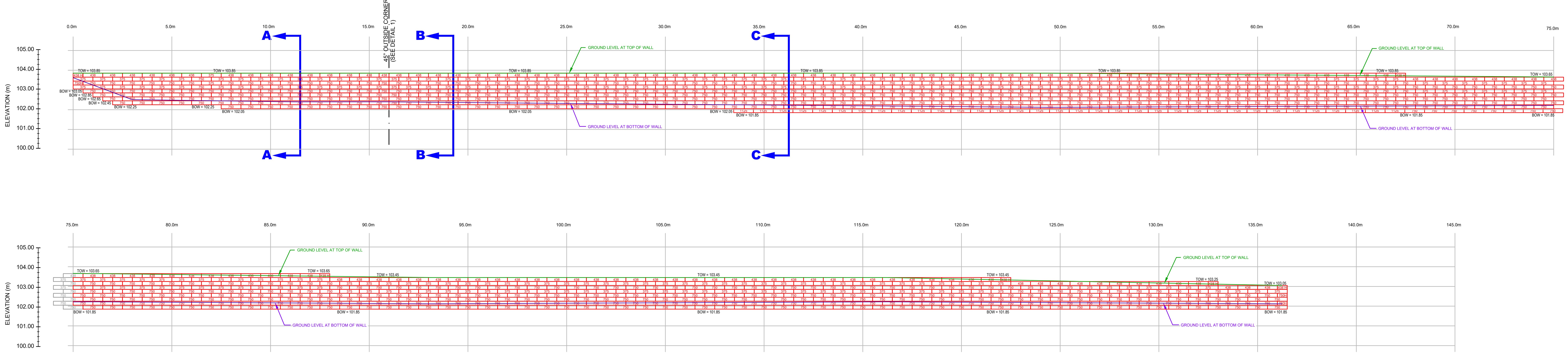
PRELIMINARY PROPOSED PROFILE VIEW:

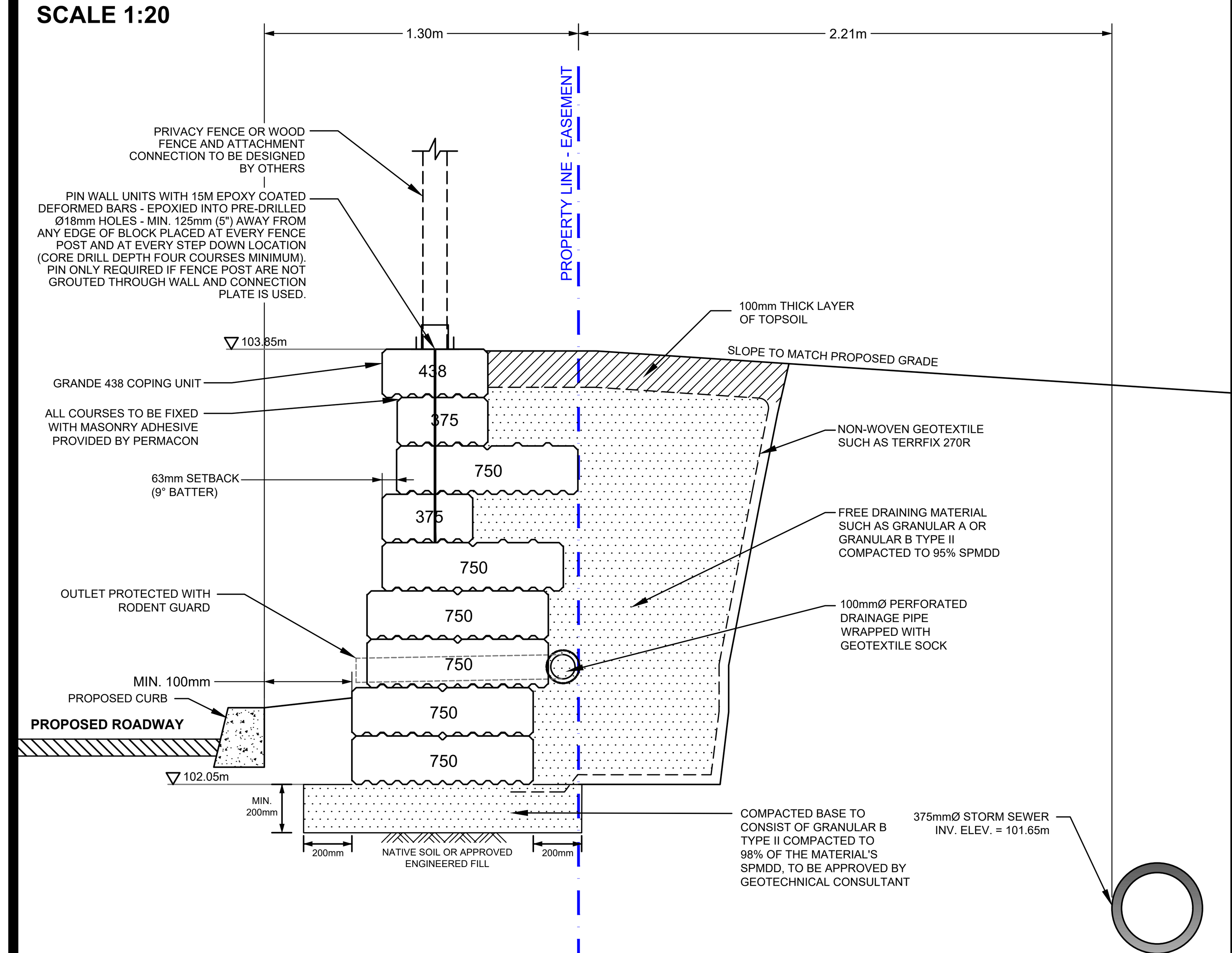
SCALE 1:125

ISSUED FOR REVIEW



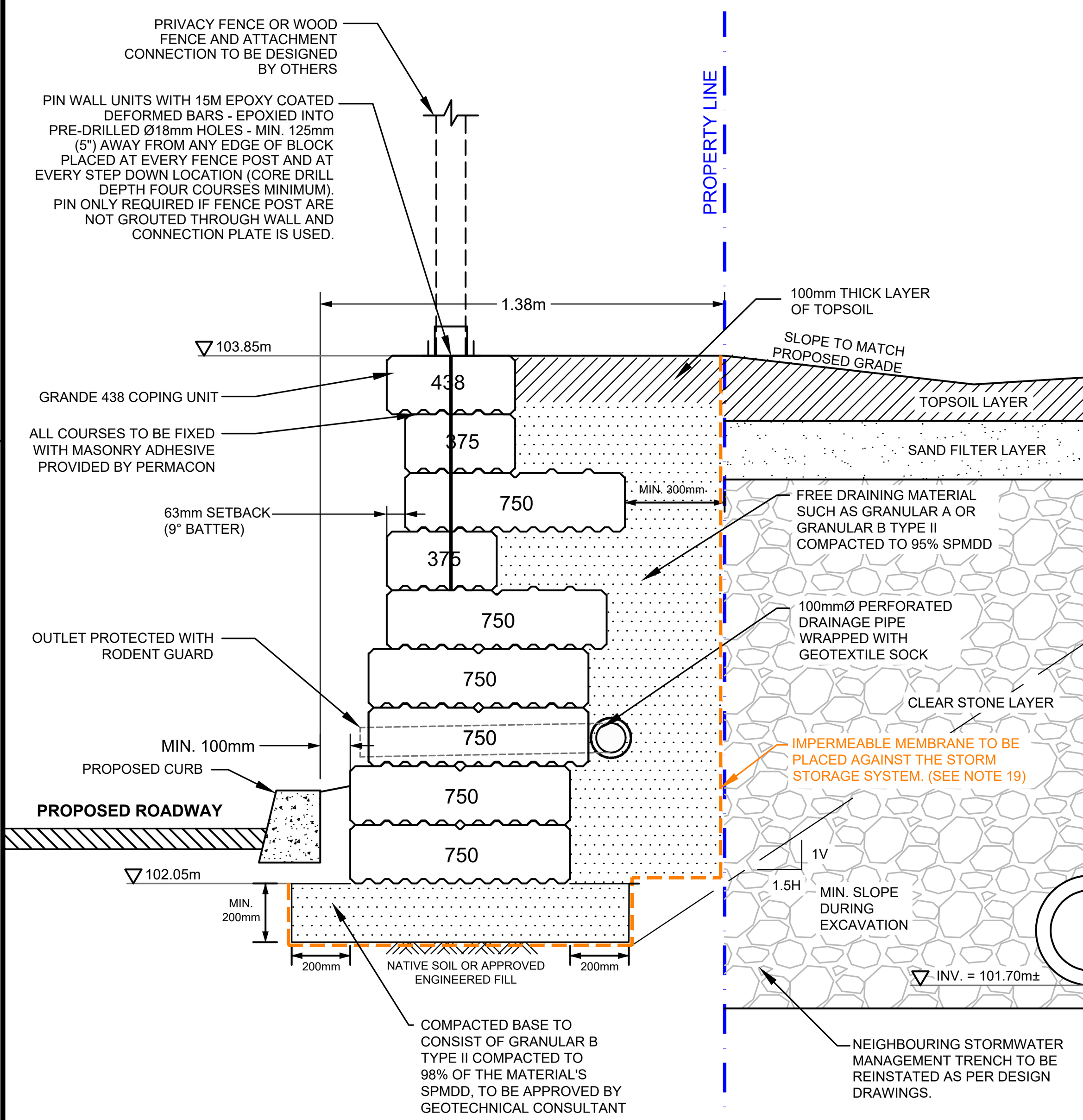
CROSS SECTION A-A:

SCALE 1:20



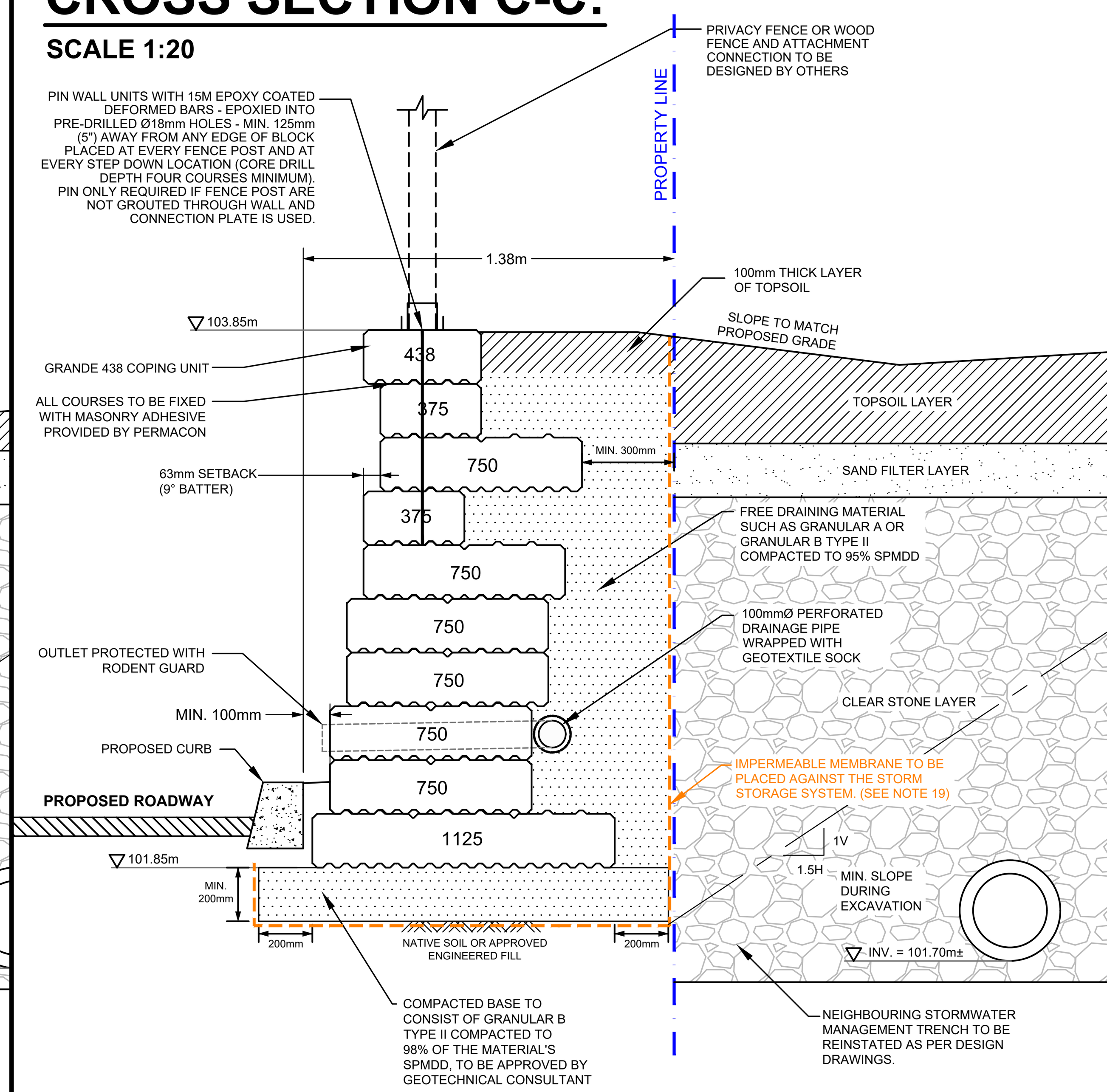
CROSS SECTION B-B:

SCALE 1:20



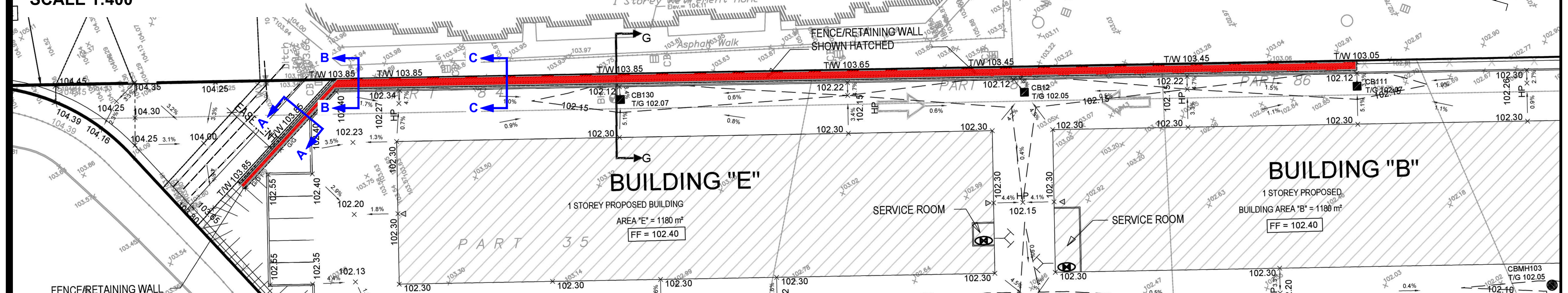
CROSS SECTION C-C:

SCALE 1:20



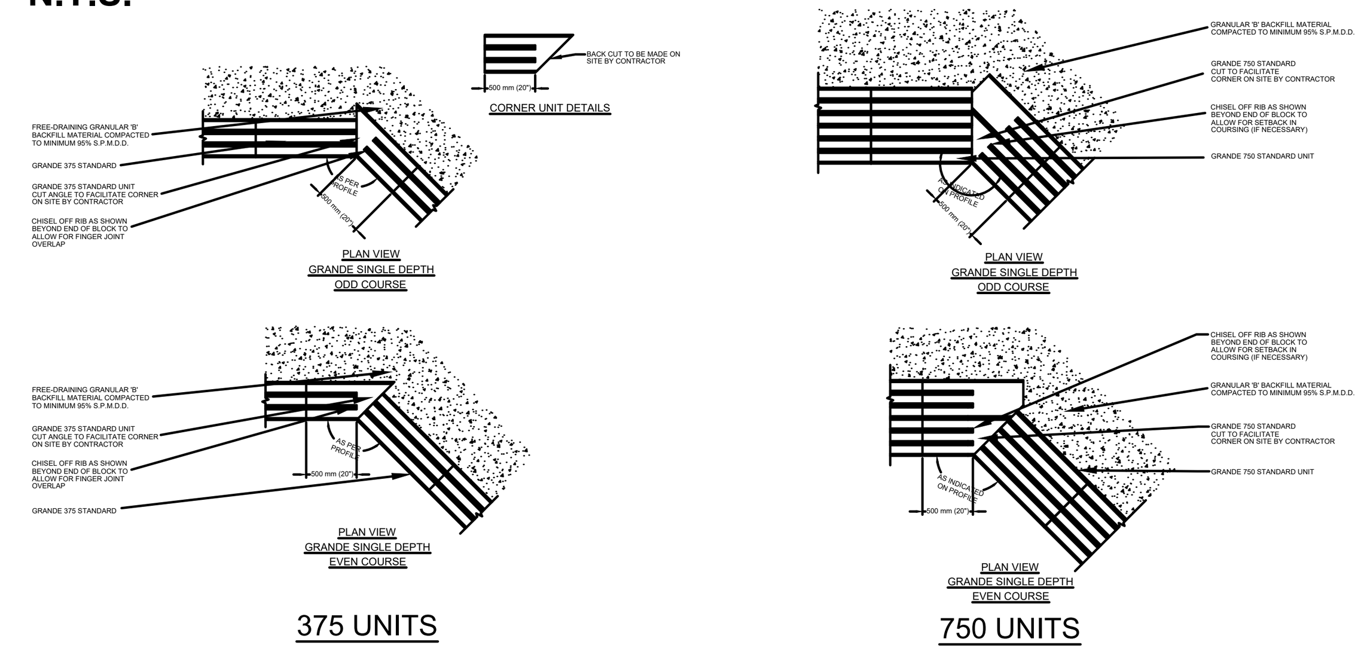
GRADING PLAN:

SCALE 1:400



DETAIL 1:

N.T.S.



NOTES:

1. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR UTILITY CLEARANCES AND CONSTRUCTION SITE SAFETY. PATERSON GROUP SHALL NOT BE RESPONSIBLE FOR MEANS OR METHODS OF CONSTRUCTION OR FOR SAFETY OF WORKERS OR OF THE PUBLIC.
2. THIS DESIGN IS BASED ON THE FOLLOWING SOIL PROPERTIES:

