



PROJECT TYPE: VERTI-BLOCK RETAINING WALL

PROJECT NAME: GUELPH GENERAL HOSPITAL - RETAINING WALL

JOB NO. & ADDRESS: 2023-VC -228 -GUELPH GENERAL HOSPITAL -STAMPED_REV.01

NOTES

- 1. ALL DIMENSION ARE IN MM
- 2. ALL ELEVATIONS & STATIONS ARE IN M UNLESS OTHERWISE NOTED
- 3. READ THESE DRAWINGS IN CONJUNCTION WITH ALL OTHER CONTRACT DOCUMENTS.
- 4. CONTRACTOR TO VERIFY EXISTING CONDITION ON SITE PRIOR TO INSTALLATION FOR EXACT FIT. NOTIFY CONSULTANT / ENGINEER REGARDING ANY DISCREPANCIES.
- 5. DON'T SCALE DRAWINGS





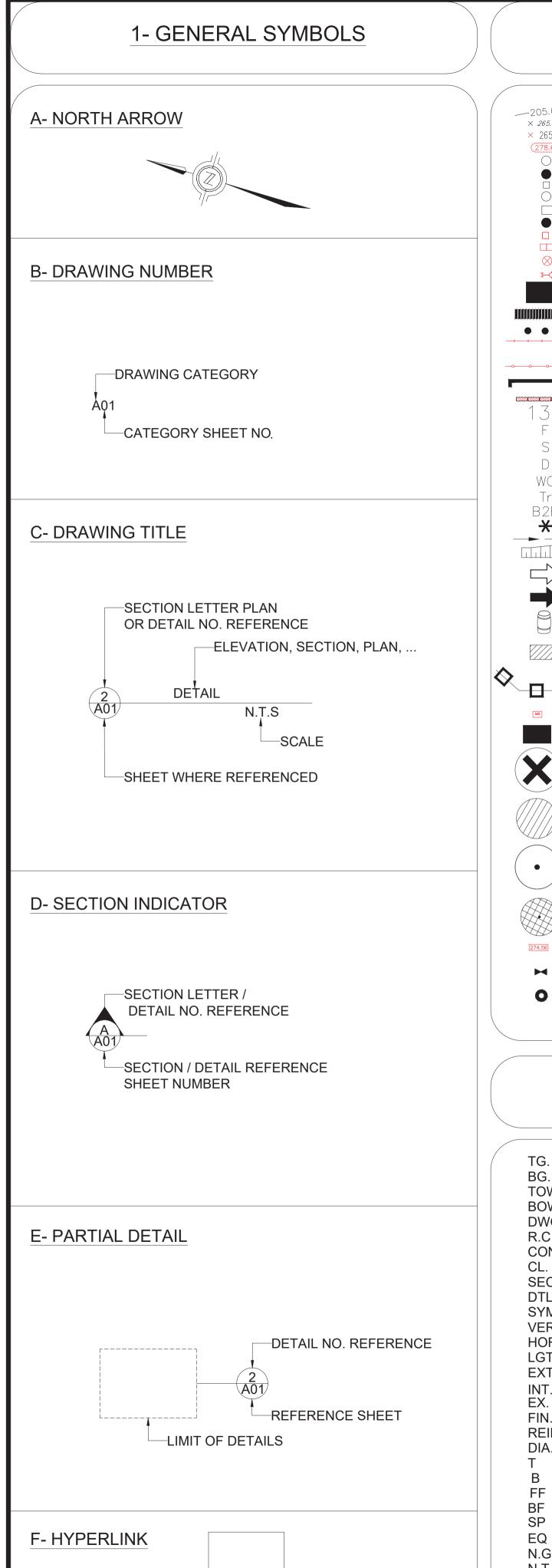


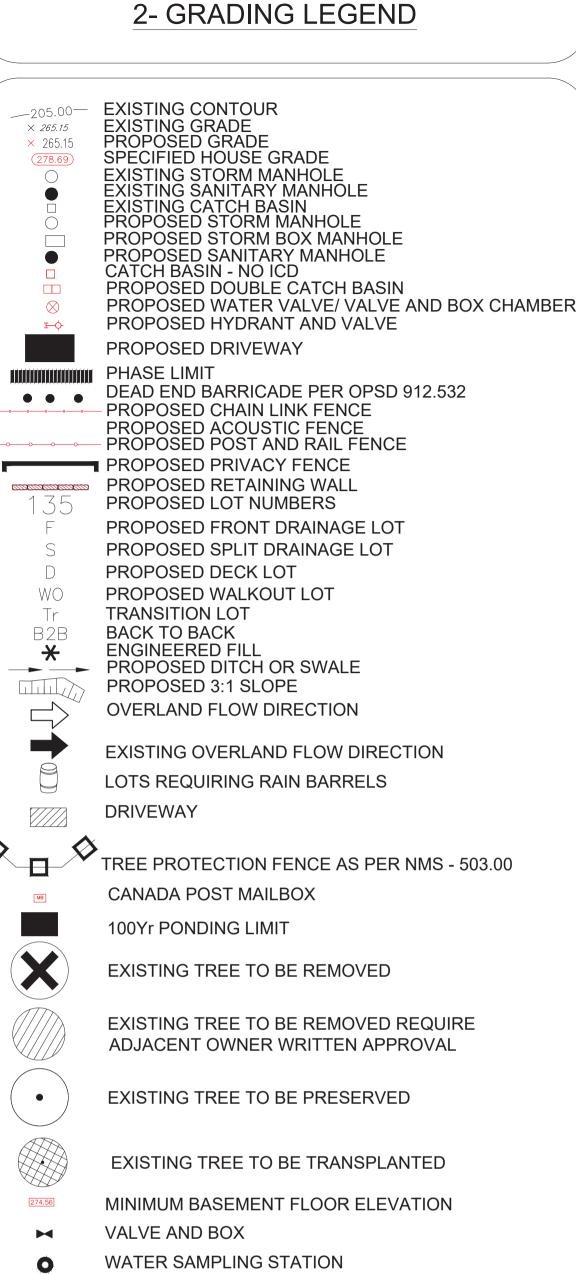
	DRAWING INDEX		
SHEET	DRAWING DESCRIPTION	Rev.	DATE
COV	COVER SHEET		2024-03-26
A-01	LEGEND & ABBREVIATIONS	1	2024-03-26
A-02	SITE PLAN	1	2024-03-26
C-01~03	WALL PLAN, PROFILE &	1	2024-03-26
	BLOCKS ARRANGEMENT		
XS-01~06	WALL CROSS-SECTION	1	2024-03-26



