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GENERAL NOTES

- G1 THESE NOTES SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTION AS ISSUED DURING THE COURSE OF THE CONTRACT. ALL DISCREPANCIES SHALL BE REFERRED TO THE ARCHITECT OR ENGINEER BEFORE PROCEEDING WITH THE WORK.
 - G2 DIMENSIONS SHALL NOT BE OBTAINED BY SCALING THE STRUCTURAL DRAWINGS.
 - G3 SETTING OUT DIMENSIONS SHOWN ON THE DRAWINGS SHALL BE VERIFIED BY ON-SITE MEASUREMENT.
 - G4 DURING CONSTRUCTION THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PART SHALL BE OVERSTRESSED.
 - G5 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT EDITIONS OF THE SAA CODE AND THE BY-LAWS AND ORDINANCES OF THE RELATIVE BUILDING AUTHORITY.
 - G6 EXCAVATIONS SHALL NOT BE PERMITTED WITHIN 2 METRES OF AN EXISTING STRUCTURE WITHOUT PRIOR APPROVAL OR RECOMMENDATIONS FOR SHORING OR UNDERPINNING PROVIDED BY ENGINEER.
- FOUNDATIONS AND FOOTINGS
- F1 FOOTINGS HAVE BEEN DESIGNED FOR AN ALLOWABLE INTENSITY OF BEARING PRESSURE OF 150kPa. THE BUILDER SHALL OBTAIN APPROVAL OF THE FOUNDATION MATERIAL BEFORE PLACING CONCRETE.
 - F2 FOOTINGS SHALL BE PLACED UNDER WALLS AND COLUMNS UNLESS OTHERWISE NOTED.
- SUB-GRADE
- SG1 UNDER ALL SLABS ON GRADE, WHETHER ON CUT OR FILL, REMOVE SOFT SPOTS AND RE-FILL BY COMPACTING CUT SURFACES OR FILL SURFACES IN LAYERS NOT EXCEEDING 200 mm TO 95% DRY DENSITY, ENSURING MINIMUM SETTLEMENT TO SLABS.

- CONCRETE WORK
- C1 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3600.
 - C2 CONCRETE QUALITY SHALL BE AS TABULATED AND SHALL BE VERIFIED BY TESTS.

