

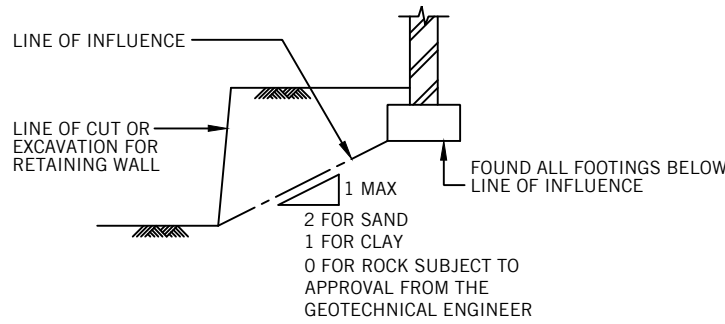
# NEW RETAINING WALL AT 2 HERBERT STREET MANLY NSW 2095 FOR MR SIMON SCHULTHEISS

## GENERAL

- G1. These drawings are for structural purposes only and are to be read in conjunction with all architectural and other working drawings, specifications and with such other written instructions as may be issued during the course of the contract.
- G2. Provide all workmanship and materials in accordance with the requirements of the current editions of the BCA, the Australian Standards and the By-Laws and Ordinances of the relevant Building Authority.
- G3. The Builder must comply with requirements of the Occupational Health & Safety Act.
- G4. Refer any conflict between these notes, the specification, the drawings or any other relevant documents to the contract superintendent for decision prior to proceeding with the work.
- G5. Do not obtain dimensions by scaling the drawings. For setting out dimensions and levels refer to architectural drawings.
- G6. During construction it is the Builder's responsibility to maintain the structure in a stable condition and to ensure no part is overstressed. The Builder is responsible for the provision of all temporary shoring, bracing and propping to maintain the stability and integrity of excavations, the structure and any adjacent structures. Provide details, for review by the Engineer, of any necessary temporary works, including temporary shoring, prior to commencing construction. For all temporary batters obtain geotechnical engineers recommendations.
- G7. The design and drawings are copyright and may not be used or reproduced in whole or in part without the written permission of Partridge.
- G8. Fire-Resistant Levels (FRLs) required for the various structural elements must be confirmed by the BCA consultant or Architect.
- G9. Waterproofing requirements shall be specified by the architect.
- G10. All proprietary items are to be installed and fixed in accordance with the manufacturers specifications and instructions.
- G11. Construction using these drawings shall not commence until a Construction Certificate is issued by the Principal Certifying Authority.

## FOUNDATIONS

- F1. The minimum safe bearing capacity of foundation material shall be:  
Footings : 500 kPa. in BEDROCK  
Piers : 500 kPa. in BEDROCK
- F2. Foundation material shall be approved by the Geotechnical Engineer prior to placing membrane, reinforcement or concrete. Builder is to allow for cost of geotechnical inspections and any required certification.
- F3. The bases of footing excavations shall be finished clean and horizontal.
- F4. Footings shall be located centrally under walls and columns unless noted otherwise.
- F5. Founding levels where shown are for tender purposes only.
- F6. Any proposed footing excavation near boundaries, other structures or services shall be approved by the Engineer.
- F7. The builder shall not excavate below the level of the footings to any existing buildings without the written consent of the engineer.
- F8. The building shall not be erected on or adjacent to any of the following hazards unless the hazard is indicated on the structural drawing: Embankments, batters, water retaining structures, retaining walls, pits, sewers, service trenches, drainage channels, streams or any potential source of damage to the structure. If any such hazards are encountered the engineer shall be notified and written approval obtained before proceeding.
- F9. The builder shall locate all existing and proposed services and easements on and adjacent to the site. The approval of the relevant statutory authority and the engineer shall be obtained before building on or over any services or easements.
- F10. The written consent of adjoining property owners shall be obtained before installation of underpinning, anchoring work, drainage lines or any other work beyond the property boundary.
- F11. Do not backfill against retaining walls (other than cantilever walls) until 7 days after slab over is poured.
- F12. The builder shall be responsible for maintaining any excavation in a stable condition without adversely affecting surrounding property including services. This includes obtaining all necessary approvals for shoring and anchor systems.
- F13. Compacted fill areas and subgrade if required shall be approved material compacted to 98% Standard Dry density determined by testing to AS 1289.5.1.1 u.n.o. Compaction under buildings to extend 2m minimum beyond building footprint.
- F14. Footings to be constructed and backfilled as soon as possible following excavation to avoid softening or drying out by exposure.
- F15. Foundations adjacent to services, existing footings, existing excavation or any new excavation for retaining walls shall extend down such that the zone of influence line of the new foundations is below the adjacent service or footing as follows:



## LOADINGS

- L1. Importance Levels of Building: 2
- L2. Superimposed floor live loads are generally in accordance with AS/NZS1170.1 and specifically:  
1.5 kPa. GENERALLY
- L3. Wind loads have been determined in accordance with AS4055  
Wind Region: A Terrain Category: 2.5  
Topographic Class: T2 Wind Classification: N2  
Shielding: PS
- L4. The relevant provisions of AS1170.4 have been applied for the following  
Earthquake Design:  
Probability factor kp: 1 Hazard Factor Z: 0.08  
Site Sub-Soil Class: Ae  
Earthquake Design Category: N/A

## CONCRETE

- C1. Provide all workmanship and materials in accordance with AS3600, the SAA standards cited in AS3600, the drawings and the specification
- C2. Concrete composition and quality shall be as follows;

ELEMENT	CONCRETE GRADE F'c - 28 DAYS (MPa)	SLUMP	MAX AGGREGATE SIZE
Footings	25	80	20
Core Filling Grout		180	10

- C3. Use type "GP" cement unless noted otherwise
- C4. No "Breccia" type aggregate is to be used.
- C5. No admixtures unless approved by the engineer.
- C6. The finished concrete shall be mechanically vibrated to achieve full compaction, completely filling formwork, thoroughly embedding the reinforcement and free of stone pockets.
- C7. Sizes of concrete are net, exclusive of applied finishes. Beam depths are written first and include slab thickness.
- C8. Properly form construction joints and use only where shown or approved by the Engineer. The first pour shall be thoroughly scabbled and cleaned of all poorly compacted material and laitance, thoroughly soaked and painted with a 2:1 sand cement slurry immediately before placing the second pour. Thoroughly compact the second pour against the first pour.
- C9. Make no holes or chases in concrete members without the approval of the Engineer.
- C10. For all falls in slab, chamfers, reglets, drip grooves etc. refer to the Architect's drawings and specification. Maintain cover to reinforcement as outlined in reinforcement notes.
- C11. Conduits and pipes are to be fixed to the underside of the top reinforcement layer.
- C12. Where a vapour barrier is specified beneath slabs on ground provide a "Cromford" 0.2 thick high-impact resistant polyethylene film damp proof membrane throughout. Lap sheets 300mm and seal with a 50mm wide pressure sensitive waterproof tape.
- C13. Slurry used to lubricate concrete pump lines is not to be used in any structural members.
- C14. Cure concrete in accordance with AS3799. Commence curing within two hours of finishing operations and continue for a minimum of seven days by using an approved proprietary compound compatible with finishes applied uniformly in accordance with the manufacturers instructions or by keeping continuously wet.

## FORMWORK

The design, certification, construction and performance of the formwork, falsework and backpropping shall be the responsibility of the contractor in accordance with AS3610 and AS3600. Proposed method of installation and removal of formwork is to be submitted to the superintendent for comment prior to work being carried out.

Refer to Architect's drawings for finish and class.

## MASONRY

### GENERAL

- M1. Ensure all workmanship and materials are in accordance with AS3700, the drawings and the APPL Standard Technical Specification STD-D905.
- M2. Build all load bearing walls before supported structural members are poured.
- M3. Obtain engineers approval before commencing building masonry walls on suspended slabs.
- M4. Do not erect any masonry walls supported by concrete slabs or beams until all formwork and props under have been removed.
- M5. Mortar shall consist of the following:  
M3 for general applications: 1 part type GP cement: 5 parts sand plus water thickener.  
M4 (exposure grade) for elements in environments subject to saline, wetting and drying: below a damp proof course or in contact with ground in aggressive soils; in marine environments; in saline or contaminated water including tidal splash zones and within 100m from non-surf coast, or 1km surf coast: 1 part type GP cement: 4 parts sand plus water thickener.
- M6. The builder shall provide records that demonstrate all masonry bed joint reinforcement, masonry ties and masonry wall stiffeners have been installed in accordance with the drawings and specification.
- M7. Where masonry walls abuts steel or concrete structures, they shall be restrained using M.E.T 5-3. Power fix to columns every 4th course (brick work) and 2nd course (block work).
- M8. Only engineer approved masonry anchors to be used.
- M9. No chasing or rebates to be made be made without the written approval of the Engineer

