RIVER STREET COMMUNITY PRECINCT

48 RIVER STREET MACLEAN NSW 2463 Job No. N0211295

STORMWATER SERVICES

STORMWATER PIPE STORMWATER RISING MAIN PIPE EXISTING STORMWATER PIPE RAINWATER PIPE SUB-SOIL DRAINAGE LINE ☐ ☐ ☐ ☐ ☐ ☐ ☐ CAST IN SLAB PIPE

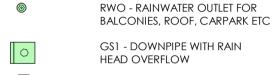
STORMWATER LEGEND

PROPOSED SEALED JUNCTION PROPOSED GRATED SUFACE INLET PIT. PIT DIMENSIONS ARE GOVERNED BY DEPTH REFER TO DETAIL. **EXISTING PIT**

PIT TO BE REMOVED



PROPOSED GRATED DRAIN PROPOSED RAINWATER TANK



GS1 - DOWNPIPE WITH RAIN **HEAD OVERFLOW** GS2 - DOWNPIPE WITH SUMP SIDE OVERFLOW GS3 - DOWNPIPE WITH SUMP HIGH CAPACITY OVERFLOW

SWALE DRAIN OVERLAND FLOW PATH

ROOF FALL DIRECTION P 35.05 PROPOSED PAVEMENT SURFACE LEVEL PROPOSED PIT SURFACE LEVEL PROPOSED PIT INVERT LEVEL

IL 34.75 PROPOSED FINISHED FLOOR LEVEL EXISTING SURFACE LEVEL

EXISTING SURVEY CONTOUR GENERAL PIPEWORK LEGEND

FLOW DIRECTION PIPE FROM ABOVE PIPE TO BELOW

STW Ø225 @ 1.0%min PIPE TYPE, SIZE AND GRADE

FALL DIRECTION

CONNECTION

CONTINUATION

END CAP

KEYNOTE TAG

PROJECT INFORMATION TABLE THE TABLES BELOW ARE TO BE READ IN CONJUNCTION WITH THE ADJACENT NOTES

GEOTECHNICAL INFORMATION

CONSTRUCTION SCIENCES 5062.P42 24/03/2022	COMPANY	REPORT No.	DATED
	CONSTRUCTION SCIENCES	5062.P42	24/03/2022

SURVEY INFORMATION

THE SURVEY INFORMATION ON THESE DRAWINGS HAS BEEN PROVIDED BY

	COMPANY	DATED	
D	MACLEAN SHIRE COUNCIL	10/08/1992	
	NOTE: 1992 IN-GROUND STORMWATER SURVEY	DRAWING PROVIDED BY	1

LOCATING SURVEY TO PROPERLY LOCATE THE EXISTING STORMWATER LINE PRIOR TO CONSTRUCTION

PROOF ROLLING PROOF ROLLING SPECIFICATIONS

(min) ROLLER WEIGHT	(min) NUMBER OF PASSE
5 TONNE	10

MACLEAN SHIRE COUNCIL TO BE VERIFIED AND CHECKED BY A NEW

COMPACTION TESTING

RATE OF TESTS	TEST AREA PER LAYER
2	1000m²

-TESTING SHALL BE CARRIED OUT BY A REGISTERED NATA LABORATORY.

RIGID PAVEMENT DESIGN DESIGN LIFE 40YEARS

DESIGN VEHICLE	DESIGN CBR	DESIGN TRAFFIC
MRV	5%	ESA

FLEXIBLE PAVEMENT DESIGN DESIGN LIFE 20YEARS

L	DESIGN VEHICLE	DESIGN CBR	DESIGN TRAFFIC
	MRV	5	ESA

SAFETY IN DESIGN

THERE ARE INHERENT RISKS WITH CONSTRUCTING, MAINTAINING, OPERATING, DEMOLISHING, DISMANTLING AND DISPOSING THIS DESIGN THAT ARE TYPICAL OF SIMILAR DESIGNS. AS FAR AS IS REASONABLY PRACTICABLE RISKS HAVE BEEN ELIMINATED C MINIMISED THROUGH THE DESIGN PROCESS. HAZARD CONTROLS MUST STILL BE IMPLEMENTED BY THE CONTRACTOR, OWNER OR OPERATOR TO ENSURE THE SAFETY OF WORKERS.

• JN DO NOT CONSIDER THAT THERE ARE ANY UNIQUE RISKS ASSOCIATED WITH THE DESIGN OF THIS PROJECT.