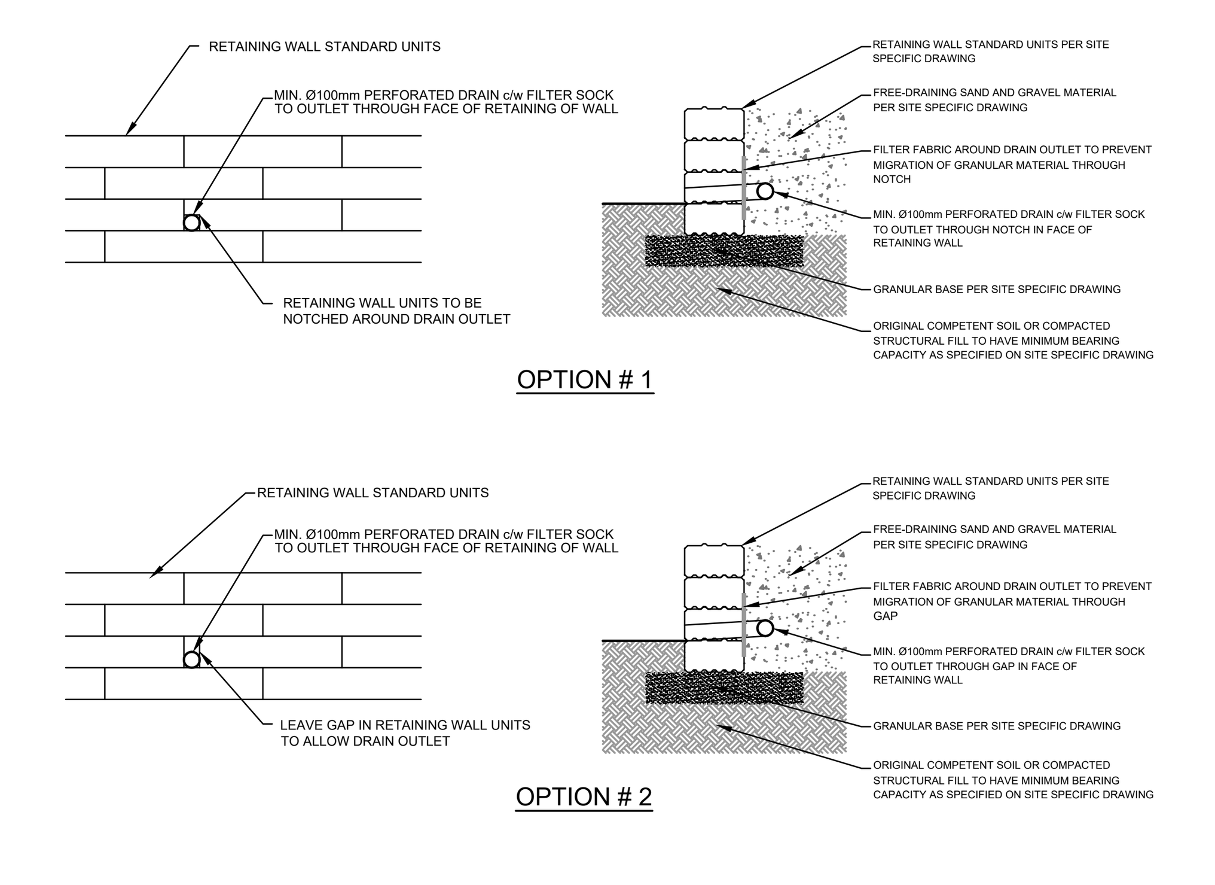
PROPERTY	RETAINED FILL	FOUNDATION MEDIUM
FRICTION ANGLE - ϕ	38°	32°
UNIT WEIGHT - γ	22 kN/m3	18 kN/m3
COHESION - C	0	8 kPa
SOIL TYPE	OPSS GRANULAR B TYPE II	BROWN SILTY CLAY

MATERIAL PROPERTIES ARE BASED ON SITE EVALUATION BY PATERSON GROUP AND DISCUSSIONS WITH CONTRACTOR. SEISMIC LOADING WAS EVALUATED ACCORDING TO THE CURRENT CANADIAN HIGHWAY BRIDGE DESIGN CODE WITH A PEAK GROUND ACCELERATION VALUE OF 0.261.