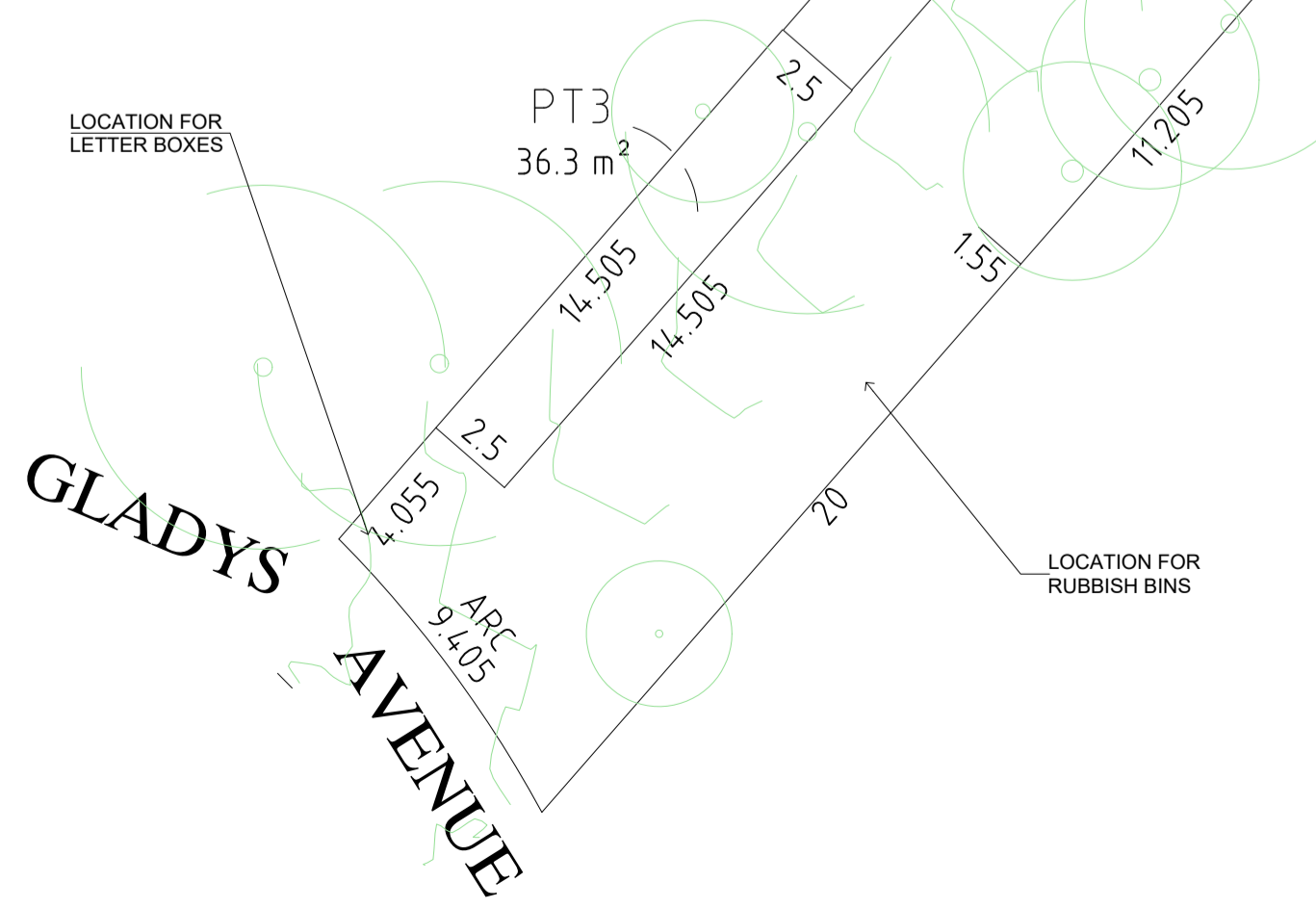
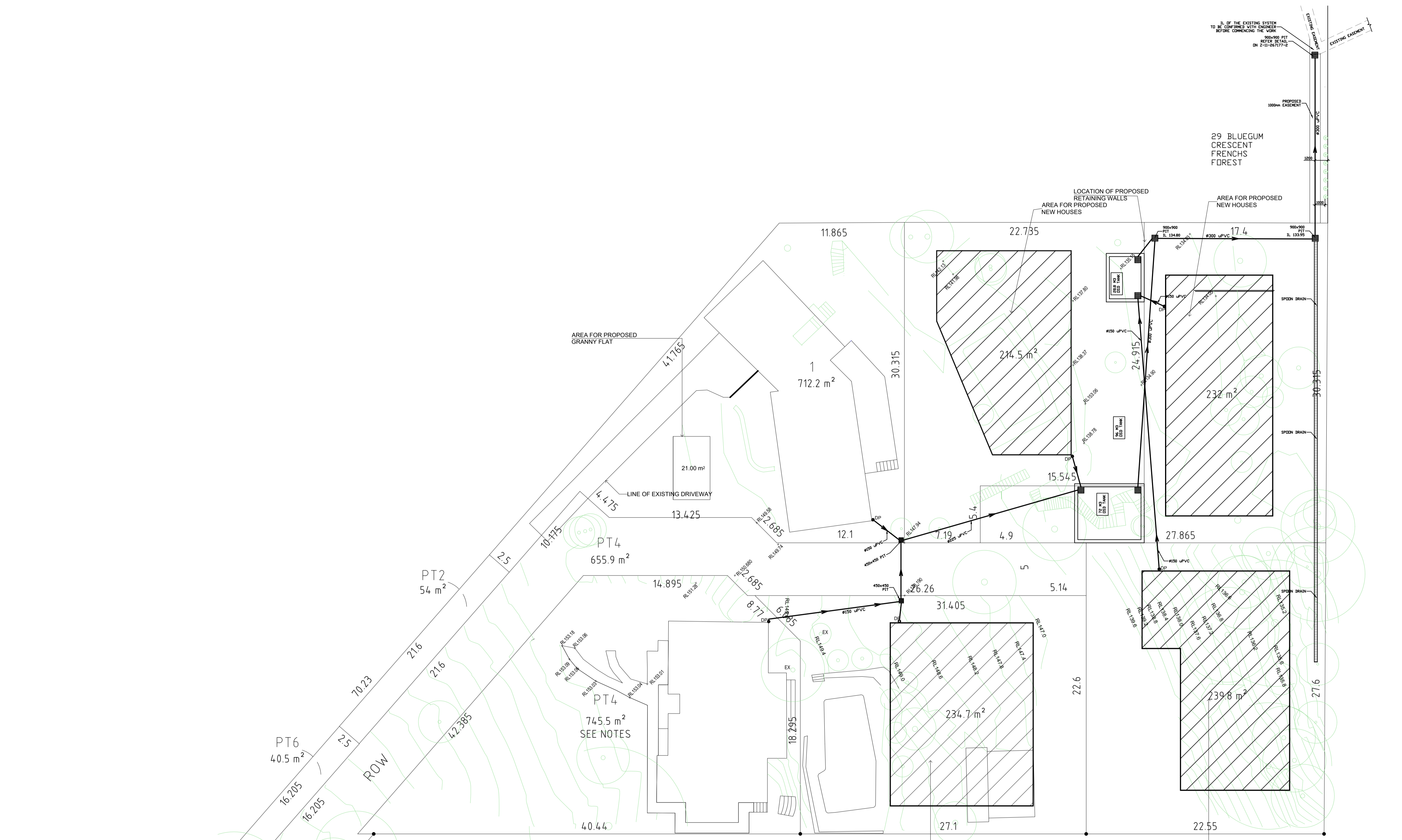
ELEMENT	SUMP	MAX. SIZE AGG.	CEMENT TYPE	ADMIXTURE	MPa CONCRETE GRADE
ALL		20	A	NL	32

C3 CLEAR CONCRETE COVERS TO REINFORCEMENT SHALL BE AS FOLLOWS UNLESS OTHERWISE SHOWN.

ELEMENT	CAST IN FORMS COMPLYING WITH AS 1509		
	CONDITION 1 NOT TO BE EXPOSED TO WEATHER GROUND WATER OR FRESH WATER	CONDITION 2 TO BE EXPOSED TO WEATHER GROUND WATER OR FRESH WATER	CONDITION 3 CAST AGAINST OTHER FORMWORK OR THE GROUND
PAD FOOTINGS & PILE CAPS	-	65	75
STRIP FOOTINGS	-	50	65
SCORE OR CAST PIERS	-	50	75
COLUMNS	40	50	75
WALLS, INCLUDING RETAINING WALLS	20	30	65
BEAMS	25	40	65
SLABS INCLUDING JOISTS & HOLLOW BLOCK CONSTRUCTION	20	30	65
REINFORCEMENT ADJACENT TO HOLLOW BLOCKS INTERNAL WITH STRUCTURE	5	-	-

NOTE: 1. SLABS POURED OVER A MEMBRANE ON THE GROUND ARE INCLUDED AS CONDITION 2.
2. SLABS EXPOSED TO CORROSIVE VAPOURS, CORROSIVE GROUND WATER, SEA WATER OR SPRAY ARE TO HAVE REINFORCEMENT COVER AS NOTED OR NOT LESS THAN AS REQUIRED FOR CONDITION 3.