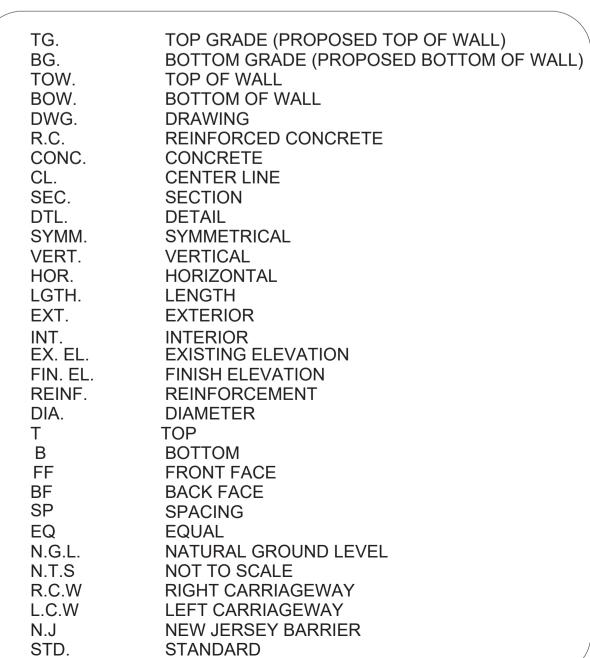
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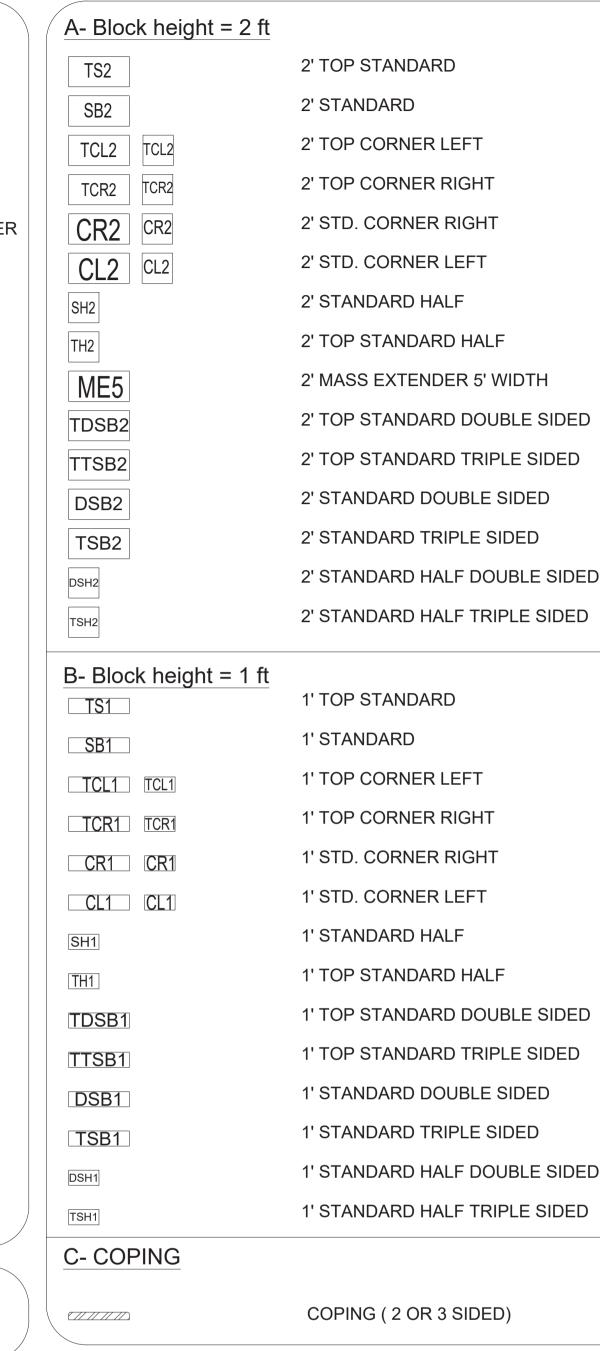