GENERAL

COMMENCEMENT OF WORKS

1. ALL EXISTING LEVELS TO BE CONFIRMED ON SITE PRIOR TO

- 2. ALL WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE NOMINATED OR APPLICABLE COUNCIL SPECIFICATION. WHERE A SPECIFICATION HAS NOT BEEN NOMINATED THEN THE CURRENT NSW DEPARTMENT OF HOUSING CONSTRUCTION SPECIFICATION IS TO BE USED. THE NOMINATED SPECIFICATION SHALL TAKE PRECEDENCE TO THESE NOTES
- THESE DRAWINGS ARE DIAGRAMMATIC AND SHOW THE GENERAL ARRANGEMENT, ALL DIMENSIONS SHOWN SHALL BE VERIFIED BY THE CONTRACTOR ON SITE. ENGINEERS DRAWINGS SHALL NOT BE SCALED FOR DIMENSIONS. 4. ALL DRAWINGS SHOULD BE READ IN CONJUNCTION WITH THE
- RELEVANT ARCHITECTURAL DRAWINGS & DRAWINGS FROM OTHER CONSULTANTS 5. THE CONTRACTOR SHOULD REPORT ANY DISCREPANCIES ON THE
- DRAWINGS TO THE ENGINEER RESPONSIBLE FOR THE DESIGN. THE CONTRACTOR SHOULD LOCATE AND LEVEL ALL EXISTING SERVICES PRIOR TO COMMENCING CONSTRUCTION AND
- PROTECT AND MAKE ARRANGEMENTS WITH THE RELEVANT AUTHORITY TO RELOCATE AND/OR ADJUST IF NECESSARY. INFORMATION GIVEN ON THE DRAWINGS IN RESPECT TO SERVICES IS FOR GUIDANCE ONLY AND IS NOT GUARANTEED
- COMPLETE NOR CORRECT. 7. CONTRACTOR IS NOT TO ENTER UPON NOR DO ANY WORK WITHIN ADJACENT LANDS WITHOUT THE PERMISSION OF THE
- 8. SURPLUS EXCAVATED MATERIAL SHALL BE PLACED WHERE DIRECTED OR REMOVED FROM SITE. 9. ALL NEW WORKS SHALL MAKE A SMOOTH JUNCTION WITH
- 10. ALL DRAINAGE LINES THROUGH ADJACENT LOTS SHALL BE CONTAINED WITHIN EASEMENTS CONFORMING TO COUNCIL'S
- STANDARDS 11. THE CONTRACTOR SHALL CLEAR THE SITE BY REMOVING ALL RUBBISH, FENCES AND DEBRIS ETC. TO THE EXTENT SPECIFIED.
- 12. PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL PROVIDE A TRAFFIC MANAGEMENT PLAN PREPARED BY AN ACCREDITED PERSON IN ACCORDANCE WITH RMS REQUIREMENTS, FOR ANY WORK ON OR ADJACENT TO PUBLIC ROADS, PLAN TO BE SUBMITTED TO COUNCIL & RMS.

- 1. JONES NICHOLSON IS NOT RESPONSIBLE FOR THE ACCURACY OF
- ANY 3RD PARTY INFORMATION PROVIDED ON THIS DRAWING. ALL LEVELS ARE TO A.H.D.
- 3. ALL CHAINAGES AND LEVELS ARE IN METRES, AND DIMENSIONS IN MILLIMETRES. 4. SET OUT COORDINATES ARE BASED ON SURVEY DRAWINGS
- PROVIDED FOR THE PURPOSE OF CARRYING OUT THE ENGINEERING DESIGN.
- 5. CONTRACTOR SHALL VERIFY ALL SET OUT COORDINATES SHOWN
- ON THE PLANS BY A REGISTERED SURVEYOR . CONTRACTORS SHALL ARRANGE FOR THE WORKS TO BE SET OUT
- BY A REGISTERED SURVEYOR. 7. ANY DISCREPANCIES SHOULD BE CLARIFIED IN WRITING WITH THE

ENGINEER PRIOR TO COMMENCEMENT OF THE WORK FOR CONFIRMATION OF THE SURVEY.

STORMWATER DRAINAGE INSTALLATION

- 1. SUPPLY & INSTALLATION OF DRAINAGE WORKS TO BE IN
- ACCORDANCEWITH THESE DRAWINGS, THE COUNCIL SPECIFICATION AND THE CURRENT APPLICABLE AUSTRALIAN
- . BEDDING OF THE PIPELINES IS TO BE TYPE 'HS2' IN ACCORDANCE WITH THE STANDARDS AND AS FOLLOWS a. COMPACTED GRANULAR MATERIAL IS TO COMPLY WITH THE **FOLLOWING GRADINGS:**

SIEVE SIZE (mm)	19	2.36	0.60	0.30	0.15	0.075
% MASS PASSING	100	50-100	20-90	10-60	0-25	0-10

- AND THE MATERIAL PASSING THE 0.075 SIEVE HAVING LOW PLASTICITY AS DESCRIBED IN APPENDIX D OF AS1726. b. BEDDING DEPTH UNDER THE PIPE TO BE 100mm. C. BEDDING MATERIAL TO BE EXTENDED FROM THE TOP OF THE BEDDING ZONE UP TO 0.3 TIMES PIPE OUTSIDE DIAMETER.

THIS REPRESENTS THE 'HAUNCH ZONE.' d. THE BEDDING & HAUNCH ZONE MATERIAL IS TO BE COMPACTED TO A MINIMUM RELATIVE COMPACTION OF 98% WITHIN ROAD RESERVES AND TRAFFICABLE AREAS AND

95% FLSEWHERE FOR COHESIVE MATERIAL OR A MINIMUM DENSITY INDEX OF 70% IN ACCORDANCE WITH THE STANDARDS FOR COHESIONLESS MATERIAL. e. COMPACTION TESTING SHALL BE CARRIED OUT BY AN APPROVED ORGANISATION WITH A NATA CERTIFIED

LABORATORY FOR ALL DRAINAGE LINES LAID WHOLLY OR IN

PART UNDER THE KERB & GUTTER OR PAVEMENT. 3. BACKFILL SHALL BE PLACED & COMPACTED IN ACCORDANCE WITH THE SPECIFICATION, A GRANULAR GRAVEL AGGREGATE MATERIAL (<10mm) BACKFILL IS RECOMMENDED FOR THE BEDDING, HAUNCH SUPPORT AND SIDE ZONE DUE TO IT'S SELF

COMPACTING ABILITY. 4. A MINIMUM OF 150mm CLEARANCE IS TO BE PROVIDED BETWEEN THE OUTSIDE OF THE PIPE BARREL AND THE TRENCH WALL FOR PIPES < 600 DIA. 200mm CLEARANCE FOR PIPES 600 TO 1200 DIA AND D/6 CLEARANCE FOR PIPES > 1200 DIA.