- C4 SIZES OF ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES.
- C5 CONSTRUCTION JOINTS WHERE NOT SHOWN SHALL BE TO THE APPROVAL OF THE ENGINEER.
- C6 BEAM DEPTHS ARE WRITTEN FIRST AND INCLUDE SLAB THICKNESS, IF ANY, UNO.
- C7 NO HOLES OR CHASES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE ELEMENTS WITHOUT PRIOR APPROVAL OF THE ENGINEER.
- C8 REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY. IT IS NOT NECESSARILY SHOWN IN TRUE PROJECTION.
- C9 SPICES IN REINFORCEMENT MADE IN POSITIONS OTHER THAN SHOWN SHALL BE TO THE APPROVAL OF THE ENGINEER, WHERE THE LAP LENGTH IS NOT SHOWN IT SHALL BE SUFFICIENT TO DEVELOP THE FULL STRENGTH OF THE REINFORCEMENT.
- C10 WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED UNLESS SHOWN ON THE STRUCTURAL DRAWINGS.
- C11 PIPES OR CONDUITS SHALL NOT BE PLACED WITHIN THE CONCRETE COVER TO REINFORCEMENT WITHOUT THE APPROVAL OF THE ENGINEER.
- C12 ALL REINFORCEMENT BARS SHALL COMPLY WITH AS 1302. ALL FABRIC SHALL COMPLY WITH AS 1303 AND AS 1304 AND SHALL BE SUPPLIED IN FLAT SHEETS.
- C13 REINFORCING SYMBOLS
S GRADE 200S DEFORMED BAR
C GRADE 400C COLD WORKED DEFORMED BAR
Y GRADE 400R DEFORMED BAR
R GRADE 230R PLAIN BAR
F GRADE 450 WELDED WIRE FABRIC
N GRADE 500 DEFORMED BAR
- C14 THE NUMBER IMMEDIATELY FOLLOWING THESE SYMBOLS IS THE BAR DIAMETER IN MILLIMETRES.
- C15 FABRIC REINFORCEMENT TO BE LAPPED 300 MM MINUM AT ENDS AND SIDES UNO. LAPS IN POSITION OF MAXIMUM MOMENT ARE NOT PERMITTED.
- C16 ALL REINFORCEMENT SHALL BE FULLY SUPPORTED ON INSULATED STEEL, PLASTIC OR CONCRETE CHAIRS SPALED AT 900 AND 750 CENTRES BOTH WAYS UNDER ROD AND FABRIC REINFORCEMENT RESPECTIVELY. RODS SHALL BE TIED AT ALTERNATE INTERSECTIONS.
- C17 MINIMUM STRIPPING TIMES FOR FORMWORK SHALL BE AS RECOMMENDED IN AS 1509 OR AS DIRECTED BY ENGINEER.



SITE PARAMETERS	
SITE AREA	4710 m ²
PERVIOUS AREA	3160 m ²
IMPERVIOUS AREA	1550 m ²
5 YEAR PRE-DEV FLOW RATE	178 L/S
100 YEAR POST-DEV FLOW RATE	178 L/S
DSD TANK 1 VOLUME	72 M ³
DRIFICE DIAMETER	240 MM
DSD TANK 2 VOLUME	28.8 M ³
DRIFICE DIAMETER	140 MM

- SPECIAL NOTES
- ALL PIPES TO BE LAID ON 75 mm SAND BED WITH THE BARRELS FULLY SUPPORTED ("B" CLASS BEDDING)
 - PROVIDE "CLEANING EYES" TO ALL DOWN PIPES NOT DIRECTLY CONNECTED TO PITS.
 - "HEAVY DUTY" GRATES AND COVERS ARE TO BE PROVIDED IN TRAFFICABLE AREAS.
 - THE SUMP IN THE DETENTION TANK SHALL BE DELETED.
 - ORIFICE PLATES USED TO RESTRICT THE OUTFLOW MUST BE MACHINED TO THE EXACT DIMENSION AS CALCULATED, FROM MINIMUM 3 mm THICK STAINLESS STEEL OR 3 mm THICK GALVANISED STEEL AFTER MACHINING. THEY MUST BE CAST IN THE PIT WALLS OR PERMANENTLY FIXED IN THE PIT BY SOME APPROVED METHOD SO THEY CANNOT BE EASILY REMOVED.
 - A PLAQUE MEASURING NO LESS THAN 400 mm X 200 mm SHALL BE IN SOME WAY PERMANENTLY ATTACHED AND PROMINENTLY DISPLAYED WITHIN THE IMMEDIATE VICINITY OF THE OSD DEVICE. THIS PLAQUE SHALL ADVISE OCCUPIERS OF THE PROPERTY OF THE EXISTENCE OF THE OSD DEVICE AND ALSO THAT THE DEVICE IS NOT IN ANY WAY TO BE TAMPERED WITH OR CHANGED WITHOUT PRIOR WRITTEN CONSENT OF COUNCIL.
 - THE CONSTRUCTED OSD INSTALLATION MUST BE APPROPRIATELY CERTIFIED BY A SUITABLY QUALIFIED AND EXPERIENCED CONSULTING ENGINEER (GENERALLY CP ENG. QUALIFICATION) WHO MUST STATE THAT IT COMPLIES WITH COUNCIL'S OSD POLICY, ALL RELEVANT CODES AND STANDARDS AND ALSO THAT IT IS GENERALLY IN ACCORDANCE WITH APPROVED PLANS.
 - UPON COMPLETION OF THE OSD WORKS, WORK-AS-EXECUTED (WAE) PLANS SHALL BE SUBMITTED TO THE COUNCIL BY THE CONSULTING ENGINEER/REGISTERED SURVEYOR TO VERIFY THAT THE VOLUME OF STORAGE HAS BEEN ATTAINED AND THAT CRITICAL WATER AND FLOOR LEVELS ARE IN ACCORDANCE WITH DESIGN REQUIREMENTS. ANY CHANGES OR VARIATIONS TO THE APPROVED PLANS SHALL BE HIGHLIGHTED IN RED.
 - CERTIFICATION ON THE STANDARD FORM FOR ON-SITE DETENTION RECORD OF INSTALLATION ISSUED BY COUNCIL AND WAE PLANS SHALL BE SUBMITTED TOGETHER WITH THE COMPLIANCE CERTIFICATE.