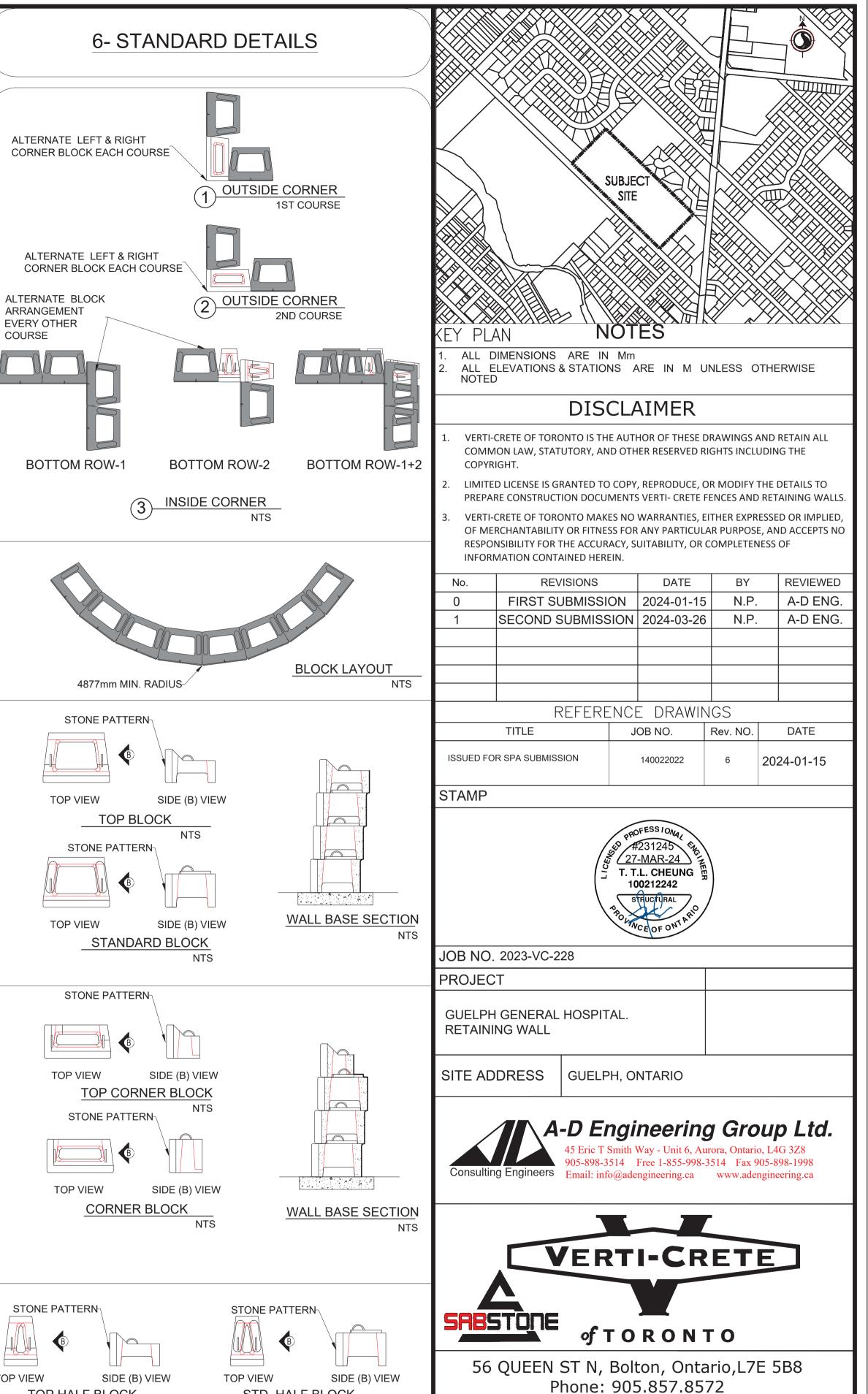


3- GENERAL ABBREVIATIONS



4- BLOCKS SYMBOLS & ABBREVIATIONS





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PROJECT TYPE: VERTI-BLOCK

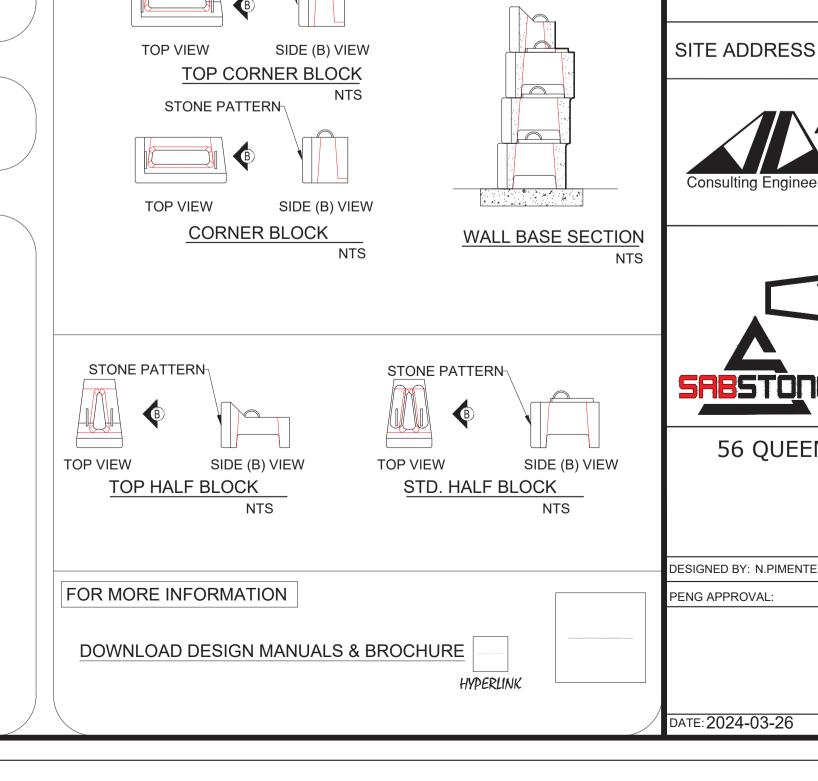
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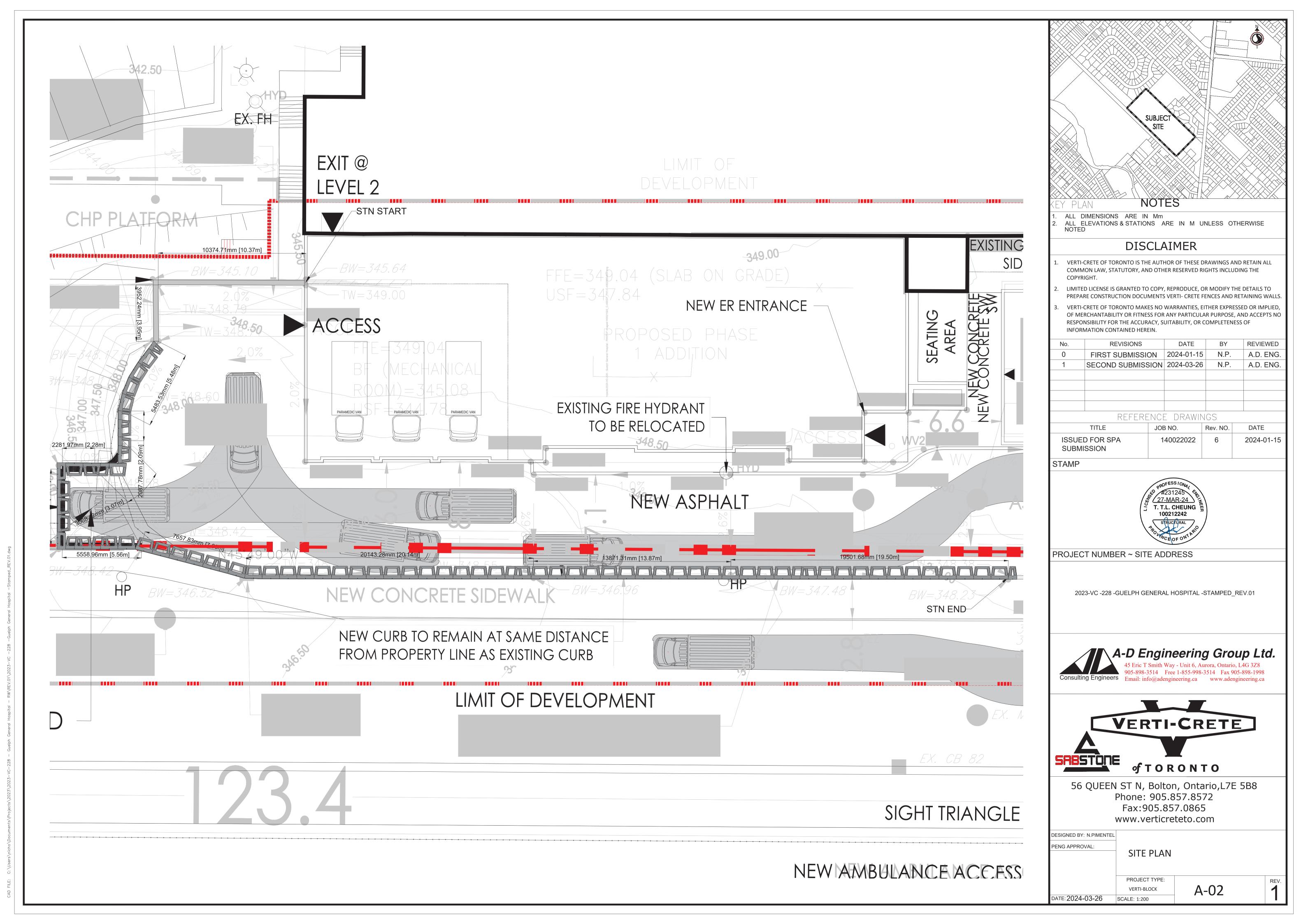
LEGEND, ABBREVIATIONS

