

# REGIS BELROSE

## 181 FOREST WAY BELROSE NSW 2085

### RESIDENTIAL AGED CARE FACILITY

ISSUE	AMENDMENT	DATE	DRAWN	APP
A	DRAFT TENDER ISSUE	30.10.23	JB	NP
B	70% TENDER ISSUE	10.11.23	JB	NP

CIVIL LEGEND	
<b>PIPELINES</b>	
	PROPOSED STORMWATER DRAINAGE
	PROPOSED BASEMENT STORMWATER DRAINAGE
	PROPOSED EMERGENCY PUMP LINE
	PROPOSED SEWER DRAINAGE
	EXISTING SEWER DRAINAGE
	EXISTING WATER
	EXISTING GAS
	EXISTING ELECTRICAL
	EXISTING COMMS
	EXISTING HIGH VOLTAGE CABLE
	REDUNDANT SERVICE
	PROPOSED SEWER MANHOLE
	EXISTING SEWER MANHOLE
	STORMWATER OVERLAND FLOW PATH
	GRASS LINED SWALE DRAIN (GRASS TO BE LAID KIKUYU OR EQUAL)
	FINISHED SURFACE LEVEL
	EXISTING SURFACE LEVEL
	GRATED DRAIN
	SUBSOIL DRAINAGE LINE
	SUBSOIL HIGH END RISER AND INTERMEDIATE RISER
	DOWNSPIPE CONNECTION (Ø150 UPVC UNO)
	STORMWATER DRAINAGE STRUCTURE WITH NUMBER (REFER STORMWATER DRAINAGE STRUCTURES SCHEDULE)
	STORMWATER DRAINAGE LINE WITH:
	IL 25.30 INVERT LEVEL UPSTREAM
	Ø375 RCP '2' PIPE SIZE AND MATERIAL CLASS
	13.30m @ 1.0% PIPE GRADE
	10m PIPE LENGTH
	IL 25.10 INVERT LEVEL DOWNSTREAM



LOCALITY PLAN

DRAWING SCHEDULE	
DWG No.	DRAWING TITLE
C100	COVER SHEET, LEGEND & DRAWING SCHEDULE
C101	NOTES PAGE - SHEET 1
C102	NOTES PAGE - SHEET 2
C201	EXISTING SITE PLAN
C301	SOIL EROSION CONTROL PLAN
C310	SOIL EROSION CONTROL DETAILS
C401	BULK EARTHWORKS PLAN
C501	STORMWATER MANAGEMENT PLAN
C510	STORMWATER DETAILS - SHEET 1
C511	STORMWATER DETAILS - SHEET 2
C512	STORMWATER DETAILS - SHEET 3
C520	STORMWATER CATCHMENT PLAN
C701	PAVEMENT PLAN
C801	COUNCIL PUBLIC DOMAIN
C901	CIVIL DETAILS - SHEET 1

CLIENT  
**REGIS AGED CARE**

PO BOX 658  
 GORDON NSW 2072  
 PHONE : (02) 8467 9333

ARCHITECT

architecture

CIVIL ENGINEER

ENTEC  
 CONSULTANTS

PROJECT  
**REGIS BELROSE**

181 FOREST WAY  
 BELROSE NSW 2085

DRAWING TITLE  
 CIVIL SERVICES  
 COVER SHEET, LEGEND & DRAWING SCHEDULE

DRAWN	DATE	SCALE	A1	QA CHECK	DATE
JB	OCT 23	NTS		NP	
DESIGNED	PROJECT NO.	DRAWING No.	ISSUE		
NP	230074-01	C100	B		

TENDER ISSUE

30/10/2023 12:57pm



**EXISTING SERVICES AND FEATURES**

1. THE CONTRACTOR SHALL ALLOW FOR THE CAPPING OFF, EXCAVATION, REMOVAL AND DISPOSAL IF REQUIRED OF ALL EXISTING SERVICES IN AREAS AFFECTED BY WORKS WITHIN THE CONTRACT AREA, AS SHOWN ON THE DRAWINGS UNLESS DIRECTED OTHERWISE BY THE PRINCIPAL'S REPRESENTATIVE.
2. THE CONTRACTOR SHALL ENSURE THAT AT ALL TIMES SERVICES TO ALL BUILDINGS NOT AFFECTED BY THE WORKS ARE NOT DISRUPTED.
3. PRIOR TO COMMENCEMENT OF ANY WORKS THE CONTRACTOR SHALL GAIN WRITTEN APPROVAL OF THEIR PROGRAMME FOR THE RELOCATION/CONSTRUCTION OF TEMPORARY SERVICES.
4. EXISTING BUILDINGS, EXTERNAL STRUCTURES, AND TREES SHOWN ON THESE DRAWINGS ARE FEATURES EXISTING PRIOR TO ANY DEMOLITION WORKS.
5. CONTRACTOR SHALL CONSTRUCT TEMPORARY SERVICES TO MAINTAIN EXISTING SUPPLY TO BUILDINGS REMAINING IN OPERATION DURING WORKS TO THE SATISFACTION AND APPROVAL OF THE PRINCIPAL'S REPRESENTATIVE. ONCE DIVERSION IS COMPLETE AND COMMISSIONED THE CONTRACTOR SHALL REMOVE ALL SUCH TEMPORARY SERVICES AND MAKE GOOD TO THE SATISFACTION OF THE PRINCIPAL'S REPRESENTATIVE.
6. INTERRUPTION TO SUPPLY OF EXISTING SERVICES SHALL BE DONE SO AS NOT TO CAUSE ANY INCONVENIENCE TO THE PRINCIPAL. CONTRACTOR TO GAIN APPROVAL OF PRINCIPAL'S REPRESENTATIVE FOR TIME OF INTERRUPTION.

**SITWORKS NOTES**

1. ORIGIN OF LEVELS :- AUSTRALIAN HEIGHT DATUM (A.H.D.)
2. CONTRACTOR MUST VERIFY ALL DIMENSIONS AND EXISTING LEVELS ON SITE PRIOR TO COMMENCEMENT OF WORK.
3. ALL WORK IS TO BE UNDERTAKEN IN ACCORDANCE WITH THE DETAILS SHOWN ON THE DRAWINGS, THE SPECIFICATIONS AND THE DIRECTIONS OF THE PRINCIPAL'S REPRESENTATIVE.
4. EXISTING SERVICES HAVE BEEN PLOTTED FROM SUPPLIED DATA AND AS SUCH THEIR ACCURACY CANNOT BE GUARANTEED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH THE LOCATION AND LEVEL OF ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY WORK. ANY DISCREPANCIES SHALL BE REPORTED TO THE PRINCIPAL'S REPRESENTATIVE. CLEARANCES SHALL BE OBTAINED FROM THE RELEVANT SERVICE AUTHORITY.
5. WHERE NEW WORKS ABUT EXISTING THE CONTRACTOR SHALL ENSURE THAT A SMOOTH EVEN PROFILE, FREE FROM ABRUPT CHANGES IS OBTAINED.
6. THE CONTRACTOR SHALL ARRANGE ALL SURVEY SETOUT TO BE CARRIED OUT BY A REGISTERED SURVEYOR.
7. CARE IS TO BE TAKEN WHEN EXCAVATING NEAR EXISTING SERVICES. NO MECHANICAL EXCAVATIONS ARE TO BE UNDERTAKEN OVER COMMUNICATIONS OR ELECTRICAL SERVICES. HAND EXCAVATE IN THESE AREAS.
8. ALL SERVICE TRENCHES UNDER VEHICULAR PAVEMENTS SHALL BE BACKFILLED WITH AN APPROVED NON-NATURAL GRANULAR MATERIAL AND COMPACTED TO 98% STANDARD MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS.1289.5.1.1.
9. ALL TRENCH BACKFILL MATERIAL SHALL BE COMPACTED TO THE SAME DENSITY AS THE ADJACENT MATERIAL.
10. ON COMPLETION OF PIPE INSTALLATION ALL DISTURBED AREAS MUST BE RESTORED TO ORIGINAL, INCLUDING KERBS, FOOTPATHS, CONCRETE AREAS, GRAVEL AND GRASSED AREAS AND ROAD PAVEMENTS.
11. PROVIDE 10mm WIDE EXPANDING CORK JOINTS BETWEEN CONCRETE PAVEMENTS AND ALL BUILDINGS, WALLS, FOOTINGS, COLUMNS, KERBS, DISH DRAINS, GRATED DRAINS, BOLLARD FOOTINGS ETC
12. CONTRACTOR TO OBTAIN ALL AUTHORITY APPROVALS.
13. ALL BATTERS TO BE GRASSED LINED WITH MINIMUM 100 TOPSOIL AND APPROVED COUCH LAID AS TURF.
14. MAKE SMOOTH TRANSITION TO EXISTING SERVICES AND MAKE GOOD.
15. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY DIVERSION DRAINS AND MOUNDS TO ENSURE THAT AT ALL TIMES EXPOSED SURFACES ARE FREE DRAINING AND WHERE NECESSARY EXCAVATE SUMPS AND PROVIDE PUMPING EQUIPMENT TO DRAIN EXPOSED AREAS.
16. THESE PLANS SHALL BE READ IN CONJUNCTION WITH APPROVED ARCHITECTURAL, STRUCTURAL, HYDRAULIC AND ELECTRICAL DRAWINGS AND SPECIFICATIONS.
17. TRENCHES THROUGH EXISTING ROAD AND CONCRETE PAVEMENTS SHALL BE SAWCUT TO FULL DEPTH OF CONCRETE AND A MIN 50mm IN BITUMINOUS PAVING.
18. ALL BRANCH GAS AND WATER SERVICES UNDER DRIVEWAYS AND BRICK PAVING SHALL BE LOCATED IN Ø80 uPVC SEWER GRADE CONDUITS EXTENDING A MIN OF 500mm PAST PAVING.
19. ON COMPLETION OF WORKS ALL DISTURBED AREAS MUST BE RESTORED TO ORIGINAL INCLUDING, BUT NOT LIMITED TO, KERBS, FOOTPATHS, CONCRETE AREAS, GRASS AND LANDSCAPED AREAS.

**STORMWATER NOTES**

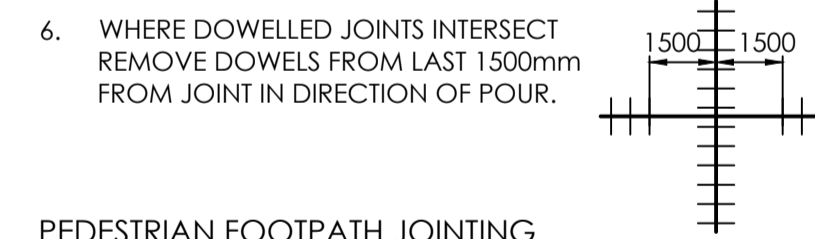
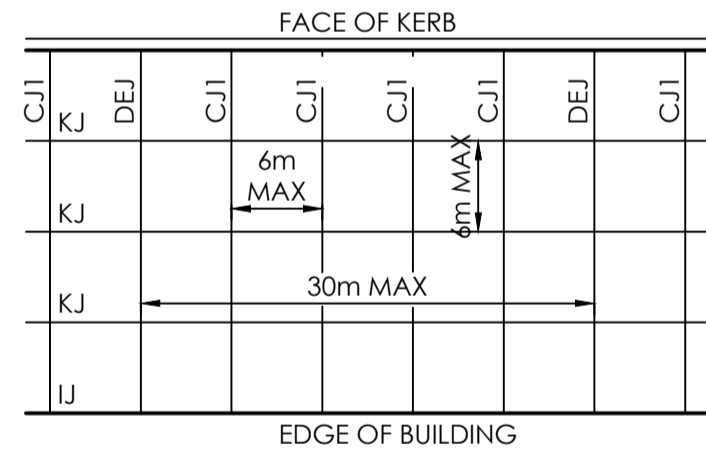
1. ALL 375 DIA. DRAINAGE PIPES AND LARGER SHALL BE CLASS "2" APPROVED SPIGOT AND SOCKET FRC OR RCP PIPES WITH RUBBER RING JOINTS. (U.N.O.) ALL DOWNPIPE DRAINAGE LINES SHALL BE SEWER GRADE UPVC WITH SOLVENT WELD JOINTS. (U.N.O.)
2. EQUIVALENT STRENGTH REINFORCED CONCRETE PIPES MAY BE USED.
3. ALL PIPE JUNCTIONS UP TO AND INCLUDING 450 DIA. AND TAPERS SHALL BE VIA PURPOSE MADE FITTINGS.
4. MINIMUM GRADE TO STORMWATER LINES TO BE 1%. (U.N.O.)
5. CONTRACTOR TO SUPPLY AND INSTALL ALL FITTINGS AND SPECIALS INCLUDING VARIOUS PIPE ADAPTORS TO ENSURE PROPER CONNECTION BETWEEN DISSIMILAR PIPEWORK.
6. ALL CONNECTIONS TO EXISTING DRAINAGE PITS SHALL BE MADE IN A TRADESMAN-LIKE MANNER AND THE INTERNAL WALL OF THE PIT AT THE POINT OF ENTRY SHALL BE CEMENT RENDERED TO ENSURE A SMOOTH FINISH.
7. PRECAST PITS SHALL NOT BE USED UNLESS WRITTEN APPROVAL IS OBTAINED FROM THE ENGINEER.
8. WHERE TRENCHES ARE IN ROCK, THE PIPE SHALL BE BEDDED ON A MIN. 50MM CONCRETE BED (OR 75MM THICK BED OF 12MM BLUE METAL) UNDER THE BARREL OF THE PIPE. THE PIPE COLLAR AT NO POINT SHALL BEAR ON THE ROCK. IN OTHER THAN ROCK, PIPES SHALL BE LAID ON A 75MM THICK SAND BED. IN ALL CASES BACKFILL THE TRENCH WITH SAND TO 200MM ABOVE THE PIPE. WHERE THE PIPE IS UNDER PAVEMENTS BACKFILL REMAINDER OF TRENCH WITH SAND OR APPROVED GRANULAR BACKFILL COMPACTED IN 150MM LAYERS TO 98% STANDARD MAX. DRY DENSITY.
9. BEDDING SHALL BE (U.N.O.) TYPE HS2, IN ACCORDANCE WITH CURRENT RELEVANT AUSTRALIAN STANDARDS.
10. WHERE STORMWATER LINES PASS UNDER FLOOR SLABS SEWER GRADE RUBBER RING JOINTS ARE TO BE USED.
11. WHERE SUBSOIL DRAINAGE LINES PASS UNDER FLOOR SLABS AND VEHICULAR PAVEMENTS UNSLOTTED UPVC SEWER GRADE PIPE SHALL BE USED.
12. PROVIDE 3.0M LENGTH OF 100 DIA. SUBSOIL DRAINAGE PIPE WRAPPED IN FABRIC SOCK, AT UPSTREAM END OF EACH PIT.

**CONCRETE PAVEMENT JOINT NOTES**

- PJ1. CONCRETE MIX PARAMETERS :
- MAXIMUM AGGREGATE SIZE 20mm
  - FLEXURAL STRENGTH AT 28 DAYS = 3.85MPa
  - FLEXURAL STRENGTH AT 90 DAYS = 3.85 MPa
  - MAXIMUM WATER / CEMENT RATIO = 0.55
  - MAXIMUM SHRINKAGE LIMIT = 650 MICRON STRAINS (AS 1012 Pt 13)
  - MINIMUM CEMENT CONTENT = 300kg/m<sup>3</sup>
  - CEMENT TO BE TYPE "A" (NORMAL CEMENT) TO AS.1315
  - SLUMP = 50mm
- PJ2. JOINT TO BE SAWN AS SOON AS CONCRETE HAS HARDENED SUFFICIENTLY THAT IT WILL NOT BE DAMAGED BY SAWING. IF AN UNPLANNED CRACK OCCURS THE CONTRACTOR SHALL REPLACE WHOLE SLABS EITHER SIDE OF THE UNPLANNED CRACK, UNLESS DIRECTED OTHERWISE.
- PJ3.
- a. CONSTRUCT JOINTS AS DETAILED
  - b. CONSTRUCTION JOINTS WHERE REQUIRED BUT NOT SHOWN, SHALL BE LOCATED TO THE APPROVAL OF THE ENGINEER AND CONSTRUCTED AT THE CONTRACTORS EXPENSE.
  - c. ALL LONGITUDINAL CONSTRUCTION JOINTS SHALL BE FORMED AND INCLUDE DOWEL BARS AS SPECIFIED. ALL TRANSVERSE CONSTRUCTION JOINTS SHALL BE FORMED AND INCLUDE DOWEL BARS AS SPECIFIED.
  - d. BOND BREAKER TO BE TWO (2) UNIFORM COATS OF BITUMEN EMULSION ALL OVER THE EXPOSED SURFACE AND ON END.
- PJ4. DOWELS AND TIE BARS TO MEET STRENGTH REQUIREMENTS OF STRUCTURAL GRADE STEEL IN ACCORDANCE AS. 1302. DOWELS AND TIE BARS SHALL BE :-
- STRAIGHT
  - TO LENGTH SPECIFIED
  - CLEAN AND FREE FROM MILL SCALE, RUST AND OIL.
  - SAWN TO LENGTH NOT CROPPED.
- PJ5. DIMENSIONS OF SEALANT RESERVOIR DEPENDANT ON THE SEALANT TYPE ADOPTED. ENGINEERS APPROVAL TO BE OBTAINED FOR SEALANT AND RESERVOIR DIMENSIONS AND DETAIL PROPOSED BY THE CONTRACTOR. REFER DETAIL "B" FOR TYPICAL ARRANGEMENT AND SEALANT.
- PJ6. PRIOR TO THE PLACEMENT OF CONCRETE IN THE ADJACENT SLAB, SELF EXPANDING CORK FILLER SHALL BE ADHERED TO THE ALREADY CAST AND CLEANED CONCRETE FACE USING AN APPROVED WATERPROOF ADHESIVE. ADHESIVE SHALL BE LIBERALLY APPLIED TO THE FULL FACE OF THE CONCRETE SLAB TO BE COVERED BY THE FILLER, AND ON THE FULL FACE OF THE FILLER TO BE ADHERED.
- PJ7. REFER TO COMPACTION NOTES FOR PREPARATION OF SUB-BASE AND SUB-GRADE.
- PJ8. ALL WORK TO BE BROOM FINISH.

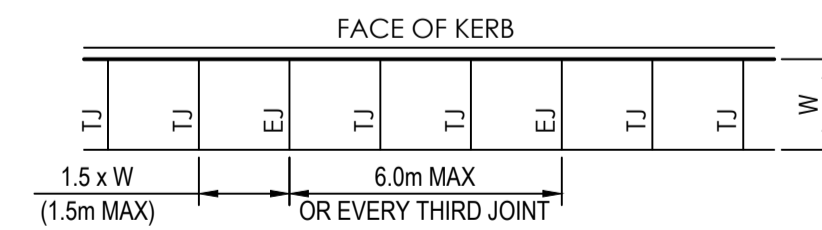
**VEHICULAR PAVEMENT JOINTING**

1. ALL VEHICULAR PAVEMENT TO BE JOINTED AS SHOWN ON DRAWINGS.
2. KEYED CONSTRUCTION JOINTS SHOULD GENERALLY BE LOCATED AT A MAXIMUM OF 6m CENTRES.
3. SAWN JOINTS SHOULD GENERALLY BE LOCATED AT A MAXIMUM OF 6m CENTRES OR 1.5 x THE SPACING OF KEYED JOINTS, WHERE KEY JOINT SPACING IS LESS THAN 4m, WITH DOWELLED EXPANSION JOINTS AT MAXIMUM OF 30m CENTRES.
4. PROVIDE 10mm WIDE FULL DEPTH ISOLATION JOINTS BETWEEN BUILDINGS AND ALL CONCRETE OR UNIT PAVERS.
5. VEHICULAR PAVEMENT JOINTING AS FOLLOWS.



**PEDESTRIAN FOOTPATH JOINTING**

1. DOWELED JOINTS ARE TO BE LOCATED WHERE POSSIBLE AT TANGENT POINTS OF CURVES AND ELSEWHERE AT MAX 6.0m CENTRES.
2. TOOLED JOINTS ARE TO BE LOCATED AT A MAX 1.5 x WIDTH OF THE PAVEMENT.
3. WHERE POSSIBLE JOINTS SHOULD BE LOCATED TO MATCH KERBING AND/OR ADJACENT PAVEMENT JOINTS.
4. ALL PEDESTRIAN FOOTPATH JOINTING LAYOUTS AS FOLLOWS (UNO)



5. ALL RAMPED CROSSINGS SHALL BE DOWELED INTO ADJOINING PATH PAVEMENT

**COMPACTION NOTES**

1. ALL EXCAVATION WORKS ARE TO BE COMPLETED IN STRICT ACCORDANCE WITH THE SITE GEOTECHNICAL INVESTIGATION REPORT PREPARED BY JK GEOTECHNICS. REF: 302225Mrip1 DATED 3 SEPTEMBER 2018.
2. THE CONTRACTOR IS TO TAKE SPECIFIC NOTE OF SECTION 4 OF THE REPORT REGARDING ROCK OUTCROPS AND BOULDERS FOR POTENTIAL RISK OF LANDSLIDE. CONTRACTOR IS TO ENSURE THAT ANY ROCK EXCAVATION IS COMPLETED IN A SAFE MANNER TO PREVENT BOULDERS FROM SLIPPING AND CAUSING LANDSLIDE FAILURE.
3. STRIP TOPSOIL TO EXPOSE NATURALLY OCCURRING MATERIAL AND STOCKPILE ON SITE FOR SELECTIVE RE-USE OR DISPOSE OFF-SITE AS DIRECTED BY THE SUPERINTENDENT.
4. UNCONTROLLED FILLING IS TO BE REMOVED FROM THE FOOTPRINT OF THE BUILDING AND PAVEMENT AREAS. THE STRIPPED SURFACE SHALL BE INSPECTED BY A GEOTECHNICAL ENGINEER.
5. PROOF ROLL EXPOSED NATURAL SURFACE WITH A MINIMUM OF EIGHT PASSES OF A SMOOTH DRUM ROLLER (MINIMUM STATIC WEIGHT OF 10 TONNES) THE FINAL PASS SHALL BE IN THE PRESENCE OF A GEOTECHNICAL ENGINEER.
6. SHOULD PROOF ROLLING CAUSE SHEARING OF THE SANDY SOIL THEN ROLLING SHOULD BE TERMINATED AND A LAYER OF 150mm THICKNESS OF DGS40 IS TO BE PLACED AND COMPACTED. THIS WILL REQUIRE AN ADDITIONAL 150mm OF EXCAVATION TO BE UNDERTAKEN BELOW THE SUBGRADE LEVEL.
7. ALL SOFT, WET OR UNSUITABLE MATERIAL TO BE REMOVED AS DIRECTED BY THE GEOTECHNICAL ENGINEER AND REPLACED WITH APPROVED MATERIAL SATISFYING THE REQUIREMENTS LISTED BELOW.
8. WASTE CLASSIFICATION OF SPOIL MATERIAL, INCLUDING PROVISION OF APPROPRIATE HAZARDOUS MATERIALS HANDLING (AS REQUIRED) IS THE RESPONSIBILITY OF THE CONTRACTOR PRIOR TO UNDERTAKING THE EXCAVATION WORKS.
9. ALL FILL MATERIAL SHALL BE FROM A SOURCE APPROVED BY THE GEOTECHNICAL ENGINEER AND SHALL COMPLY WITH THE FOLLOWING :
  - a. FREE FROM ORGANIC, PERISHABLE AND CONTAMINATED MATTER
  - b. MAXIMUM PARTICLE SIZE 75mm
  - c. PLASTICITY INDEX BETWEEN 2% AND 15%
10. ALL FILL MATERIAL SHALL BE PLACED IN MAXIMUM 200MM THICK LAYERS AND COMPACTED AT OPTIMUM MOISTURE CONTENT (+ OR -2%) TO ACHIEVE A DRY DENSITY DETERMINED IN ACCORDANCE WITH AS 1289 5.3.1 OF NOT LESS THAN THE FOLLOWING STANDARD MINIMUM DRY DENSITY IN ACCORDANCE WITH AS 1289 ES.1.1 :

LOCATION	STANDARD DRY DENSITY
UNDER BUILDING SLABS	98%
AREAS OF SERVICE TRENCHES	98%
EXTERNAL PAVED AREAS, ROADS AND CARPARKS	98%
LANDSCAPED AREAS	90%

THE UPPER 0.5m THICKNESS FOR THE FOLLOWING AREAS MUST BE COMPACTED AT OPTIMUM MOISTURE CONTENT (+ OR -2%) AS FOLLOWS

LOCATION	STANDARD DRY DENSITY
UNDER BUILDING SLABS	100%
PAVEMENTS AND CARPARKS	100%

11. THE REUSE OF THE EXCAVATED SANDY SOIL IS NOT RECOMMENDED BY THE GEOTECHNICAL ENGINEER FOR ENGINEERED FILL AND AS SUCH IT IS TO BE REMOVED FROM SITE UNLESS OTHERWISE CERTIFIED BY THE CONTRACTORS LEVEL 1 GITA AS MEETING THE REQUIRED COMPACTION SPECIFICATIONS ABOVE.
12. THE CONTRACTOR SHALL PROGRAM THE EARTHWORKS OPERATION SO THAT THE WORKING AREAS ARE ADEQUATELY DRAINED DURING THE PERIOD OF CONSTRUCTION. THE SURFACE SHALL BE GRADED AND SEALED OFF TO REMOVE DEPRESSIONS, ROLLER MARKS AND SIMILAR WHICH WOULD ALLOW WATER TO POND AND PENETRATE THE UNDERLYING MATERIAL. ANY DAMAGE RESULTING FROM THE CONTRACTOR NOT OBSERVING THESE REQUIREMENTS SHALL BE RECTIFIED BY THE CONTRACTOR AT THEIR COST.
13. TESTING OF THE SUBGRADE SHALL BE CARRIED OUT BY AN APPROVED NATA REGISTERED LABORATORY AT THE CONTRACTORS EXPENSE. TESTING FREQUENCY SHALL BE IN ACCORDANCE WITH THE FREQUENCY SPECIFIED IN THE GEOTECHNICAL REPORT.

NORTH POINT	
-------------	--

ISSUE	AMENDMENT	DATE	DRAWN	APP
A	DRAFT TENDER ISSUE	30.10.23	JB	BM
B	70% TENDER ISSUE	10.11.23	JB	NP

CLIENT  
**REGIS AGED CARE**

PO BOX 658  
GORDON NSW 2072  
PHONE : (02) 8467 9333

ARCHITECT

**mdp**  
architecture

CIVIL ENGINEER

**ENTEC**  
CONSULTANTS

PROJECT  
**REGIS BELROSE**

181 FOREST WAY  
BELROSE NSW 2085

DRAWING TITLE  
CIVIL SERVICES  
NOTES SHEET - SHEET 1

DRAWN SM	DATE SEPT 23	SCALE NTS	A1	QA CHECK NP	DATE
DESIGNED NP	PROJECT NO. 230074-01	DRAWING No. C101	ISSUE B		

TENDER ISSUE

05/10/2023 - 12:57 PM



**CONCRETE NOTES**

**GENERAL**

1. ALL WORKMANSHIP AND MATERIALS SHALL COMPLY WITH AS 3600 CURRENT EDITIONS WITH AMENDMENTS, AND THE ACSE CONCRETE SPECIFICATION EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
2. VERIFY ALL SETTING OUT DIMENSIONS WITH THE ARCHITECT AND/OR THE SURVEYOR.
3. DO NOT OBTAIN DIMENSIONS BY SCALING THE DRAWINGS.
4. IN CASE OF DOUBT - ASK.

**CONCRETE**

1. PLACE CONCRETE OF THE FOLLOWING CHARACTERISTIC COMPRESSIVE STRENGTH F<sub>C</sub> AS DEFINED IN AS.3600 OR M.R. FORM 609. ADD WATER REDUCING ADMIXTURE EQUAL TO WRDA.

