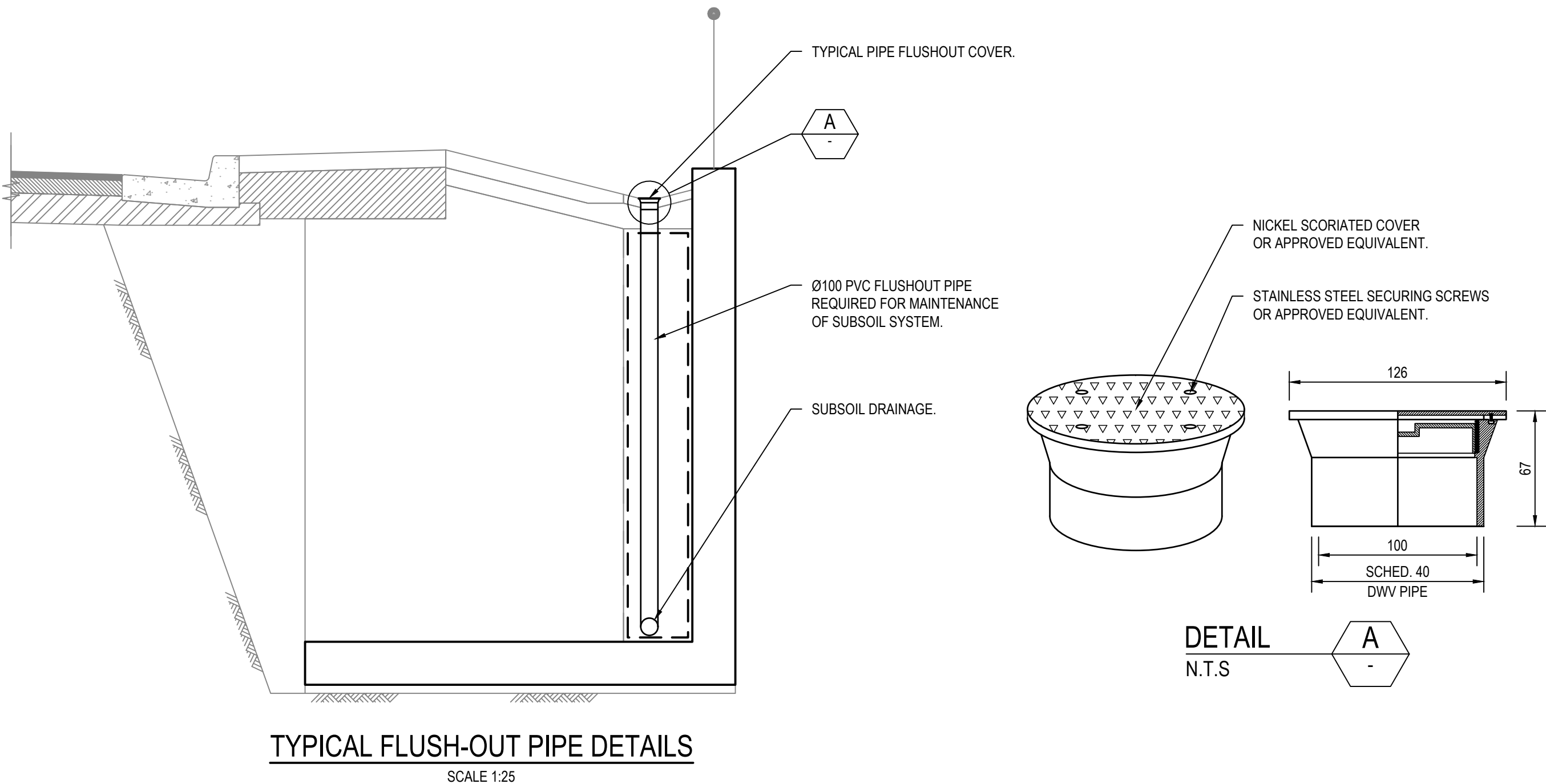