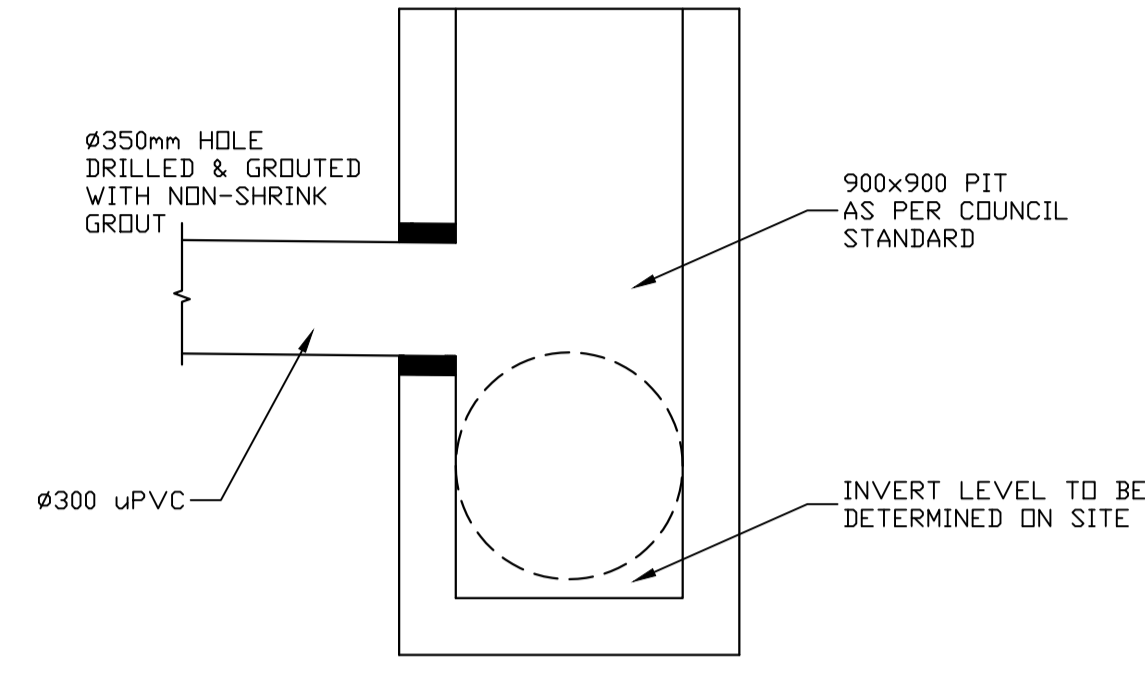
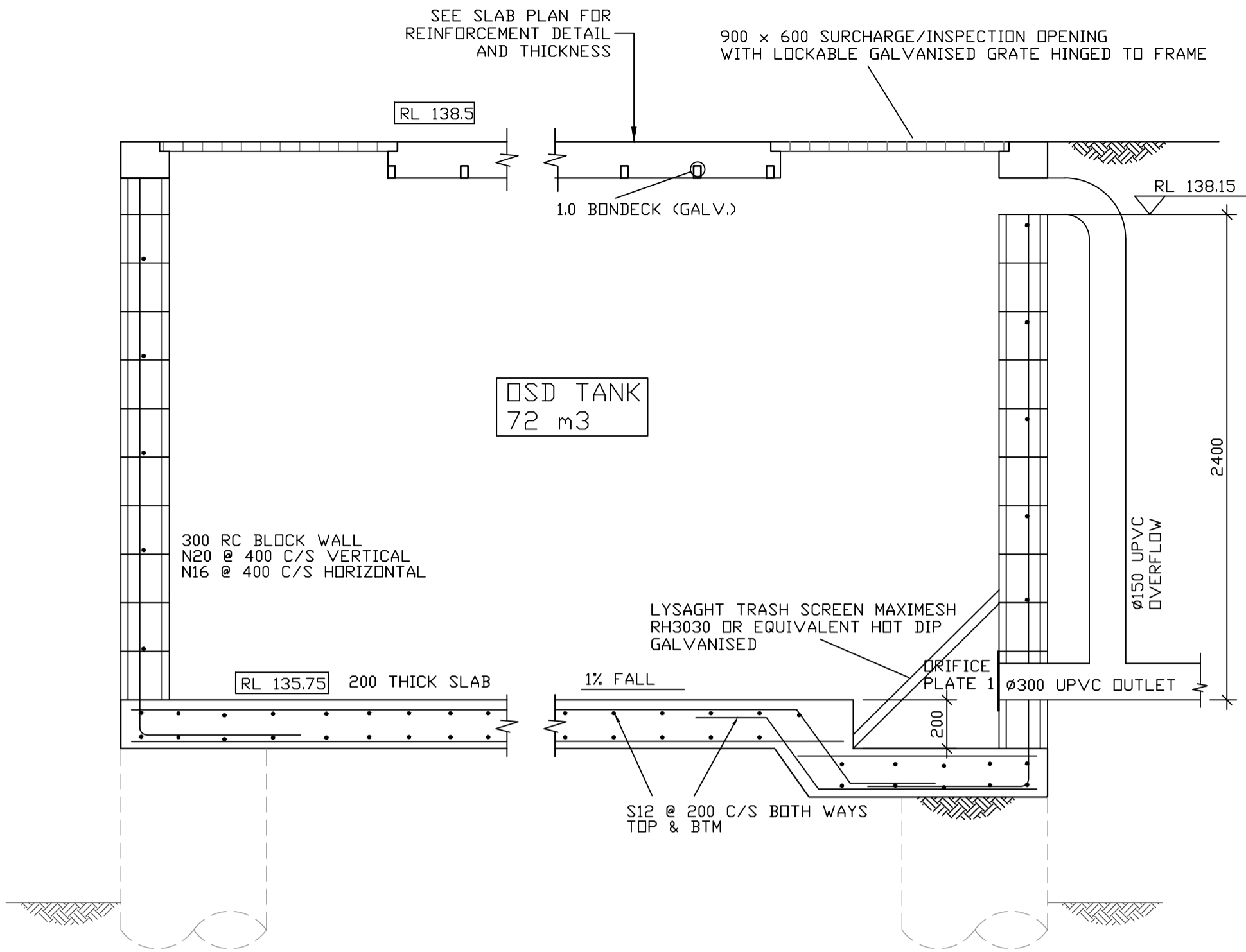
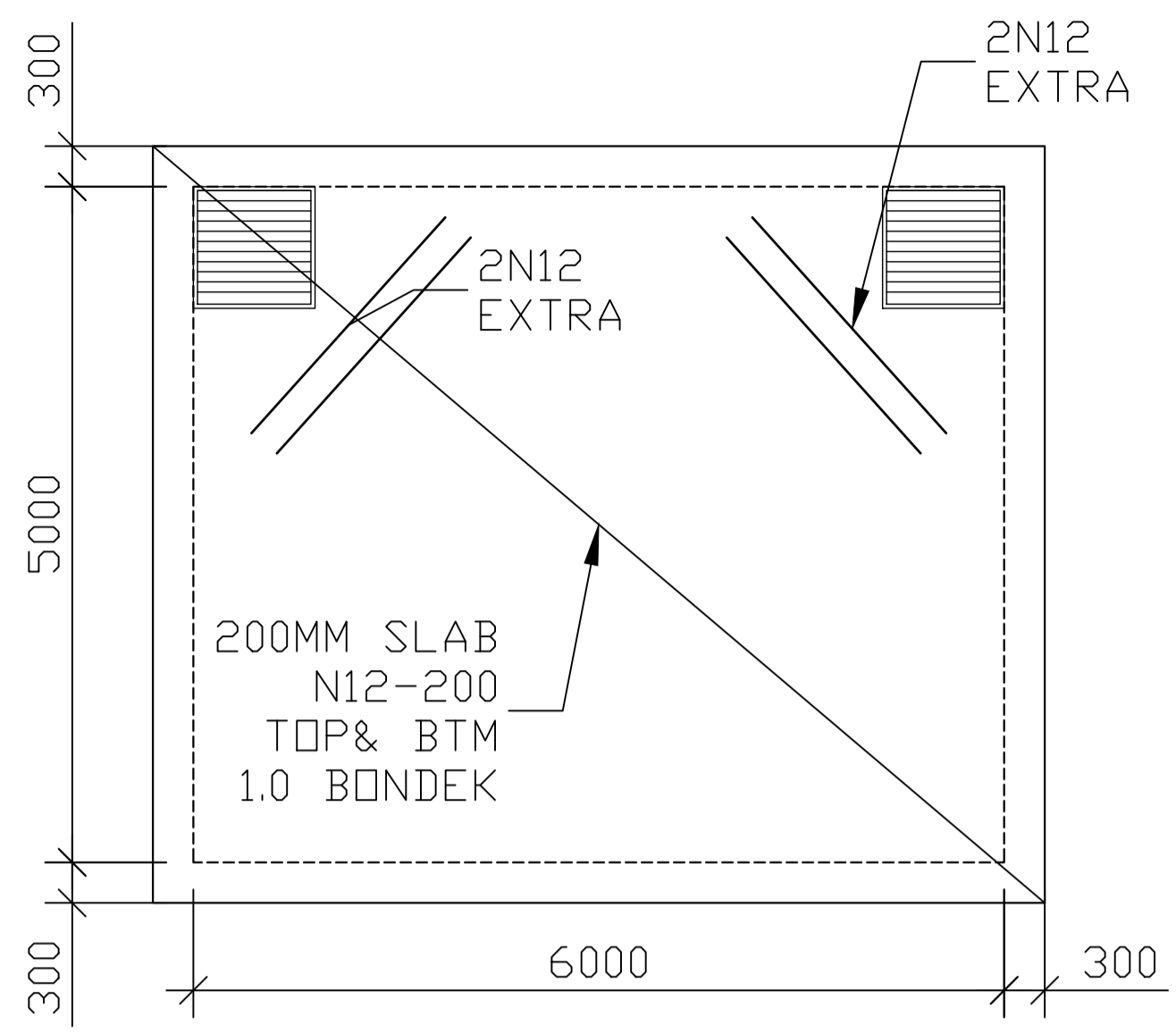
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 FAX 61-02 9975 1943
 MOBILE 04-07 753 899
 EMAIL hited@bigpond.net.au