STORMWATER DRAINAGE

- 1. STORMWATER DRAINAGE SHALL BE GENERALLY IN ACCORDANCE WITH CURRENT AUSTRALIAN STANDARDS AND COUNCIL'S
- PIPES OF 225mm DIA. AND UNDER SHALL BE UPVC. PIPES OF 300mm DIA. AND LARGER SHALL BE FRC OR CONCRETE
- CLASS 2 RUBBER RING JOINTED UNO.
- 4. ALL FRC OR RCP STORMWATER PIPES WITHIN ROAD RESERVE AREAS TO BE CLASS 3 U.N.O. 5. MINIMUM COVER TO PIPES 300mm DIA. AND OVER GENERALLY
- SHALL BE 600mm IN CARPARK & ROADWAY AREAS UNO. PIPES SHALL GENERALLY BE LAID AT THE GRADES INDICATED ON THE
- DRAWINGS 7. PIPES UP TO 150mm DIA SHALL BE LAID AT 1.0% MIN. GRADE U.N.O. 8. PIPES 225mm DIA AND OVER SHALL BE LAID AT 0.5% MIN. GRADE
- 9. BACKFILL TRENCHES WITH APPROVED FILL COMPACTED IN 200mm LAYERS TO 98% OF STANDARD DENSITY.
- 10. ANY PIPES OVER 16% GRADE SHALL HAVE CONCRETE BULKHEADS AT 11. PITS SHALL BE AS DETAILED WITH METAL GRATES AT LEVELS INDICATED. ALL PITS DEEPER THAN 1200mm TO HAVE CLIMB IRONS.
- 12. BUILD INTO UPSTREAM FACE OF ALL PITS A 3.0m SUBSOIL LINE FALLING TO PITS TO MATCH PIT INVERTS.
- 13. ALL COURTYARD & LANDSCAPED PITS TO BE 450 SQUARE LOAD CLASS A UNLESS NOTED OTHERWISE. 14. ALL DRIVEWAY & OSD PITS TO BE 600 SQUARE LOAD CLASS D UNLESS
- 15. INSTALL TEMPORARY SEDIMENT BARRIERS TO INLET PITS, TO COUNCIL'S STANDARDS UNTIL SURROUNDING AREAS ARE PAVED OR
- 16. PITS & DOWNPIPE LOCATIONS AND LEVELS MAY BE VARIED TO SUIT SITE CONDITIONS AFTER CONSULTING THE ENGINEER.
- 17. DOWNPIPES SHOWN ARE INDICATIVE ONLY, ALL ROOF GUTTERING AND DOWNPIPES TO THE CURRENT AUSTRALIAN STANDARDS. 18. ALL PLANTER BOXES AND BALCONIES TO BE CONNECTED TO THE
- PROPOSED STORMWATER DRAINAGE LINE. 19. HAND-EXCAVATE STORMWATER PIPES IN VICINITY OF TREE ROOTS.
- 20. FOOTPATH CROSSING LEVELS SHOWN ARE TO BE ADJUSTED TO FINAL COUNCIL'S ISSUED LEVELS.
- 21. GEOTEXTILE FABRIC TO BE PLACED UNDER RIP RAP SCOUR
- PROTECTION. 22. ALL BASES OF PITS TO BE BENCHED TO HALF PIPE DEPTH AND PROVIDE GALVANISED ANGLE SURROUNDINGS TO GRATE.
- 23. SUBSOIL LINE PIPES AND FITTINGS SHALL BE PERFORATED PLASTIC TO CURRENT AUSTRALIAN STANDARDS. LAY PIPES ON FLOOR OF TRENCH GRADED AT 1% MIN. AND OVERLAY WITH FILTER MATERIAL EXTENDING TO WITHIN 200mm OF SURFACE. PROVIDE FILTER FABRIC OF PERMEABLE POLYPROPYLENE BETWEEN FILTER MATERIAL AND
- 24. SHOULD THE CONTRACTOR ELECT TO INSTALL PRECAST STORMWATER PITS AND THEY ARE PERMITTED BY COUNCIL AND THE CLIENT, THE PRECAST PITS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH RMS STANDARDS INCLUDING:
- 1. SEAL THE SEGMENTS TOGETHER USING A SITE-APPROVED NON-SHRINK GROUT OR MASTIC-TYPE PRODUCT. APPLY THE SEALANT IN ACCORDANCE WITH THE PRODUCT MANUFACTURER'S REQUIREMENTS.
- 2. ENSURE THAT NO GAPS REMAIN AND THAT A SMOOTH FACE EXISTS BETWEEN MULTIPLE UNITS.
- 3. LEAVE THE SEGMENTS UNDISTURBED UNTIL THE PERIOD OF CURING IS COMPLETED IN ACCORDANCE WITH THE GROUT OR SEALANT PRODUCT MANUFACTURER'S REQUIREMENTS.

	CLARENCE VALLEY COUNCIL
	STATUS PRELIMINARY
Responsive Engineering	THIS DOCUMENT IS ISSUED BY JONES NICHOLSON Pty. Ltd. (ABN 51 003 316 032) AND IS SI TO THE RELEVANT CONTRACT BETWEEN JONES NICHOLSON Pty. Ltd. AND ITS CLIENT. THI CONCEPTS AND INFORMATION CONTAINED IN THE DOCUMENT ARE THE COPYRIGHT OF JNICHOLSON Pty. Ltd. USE OR COPYING OF THE DOCUMENT WITHOUT WRITTEN PERMISSI JONES NICHOLSON Pty. Ltd. CONSTITUTES AN INFRINGEMENT OF COPYRIGHT