3. THIS DESIGN IS BASED ON A GRADING PLAN PROVIDED BY HUNTINGTON PROPERTIES BY IBI GROUP, PROJECT No 135470, SHEET No. C-200, GRADING PLAN, REVISION 6 DATED 13 NOVEMBER 2023. THE WALL BASE DESIGN ASSUMES A BEARING RESISTANCE AT SLS OF 120 kPa. THE SITE GEOTECHNICAL ENGINEER SHOULD OBSERVE THE BEARING CONDITIONS AND ADJUST THE THICKNESS OF THE GRANULAR BASE OR RECOMMEND CONCRETE BEDDING TO ACCOMMODATE THE SITE CONDITIONS, IF NECESSARY.
4. RETAINING WALL DESIGN WITH A GLOBAL STABILITY FACTOR GREATER THAN 1.5 UNDER STATIC CONDITIONS AND 1.1 UNDER SEISMIC CONDITIONS. WALL GEOMETRY AND GRADE ELEVATIONS ABOVE AND BELOW THE WALL SHOULD CONFORM WITH THE GRADING PLAN PROVIDED HERE IN IF ACTUAL SITE GRADES VARY SIGNIFICANTLY FROM THOSE SHOWN OR IF THE BACK SLOPE DOES NOT CONFORM, INSTALLATION SHALL NOT PROCEED UNTIL THE DESIGN IS VERIFIED OR MODIFIED IN THE APPLICABLE AREA.
5. PRECAST UNITS SHALL BE GRANDE RETAINING WALL UNITS MANUFACTURED UNDER LICENSE FROM PERMACON.
6. THE WALL BASE SHALL CONSIST OF A MINIMUM OF 200mm OF OPSS GRANULAR B TYPE II. THE GRANULAR BEDDING LAYER SHOULD EXTEND AT LEAST 200mm BEYOND THE FRONT BLOCK FACE AND A MINIMUM OF 200mm BEYOND THE REAR BLOCK FACE. THE BASE SHALL BE SMOOTHED TO ENSURE COMPLETE CONTACT OF RETAINING WALL UNIT WITH BASE. SURFACE OF GRANULAR BASE MAY BE DRESSED WITH FINER AGGREGATE TO AID LEVELING. ENSURE GRADATION OF DRESSING MATERIAL IS SUCH AS TO PRECLUDE LOSS OF FINES INTO BASE. THE THICKNESS OF DRESSING LAYER SHOULD NOT EXCEED 3 TIMES THE MAXIMUM PARTICLE SIZE USED.
7. WALL IS DESIGNED WITH A MIN. 200mm TOE EMBEDMENT WITH A GRANULAR BEDDING LAYER EXTENDING A MINIMUM 200mm BEYOND THE FACE, AND A MINIMUM 200mm BEYOND THE HEEL OF THE BASE BLOCK.
8. THE CONDITIONS WILL BE EVALUATED BY THE GEOTECHNICAL ENGINEER DURING PREPARATION FOR WALL CONSTRUCTION IN EACH AREA TO CONFIRM THE SUBSURFACE PROFILE INDICATED BY THE GEOTECHNICAL REPORT WITHIN THE FOOTPRINT OF THE PROPOSED WALL . WHERE GRANULAR BEDDING WILL NOT BE SUFFICIENT, THE USE OF CONCRETE BEDDING MAY BE REQUIRED AND WILL BE PROVIDED AS SITE INSTRUCTIONS.
9. BACKFILL MATERIAL SHALL BE APPROVED BY THE SITE GEOTECHNICAL ENGINEER PRIOR TO USE AND SHOULD CONSIST OF OPSS GRANULAR B TYPE II B FOLLOWED BY SUITABLE BACKFILL MATERIAL. ALL FILL WITHIN A 1H:1V ZONE UP AND BACK FROM THE HEEL SHOULD ALSO BE COMPACTED. BACKFILL SHALL BE PLACED IN MAXIMUM 300mm LOOSE LIFTS AND COMPACTED TO A MINIMUM OF 95% OF SPMDD. MOISTURE CONTENT SHOULD BE CONTROLLED AND MAINTAINED WITHIN -3 TO +4 PERCENT OF OPTIMUM.
10. MAINTAIN TEMPORARY GRADES TO DIVERT SURFACE WATER AWAY FROM THE RETAINING WALL EXCAVATION. SLOPE FINAL BACKFILL TO PROVIDE POSITIVE DRAINAGE AND TO ELIMINATE PONDING.
11. EXCAVATION SIDE SLOPE SHOULD BE PROTECTED TEMPORARILY DURING CONSTRUCTION FROM PRECIPITATION EVENTS BY PLACEMENT OF TARPS.
12. ALL RETAINING WALL RELATED INSPECTIONS (BEARING SURFACE, COMPACTION, BLOCK INSTALLATION, ETC.) MUST BE COMPLETED BY PATERSON GROUP. ONCE THE WALL CONSTRUCTION IS COMPLETED AND REVIEWED BY PATERSON DURING CONSTRUCTION, A CERTIFICATE LETTER WILL BE ISSUED BY PATERSON GROUP.
13. ANY CUTTING OF BLOCKS TO SUIT SITE CONDITIONS OR WALL DESIGN WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
14. INSTALL 100mmØ PERFORATED PIPE SUBDRAIN WRAPPED WITH GEOTEXTILE SOCK BEHIND THE RETAINING WALL . PROVIDE CLEAR STONE SURROUND TO PROTECT PIPE FROM CLOGGING AND PROVIDE OUTLETS THROUGH THE WALL TO DRAINAGE DITCH OR GROUND SURFACE AT MINIMUM INTERVALS OF 20.0m
15. TO INSTALL PRIVACY FENCE, THE TOP PORTION OF THE RETAINING WALL SHOULD BE REINFORCED BY A 15M REINFORCEMENT BAR INSTALLED BY CORING THROUGH THE COPPING BLOCK AND A MINIMUM OF 3 COURSES. THE BAR SHOULD BE GROUTED IN PLACE WITH A MINIMUM 30MPA NON-SHRINK GROUT AT A MINIMUM 1.0M SPACING.
16. USE MASONRY ADHESIVE RECOMMENDED BY THE SUPPLIER FOR ALL COURSES .
17. PRELIMINARY PROFILE PROVIDED. PROFILE IS AT THE DISCRETION OF THE INSTALLER AND SHOULD FOLLOW MANUFACTURERS RECOMMENDATIONS.
18. THE CONTRACTOR SHOULD REFER TO THE INSTALLATION MANUAL PROVIDED FOR THE RETAINING WALL BLOCK TYPE PROVIDED HEREIN FOR ADDITIONAL DETAILS ON ACCEPTABLE INSTALLATION PRACTICES.
19. IMPERMEABLE MEMBRANE TO BE PLACED AGAINST THE STORM STORAGE SYSTEM TO PREVENT STORM WATER OF ADJACENT SITE FROM DRAINING TO THE RETAINING WALL. IMPERMEABLE MEMBRANE MUST BE PROTECTED AND/OR REINSTATED IF EXCAVATION IS COMPLETED NEAR THE BACK OF THE WALL OR DURING MAINTENANCE/REPAIR OF THE STORAGE SYSTEM.
20. PLEASE NOTE THAT THIS WALL MAY BE IMPACTED IF THE STORAGE SYSTEM IS TAMPERED WITH OR RELOCATED AS THE STONE WEIGHT BEHIND THE WALL CONTRIBUTES TO THE GLOBAL STABILITY OF THE WALL. ANY FUTURE MAINTENANCE WORK TO THE STORM STORAGE SYSTEM SHOULD BE ACCOMPANIED WITH A FIELD REVIEW BY A GEOTECHNICAL CONSULTANT TO ENSURE THE RETAINING WALL STABILITY IS INTACT.