LOCATION	AS.3600 F <sub>c</sub> MPa AT 28 DAYS	SPECIFIED SLUMP	NOMINAL AGG. SIZE
ALL KERB PITS ETC.	25	80	20
VEHICULAR PAVEMENTS	32	80	20

2. USE "A.C.S.E. SPECIFICATION TYPE A" CEMENT.
3. ALL CONCRETE SHALL BE SUBJECT TO PROJECT CONTROL SAMPLE AND TESTING TO AS.3600.
4. CONSOLIDATE BY VIBRATION.

**REINFORCEMENT**

1. FIX REINFORCEMENT AS SHOWN ON DRAWINGS. THE TYPE AND GRADE IS INDICATED BY A SYMBOL AS SHOWN BELOW. ON THE DRAWING N IS FOLLOWED BY A NUMERAL WHICH INDICATES THE SIZE IN MILLIMETRES. A MARK NUMERAL (IF USED) FOLLOWS THIS NUMERAL.  
 N. HOT ROLLED DEFORMED BARS, GRADE 500N  
 R. HOT ROLLED PLAIN BARS, GRADE 250N  
 W. COLD DRAWN PLAIN ROUND WIRE, GRADE 500L  
 SL. SQUARE WELDED MESH, GRADE 500L  
 RL. RECTANGULAR WELDED MESH, GRADE 500L  
 LTM. RECTANGULAR WELDED TRENCH MESH, GRADE 500L

**CURING**

1. CURING OF ALL CONCRETE SHALL BE IN ACCORDANCE WITH AS3600 AND SHALL COMMENCE WITHIN 2 HOURS OF FINISHING OPERATIONS.
2. CURING SHALL BE CONTINUAL SATURATION WITH POTABLE WATER FOR 3 DAYS FOLLOWED BY PREVENTION OF MOISTURE LOSS FOR THE NEXT 4 DAYS. USING POLYTHENE SHEETING OR WET HESSIAN PROTECTED BY WIND OR TRAFFIC AND THEN ALLOWING GRADUAL DRYING OUT.
3. CURING COMPOUNDS MAY BE USED PROVIDED THAT THEY COMPLY WITH AS3799 AND NOT AFFECT THE PROPOSED FINISH.
4. THE COMPATIBILITY OF CURING COMPOUNDS WITH THE PROPOSED FINISH AND OTHER CONCRETE ADMIXTURES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO ORDERING AND APPLICATION.
5. CURING COMPOUNDS ARE APPLIED UNIFORMLY IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS. PVA - BASED CURING COMPOUNDS ARE NOT ACCEPTABLE.
6. CURING SHALL BE UNDERTAKEN BY AN EXPERIENCED CONTRACTOR FAMILIAR WITH THE PROPOSED COMPOUNDS AND THE MANUFACTURER'S SPECIFICATIONS.
7. WHERE SHADE TEMPERATURES EXCEEDS 35°C, SPRAY THE EXPOSED SURFACE OF THE CONCRETE PAVEMENT / SLAB DURING THE PLACING OF FINISHING OPERATION WITH A FINE FILM OR APPROVED ALIPHATIC ALCOHOL. REPEAT THE SPRAY IF THE SPRAY SURFACE HAS BEEN RE-WORKED.
8. ENSURE ADEQUATE SUPPLY OF ALIPHATIC ALCOHOL ON-SITE PRIOR TO CONCRETE WORKS.

**EROSION AND SEDIMENT CONTROL NOTES**

**GENERAL INSTRUCTIONS**

- E1. THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE ENGINEERING PLANS, AND ANY OTHER PLANS OR WRITTEN INSTRUCTIONS THAT MAY BE ISSUED AND RELATING TO DEVELOPMENT AT THE SUBJECT SITE.
- E2. THE PRINCIPAL'S REPRESENTATIVE WILL ENSURE THAT ALL SOIL AND WATER MANAGEMENT WORKS ARE UNDERTAKEN AS INSTRUCTED IN THIS SPECIFICATION AND CONSTRUCTED FOLLOWING THE GUIDELINES OF "MANAGING URBAN STORMWATER SOILS AND CONSTRUCTION", DEPT OF HOUSING, 2004 (BLUE BOOK).
- E3. ALL BUILDERS AND SUB-CONTRACTORS WILL BE INFORMED OF THEIR RESPONSIBILITIES IN MINIMISING THE POTENTIAL FOR SOIL EROSION AND POLLUTION TO DOWNSLOPE LANDS AND WATERWAYS.

**CONSTRUCTION SEQUENCE**

- E4. THE SOIL EROSION POTENTIAL ON THIS SITE SHALL BE MINIMISED. HENCE WORKS SHALL BE UNDERTAKEN IN THE FOLLOWING SEQUENCE :
  - a. INSTALL SEDIMENT FENCES, TEMPORARY CONSTRUCTION EXIT AND SANDBAG KERB INLET SEDIMENT TRAP.
  - b. UNDERTAKE SITE DEVELOPMENT WORKS IN ACCORDANCE WITH THE ENGINEERING PLANS. PHASE DEVELOPMENT SO THAT LAND DISTURBANCE IS CONFINED TO AREAS OF WORKABLE SIZE.

**EROSION CONTROL**

- E5. DURING WINDY CONDITIONS, LARGE, UNPROTECTED AREAS WILL BE KEPT MOIST (NOT WET) BY SPRINKLING WITH WATER TO KEEP DUST UNDER CONTROL.
- E6. FINAL SITE LANDSCAPING WILL BE UNDERTAKEN AS SOON AS POSSIBLE AND WITHIN 20 WORKING DAYS FROM COMPLETION OF CONSTRUCTION ACTIVITIES.
- FENCING**
  - E7. STOCKPILES WILL NOT BE LOCATED WITHIN 2 METRES OF HAZARD AREAS, INCLUDING LIKELY AREAS OF CONCENTRATED OR HIGH VELOCITY FLOWS SUCH AS WATERWAYS. WHERE THEY ARE BETWEEN 2 AND 5 METRES FROM SUCH AREAS, SPECIAL SEDIMENT CONTROL MEASURES SHOULD BE TAKEN TO MINIMISE POSSIBLE POLLUTION TO DOWNSLOPE WATERS, E.G. THROUGH INSTALLATION OF SEDIMENT FENCING.
  - E8. ANY SAND USED IN THE CONCRETE CURING PROCESS (SPREAD OVER THE SURFACE) WILL BE REMOVED AS SOON AS POSSIBLE AND WITHIN 10 WORKING DAYS FROM PLACEMENT.
  - E9. WATER WILL BE PREVENTED FROM ENTERING THE PERMANENT DRAINAGE SYSTEM UNLESS IT IS RELATIVELY SEDIMENT FREE, I.E. THE CATCHMENT AREA HAS BEEN PERMANENTLY LANDSCAPED AND/OR ANY LIKELY SEDIMENT HAS BEEN FILTERED THROUGH AN APPROVED STRUCTURE.
- E10. TEMPORARY SOIL AND WATER MANAGEMENT STRUCTURES WILL BE REMOVED ONLY AFTER THE LANDS THEY ARE PROTECTING ARE REHABILITATED.

**OTHER MATTERS**

- E11. ACCEPTABLE RECEPTORS WILL BE PROVIDED FOR CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHT-WEIGHT WASTE MATERIALS AND LITTER.
- E12. RECEPTORS FOR CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHT-WEIGHT WASTE MATERIALS AND LITTER ARE TO BE EMPTIED AS NECESSARY. DISPOSAL OF WASTE SHALL BE IN A MANNER APPROVED BY THE PRINCIPAL'S REPRESENTATIVE.

**SITE INSPECTION & MAINTENANCE**

- E13. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED AFTER RAINFALL EVENTS TO ENSURE THAT THEY OPERATE EFFECTIVELY. REPAIR AND OR MAINTENANCE SHALL BE UNDERTAKEN AS REQUIRED.

**GENERAL NOTES**

1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND STRUCTURAL CONSULTANTS DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED.
2. ALL DIMENSIONS RELEVANT TO SETTING OUT AND OFF-SITE WORK SHALL BE VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION
3. DIMENSIONS SHALL NOT BE OBTAINED BY SCALING THE DRAWINGS.
4. ALL DIMENSIONS ON DETAILS ARE IN MILLIMETRES UNLESS STATED OTHERWISE. ALL PLANS AND LEVELS ARE EXPRESSED IN METRES.
5. DURING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE STRUCTURAL STABILITY OF THE WORKS AND ENSURE NO PARTS BE OVER STRESSED UNDER CONSTRUCTION ACTIVITIES.
6. WORKMANSHIP AND MATERIALS ARE TO BE IN ACCORDANCE WITH THE RELEVANT CURRENT S.A.A. CODES INCLUDING ALL AMENDMENTS, AND THE LOCAL STATUTORY AUTHORITIES, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
7. THE APPROVAL OF A SUBSTITUTION SHALL BE SOUGHT FROM ACOR CONSULTANTS / PRINCIPAL'S REPRESENTATIVE BUT IS NOT AN AUTHORISATION FOR A VARIATION. ANY VARIATIONS INVOLVED MUST BE TAKEN UP WITH ACOR CONSULTANTS / PRINCIPAL'S REPRESENTATIVE BEFORE THE WORK COMMENCES.
8. ANY DISCREPANCIES OR OMISSIONS SHALL BE REFERRED TO THE ENGINEER FOR A DECISION BEFORE PROCEEDING WITH THE WORK.
9. THE CONTRACTOR SHALL GIVE 48 HOURS NOTICE FOR ALL ENGINEERING INSPECTIONS, ALL INSPECTIONS AND CERTIFICATIONS TO BE INCLUDED IN CONTRACTORS COST.
10. BUILDING FROM THESE DRAWINGS IS NOT TO COMMENCE UNTIL APPROVED BY THE PRINCIPAL CERTIFYING AUTHORITY.
11. THE WORD 'ENGINEER' USED IN THESE NOTES REFER TO AN EMPLOYEE OR NOMINATED REPRESENTATIVE OF **ENTEC CONSULTANTS PTY LTD.**
12. ALL CONSTRUCTION ACTIVITIES SHALL COMPLY WITH THE RELEVANT CURRENT WORKPLACE HEALTH AND SAFETY LEGISLATION.

NORTH POINT

ISSUE	AMENDMENT	DATE	DRAWN	APP
A	DRAFT TENDER ISSUE	30.10.23	JB	BM
B	70% TENDER ISSUE	10.11.23	JB	NP

CLIENT  
**REGIS AGED CARE**



PO BOX 658  
 GORDON NSW 2072  
 PHONE : (02) 8467 9333

ARCHITECT



architecture

CIVIL ENGINEER




PROJECT  
**REGIS BELORE**

181 FOREST WAY  
 BELORE NSW 2085

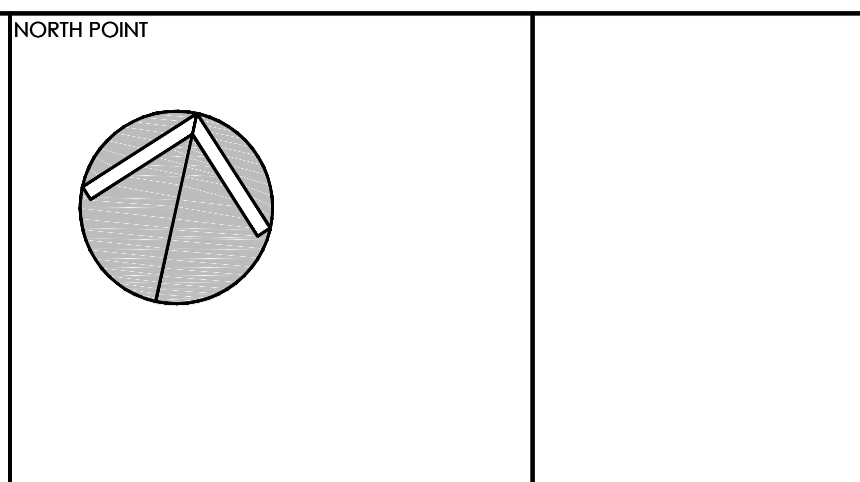
DRAWING TITLE  
 CIVIL SERVICES  
 NOTES SHEET - SHEET 2

DRAWN SM	DATE SEPT 23	SCALE NTS	A1	QA CHECK NP	DATE
DESIGNED NP	PROJECT NO. 230074-01	DRAWING No. C102	ISSUE B		

TENDER ISSUE

06/11/2023 13:25:00





ISSUE	AMENDMENT	DATE	DRAWN	APP
A	DRAFT TENDER ISSUE	30.10.23	JB	NP
B	70% TENDER ISSUE	10.11.23	JB	NP

**EXISTING SERVICES**

- SEWER AND MANHOLE
- WATERMAIN
- GAS
- OVERHEAD ELECTRICAL AND POLE
- TELSTRA / NBN COMMUNICATIONS AND PIT
- STORMWATER DRAINAGE AND PIT
- TREE PROTECTION ZONE
- ROCK OUTCROP AND BOULDER WITH SLOPE STABILITY HAZARD RATING

- EXISTING SERVICES NOTES**
- EXISTING SERVICE ALIGNMENTS HAVE BEEN PLOTTED UTILISING INFORMATION OBTAINED FROM DIAL BEFORE YOU DIG AND AS SUCH ALL ALIGNMENTS ARE APPROXIMATE ONLY. THE CONTRACTOR IS TO DETERMINE LOCATION AND DEPTH OF ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY WORKS.
  - REFER TO SITE ARBORIST REPORT FOR FURTHER INFORMATION REGARDING TREES TO BE RETAINED AND THE RELEVANT TREE PROTECTION ZONE AREA.
  - REFER TO SITE GEOTECHNICAL REPORT FOR FURTHER INFORMATION REGARDING ROCK OUTCROP AND SLOPE STABILITY ASSESSMENT.

CLIENT  
**REGIS AGED CARE**

PO BOX 658  
 GORDON NSW 2072  
 PHONE : (02) 8467 9333



ARCHITECT

**mdp**  
 architecture

CIVIL ENGINEER

**ENTEC**  
 CONSULTANTS



PROJECT  
**REGIS BELROSE**

181 FOREST WAY  
 BELROSE NSW 2085

DRAWING TITLE  
 CIVIL SERVICES  
 EXISTING SITE PLAN

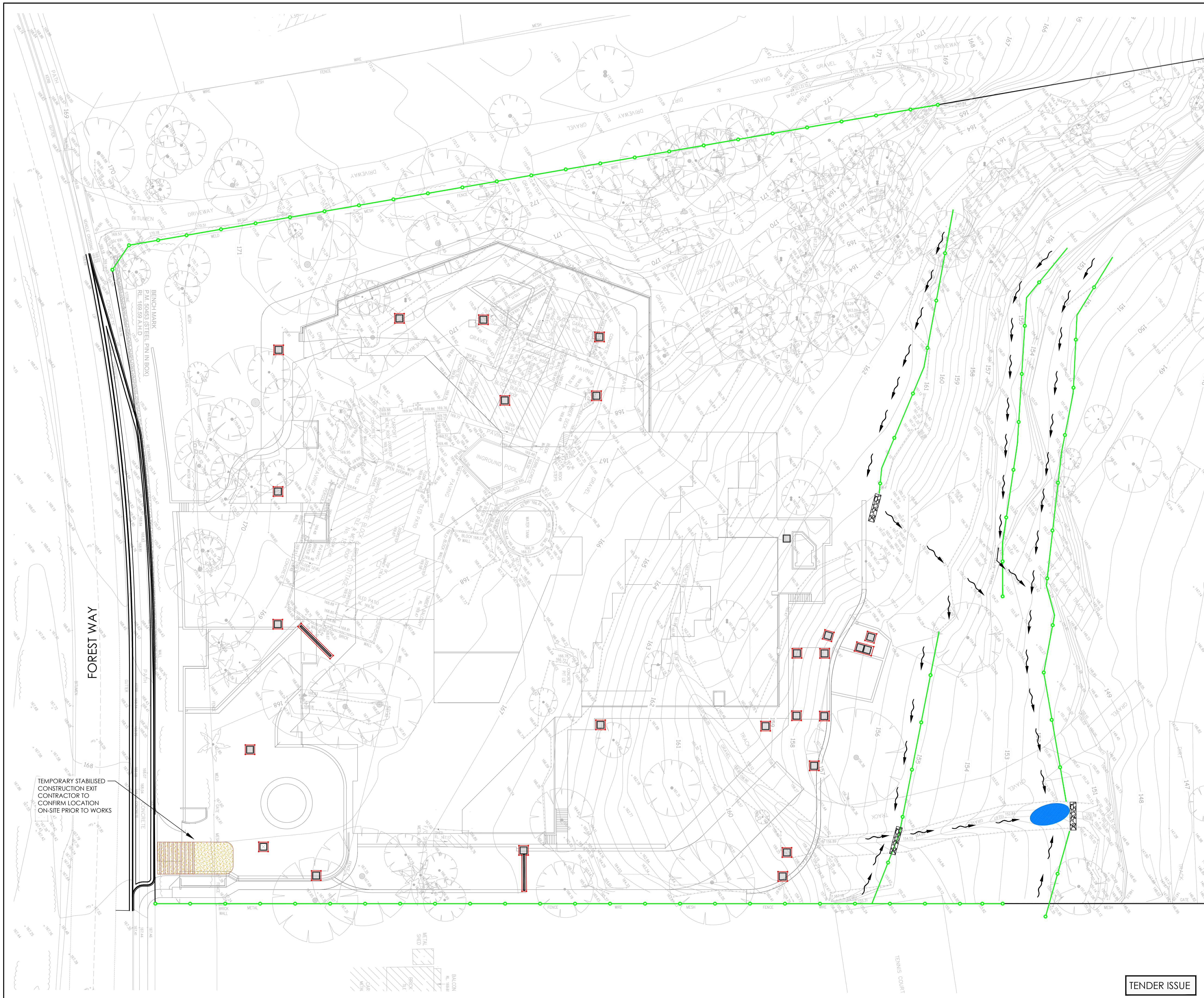
DRAWN	DATE	SCALE	A1	QA CHECK	DATE
JB	OCT 23	1:250		NP	
DESIGNED	PROJECT NO.	DRAWING No.	ISSUE		
NP	230074-01	C201	B		

SCALE 1:250

TENDER ISSUE

ROCK OUTCROPS AND BOULDERS WITH SLOPE STABILITY RISK RATINGS. REFER TO SITE GEOTECHNICAL REPORT FOR FURTHER DETAIL





NORTH POINT

ISSUE	AMENDMENT	DATE	DRAWN	APP
A	DRAFT TENDER ISSUE	30.10.23	JB	NP
B	70% TENDER ISSUE	10.11.23	JB	NP

**NOTE**  
 EXACT LOCATION OF STABILISED SITE ACCESS AND TEMPORARY STOCKPILE TO BE DETERMINED ON-SITE DURING CONSTRUCTION BY CONTRACTOR.

**LEGEND**

	SEDIMENT FENCE
	GEOTEXTILE INLET FILTER
	STABILISED SITE ACCESS
	DIRECTION OF OVERLAND FLOW
	SANDBAG, TEMPORARY GUTTER GROSS SEDIMENT / POLLUTION TRAP
	MESH AND GRAVEL INLET FILTER
	STOCKPILES

CLIENT  
**REGIS AGED CARE**

PO BOX 658  
 GORDON NSW 2072  
 PHONE : (02) 8467 9333



ARCHITECT  
**mdp**  
 architecture

CIVIL ENGINEER  
**ENTEC**  
 CONSULTANTS



PROJECT  
**REGIS BELROSE**

181 FOREST WAY  
 BELROSE NSW 2085

DRAWING TITLE  
 CIVIL SERVICES  
 SOIL EROSION CONTROL PLAN

DRAWN	DATE	SCALE	A1	QA CHECK	DATE
JB	OCT 23	1:250		NP	
DESIGNED	PROJECT NO.			DRAWING No.	ISSUE
NP	230074-01			C301	B

TENDER ISSUE

BENCH MARK  
 P.M. 50453 (STEEL PIN IN BOX)  
 R.L. 169.99 A.H.D.

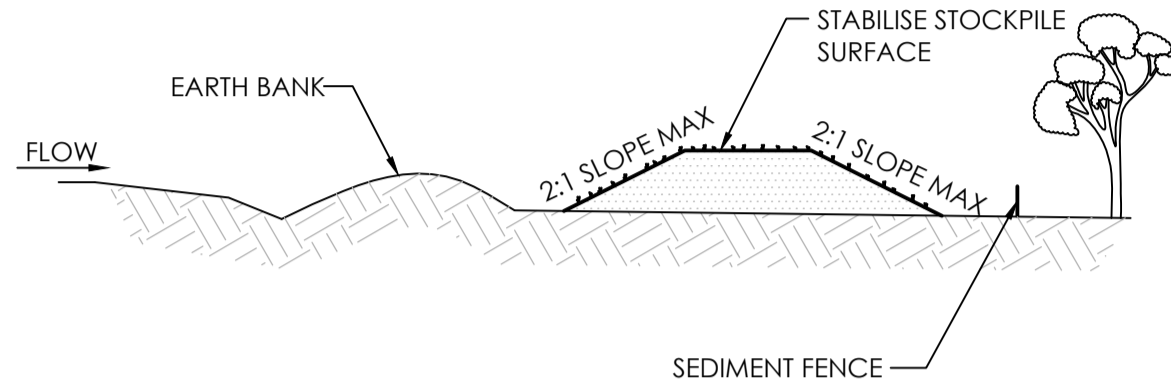
TEMPORARY STABILISED CONSTRUCTION EXIT CONTRACTOR TO CONFIRM LOCATION ON-SITE PRIOR TO WORKS

FOREST WAY

C:\Users\james\OneDrive\Documents\230074\230074-01\230074-01.dwg



SOURCE: MANAGING URBAN STORMWATER SOILS AND CONSTRUCTION THIRD EDITION, AUGUST 1998 PRODUCED BY THE DEPARTMENT OF HOUSING.

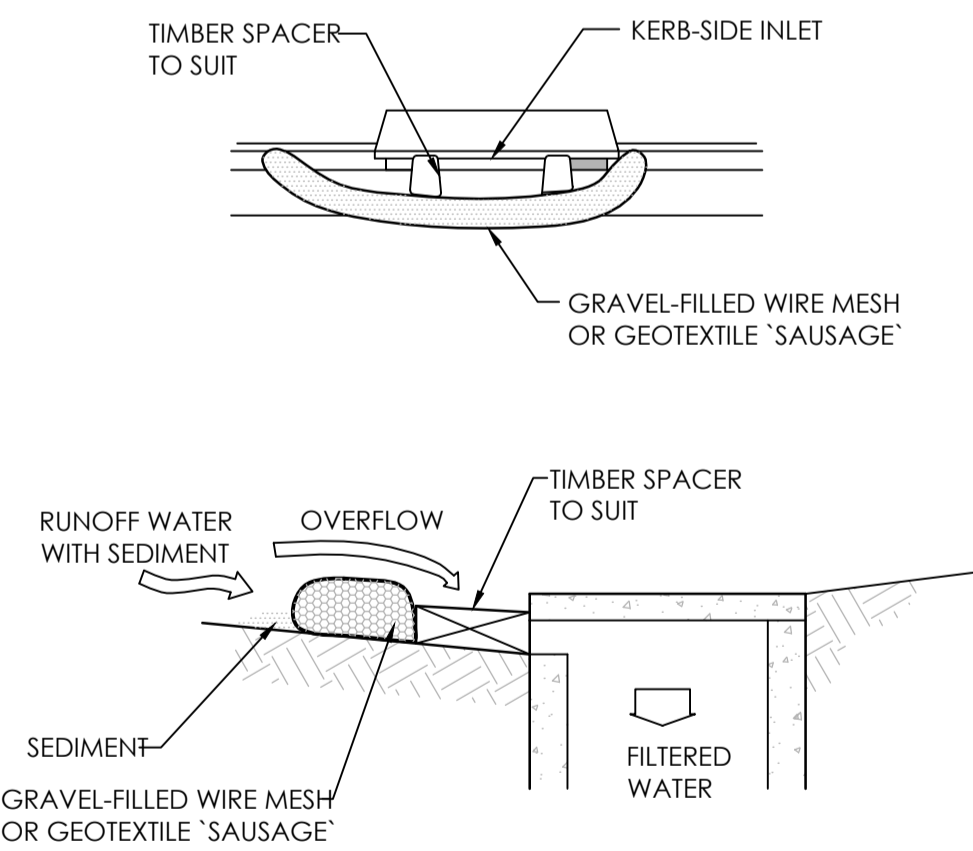


**CONSTRUCTION NOTES:**

1. LOCATE STOCKPILE AT LEAST 5 METRES FROM EXISTING VEGETATION, CONCENTRATED WATER FLOWS, ROADS AND HAZARD AREAS.
2. CONSTRUCT ON THE CONTOUR AS A LOW, FLAT, ELONGATED MOUND.
3. WHERE THERE IS SUFFICIENT AREA TOPSOIL, STOCKPILES SHALL BE LESS THAN 2 METERS IN HEIGHT.
4. REHABILITATE IN ACCORDANCE WITH THE SWMP/ESCP.
5. CONSTRUCT EARTH BANK (STANDARD DRAWING 5-2) ON THE UPSLOPE SIDE TO DIVERT RUN OFF AROUND THE STOCKPILE AND A SEDIMENT FENCE (STANDARD DRAWING 6-7) 1 TO 2 METRES DOWNSLOPE OF STOCKPILE.

**STOCKPILES**

SOURCE: MANAGING URBAN STORMWATER SOILS AND CONSTRUCTION THIRD EDITION, AUGUST 1998 PRODUCED BY THE DEPARTMENT OF HOUSING.



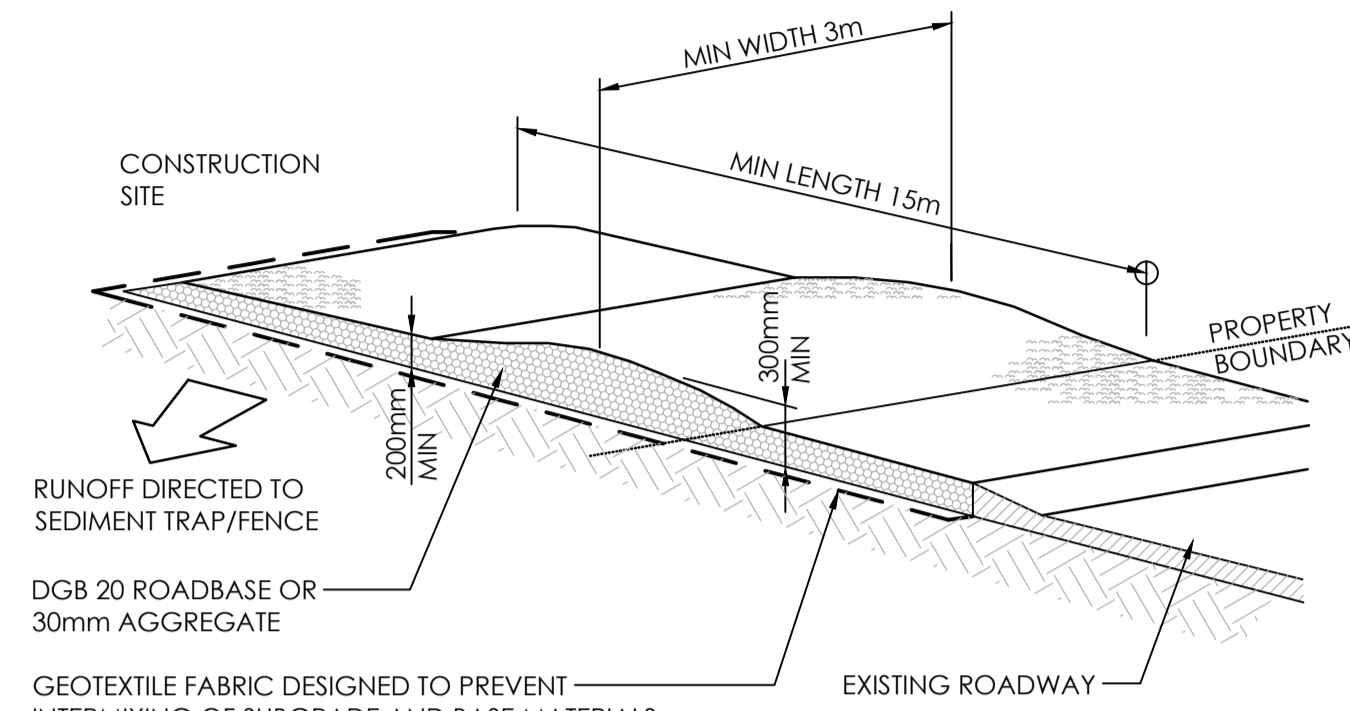
NOTE: THIS PRACTICE ONLY TO BE USED WHERE SPECIFIED IN AN APPROVED SWMP/ESCP.