CIVIL DRAWING LIST

NOTES & LEGEND

WSUD PLAN

TYPICAL DETAILS - SHEET 1

TYPICAL DETAILS - SHEET 2

ROOF STORMWATER PLAN

BASEMENT 1 STORMWATER PLAN

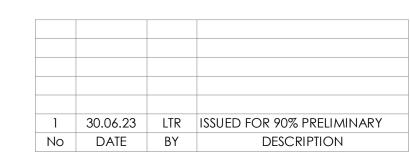
GROUND STORMWATER PLAN

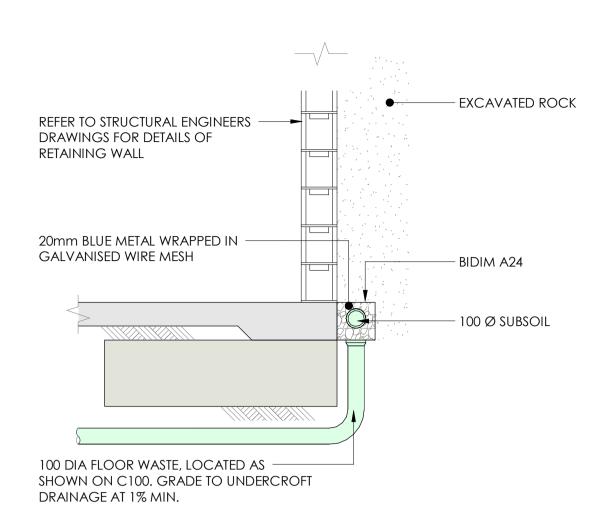
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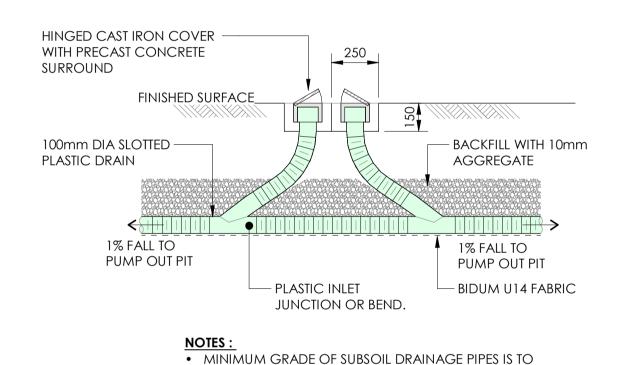
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SHEET NAME





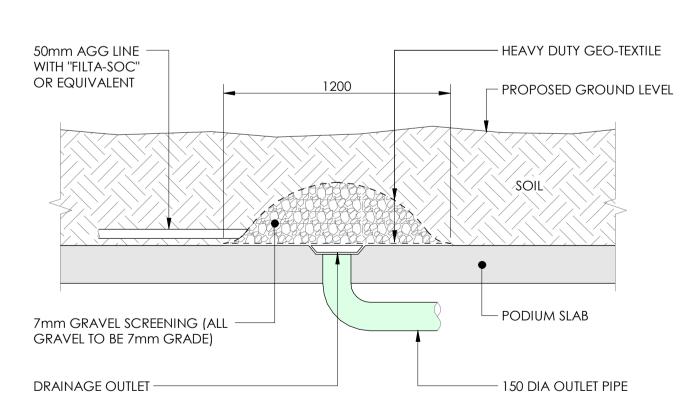
TYPICAL GROUNDWATER DRAINAGE DETAIL SCALE 1:20



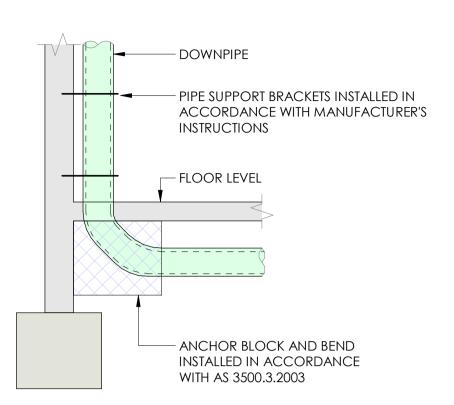
MINIMUM 300mm. SUBSOIL PIPE FLUSHING POINT

SCALE 1:20

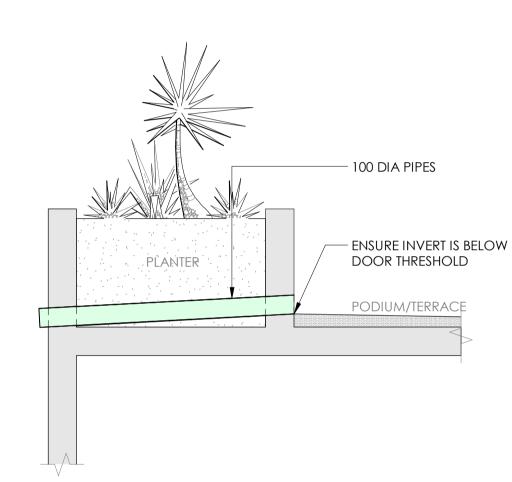
BE 1.0%. JOINTS IN FILTER FABRIC TO BE LAPPED A



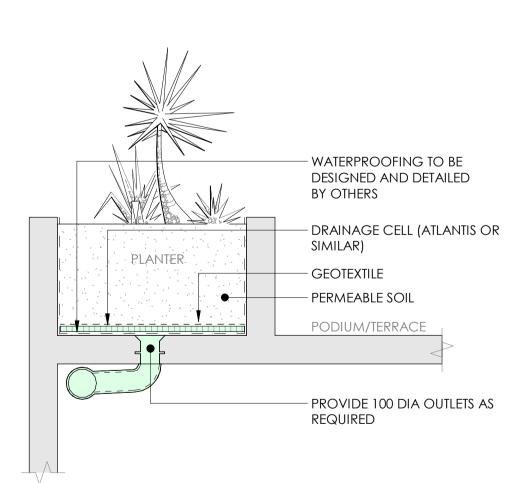
TYPICAL SUBSOIL OUTLET DETAIL SCALE 1:20



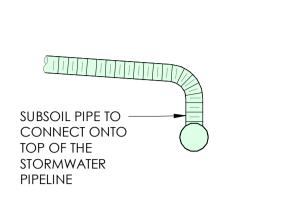
TYPICAL VERTICAL DROP DETAIL SCALE 1:20



TYPICAL PLANTER OVERFLOW DETAIL SCALE 1:20



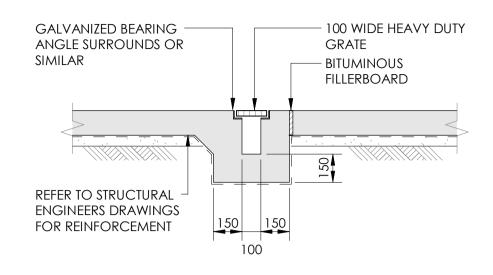
TYPICAL PLANTER DRAINAGE DETAIL SCALE 1:20



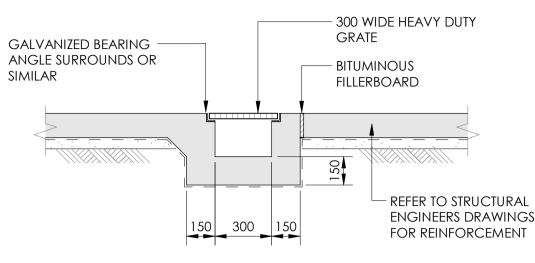
SUBSOIL PIPE CONNECTION SCALE 1:20

SOCK AND GRAVEL FILTER.

