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LENDLEASE
JORDAN SPRINGS EAST
STAGE 3B2 - CIVIL WORKS
DEVELOPMENT APPLICATION



SCHEDULE OF DRAWINGS

DRAWING No.	DESCRIPTION
CV-CARDNO-ST03B2-1001	COVER SHEET & DRAWING SCHEDULE
CV-CARDNO-ST03B2-1011	GENERAL NOTES & LEGENDS
CV-CARDNO-ST03B2-1021	CONTEXT PLAN
CV-CARDNO-ST03B2-1031	GENERAL ARRANGEMENT PLAN
CV-CARDNO-ST03B2-1041	DEVELOPMENT APPLICATION STAGING PLAN AND ROAD HIERARCHY PLAN
CV-CARDNO-ST03B2-1051	EXISTING SERVICES AND SURVEY PLAN
CV-CARDNO-ST03B2-1101	EROSION AND SEDIMENTATION CONTROL PLAN
CV-CARDNO-ST03B2-1131	EROSION AND SEDIMENTATION CONTROL DETAILS
CV-CARDNO-ST03B2-1251	TYPICAL ROAD CROSS SECTIONS
CV-CARDNO-ST03B2-1301	ROADS & STORMWATER PLAN
CV-CARDNO-ST03B2-1351	ROAD LONGITUDINAL SECTIONS SHEET 1 ROAD 001
CV-CARDNO-ST03B2-1352	ROAD LONGITUDINAL SECTIONS SHEET 2 ROAD 013 & 021
CV-CARDNO-ST03B2-1353	ROAD LONGITUDINAL SECTIONS SHEET 3 ROAD 022 & 023
CV-CARDNO-ST03B2-1354	ROAD LONGITUDINAL SECTIONS SHEET 4 LANE 001 & 002
CV-CARDNO-ST03B2-1601	SITEWORKS DETAILS SHEET 1
CV-CARDNO-ST03B2-1602	SITEWORKS DETAILS SHEET 2
CV-CARDNO-ST03B2-1701	PAVEMENT, SIGNAGE & LINEMARKING PLAN
CV-CARDNO-ST03B2-2201	STORMWATER DRAINAGE DETAILS SHEET 1
CV-CARDNO-ST03B2-2202	STORMWATER DRAINAGE DETAILS SHEET 2
CV-CARDNO-ST03B2-2301	INTERNAL STORMWATER CATCHMENT PLAN
CV-CARDNO-ST03B2-3001	LANEWAY GARBAGE COLLECTION TURNING PATH

XREF's: 160929 Aerial
CAD File: N:\Paramatla\Projects\893\FY14\020_CENTRAL PRECINCT_ADI ST MARYS\Drawings\22 Jordan Springs East 3B2\Drawings\CV-CARDNO-ST03B2-1001-DWG(2).dwg

Rev.	Date	Description	Des.	Verif.	Appd.
2	15.09.17	ISSUED FOR DEVELOPMENT APPLICATION APPROVAL	BJD		ARM
1	08.09.17	DRAFT - ISSUED FOR INFORMATION	BJD		ARM

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Drawn MCD	Date 15.09.17	FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES			
Checked DAC	Date 15.09.17				
Designed BJD	Date 15.09.17				
Verified	Date	Datum AHD	Scale	Size A1	
Approved		Drawing Number CV-CARDNO-ST03B2-1001			Revision 2
ARM	15.09.17				

GENERAL

- 1. ALL WORKS TO BE CONSTRUCTED IN ACCORDANCE WITH PENRITH CITY COUNCIL ENGINEERING CONSTRUCTION SPECIFICATION FOR CIVIL WORKS.
- 2. PENRITH CITY COUNCIL STANDARD DETAILS TO BE USED AT ALL TIMES.