**CONSTRUCTION NOTES:**

1. FABRICATE A SLEEVE MADE FROM GEOTEXTILE OR WIRE MESH LONGER THAN THE LENGTH OF THE INLET PIT.
2. FILL THE SLEEVE WITH 25MM TO 50MM GRAVEL.
3. FORM AN ELLIPTICAL CROSS-SECTION ABOUT 150MM HIGH X 400MM WIDE.
4. PLACE THE FILTER AT THE OPENING OF THE KERB INLET LEAVING A 100MM GAP AT THE TOP TO ACT AS AN EMERGENCY SPILLWAY.
5. MAINTAIN THE OPENING WITH SPACER BLOCKS.
6. FORM A SEAL WITH THE KERBING AND PREVENT SEDIMENT BYPASSING THE FILTER.
7. FIT TO ALL KERB INLETS AT SAG POINTS.

**MESH AND GRAVEL INLET FILTER**

SOURCE: MANAGING URBAN STORMWATER SOILS AND CONSTRUCTION THIRD EDITION, AUGUST 1998 PRODUCED BY THE DEPARTMENT OF HOUSING.



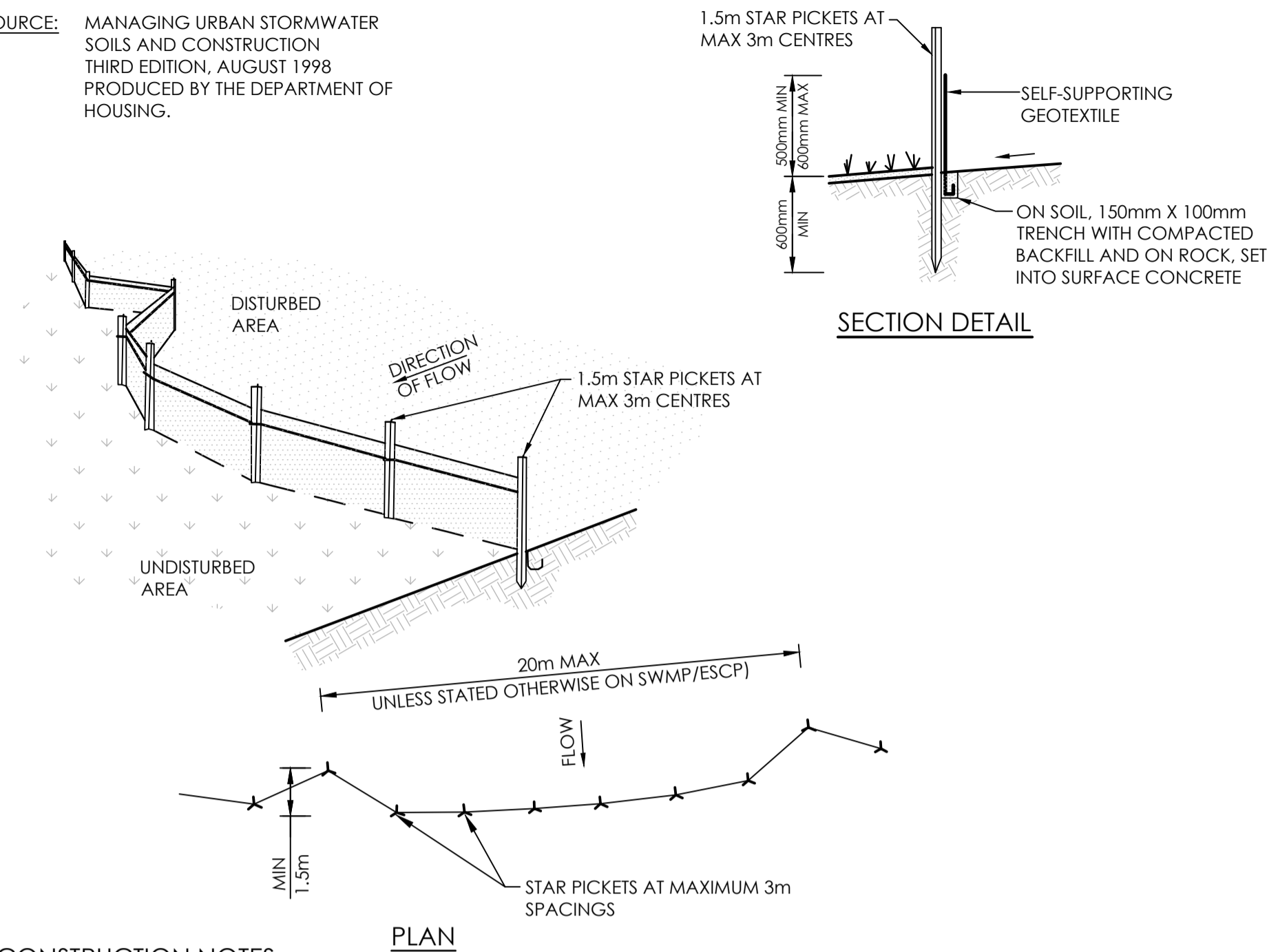
GEOTEXTILE FABRIC DESIGNED TO PREVENT INTERMIXING OF SUBGRADE AND BASE MATERIALS AND TO MAINTAIN GOOD PROPERTIES OF THE SUB-BASE LAYERS. GEOTEXTILE MAY BE A WOVEN OR NEEDLE PUNCHED PRODUCT WITH A MINIMUM CBR BURST STRENGTH (AS3706.9-90) OF 2500 N

**CONSTRUCTION NOTES:**

1. STRIP TOPSOIL AND LEVEL SITE.
2. COMPACT SUBGRADE.
3. COVER AREA WITH NEEDLE-PUNCHED GEOTEXTILE.
4. CONSTRUCT 200MM THICK PAD OVER GEOTEXTILE USING ROADBASE OR 30MM AGGREGATE. MINIMUM LENGTH 1.5M OR TO BUILDING ALIGNMENT. MINIMUM WIDTH 3 METRES.
5. CONSTRUCT HUMP IMMEDIATELY WITHIN BUUNDARY TO DIVERT WATER TO A SEDIMENT FENCE OR OTHER SEDIMENT TRAP.

**STABILISED SITE ACCESS**

SOURCE: MANAGING URBAN STORMWATER SOILS AND CONSTRUCTION THIRD EDITION, AUGUST 1998 PRODUCED BY THE DEPARTMENT OF HOUSING.

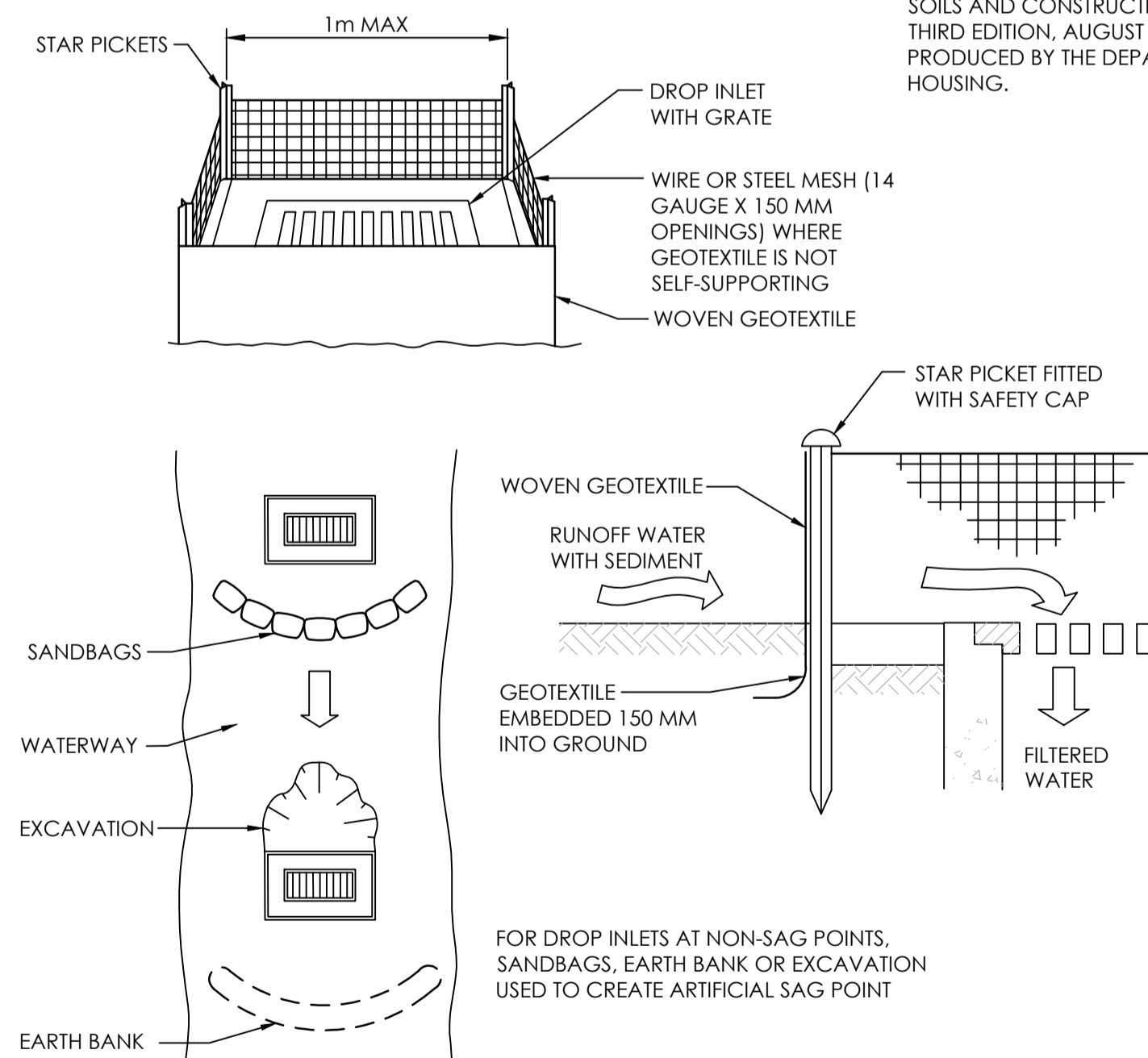


**CONSTRUCTION NOTES**

1. CONSTRUCT SEDIMENT FENCE AS CLOSE AS POSSIBLE TO PARALLEL TO THE CONTOURS OF THE SITE.
2. DRIVE 1.5 METRE LONG STAR PICKETS INTO GROUND, 3 METRES APART.
3. DIG A 150 MM DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE TRENCHED.
4. BACKFILL TRENCH OVER BASE OF FABRIC.
5. FIX SELF-SUPPORTING GEOTEXTILE TO UPSLOPE SIDE OF POSTS WITH WIRE TIES OR AS RECOMMENDED BY GEOTEXTILE MANUFACTURER.
6. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150 MM OVERLAP.

**SEDIMENT FENCE**

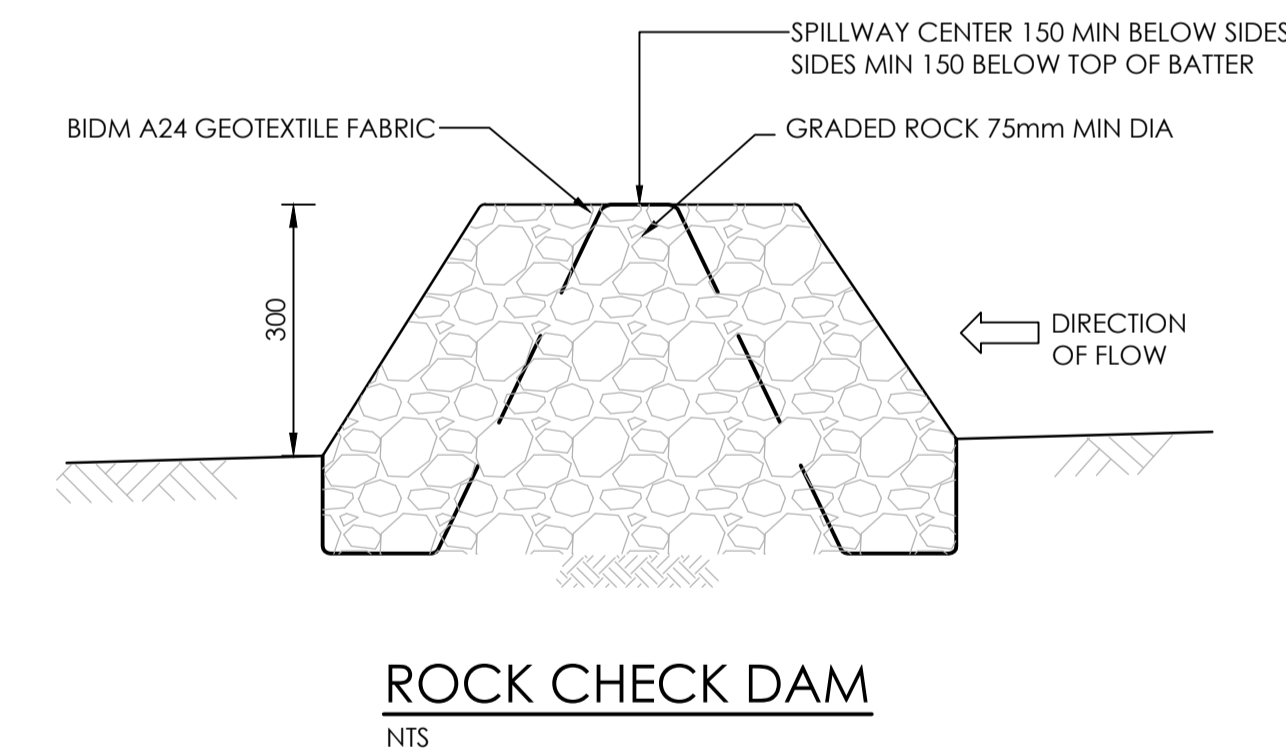
SOURCE: MANAGING URBAN STORMWATER SOILS AND CONSTRUCTION THIRD EDITION, AUGUST 1998 PRODUCED BY THE DEPARTMENT OF HOUSING.



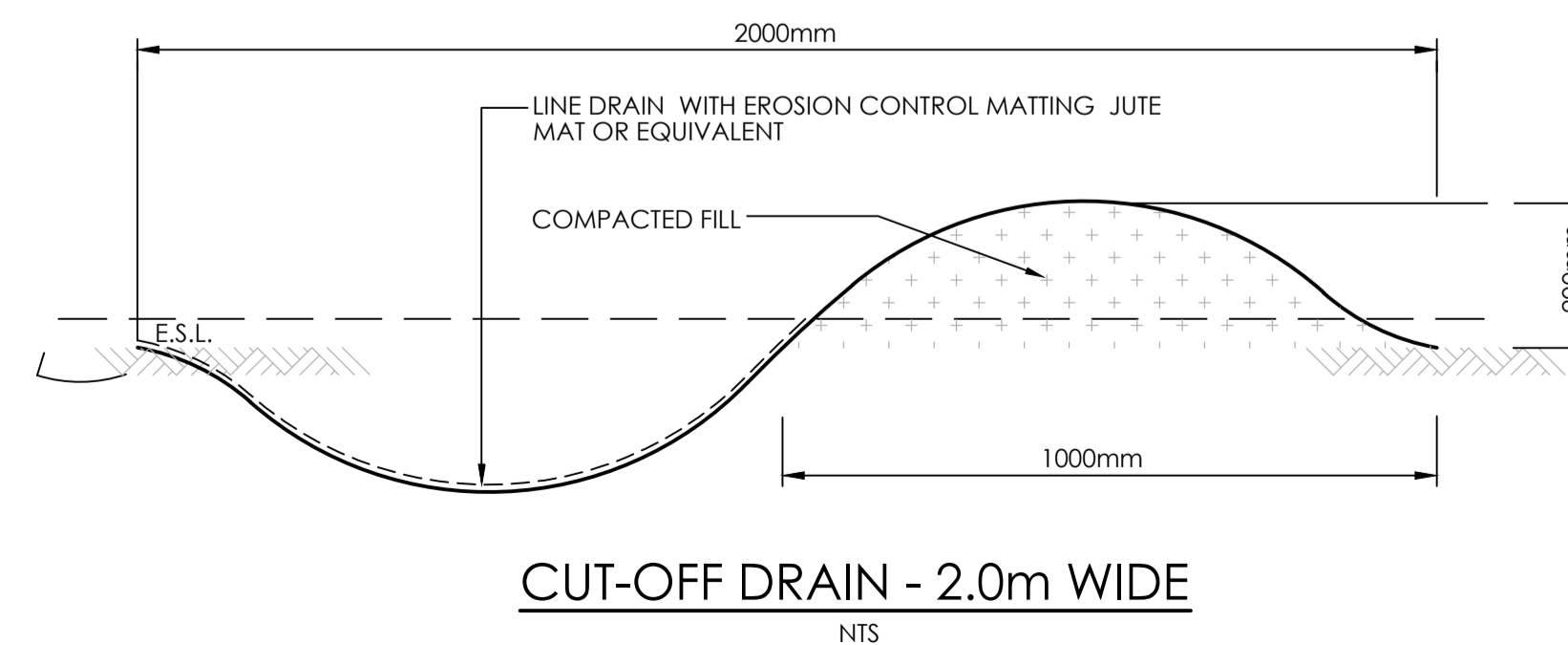
**CONSTRUCTION NOTES:**

1. FABRICATE A SEDIMENT BARRIER FROM GEOTEXTILE OR STRAW BALES.
2. SUPPORT GEOTEXTILE WITH MESH TIED TO POSTS AT 1 METRE CENTRES.
3. DO NOT COVER INLET WITH GEOTEXTILE.
4. CONSTRUCTION DETAILS ARE SIMILAR TO TYPICAL SEDIMENT FENCING DETAIL.

**GEOTEXTILE INLET FILTER**



**ROCK CHECK DAM**  
NTS



**CUT-OFF DRAIN - 2.0m WIDE**  
NTS

NORTH POINT	
-------------	--

ISSUE	AMENDMENT	DATE	DRAWN	APP
A	DRAFT TENDER ISSUE	30.10.23	JB	NP
B	70% TENDER ISSUE	10.11.23	JB	NP

CLIENT  
**REGIS AGED CARE**



PO BOX 658  
GORDON NSW 2072  
PHONE : (02) 8467 9333

ARCHITECT  
**mdp architecture**  
CIVIL ENGINEER

**ENTEC** CONSULTANTS  
**CADIGAL GROUP**

PROJECT  
**REGIS BELROSE**

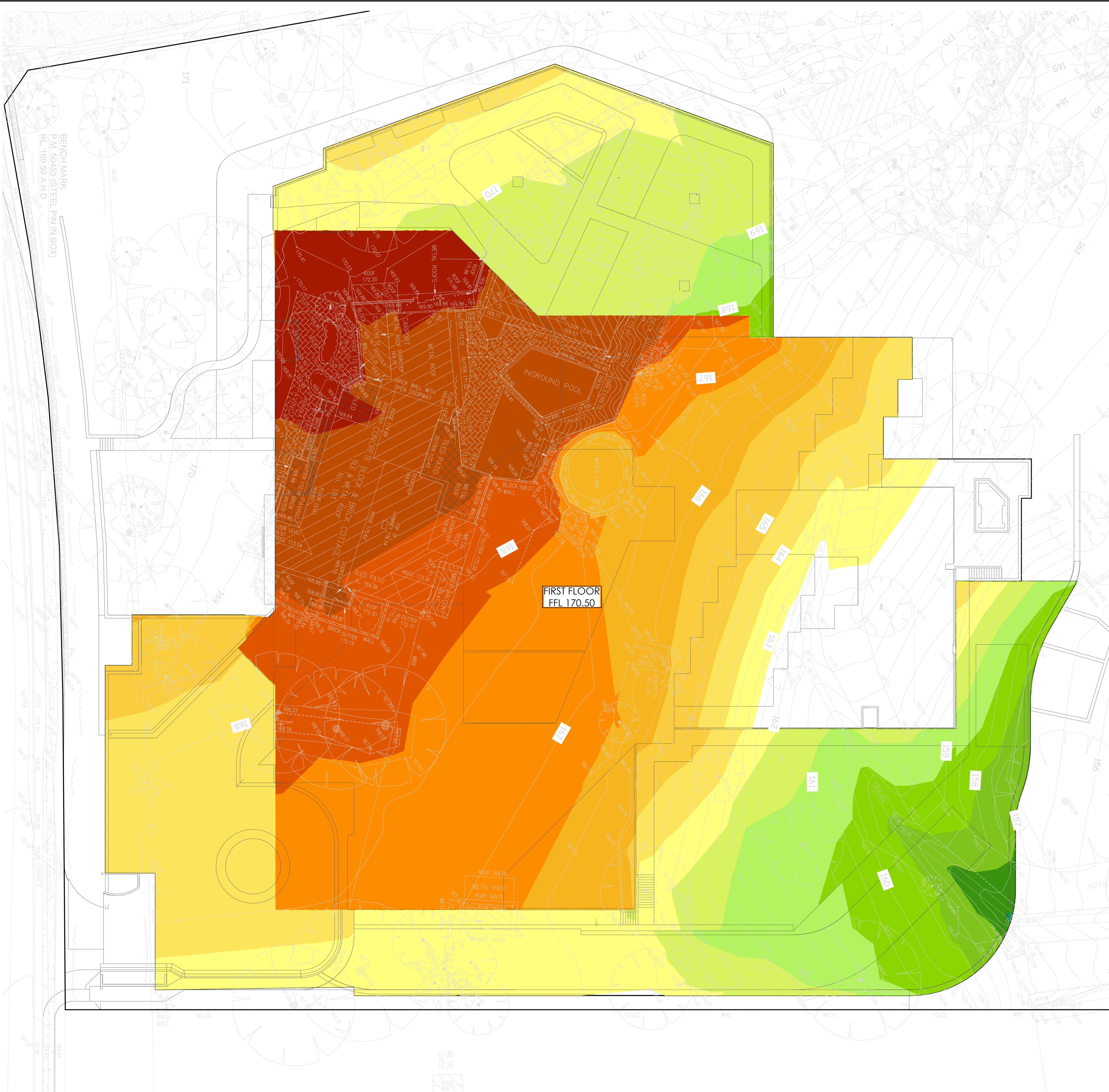
181 FOREST WAY  
BELROSE NSW 2085

DRAWING TITLE  
CIVIL SERVICES  
SOIL EROSION CONTROL DETAILS

DRAWN JB	DATE OCT 23	SCALE NTS	AI	QA CHECK NP	DATE
DESIGNED NP	PROJECT NO. 230074-01	DRAWING No. C310	ISSUE B		

TENDER ISSUE





**LEGEND**

[Red]	CUT GREATER THAN 8m
[Dark Red]	CUT BETWEEN 7m AND 8m
[Orange-Red]	CUT BETWEEN 6m AND 7m
[Orange]	CUT BETWEEN 5m AND 6m
[Light Orange]	CUT BETWEEN 4m AND 5m
[Yellow-Orange]	CUT BETWEEN 3m AND 4m
[Yellow]	CUT BETWEEN 2m AND 3m
[Light Yellow]	CUT BETWEEN 1m AND 2m
[Lightest Yellow]	CUT LESS THAN 1m
[Lightest Green]	FILL LESS THAN 1m
[Light Green]	FILL BETWEEN 1m AND 2m
[Medium Light Green]	FILL BETWEEN 2m AND 3m
[Medium Green]	FILL BETWEEN 3m AND 4m
[Medium-Dark Green]	FILL BETWEEN 4m AND 5m
[Dark Green]	FILL BETWEEN 5m AND 6m
[Darkest Green]	FILL BETWEEN 6m AND 7m
[Blue-Green]	FILL BETWEEN 7m AND 8m
[Blue]	FILL GREATER THAN 8m

CUT/FILL QUANTITIES	
TOTAL CUT	16,600m³
TOTAL FILL	2,100m³
TOTAL BALANCE	14,500m³

**CUT / FILL ASSUMPTIONS**

1. A NOMINAL 200mm DEPTH ALLOWANCE FOR STRIPPING OF TOPSOIL HAS BEEN INCLUDED.
2. A BOXING OF 220mm FOR THE BASEMENT SLAB HAS BEEN ALLOWED FOR IN ACCORDANCE WITH STRUCTURAL ENGINEERS DETAILS. REFER TO LEVELS AS SHOWN ON THE PLAN ABOVE.
3. BOXING OUT FOR PAVEMENTS HAVE BEEN APPLIED IN ACCORDANCE WITH THE PAVEMENT PLAN.
4. DETAILED BULKING AND CUT/FILL QUANTITIES FOR FOOTINGS, TRENCHING AND THE LIKE HAS NOT BEEN INCLUDED.
5. NO ALLOWANCE FOR TOPSOIL AND FRIABLE SOIL LAYERS HAVE BEEN ALLOWED FOR LANDSCAPE AREAS. IT ASSUMES THAT STRIPPED TOPSOIL WILL BE STOCKPILED AND REUSED IN LANDSCAPE AREAS.
6. IT IS ASSUMED THAT STRIPPED TOP SOIL WILL BE STOCKPILED AND REUSED IN LANDSCAPE AREAS.
7. CLASSIFICATION AND QUANTITIES OF EXCAVATED MATERIAL HAS NOT BEEN UNDERTAKEN. CONTRACTOR TO ENSURE APPROPRIATE ALLOWANCES FOR EXCAVATION IN ROCK, CRUSHING AND REUSE ON SITE AND/OR DISPOSAL OFFSITE.
8. ALL EARTHWORKS ARE TO BE COMPLETED IN STRICT ACCORDANCE WITH THE SITE GEOTECHNICAL REPORT COMPLETED BY JK GEOTECHNICS REFERENCE: 3022Smrp1 DATED : 03/09/2018.
9. BOREHOLE LOCATIONS HAVE BEEN EXTRACTED FROM THE GEOTECHNICAL ASSESSMENT REPORT.
10. ALL EARTHWORK QUANTITIES ARE THEORETICAL AND INDICATIVE ONLY, BASED UPON BANKED VOLUMES WITH NO BULKING FACTORS. THE CONTRACTOR IS TO MAKE THEIR OWN ASSESSMENT OF EARTHWORKS QUANTITIES.

