGN Section 5

Drw by:	Des by:	Chk by:
HN/SH	AR	KS

Scale:	File no:
AS SHOWN	121-4976

Sheet:
G3 of 4

Scale check: 10mm 1 inch

RETAINING WALL SPECIFICATIONS

1.0. GENERAL

1.1. References
- Hobbs, Winter & MacDonlad B.C. Land Surveyors, survey plan dated 2022-01-12.

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

1.3. Soil
Defined as earth which can be removed by hydraulic excavation equipment suitably equipped and in good repair.

1.4. Rock
Defined as rock or bedrock in excess of 35ft^3 (1m^3) volume which cannot be removed using a 235C Excavator equipped with a single tooth ripper.

1.5. Stability
Any significant soil movement, or slough larger than 2ft^2 (0.2m^2) face area, to be reported immediately to the Geotechnical Engineer.

1.6. Hoarding
Ensure hoarding, adequately braced, is provided on all perimeter slopes. Hoarding should meet the requirements of the municipality.

1.7. Erosion Control
Unless noted or directed otherwise by the Geotechnical Engineer, protect all soil slopes with 6 x 6 x 10/10 WWM on a 6 mil polyethylene sheet. Mesh is to be wire-tied to 10M pins driven 2ft (0.6m) into soil at 20ft (6.0m) each way.

1.8. Utilities
The contractor cannot rely on the information provided in these drawings and must verify utility information by independently collecting relevant reference drawings and field verification as required. Bring any discrepancies between these and information contained herein to the attention of the Geotechnical Engineer, to review the design and revise as required.

2.0. MATERIALS
Samples and technical specifications for proposed alternative materials may be submitted to the Geotechnical Engineer for technical review. Substitutions are subject to review by the General Contractor and/or Prime Consultant for contractual implications.

2.1. Filter Cloth
Non-woven needle punch Terrafix 270R, or an approved equivalent.

2.2 Concrete Modules (e.g. Lock-Blocks, or an approved equivalent)
The fascia of the retaining walls shall be constructed using Lock-Block precast concrete blocks (ie. generally measuring 2'-6" (0.75m) by 2'-6" (0.75m) by 5' (1.50m) complete with lifting loop, consistent interlocking keys and bevelled corners or an equivalent, as approved by the Geotechnical Engineer). Half blocks to be used to construct required interlocking geometry where necessary.

2.3. Drainage Layer & Levelling Pad
Clear crushed gravel, passing a 1" (25mm) screen and retained on a 3/4" (19mm) screen. The levelling pad must be used to provide a level surface for the first layer of blocks. The levelling pad should have a 6" (150mm) thickness, be placed and compacted directly on dense, natural, undisturbed soil approved by the Geotechnical Engineer.

2.4. Geogrid
The geogrid shall possess the design properties of Tensar UX 1500 MSE or an approved equivalent. All geogrid material should be inspected on delivery to the jobsite to ensure proper material strengths as specified in the project documents. A product certification should be supplied with each shipment to verify that the delivered product conforms to the suppliers published values. Primary strength direction of geogrid to be confirmed prior to cutting.

3.0. INSTALLATION PROCEDURES
Workers shall be provided with appropriate safety gear. Contractor to carry out a daily site reconnaissance around the excavation and perimeter and report any deterioration to the Geotechnical Engineer immediately.

3.1. Excavation
Prior to excavation the Contractor shall:
Consult with the relevant authorities for appropriate methods of locating utilities.
Determine the locations of all structures and underground services that may be affected by the work.
Notify the Geotechnical Engineer and the Utility Companies 48 hours before commencing the excavation.
The contractor shall excavate to the lines and grades shown on the construction drawings. Excavation slopes may be constructed at 3.0 horizontal to 4.0 vertical, subject to review by RAM Geotechnical Engineering Ltd. The exposed excavation slopes are to be covered by 6-mil polyethylene sheeting that is securely attached to the ground. This sheeting must be removed prior to placing any backfill.

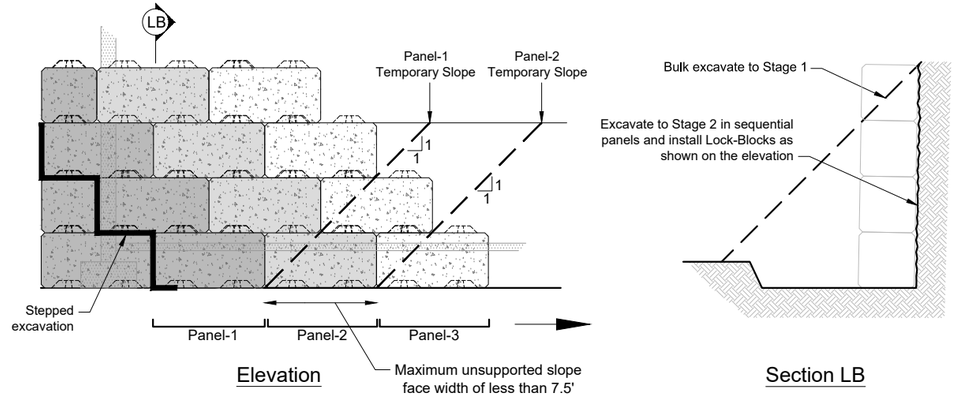
3.2. Lock-Block Installation
The drawings include elevation(s) and cross-section(s) of the proposed retaining wall(s) complete with recommendations.
If applicable, the Lock-Blocks are to be constructed with a batter as shown in the sections. The blocks should be staggered to provide an interlocking effect and installed in accordance with the manufacturer's recommendations, taking special care and regular measurements to assure proper installation of the blocks.

Details of excavation and installation of blocks must be reviewed by the Geotechnical Engineer prior to excavation.

3.3. Site Drainage
The Contractor is responsible for construction and maintenance of works, site drainage, and sediment control during construction. That may include, but is not limited to, installation of bypasses, berms and swales to collect and divert any site water appropriately, via pumping or gravity flow. At the end of each day's operation and prior to rainfall events, the site shall be graded to direct runoff away from excavation slopes.
3.3.1. Control of Surface Water
Adjacent perimeter surface flow to be directed away from excavation slopes. Interior surface flows to be directed to suitable sediment removal system prior to discharge to the municipality sewer.
3.3.2. Control of Groundwater
Suitable measures shall be taken, where necessary, to control groundwater flow at the excavation face during excavation. These shall include the installation of materials such as burlap and filter cloth and pea or birds eye gravel to permit drainage without loss of soil, and where necessary, the replacement of eroded soil with suitable backfill material.

3.4. Foundation Subgrade
The Geotechnical Engineer must have the opportunity to review and approve the foundation subgrade for the retaining wall prior to the placement of blocks.

4.0. QUALITY CONTROL AND TESTING
4.1. Backfilling
Field density testing should be carried out by a qualified testing agency over the full fill depth during backfill placement. In addition, the Geotechnical Engineer should review the backfilling with respect to material type and placement procedures and to ensure density testing is representative. Only lightweight hand-operated equipment shall be allowed within 3' (0.9m) of wall units within the retained fill area.



Lock-Block Wall Installation Stages Detail
N.T.S.

NOTES:
- 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 prior to excavating or installing shoring.
- Configuration of the Lock-Blocks shall be finalized on site during excavation.
- The contractor must establish a coordination meeting on-site with the Geotechnical Engineer as soon as the earthworks contractor is mobilized to the site. No excavation shall be carried out before the coordination meeting.
- Installation of the Lock-Blocks may require full-time review by the Geotechnical Engineer.

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G4 of 4