DRAINAGE DETAILS:

N.T.S.



PATERSON GROUP
9 AURIGA DRIVE
OTTAWA, ON
K2E 7T9
TEL: (613) 226-7381

NO.	REVISIONS	DATE	INITIAL
5	AS PER CLIENT COMMENTS	21/11/2023	JV
4	AS PER CLIENT COMMENTS	12/09/2023	JV
3	AS PER REVISED GRADING PLAN	19/07/2023	JV
2	AS PER CLIENT COMMENTS	30/06/2023	JV
1	AS PER CLIENT COMMENTS	15/06/2023	JV

HUNTINGTON PROPERTIES

PROPOSED COMMERCIAL DEVELOPMENT - PROPOSED RETAINING WALL
75 MICHAEL COWPLAND DRIVE
OTTAWA, ONTARIO

OTTAWA, ONTARIO

Title:

GRANDE RETAINING WALL DESIGN

Stamp: LICENSED PROFESSIONAL ENGINEER 21/11/2023 J. R. VILLENEUVE 100504344 PROVINCE OF ONTARIO

Stamp: LICENSED PROFESSIONAL ENGINEER 21/11/2023 F. I. ABOU-SEIDO 100156744 PROVINCE OF ONTARIO

Scale:	AS SHOWN
Drawn by:	NFRV
Checked by:	JV
Approved by:	FA
Date:	03/2023
File No.:	PG3798
Drawing No.:	PG3798-2
Revision No.:	5

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