NORTH POINT

ISSUE	AMENDMENT	DATE	DRAWN	APP
A	DRAFT TENDER ISSUE	30.10.23	JB	NP
B	70% TENDER ISSUE	10.11.23	JB	NP



TENDER ISSUE

CLIENT  
**REGIS AGED CARE**

PO BOX 658  
GORDON NSW 2072  
PHONE : (02) 8467 9333

ARCHITECT  
**mdp architecture**

CIVIL ENGINEER  
**ENTEC**  
CONSULTANTS

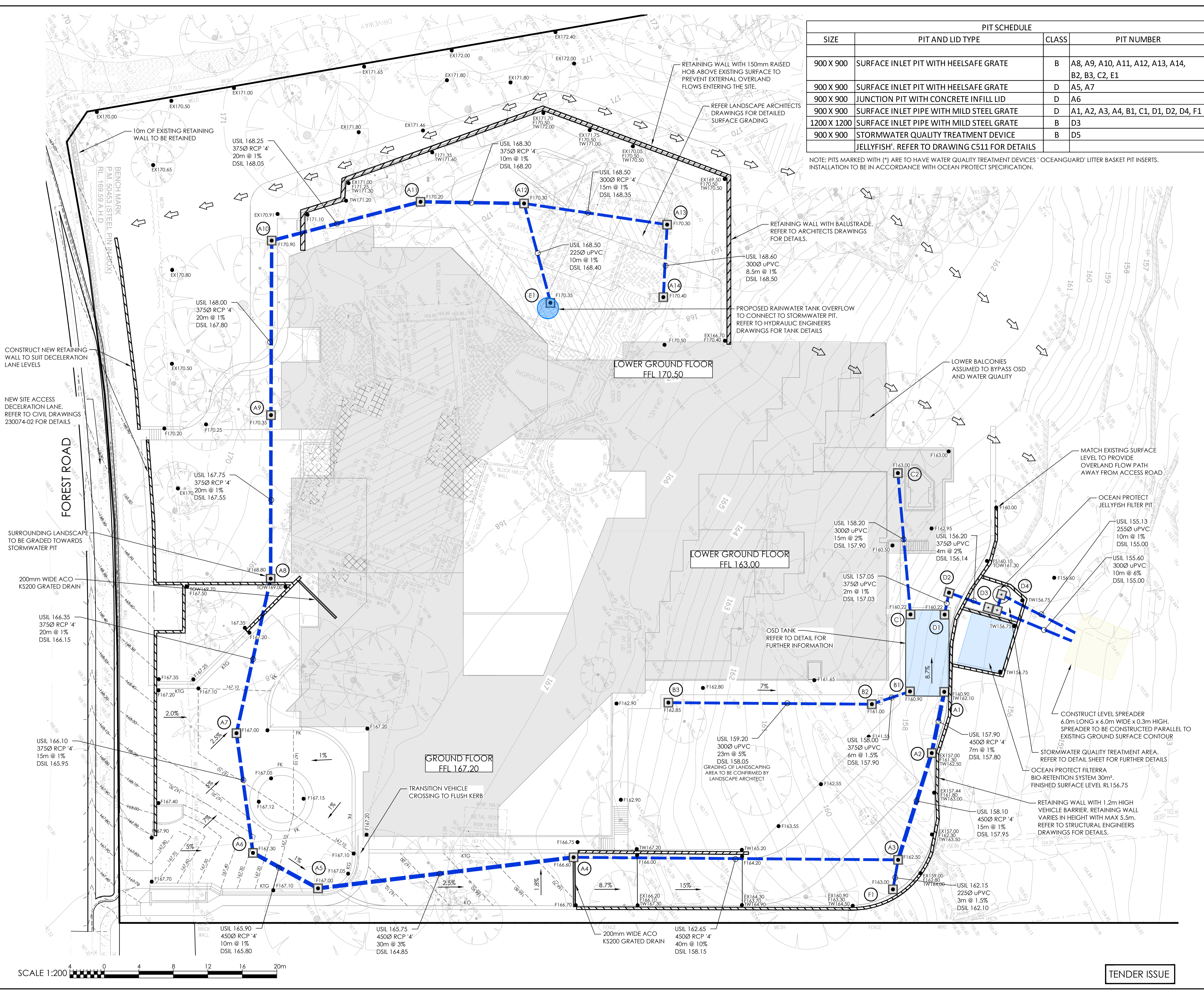
PROJECT  
**REGIS BELROSE**

181 FOREST WAY  
BELROSE NSW 2085

DRAWING TITLE  
CIVIL SERVICES  
BULK EARTHWORKS PLAN

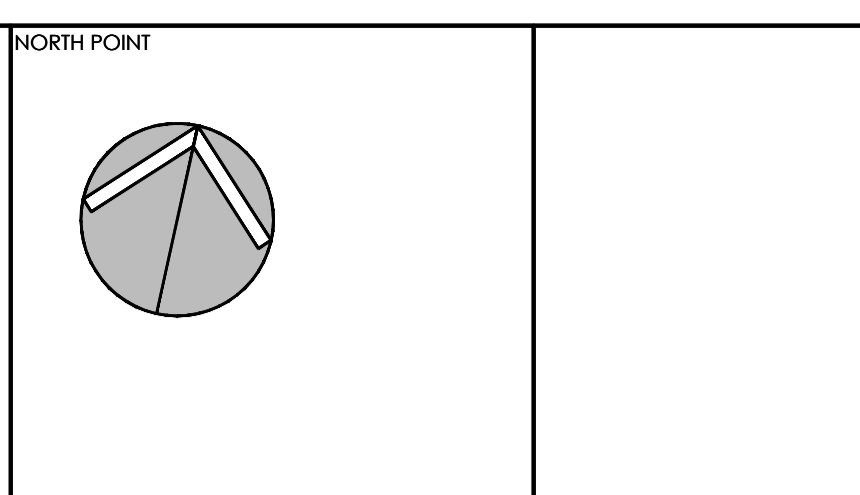
DRAWN	DATE	SCALE	AI	QA CHECK	DATE
JB	OCT 23	1:200		NP	
DESIGNED	PROJECT NO.			DRAWING No.	ISSUE
NP	230074-01			C401	B





PIT SCHEDULE			
SIZE	PIT AND LID TYPE	CLASS	PIT NUMBER
900 X 900	SURFACE INLET PIT WITH HEELSAFE GRATE	B	A8, A9, A10, A11, A12, A13, A14, B2, B3, C2, E1
900 X 900	SURFACE INLET PIT WITH HEELSAFE GRATE	D	A5, A7
900 X 900	JUNCTION PIT WITH CONCRETE INFILL LID	D	A6
900 X 900	SURFACE INLET PIPE WITH MILD STEEL GRATE	D	A1, A2, A3, A4, B1, C1, D1, D2, D4, F1
1200 X 1200	SURFACE INLET PIPE WITH MILD STEEL GRATE	B	D3
900 X 900	STORMWATER QUALITY TREATMENT DEVICE 'JELLYFISH'. REFER TO DRAWING C511 FOR DETAILS	B	D5

NOTE: PITS MARKED WITH (\*) ARE TO HAVE WATER QUALITY TREATMENT DEVICES 'OCEANGUARD' LITTER BASKET PIT INSERTS. INSTALLATION TO BE IN ACCORDANCE WITH OCEAN PROTECT SPECIFICATION.



ISSUE	AMENDMENT	DATE	DRAWN	APP
A	DRAFT TENDER ISSUE	30.10.23	JB	NP
B	70% TENDER ISSUE	10.11.23	JB	NP

**NOTES:**

- THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH OTHER CONSULTANT DRAWINGS, INCLUDING ARCHITECTS, STRUCTURAL ENGINEER, LANDSCAPE ARCHITECT AND HYDRAULIC CONSULTANT.
- THESE DRAWINGS ARE FOR PRICING ONLY AND ARE NOT FOR CONSTRUCTION. FURTHER COORDINATION AND DESIGN FINALISATION IS TO OCCUR PRIOR TO DBP ACT SIGN OFF.

CLIENT  
**REGIS AGED CARE**

PO BOX 658  
 GORDON NSW 2072  
 PHONE : (02) 8467 9333



ARCHITECT  
**mdp architecture**

CIVIL ENGINEER  
**ENTEC CONSULTANTS**

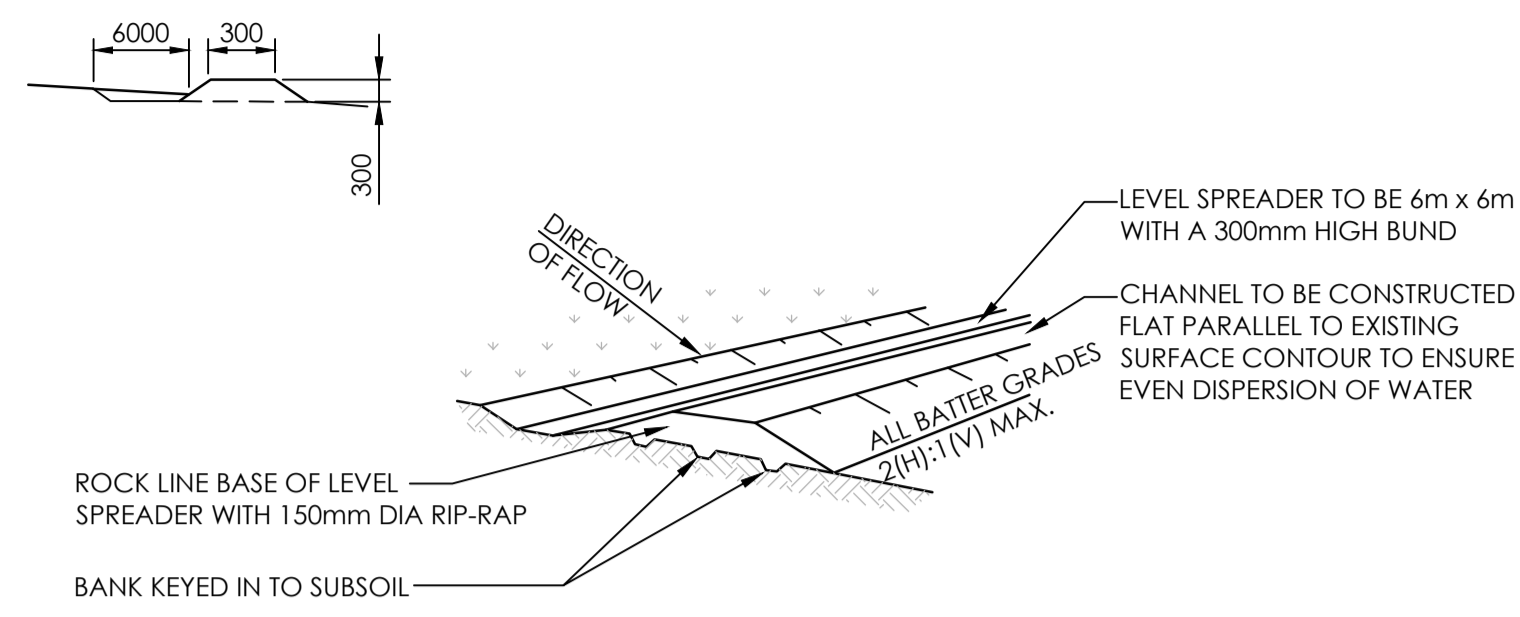
PROJECT  
**REGIS BELROSE**

181 FOREST WAY  
 BELROSE NSW 2085

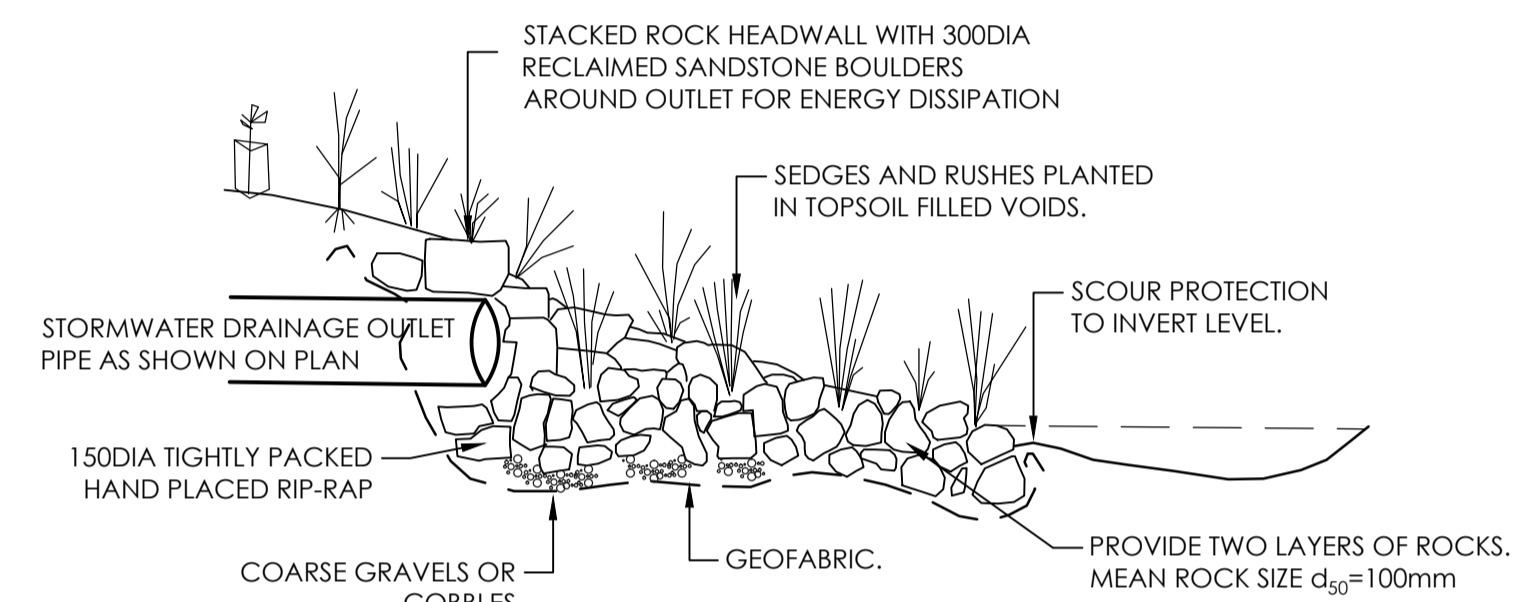
DRAWN	DATE	SCALE	A1	QA CHECK	DATE
JB	OCT 23	1:200		NP	
DESIGNED	PROJECT NO.	DRAWING NO.	ISSUE		
NP	230074-01	C.501	B		

TENDER ISSUE

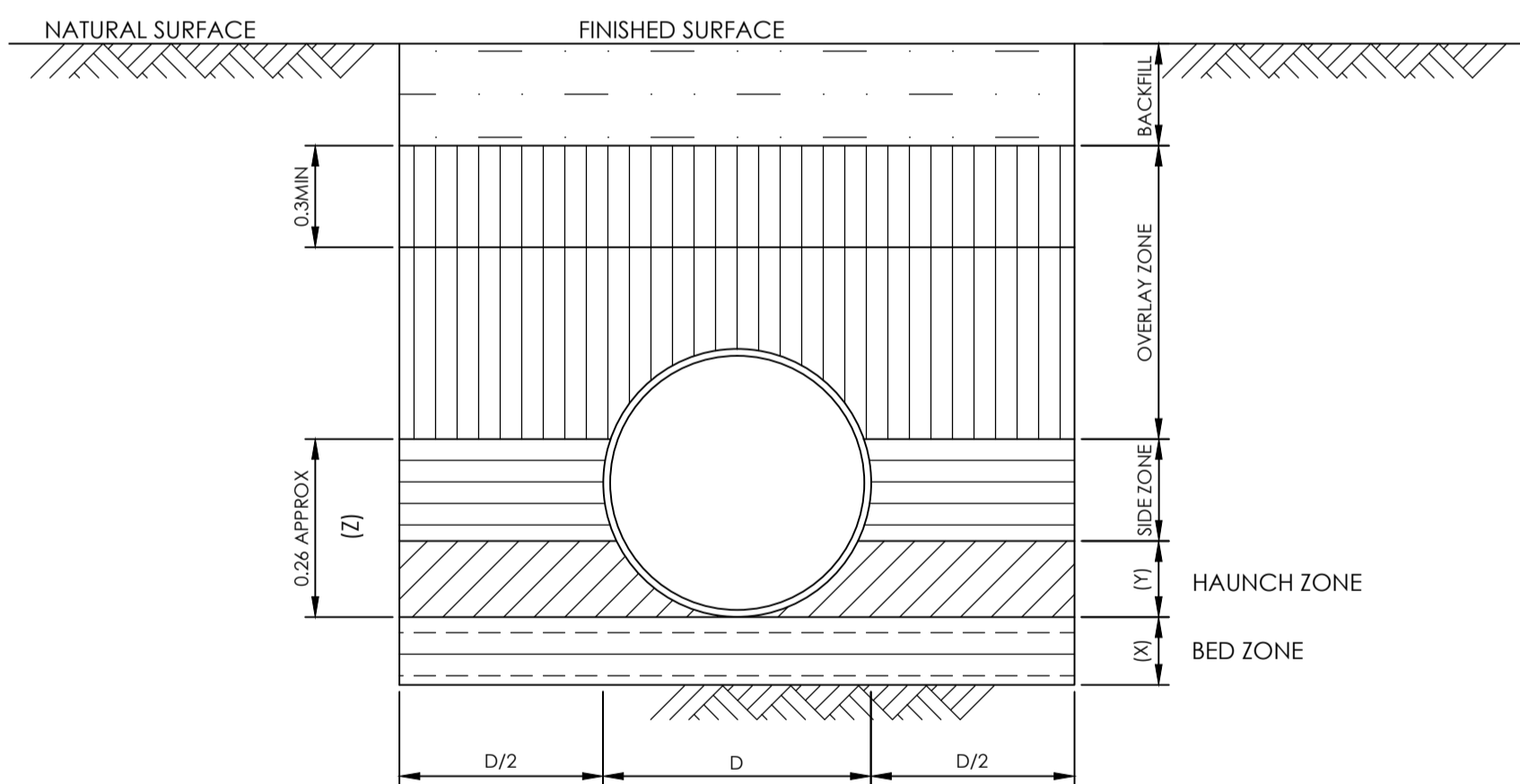




**LEVEL SPREADER DETAIL**  
NOT TO SCALE



**TYPICAL STONE HEADWALL DETAIL**  
NOT TO SCALE



**STORMWATER TRENCH DETAIL**

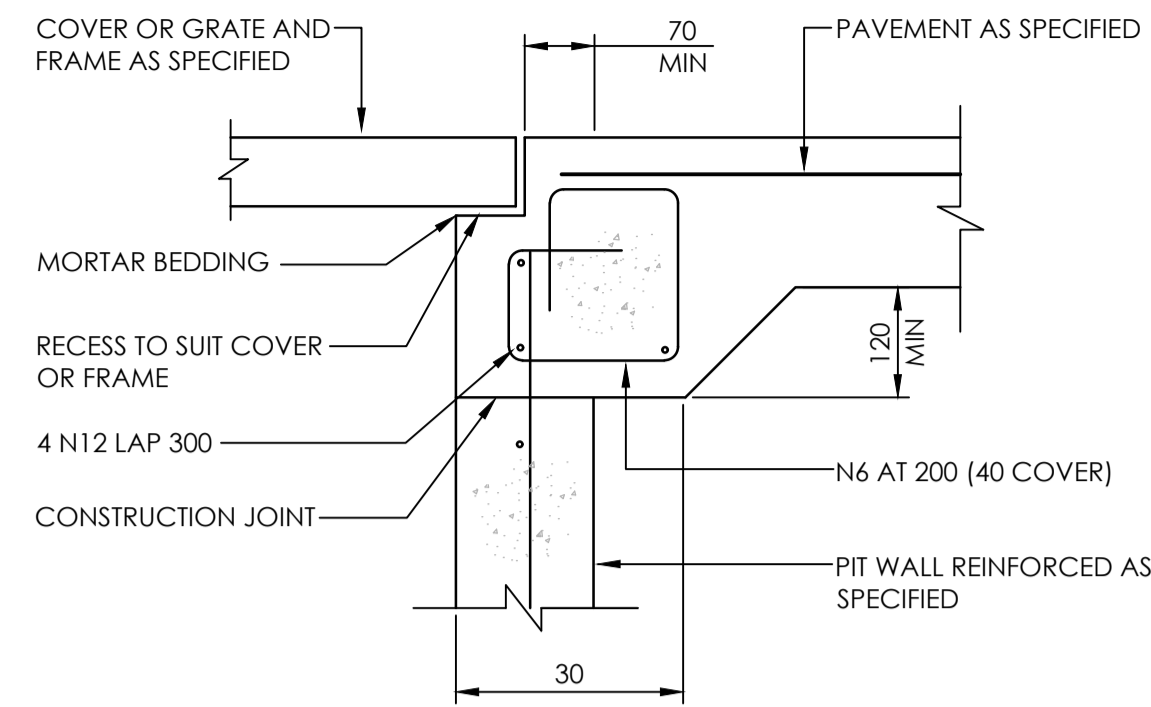
BEDDING MATERIAL FOR THE BED, HAUNCH AND SIDE ZONES AND OVERLAY UP TO A MINIMUM OF 150mm FROM TOP OF THE PIPE SHALL CONSIST OF 20mm AGGREGATE CONSISTING OF CLEAN HARD DURABLE MATERIAL HAVING A GRADING COMPLYING WITH TABLE BELOW

RECYCLED CONCRETE AGGREGATE SHALL ONLY BE USED WHERE THE MATERIAL IS CERTIFIED FREE FROM FOREIGN MATTER SUCH AS REINFORCING STEEL, CEMENT DUST, TIMBER AND OTHER WASTE MATERIALS.

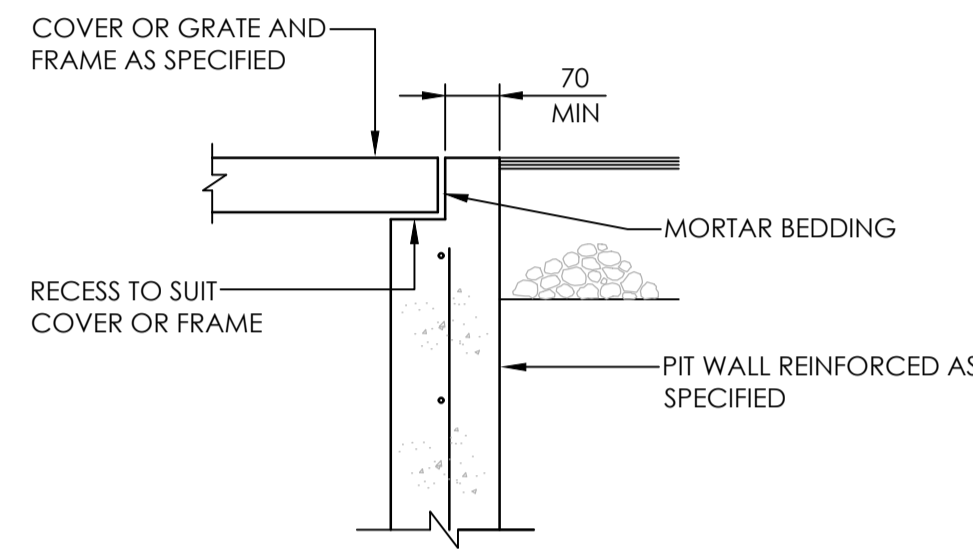
		PIPE SUPPORT						
		U	H1	H2	H3	HS1	HS2	HS3
Dimension (minimum)	X	75 on rock Nil on soil	100 for D < 1500 150 for D > 1500	0.25 D BUT < 100	100 for D < 1500 150 for D > 1500	0.1D	0.3D	0.3D
	Y	-	0.1D	0.3D	0.3D	0.1D	0.3D	0.3D
	Z	-	-	-	-	-	-	≥ 0.7D