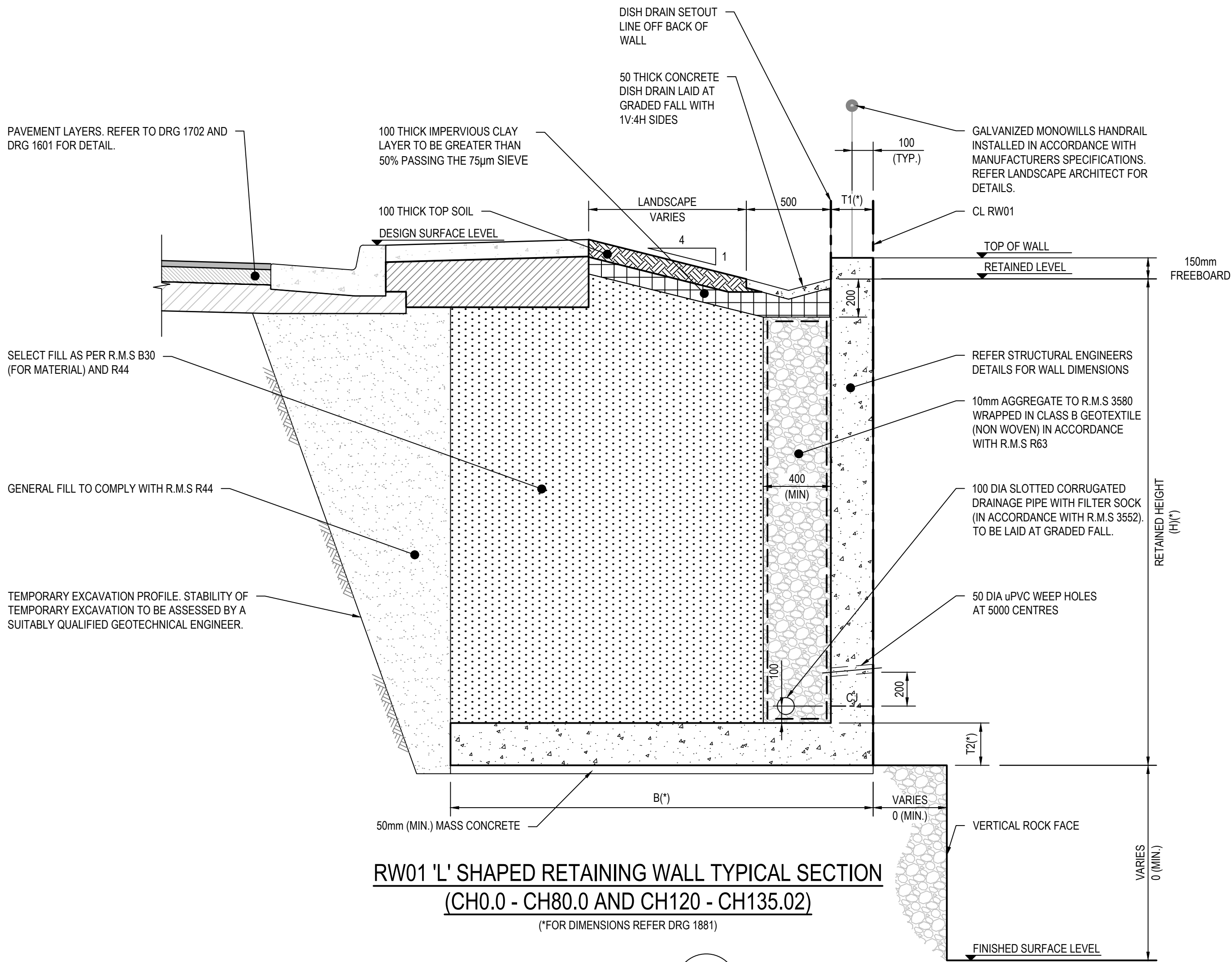