## REINFORCED BLOCK WORK

- M18. Provide all hollow concrete masonry of strength f'uc= 15 MPa u.n.o.
- M19. Provide Vertical Control Joints in all walls at a maximum of 8m maximum centres and over any permanent floor joints unless indicated on the structural drawings. Joint locations to be co-ordinated with the architectural drawings.
- M20. Maximum continuous pour height shall be 3600mm. Stop pour 50mm below top of block to provide key for the following pour. Provide clean out openings at the base of all cores to be filled. Cores shall be cleaned of mortar protrusions before grouting.
- M21. Provide hollow F'c 20 MPa core filling concrete with 10mm aggregate, 180 slump. U.N.O. to all reinforced block walls. Core filling grout shall be thoroughly compacted by mechanical vibrator or rodding. Grout to be in accordance with AS3700.
- M22. Lay bottom course on full mortar bed. All perpend shall be fully filled with mortar, except where required for weep holes.
- M23. All core filled block walls shall be constructed using "double U blocks".
- M24. Reinforcement shall be placed and securely held in the locations indicated by plastic "blockaid" reinforcement location brackets or approved equivalent at the intersection of all vertical and horizontal reinforcement. Rods shall be tied to starter bars in clean out blocks.
- M25. Water proofing to the back of block retaining walls to the architect's specification.
- M26. Only backfill behind retaining walls after obtaining engineers approval.

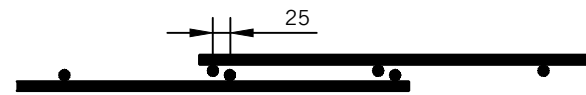
## REINFORCEMENT

- R1. All workmanship and materials shall be in accordance with AS 3600, the drawings and the specification
- R2. Fix reinforcement as shown on drawings. The type and grade is indicated by a symbol as shown below. On the drawings this is followed by a numeral which indicates the size in millimetres of the reinforcement.  
S - Denotes hot rolled deformed bars Grade 250S.  
N - Denotes hot rolled deformed bars Grade 500N.  
R - Denotes hot rolled plain round bars Grade 250N.  
SL, RL, L(size)TM - Denotes hard drawn wire fabric Grade 500L.
- R3. Reinforcement is shown diagrammatically and not necessarily shown in true projection.
- R4. All reinforcement shall be securely supported in its correct position during concreting by approved bar chairs, spacers or support bars. Bar chairs are to be mild steel plastic tipped chairs, plastic chairs or concrete chairs. Fully plastic chairs only shall be used on element faces having external exposure on the completed structure. Extra chairs may be required adjacent to slab edges and joints to prevent the upward deflection of the reinforcement when stood on. All reinforcement shall be chaired at maximum centers as follows:  
Bars - 1000mm centers each way  
Fabric - 600mm centers each way

## REINFORCEMENT COVER TABLE

EXPOSURE CONDITION	COVER TO REINFORCEMENT
<b>SURFACES IN DIRECT CONTACT WITH GROUND</b>	
A - Surface protected by damp proof membrane	30
B - Unprotected surfaces U.N.O	50

- R5. Reinforcement shall not be cut or welded on site without approval by the engineer. At small holes less than 200mm eg plumbing penetrations, bars shall be displaced to either side.
- R6. Maintain cover to all pipes, conduits, reglets, drip grooves etc as required by AS3600 but not less than three bar diameters. Do not place conduits in slabs above top reinforcement or below bottom reinforcement.
- R7. Site bending of reinforcement shall be avoided if possible. Where site bending is specified or unavoidable, it shall be carried out cold, without the application of heat with power mechanical bending tools. Cranked bars to be bent 1:6 max.
- R8. Laps in reinforcement shall be made only where shown on the drawings unless otherwise approved. Lap lengths as per table below and shown on reinforcement drawings.
- R12. Notify the Engineer a minimum of 24 hours before reinforcement has been completed. Allow 2 hours after the completion of the reinforcement for the Engineer's inspection. Do not order concrete until reinforcement has been approved by the Engineer.
- R13. Tie all unsupported bars in transverse direction to N12-300, lapped 500 U.N.O.
- R14. Provide hooks, bends and cogs in accordance with AS3600 U.N.O.
- R15. Fabric end and side laps are to be placed strictly in accordance with the manufacturers requirements to achieve a full tensile lap. Fabric shall be laid so that there is a maximum of 3 layers at any location.