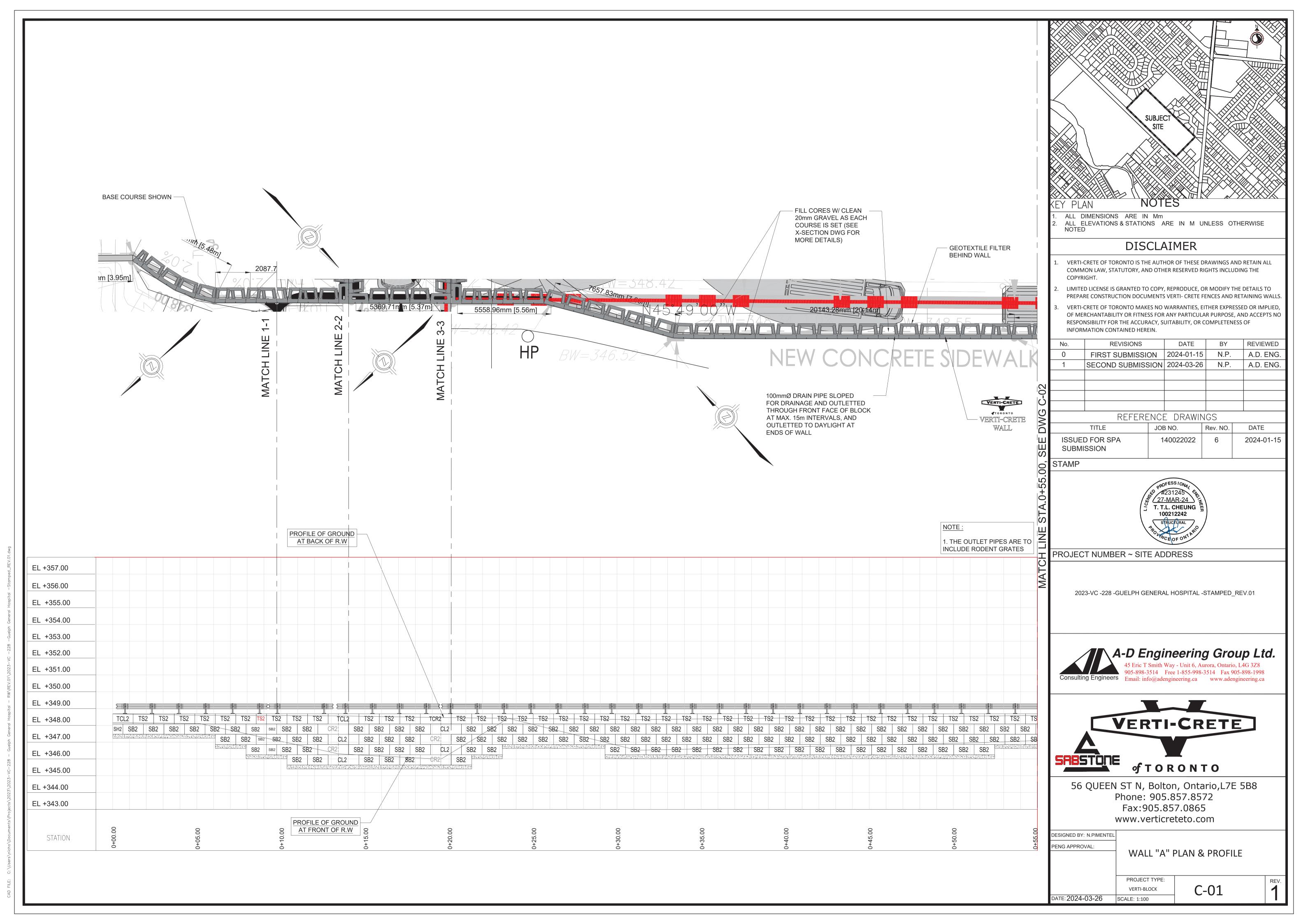
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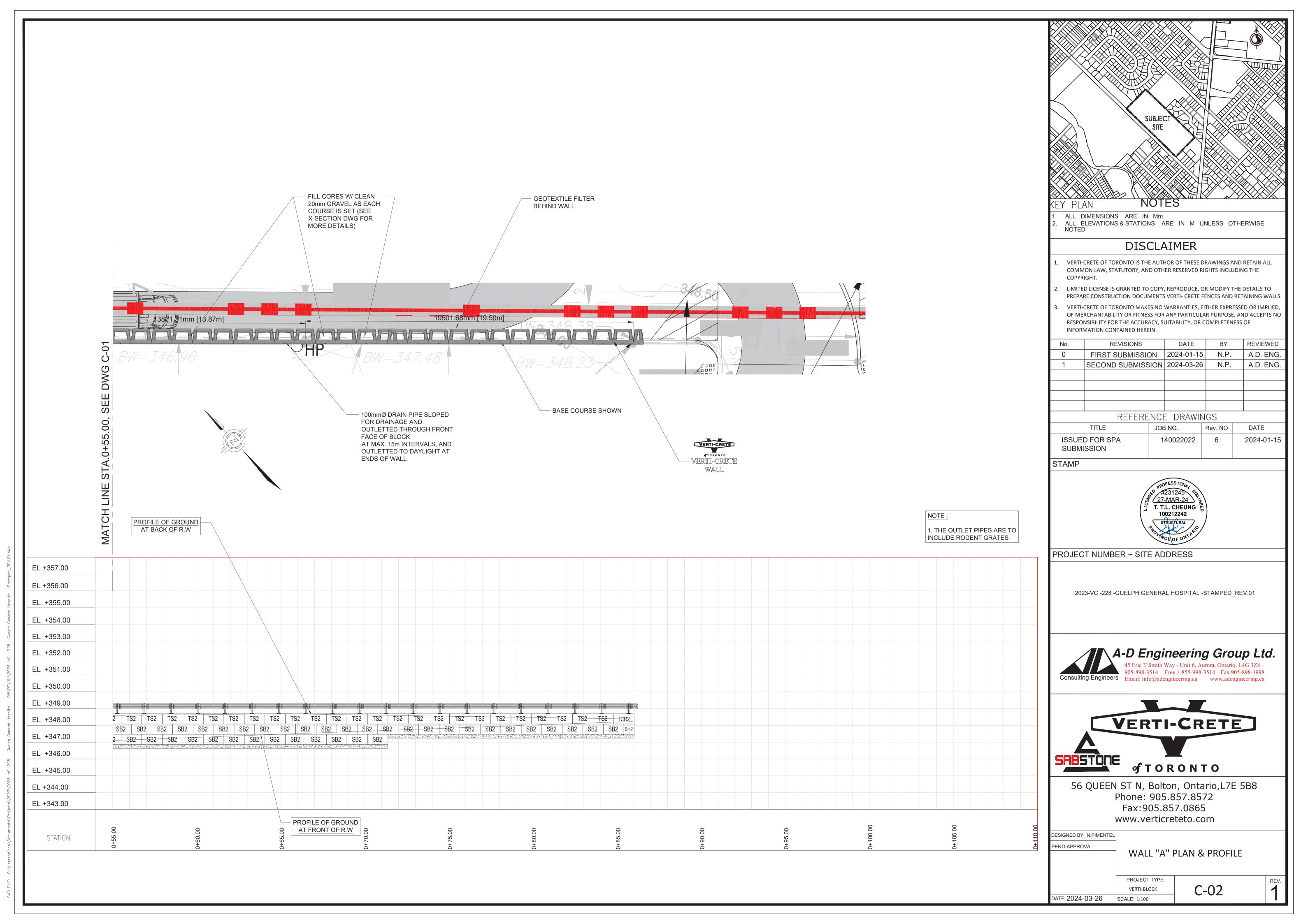
& STANDARD DETAILS