DATE PLOTTED: 15 February 2019 4:45 PM BY: GEORGE LATT

XREF's: XR-8072-8075-CJ-LOGO
CAD File: N:\Projects\802\FY18079_Glenaeon Renewal\Drawings\Build\Stage 01\256773_CDA_BA_000_1880_1887 RETAINING WALL DETAILS.dwg



GENERAL NOTES:

- DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
- REFER TO GEOTECHNICAL FACTUAL REPORT FOR BOREHOLE (BH) AND SUBSURFACE INFORMATION.
- ENSURE MINIMUM 150 mm FREEBOARD ABOVE TOP OF CONCRETE CHANNEL AND INCREASE WALL HEIGHT BY MAXIMUM 150mm IF NECESSARY

FOUNDATION NOTES:

- THE FOUNDATION ASSUMPTIONS ARE TO BE VALIDATED ON SITE BY THE DESIGNER'S SITE GEOTECHNICAL REPRESENTATIVE. IF WEAKER FOUNDATIONS THAN THAT SPECIFIED ARE ENCOUNTERED, THE DESIGNER IS TO BE NOTIFIED AND ANY ADDITIONAL TREATMENTS IMPLEMENTED AS ADVISED BY THE DESIGNER'S SITE GEOTECHNICAL REPRESENTATIVE.
- ALL TOP SOIL AND VEGETATION MATERIALS ARE TO BE STRIPPED THROUGHOUT THE EXTENT OF THE RETAINING WALL FOUNDATION.
- TEMPORARY EXCAVATION BATTER STABILITY TO BE ASSESSED BY QUALIFIED GEOTECHNICAL ENGINEER.
- ROCK EXCAVATION TO FORM THE BASEMENT SHALL BE CARRIED OUT TO MINIMISE THE DISTURBANCE OF ROCK IN ORDER TO AVOID UNDERMINING THE ROCK FOUNDING MATERIAL OF THE 'L' SHAPED WALLS. ROCK SAW CUTTING/GRINDING SHALL BE USED WHEN WORKING IN CLOSE VICINITY OF PROPOSED WALLS RATHER THAN JACK HAMMERING OR USE OF HEAVY EQUIPMENT GENERATING SIGNIFICANT VIBRATIONS. VIBRATION ASSESSMENT SHALL BE CARRIED OUT BY THE CONTRACTOR PRIOR TO THE START OF WORK.
- ALL ROCK FACES (VERTICAL AND HORIZONTAL) SHALL BE INSPECTED BY THE DESIGNER'S SITE GEOTECHNICAL REPRESENTATIVE AND TREATMENTS IMPLEMENTED AS ADVISED BY THE DESIGNER'S SITE GEOTECHNICAL REPRESENTATIVE. WHERE ADVERSE JOINTING CONDITIONS ARE PRESENT WITHIN THE ROCK MASS, THERE MIGHT BE A REQUIREMENT TO INSTALL ROCK ANCHORS TO PREVENT KINEMATIC FAILURE OF ROCK BLOCKS.

DESIGN CRITERIA:

- DESIGN LIFE = 100 YEARS.
- EARTHQUAKE ACCELERATION CO-EFFICIENT = 0.08
- SURCHARGE LOADING IS 20kPa FOR TRAFFICABLE AREAS AND 5kPa FOR NON TRAFFICABLE AREAS.

R.M.S SPECIFICATIONS:

- R44 EARTHWORKS.
- B30 EXCAVATION AND BACKFILL FOR BRIDGES.
- R63 GEOTEXTILES (SEPARATION AND FILTRATION)
- 3552 SUBSURFACE DRAINAGE PIPE (CORRUGATED PERFORATED AND NON PERFORATED PLASTIC)
- 3580 AGGREGATE FILTER MATERIALS FOR SUBSURFACE DRAINAGE.
- B312 COLD APPLIED ELASTOMERIC JOINT SEALANTS.
- B80 CONCRETE WORK FOR BRIDGES.

SOIL MATERIAL:

- FOR SOIL AND FOUNDATION MATERIAL PROPERTIES REFER TO TABLE.

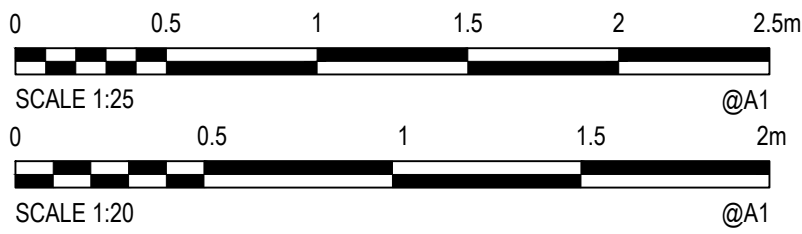
CONSTRUCTION SEQUENCE:

- EXCAVATE EXISTING GROUND AND PREPARE FOUNDATION LEVEL, REMOVING ANY UNSUITABLE MATERIAL BELOW THE FOUNDATION LEVEL.
- TEMPORARY EXCAVATION MUST BE INSPECTED BY A SUITABLY QUALIFIED GEOTECHNICAL ENGINEER.
- A SUITABLY QUALIFIED GEOTECHNICAL ENGINEER TO VERIFY FOUNDATION CONDITIONS (HOLD POINT)
- PLACE MASS CONCRETE (BLINDING) LAYER WITH ROUGH FINISH.
- CONSTRUCT RETAINING WALL FOOTING.
- CONSTRUCT RETAINING WALL STEM.
- PLACE SUBSOIL DRAIN AT BACK OF WALL.
- AFTER WALL STEM ACHIEVES 40MPa IN STRENGTH, BACKFILL TO DESIGN LEVEL AND CONSTRUCT IMPERVIOUS CLAY LAYER AND CONCRETE DISH DRAIN.
- INSTALL ROADSIDE FURNITURE AND FENCING ETC.