CLIENT: MR JACK ZHANG
 PROJECT: STORMWATER MANAGEMENT PLAN FOR 12-14 GLADYS AVENUE FRENCHS FOREST, NSW

Drawn By: SD	Scale: AS SHOWN
Checked By: E. A. BENNETT M.I.E. Aust.	Drawing No: Z-11-267177-1H
Date: 12/06/2019	Amendment: H-05/11/2019

Registered Professional Engineer 198230
Mr Edward A. Bennett
 MIE Aust. CPENG
 Signature: Date 12 / 06 / 2019
 Register on the NPER in the Category of Civil/Environmental/Structural/Geotechnical National Professional Engineers Register

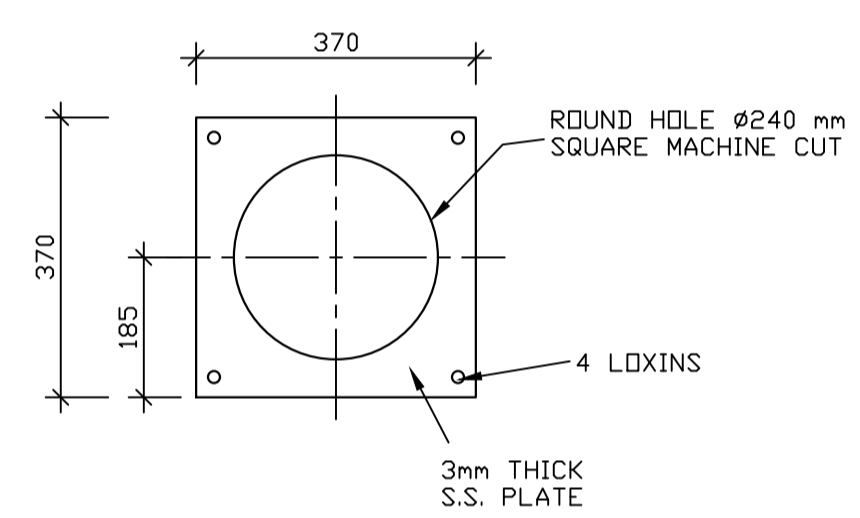
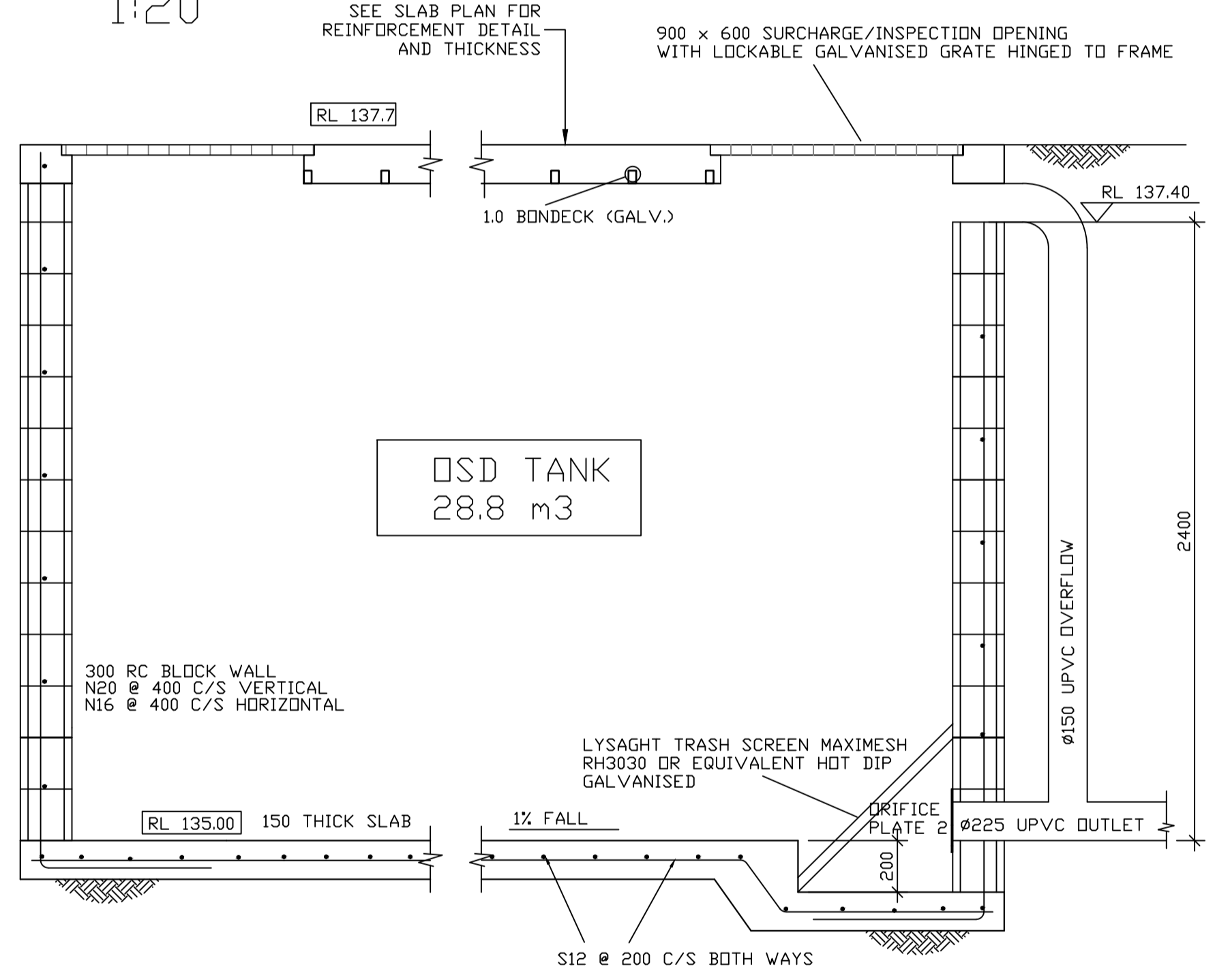
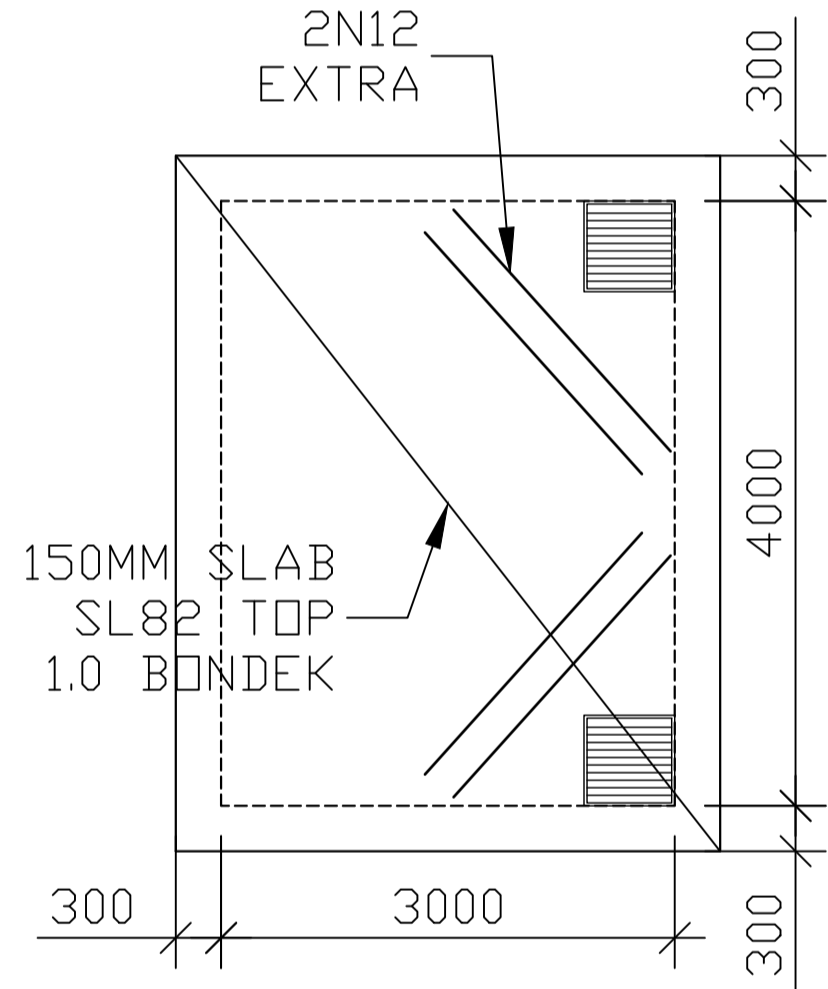
SITE PLAN
1:200



