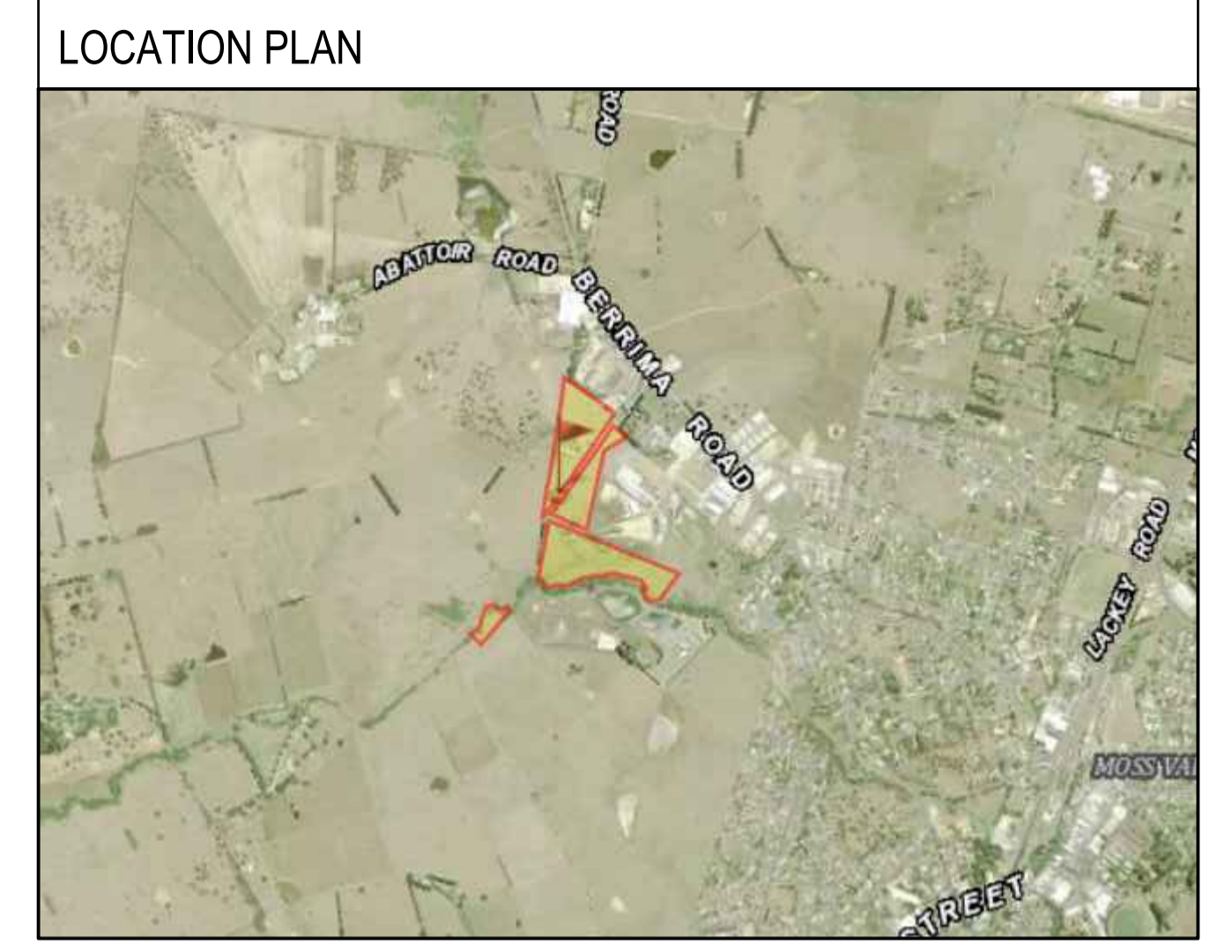


PROPOSED DEVELOPMENT

2 Bowman Rd, Moss Vale

CONCEPT EXTERNAL CIVIL WORKS



GENERAL NOTES

- G1. THE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL DRAWINGS AND SPECIFICATIONS AND OTHER WRITTEN INSTRUCTIONS THAT MAY BE ISSUED.
- G2. DIMENSIONS SHALL NOT BE OBTAINED BY SCALING FROM THE DRAWINGS. REFER ARCHITECTS DRAWINGS FOR ALL DIMENSIONS.
- G3. REFER ANY DISCREPANCY TO THE ENGINEER/ARCHITECT.
- G4. MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE APPROPRIATE SAA SPECIFICATIONS OR CODE AND WITH THE REQUIREMENTS OF THE RELEVANT LOCAL AUTHORITY.
- G5. THE ALIGNMENT AND LEVEL OF ALL SERVICES SHOWN ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL CONFIRM THE POSITION AND LEVEL OF ALL SERVICES PRIOR TO COMMENCEMENT OF CONSTRUCTION. ANY DAMAGE TO SERVICES SHALL BE RECTIFIED AT THE CONTRACTORS EXPENSE.
- G6. NO WORKS ARE TO COMMENCE UNTIL THE REQUIRED TREE REMOVAL PERMITS HAVE BEEN GRANTED BY RELEVANT LOCAL AUTHORITY, AND THE APPROPRIATE NOTICE OF INTENTION TO COMMENCE GIVEN.
- G7. ALL SERVICES, OR CONDUITS FOR SERVICING SHALL BE INSTALLED PRIOR TO COMMENCEMENT OF PAVEMENT CONSTRUCTION.
- G8. SUBSOIL DRAINAGE, COMPRISING 100 AGRICULTURE PIPE IN GEO-STOCKING TO BE PLACED AS SHOWN AND AS MAY BE DIRECTED BY THE SUPERINTENDENT. SUBSOIL DRAINAGE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE RELEVANT LOCAL AUTHORITY CONSTRUCTION SPECIFICATION.
- G9. NO WORK IS PERMITTED WITHIN ADJOINING PROPERTIES WITHOUT WRITTEN PERMISSION FROM THE OWNERS OR RESPONSIBLE AUTHORITY.

DRAINAGE NOTES

- D1. ALL DRAINAGE OUTLET LEVELS SHALL BE CONFIRMED ON SITE, PRIOR TO CONSTRUCTION COMMENCING.
- D2. ALL PIPES WITHIN THE PROPERTY TO BE MIN. 100 DIA UPVC @ 1% MIN. GRADE, UNO.
- D3. ALL PITS WITHIN THE PROPERTY ARE TO BE FITTED WITH "WELDLOK" OR APPROVED EQUIVALENT GRATES.
 - LIGHT DUTY FOR LANDSCAPED AREAS
 - HEAVY DUTY WHERE SUBJECTED TO VEHICULAR TRAFFIC
- D4. PITS WITHIN THE PROPERTY MAY BE CONSTRUCTED AS:
 - 1) PRECAST STORMWATER PITS
 - 2) CAST INSITU MASS CONCRETE
 - 3) CEMENT RENDERED 230mm BRICKWORK
 SUBJECT TO THE RELEVANT LOCAL AUTHORITY CONSTRUCTION SPECIFICATION.
- D5. ENSURE ALL GRATES TO PITS ARE SET BELOW FINISHED SURFACE LEVEL WITHIN THE PROPERTY. TOP OF PIT RLS ARE APPROXIMATE ONLY AND MAY BE VARIED SUBJECT TO APPROVAL OF THE ENGINEER. ALL INVERT LEVELS ARE TO BE ACHIEVED.
- D6. ANY PIPES BENEATH RELEVANT LOCAL AUTHORITY ROAD TO BE RUBBER RING JOINTED RCP, UNO.
- D7. ALL PITS IN ROADWAYS ARE TO BE FITTED WITH HEAVY DUTY GRATES WITH LOCKING BOLTS AND CONTINUOUS HINGE.
- D8. PROVIDE STEP IRONS TO STORMWATER PITS GREATER THAN 1200 IN DEPTH.
- D9. TRENCH BACK FILL IN ROADWAYS SHALL COMPRISE SHARP, CLEAN GRANULAR BACK FILL IN ACCORDANCE WITH THE RELEVANT LOCAL AUTHORITY SPECIFICATION TO NON-TRAFFICABLE AREAS TO BE COMPACTED BY RODDING AND TAMPING USING A FLAT PLATE VIBRATOR.
- D10. WHERE A HIGH EARLY DISCHARGE (HED) PIT IS PROVIDED ALL PIPES ARE TO BE CONNECTED TO THE HED PIT, UNO.
- D11. DOWN PIPES SHALL BE A MINIMUM OF DN100 SW GRADE UPVC OR 100X100 COLORBOND/ZINCALUME STEEL, UNO.
- D12. COLORBOND OR ZINCALUME STEEL BOX GUTTERS SHALL BE A MINIMUM OF 450 WIDE X 150 DEEP.
- D13. EAVES GUTTERS SHALL BE A MINIMUM OF 125 WIDE X 100 DEEP (OR OF EQUIVALENT AREA) COLORBOND OR ZINCALUME STEEL, UNO.
- D14. SUBSOIL DRAINAGE SHALL BE PROVIDED TO ALL RETAINING WALLS & EMBANKMENTS, WITH THE LINES FEEDING INTO THE STORMWATER DRAINAGE SYSTEM, UNO.

EARTHWORKS NOTES

- E1. THE EARTHWORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT.
- E2. THE SITE OF THE WORKS SHALL BE PREPARED BY STRIPPING ALL EXISTING TOPSOIL, FILL AND VEGETATION.
- E3. SUBGRADE SHALL BE COMPACTED UNTIL A DRY DENSITY HAS BEEN ACHIEVED OF NOT LESS THAN 100% OF THE STANDARD MAXIMUM DRY DENSITY WHEN TESTED IN ACCORDANCE WITH AS 1289 TESTS E.1.1. OR E.1.2.
- E4. THE EXPOSED SUBGRADE SHOULD BE PROOF ROLLED TO DETECT ANY SOFT OR WET AREAS WHICH SHOULD BE LOCALLY EXCAVATED AND BACK FILLED WITH SELECTED MATERIAL.
- E5. THE BACK FILLING MATERIAL SHALL BE IMPORTED GRANULAR FILL OF LOW PLASTICITY, PREFERABLY CRUSHED SANDSTONE, OR AN APPROVED FILL MATERIAL COMPLYING WITH AN EPA RESOURCE RECOVERY ORDER AND TO BE PLACED IN LAYERS NOT EXCEEDING 150 LOOSE THICKNESS AND COMPACTED TO 98% OF STANDARD DRY DENSITY AT A MOISTURE CONTENT WITHIN 2% OF OPTIMUM.
- E6. SITE WORKS ARE TO BE BATTERED TO ADJACENT PROPERTY LEVELS.
- E7. STORMWATER MUST NOT BE CONCENTRATED ON TO AN ADJACENT PROPERTY.
- E8. AT NO TIME DURING OR AFTER CONSTRUCTION IS STORMWATER TO BE PONDED ON ADJOINING PROPERTIES.
- E9. THE SITE SHALL BE GRADED AND DRAINED SO THAT STORMWATER WILL BE DIRECTED AWAY FROM THE BUILDING PLATFORM.
- E10. STORMWATER DRAINAGE SHALL BE PROVIDED AND MAINTAINED THROUGHOUT THE COURSE OF CONSTRUCTION. ALL STORMWATER RUNOFF SHALL BE GRADED AWAY FROM THE SITE WORKS AND DISPOSED OF VIA SURFACE CATCHDRAINS AND STORMWATER COLLECTION PITS.
- E11. ALL SURFACE CATCH DRAINS SHALL BE GRADED AT 1% (1 IN 100) MINIMUM. THE GROUND SHALL GRADE AWAY FROM ANY DWELLING AT 5% (1 IN 20) FOR THE FIRST METRE THEN AT 2.5% (1 IN 40).
- E12. WHERE A CUT FILL PLATFORM IS USED THERE SHALL BE A MINIMUM BERM 1000 WIDE TO THE PERIMETER OF THE SITE WORKS WHICH SHALL BE SUPPORTED BY BATTERS OF 3:1 IN FILL.
- E13. ANY VERTICAL OR NEAR VERTICAL PERMANENT EXCAVATION (CUT) DEEPER THAN 600 IN MATERIAL OTHER THAN ROCK SHALL BE ADEQUATELY RETAINED OR BATTERED AT A MINIMUM OF 3:1.
- E14. WHERE BATTERS CANNOT BE PROVIDED TO SUPPORT THE CUT OR FILL, THEY SHALL BE ADEQUATELY RETAINED.
- E15. RETAINING WALLS ARE TO BE CONSTRUCTED WITH ADEQUATE SUBSOIL DRAINAGE.

CONCRETE PAVEMENT

- C1. SUBGRADE SHALL BE PREPARED AS OUTLINED IN EARTHWORKS.
- C2. PROVIDE JOINTING AT MINIMUM 6000 MAX. INTERVALS OR AS OTHERWISE SPECIFIED IN THE DRAWINGS.
- C3. CONCRETE SHALL COMPRISE A MIN. COMPRESSIVE STRENGTH OF 32MPa AT 28 DAYS IN ACCORDANCE WITH THE RELEVANT LOCAL AUTHORITY SPECIFICATION, UNO.
- C4. ANY SUB-BASE MATERIAL SHALL BE COMPACTED AS OUTLINED IN EARTHWORKS.
- C5. CONCRETE KERBS AND GUTTER SHALL COMPRISE A MINIMUM COMPRESSIVE STRENGTH OF 25MPa, UNO.
- C6. CONCRETE WORKS ARE TO BE CURED BY ONE OF THE FOLLOWING MEANS:
 - i) WETTING TWICE DAILY FOR THE FIRST THREE DAYS.
 - ii) USING AN APPROVED CURING COMPOUNDED FOR A MINIMUM OF 7 DAYS COMMENCING IMMEDIATELY AFTER POURING.

FLEXIBLE PAVEMENT NOTES

- F1. SUBGRADE SHALL BE PREPARED AS OUTLINED IN EARTHWORKS.
- F2. PAVEMENT MATERIAL SHALL CONSIST OF APPROVED OR RIPPED SANDSTONE, NATURAL GRAVEL OR FINE CRUSH ROCK AS PER THE RELEVANT COUNCIL AUTHORITY SPECIFICATION.
- F3. PAVEMENT MATERIALS SHALL BE SPREAD IN LAYERS NOT EXCEEDING 150 AND NOT LESS 75 COMPACTED THICKNESS.
- F4. PAVEMENT MATERIALS SHALL BE SIZED AND OF A STANDARD OUTLINED IN AS1141.
- F5. CRUSHED OR RIPPED SANDSTONE SHALL BE MINUS 75 NOMINAL SIZE DERIVED FROM SOUND, CLEAN SANDSTONE FREE FROM OVERBURDEN, CLAY SEAMS, SHALE AND OTHER DELETERIOUS MATERIAL.
- F6. PAVEMENT MATERIALS SHALL BE COMPACTED BY SUITABLE MEANS TO SATISFY THE FOLLOWING MINIMUM SPECIFICATIONS (AS PER AS1289.2)

DESCRIPTION	MEDIUM DENSITY RATIO
SUB-BASE	98% MOD
BASE COURSE	98% MOD
ASPHALTIC CONCRETE	97% MOD
- F7. TESTING FOR EACH LAYER SHALL BE UNDERTAKEN BY A N.A.T.A. REGISTERED LABORATORY IN ACCORDANCE WITH AS1289, AT NOT MORE THAN 50m INTERVALS AND A MINIMUM OF TWO PER LAYER. FURTHER FREQUENCY OF TESTING SHALL BE NO LESS THAN THAT REQUIRED BY AS3978.

PAVED AREAS NOTES

- A1. SUBGRADE SHALL BE PREPARED AS OUTLINED IN EARTHWORKS.
- A2. ALL PAVERS ARE TO BE PLACED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION.
- A3. TRAFFICABLE AREAS:
 - SUB-BASE TO BE 150 COMPACTED THICKNESS DGS75
 - SUB-BASE TO BE SUITABLY COMPACTED TO MEDIUM DENSITY 98% MOD.
 - SUB-BASE TO EXTEND AT LEAST 200 BEYOND PAVED SURFACE.
 - PAVERS TO BE 80 THICK INTERLOCKING PAVERS ON 50 SAND BEDDING.
- A4. NON TRAFFICABLE AREAS:
 - SUB BASE AS PER TRAFFICABLE AREAS
 - PAVERS TO BE 60 INTERLOCKING PAVERS ON 50 SAND BEDDING (UNO).

EROSION AND SEDIMENT NOTES

- B1. THIS PLAN TO BE READ IN CONJUNCTION WITH EROSION AND SEDIMENT CONTROL DETAILS AS ATTACHED.
- B2. THE CONTRACTOR SHALL IMPLEMENT ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES AS NECESSARY AND TO THE SATISFACTION OF THE RELEVANT LOCAL AUTHORITY PRIOR TO THE COMMENCEMENT OF AND DURING CONSTRUCTION. NO DISTURBANCE TO THE SITE SHALL BE PERMITTED OTHER THAN IN THE IMMEDIATE AREA OF THE WORKS AND NO MATERIAL SHALL BE REMOVED FROM THE SITE WITHOUT THE RELEVANT LOCAL AUTHORITY APPROVAL. ALL EROSION AND SEDIMENT CONTROL DEVICES TO BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH STANDARDS OUTLINED IN NSW DEPARTMENT OF HOUSING'S "MANAGING URBAN STORMWATER - SOILS AND CONSTRUCTIONS".
- B3. TOPSOIL SHALL BE STRIPPED AND STOCKPILED OUTSIDE HAZARD AREAS SUCH AS DRAINAGE LINES. THIS TOPSOIL SHALL BE RESPAED LATER ON AREAS TO BE REVEGETATED AND STABILISED ONLY. (I.E. ALL FOOTPATHS, BATTERS, SITE REGARDING AREAS, BASINS AND CATCHDRAINS). TOPSOIL SHALL NOT BE RESPAED ON ANY OTHER AREAS UNLESS SPECIFICALLY INSTRUCTED BY THE SUPERINTENDENT. IF THEY ARE TO REMAIN FOR LONGER THAN ONE MONTH STOCKPILES SHALL BE PROTECTED FROM EROSION BY COVERING THEM WITH A MULCH AND HYDROSEEDING AND, IF NECESSARY, BY LOCATING BANKS OR DRAINS DOWNSTREAM OF A STOCKPILE TO RETARD SILT LADEN RUNOFF.
- B4. THE CONTRACTOR SHALL REGULARLY MAINTAIN ALL EROSION AND SEDIMENT CONTROL DEVICES AND REMOVE ACCUMULATED SILT FROM SUCH DEVICES. SUCH THAT MORE THAN 60% OF THEIR CAPACITY IS LOST. ALL THE SILT IS TO BE PLACED OUTSIDE THE LIMIT OF WORKS. THE PERIOD FOR MAINTAINING THESE DEVICES SHALL BE AT LEAST UNTIL ALL DISTURBED AREAS ARE REVEGETATED AND FURTHER AS MAY BE DIRECTED BY THE SUPERINTENDENT OR COUNCIL.
- B5. LAY TURF STRIP (MIN 300 WIDE) ON 100 TOPSOIL BEHIND ALL KERB WITH 1000 LONG RETURNS EVERY 6000 AND AROUND STRUCTURES IMMEDIATELY AFTER BACKFILLING AS PER THE RELEVANT LOCAL AUTHORITY SPECIFICATION.
- B6. THE CONTRACTOR SHALL GRASS SEED ALL DISTURBED AREAS WITH AN APPROVED MIX AS SOON AS PRACTICABLE AFTER COMPLETION OF EARTHWORKS AND REGRADING.
- B7. VEHICULAR TRAFFIC SHALL BE CONTROLLED DURING CONSTRUCTION CONFINING ACCESS WHERE POSSIBLE TO NOMINATED STABILISED ACCESS POINTS.
- B8. WHEN ANY DEVICES ARE TO BE HANDED OVER TO COUNCIL, THEY SHALL BE IN CLEAN AND STABLE CONDITION.
- B9. THE CONTRACTOR SHALL IMPLEMENT DUST CONTROL BY REGULAR WETTING DOWN (BUT NOT SATURATING) DISTURBED AREA.
- B10. PROVIDE AND MAINTAIN SILT TRAPS AROUND ALL SURFACE INLET PITS UNTIL CATCHMENT IS REVEGETATED OR PAVED.
- B11. REVEGETATE ALL TRENCHES IMMEDIATELY UPON COMPLETION OF BACKFILLING.
- B12. ALL DRAINAGE PIPE INLETS TO BE CAPPED UNTIL:
 - DOWNPIPES CONNECTED
 - PITS CONSTRUCTED AND PROTECTED WITH SILT BARRIER

CONCRETE STRUCTURES NOTES

- S1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3600 CURRENT EDITION WITH AMENDMENTS, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
- S2. CONCRETE COMPONENTS AND QUALITY SHALL BE AS FOLLOWS, UNO:

ELEMENT	SLUMP mm	MAX. SIZE AGG. mm	CEMENT TYPE	f _c AT 28 DAYS - MPa	ADMIXTURE
FOOTINGS	80	20	A	25	-
PIERS & CAPS	80	20	A	25	-
SLABS ON GROUND	80	20	A	32	-
SUSPENDED SLABS	80	20	A	32	-
PITS	80	20	A	25	-

- S3. MINIMUM CLEAR CONCRETE COVER TO REINFORCEMENT INCLUDING TIES AND STIRRUPS SHALL BE AS FOLLOWS UNO.