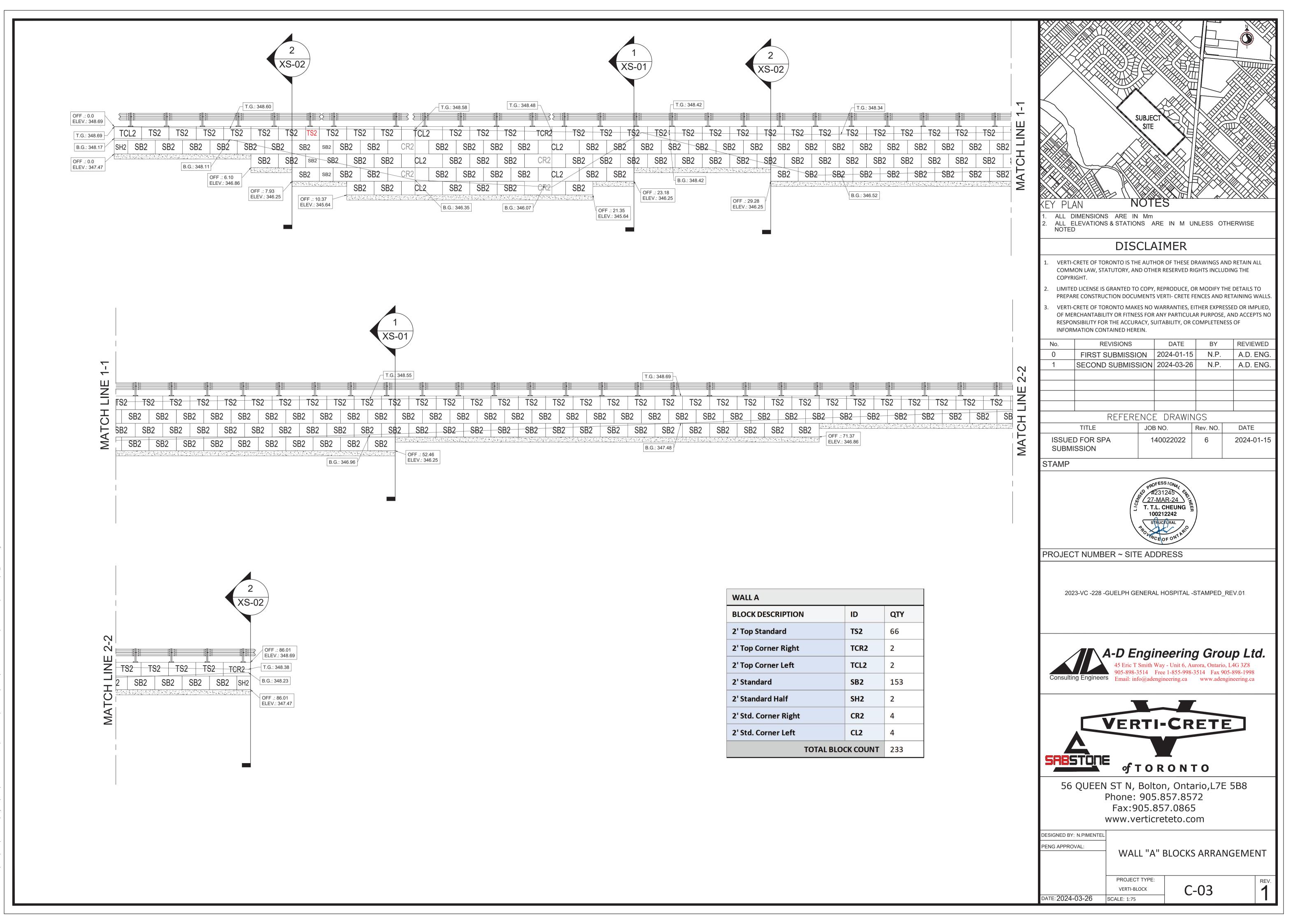




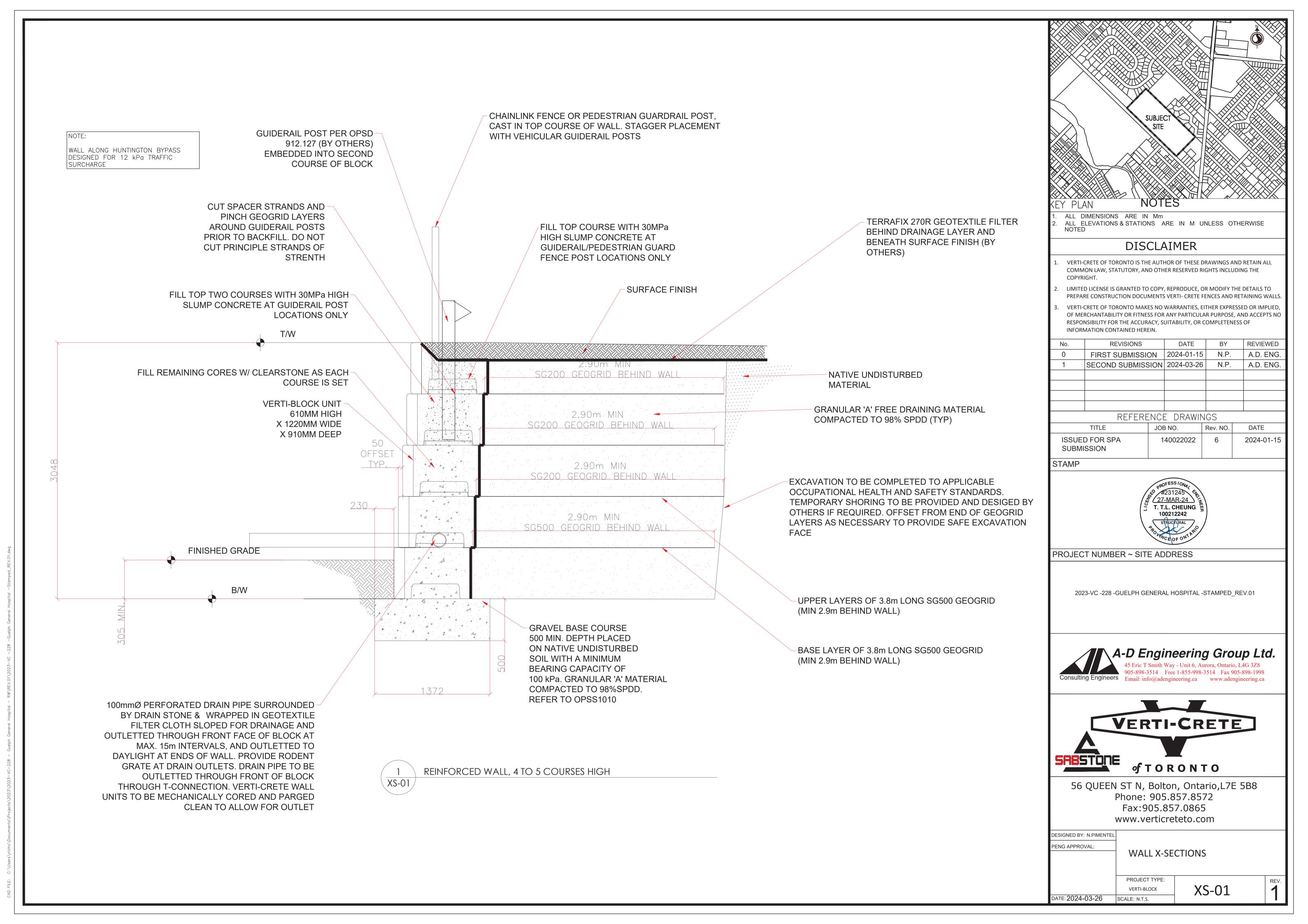


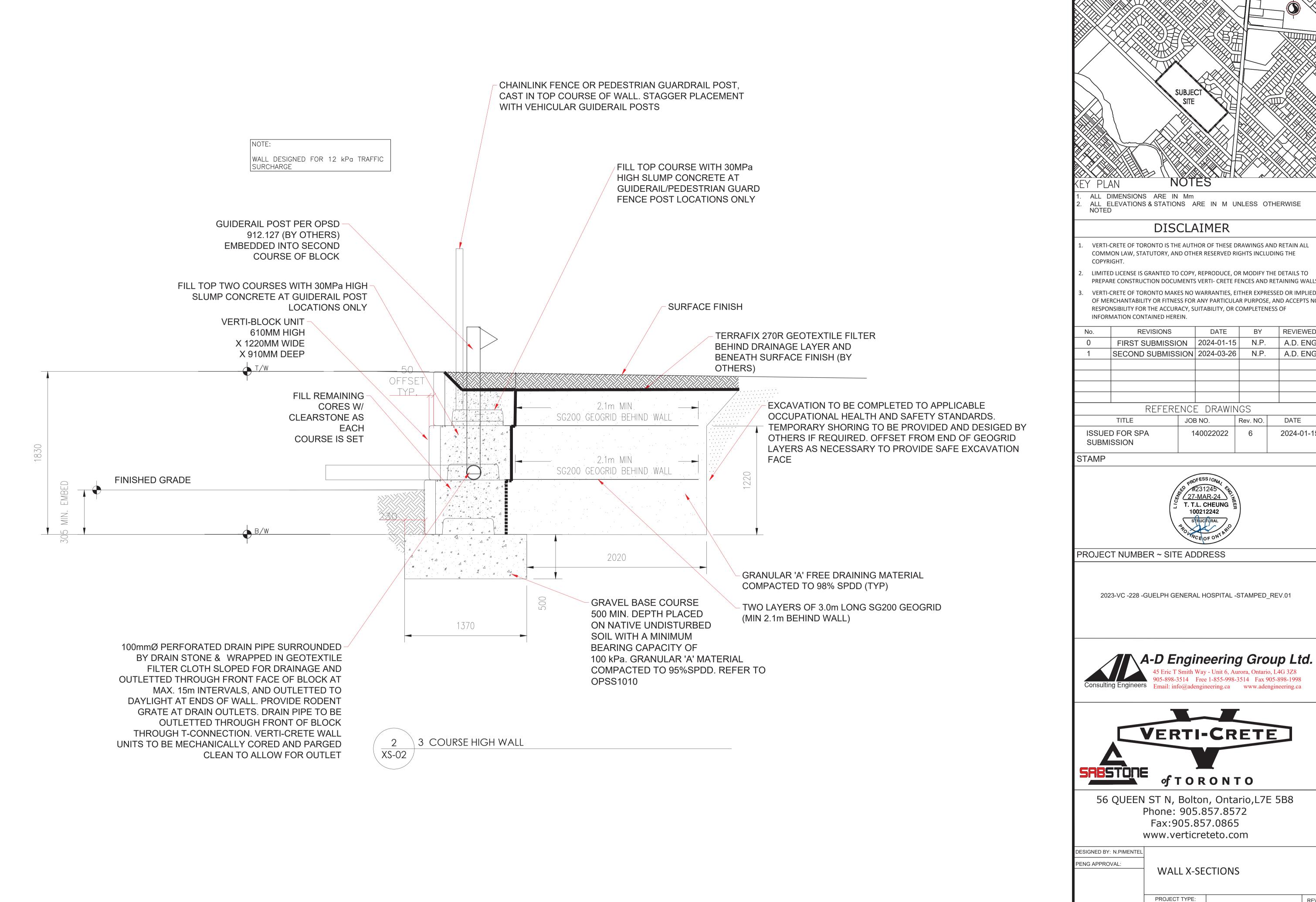






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