CONCRETE NOTES:

- CONCRETE EXPOSURE CLASSIFICATION B1.
- MINIMUM 28 DAYS COMPRESSIVE STRENGTH OF CONCRETE SHALL BE 32MPa.
- MINIMUM 28 DAYS COMPRESSIVE STRENGTH OF MASS CONCRETE TO BE 25MPa.
- EDGES SHALL BE CHAMFERED 20 x 20 AND RE-ENTRANT ANGLES FILLETED 20 x 20 UNLESS SPECIFIED OTHERWISE.
- CJ DENOTES CONSTRUCTION JOINT. NCF DENOTES NO CHAMFER OF FILLET.
- EXPOSED CONCRETE SURFACES SHALL ACHIEVE A CLASS 2 FINISH WITH TONAL RANGE IN ACCORDANCE WITH AS3610.
- MINIMUM CONCRETE COVER TO BE AS FOLLOWS:

| | |
|----------|------|
| FOOTING | 50mm |
| WALL | 40mm |
| PILE | 70mm |
| PILE CAP | 50mm |



| Rev. | Date | Description | Des. | Verif. | Appd. |
|------|------|----------------------|------|--------|-------|
| 1 | | REVISION IN PROGRESS | MLL | RFA | RFA |

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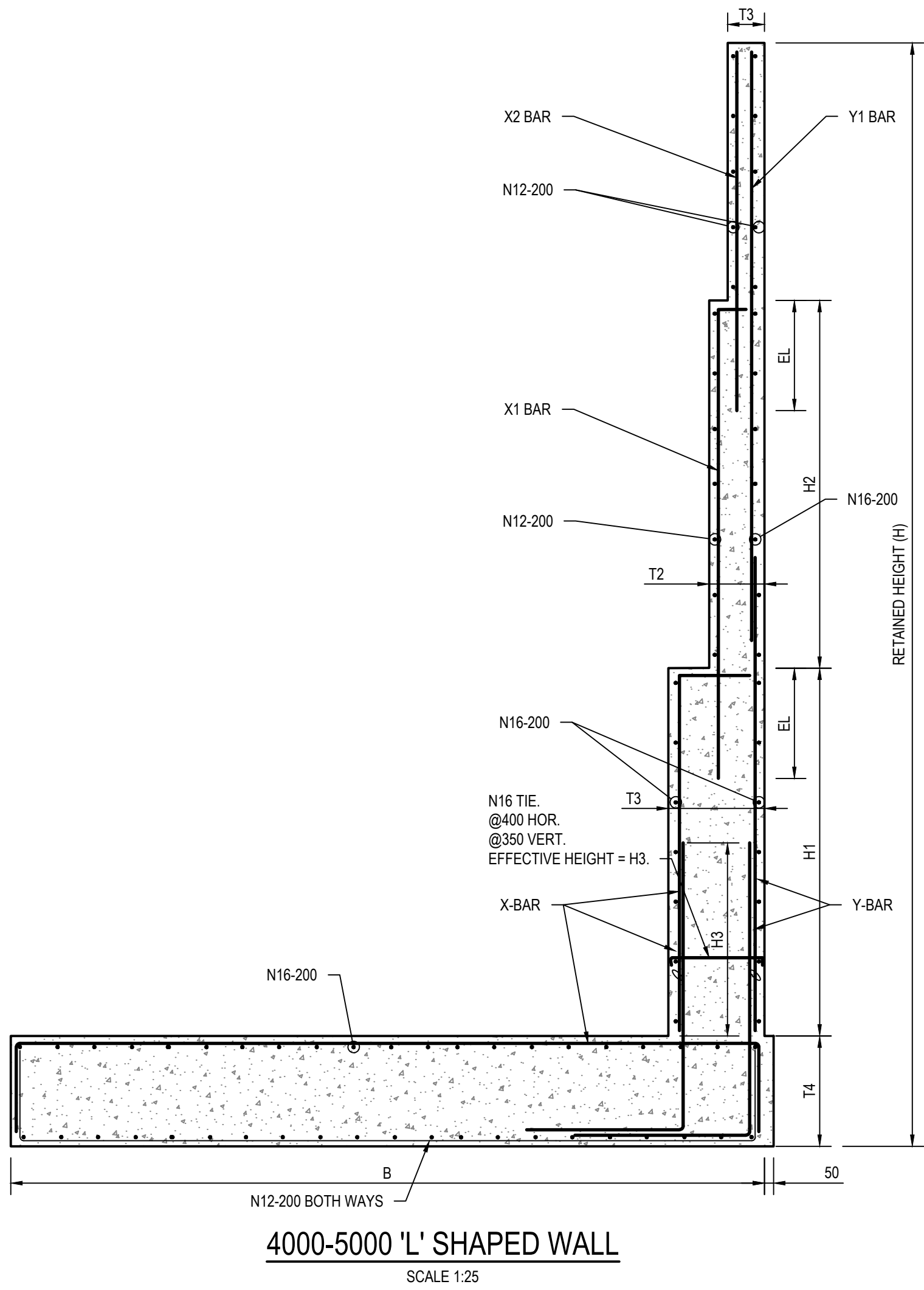
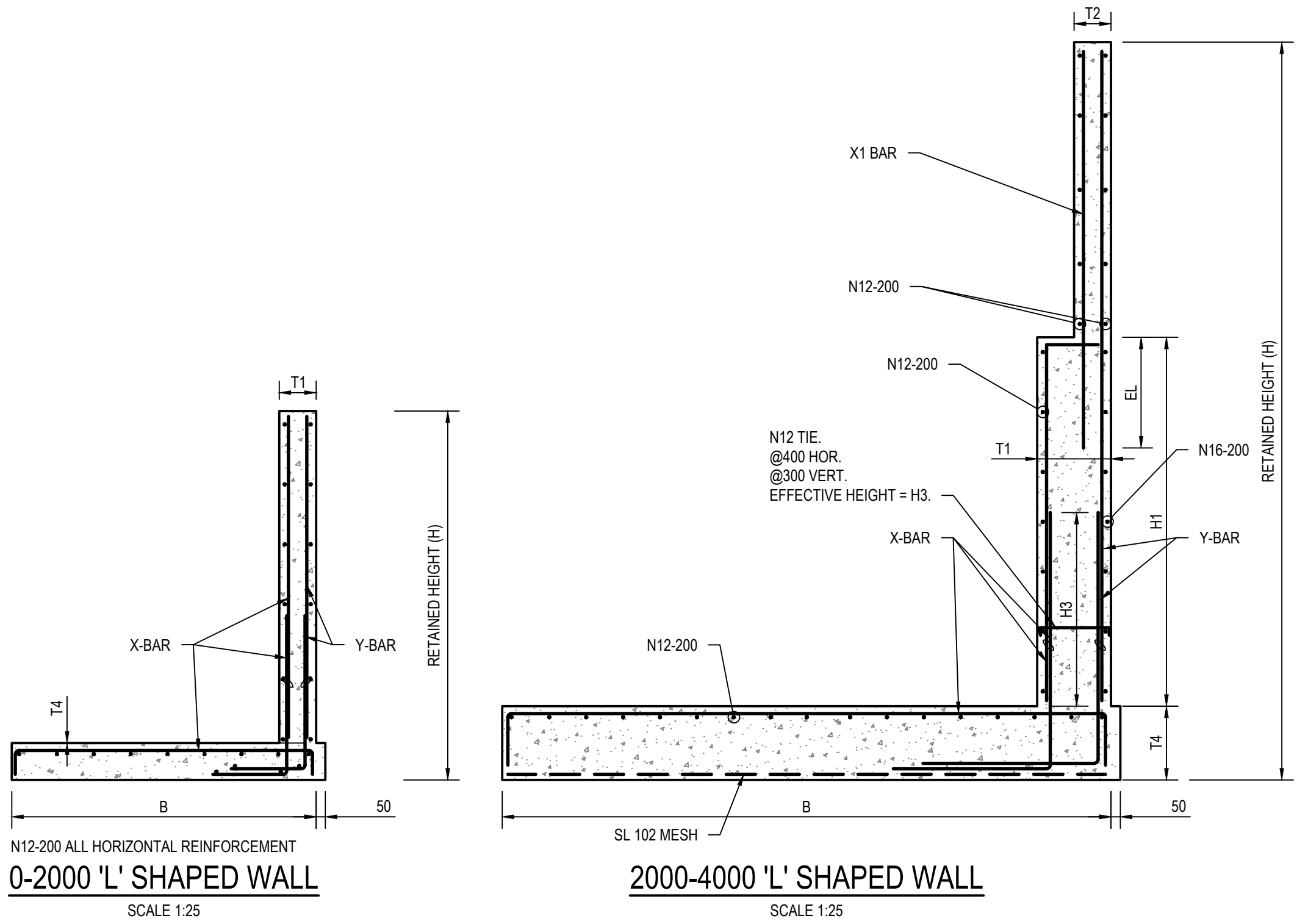
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| Drawn | GJI | Date | R.I.P |
| Checked | MLL | Date | R.I.P |
| Designed | MLL | Date | R.I.P |
| Verified | RFA | Date | R.I.P |
| Approved | | | |