EXPOSURE CLASSIFICATION	MINIMUM COVER (mm)				
	CONCRETE STRENGTH (f _c)				
	20 MPa	25 MPa	32 MPa	40 MPa	>50 MPa
A1	20	20	20	20	20
A2	(50)	30	25	20	20
B1	-	(60)	40	30	25
B2	-	-	(65)	45	35
C	-	-	-	(70)	50

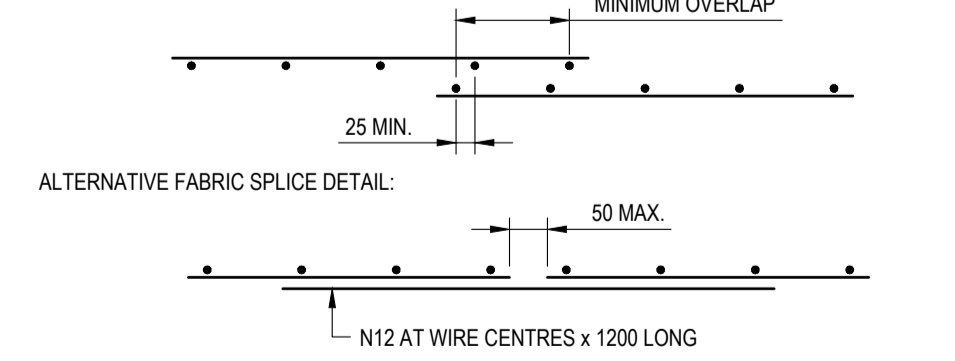
FOR BRACKETED FIGURES REFER TO AS 3600 CURRENT EDITION TABLE 4.10.3.2

- S4. MINIMUM COVER FOR FIRE RESISTANCE LEVEL (FRL) SHALL BE AS FOLLOWS:

FRL	MINIMUM ELEMENT WIDTH OR THICKNESS / MIN COVER (mm)			
	BEAM	SLAB	COLUMN	WALL
60	125 / 30	80 / 20	200 / 20	80 / 20
90	150 / 45	100 / 25	250 / 35	100 / 35
120	200 / 55	120 / 30	300 / 45	120 / 40
180	240 / 70	150 / 45	400 / 60	150 / 45
240	270 / 80	170 / 55	450 / 70	170 / 50

NOTE : 1. REFER TO AS 3600 CURRENT EDITION FOR REDUCED COVERS IF GREATER ELEMENT THICKNESSES ARE ADOPTED FOR BEAMS & COLUMNS.
2. COVER IS MEASURED TO THE MAIN REINFORCEMENT

- S5. COVER TO REINFORCEMENT SHALL BE OBTAINED BY THE USE OF APPROVED BAR CHAIRS. ALL CHAIRS SHALL BE SPACED AT 1000 CTS MAXIMUM.
- S6. ALL CONCRETE SHALL BE MECHANICALLY VIBRATED. VIBRATORS SHALL NOT BE USED TO SPREAD CONCRETE.
- S7. SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES.
- S8. NO HOLES OR CHASES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.
- S9. CONSTRUCTION JOINTS WHERE NOT SHOWN SHALL BE LOCATED TO APPROVAL OF THE ENGINEER. ALL CONSTRUCTION JOINTS SHALL BE SCABBLED OVER THE WHOLE FACE AND ANY UNSOUND MATERIAL REMOVED.
- S10. REINFORCEMENT IS REPRESENTED DIAGMATICALLY; IT IS NOT NECESSARILY SHOWN IN TRUE PROJECTION.
- S11. SPLICES IN REINFORCEMENT SHALL BE MADE ONLY IN THE POSITIONS SHOWN OR AS APPROVED BY THE ENGINEER. WHERE THE LAP LENGTH IS NOT SHOWN IT SHALL BE SUFFICIENT TO DEVELOP THE FULL STRENGTH OF THE REINFORCEMENT AS SPECIFIED IN AS3600. COGS AND HOOKS SHALL BE STANDARD UNLESS SHOWN OTHERWISE.
- S12. WELDING OF REINFORCEMENT WILL NOT BE PERMITTED UNLESS SHOWN ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE ENGINEER.
- S13. PIPES OR CONDUITS SHALL NOT BE PLACED WITHIN THE CONCRETE COVER TO REINFORCEMENT WITHOUT THE APPROVAL OF THE ENGINEER.
- S14. REINFORCEMENT SYMBOLS:
 - N - DENOTES DEFORMED GRADE 500 NORMAL DUCTILITY REINFORCING BARS TO AS/NZS 4671.
 - R - DENOTES PLAIN ROUND GRADE 250 NORMAL DUCTILITY REINFORCING BARS TO AS/NZS 4671.
 - SL - DENOTES DEFORMED GRADE 500 LOW DUCTILITY REINFORCING MESH TO AS/NZS 4671.
 - RL - DENOTES DEFORMED GRADE 500 LOW DUCTILITY REINFORCING MESH TO AS/NZS 4671.
 - L-TM - DENOTES DEFORMED GRADE 500 LOW DUCTILITY TRENCH MESH TO AS/NZS 4671.
- S15. ALL REINFORCING FABRIC SHALL COMPLY WITH AS1303 AND AS1304 AND SHALL BE SUPPLIED IN FLAT SHEETS.
- S16. SPLICES IN FABRIC: THE OUTERMOST TRANSVERSE WIRES SHALL BE OVERLAPPED BY AT LEAST THE SPACING OF THESE TRANSVERSE WIRES PLUS 25 mm.



- S17. EXPOSED CORNERS SHALL BE 20 mm CHAMFERED UNO.
- S18. ALL REINFORCEMENT SHALL BE INSPECTED BY THE SUPERINTENDENT OR ENGINEER PRIOR TO PLACING CONCRETE.
- S19. ALL SLAB CONCRETE TO BE CURED IN AN APPROVED MANNER FOR A MINIMUM OF 7 DAYS.
- S20. ALL FORMWORK AND PROPS FOR SLABS AND BEAMS SHALL BE REMOVED BEFORE CONSTRUCTION OF ANY MASONRY WALLS OR PARTITIONS ON THE FLOOR.
- S21. ALL ABBREVIATIONS ARE IN ACCORDANCE WITH AS1100.
- S22. FORMWORK SHALL NOT BE STRIPPED UNTIL CONCRETE HAS ACHIEVED A MINIMUM STRENGTH OF 20 MPa. THE CONCRETE SLAB AND BEAMS SHALL BE TEMPORARILY BACK PROPPED UNTIL THE CONCRETE HAS ACHIEVED 28 DAY STRENGTH AND ANY PROPPING TO HIGHER LEVEL FORMS HAVE BEEN REMOVED.
- S23. WHERE A SUSPENDED SLAB IS TO BE SUPPORTED OFF A SUSPENDED SLAB BELOW, WRITTEN APPROVAL SHALL BE OBTAINED FROM THE ENGINEER PRIOR TO ANY SITE WORKS.

MASONRY

- M1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3700.
- M2. THE DESIGN STRENGTH OF MASONRY SHALL BE AS FOLLOWS U.N.O. :

EXPOSURE CLASSIFICATION TO AS 3600	MASONRY COMPRESSIVE STRENGTH MPa (f _m)	MASONRY SALT RESISTANCE GRADE	DURABILITY CLASSIFICATION OF BUILT IN COMPONENTS	MORTAR MIX	
				GP PORTLAND CEMENT : LIME : SAND	f _c MPa
A1 / A2	> 6.3	General Purpose	R3 (Galvanised)	1.0 : 1.0 : 6.0	2.8
B1	> 6.3	General Purpose	R3 (Galvanised)	1.0 : 1.0 : 6.0	2.8
B2	> 6.7	Exposure	R4 (Stainless)	1.0 : 0.5 : 4.5	2.8

- M3. ALL MASONRY WALLS SUPPORTING SLABS AND BEAMS SHALL HAVE A PRE-GREASED TWO LAYER GALVANISED STEEL SLIP JOINT BETWEEN CONCRETE AND MASONRY.
- M4. ALL MASONRY WALLS SUPPORTING OR SUPPORTED BY CONCRETE FLOORS SHALL BE PROVIDED WITH VERTICAL JOINTS TO MATCH ANY CONTROL JOINTS IN THE CONCRETE.
- M5. NON LOAD BEARING WALLS SHALL BE SEPARATED FROM CONCRETE ABOVE BY 20 mm THICK CLOSED CELL POLYETHYLENE STRIP.
- M6. MASONRY SHALL BE ARTICULATED IN ACCORDANCE WITH TECHNICAL NOTE 61 FROM THE CEMENT AND CONCRETE ASSOCIATION OF AUSTRALIA. VERTICAL CONTROL JOINTS SHALL NOT EXCEED 5 METRES MAXIMUM CENTRES, AND 4 METRES MAXIMUM FROM CORNERS IN MASONRY WALLS, AND BETWEEN NEW & EXISTING BRICKWORK.
- M7. MASONRY RETAINING WALLS ARE TO BE BACKFILLED WITH EITHER OF THE FOLLOWING MATERIAL:
 - COARSE GRAINED SOIL WITH LOW SILT CONTENT
 - RESIDUAL SOIL CONTAINING STONES
 - FINE SILTY SAND
 - GRANULAR MATERIALS WITH LOW CLAY CONTENT

BLOCKWORK

- B1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3700.
- B2. REINFORCED CONCRETE BLOCKWORK SHALL COMPLY WITH THE FOLLOWING, UNO:
 - BLOCKS : GRADE 15 CONFORMING TO AS1500.
 - MORTAR : 1 CEMENT / 0.25 LIME / 3 SAND.
 - PROVIDE CLEANOUT HOLES AT BASE OF WALL & ROD CORE HOLES TO REMOVE PROTRUDING MORTAR FINIS.
 - CORE FILLING : f_c = 20 MPa, 10 AGG, 230 SLUMP +/- 30 mm.
 - COVER : 55 mm MIN. FROM OUTSIDE OF BLOCKWORK.
- B3. BACKFILL TO RETAINING WALLS TO BE FREE DRAINING GRANULAR MATERIAL, UNO. PROVIDE SUBSOIL DRAIN BEHIND WALL AND AT WEEP HOLES.
- B4. VERTICAL CONTROL JOINTS SHALL BE PROVIDED AT 10 m MAX. CENTRES.
- B5. NO ADMIXTURES SHALL BE USED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.

STANDARD LINE TYPES AND SYMBOLS:

- ===== PROPOSED KERB & GUTTER
- EXISTING KERB & GUTTER
- =====[]==== PROPOSED BELOW GROUND PIPELINE
- ====-[]==== PROPOSED SUSPENDED PIPELINE
- EXISTING PIPELINE
- SUBSOIL DRAINAGE LINE
- =====[]==== PROPOSED KERB INLET PIT
- EXISTING KERB INLET PIT
- =====[]==== PROPOSED JUNCTION OR INLET PIT
- EXISTING JUNCTION OR INLET PIT
- DESIGN CENTRELINE
- EXISTING EDGE OF BITUMEN
- TELECOMMUNICATION CONDUIT
- GAS MAIN
- WATER MAIN
- SEWER MAIN
- UNDERGROUND ELECTRICITY CABLES
- PERMANENT MARK & S.S.M.
- △ BENCH MARK, SURVEY STATION

SCHEDULE OF DRAWINGS

SHEET No	DESCRIPTION
C401	GENERAL NOTES
C402	SEDIMENT AND EROSION CONTROL PLAN
C403	STORMWATER CATCHMENT AREA PLAN
C404	EXTERNAL CIVIL WORKS PLAN PART 1 OF 2
C405	EXTERNAL CIVIL WORKS PLAN PART 2 OF 2
C406	STORMWATER DRAINAGE PLAN AND LONG SECTION
C407	STORMWATER DRAINAGE PLAN AND LONG SECTION
C408	STORMWATER LONG SECTIONS
C409	BULK EARTHWORKS CUT AND FILL PLAN
C410	SERVICES PLAN
C411	LINEMARKING AND SIGNAGE PLAN
C412	STANDARD DRAWINGS
C413	STANDARD DRAWINGS

FOR DA APPROVAL
NOT TO BE USED FOR CONSTRUCTION PURPOSES

REVISION	DATE	AMENDMENT DESCRIPTION
F	03.04.24	ISSUED FOR DA APPROVAL
E	19.03.24	ISSUED FOR DA APPROVAL
D	28.07.23	ISSUED FOR DA APPROVAL
C	30.06.23	ISSUED FOR DA APPROVAL
B	14.06.23	ISSUED FOR DA APPROVAL

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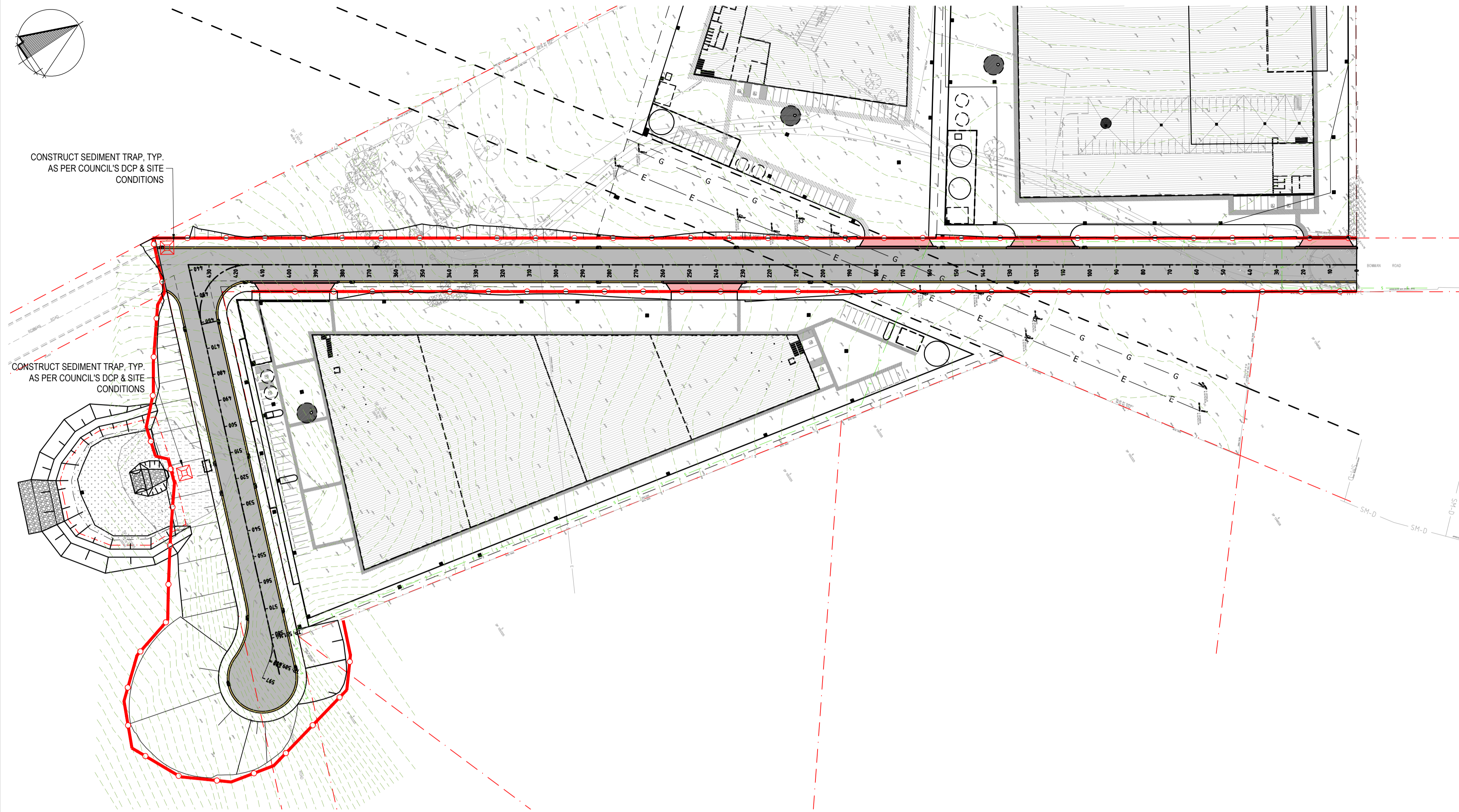
ECLIPSE Consulting Engineers Pty Ltd
305/12 Century Cct
Northwest Central
NORWEST NSW 2153

Phone : (02) 9894 8500
info@eclipseconsulting.com.au
www.eclipseconsulting.com.au

EXTERNAL CIVIL WORKS
2 Bowman Rd, Moss Vale
For SAAS Aus Pty Ltd

GENERAL NOTES			
DESIGN	DRAWN	DATE	PROJECT No
SWH	RCL	JAN 2023	10530
CHECKED	APPROVED	SCALE	DRG No
-	-	-	C401 - F

AT ORIGINAL SIZE



CONSTRUCT SEDIMENT TRAP, TYP. AS PER COUNCIL'S DCP & SITE CONDITIONS

CONSTRUCT SEDIMENT TRAP, TYP. AS PER COUNCIL'S DCP & SITE CONDITIONS

SEDIMENT & EROSION CONTROL PLAN

1:1000

- - DENOTES SEDIMENT FENCE
- ← - DENOTES SURFACE WATER FLOW

SEDIMENT AND EROSION CONTROL NOTES

SEDIMENT AND EROSION CONTROL SHALL BE EFFECTIVELY MAINTAINED AT ALL TIMES DURING THE COURSE OF CONSTRUCTION AND SHALL NOT BE REMOVED UNTIL THE SITE HAS BEEN STABILISED OR LANDSCAPED TO THE SUPERINTENDENT'S SATISFACTION.

A SINGLE ALL WEATHER ACCESS WAY WILL BE PROVIDED AT THE FRONT OF THE PROPERTY CONSISTING OF 50-75 AGGREGATE OR SIMILAR MATERIAL AT A MINIMUM THICKNESS OF 150 LAID OVER NEEDLE-PUNCHED GEOTEXTILE FABRIC AND CONSTRUCTED PRIOR TO COMMENCEMENT OF WORKS.

THE CONTRACTOR SHALL ENSURE THAT NO SPOIL OR FILL ENCROACHES UPON ADJACENT AREAS FOR THE DURATION OF WORKS.

THE CONTRACTOR SHALL ENSURE THAT KERB INLETS AND DRAINS RECEIVING STORMWATER SHALL BE PROTECTED AT ALL TIMES DURING DEVELOPMENT. KERB INLET SEDIMENT TRAPS SHALL BE INSTALLED ALONG THE IMMEDIATE VICINITY ALONG THE STREET FRONTAGE.

ALL TOPSOIL STRIPPED FROM THE SITE AND STOCKPILED DOES NOT INTERFERE WITH DRAINAGE LINES AND STORMWATER INLETS AND WILL BE SUITABLY COVERED WITH AN IMPERVIOUS MEMBRANE MATERIAL AND SCREENED BY SEDIMENT FENCING.

SOIL CONSERVATION NOTE:

PRIOR TO COMMENCEMENT OF CONSTRUCTION PROVIDE 'SEDIMENT FENCE', 'SEDIMENT TRAP' AND WASHOUT AREA TO ENSURE THE CAPTURE OF WATER BORNE MATERIAL GENERATED FROM THE SITE.

MAINTAIN THE ABOVE DURING THE COURSE OF CONSTRUCTION, AND CLEAR THE 'SEDIMENT TRAP' AFTER EACH STORM.

SEDIMENT TRAP

1000 x 1000 WIDE 500 DEEP PIT, LOCATED AT THE LOWEST POINT TO THE TRAP SEDIMENT AND IN ACCORDANCE WITH LOCAL COUNCIL'S DCP AND SITE CONDITIONS.

SEDIMENT FENCE

PROVIDE 'SEDIMENT FENCE' ON DOWN SLOPE BOUNDARY AS SHOWN ON PLAN. FABRIC TO BE BURIED BELOW GROUND AT LOWER EDGE. REFER TO SD 6-8

BUILDING MATERIAL STOCKPILES

ALL STOCKPILES OF BUILDING MATERIAL SUCH AS SAND AND SOIL MUST BE PROTECTED TO PREVENT SCOUR AND EROSION.

THEY SHOULD NEVER BE PLACED IN THE STREET GUTTER WHERE THEY WILL WASH AWAY WITH THE FIRST RAINSTORM. REFER TO SD 4-1

GENERAL NOTES

THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH OTHER CONSULTANTS' DRAWINGS AND SPECIFICATIONS AND WITH OTHER SUCH WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ANY DISCREPANCY SHALL BE REFERRED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.

ALL DIMENSIONS ARE IN MILLIMETRES & ALL LEVELS ARE IN METRES, UNO (UNLESS NOTED OTHERWISE).

NO DIMENSION SHALL BE OBTAINED BY SCALING THE DRAWINGS.

ALL LEVELS AND SETTING OUT DIMENSIONS SHOWN ON THE DRAWINGS SHALL BE CHECKED ON SITE PRIOR TO THE COMMENCEMENT OF THE WORK.

DURING EXCAVATION WORK THE STRUCTURE SHALL BE MAINTAINED IN A STABLE AND NO PART SHALL BE OVERSTRESSED.

ALL WORK IS TO BE UNDERTAKEN IN ACCORDANCE WITH THE DETAILS SHOWN ON THE DRAWINGS & THE SPECIFICATION.

EXISTING SERVICES WHERE SHOWN HAVE BEEN PLOTTED FROM SUPPLIED DATA AND SUCH THEIR ACCURACY CAN NOT BE GUARANTEED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH THE LEVEL OF ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF WORK.

ALL SERVICE TRENCHES UNDER VEHICULAR PAVEMENTS SHALL BE BACK FILLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL COUNCIL.

ALL TRENCH BACK FILL MATERIAL SHALL BE COMPACTED TO THE SAME DENSITY AS THE ADJACENT MATERIAL.

ON COMPLETION OF STORMWATER INSTALLATION, ALL DISTURBED AREAS MUST BE RESTORED TO ORIGINAL CONDITION, INCLUDING KERBS, FOOTPATHS, CONCRETE AREAS, GRAVEL AND GRASSED AREAS AND ROAD PAVEMENTS, UNLESS DIRECTED OTHERWISE.