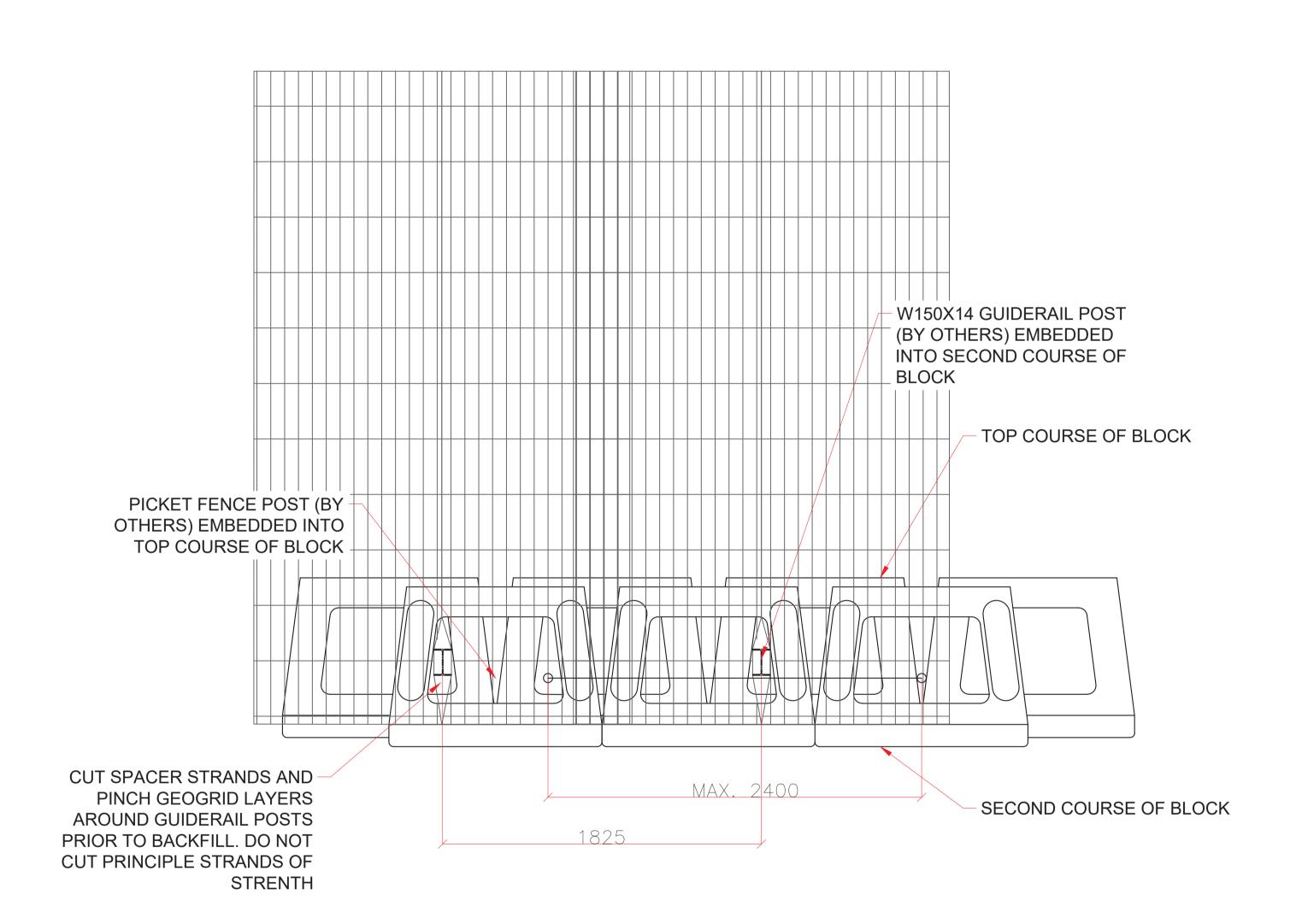
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0	FIRST SUBMISSION	2024-01-15	N.P.	A.D. ENG.
1	SECOND SUBMISSION	2024-03-26	N.P.	A.D. ENG.