FABRIC LAP DIAGRAM

LAPS & COGS			
BAR SIZE	TOP BARS WITH MORE THAN 300mm CONCRETE BELOW BAR	ALL OTHER BARS	COG LENGTH
N12	650	500	180
N16	950	700	210
N20	1250	950	260
N24	1600	1250	310
N28	1950	1500	360
N32	2300	1800	400
N36	2700	2100	450



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Client  
**MR SIMON SCHULTHEISS**

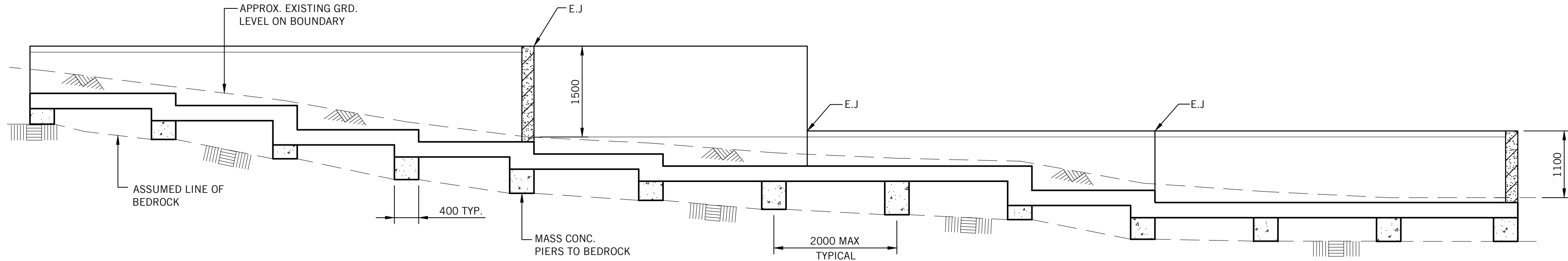
Architect

Project  