CONTRACTOR TO OBTAIN ALL AUTHORITY APPROVALS UNLESS DIRECTED OTHERWISE.

STORMWATER DRAINAGE

THE STORMWATER DRAINAGE DESIGN HAS BEEN CARRIED OUT IN ACCORDANCE WITH AS/NZS 3500.3 - 1990 'STORMWATER DRAINAGE' & AS/NZS 3500.3.2-1998 'STORMWATER DRAINAGE - ACCEPTABLE SOLUTIONS'.

ANY VARIATIONS TO THE NOMINATED LEVELS SHALL BE REFERRED TO ENGINEER IMMEDIATELY.

ANY VARIATIONS TO SPECIFIED PRODUCTS OR DETAILS SHALL BE REFERRED TO THE ENGINEER FOR APPROVAL.

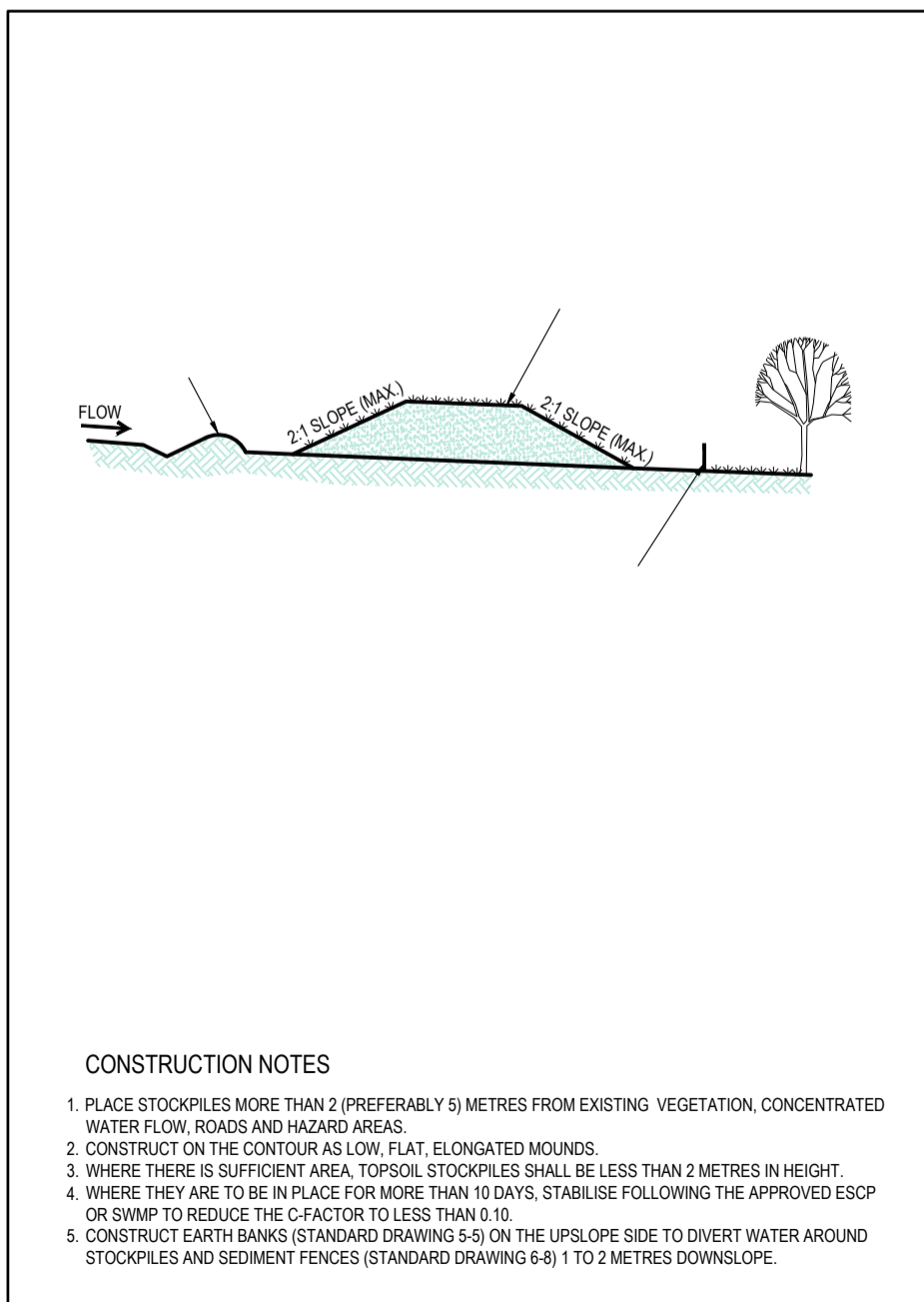
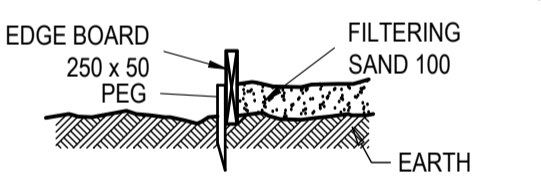
DOWN PIPES SHALL BE A MINIMUM OF DN100 SW GRADE UPVC OR 100X100 COLORBOND/ZINCALUME STEEL, UNO.

BOX COLORBOND OR ZINCALUME STEEL. GUTTERS SHALL BE A MINIMUM OF 450 WIDE X 150 DEEP.

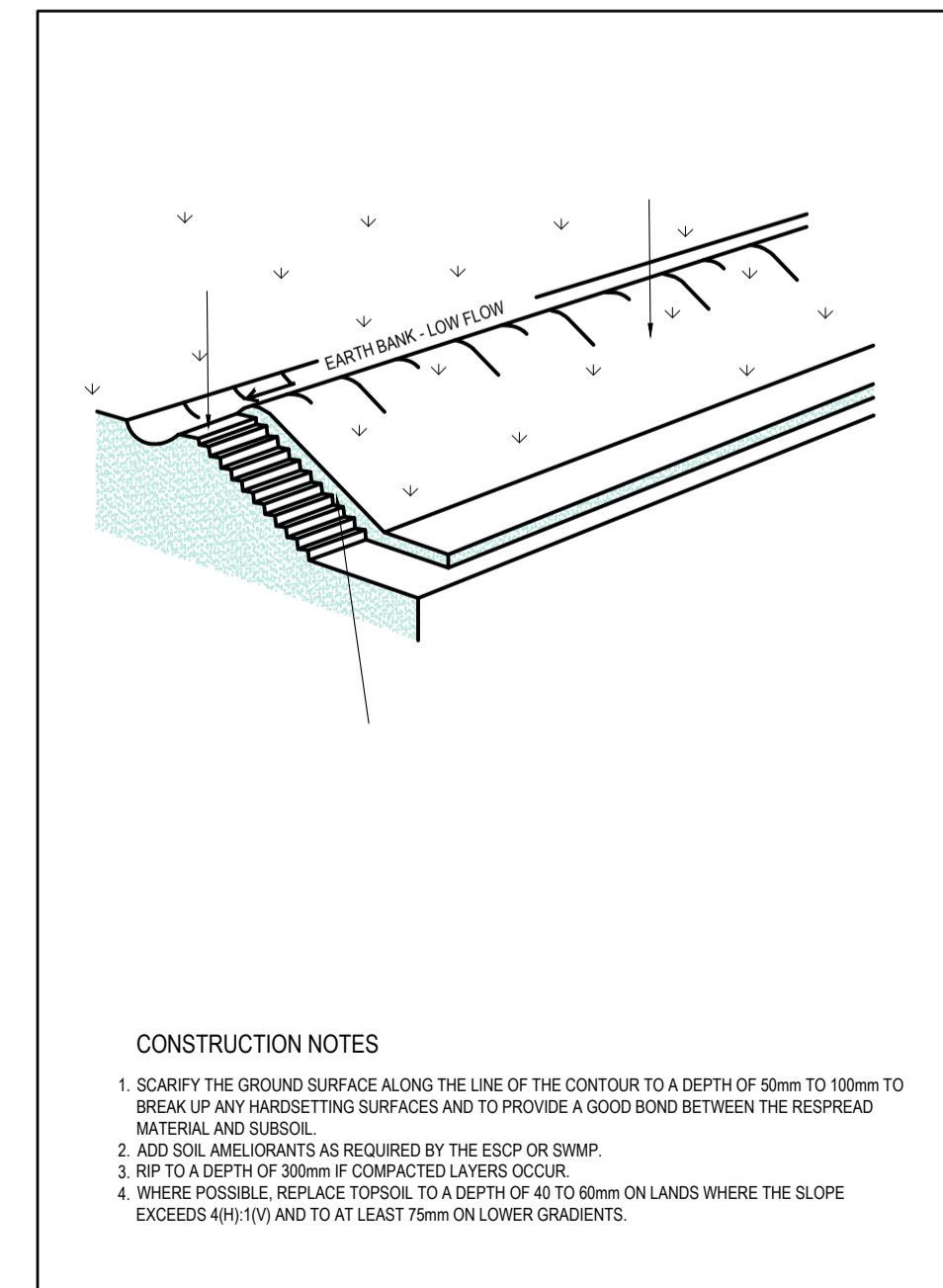
EAVES GUTTERS SHALL BE A MINIMUM OF 125 WIDE X 100 DEEP (OR OF EQUIVALENT AREA) COLORBOND OR ZINCALUME STEEL.

SUBSOIL DRAINAGE SHALL BE PROVIDED TO ALL RETAINING WALLS & EMBANKMENTS, WITH THE LINES FEEDING INTO THE STORMWATER DRAINAGE SYSTEM.

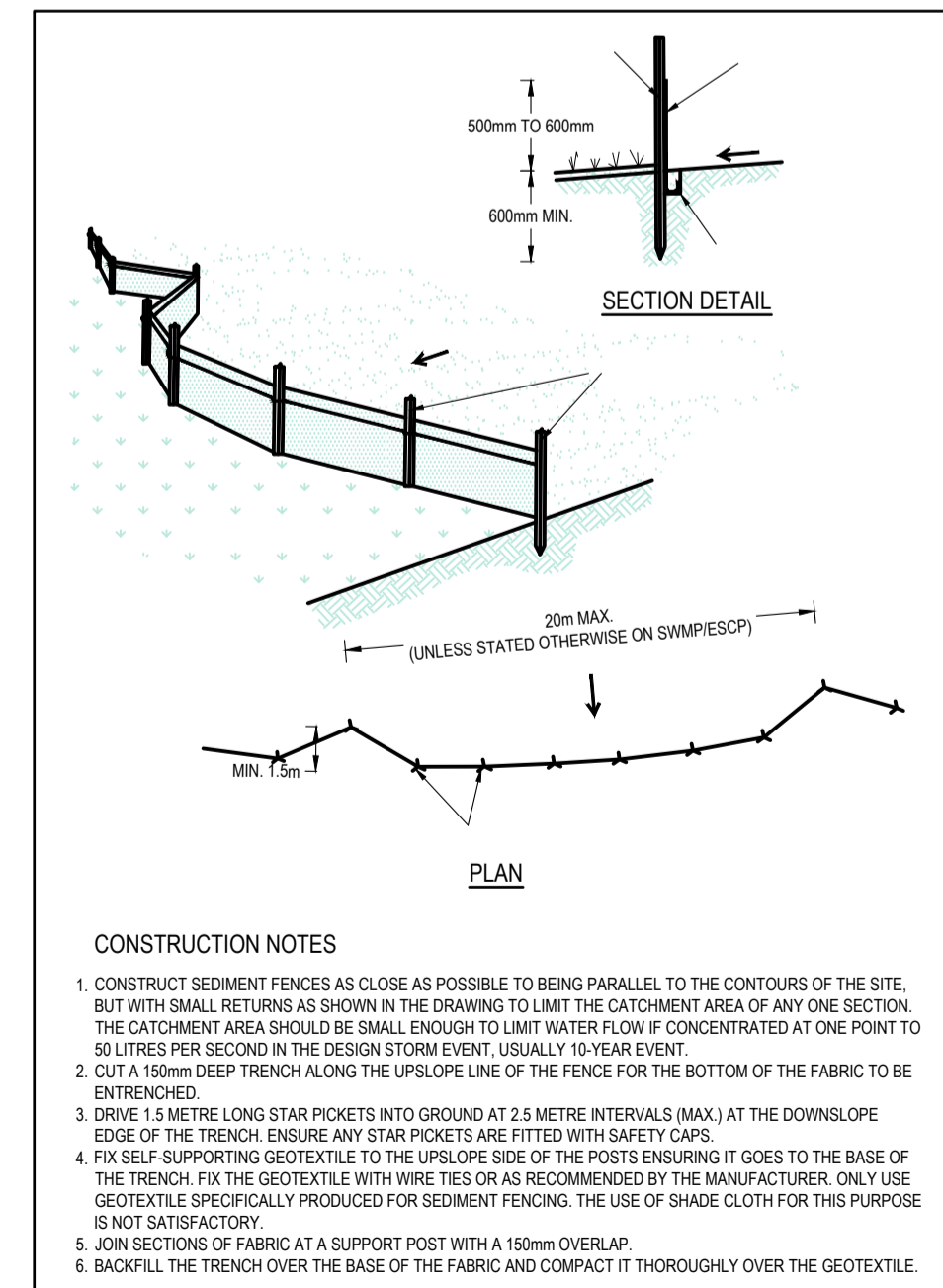
WASHOUT AREA TO BE 1800 x 1800 ALLOCATED FOR THE WASHING OF TOOL & EQUIPMENT.