CONNECT TO STORMWATER LINE.



TYPICAL 100mm GRATED DRAIN DETAIL SCALE 1:20



TYPICAL 300mm GRATED DRAIN DETAIL SCALE 1:20

- GALVANISED STEEL PLATE

BRACKET FIXED TO WALL

TO SUPPORT TRASH

RACK

- HANDLE

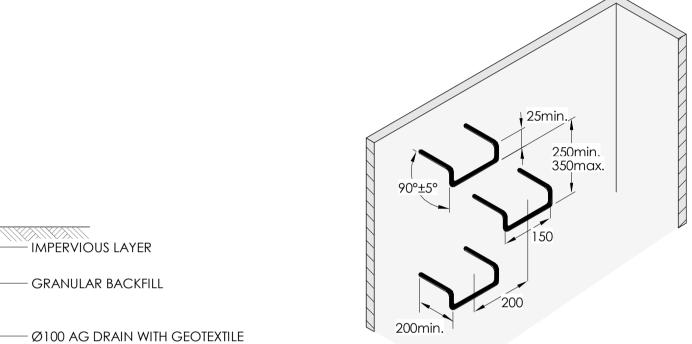
OUTLET PIPE

- STAINLESS STEEL

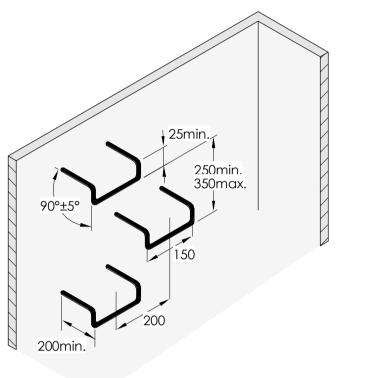
ORIFICE PLATE

TO PIT WALL

BOLTED AND EPOXIED



TYPICAL SUBSOIL LINE STEP IRON DETAIL SCALE 1:20 SCALE 1:20

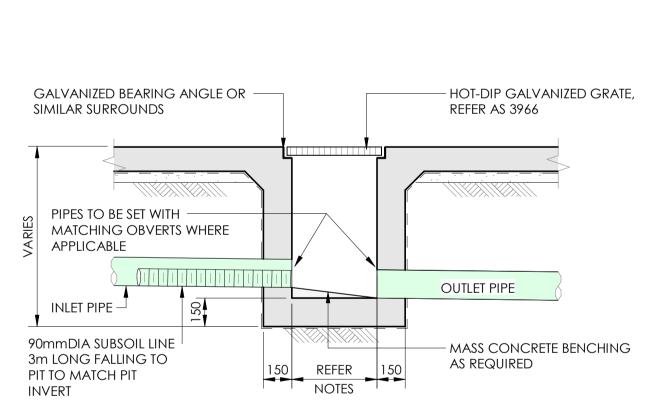


TYPICAL TRASH RACK SCREEN DETAIL SCALE 1:20

'LYSAGHT' MAXIMESH RH3030 HOT DIP

GALVANISED OR

EQUIVALENT

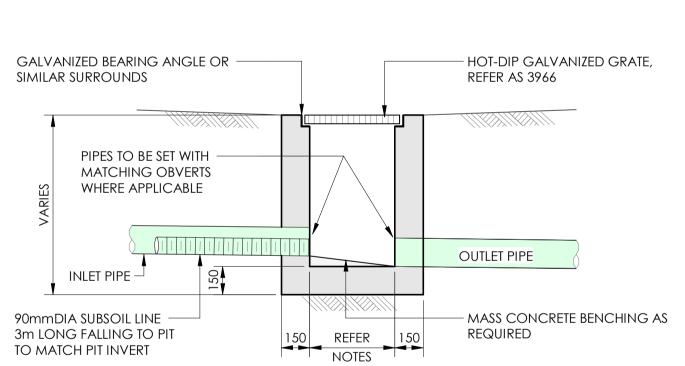


NOTES					
MINIMUM INTERNAL DIMENSIONS FOR STORMWATER PITS					
DEPTH OF INVERT OF OUTLET DEPTH OF INVERT OF OUTLET					
WIDTH LENGTH		LENGTH			
	< 600	450	450		
> 600		600	600		
> 900		600	900		
> 1200		900	900		
*STEP IRONS SHALL BE PROVIDED FOR PITS WITH DEPTHS EXCEEDING 1000mm					

1. CLIMB IRONS SHALL BE PROVIDED UNDER LID AT 300 CTS TO COUNCIL STANDARDS WHERE PIT DEPTH IS DEEPER THAN 1000.

. PROVIDE 90Dia x 3000 LONG SUBSOIL DRAINAGE STUB PIPE SURROUNDED WITH 100mm THICKNESS OF NOMINAL 20mm COARSE FILTER MATERIAL WRAPPED IN GEOTEXTILE FILTER FABRIC.(BIDUM A24 OR APPROVED SIMILAR). TO BE PARALLEL TO UPSTREAM SIDE OF EACH INLET PIPE. 3. ALTERNATIVE PIT CONSTRUCTION MAY BE USED SUBJECT TO THE ENGINEERS APPROVAL. 4. CONCRETE STRENGTH F'c = 32 MPa