**NEW RETAINING WALL  
2 HERBERT STREET  
MANLY NSW 2095**

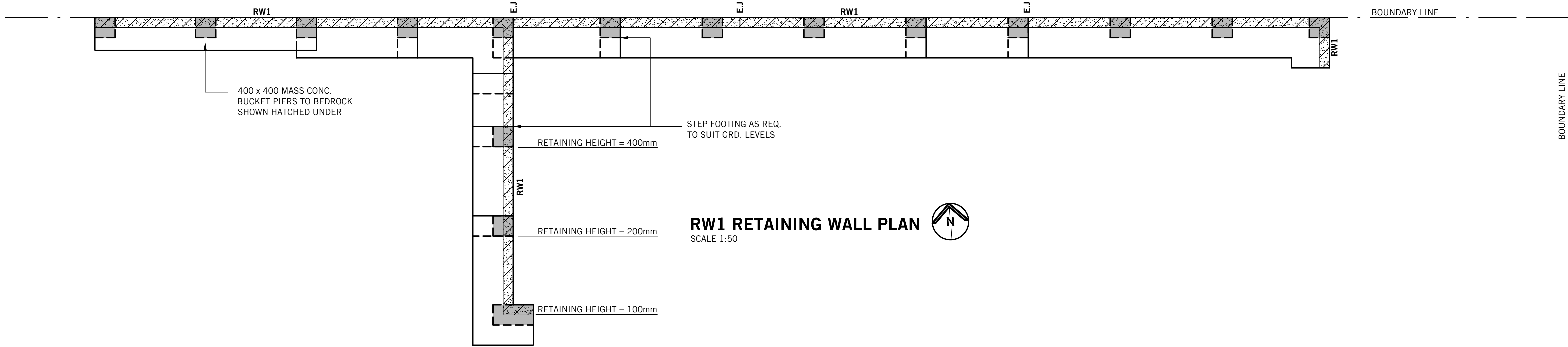
Title  
**CONSTRUCTION NOTES**

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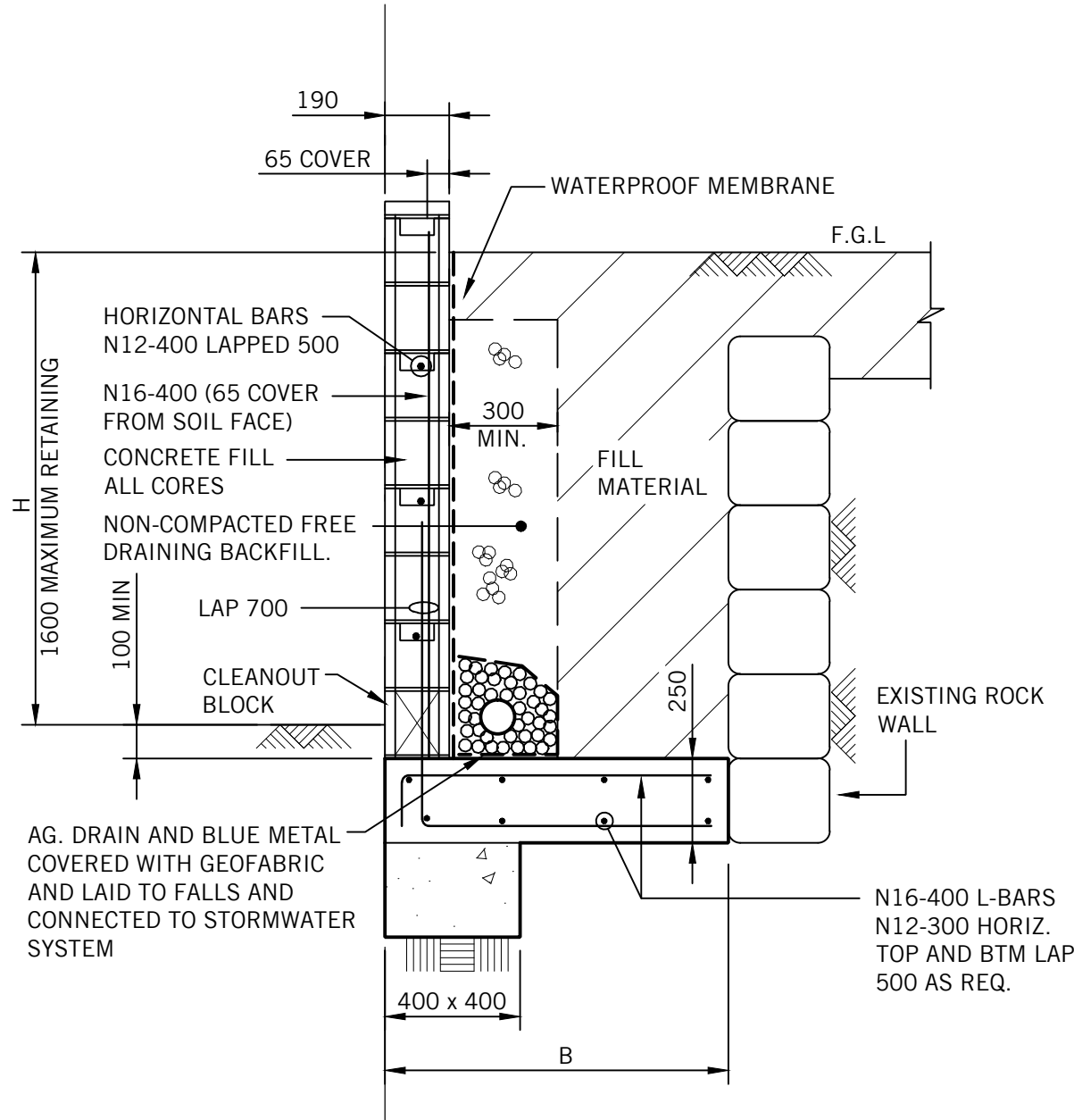
Electronic Code	Signature Date	Designed
.		<b>S.M</b>
Scale at A1	Date	Drawn
<b>N/A</b>	<b>OCT 2019</b>	<b>S.M</b>
Job No.	Drawing No.	Revision
<b>2019S0718</b>	<b>S1.1</b>	<b>A</b>