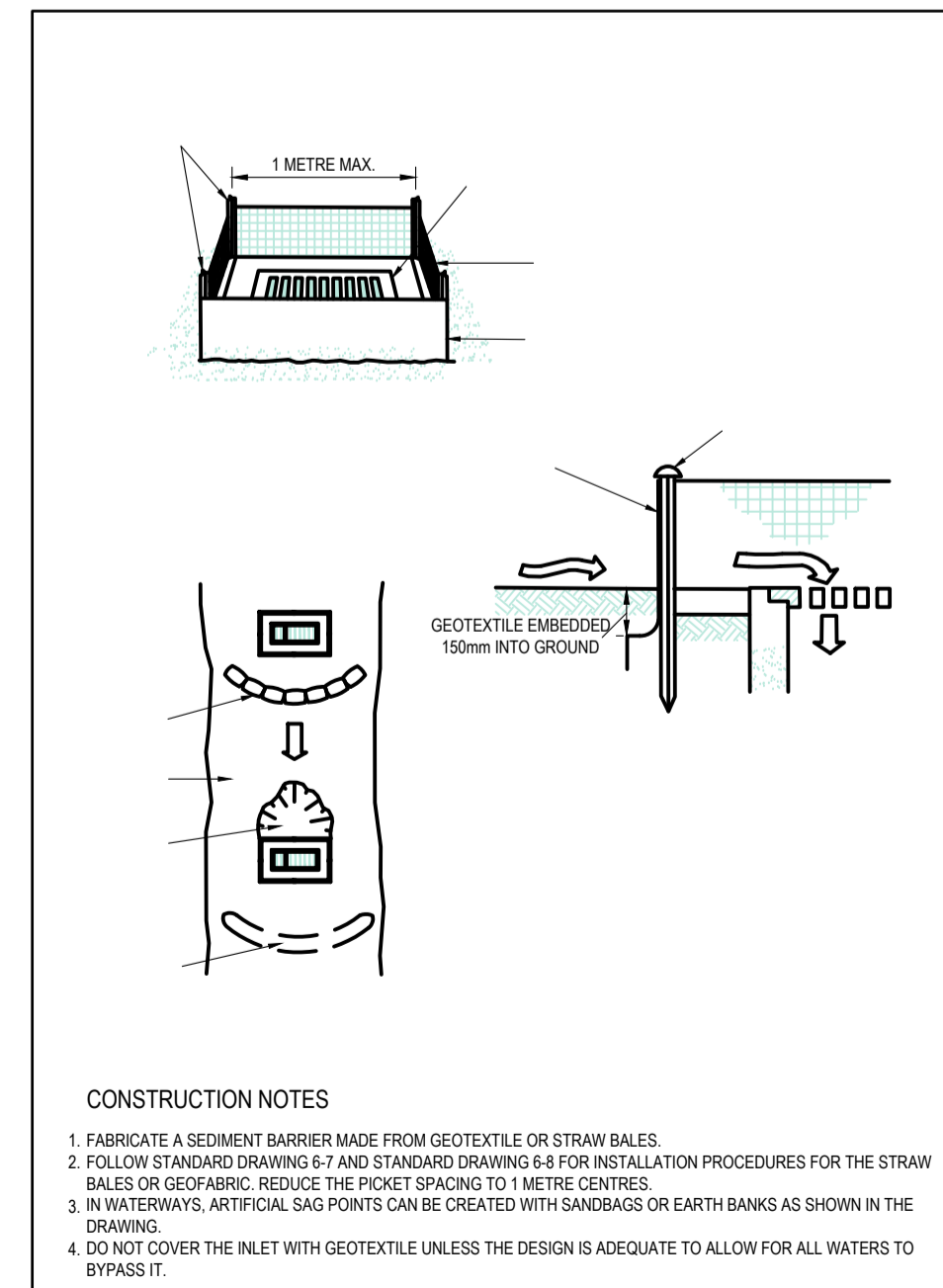
STOCKPILES SD 4-1



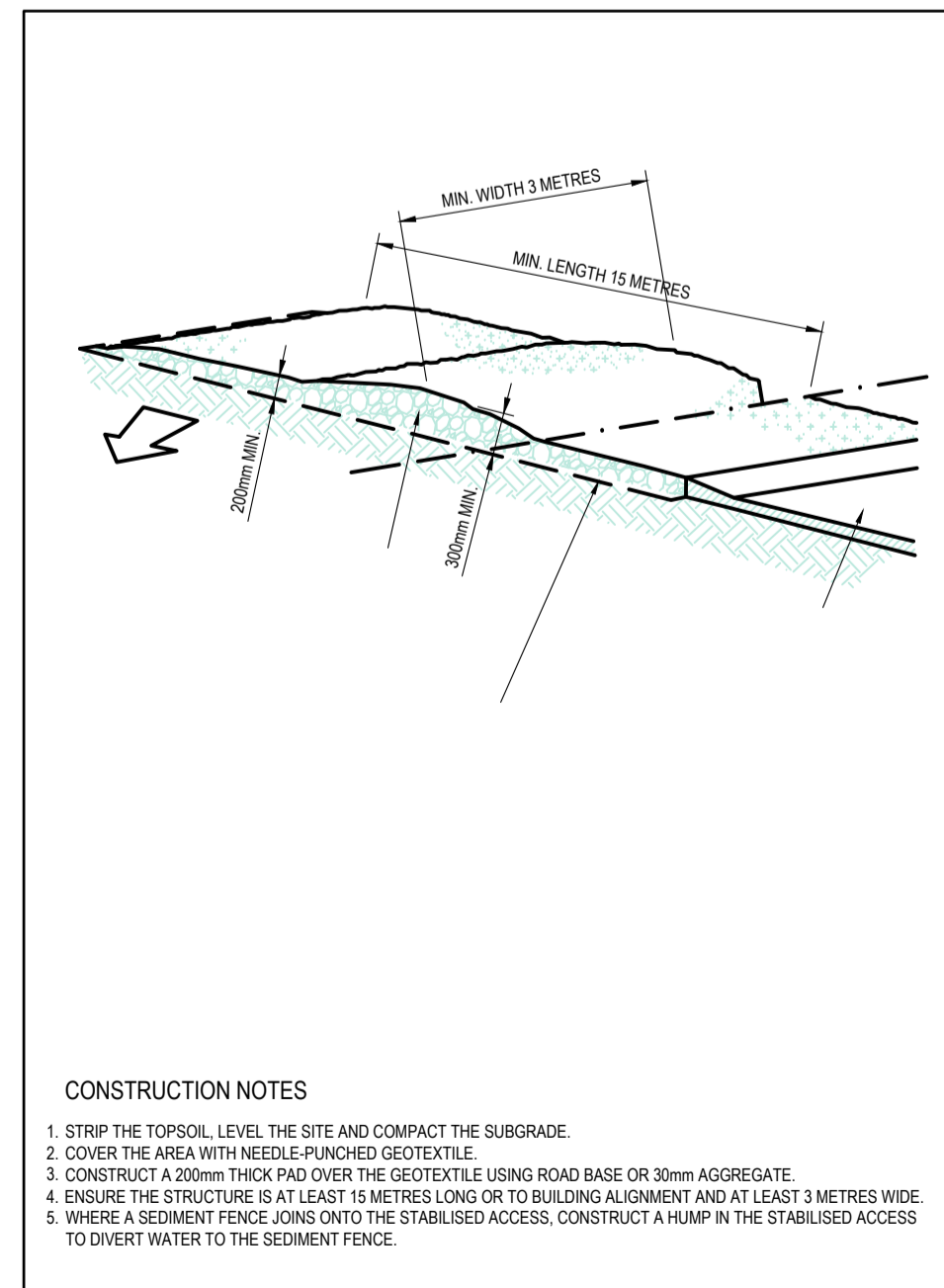
REPLACING TOPSOIL SD 4-2



SEDIMENT FENCE SD 6-8



GEOTEXTILE INLET FILTER SD 6-12



STABILISED SITE ACCESS SD 6-14

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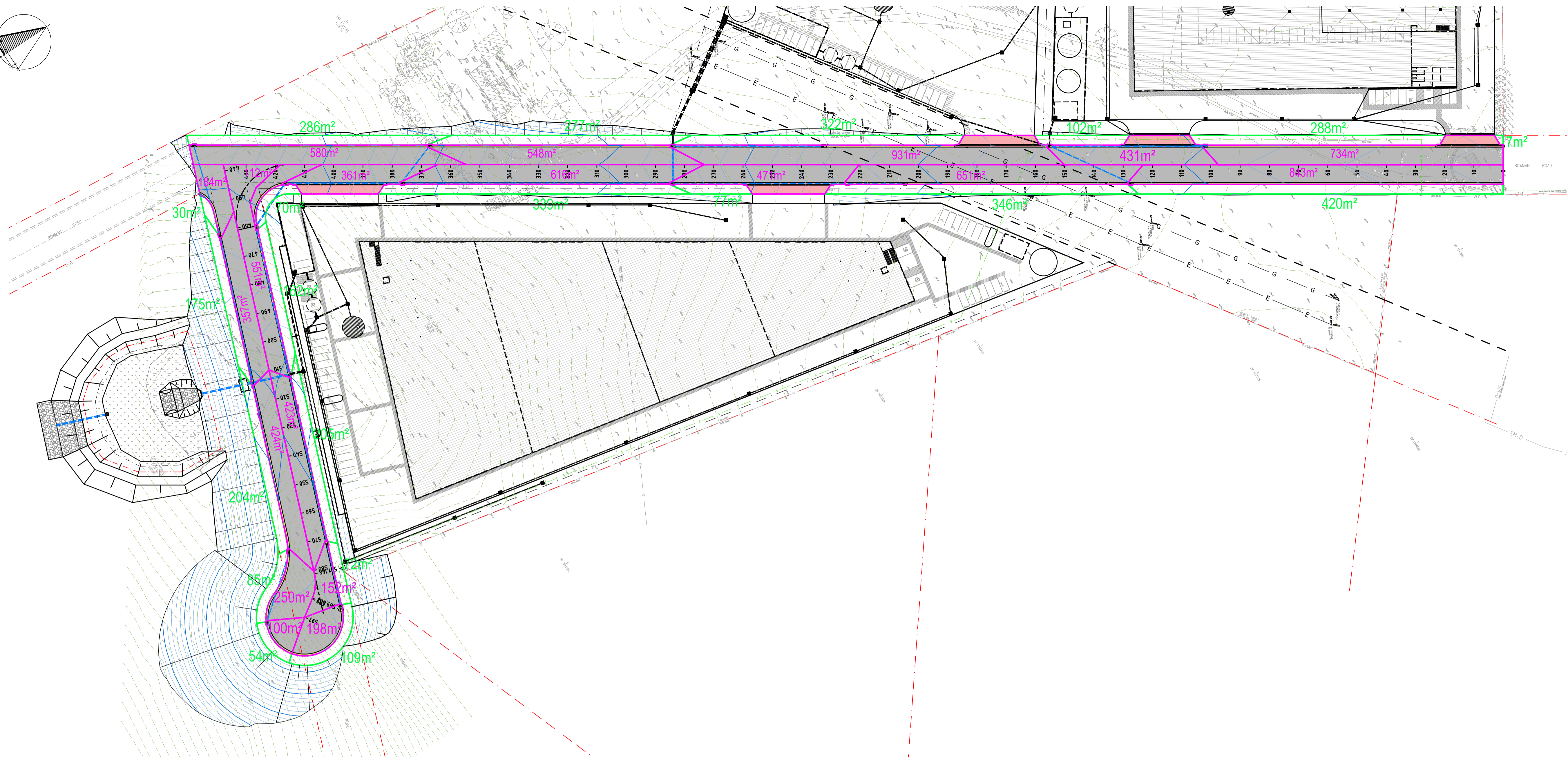
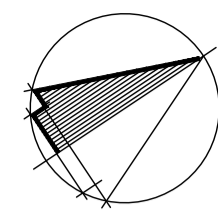
Phone: (02) 9894 8500
info@eclipseconsulting.com.au
www.eclipseconsulting.com.au

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2 Bowman Rd, Moss Vale
For SAAS Aus Pty Ltd

SEDIMENT AND EROSION CONTROL PLAN

DESIGN	DRAWN	DATE	PROJECT No.
SWH	RCL	JAN 2023	10530
CHECKED	APPROVED	SCALE	DRG No.
		1:1000	C402 - G

AT ORIGINAL SIZE



STORMWATER CATCHMENT AREA PLAN

1:750

- - DENOTES STORMWATER CATCHMENT AREA BOUNDARY (IMPERVIOUS)
- - DENOTES STORMWATER CATCHMENT AREA BOUNDARY (PERVIOUS)

TOTAL EXTERNAL SITE CATCHMENT AREA = 12,549 m²
 PAVEMENT AREA = 8,919 m²
 LANDSCAPE AREA = 3,630 m²

- - DENOTES EXISTING SURVEY CONTOUR
- - DENOTES NEW SURFACE LEVEL CONTOUR (MAJOR)
- - DENOTES NEW SURFACE LEVEL CONTOUR (MINOR)

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AT ORIGINAL SIZE

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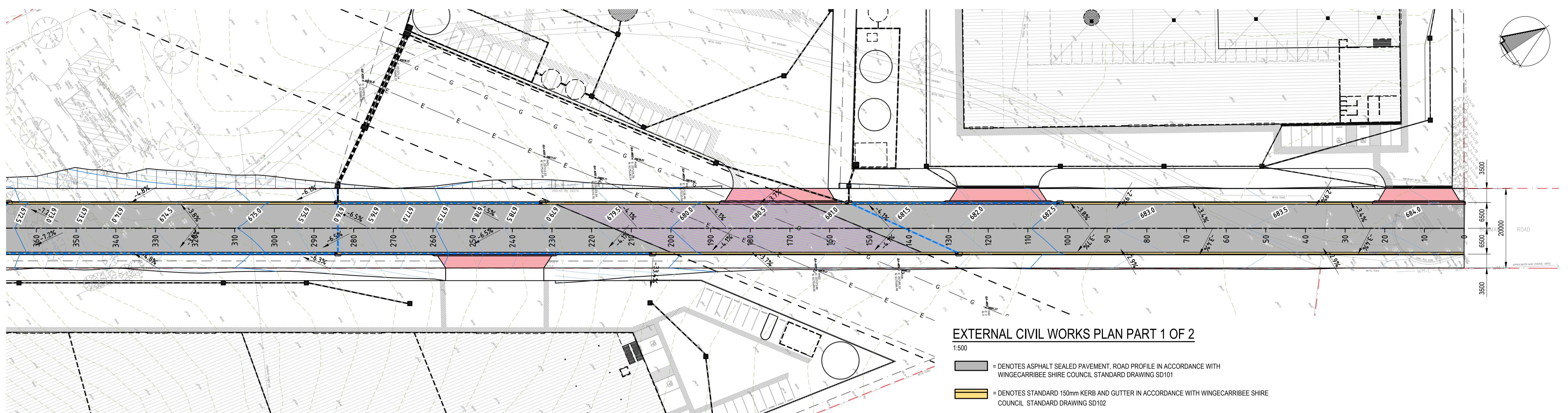
ECLIPSE Consulting Engineers Pty Ltd
 305/12 Century Cct
 Northwest Central
 NORTHWEST NSW 2153

Phone : (02) 9894 8500
 info@eclipseconsulting.com.au
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STORMWATER CATCHMENT AREA PLAN

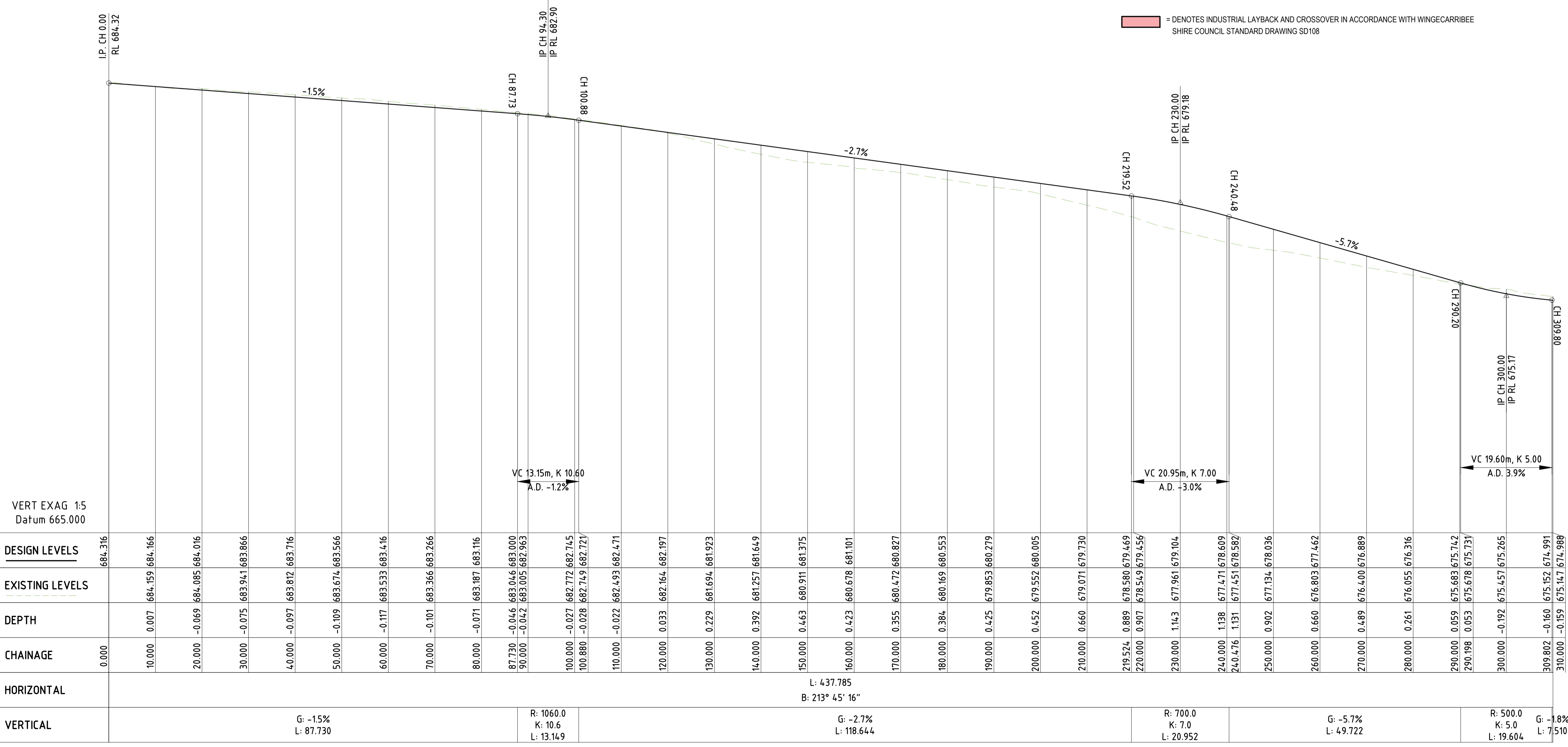
DESIGN	DRAWN	DATE	PROJECT No.
SWH	RCL	JAN 2023	10530
CHECKED	APPROVED	SCALE	DRG No.
		1:750	C403 - F



EXTERNAL CIVIL WORKS PLAN PART 1 OF 2

1:500

- = DENOTES ASPHALT SEALED PAVEMENT, ROAD PROFILE IN ACCORDANCE WITH WINGECARRIBEE SHIRE COUNCIL STANDARD DRAWING SD101
- = DENOTES STANDARD 150mm KERB AND GUTTER IN ACCORDANCE WITH WINGECARRIBEE SHIRE COUNCIL STANDARD DRAWING SD102
- = DENOTES TYPICAL SEALED ROAD CROSSING - OPEN CUT PIPELINE CROSSING IN ACCORDANCE WITH APA STANDARD DRAWING 530-DWG-5001
- = DENOTES INDUSTRIAL LAYBACK AND CROSSOVER IN ACCORDANCE WITH WINGECARRIBEE SHIRE COUNCIL STANDARD DRAWING SD108



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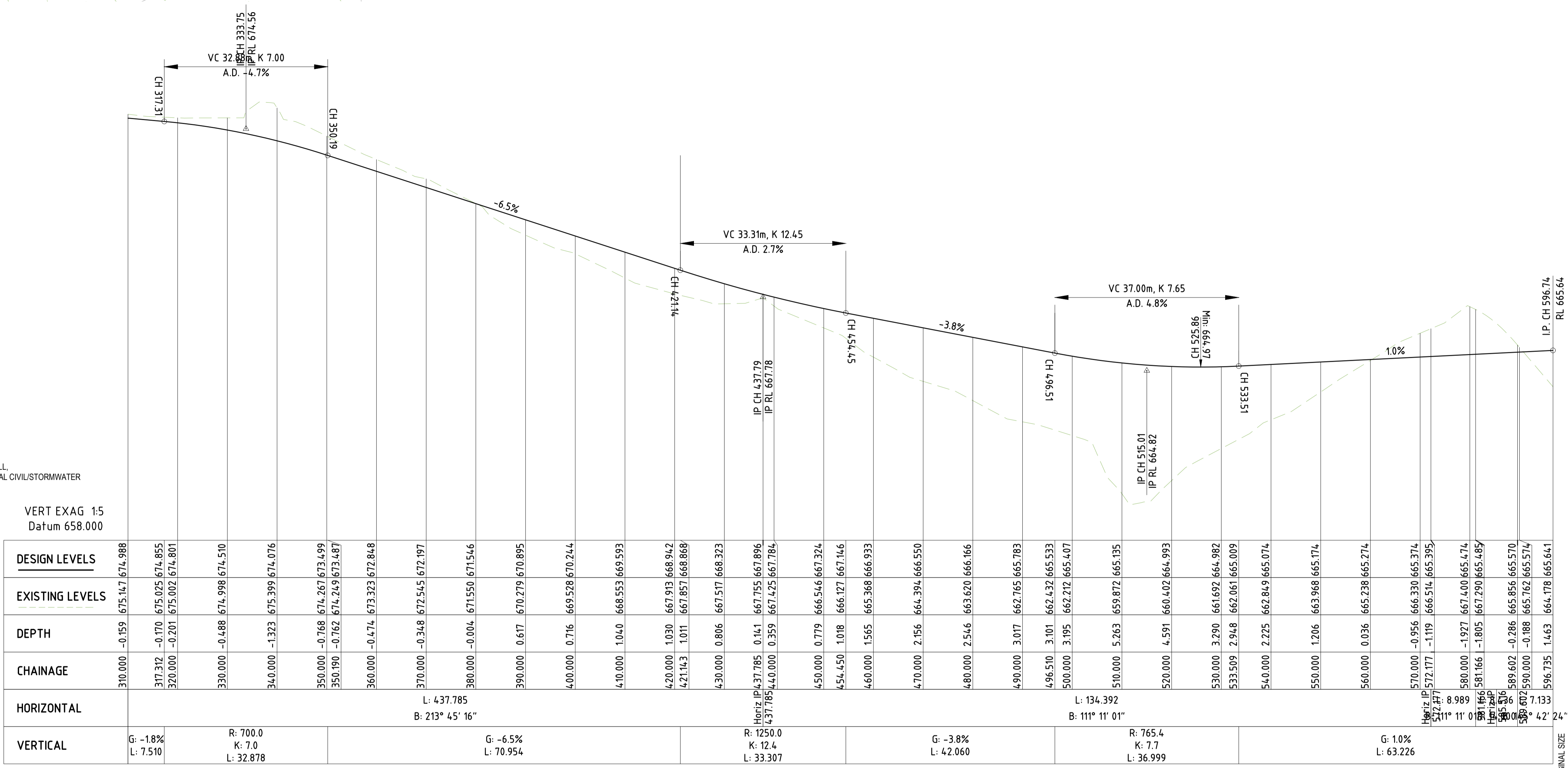
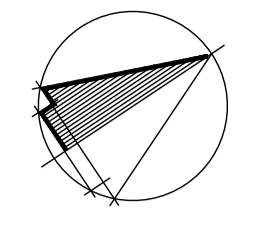
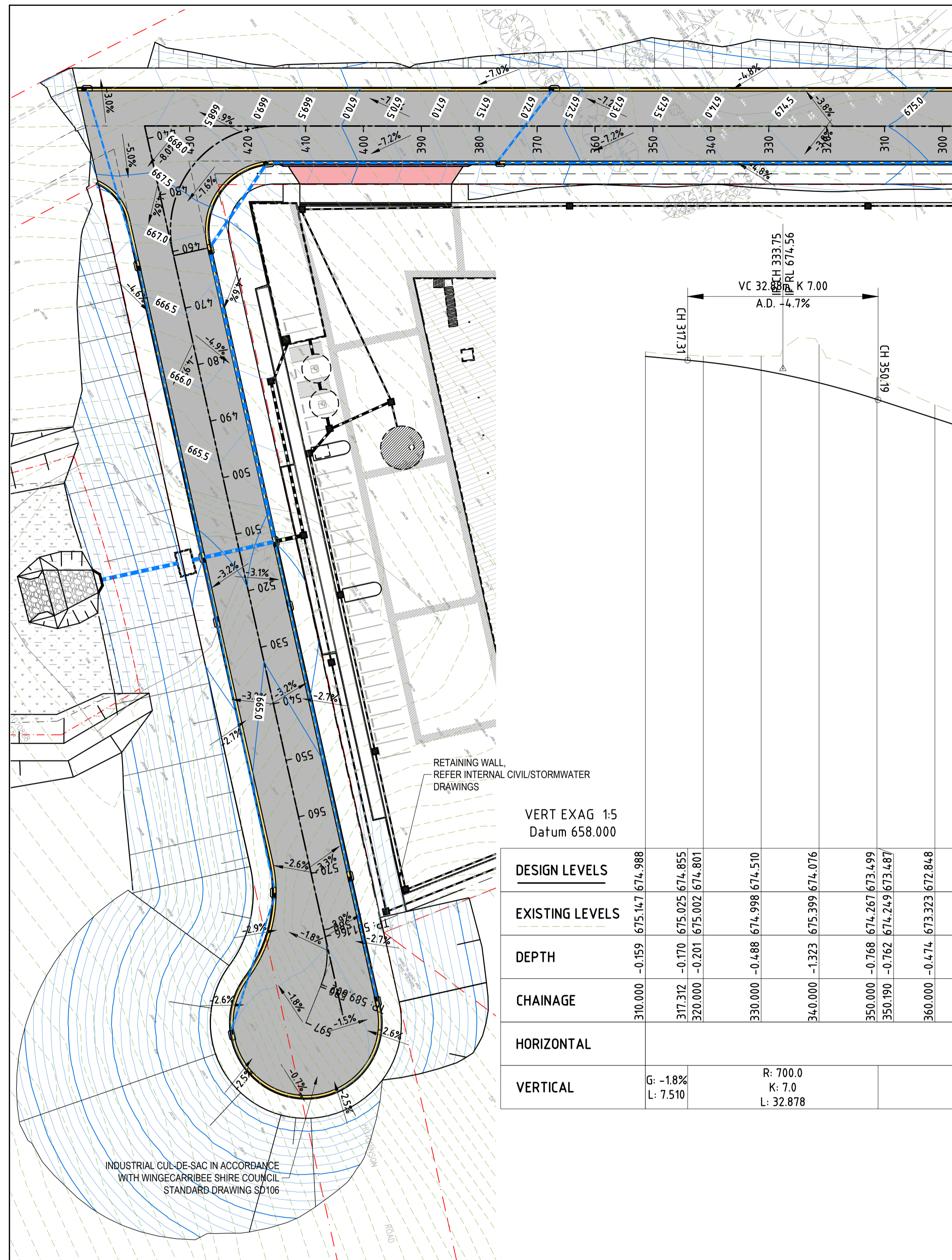
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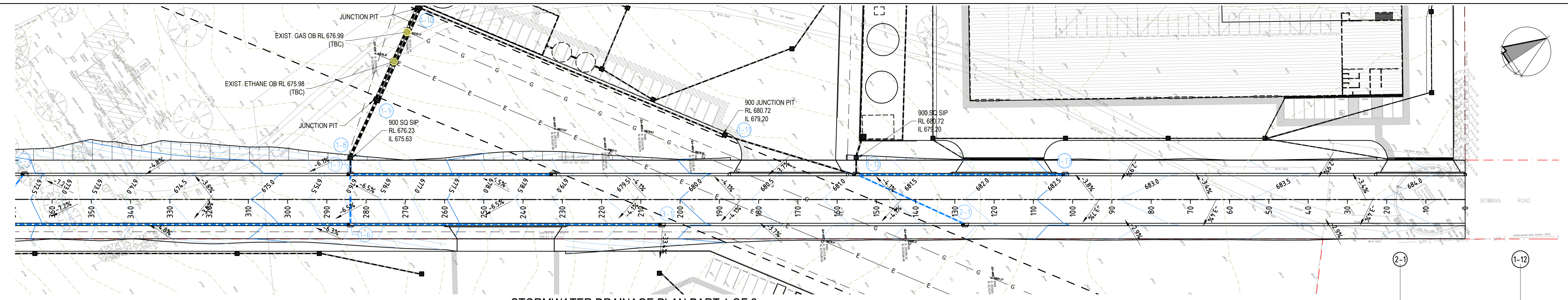
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305/12 Century Cct
Norwest Central
NORWEST NSW 2153
Phone: (02) 9894 8500
info@eclipseconsulting.com.au
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EXTERNAL CIVIL WORKS PLAN PART 1 OF 2

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CHECKED	APPROVED	SCALE	DRG No.
		1:500	C404 - F