DATE Rev. NO. 2024-01-15

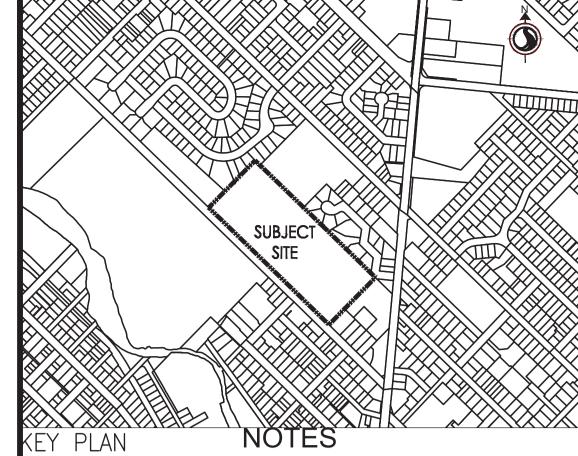




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REFERENCE DRAWINGS					
TITLE	JOB NO.	Rev. NO.	DATE		
ISSUED FOR SPA SUBMISSION	140022022	6	2024-01-15		

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PROJECT NUMBER ~ SITE ADDRESS

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DESIGNED BY: N.PIMENTEL
PENG APPROVAL:

WALL X-SECTIONS

PROJECT TYPE:

VERTI-BLOCK

DATE: 2024-03-26 SCALE: N.T.S.

VERTI-BLOCK RETAINING WALL SYSTEMS

- 1. RETAINING WALL TO BE USED AGAINST ENGINEERED FILL MATERIAL IN ACCORDANCE TO PROJECT DOCUMENTS.
- 2. EXCAVATIONS IN ACCORDANCE WITH APPLICABLE OCCUPATIONAL HEALTH AND SAFETY ACT REGULATIONS.
- 3. RETAINING WALLS TO BE VERTI-BLOCK SYSTEM (COLOUR NATURAL GREY) WITH APPROXIMATE DIMENSIONS OF STANDARD VERTI-BLOCK UNIT:

 LENGTH = 1220mm

 WIDTH = 915mm

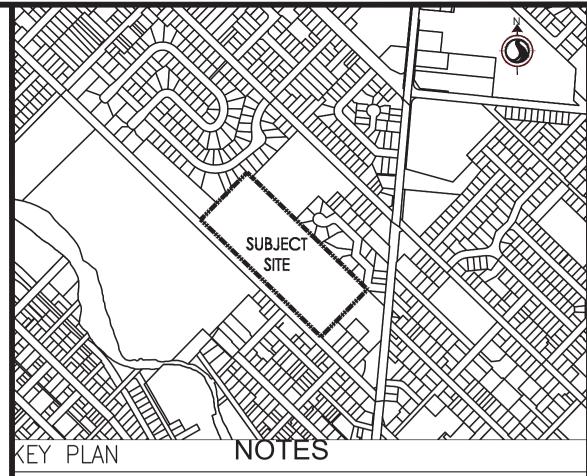
 HEIGHT = 610mm
- 4. WALL SYSTEMS TO BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S SPECIFICATION.
- 5. FIRST COURSE OF BLOCKS TO BE FOUNDED ON MINIMUM 500mm OF GRANULAR "A" BASE MATERIAL COMPACTED TO 98% SPDD OVER UNDISTURBED NATIVE SOIL OR AS NOTED ON DRAWINGS.
- 6. WHERE REQUIRED, BACKFILL MATERIAL IS TO BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 200mm IN THICKNESS. REQUIRED COMPACTION: 98% OF THE STANDARD PROCTOR DENSITY OF THE MATERIAL.
- 7. THE FOUNDATIONS HAVE BEEN DESIGNED FOR A REQUIRED SLS BEARING CAPACITY OF 100 kPa (2000 psf) TO BE CONFIRMED BY GEOTECHNICAL ENGINEER. FOUND ALL FOUNDATIONS ON NATURAL UNDISTURBED INORGANIC SOIL.
- B. A SOILS CONSULTANT SHALL APPROVE ON SITE THE ASSIGNED SAFE NET BEARING PRESSURE FOR EACH FOOTING. IF THE SAFE NET BEARING PRESSURE USED FOR DESIGN IS NOT APPROVED, ENGINEER TO BE NOTIFIED FOR REVISION OF RETAINING WALL DESIGN.
- 9. ASSUMED SOIL PROPERTIES (TO BE CONFIRMED AND APPROVED BY SOILS CONSULTANT):

INTERNAL FRICTION ANGLE = 30° UNIT WEIGHT OF SOIL (DRAINED) = 20 kN/m (128pcf) ACTIVE PRESSURE COEFFICIENT (Ka) = 0.28 (LEVEL BACKSLOPE)

- 10. DESIGN SURCHARGE = 12 kPa (UNLESS NOTED OTHERWISE)
- 11. GEOGRID SHALL BE STRATAGRID SG200 OR HIGHER FOR RETAINING WALL, UNLESS NOTED OTHERWISE ON DRAWINGS. GRID SHOULD BE EMEDDED FULLY TO FRONT FACE OF BLOCK. SLOPE REINFORCEMENT BY OTHERS.
- 12. CONTRACTOR IS RESPONSIBLE FOR RETAINING WALL LAYOUT.
- 13. RETAINING WALLS HAVE DESIGNED IN ACCORDANCE W/LATEST EDITION OF ONTARIO BUILDING CODE, ONTARIO REG. 332/12 AND THE DESIGN MANUAL FOR SEGMENTAL RETAINING WALLS, 3rd EDITION BY THE NATIONAL CONCRETE MASONRY ASSOCIATION.
- 14. RETAINING WALLS HAVE BEEN DESIGNED TO BE ADEQUATE FOR EXTERNAL AND INTERNAL STABILITY.
 WITH CONSIDERATION TO DRAINED SOIL CONDITION, LIVE LOAD SURCHARGE = 12 kPA.

GLOBAL STABILITY IS OUTSIDE THE AREA OF EXPERTISE FOR A-D ENGINEERING GROUP LTD. AND SHALL BE CHECKED BY A LICENSED GEOTECHNICAL ENGINEER.

15. REFER TO OPSD 3121.150 "WALLS RETAINING, BACKFILL MINIMUM GRANULAR REQUIREMENTS" FOR BACKFILL REQUIREMENTS.



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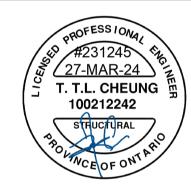
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DESIGNED BY: N.PIMENTEL
PENG APPROVAL:

WALL X-SECTIONS

PROJECT TYPE:

VERTI-BLOCK

DATE: 2024-03-26 SCALE: N.T.S.