Client **LENLEASE**
Project **GLENAEON RETIREMENT LIVING**
PRECINCT 207 FOREST WAY
CIVIL WORKS - RENEWAL AFT
Title **RETAINING WALL DETAILS**
RW01
SHEET 01

| | | | | |
|----------------|------------------------|------|-------|----------|
| Status | FOR TENDER ONLY | | | |
| DATUM | A.H.D | DATE | R.I.P | Scale |
| Drawing Number | 256773_CDA_BA_000_1880 | | | Size |
| | | | | A1 |
| | | | | Revision |
| | | | | 1 |

DATE PLOTTED: 15 February 2019 4:51 PM BY: GEORGE ZAIT

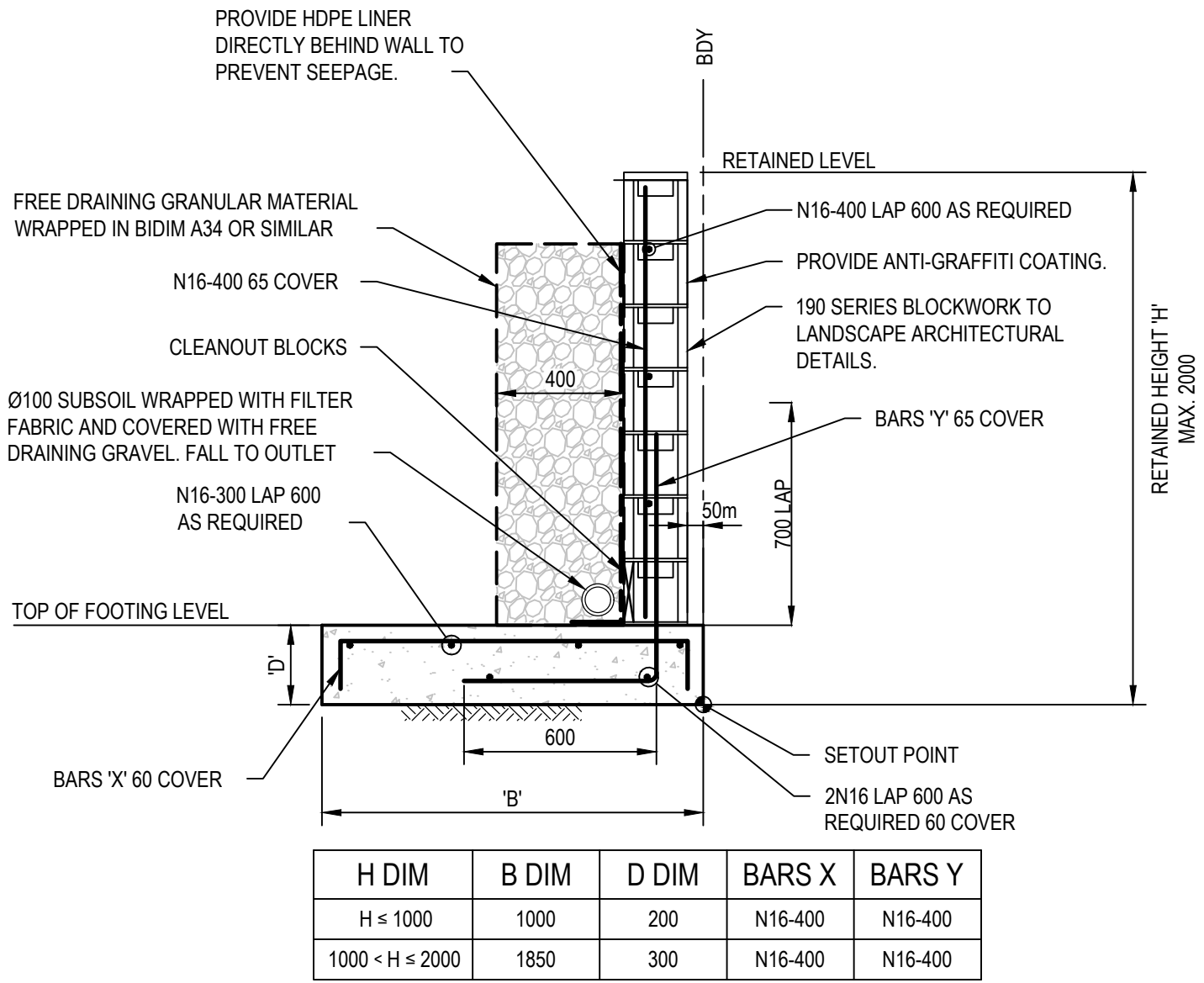
RW01 OPTION 1: REINFORCED CONCRETE



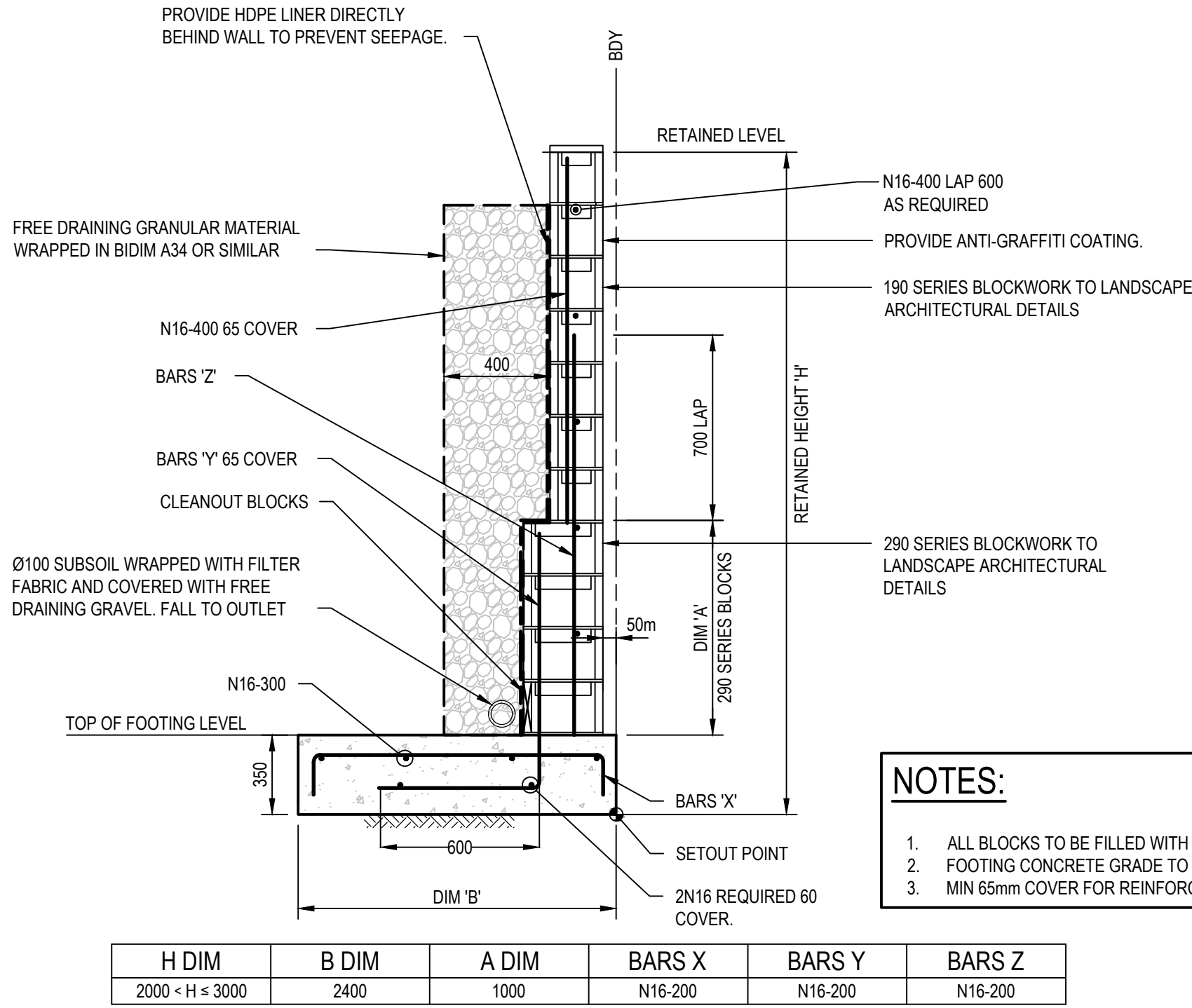
| NOTE: | |
|-------|---|
| 1. | MINIMUM OVERLAP AND EMBEDMENT LENGTH (E.L.) TO BE AS FOLLOWS: |
| N12 | 600mm |
| N16 | 700mm |
| N20 | 900mm |
| N24 | 1100mm |