TYPICAL CONCRETE INLET PIT - CONCRETE SURFACE



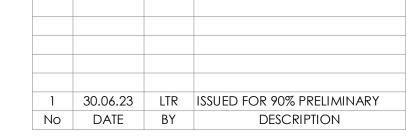
minimum internal dimensions for stormwater pits					
DEPTH OF INVERT OF OUTLET DEPTH OF INVERT OF OUTLET					
		WIDTH	LENGTH		
	< 600	450	450		
> 600		600	600		
> 900		600	900		
> 1200		900	900		
*STEP IRONS SHALL BE PROVIDED FOR PITS WITH DEPTHS EXCEEDING 1000mm					

48 RIVER STREET

MACLEAN NSW 2463

- 1. CLIMB IRONS SHALL BE PROVIDED UNDER LID AT 300 CTS TO COUNCIL STANDARDS WHERE PIT DEPTH IS DEEPER THAN 1000.
- . PROVIDE 90Dia x 3000 LONG SUBSOIL DRAINAGE STUB PIPE SURROUNDED WITH 100mm THICKNESS OF NOMINAL 20mm COARSE FILTER MATERIAL WRAPPED IN GEOTEXTILE FILTER
- (BIDUM A24 OR APPROVED SIMILAR). TO BE PARALLEL TO UPSTREAM SIDE OF EACH INLET PIPE. 4. ALTERNATIVE PIT CONSTRUCTION MAY BE USED SUBJECT TO THE ENGINEERS APPROVAL. 5. CONCRETE STRENGTH F'C = 32 MPa