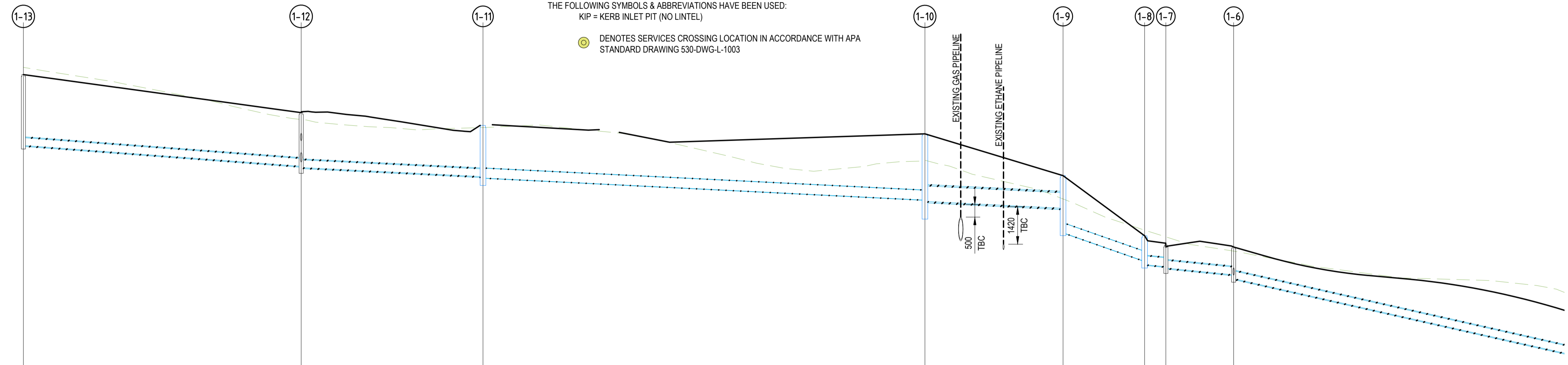




STORMWATER DRAINAGE PLAN PART 1 OF 2

1:500
 ALL DRAINAGE LINES SHALL BE UPVC (CLASS SH) STORMWATER DRAINAGE PIPE, UNO.
 ALL DRAINAGE LINES SHALL BE LAID @ 1% FALL MIN. UNO.
 THE FOLLOWING SYMBOLS & ABBREVIATIONS HAVE BEEN USED:
 KIP = KERB INLET PIT (NO INTEL)

⊙ DENOTES SERVICES CROSSING LOCATION IN ACCORDANCE WITH APA STANDARD DRAWING 530-DWG-L-1003



VERT EXAG 1:5
 Datum 675.000

GRADE % 2.48%
 PIPE DETAILS (CL to CL LENGTHS)
 NB RCP CLASS 4
 3D LENGTH: 30.637
 2D LENGTH: 30.627

DESIGN LEVEL AT MH CL	681.768	681.010
INVERT LEVEL	680.683	679.924
COVER	0.750	0.751
CHAINAGE	0.000	53.274

STORMWATER LONG SECTION - LINE 2

1:500

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 305/12 Century Cct
 Norwest Central
 NORWEST NSW 2153
 Phone: (02) 9894 8500
 info@eclipseconsulting.com.au
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STORMWATER DRAINAGE PLAN AND LONG SECTION

DESIGN SWH	DRAWN RCL	DATE JAN 2023	PROJECT No 10530
CHECKED	APPROVED	SCALE 1:500	DRG No C406 - F

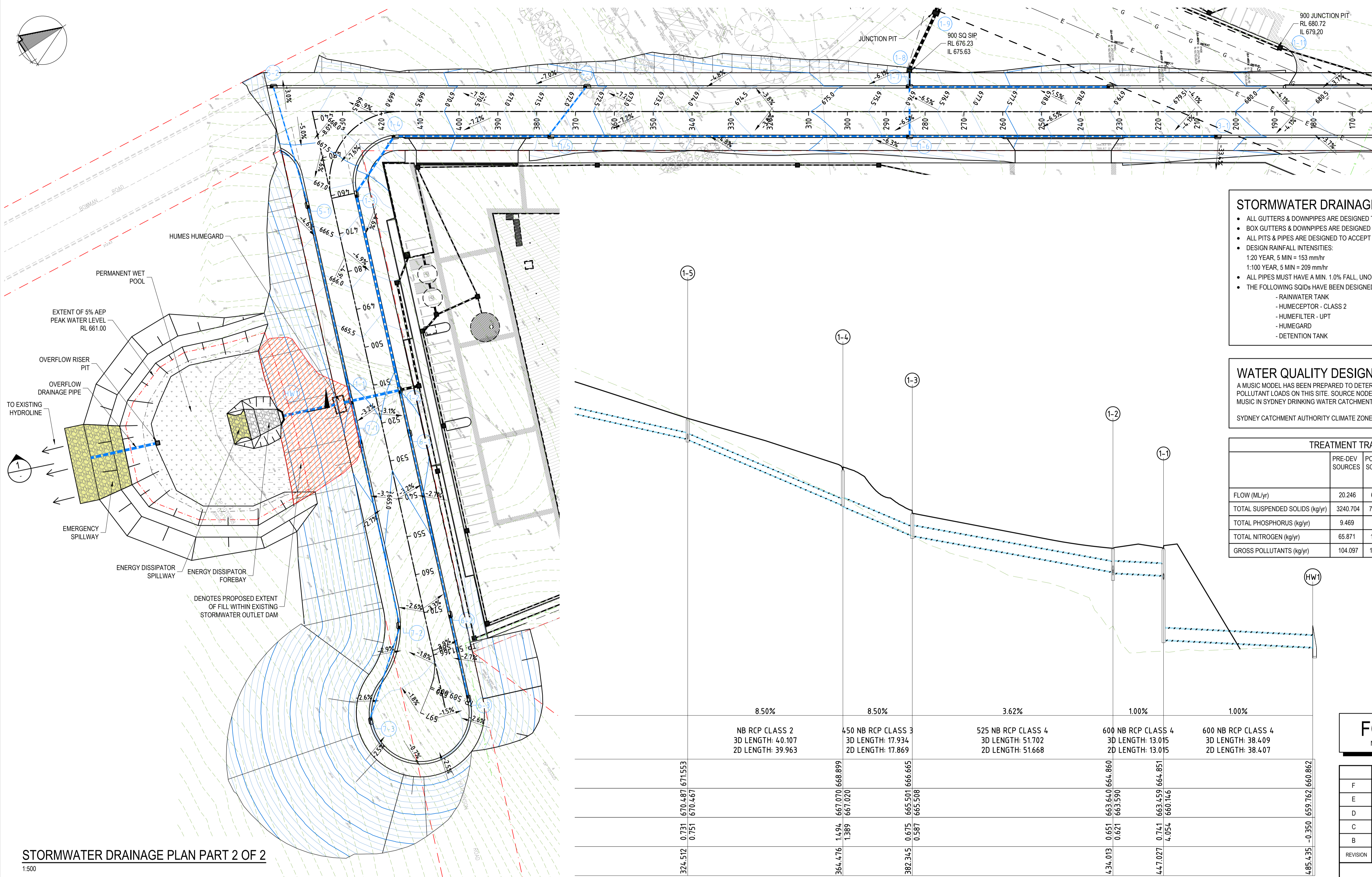
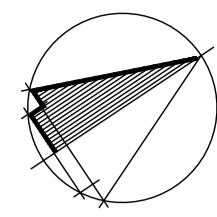
VERT EXAG 1:5
 Datum 657.000

GRADE %	1.50%	1.00%	1.00%	1.00%	1.00%	7.00%	2.00%	2.00%	4.50%
PIPE DETAILS (CL to CL LENGTHS)	NB RCP CLASS 2 3D LENGTH: 53.280 2D LENGTH: 53.274	NB RCP CLASS 2 3D LENGTH: 34.879 2D LENGTH: 34.877	NB UPVC PN 6 3D LENGTH: 84.768 2D LENGTH: 84.764	600 NB RCP CLASS 4 3D LENGTH: 26.500 2D LENGTH: 26.499	NB UPVC PN 6 3D LENGTH: 15.682 2D LENGTH: 15.644	NB RCP CLASS 2 3D LENGTH: 13.003 2D LENGTH: 13.000	NB RCP CLASS 2 3D LENGTH: 92.474 2D LENGTH: 92.380		
DESIGN LEVEL AT MH CL	682.468	681.010							
INVERT LEVEL	679.750	678.951 678.901							
COVER	2.383	1.174 1.174							
CHAINAGE	0.000	53.274	???	???	???	43.083 219.132	232.132		

STORMWATER LONG SECTION - LINE 1

1:500

AT ORIGINAL SIZE



STORMWATER DRAINAGE STRATEGY

- ALL GUTTERS & DOWNPIPES ARE DESIGNED TO ACCEPT A 1:20 YEAR ARI STORM EVENT.
- BOX GUTTERS & DOWNPIPES ARE DESIGNED TO ACCEPT A 1:100 YEAR ARI STORM EVENT.
- ALL PITS & PIPES ARE DESIGNED TO ACCEPT A 1:20 YEAR ARI STORM EVENT.
- DESIGN RAINFALL INTENSITIES:
1:20 YEAR, 5 MIN = 153 mm/hr
1:100 YEAR, 5 MIN = 209 mm/hr
- ALL PIPES MUST HAVE A MIN. 1.0% FALL UNO.
- THE FOLLOWING SQIDs HAVE BEEN DESIGNED FOR THIS DEVELOPMENT
- RAINWATER TANK
- HUMCEPTOR - CLASS 2
- HUMEFILTER - UPT
- HUMEGARD
- DETENTION TANK

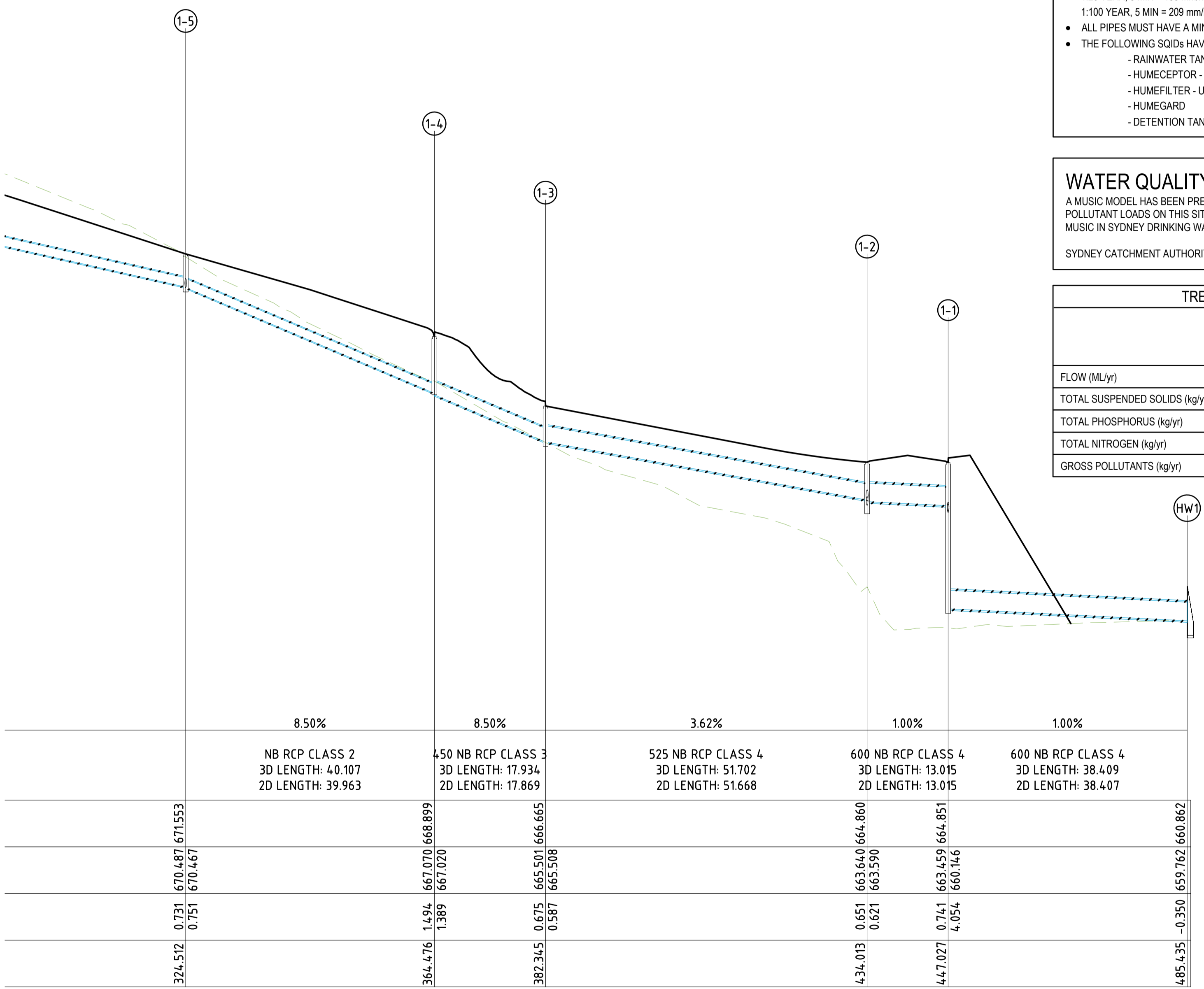
WATER QUALITY DESIGN SUMMARY

A MUSIC MODEL HAS BEEN PREPARED TO DETERMINE THE EFFECTIVENESS OF SQIDs AT REDUCING POLLUTANT LOADS ON THIS SITE. SOURCE NODE PARAMETERS HAVE BEEN ADOPTED FROM "USING MUSIC IN SYDNEY DRINKING WATER CATCHMENT - FEBRUARY 2023"

SYDNEY CATCHMENT AUTHORITY CLIMATE ZONE = ZONE 3

TREATMENT TRAIN EFFECTIVENESS

	PRE-DEV SOURCES	POST-DEV SOURCES	PRE-DEV RESIDUAL LOAD	POST-DEV RESIDUAL LOAD	% REDUCT. FROM POSTDEV	% REDUCT. FROM PREDEV
FLOW (ML/yr)	20.246	61.538	20.246	57.171	7.098	-183
TOTAL SUSPENDED SOLIDS (kg/yr)	3240.704	7164.57	3240.704	1438.144	79.927	57
TOTAL PHOSPHORUS (kg/yr)	9.469	15.417	9.469	5.043	67.287	46
TOTAL NITROGEN (kg/yr)	65.871	135.17	65.871	61.131	54.775	8
GROSS POLLUTANTS (kg/yr)	104.097	1544.347	104.097	17.302	98.88	83



STORMWATER LONG SECTION - LINE 1
1:500

STORMWATER DRAINAGE PLAN PART 2 OF 2

1:500
ALL DRAINAGE LINES SHALL BE UPVC (CLASS SH) STORMWATER DRAINAGE PIPE, UNO.
ALL DRAINAGE LINES SHALL BE LAID @ 1% FALL MIN, UNO.
THE FOLLOWING SYMBOLS & ABBREVIATIONS HAVE BEEN USED:
KIP = KERB INLET PIT (NO LINTEL)

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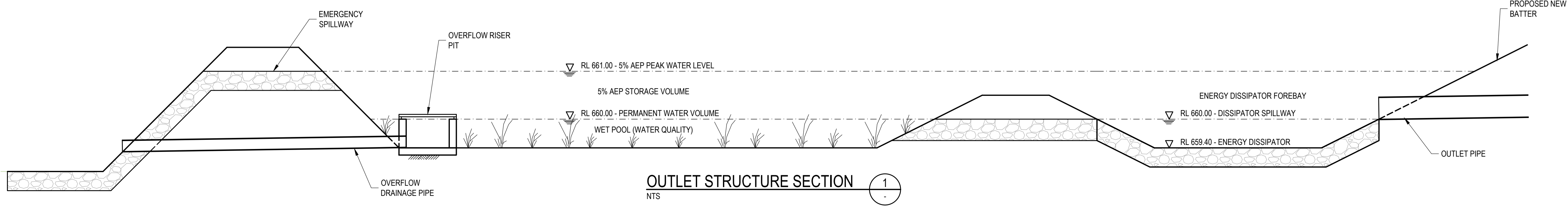
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NORWEST NSW 2153

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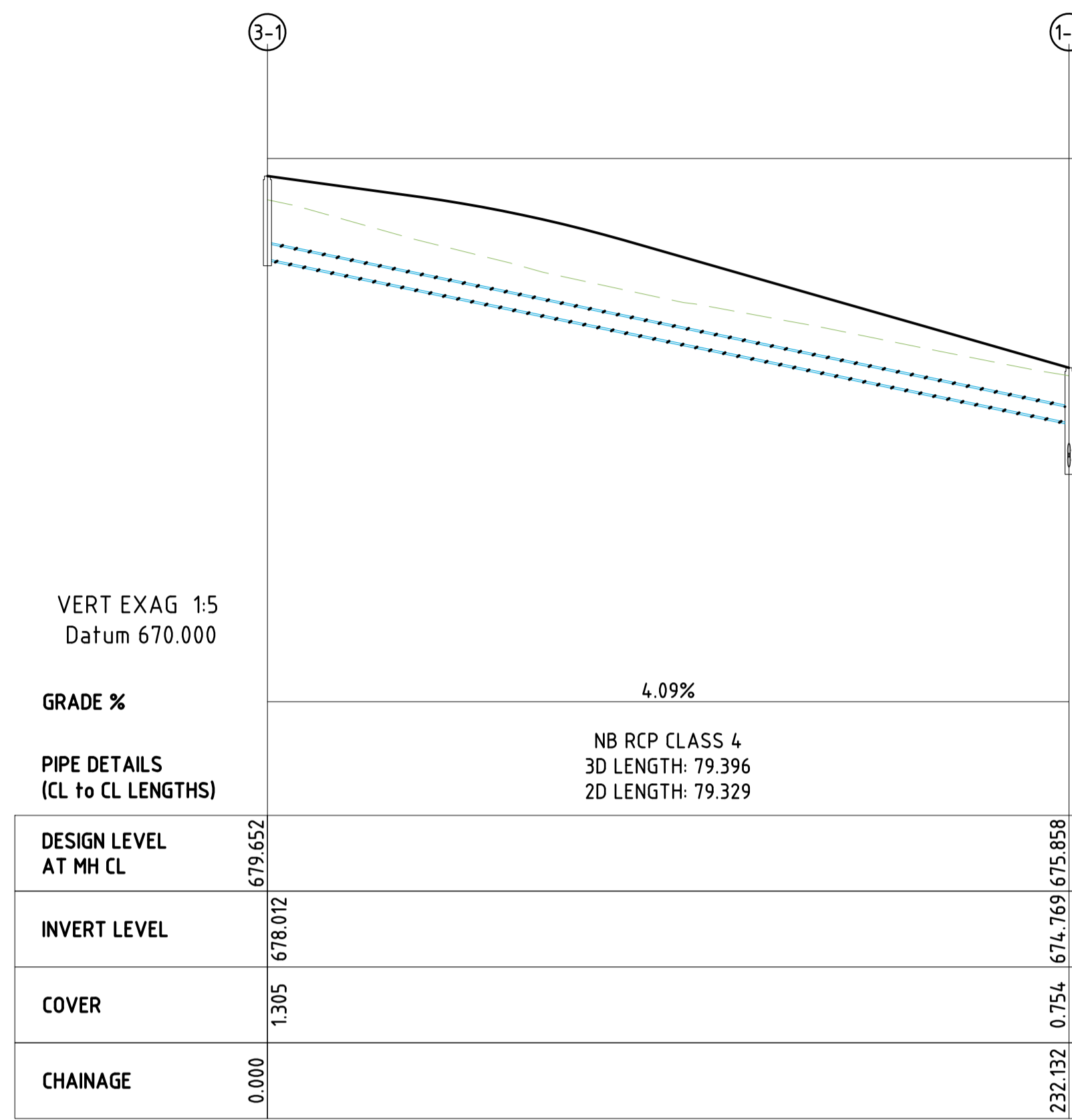
STORMWATER DRAINAGE PLAN AND LONG SECTION