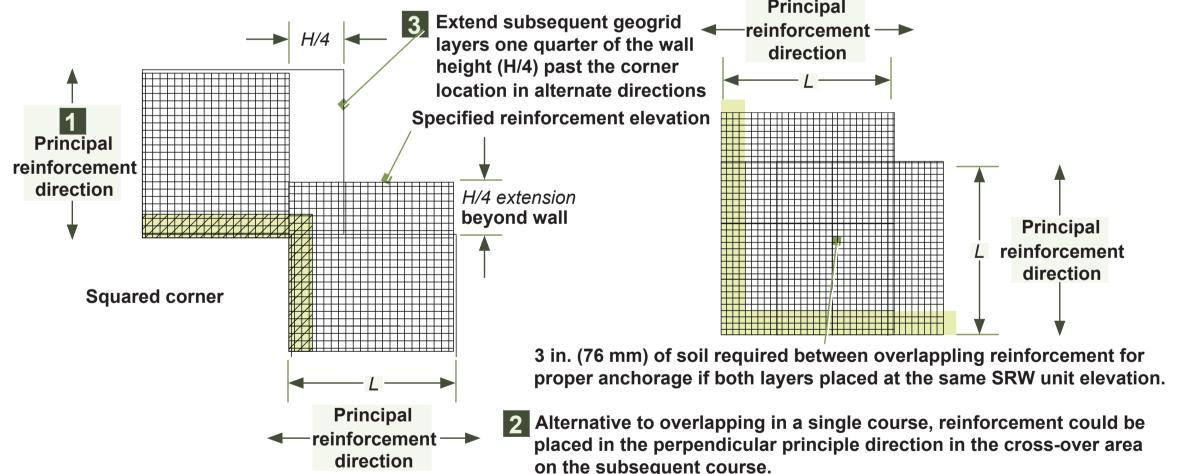
PROPER ORIENTATION OF GEOGRID AND PLACEMENT

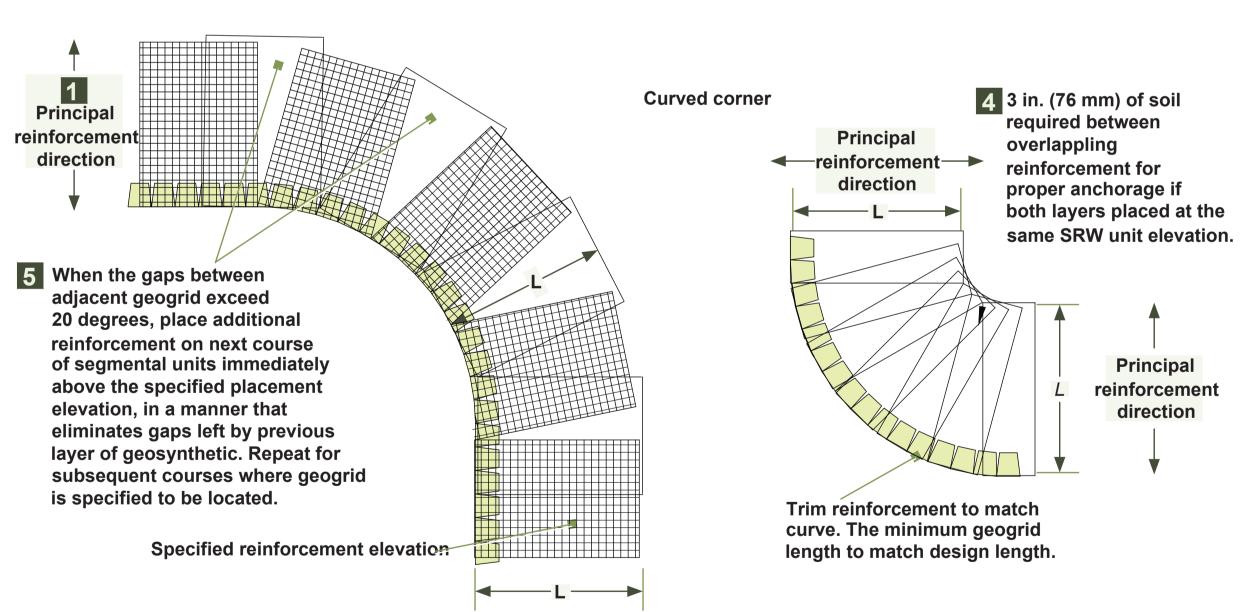
- CUT GEOSYNTHETIC REINFORCEMENT TO DESIGN LENGTH (L) AS SHOWN ON THE PLANS AND INSTALL WITH DESIGN STRENGTH DIRECTION PERPENDICULAR TO THE WALL FACE. BRING GEOSYNTHETIC TO THE FRONT OF THE BLOCK AND SECURE FOLLOWING MANUFACTURER'S DETAILS WITH THE UPPER BLOCK. TYPICALLY THE GEOGRID SHOULD EXTEND TO NO LESS THAN 1 in. (203 mm) FROM THE FACE OF THE WALL.
- FOR STRAIGHT WALLS, PLACEMENT OF ADJACENT SHEETS OF REINFORCEMENT SHOULD BE SIDE-BY-SIDE WITHOUT ANY OVERLAP.
- FOR WALLS WITH CORNERS OR CURVES AS SHOWN BELOW, THE FOLLOWING ARE RECOMMENED PRACTICES FOR GEOGRID PLACEMENT:
- FOR OUTSIDE CORNERS, TO AVOID OVERLAPPING GEOGRID LAYERS, GEOGRIDS SHOULD BE STAGGERED BY ONE COURSE ON EITHER SIDE OF THE CORNER, WEAVING THE STRONG DIRECTION FROM BOTTOM TO TOP OF WALL.
- FOR INSIDE CORNERS, EXTEND THE GEOGRID LAYER INTO THE CORNER FROM ONE SODE A DISTANCE EQUAL TO 25% OF THE TOTAL WALL HEIGHT. ALTERNATE EXTENDED GEOGRID LAYER FROM SIDE TO SIDE PER COURSE TO CREATE A GEOGRID WEAVE AS THE WALL IS BUILT.
- FOR OUTSIDE CURVES, WHERE GEOGRID TAILS OVERLAP NATURALLY, PLACE ROUGHLY 3 in (75 mm) OF GRAVEL FILL OR REINFORCED SOIL BETWEEN THE OVERLAPPING LAYERS.
- FOR INSIDE CURVES, WHERE GEOGRID LAYERS FAN APART AND THE GAP ANGLE EXCEEDS 20 DEGREES, PLACE A SECONDARY, EQUAL LENGTH, LAYER OF GEOGRID ON THE NEXT COURSE ABOVE THE FANNED GAP.

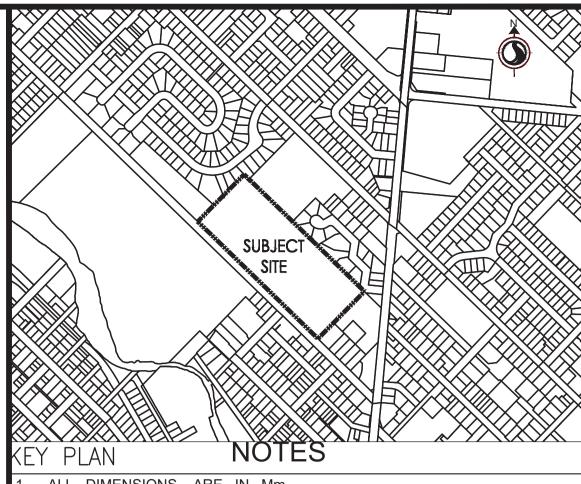
Notes: Alternate placement of reinforcement extension on specified reinforcement elevations.

L: □ Geosynthetic reinforcement design length

H: □ Total finished wall height







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DESIGNED BY: N.PIMENTEL
PENG APPROVAL:

DATE: 2024-03-26

GEO-GRID INSTALLATION

PROJECT TYPE:

VERTI-BLOCK

SCALE: N.T.S.