D = External diameter of pipe

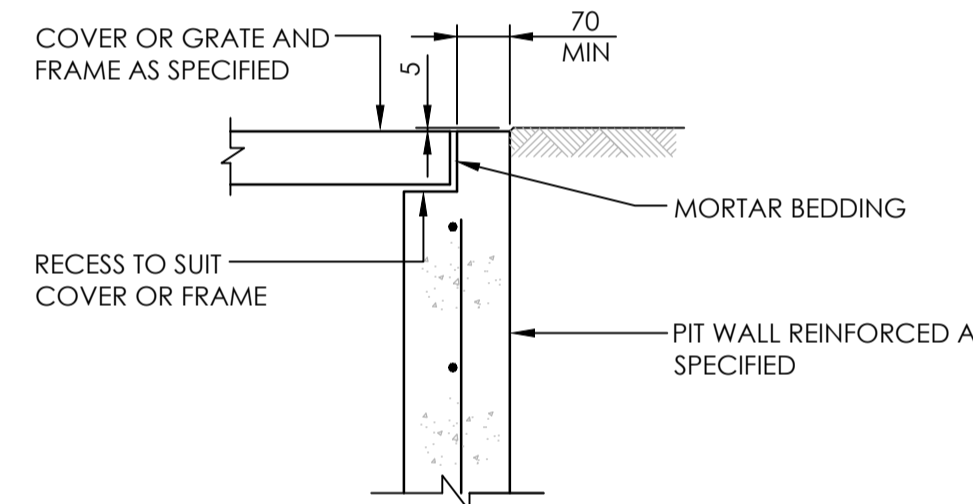
**PIPE INSTALLATION DIMENSIONS**



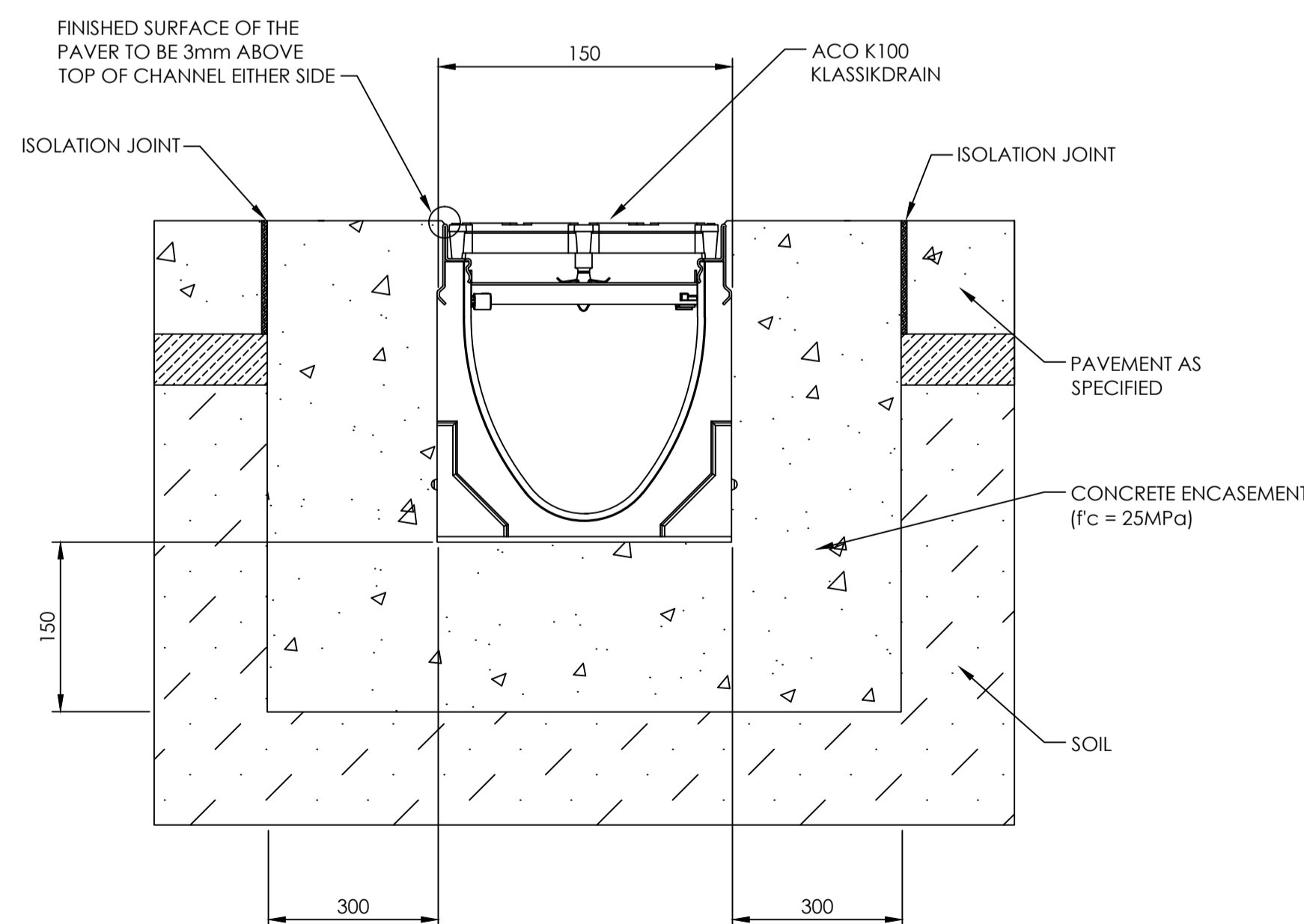
**PIT EDGE DETAIL "A"**  
SCALE 1:10



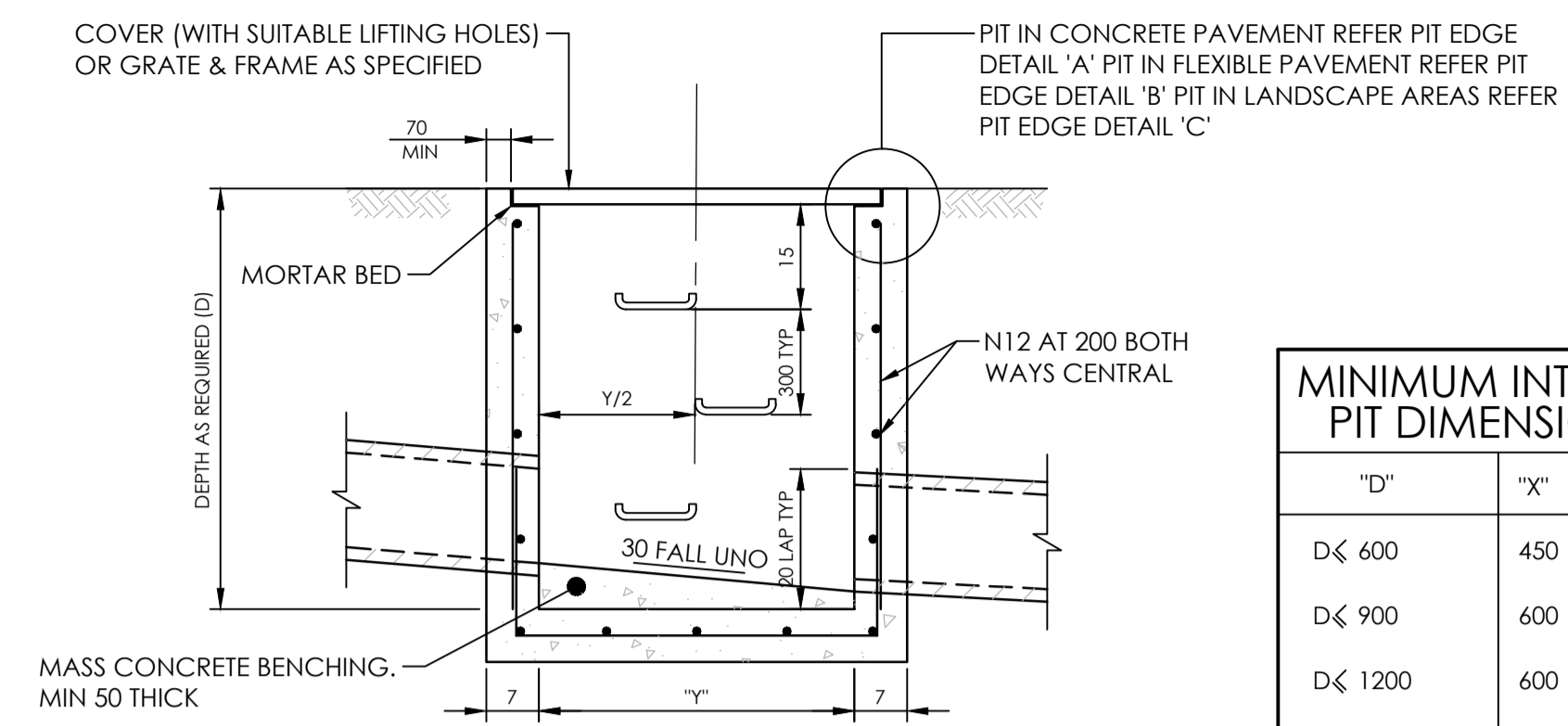
**PIT EDGE DETAIL "B"**  
SCALE 1:10



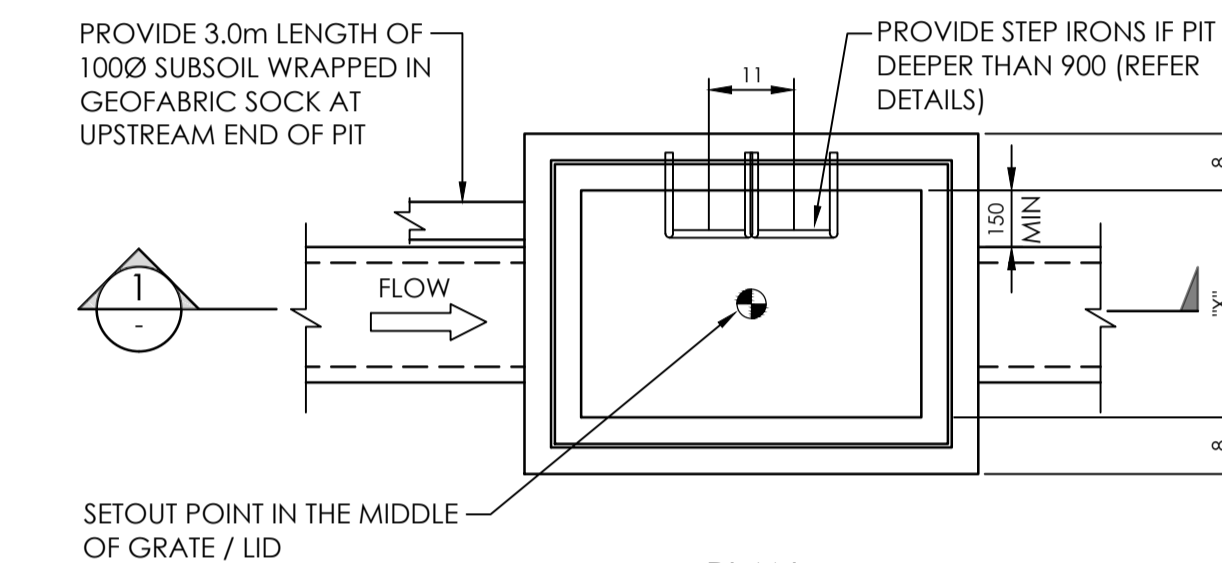
**PIT EDGE DETAIL "C"**  
SCALE 1:10



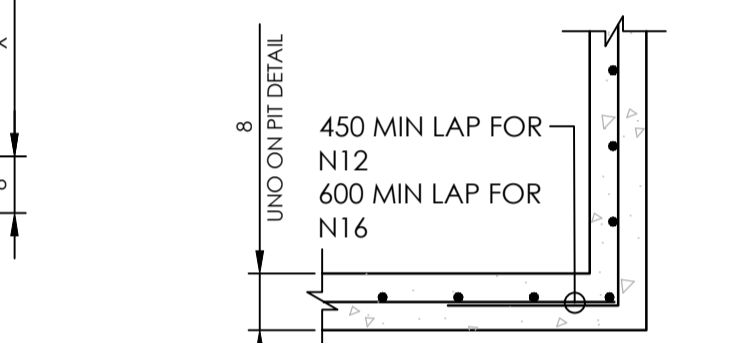
**GRATED DRAIN IN CONCRETE DETAIL**  
NOT TO SCALE



**SECTION 1**  
SCALE 1:20



**SURFACE INLET/JUNCTION PIT**  
SCALE 1:20

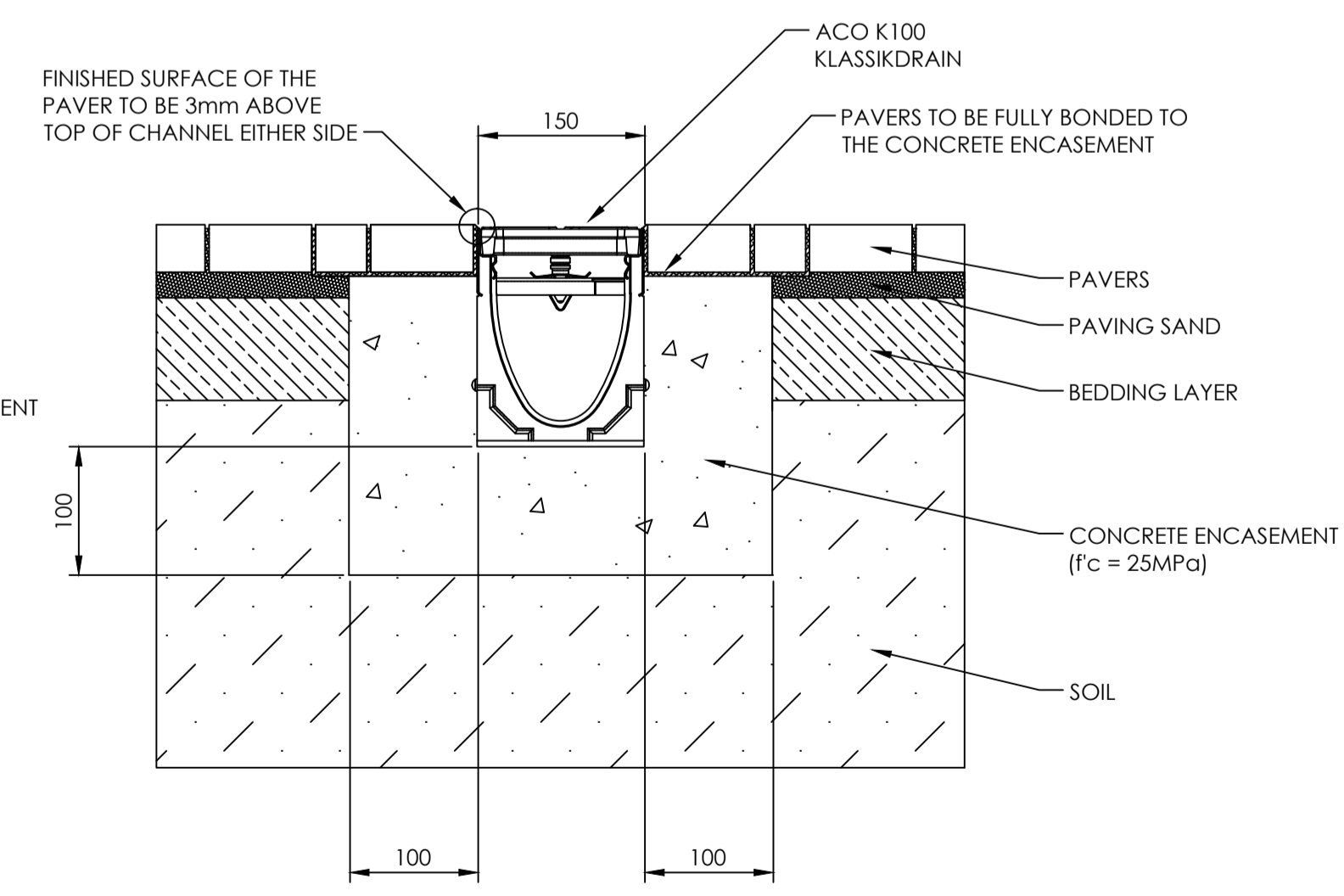


**TYPICAL PIT CORNER DETAIL**  
SCALE 1:20

Span <= 1.5m	Wall Dimensions (mm)	Base thickness "c"	Wall thickness "w"	Vertical reinf.	Hor.reinf.	Base Reinf. BW
Depth "h"						
up to 2m	150.0	150.0	150.0	N12@200	N12@200	N12@200
up to 4m	200.0	175.0	175.0	N12@200	N12@200	N12@200
Span 1.5 to 2.5m <th>Wall Dimensions (mm)</th> <th>Base thickness "c"</th> <th>Wall thickness "w"</th> <th>Vertical reinf.</th> <th>Hor.reinf.</th> <th>Base Reinf. BW</th>	Wall Dimensions (mm)	Base thickness "c"	Wall thickness "w"	Vertical reinf.	Hor.reinf.	Base Reinf. BW
Depth "h"						
up to 2m	150.0	200.0	200.0	N12@200	N12@200	N12@200
up to 4m	200.0	200.0	200.0	N16@200	N16@200	N16@200

**PIT DIMENSION TABLE**

NOTE: FOR PIT DIMENSIONS AND REINFORCEMENT REFER TABLE ABOVE



**GRATED DRAIN IN PAVERS DETAIL**  
NOT TO SCALE

ISSUE	AMENDMENT	DATE	DRAWN	APP
A	DRAFT TENDER ISSUE	30.10.23	JB	NP
B	70% TENDER ISSUE	10.11.23	JB	NP

NORTH POINT	

CLIENT  
**REGIS AGED CARE**

PO BOX 658  
GORDON NSW 2072  
PHONE : (02) 8467 9333

ARCHITECT  
**mdp architecture**

CIVIL ENGINEER  
**ENTEC CONSULTANTS**

PROJECT  
**REGIS BELROSE**

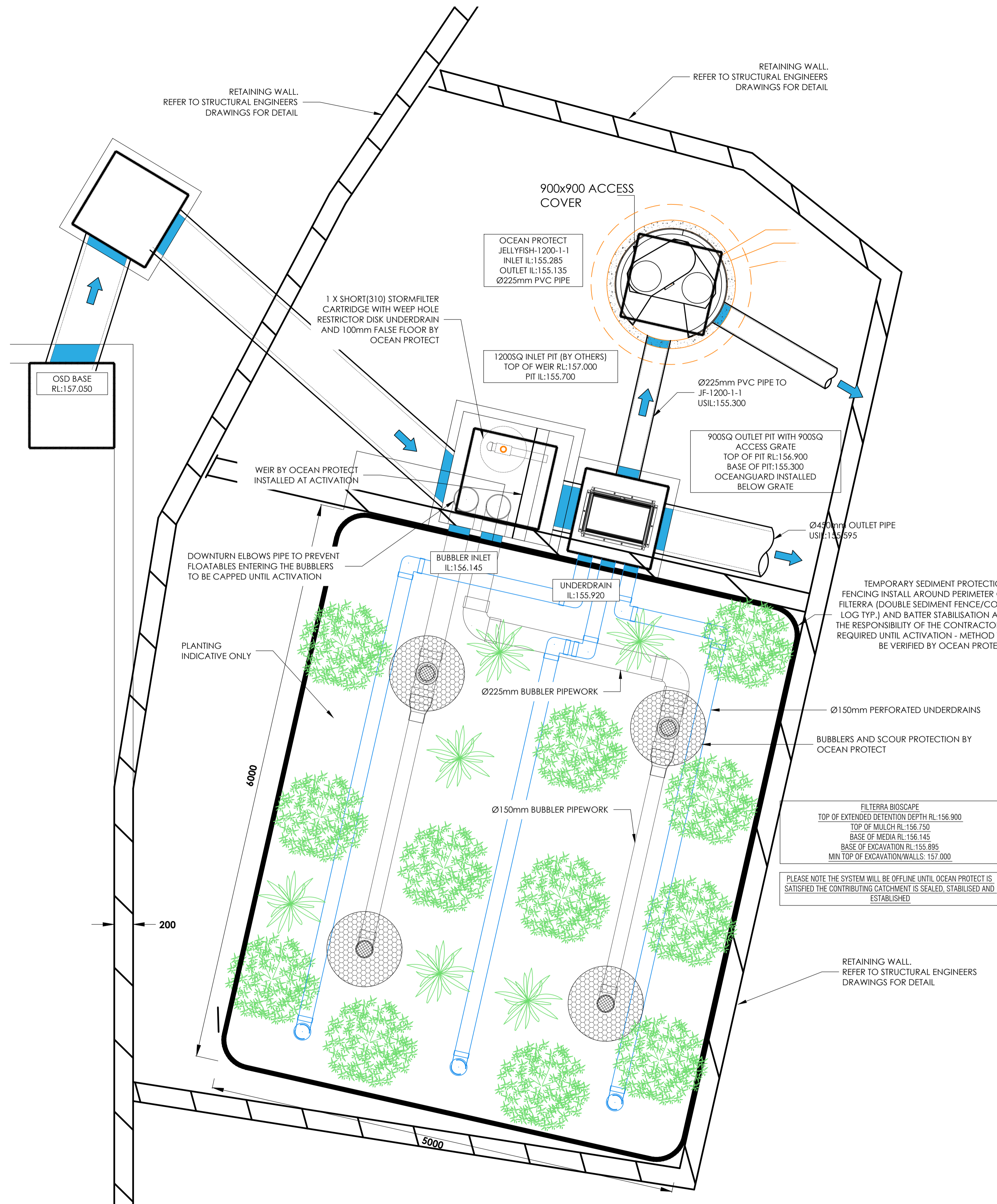
181 FOREST WAY  
BELROSE NSW 2085

DRAWING TITLE  
CIVIL SERVICES  
STORMWATER DETAILS SHEET 1

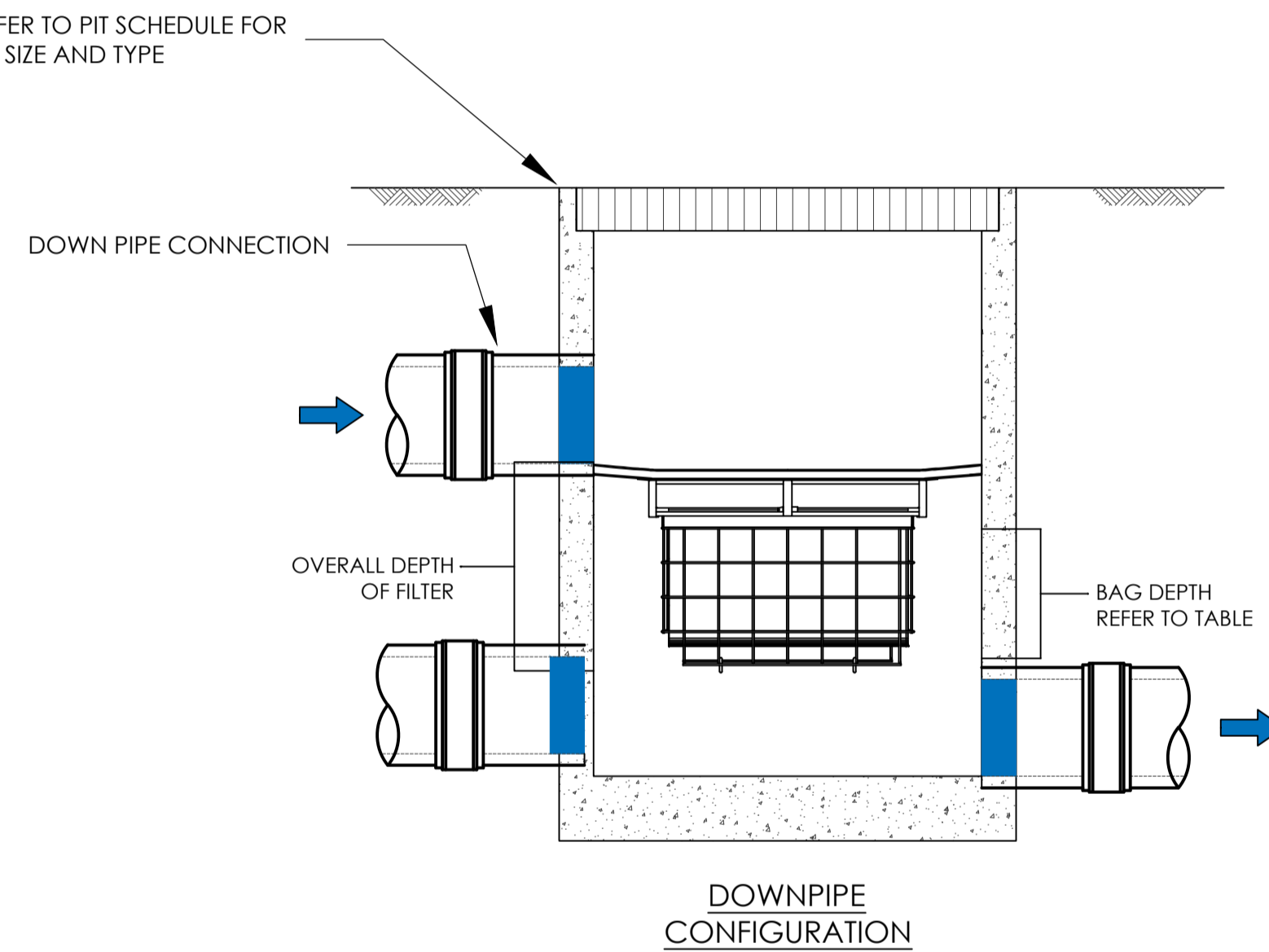
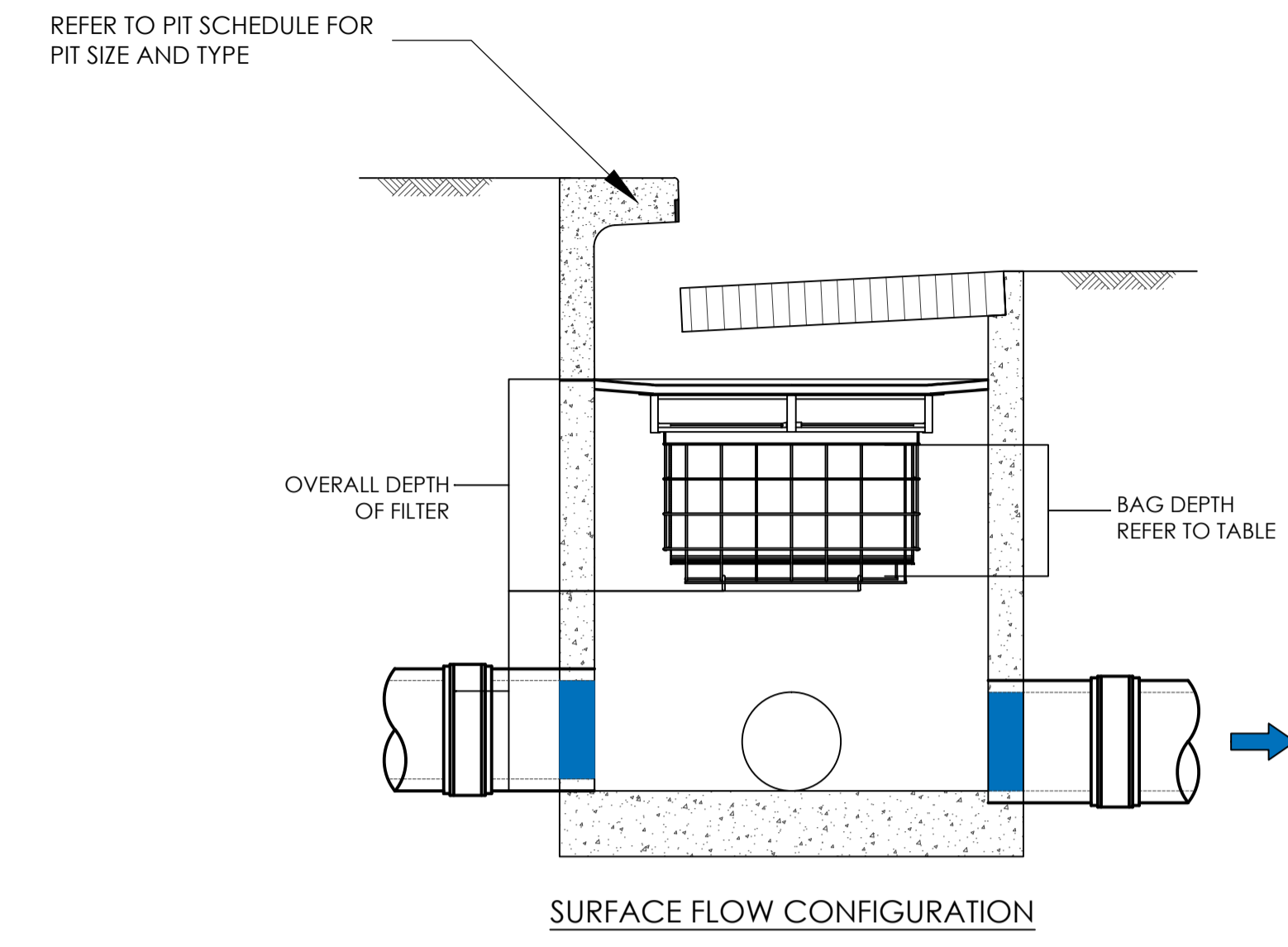
DRAWN	DATE	SCALE	A1	QA CHECK	DATE
JB	OCT 23	NTS		NP	
DESIGNED	PROJECT NO.	DRAWING No.	ISSUE		
NP	230074-01	C510	A		

TENDER ISSUE





FILTERRA BIOSCAPE 30m BIOSCAPE SYSTEM  
NOT TO SCALE



PLAN ID	MAXIMUM PIT PLAN DIMENSIONS
S	450mm x 450mm
M	600mm x 600mm
L	900mm x 900mm
XL	1200mm x 1200mm