DESIGN	DRAWN	DATE	PROJECT No.
SWH	RCL	JAN 2023	10530
CHECKED	APPROVED	SCALE	DRG No.
		1:500	C407 - F



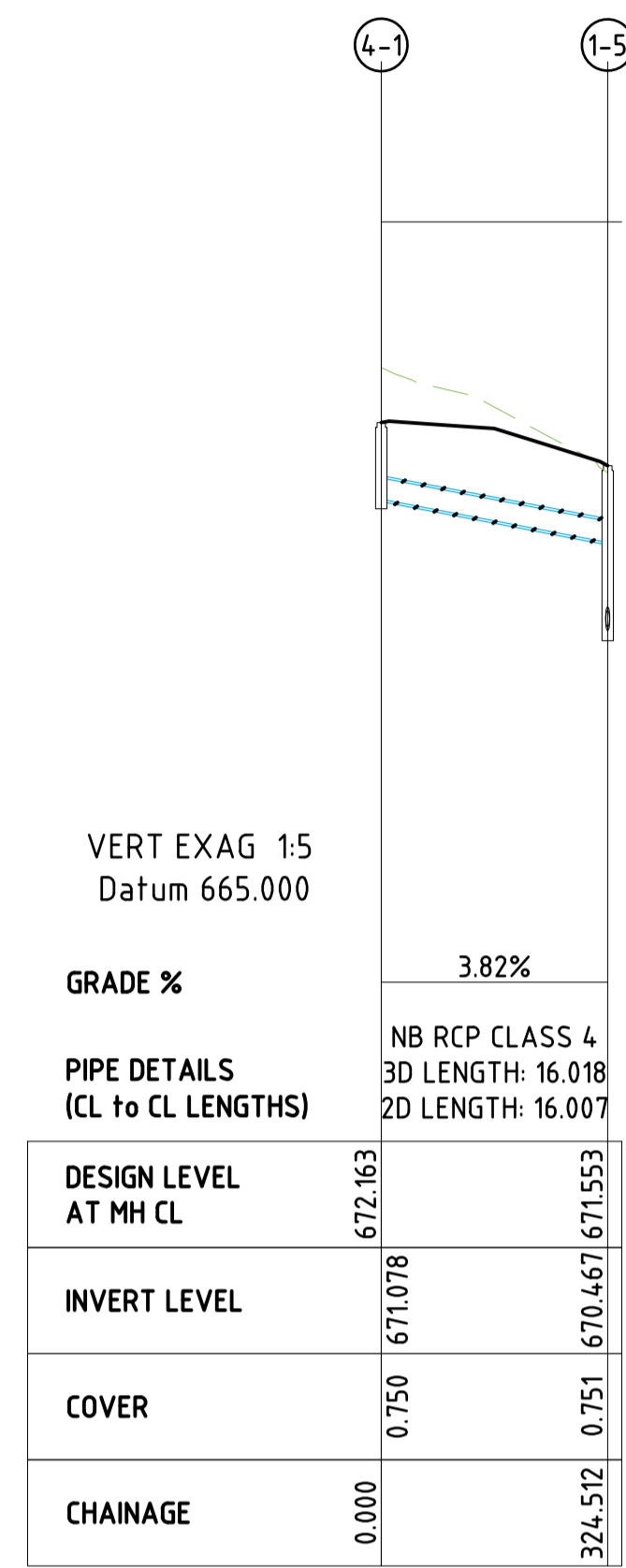
OUTLET STRUCTURE SECTION
NTS

AT ORIGINAL SIZE



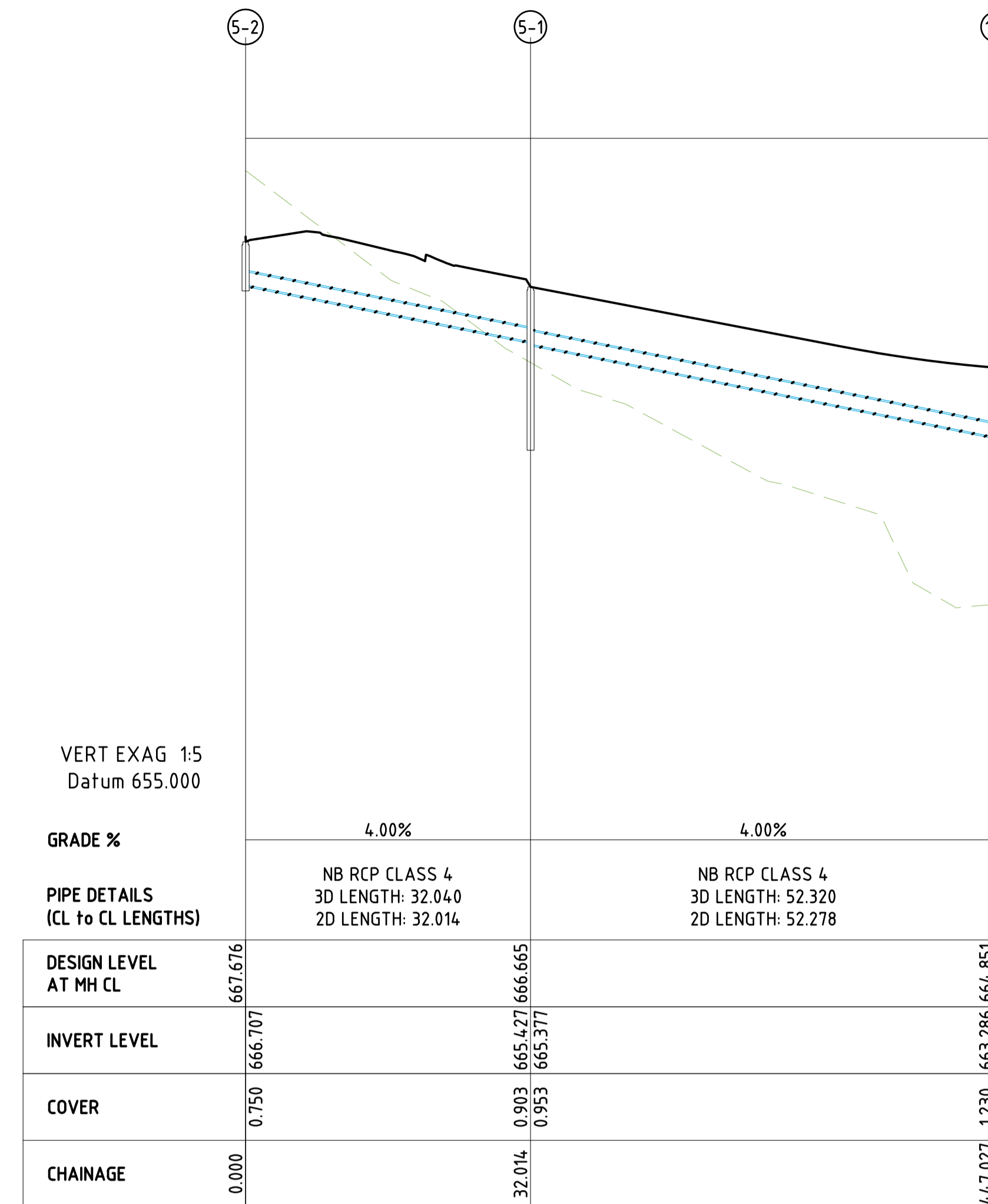
STORMWATER LONG SECTION - LINE 3

1:500



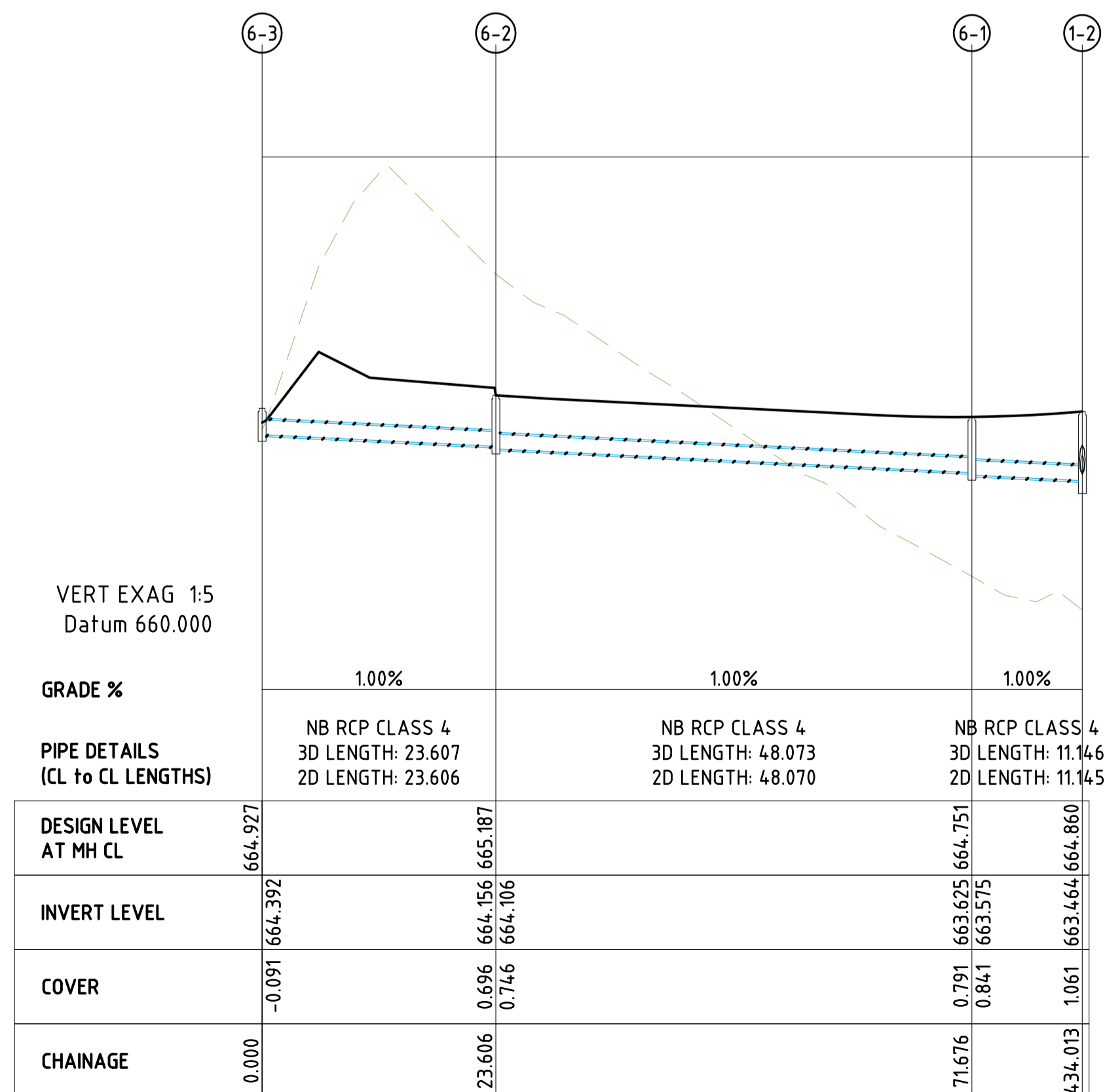
STORMWATER LONG SECTION - LINE 4

1:500



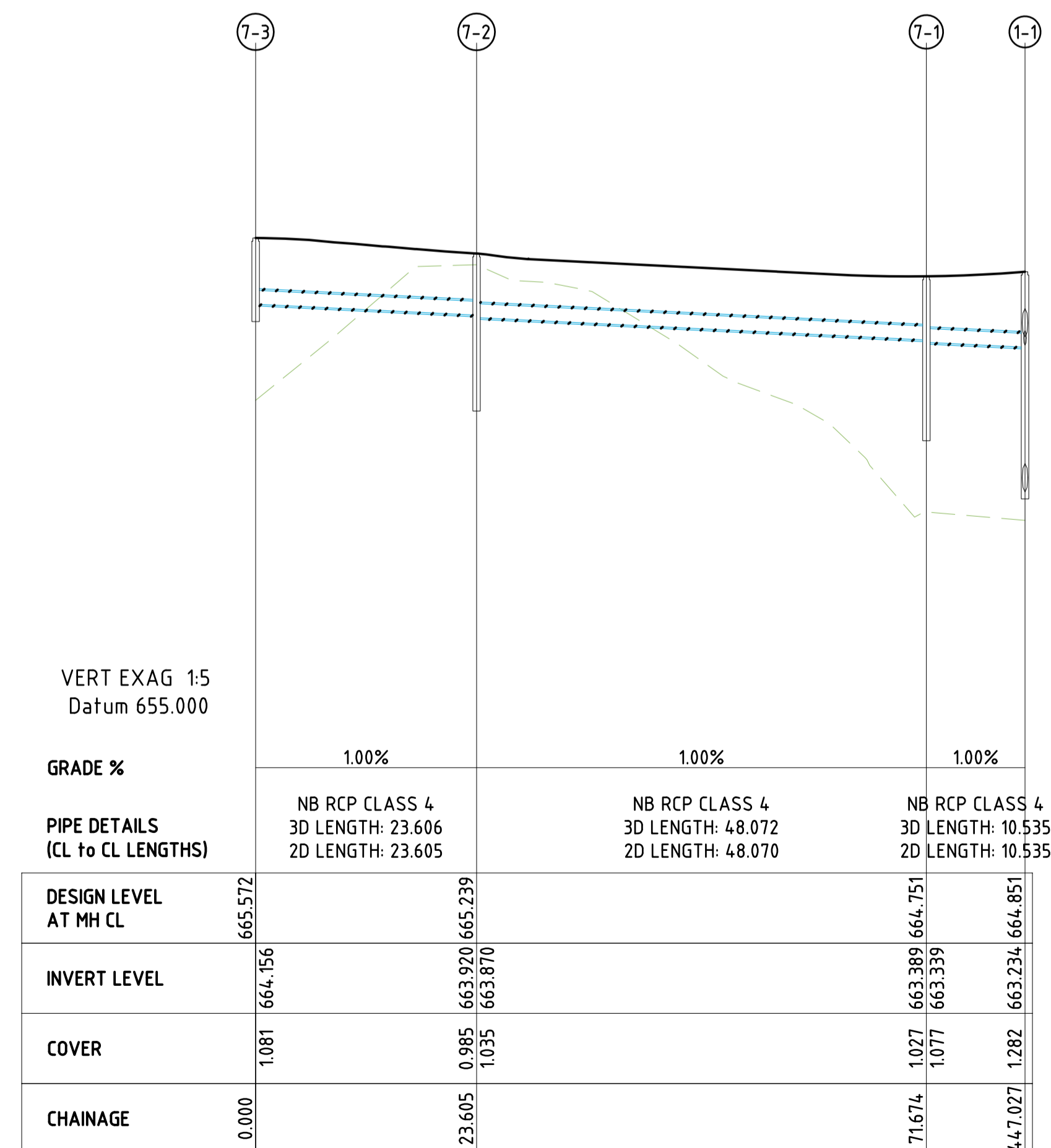
STORMWATER LONG SECTION - LINE 5

1:500



STORMWATER LONG SECTION - LINE 6

1:500



STORMWATER LONG SECTION - LINE 7

1:500

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AT ORIGINAL SIZE

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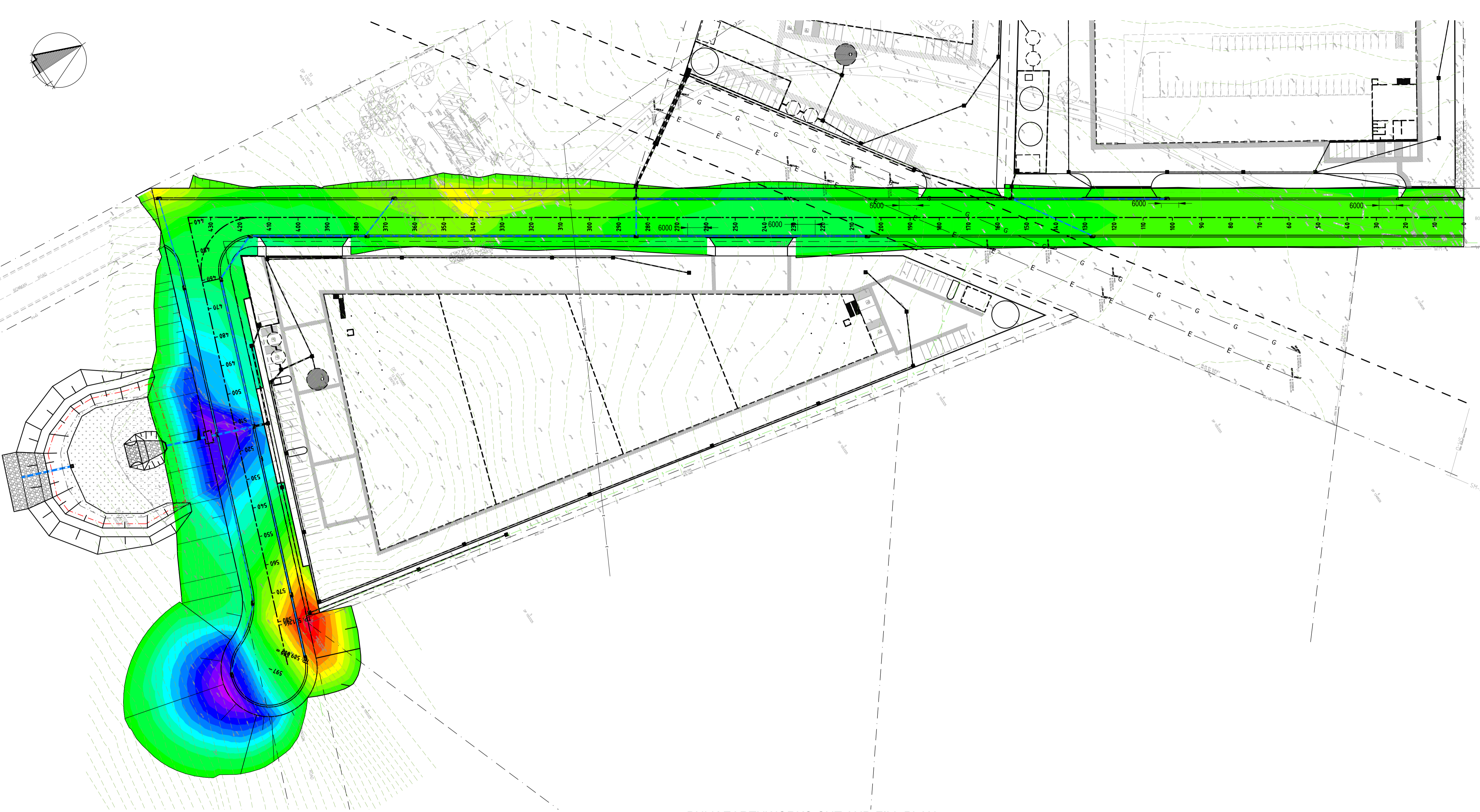
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305/12 Century Cct
Norwest Central
NORWEST NSW 2153
Phone: (02) 9894 8500
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STORMWATER LONG SECTIONS

DESIGN	DRAWN	DATE	PROJECT No.
SWH	RCL	JAN 2023	10530
CHECKED	APPROVED	SCALE	DRG No.
		1:500	C408 - F



Surface Analysis: Elevation Ranges

Number	Color	Minimum Elevation (m)	Maximum Elevation (m)
1	Red	-5.000	-4.500
2	Red	-4.500	-4.000
3	Red	-4.000	-3.500
4	Orange	-3.500	-3.000
5	Orange	-3.000	-2.500
6	Yellow	-2.500	-2.000
7	Yellow	-2.000	-1.500
8	Light Green	-1.500	-1.000
9	Light Green	-1.000	-0.500
10	Light Green	-0.500	0.000
11	Light Green	0.000	0.500
12	Light Green	0.500	1.000
13	Light Green	1.000	1.500
14	Light Green	1.500	2.000
15	Light Green	2.000	2.500
16	Light Green	2.500	3.000
17	Light Green	3.000	3.500
18	Light Green	3.500	4.000
19	Light Green	4.000	4.500
20	Light Green	4.500	5.000
21	Light Green	5.000	5.500
22	Light Green	5.500	6.000
23	Light Green	6.000	6.500

CUT
FILL

BULK EARTHWORKS CUT AND FILL PLAN

1:750

Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
bulk earthworks cut and fill - proposed surface less 200mm	1.000	1.000	18079.994sq.m	3664.125 Cu. M.	19116.817 Cu. M.	15452.692 Cu. M.<Fill>
Totals			18079.994sq.m	3664.125 Cu. M.	19116.817 Cu. M.	15452.692 Cu. M.<Fill>

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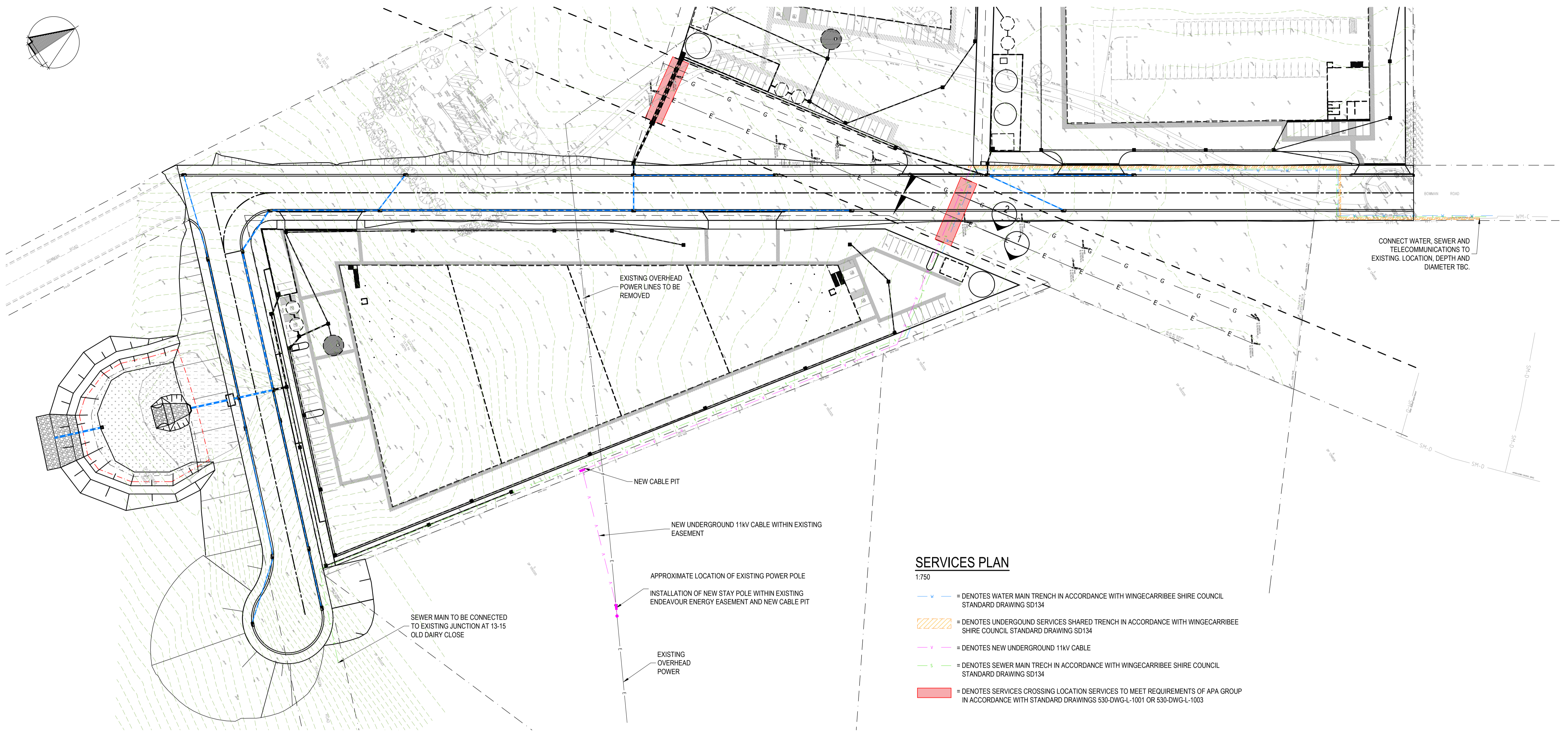
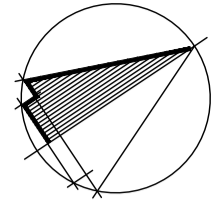
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305/12 Century Cct
Northwest Central
NORWEST NSW 2153