RW1 RETAINING WALL ELEVATION  
SCALE 1:50



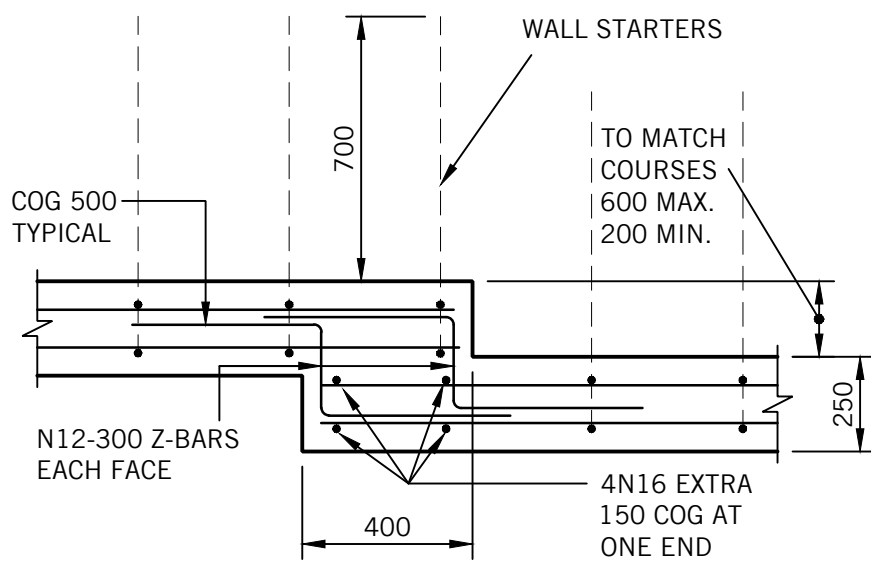
RW1 RETAINING WALL PLAN  
SCALE 1:50



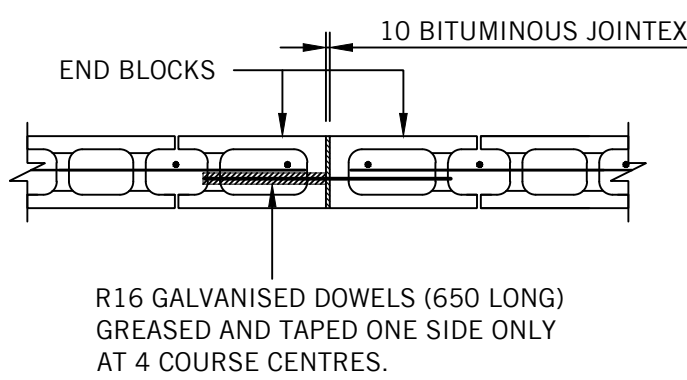
RW1 RETAINING WALL DETAIL

RETAINING WALL SCHEDULE	
H	B
800	500
1000	600
1200	700
1400	800
1600	950

- NOTE:
- THIS WALL HAS BEEN DESIGNED FOR A LIVE LOAD SURFACE SURCHARGE OF 2.5kPa (STRUCTURE CLASSIFICATION A)
  - POSITION WALL STARTER BARS ACCURATELY BY TEMPLATES OR SIMILAR MEANS.
  - PLACE NO BACKFILL AGAINST REINFORCED CONCRETE BLOCK RETAINING WALLS UNTIL 14 DAYS AFTER FILLING ALL CORES WITH CONCRETE BLOCK MIX
  - CONCRETE CORE FILL TO BE POURED AND PLACED WITH A PENCIL VIBRATOR TO ENSURE FULL AND DENSE FILLING OF ALL CORES.
  - CONSTRUCT RETAINING WALLS USING "DOUBLE U-BLOCKS"



RW1 FOOTING STEP (UP TO 600)



PLAN ON BLOCK WALL  
EXPANSION JOINT - E.J

Rev.	Issue / Amendment	By	App.	Date
A	APPROVED FOR CONSTRUCTION	S.M	T.W	23.10.19



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Client  
**MR SIMON SCHULTHEISS**

Architect

Project  
**NEW RETAINING WALL  
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Title  
**RETAINING WALL PLAN, ELEVATION  
AND SECTIONS AND DETAILS**

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<b>1:50, 1:20</b>	<b>OCT 2019</b>	<b>S.M</b>	
Job No.	Drawing No.	Revision	
<b>2019S0718</b>	<b>S2.1</b>	<b>A</b>	

APPROVED FOR CONSTRUCTION