DEPTH ID	BAG DEPTH	OVERALL DEPTH
1	170	270
2	300	450
3	600	700

PLAN ID	DEPTH ID		
	1	2	3
S	■	■	■
M	■	■	■
L	■	■	■
XL	■	■	■

OCEANGUARD  
TYPICAL ARRANGEMENTS  
NOT TO SCALE

NORTH POINT

ISSUE	AMENDMENT	DATE	DRAWN	APP
A	DRAFT TENDER ISSUE	30.10.23	JB	NP
B	70% TENDER ISSUE	10.11.23	JB	NP

CLIENT  
**REGIS AGED CARE**



PO BOX 658  
GORDON NSW 2072  
PHONE : (02) 8467 9333

ARCHITECT  
**mdp**  
architecture

CIVIL ENGINEER  
**ENTECC**  
CONSULTANTS  
**CADIGAL GROUP**

PROJECT  
**REGIS BELROSE**

181 FOREST WAY  
BELROSE NSW 2085

DRAWING TITLE  
CIVIL SERVICES  
STORMWATER DETAILS SHEET 2

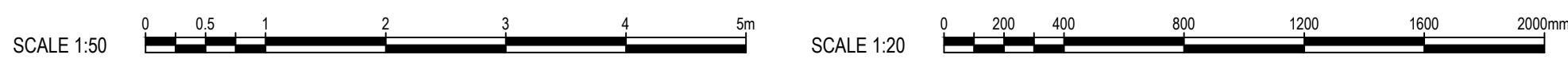
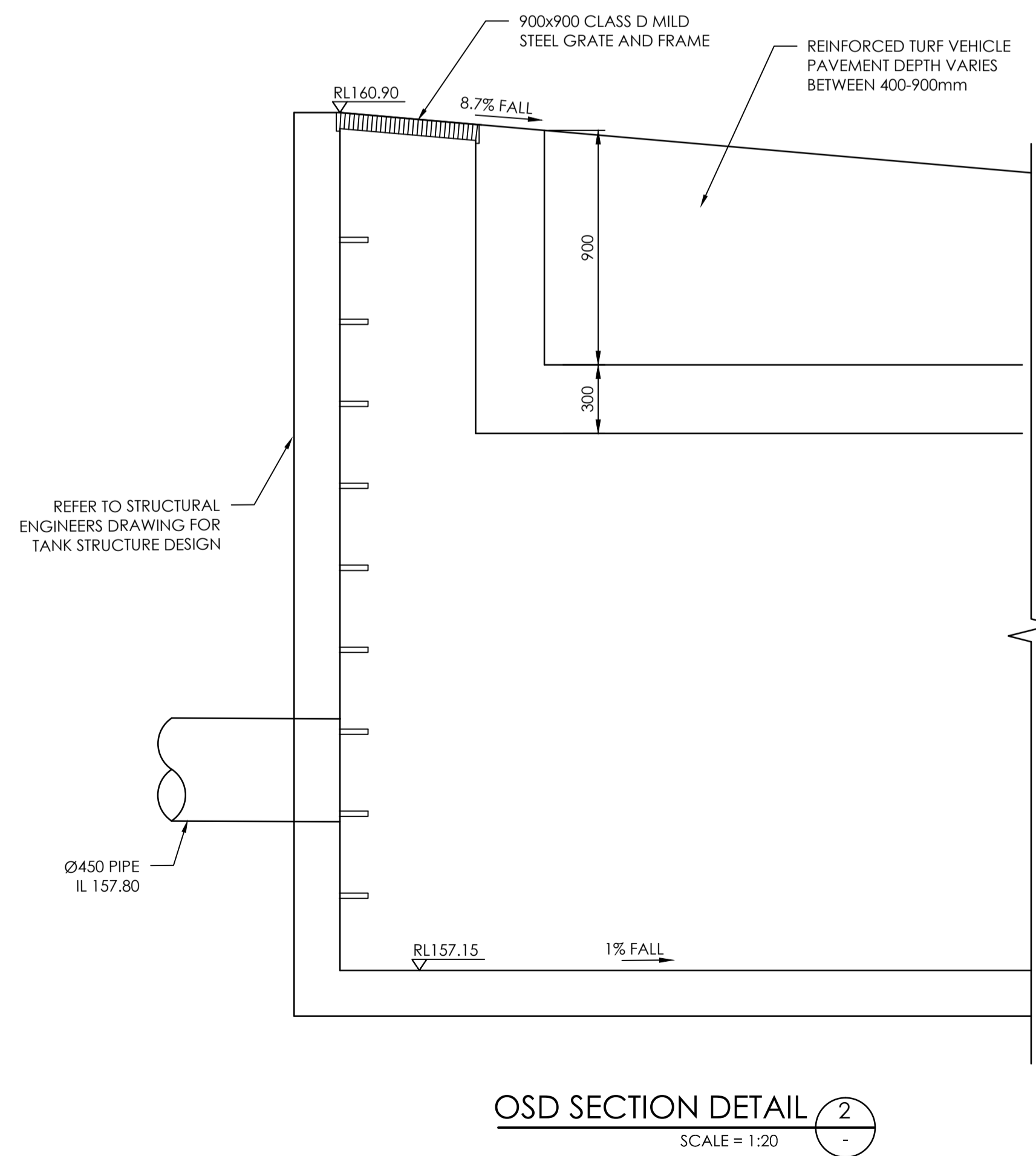
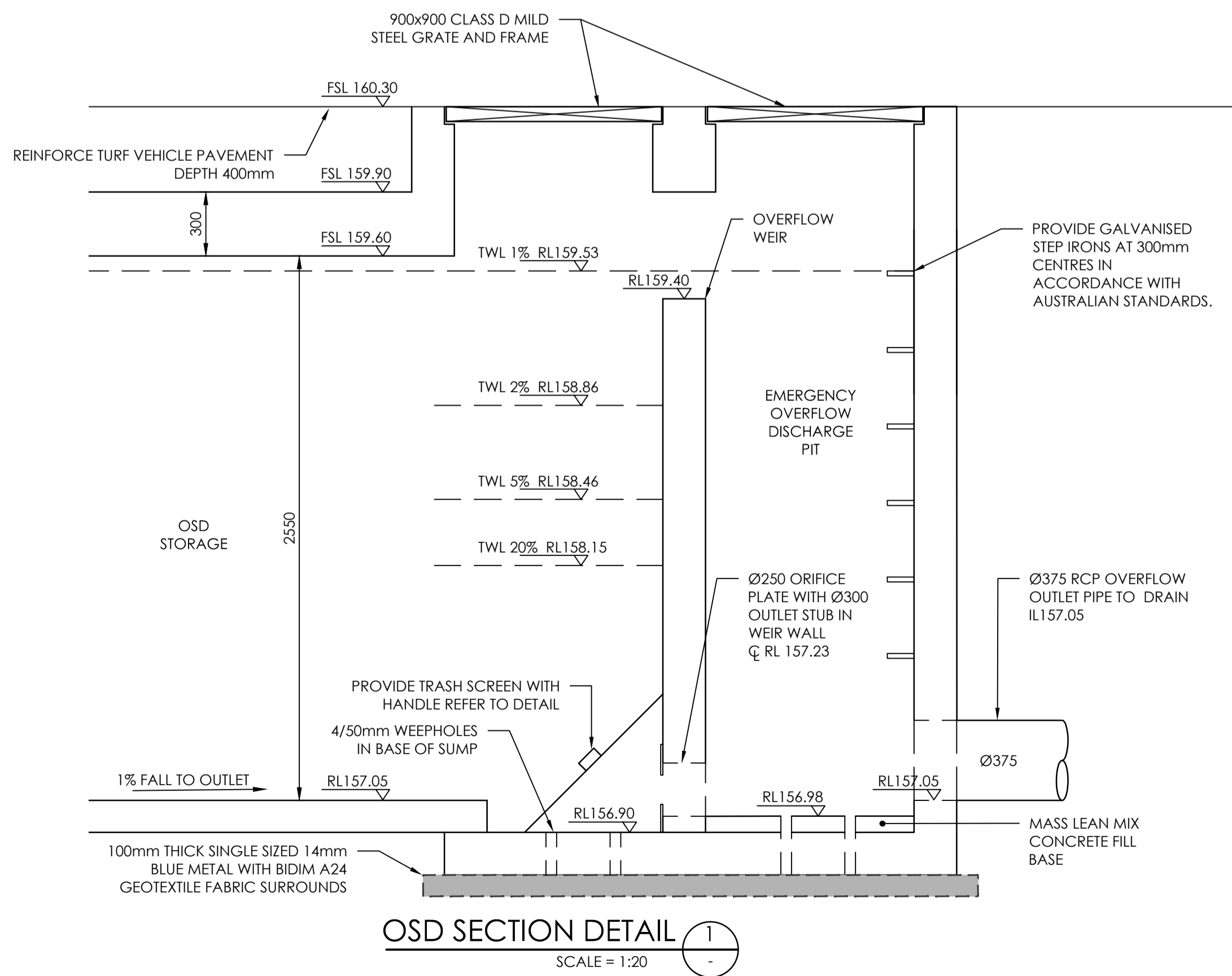
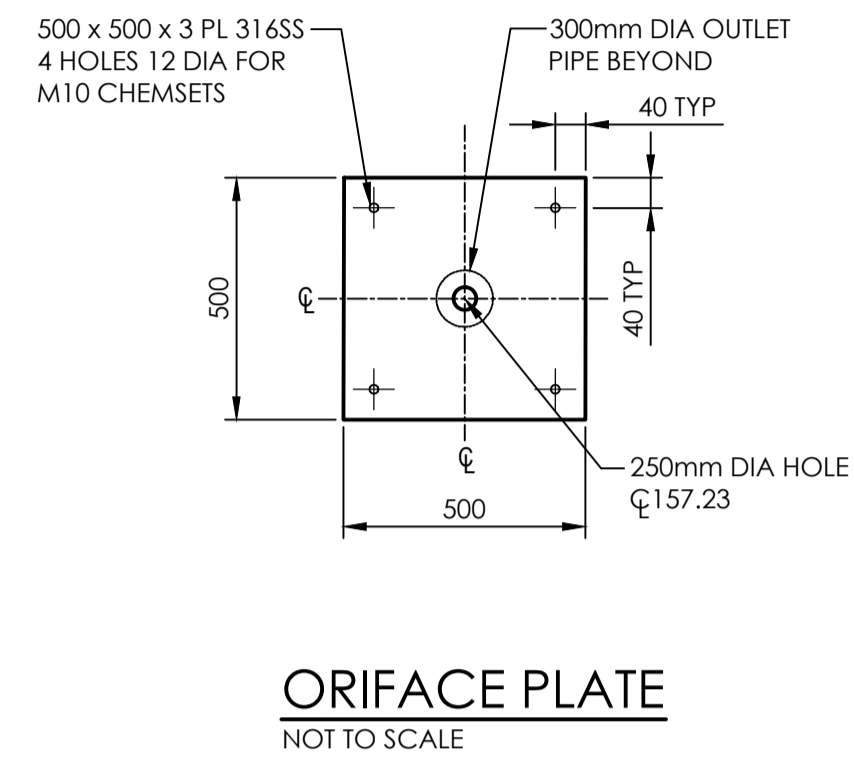
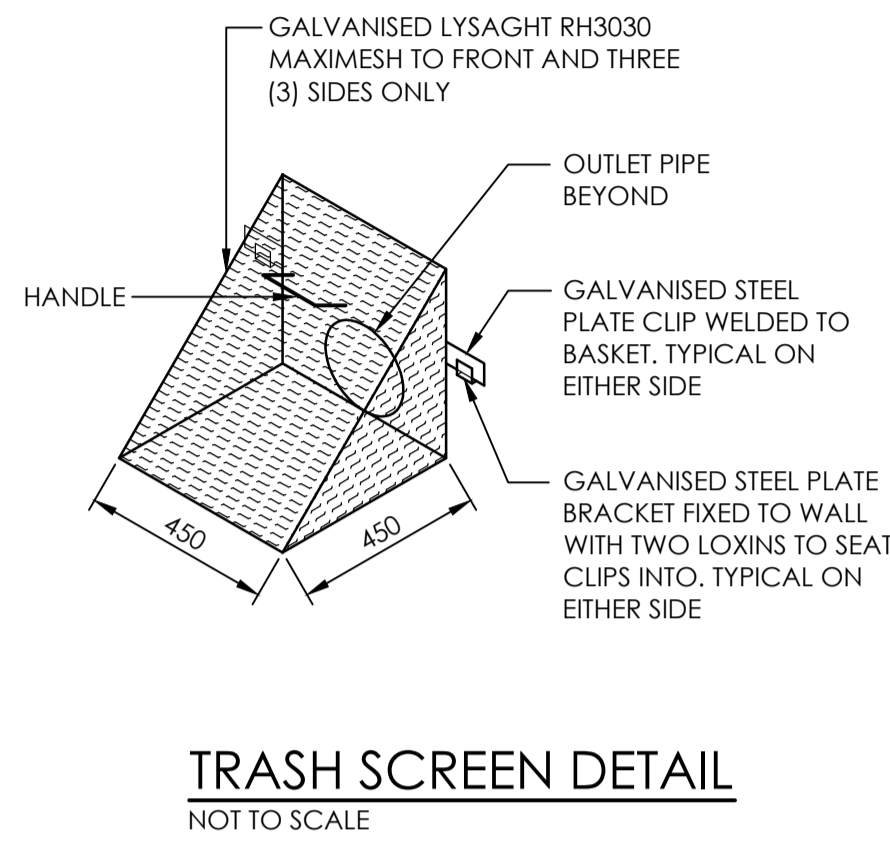
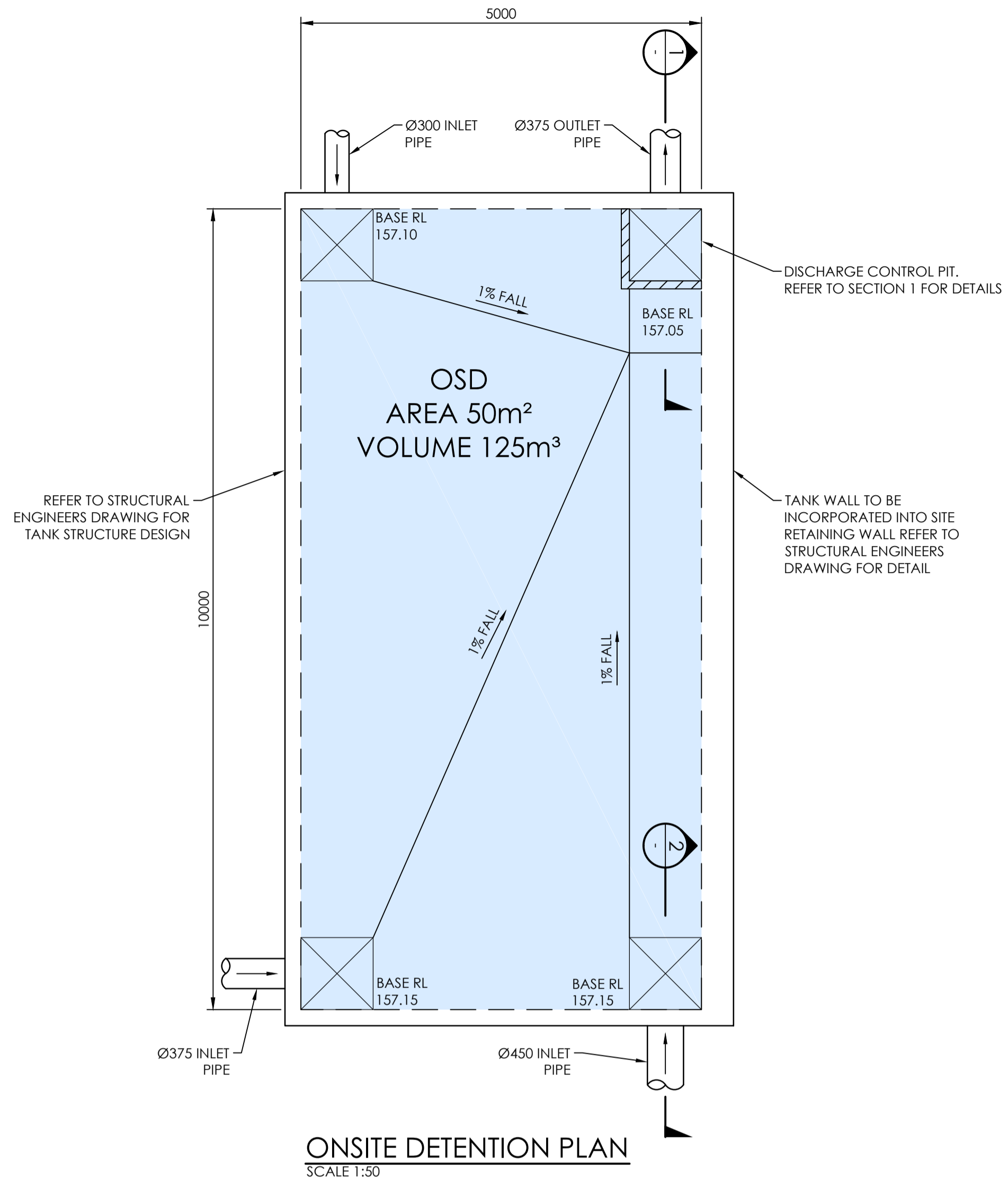
DRAWN	DATE	SCALE	AI	QA CHECK	DATE
JB	OCT 23	NTS		NP	
DESIGNED	PROJECT NO.	DRAWING No.	ISSUE		
NP	230074-01	C511	B		

TENDER ISSUE

DATE PLOTTED: 10/11/2023 1:02:01 PM



DESIGN CRITERIA	
CATCHMENT AREA =	7960m <sup>2</sup>
PRE-DEVELOPMENT IMPERVIOUS AREA =	13%
POST-DEVELOPMENT IMPERVIOUS AREA =	66%
PRE-DEVELOPMENT FLOWS (L/s)	
1% AEP	350
5% AEP	235
10% AEP	188
20% AEP	138
POST-DEVELOPMENT FLOWS	
1% AEP	341
5% AEP	170
10% AEP	148
20% AEP	128
OSD STORAGE VOLUME =	125m <sup>3</sup>



TENDER ISSUE

NORTH POINT

ISSUE	AMENDMENT	DATE	DRAWN	APP
A	DRAFT TENDER ISSUE	30.10.23	JB	NP
B	70% TENDER ISSUE	10.11.23	JB	NP

CLIENT  
**REGIS AGED CARE**

PO BOX 658  
 GORDON NSW 2072  
 PHONE : (02) 8467 9333

ARCHITECT  
**mdp**  
 architecture  
 CIVIL ENGINEER

**ENTEC**  
 CONSULTANTS

**CADIGAL GROUP**

PROJECT  
**REGIS BELROSE**





181 FOREST WAY  
 BELROSE NSW 2085

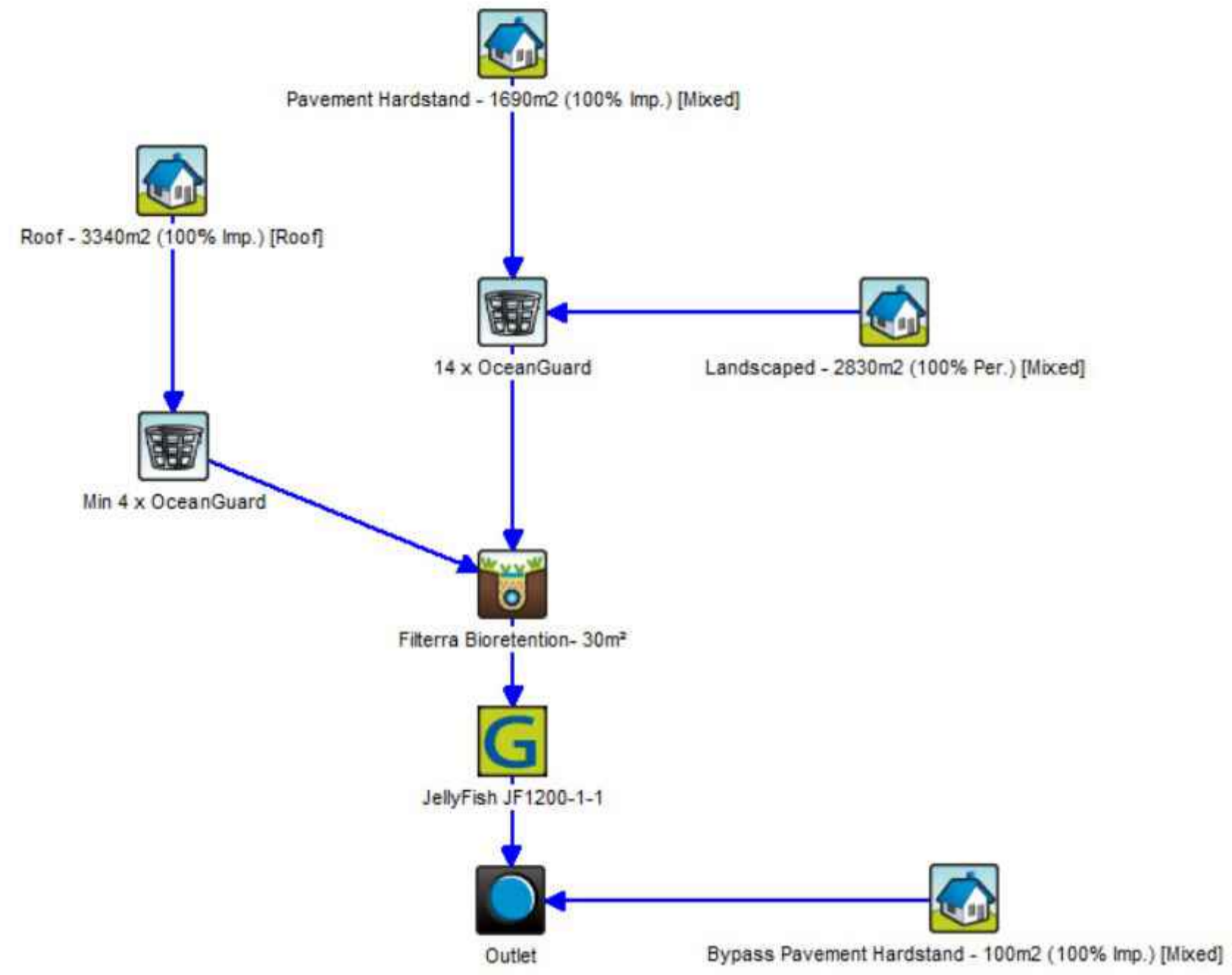
DRAWING TITLE  
 CIVIL SERVICES  
 STORMWATER DETAILS SHEET 3

DRAWN	DATE	SCALE	A1	QA CHECK	DATE
JB	OCT 23	NTS		NP	
DESIGNED	PROJECT NO.	DRAWING No.	ISSUE		
NP	230074-01	C512	B		

CIVIL SERVICES STORMWATER DETAILS SHEET 3



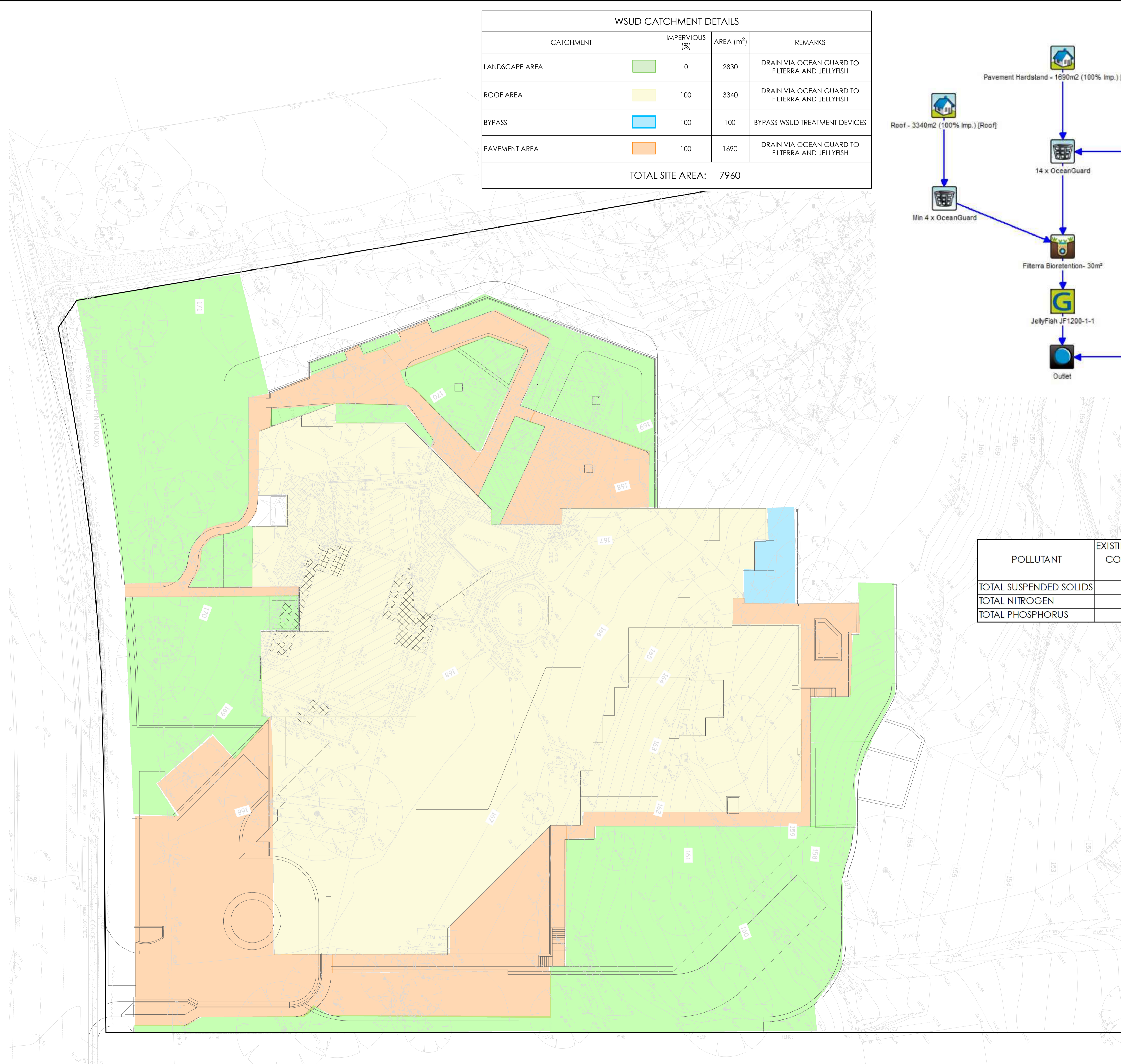
WSUD CATCHMENT DETAILS				
CATCHMENT		IMPERVIOUS (%)	AREA (m <sup>2</sup> )	REMARKS
LANDSCAPE AREA		0	2830	DRAIN VIA OCEAN GUARD TO FILTERRA AND JELLYFISH
ROOF AREA		100	3340	DRAIN VIA OCEAN GUARD TO FILTERRA AND JELLYFISH
BYPASS		100	100	BYPASS WSUD TREATMENT DEVICES
PAVEMENT AREA		100	1690	DRAIN VIA OCEAN GUARD TO FILTERRA AND JELLYFISH
TOTAL SITE AREA:			7960	



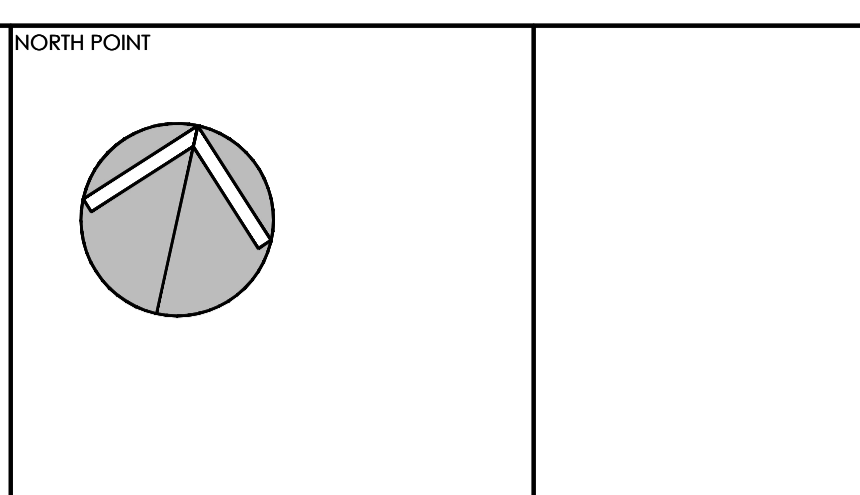
MUSIC MODEL

POLLUTANT	EXISTING SNAKE CREEK CONCENTRATIONS (mg/L)	POST-DEVELOPMENT MEAN DISCHARGE CONCENTRATIONS (mg/L)
TOTAL SUSPENDED SOLIDS	1	0.67
TOTAL NITROGEN	0.3	0.241
TOTAL PHOSPHORUS	<0.01	0.00767