Phone : (02) 9894 8500
info@eclipseconsulting.com.au
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BULK EARTHWORKS CUT AND FILL PLAN

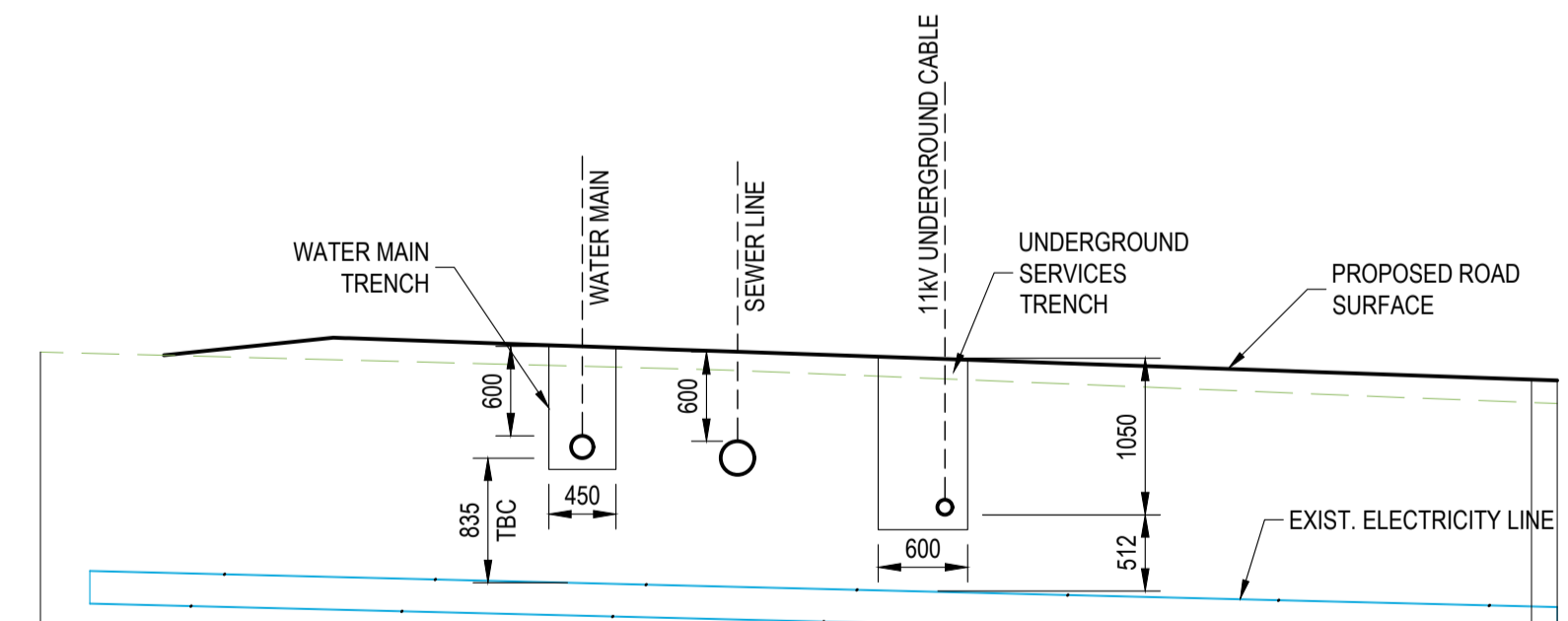
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SWH	RCL	JAN 2023	10530
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		1:750	C409 - F



SERVICES PLAN

1:750

- DENOTES WATER MAIN TRENCH IN ACCORDANCE WITH WINGECARRIBEE SHIRE COUNCIL STANDARD DRAWING SD134
- ▨ DENOTES UNDERGROUND SERVICES SHARED TRENCH IN ACCORDANCE WITH WINGECARRIBEE SHIRE COUNCIL STANDARD DRAWING SD134
- DENOTES NEW UNDERGROUND 11kV CABLE
- DENOTES SEWER MAIN TRENCH IN ACCORDANCE WITH WINGECARRIBEE SHIRE COUNCIL STANDARD DRAWING SD134
- ▭ DENOTES SERVICES CROSSING LOCATION SERVICES TO MEET REQUIREMENTS OF APA GROUP IN ACCORDANCE WITH STANDARD DRAWINGS 530-DWG-L-1001 OR 530-DWG-L-1003

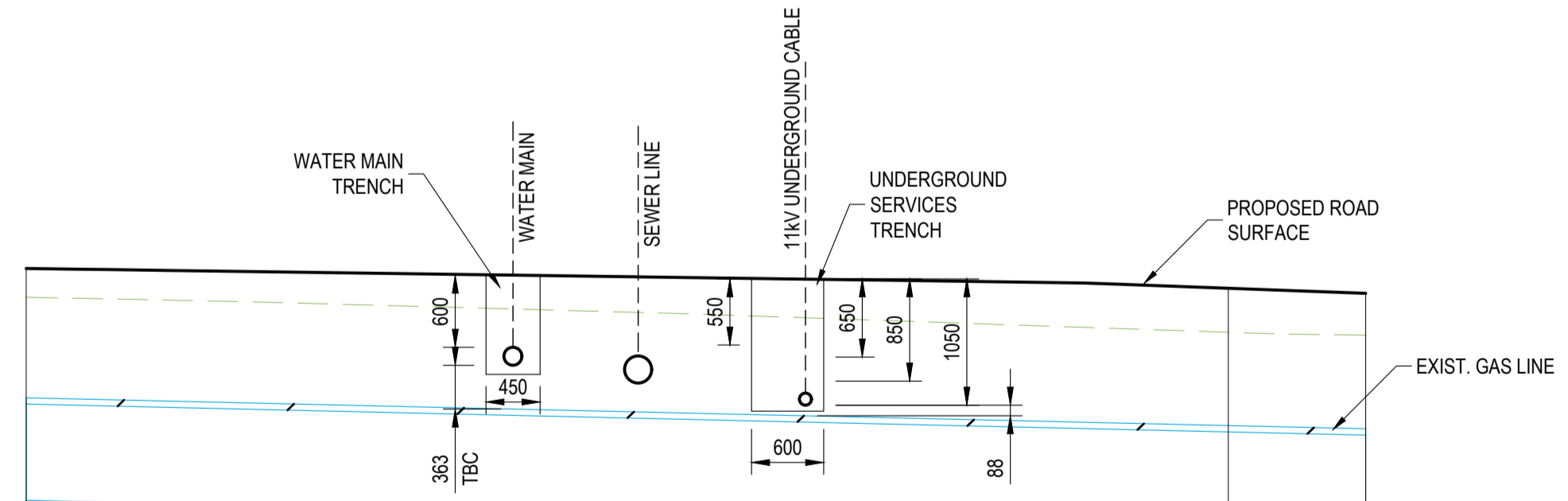


VERT EXAG 1:1
Datum 678.000

DESIGN LEVELS					
EXISTING LEVELS	680.881	680.786	680.919	680.883	680.697
DEPTH		0.133	0.125	0.132	0.154
CHAINAGE	0.000	3.634	4.675	5.918	10.000

SERVICES CROSS SECTION 1
1:50

DEPTHS ADOPTED REFLECT TYPICAL WINGECARRIBEE SHIRE COUNCIL SERVICES DEPTHS. DESIGN DEPTHS TO BE CONFIRMED BY RELEVANT CONSULTANT IN CONJUNCTION WITH APA REQUIREMENTS.



VERT EXAG 1:1
Datum 678.000

DESIGN LEVELS					
EXISTING LEVELS	680.955	680.941	680.924	680.846	680.803
DEPTH	0.282	0.296	0.319	0.365	0.346
CHAINAGE	4.050	5.091	6.334	10.000	11.143

SERVICES CROSS SECTION 2
1:50

DEPTHS ADOPTED REFLECT TYPICAL WINGECARRIBEE SHIRE COUNCIL SERVICES DEPTHS. DESIGN DEPTHS TO BE CONFIRMED BY RELEVANT CONSULTANT IN CONJUNCTION WITH APA REQUIREMENTS.

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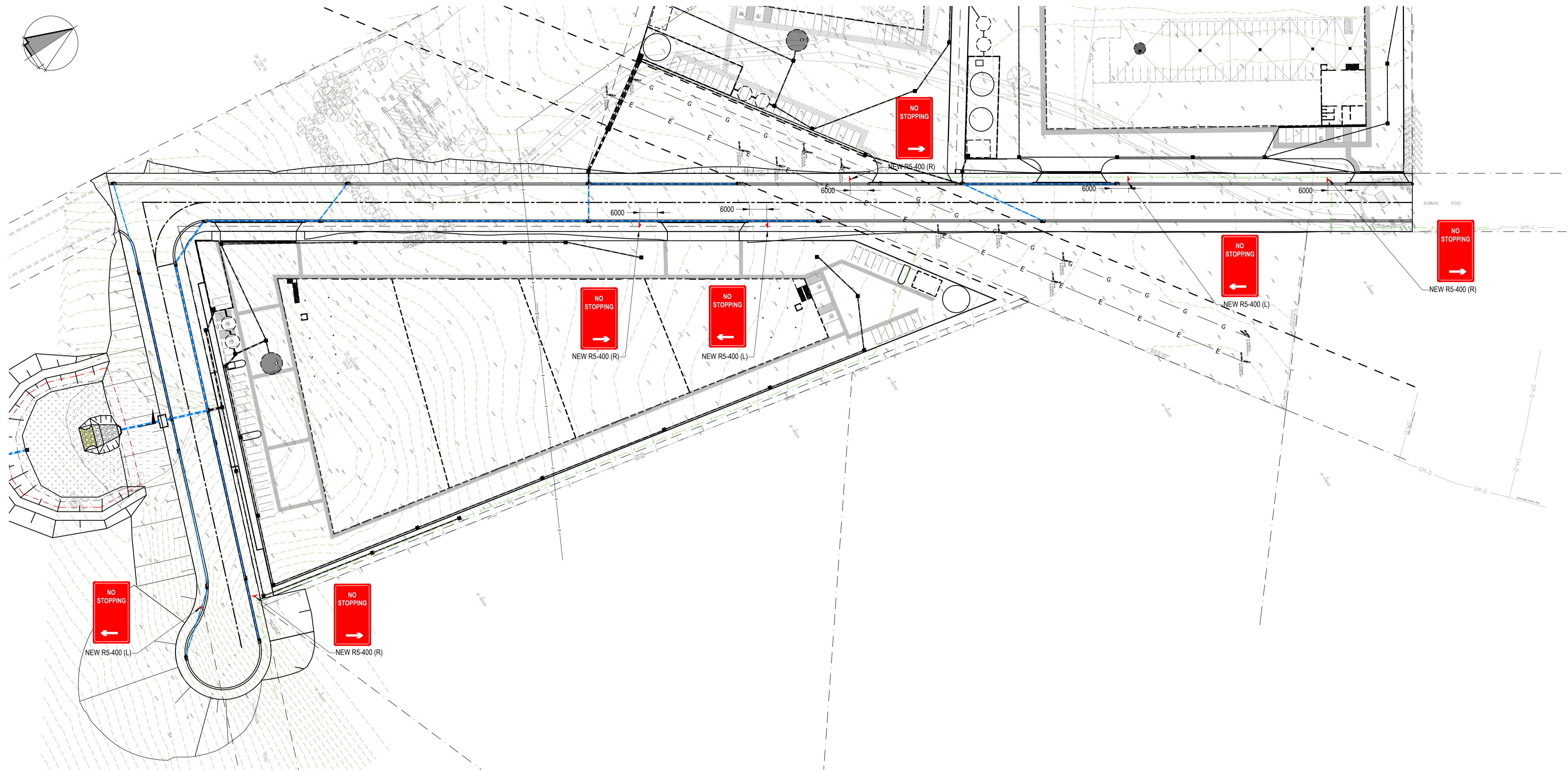
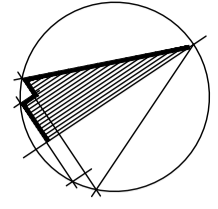
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ECLIPSE Consulting Engineers Pty Ltd
305/12 Century Cct
Northwest Central
NORWEST NSW 2153
Phone: (02) 9894 8500
info@eclipseconsulting.com.au
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AT ORIGINAL SIZE



LINEMARKING AND SIGNAGE PLAN

1:750

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AT ORIGINAL SIZE

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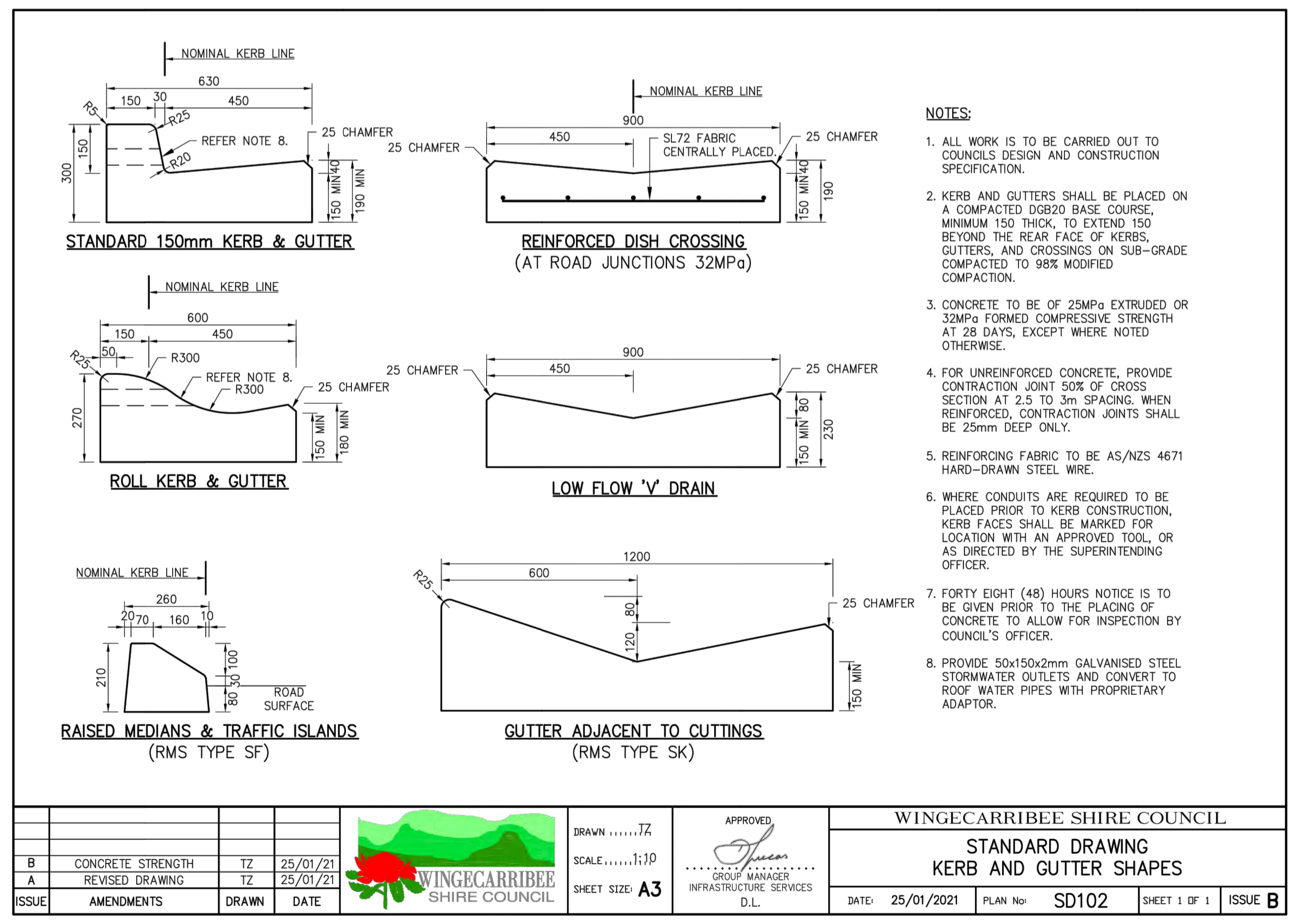
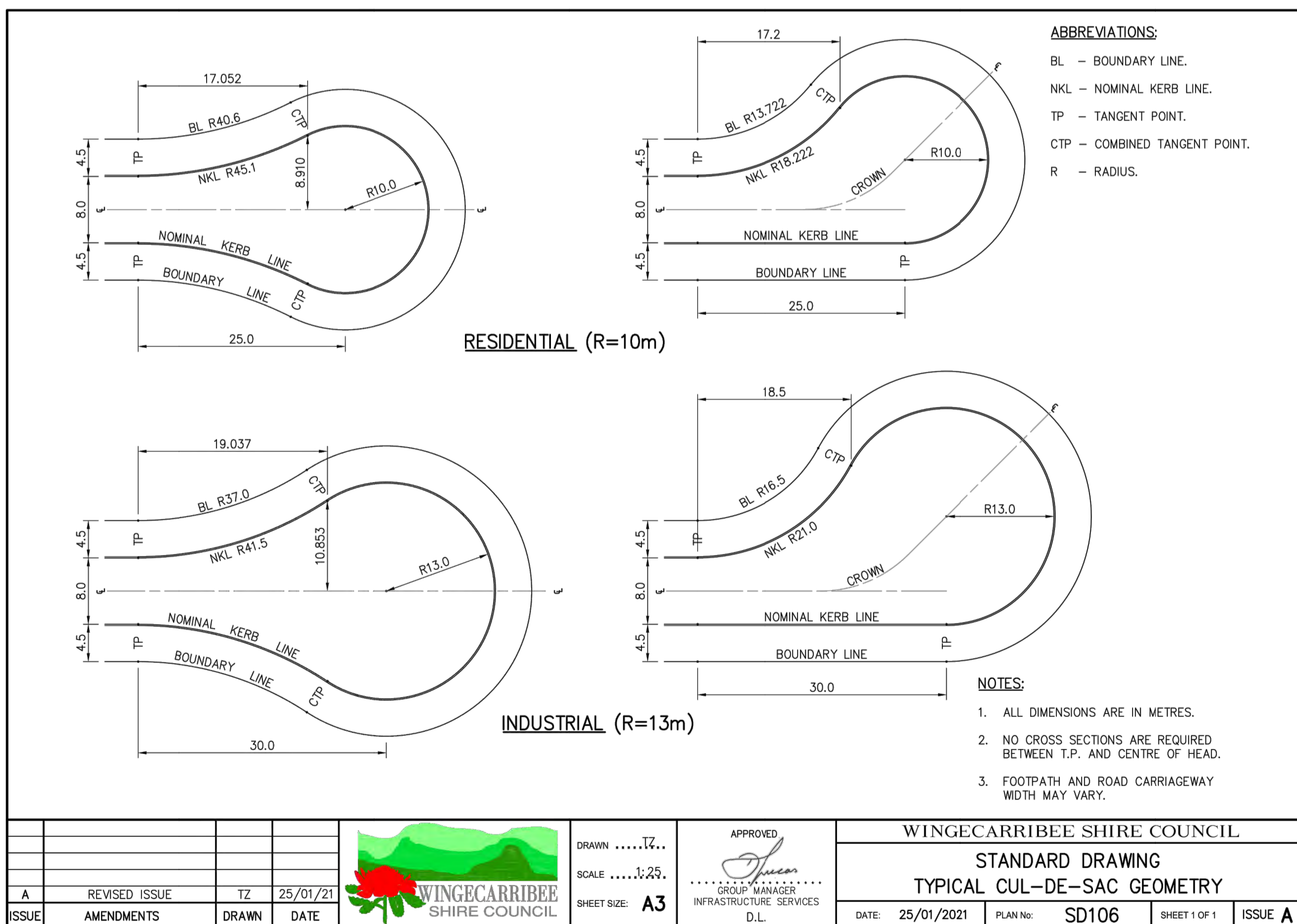
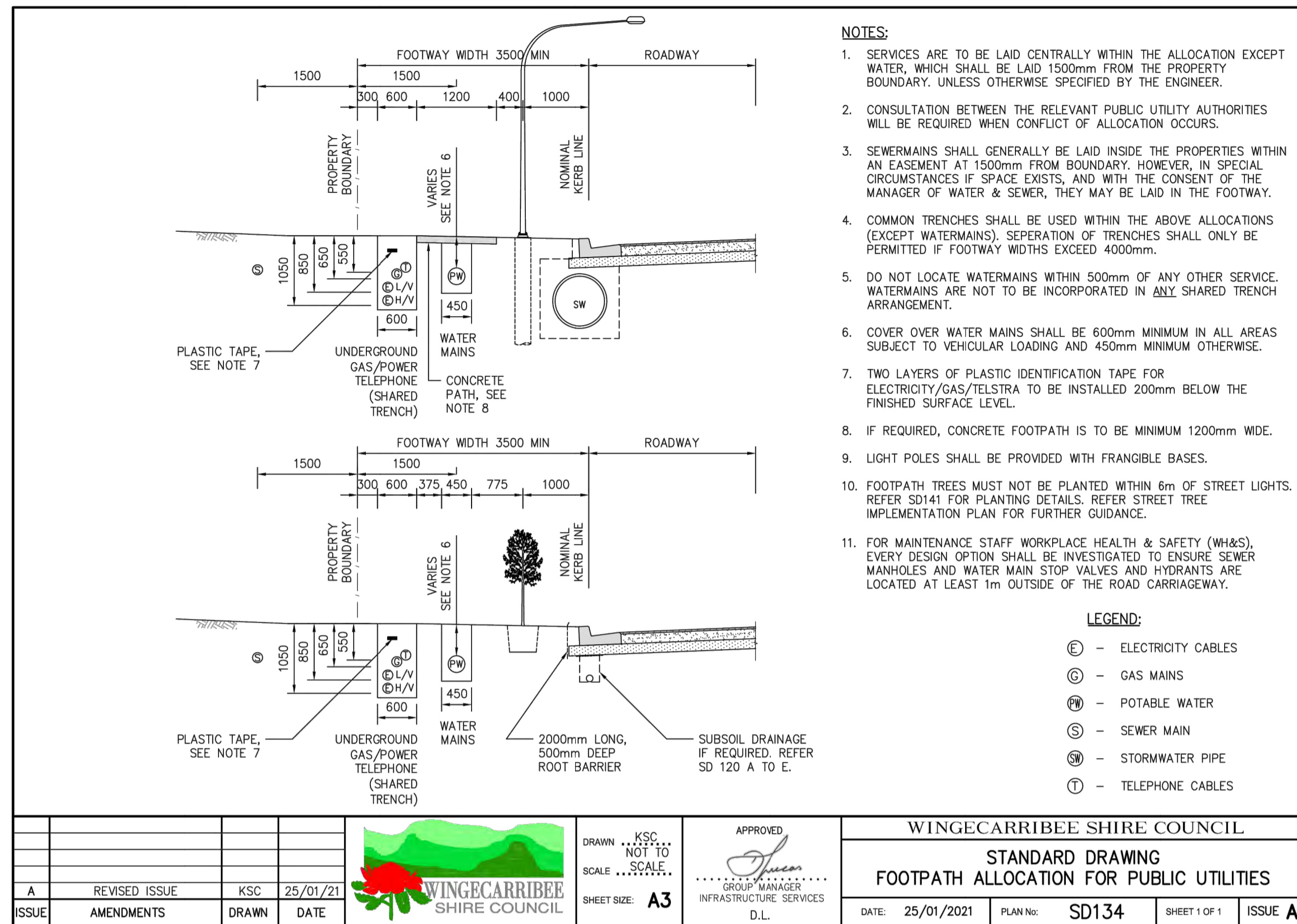
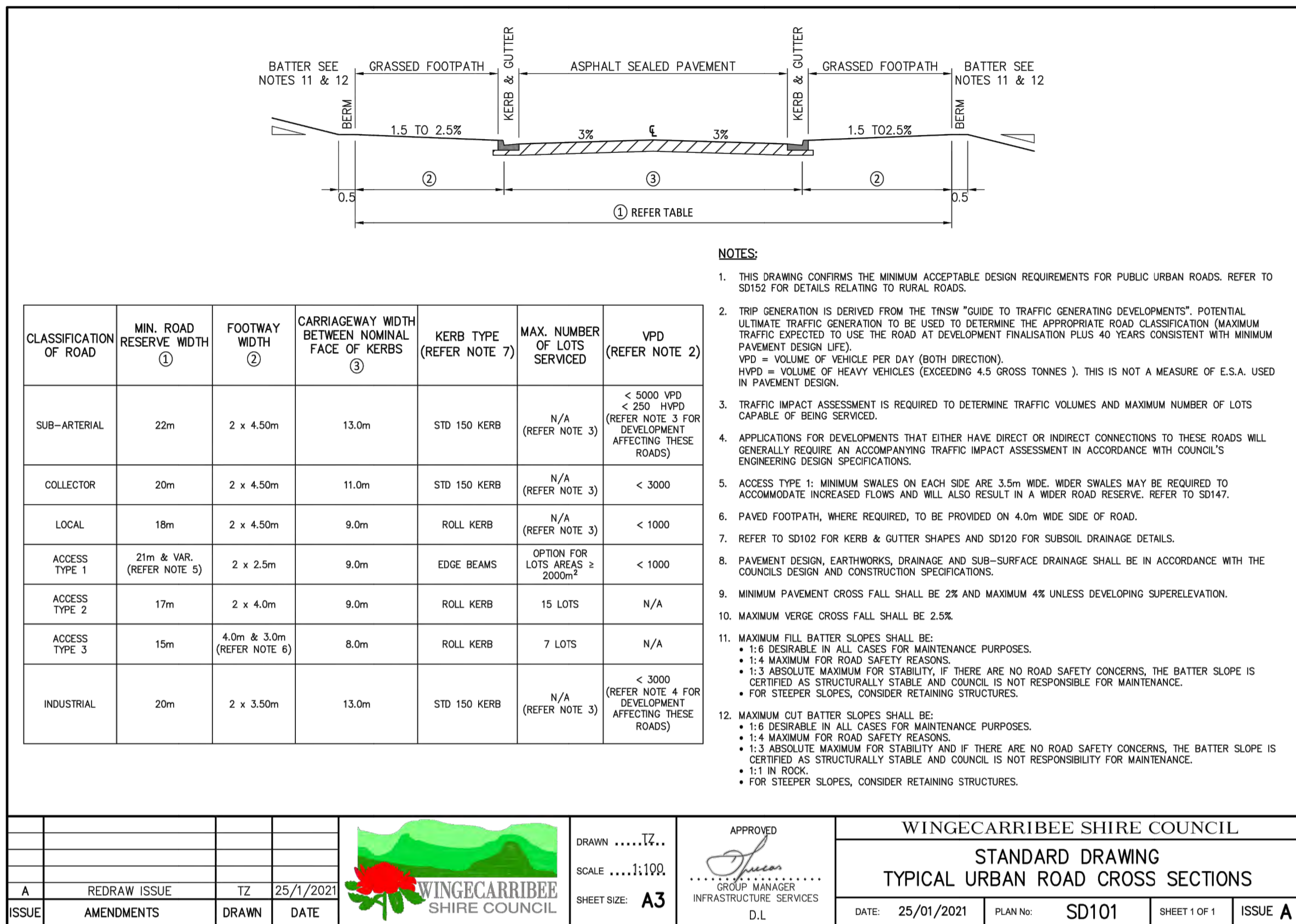
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info@eclipseconsulting.com.au
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LINEMARKING AND SIGNAGE PLAN