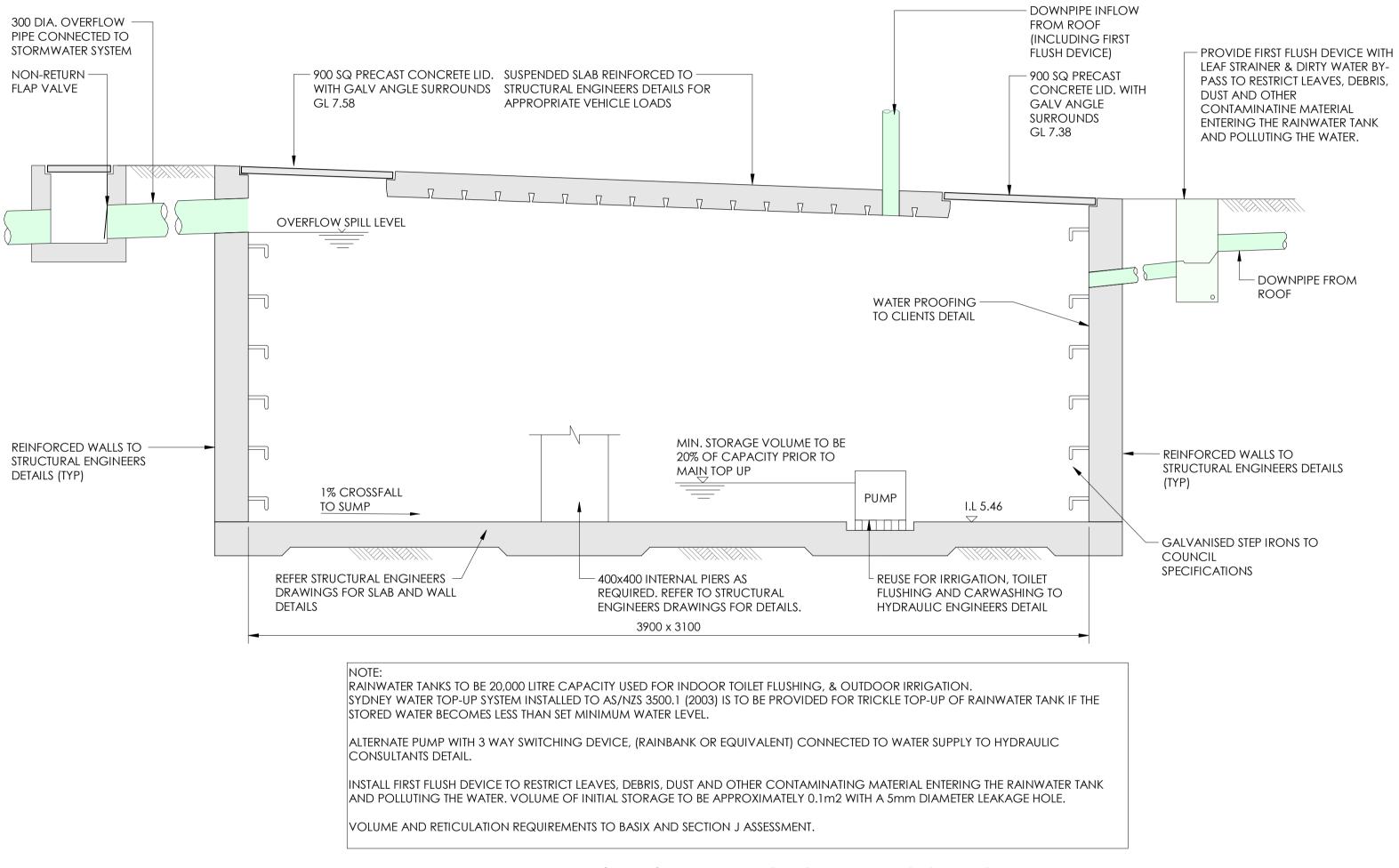
TYPICAL CONCRETE INLET PIT - NATURAL SURFACE SCALE 1:20



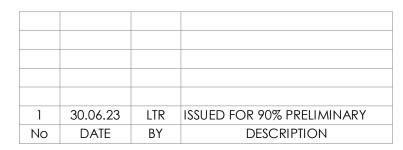








RAINWATER TANK (RWT) - UNDERGROUND BLOCKWORK SCALE 1:20



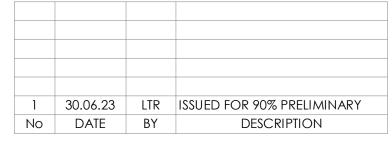




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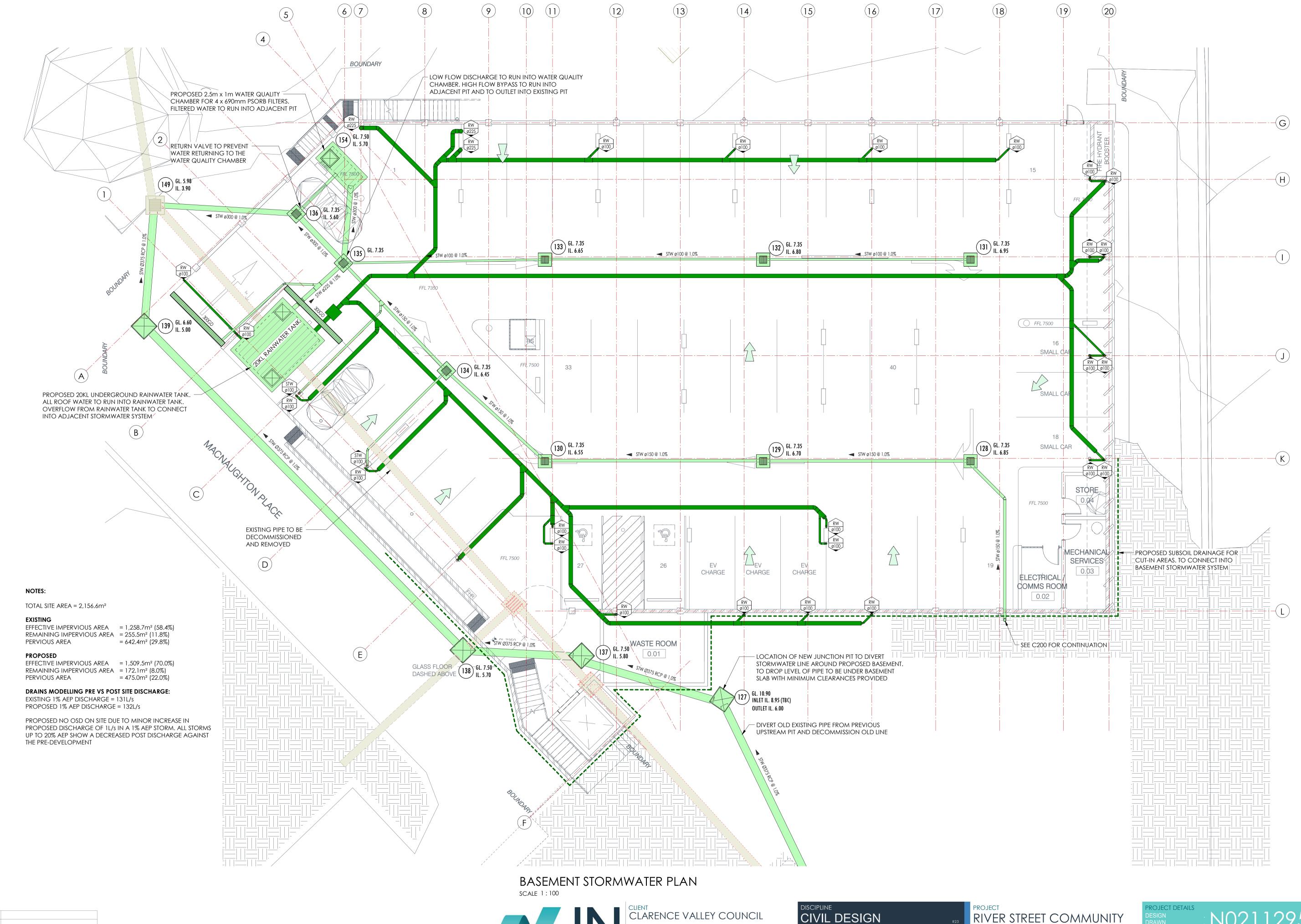