MUSIC RESULTS

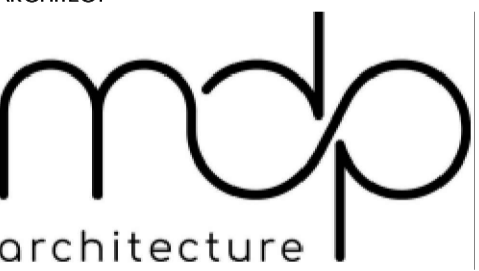


TENDER ISSUE



ISSUE	AMENDMENT	DATE	DRAWN	APP
A	DRAFT TENDER ISSUE	30.10.23	JB	NP
B	70% TENDER ISSUE	10.11.23	JB	NP

CLIENT  
**REGIS AGED CARE**  
  
 PO BOX 658  
 GORDON NSW 2072  
 PHONE : (02) 8467 9333

ARCHITECT  
  
 CIVIL ENGINEER

**ENTEC**  
 CONSULTANTS  

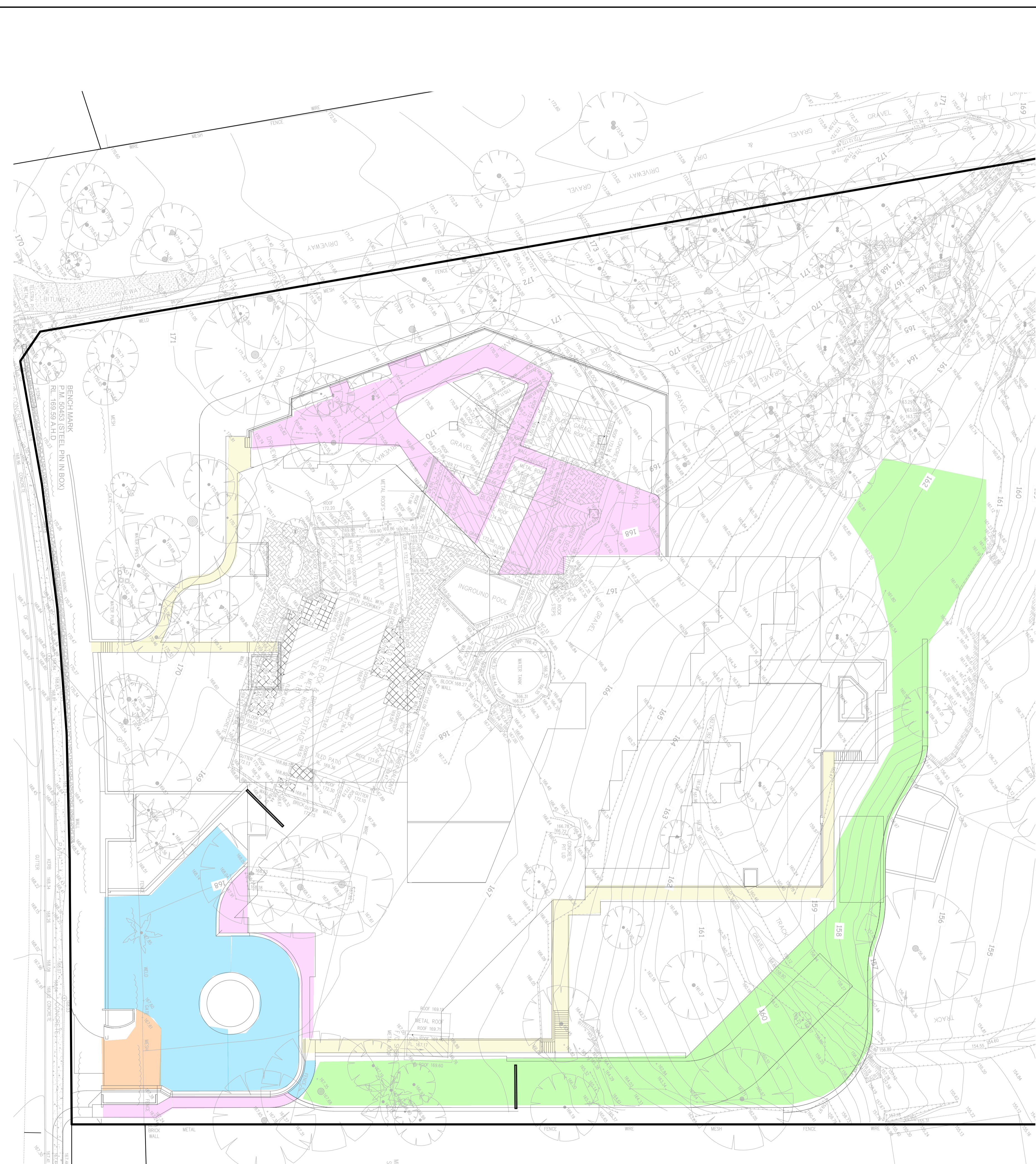

PROJECT  
**REGIS BELROSE**  
 181 FOREST WAY  
 BELROSE NSW 2085

DRAWING TITLE  
 CIVIL SERVICES  
 STORMWATER CATCHMENT PLAN

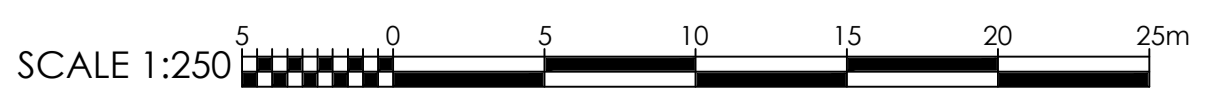
DRAWN	DATE	SCALE	A1	QA CHECK	DATE
JB	OCT 23	NTS		NP	
DESIGNED	PROJECT NO.	DRAWING No.	ISSUE		
NP	230074-01	C.520	B		

03/11/2023 1:05 PM  
 C:\Users\jbruce\OneDrive\Documents\230074\230074-01.dwg

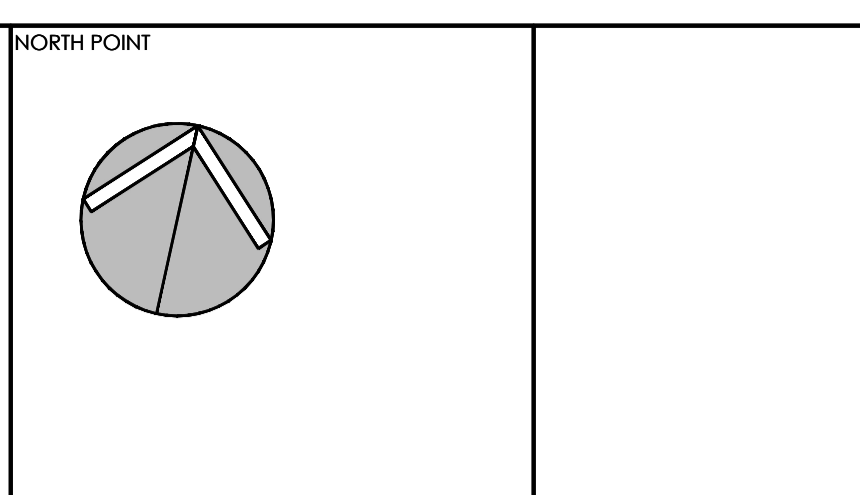




- PAVEMENT TYPE 1  
CONCRETE DRIVEWAY**
  - 180mm THICK CONCRETE ( $f_c=32\text{mPa}$ ) WITH SL82 MESH TOP 30mm COVER
  - 150mm THICK COMPACTED BASE COURSE DGB20
  - 150mm THICK COMPACTED SUBGRADE REPLACEMENT LAYER DGS40 AS REQUIRED
  - COMPACTED PROOF ROLLED SAND SUBGRADE 10% CBR
  
- PAVEMENT TYPE 2  
VEHICULAR PAVEMENT PAVERS**
  - 80mm THICK PAVER ON 30mm MORTAR BED TO LANDSCAPE ARCHITECTS SPECIFICATIONS
  - 180mm THICK CONCRETE ( $f_c=32\text{mPa}$ ) WITH SL82 MESH TOP 30mm COVER
  - 150mm THICK COMPACTED BASE COURSE DGB20
  - 150mm THICK COMPACTED SUBGRADE REPLACEMENT LAYER DGS40 AS REQUIRED
  - COMPACTED PROOF ROLLED SAND SUBGRADE CBR 10%
  
- PAVEMENT TYPE 3  
CONCRETE FOOTPATH**
  - 125mm THICK CONCRETE ( $f_c=25\text{mPa}$ ) WITH SL72 CENTRALLY PLACED
  - MIN 50mm COMPACTED SAND BEDDING/EXISTING SUBGRADE
  
- PAVEMENT TYPE 4  
FOOTPATH PAVER**
  - 50mm THICK PAVER ON 30mm MORTAR BED TO LANDSCAPE ARCHITECTS SPECIFICATIONS
  - 125mm THICK CONCRETE ( $f_c=25\text{mPa}$ ) WITH SL72 CENTRALLY PLACED
  - 50mm MIN COMPACTED SAND BEDDING/EXISTING SUBGRADE
  
- PAVEMENT TYPE 5  
REINFORCED TURF**
  - 50mm 'ATLANTIS TURF CELL'
  - 100mm TURF UNDERLAY MIX
  - 150mm THICK COMPACTED BASE COURSE DGB20
  - 150mm THICK COMPACTED SUBGRADE REPLACEMENT LAYER DGS40 AS REQUIRED
  - COMPACTED PROOF ROLLED SAND SUBGRADE CBR 10%



TENDER ISSUE



ISSUE	AMENDMENT	DATE	DRAWN	APP
A	DRAFT TENDER ISSUE	30.10.23	JB	NP
B	70% TENDER ISSUE	10.11.23	JB	NP

CLIENT  
**REGIS AGED CARE**

PO BOX 658  
GORDON NSW 2072  
PHONE : (02) 8467 9333



ARCHITECT  
**mdp architecture**  
CIVIL ENGINEER



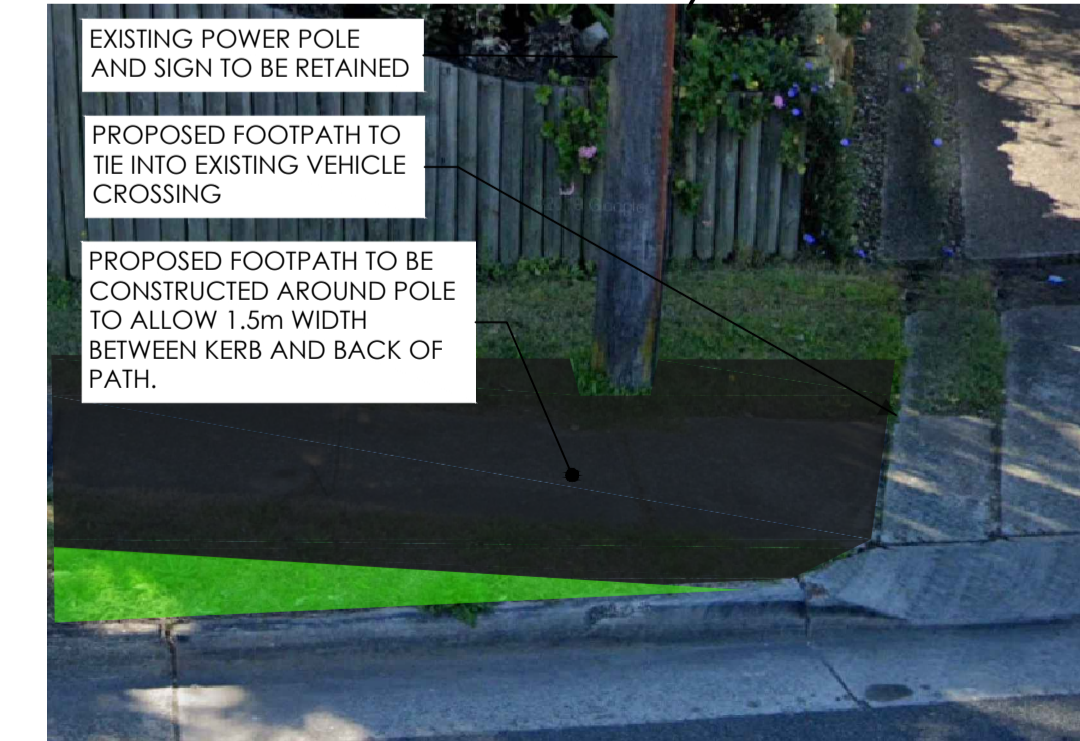
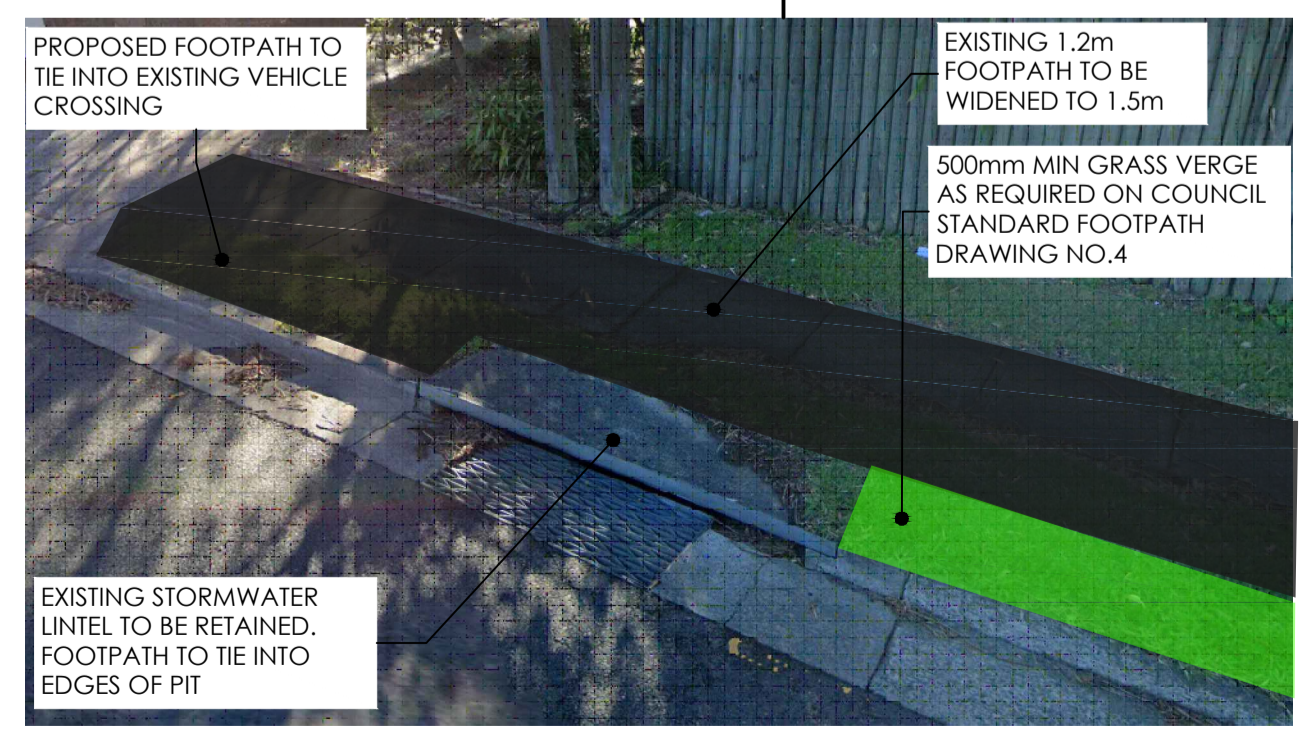
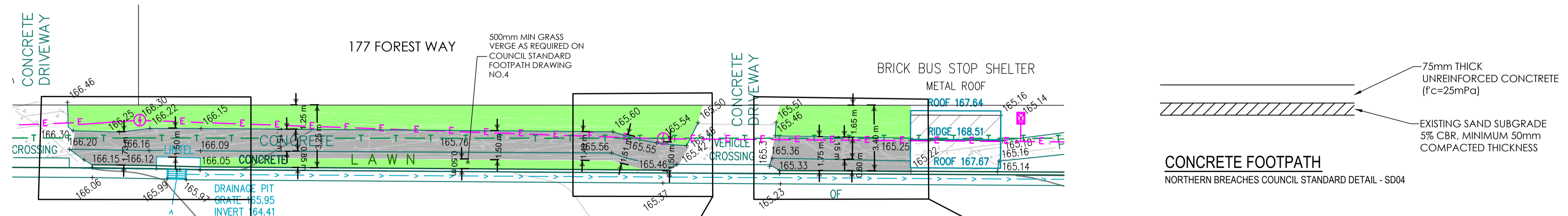
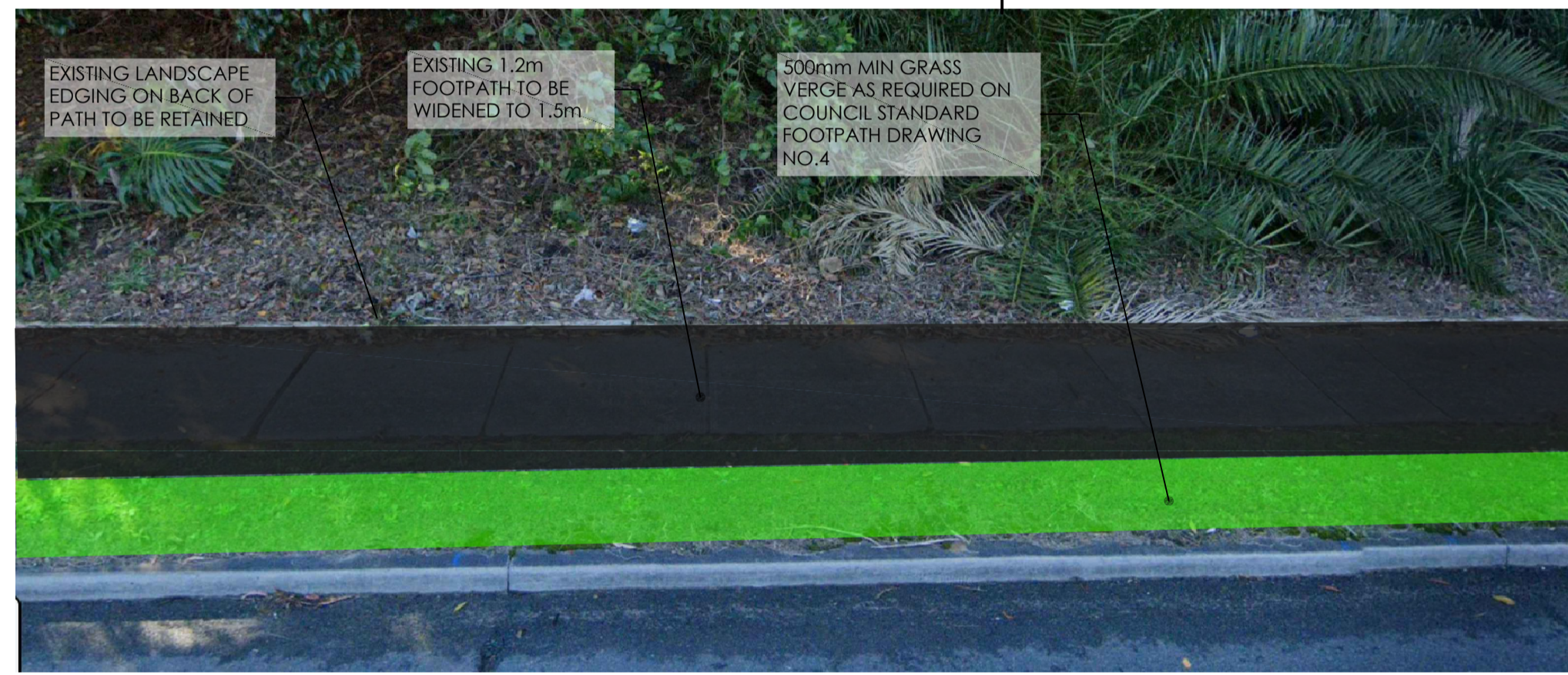
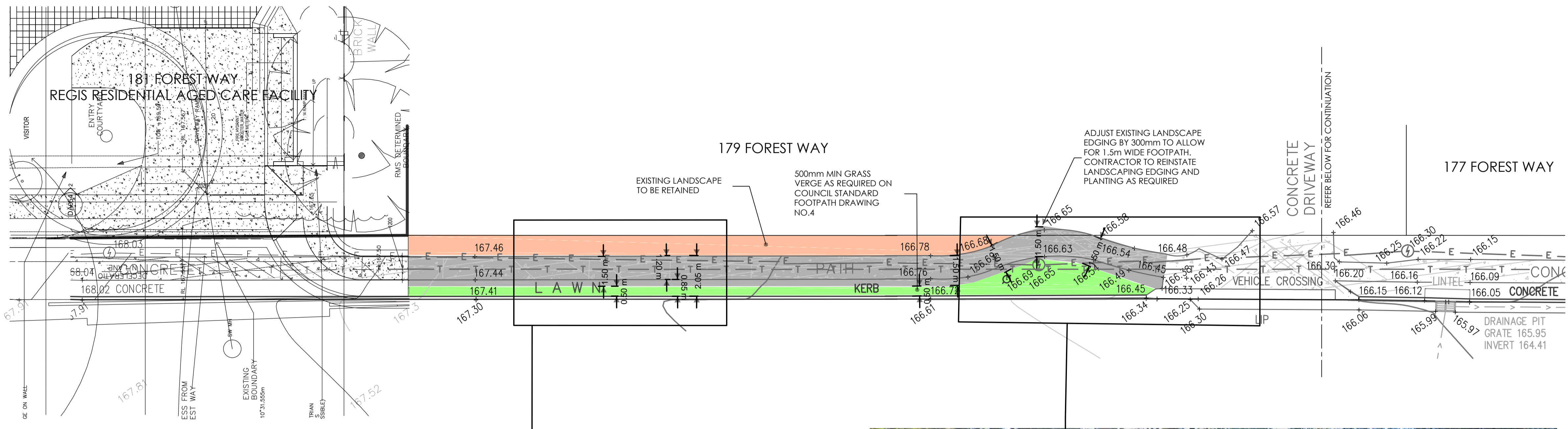
PROJECT  
**REGIS BELROSE**

181 FOREST WAY  
BELROSE NSW 2085

DRAWING TITLE  
CIVIL SERVICES  
PAVEMENT PLAN

DRAWN	DATE	SCALE	A1	QA CHECK	DATE
JB	OCT 23	NTS		NP	
DESIGNED	PROJECT NO.	DRAWING NO.	ISSUE		
NP	230074-01	C701	B		





NORTH POINT				
-------------	--	--	--	--

ISSUE	AMENDMENT	DATE	DRAWN	APP
A	DRAFT TENDER ISSUE	30.10.23	JB	NP
B	70% TENDER ISSUE	10.11.23	JB	NP

CLIENT  
**REGIS AGED CARE**  
 PO BOX 658  
 GORDON NSW 2072  
 PHONE : (02) 8467 9333



ARCHITECT  
**mdp**  
 architecture

CIVIL ENGINEER  
**ENTEC**  
 CONSULTANTS



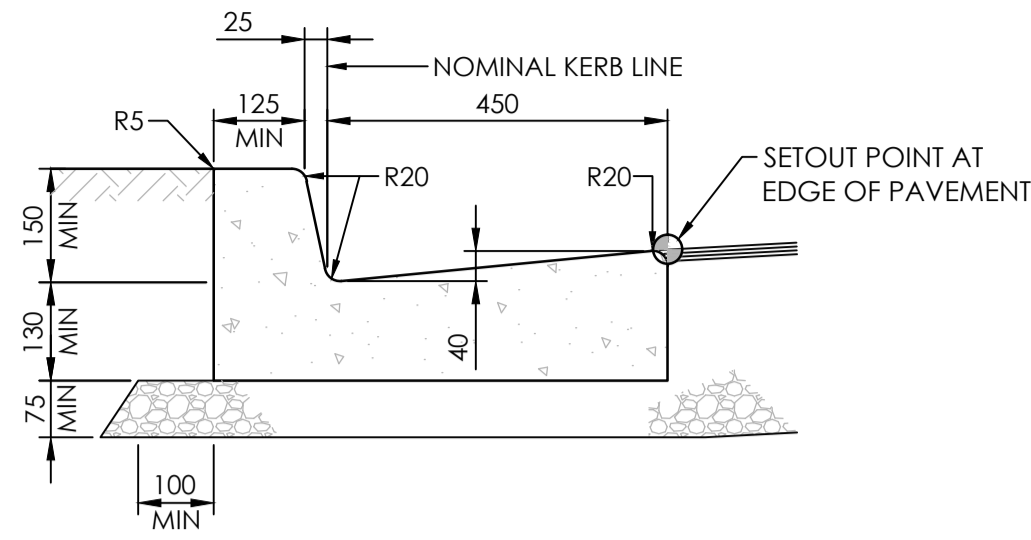
PROJECT  
**REGIS BELROSE**  
 181 FOREST WAY  
 BELROSE NSW 2085

DRAWING TITLE  
 CIVIL SERVICES  
 COUNCIL PUBLIC DOMAIN

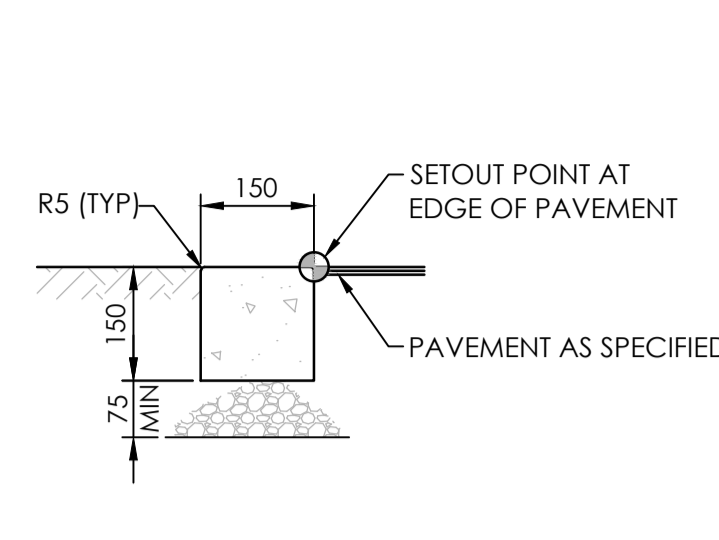
DRAWN	DATE	SCALE	AI	QA CHECK	DATE
JB	OCT 23	NTS		NP	
DESIGNED	PROJECT NO.	DRAWING No.	ISSUE		
NP	230074-01	C801	B		

TENDER ISSUE

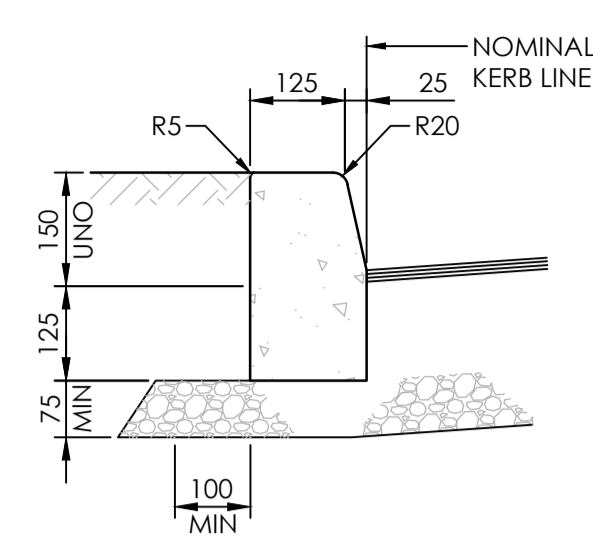




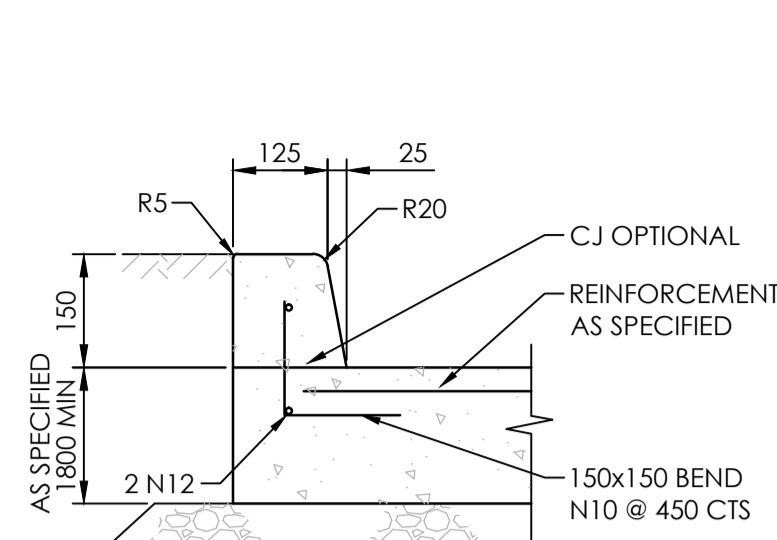
**KERB & GUTTER**  
SCALE 1:10  
SHOWN AS 'K&G'