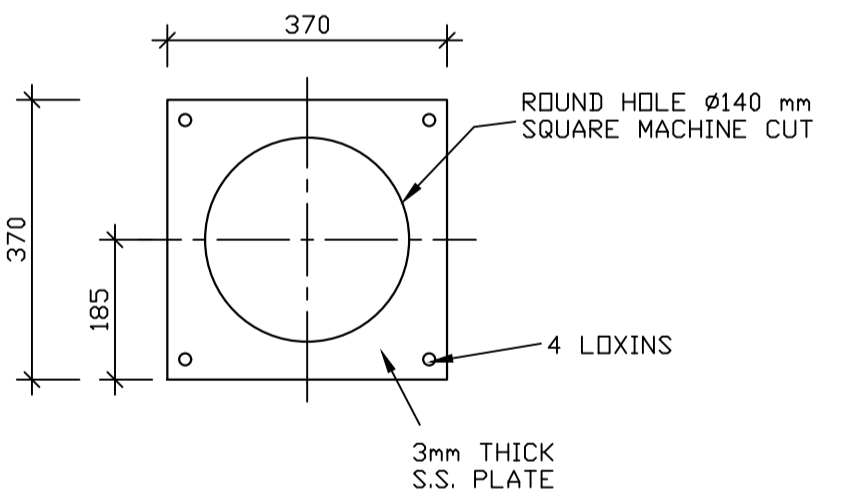
CONNECTION TO 900x900 PIT

PLAN OF ON-SITE DETENTION TANK 1
1:50

ON-SITE DETENTION TANK 1
1:20



ORIFICE PLATE 1
1:10

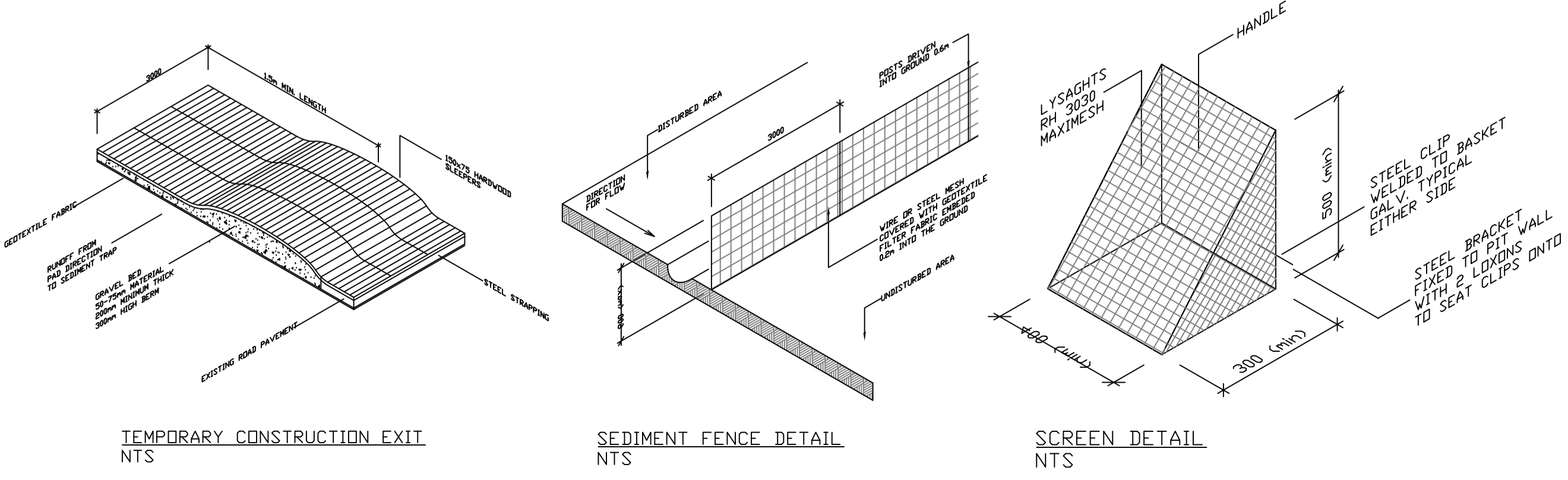


ORIFICE PLATE 2
1:10

PLAN OF ON-SITE DETENTION TANK 2
1:50

ON-SITE DETENTION TANK 2
1:20

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- | ELEMENT | SUMP | MAX. SIZE AGG. | CEMENT TYPE | ADMXTURE | MPa CONCRETE GRADE |
|---------|------|----------------|-------------|----------|--------------------|
| ALL | 80 | 20 | A | NL | 32 |
- C3 CLEAR CONCRETE COVERS TO REINFORCEMENT SHALL BE AS FOLLOWS UNLESS OTHERWISE SHOWN.**
- | ELEMENT | CAST IN FORMS COMPLYING WITH AS 1599 | | |
|---|--|--|---|
| | CONDITION 1 NOT TO BE EXPOSED TO WEATHER GROUND WATER OR FRESH WATER | CONDITION 2 TO BE EXPOSED TO WEATHER GROUND WATER OR FRESH WATER | CONDITION 3 CAST AGAINST OTHER FORMWORK OR THE GROUND |
| PAD FOOTINGS & PILE CAPS | - | 65 | 75 |
| STRIP FOOTINGS | - | 50 | 65 |
| SOLE OR CAST PIERS | - | 50 | 75 |
| COLUMNS | 40 | 50 | 75 |
| WALLS, INCLUDING RETAINING WALLS | 20 | 30 | 65 |
| BEAMS | 25 | 40 | 65 |
| SLABS INCLUDING JOISTS & HOLLOW BLOCK CONSTRUCTION | 20 | 30 | 65 |
| REINFORCEMENT ADJACENT TO HOLLOW BLOCKS INTERNAL WITH STRUCTURE | 5 | - | - |
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 - C12 ALL REINFORCING BARS SHALL COMPLY WITH AS 1302. ALL FABRIC SHALL COMPLY WITH AS 1903 AND AS 1904 AND SHALL BE SUPPLIED IN FLAT SHEETS.
 - C13 REINFORCING SYMBOLS
- | SYMBOL | DEFORMED BAR |
|--------|--------------|
| S | GRADE 2305 |
| C | GRADE 400C |
| Y | GRADE 400R |
| R | GRADE 230R |
| F | GRADE 450 |
| N | GRADE 500 |
- THE NUMBER IMMEDIATELY FOLLOWING THESE SYMBOLS IS THE BAR DIAMETER IN MILLIMETRES
- C14 FABRIC REINFORCEMENT TO BE LAPPED 300 MINIMUM AT ENDS AND SIDES UNO. LAPS IN POSITION OF MAXIMUM MOMENT ARE NOT PERMITTED.
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CLIENT: MR JACK ZHANG
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Drawn By: SD Scale: AS SHOWN
Checked By: E. A. BENNETT M.I.E. Aust. Drawing No: Z-11-267177-2H
Date: 12/06/2019 Amendment: H-05/11/2019

Registered Professional Engineer 198230
Mr Edward A. Bennett
MIE Aust. CP Eng

Signature: Date 12 / 06 / 2019

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