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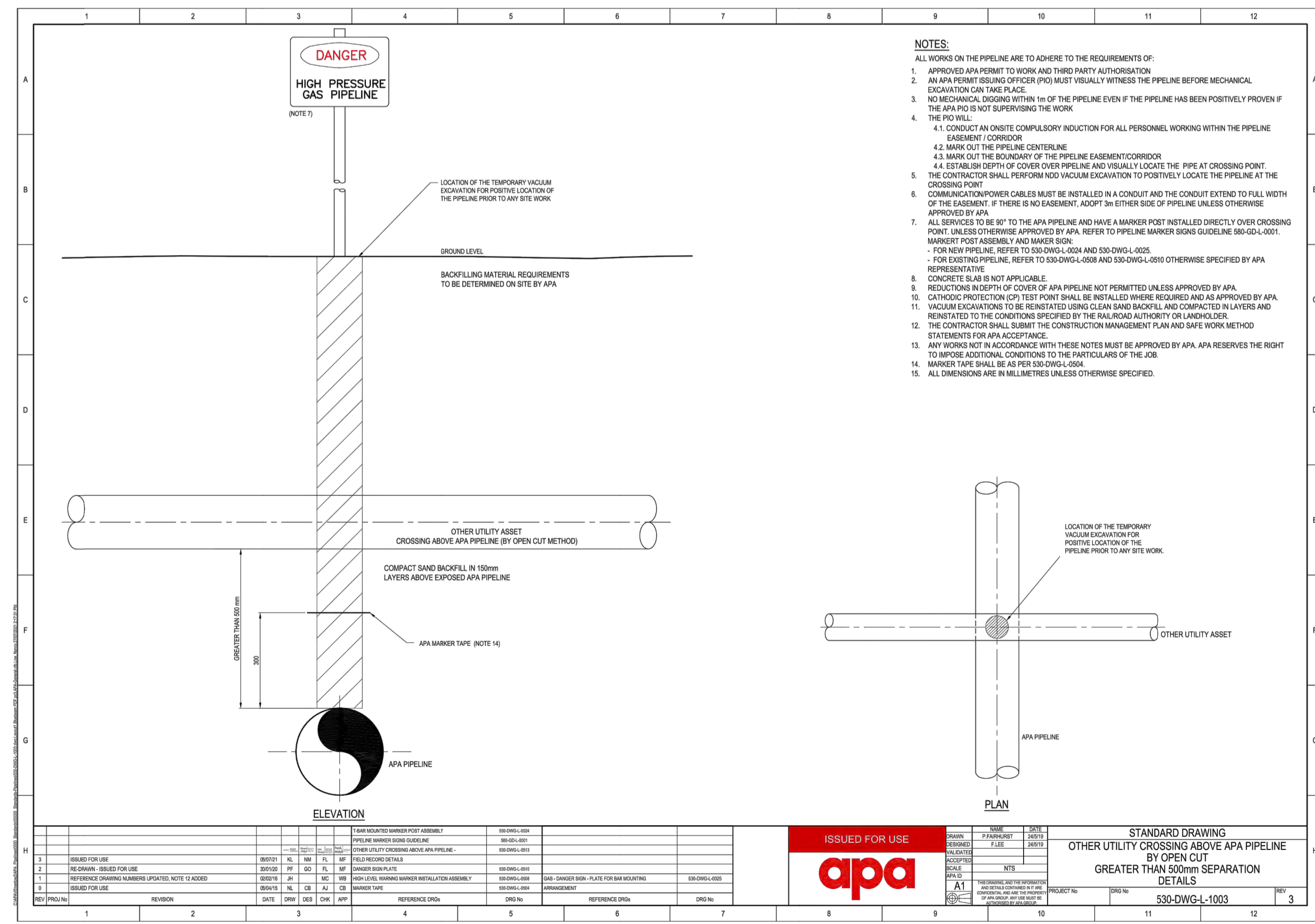
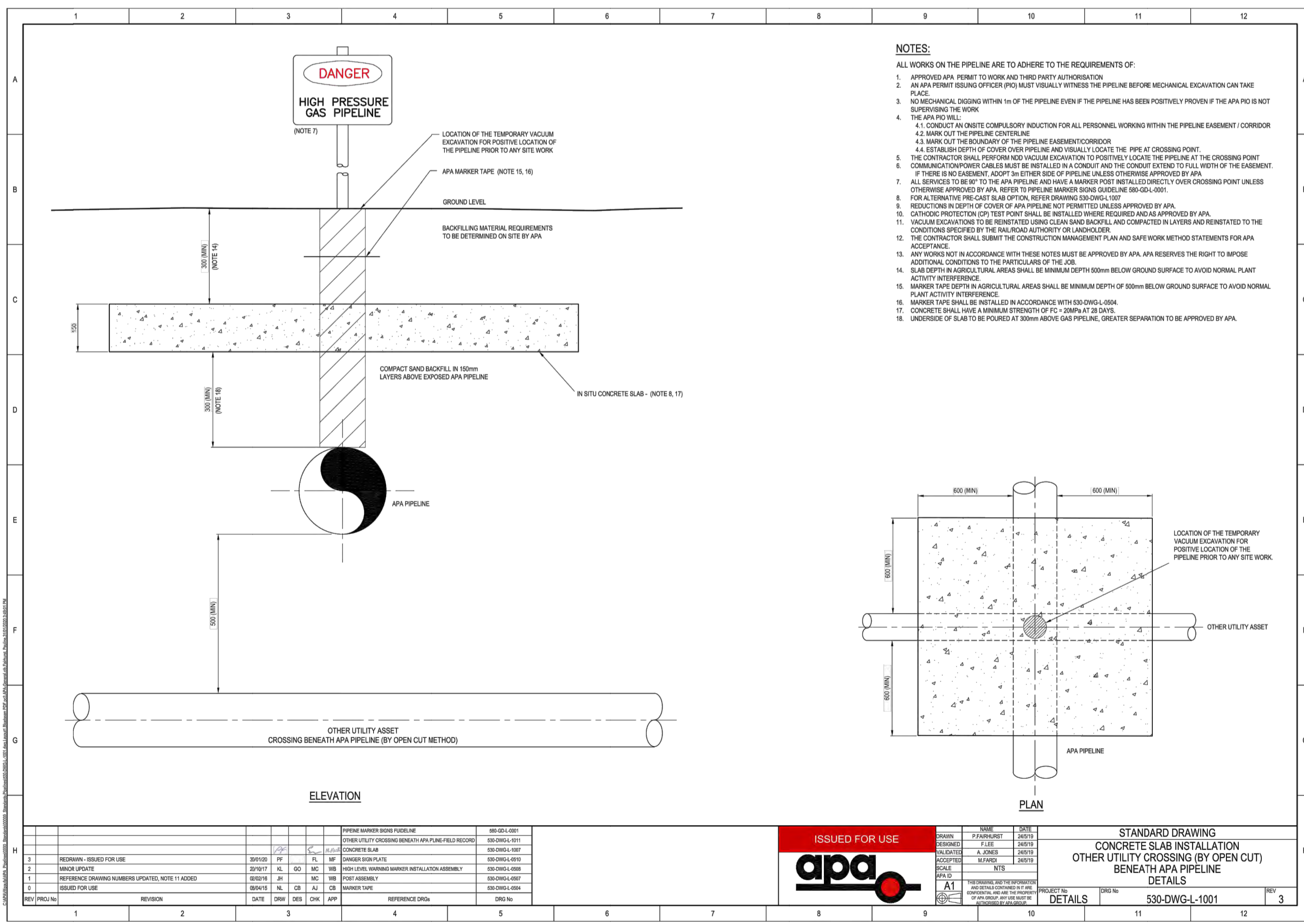
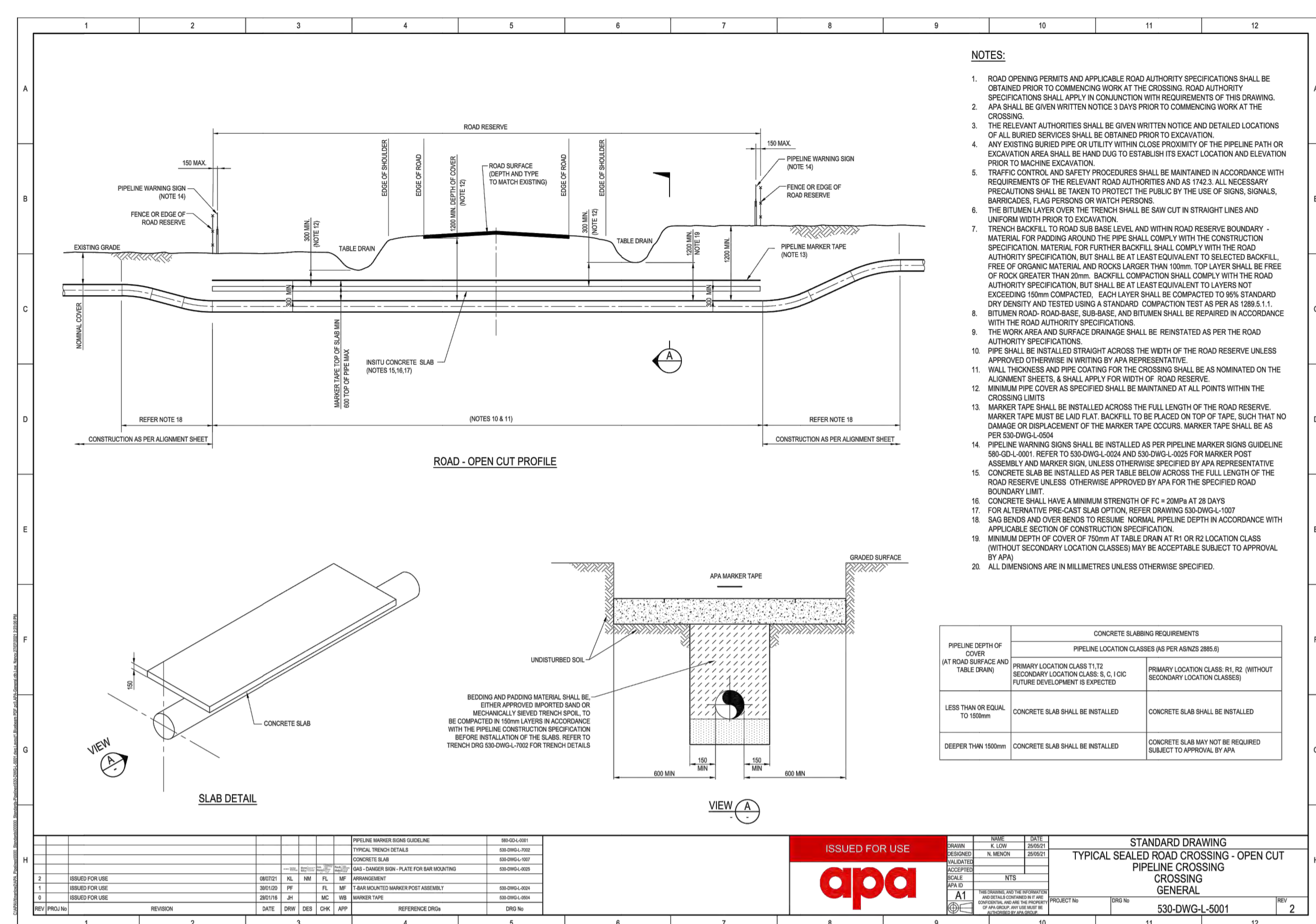
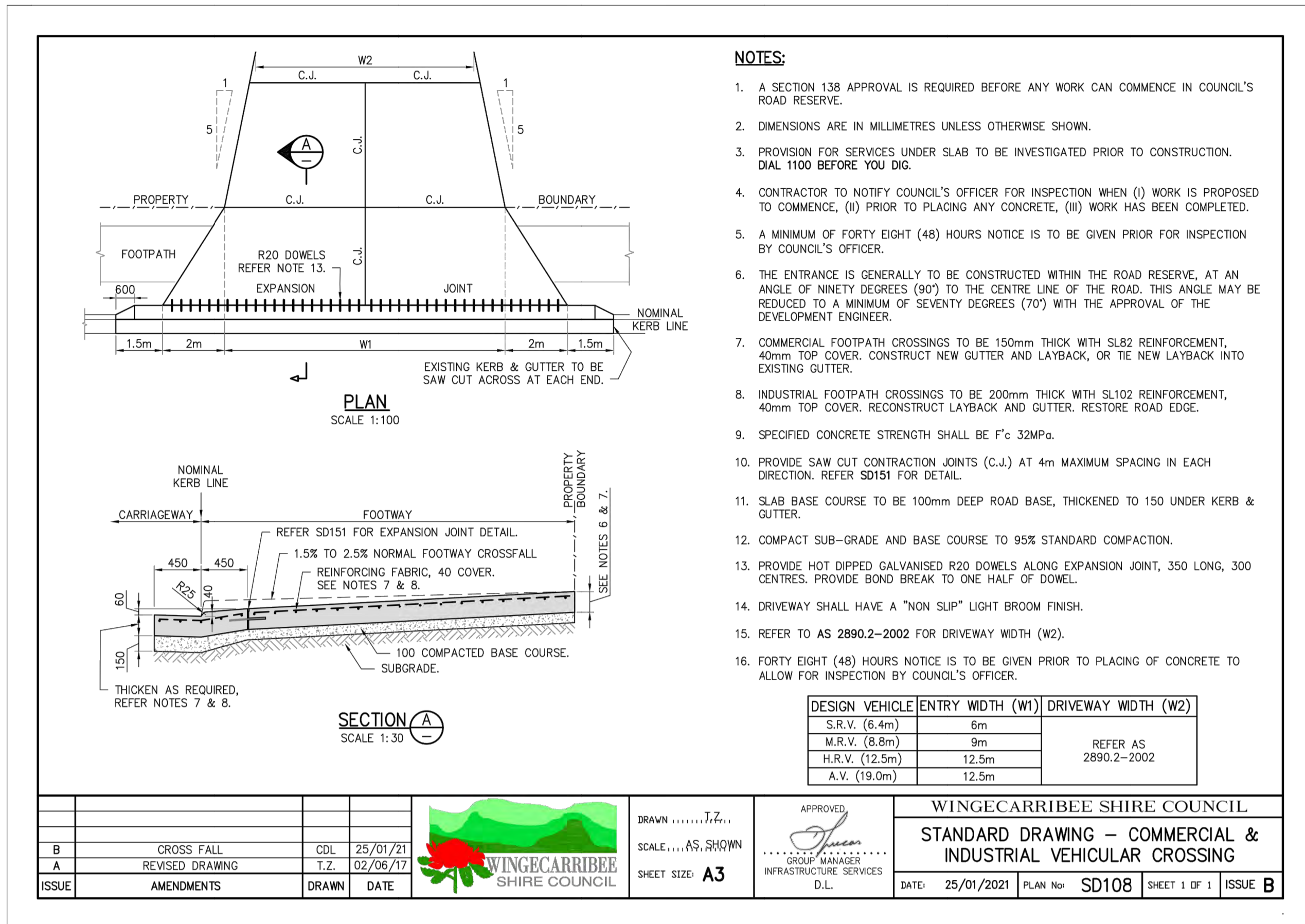
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ECLIPSE Consulting Engineers Pty Ltd
 305/12 Century Cct
 Northwest Central
 NORTHWEST NSW 2153
 Phone: (02) 9884 8500
 info@eclipseconsulting.com.au
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