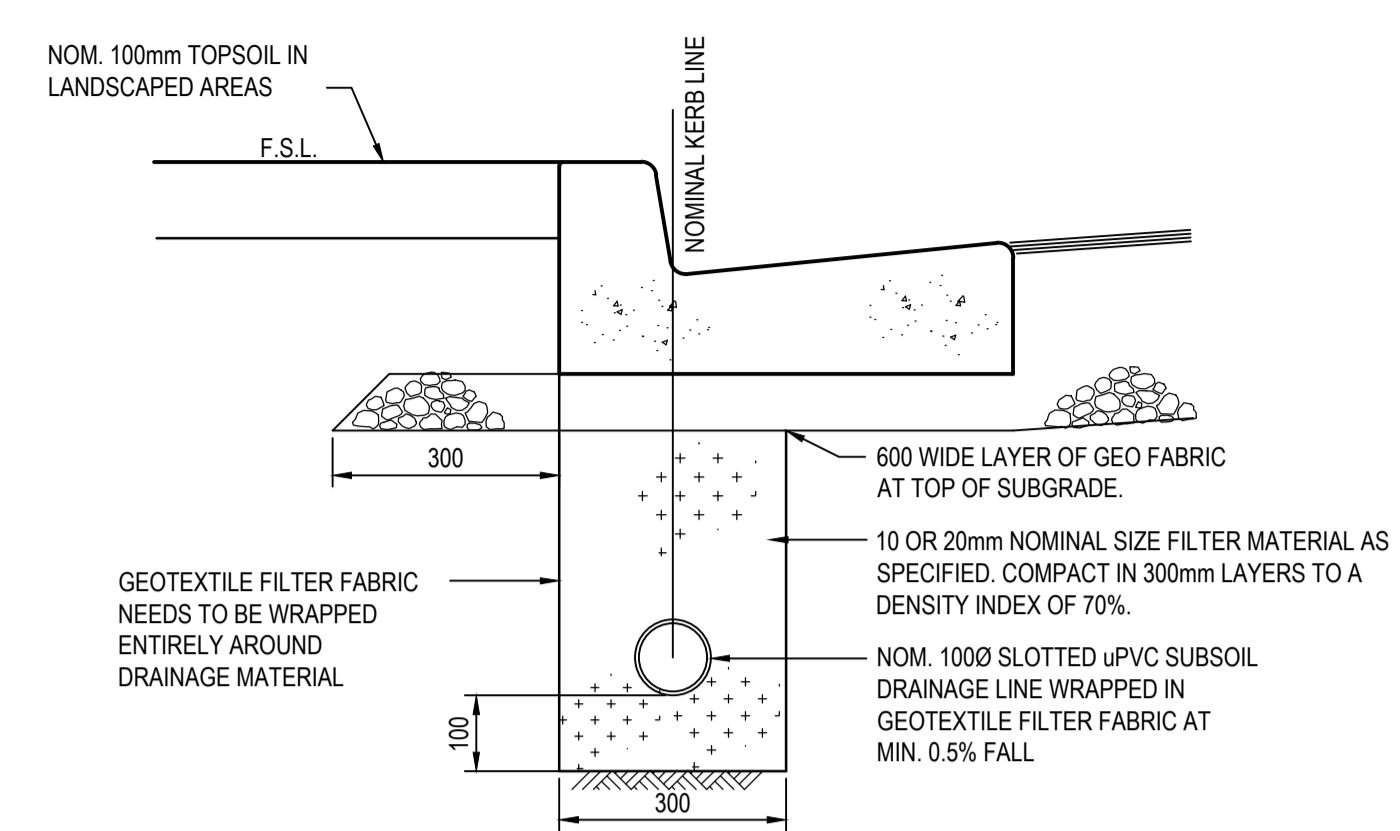
**FLUSH KERB TYPE 1**  
SCALE 1:10  
SHOWN AS 'FK'



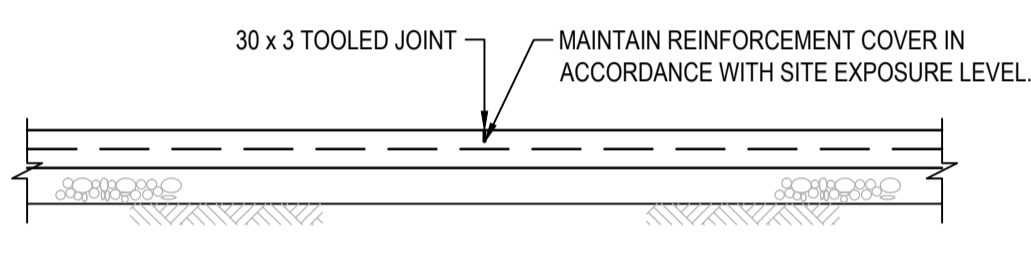
**KERB ONLY**  
SCALE 1:10  
SHOWN AS 'KO'



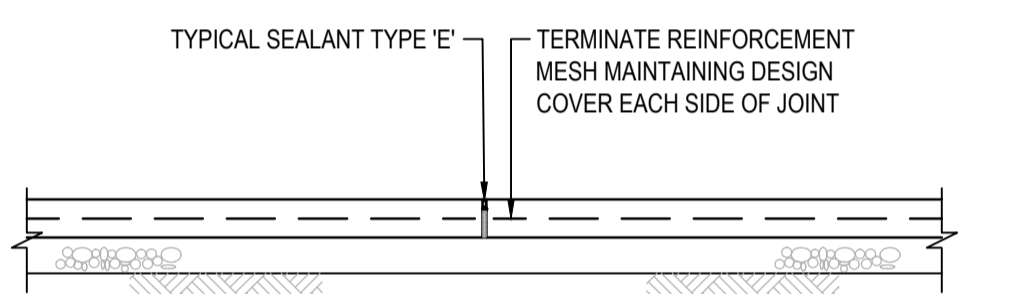
**INTEGRAL KERB**  
SCALE 1:10



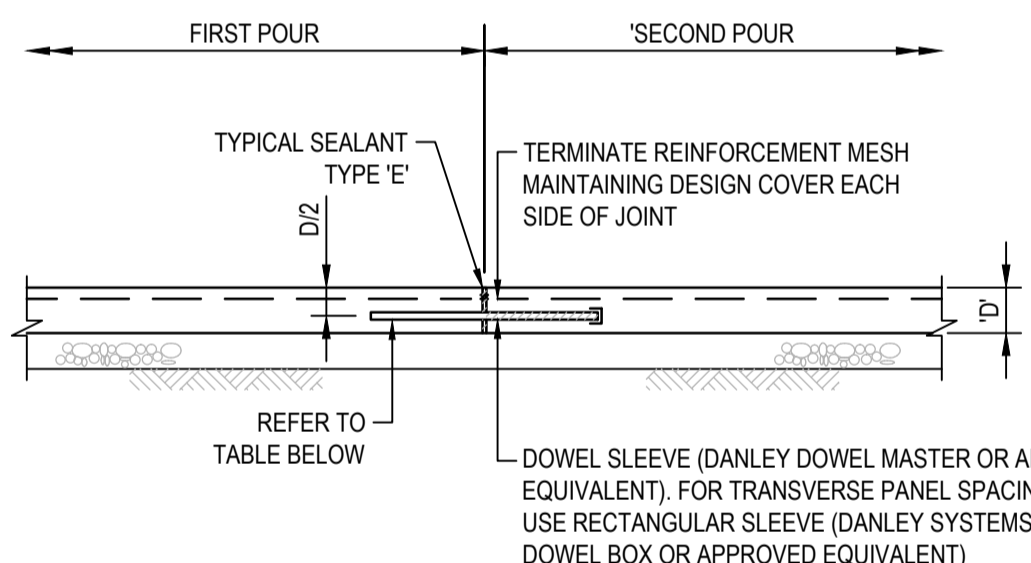
**SUBSOIL UNDER KERBS**  
SCALE 1:10



**TYPICAL FOOTPATH TOOLED JOINT - TJ**  
SCALE 1:20

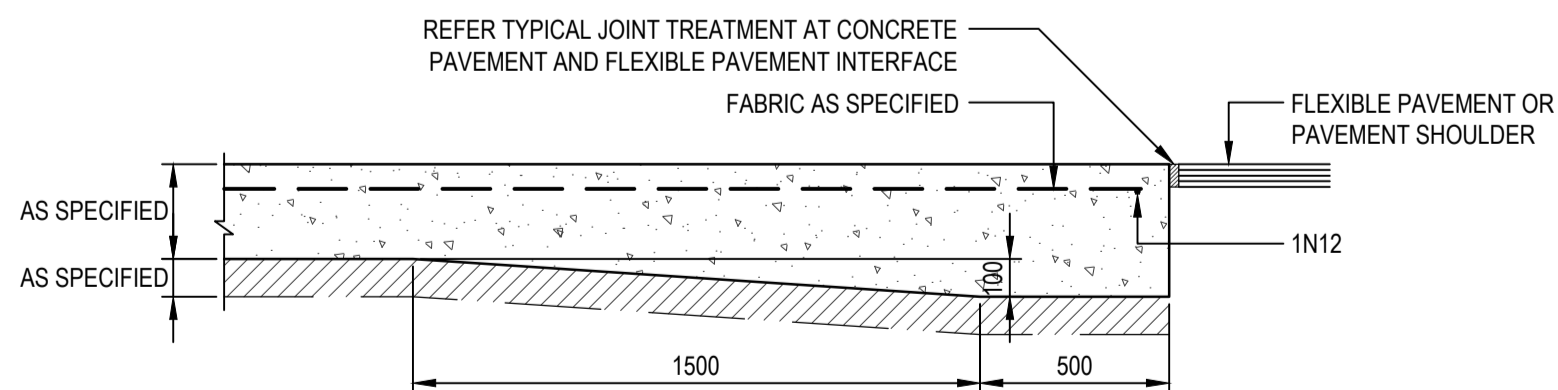


**TYPICAL FOOTPATH EXPANSION JOINT - EJ**  
SCALE 1:20

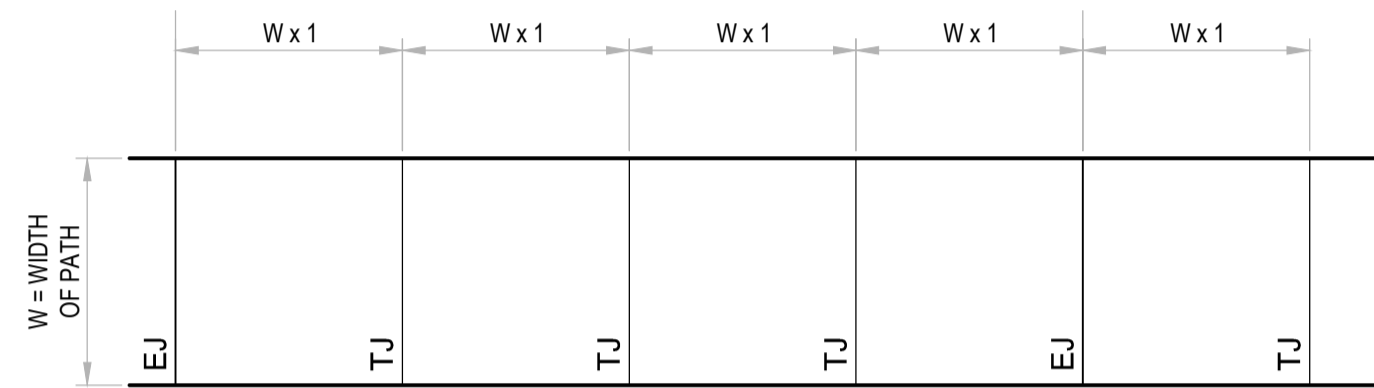


**TYPICAL EXPANSION JOINT - EJ**  
SCALE 1:20

ROUND DOWELS (GRADE 250R) @ 300 CRS		
SLAB THICKNESS (D) (mm)	DOWEL DIAMETER (mm)	DOWEL LENGTH (mm)
150 - 190	20	400

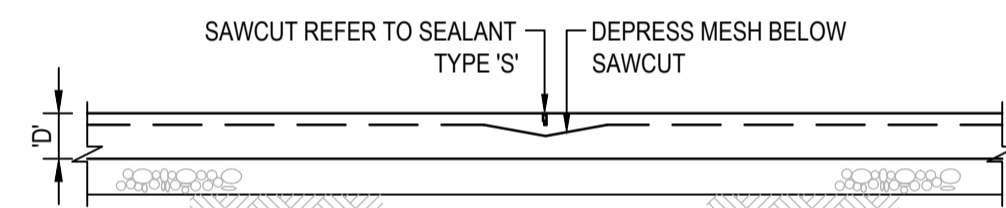


**EDGE THICKENING**  
SCALE 1:20  
SHOWN AS 'ET' ON PLAN  
NOTE: JOINT THICKENING TO MATCH THE THICKER OF THE TWO ADJOINING PAVEMENTS

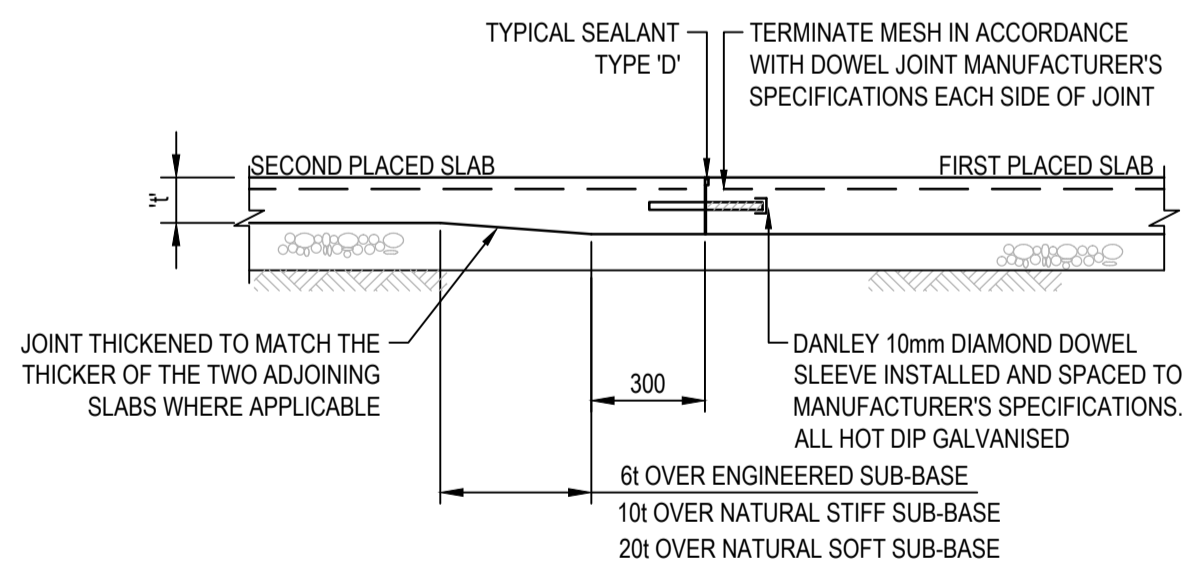


**FOOTPATH NOTE**  
CONCRETE TO HAVE BROOM FINISH WITH SMOOTH TROWELLED EDGES.  
TJ - FOOTPATH TOOLED JOINT. REFER DETAIL  
EJ - FOOTPATH EXPANSION JOINT. REFER DETAIL

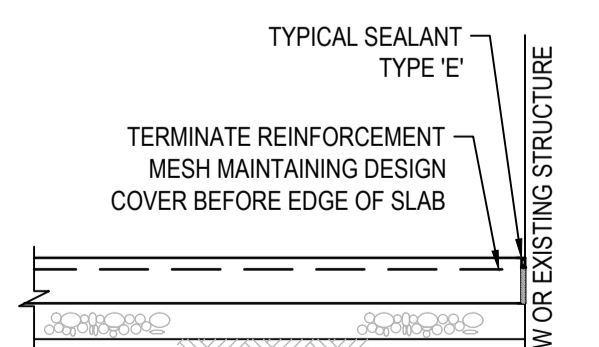
**TYPICAL JOINT PLAN FOR FOOTPATHS**  
NTS



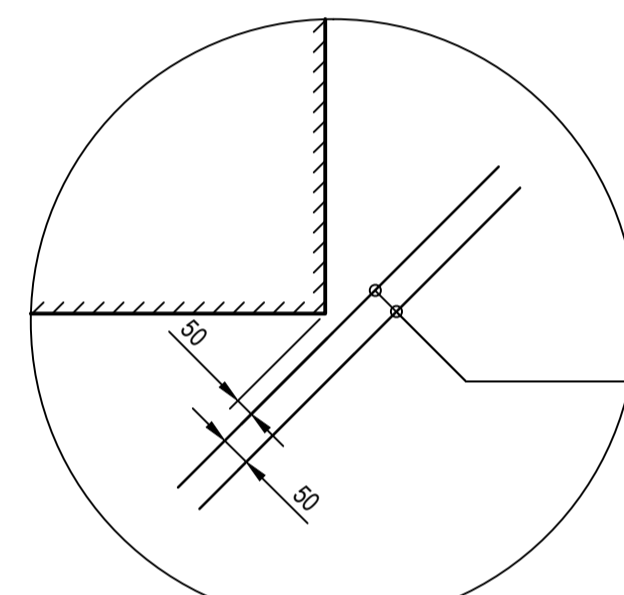
**TYPICAL SAWCUT JOINT - SJ**  
SCALE 1:20  
SAWCUT WITHIN 24 HOUR PERIOD AFTER CONCRETE IS POURED UNLESS AGREED OTHERWISE BY ENGINEER



**TYPICAL DIAMOND DOWEL JOINT - DDJ**  
SCALE 1:20

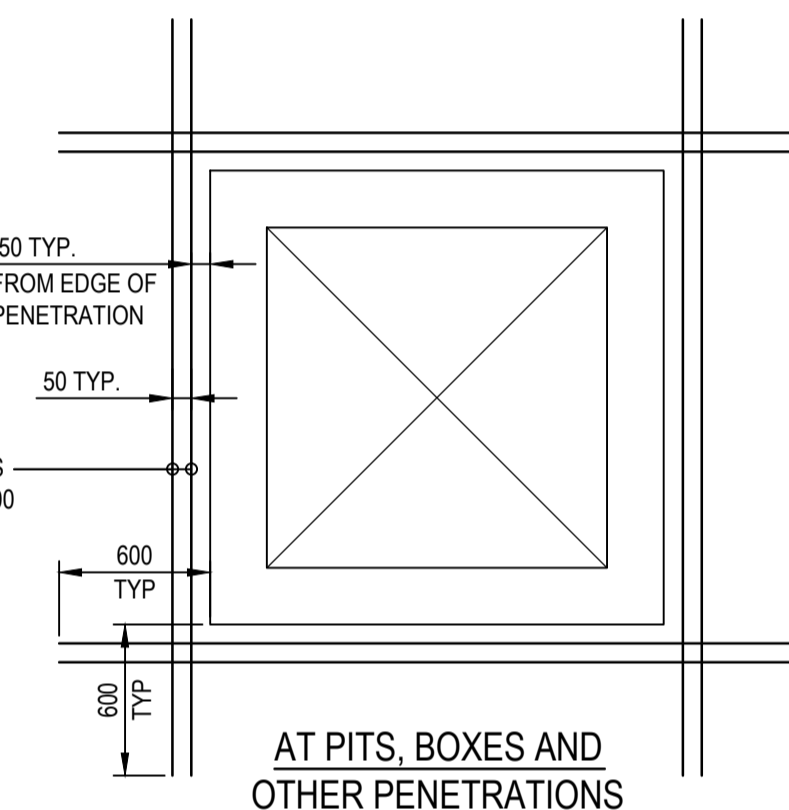


**TYPICAL ISOLATION JOINT - IJ**  
SCALE 1:20

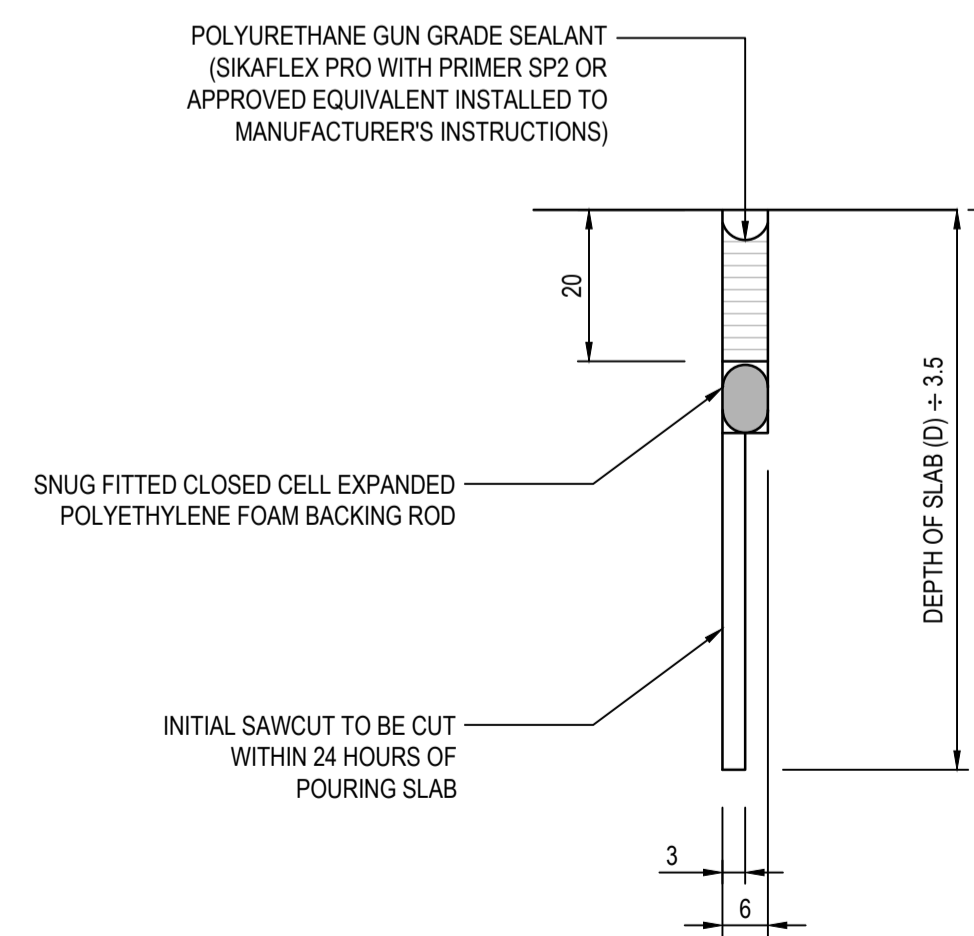


**AT CORNERS**  
**TYPICAL TRIMMER BAR DETAIL**  
SCALE 1:20

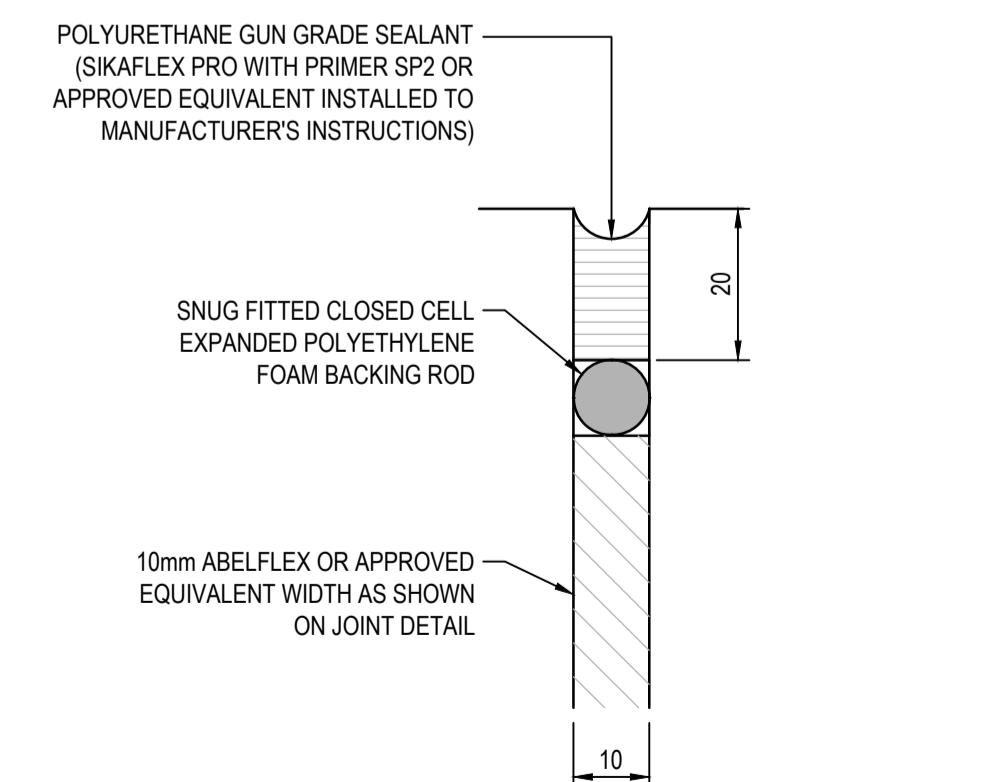
- TRIMMER BARS:
  - TO BE CONSTRUCTED AT ALL PENETRATIONS IN AIRCRAFT/VEHICLE CONCRETE PAVEMENTS INCLUDING BUT NOT LIMITED TO:
    - ALL SERVICE PITS
    - ALL DRAINAGE STRUCTURES
    - ALL VALVE BOXES
    - ALL IN-GROUND FIRE HYDRANTS
    - ALL PROTRUDING CORNERS OF STRUCTURES OR SLABS
    - ALL COLUMNS PENETRATING CONCRETE PAVEMENT
  - CONSTRUCT 2-N16 TRIMMER BARS (1200LONG, TOP AND BOTTOM) AT ALL MISMATCHED OR DISCONTINUOUS JOINTS. TYPICAL



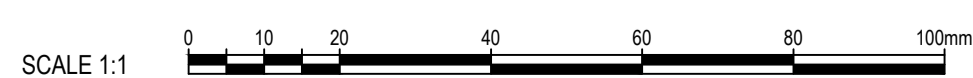
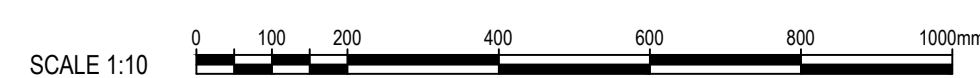
**AT PITS, BOXES AND OTHER PENETRATIONS**



**TYPICAL JOINT SEALANT TYPE 'S'**  
SCALE 1:1



**TYPICAL JOINT SEALANT TYPE 'E'**  
SCALE 1:1



TENDER ISSUE

ISSUE	AMENDMENT	DATE	DRAWN	APP
A	DRAFT TENDER ISSUE	30.10.23	JB	NP
B	70% TENDER ISSUE	10.11.23	JB	NP

CLIENT  
**REGIS AGED CARE**



PO BOX 658  
GORDON NSW 2072  
PHONE : (02) 8467 9333

ARCHITECT  
**mdp architecture**  
CIVIL ENGINEER



**ENTEC**  
CONSULTANTS

PROJECT  
**REGIS BELROSE**

181 FOREST WAY  
BELROSE NSW 2085

DRAWING TITLE  
CIVIL SERVICES  
CIVIL DETAILS - SHEET 1

DRAWN	DATE	SCALE	A1	QA CHECK	DATE
JB	OCT 23	NTS		NP	
DESIGNED	PROJECT NO.	DRAWING No.	ISSUE		
NP	230074-01	C901	B		

09/10/2023 1:58pm