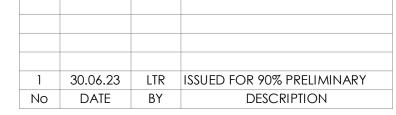




PROJECT
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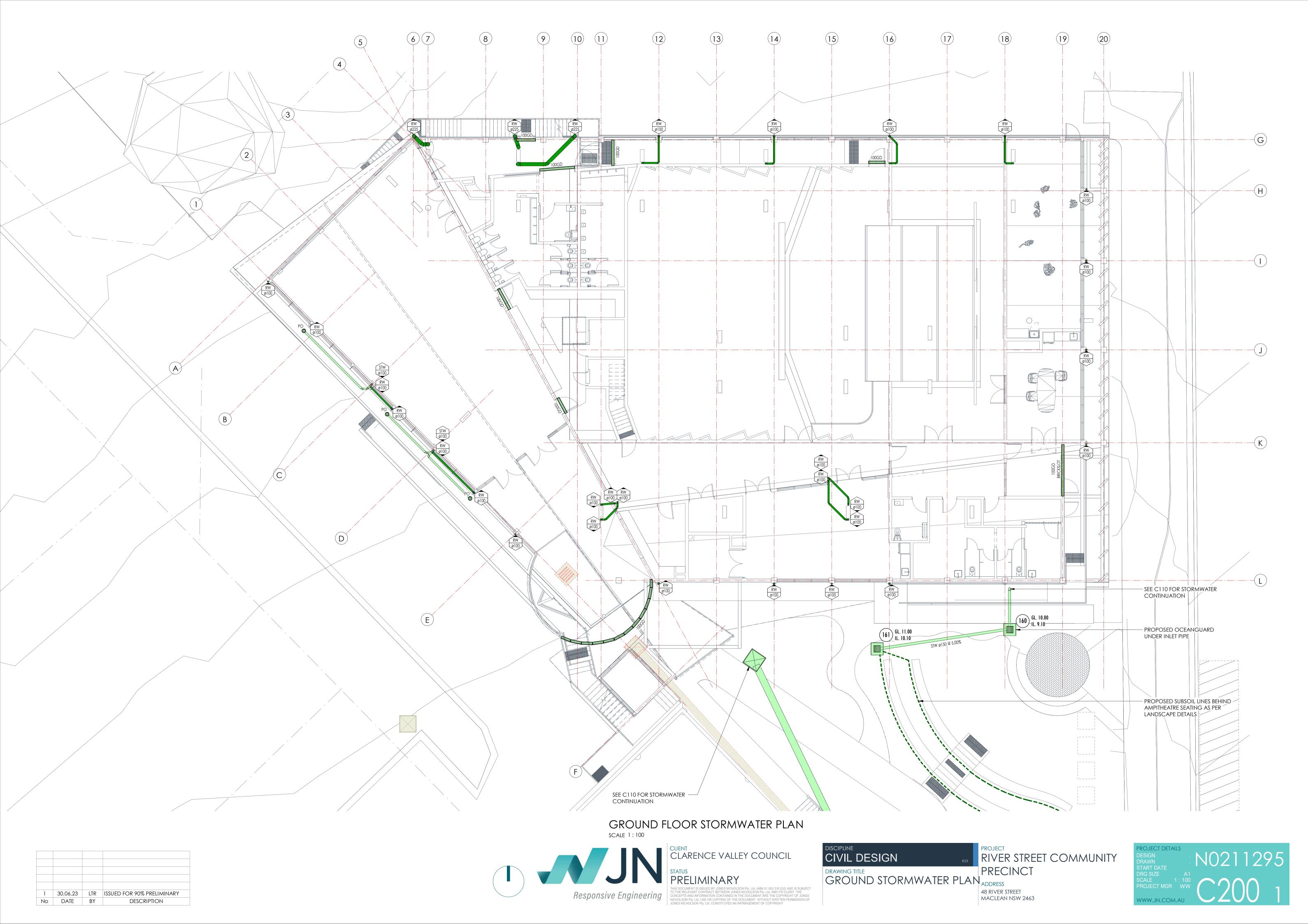
DRAWING TITLE BASEMENT 1 STORMWATER PLAN

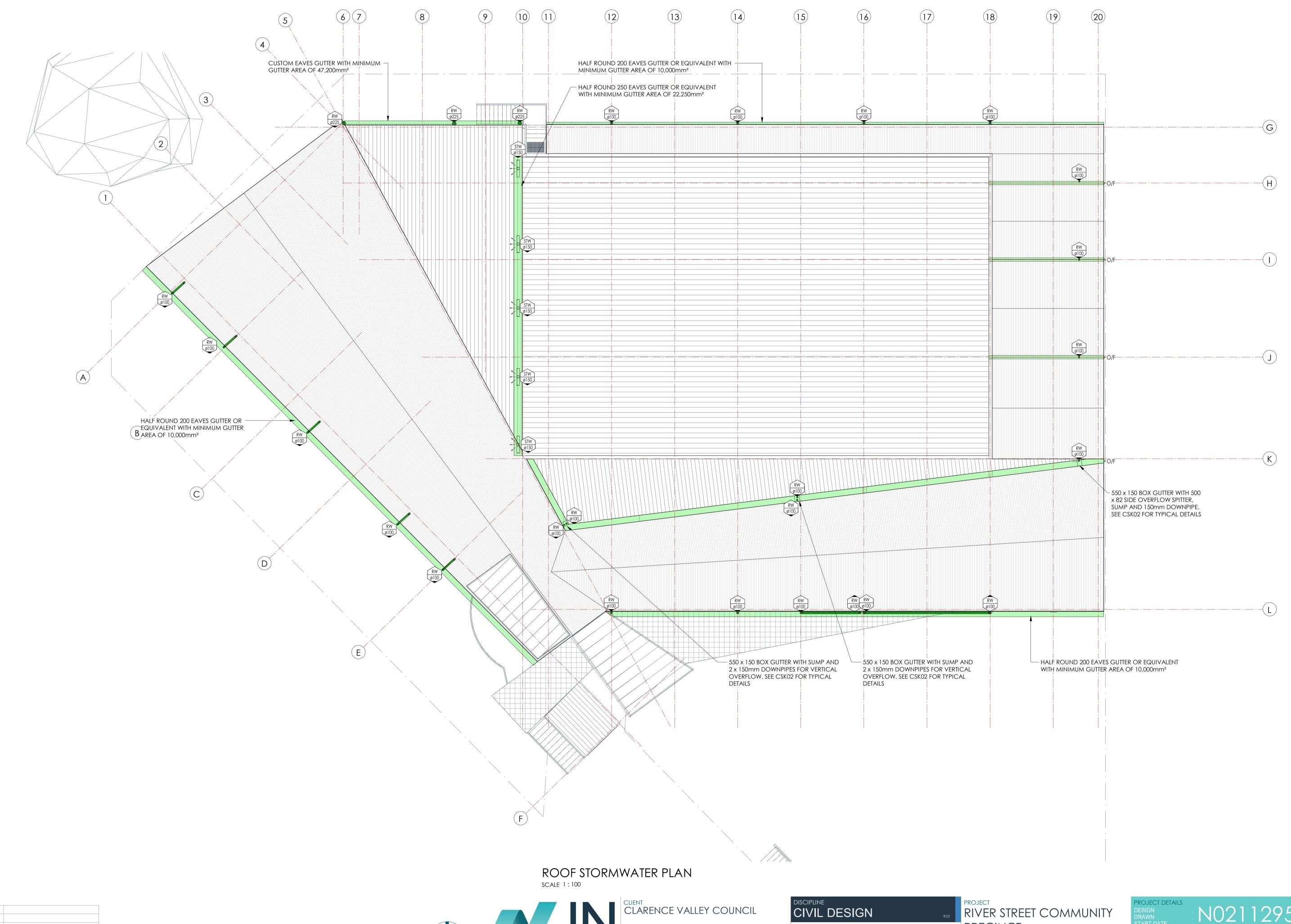
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