| RW01 REINFORCED CONCRETE 'L' SHAPED WALL DIMENSIONS | | | | | | | | | | | | | |
|---|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| RETAINED HEIGHT (m) | B (mm) | T1 (mm) | T2 (mm) | T3 (mm) | T4 (mm) | H1 (mm) | H2 (mm) | H3 (mm) | X BAR | X1 BAR | X2 BAR | Y BAR | Y1 BAR |
| 0 - 1000 | 1000 | 200 | NA | NA | 200 | NA | NA | NA | N12-200 | NA | NA | N12-200 | NA |
| 1000 - 2000 | 1850 | 200 | NA | NA | 250 | NA | NA | NA | N16-200 | NA | NA | N12-200 | NA |
| 2000 - 3000 | 2400 | 300 | 200 | NA | 350 | 1000 | NA | NA | N20-200 | N16-200 | NA | N12-200 | NA |
| 3000 - 4000 | 3300 | 400 | 200 | NA | 450 | 2000 | NA | 1000 | N20-200 | N16-200 | NA | N16-200 | NA |
| 4000 - 5000 | 4100 | 500 | 300 | 200 | 500 | 2000 | 1000 | 1500 | N24-200 | N20-200 | N16-200 | N16-200 | N12-200 |

RW01 OPTION 2: BLOCKWORK
RW02, RW06, RW08 OPTION : BLOCKWORK



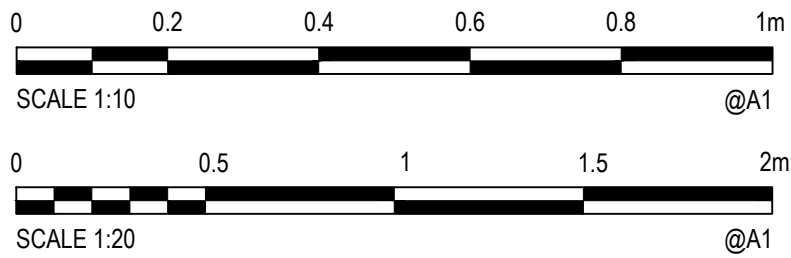
BLOCKWORK RETAINING WALL UP TO 2000mm
SCALE 1:20



| NOTES: | |
|--------|--|
| 1. | ALL BLOCKS TO BE FILLED WITH F'c=25 MPa GROUT. |
| 2. | FOOTING CONCRETE GRADE TO BE 32MPa MINIMUM. |
| 3. | MIN 65mm COVER FOR REINFORCEMENT IN BLOCKS |

| H DIM | B DIM | A DIM | BARS X | BARS Y | BARS Z |
|-----------------|-------|-------|---------|---------|---------|
| 2000 < H ≤ 3000 | 2400 | 1000 | N16-200 | N16-200 | N16-200 |

BLOCKWORK RETAINING WALL 2000mm TO 3000mm
SCALE 1:20



XREFs: XR-002/18079-CL-LOGO
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Drawn: GJI
Checked: MLL
Designed: MLL
Verified: RFA
Approved: RFA

Date: R.I.P.
Client: LENDLEASE
Project: GLENAEON RETIREMENT LIVING
PRECINCT 207 FOREST WAY
CIVIL WORKS - RENEWAL AFT
Title: RETAINING WALL DETAILS
R.I.P.

Status: **FOR TENDER ONLY**
NOT TO BE USED FOR CONSTRUCTION PURPOSES
DATING: A.H.D. DATE R.I.P. Scale: AS SHOWN Size: A1
Drawing Number: 256773_CDA_BA_000_1881
Revision: 1