SITEWORKS NOTES

- 1. ORIGIN OF LEVELS:- REFER SURVEY NOTES.
- 2. CONTRACTOR MUST VERIFY ALL DIMENSIONS AND EXISTING LEVELS ON SITE PRIOR TO COMMENCEMENT OF WORK. ANY DISCREPANCIES TO BE REPORTED TO CARDNO.
- 3. MAKE SMOOTH CONNECTION WITH EXISTING WORKS AND SURFACES.
- 4. ALL TRENCH BACKFILL MATERIAL SHALL BE COMPACTED TO THE SAME DENSITY AS THE ADJACENT MATERIAL.
- 5. ALL SERVICE TRENCHES UNDER VEHICULAR PAVEMENTS SHALL BE BACKFILLED WITH SAND TO 300mm ABOVE PIPE. WHERE PIPE IS UNDER PAVEMENTS BACKFILL REMAINDER OF TRENCH TO UNDERSIDE OF PAVEMENT WITH SAND OR APPROVED GRANULAR MATERIAL COMPACTED IN 150mm LAYERS TO MINIMUM 98% MODIFIED MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS 1289 5.2.1. (OR A DENSITY INDEX OF NOT LESS THAN 75)
- 6. PROVIDE 10mm WIDE EXPANSION JOINTS BETWEEN BUILDINGS AND ALL CONCRETE OR UNIT PAVEMENTS.
- 7. ASPHALTIC CONCRETE SHALL CONFORM TO R.M.S. SPECIFICATION R116.
- 8. ALL BASECOURSE MATERIAL SHALL BE IGNEOUS ROCK QUARRIED MATERIAL TO COMPLY WITH R.M.S. FORM 3051, AND COMPACTED TO MINIMUM 98% MODIFIED DENSITY IN ACCORDANCE WITH AS 1289 5.2.1 FREQUENCY OF COMPACTION TESTING SHALL NOT BE LESS THAN 1 TEST PER 50m³ OF BASECOURSE MATERIAL PLACED.
- 9. ALL SUB-BASE COURSE MATERIAL SHALL BE IGNEOUS ROCK QUARRIED MATERIAL IN (9) A CERTIFIED RECYCLED CONCRETE MATERIAL COMPLYING WITH R.M.S. FORM 3051 WILL BE CONSIDERED. SUBJECT TO MATERIAL SAMPLES AND APPROPRIATE CERTIFICATIONS BEING PROVIDED TO THE SATISFACTION OF PENRITH CITY COUNCIL AND THE SUPERINTENDENT.
- 10. AS AN ALTERNATIVE TO THE USE OF IGNEOUS ROCK AS A SUB-BASE MATERIAL IN (9) A CERTIFIED RECYCLED CONCRETE MATERIAL COMPLYING WITH R.M.S. FORM 3051 WILL BE CONSIDERED. SUBJECT TO MATERIAL SAMPLES AND APPROPRIATE CERTIFICATIONS BEING PROVIDED TO THE SATISFACTION OF PENRITH CITY COUNCIL AND THE SUPERINTENDENT.
- 11. A HANDRAIL OR SAFETY BARRIER IS TO BE PROVIDED AT THE TOP OF ALL HEADWALLS AND RETAINING WALLS GREATER THAN 1m HIGH IN ACCORDANCE WITH THE LENDLEASE GMR'S.

BULK EARTHWORKS NOTES

- 1. ORIGIN OF LEVELS: REFER SURVEY NOTES
- 2. STRIP ALL TOPSOIL/ORGANIC MATERIAL FROM CONSTRUCTION AREA AND STOCK PILE AS DIRECTED BY SUPERINTENDENT FOR FUTURE REUSE.
- 3. EXCAVATED MATERIAL TO BE USED AS STRUCTURAL FILL PROVIDED THE PLACEMENT MOISTURE CONTENT OF THE MATERIAL IS +/- 2% OF THE OPTIMUM MOISTURE CONTENT.
- 4. COMPACT FILL AREAS AND SUBGRADE TO NOT LESS THAN:

LOCATION	STANDARD DRY DENSITY (AS 1289 E 5.1.1)
UNDER BUILDING SLABS ON GROUND	98%
UNDER ROADS AND CARPARKS	100%
LANDSCAPED AREAS UNLESS NOTED OTHERWISE	98%
- 5. FOR NON COHESIVE MATERIAL, COMPACT TO 75% DENSITY INDEX.
- 6. BEFORE PLACING FILL, PROOF ROLL EXPOSED SUBGRADE WITH AN 8 TONNE (MIN) DEADWEIGHT SMOOTH DRUM VIBRATORY ROLLER TO DETECT THEN REMOVE SOFT SPOTS (AREAS WITH MORE THAN 2mm MOVEMENT UNDER ROLLER).
- 7. FREQUENCY OF COMPACTION TESTING SHALL BE NOT LESS THAN--
 - (A) 1 TEST PER 1,000m³ OF FILL PLACED PER LAYER OF FILL.
 - (B) 3 TESTS PER VISIT
 - (C) 1 TEST PER 1000m² OF EXPOSED SUBGRADE "LEVEL 1" TESTING SHALL BE TESTING IN ACCORDANCE WITH AS 3798 (1996).
- 8. FILLING TO BE PLACED IN MAXIMUM 300mm - LOOSE LAYERS AND COMPACTED AS SPECIFIED
- 9. NO FILLING SHALL TAKE PLACE TO EXPOSED SUBGRADE UNTIL THE AREA HAS BEEN PROOF ROLLED IN THE PRESENCE OF A SUITABLY QUALIFIED GEOTECHNICAL ENGINEER AND APPROVAL GIVEN IN WRITING THAT FILLING CAN PROCEED.

EROSION AND SEDIMENT CONTROL NOTES

GENERAL INSTRUCTIONS

- 1. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONTROL OF EROSION AND SEDIMENTATION TO THE SATISFACTION OF COUNCIL, NSW OFFICE OF WATER, SYDNEY WATER, THE OFFICE OF ENVIRONMENT AND HERITAGE, AND LENDLEASE'S REPRESENTATIVE. TO THIS END, THE EROSION AND SEDIMENTATION CONTROLS SHOWN ON THE DRAWINGS SHALL ONLY BE USED AS A GUIDE BY THE CONTRACTOR, AND REPRESENT THE MINIMUM REQUIREMENT ONLY.
- 2. THE CONTRACTOR SHALL ENSURE THAT ALL SOIL AND WATER MANAGEMENT WORKS ARE LOCATED AS DOCUMENTED OR AS OTHERWISE DIRECTED BY THE SUPERINTENDENT.
 - ALL WORK SHALL BE GENERALLY CARRIED OUT IN ACCORDANCE WITH
 - a. LOCAL AUTHORITY REQUIREMENTS
 - b. EPA REQUIREMENTS
 - c. NSW DEPARTMENT OF HOUSING MANUAL "MANAGING URBAN STORMWATER, SOILS AND CONSTRUCTION", 4th EDITION, MARCH 2004.
- 3. MAINTAIN THE EROSION CONTROL DEVICES TO THE SATISFACTION OF THE SUPERINTENDENT AND THE LOCAL AUTHORITY.
- 4. WHEN STORMWATER PITS ARE CONSTRUCTED, PREVENT SITE RUNOFF ENTERING UNLESS SEDIMENT FENCES ARE ERECTED AROUND PITS.
- 5. CONTRACTOR IS TO ENSURE ALL EROSION & SEDIMENT CONTROL DEVICES ARE MAINTAINED IN GOOD WORKING ORDER AND OPERATE EFFECTIVELY. REPAIRS AND OR MAINTENANCE SHALL BE UNDERTAKEN AS REQUIRED, PARTICULARLY FOLLOWING STORM EVENTS.

LAND DISTURBANCE

- 6. WHERE PRACTICAL, THE SOIL EROSION HAZARD ON THE SITE WILL BE KEPT AS LOW AS POSSIBLE. TO THIS END, WORKS SHOULD BE UNDERTAKEN IN THE FOLLOWING SEQUENCE
 - a. INSTALL A SEDIMENT FENCE ALONG THE BOUNDARIES AS SHOWN ON PLAN. REFER DETAIL.
 - b. CONSTRUCT STABILISED CONSTRUCTION ENTRANCE TO LOCATION AS DETERMINED BY SUPERINTENDENT/ENGINEER. REFER DETAIL.
 - c. INSTALL SEDIMENT BASIN AS SHOWN ON PLAN (D). INSTALL SEDIMENT TRAPS AS SHOWN ON PLAN.
 - d. UNDERTAKE SITE DEVELOPMENT WORKS IN ACCORDANCE WITH THE ENGINEERING PLANS. WHERE POSSIBLE, PHASE DEVELOPMENT SO THAT LAND DISTURBANCE IS CONFINED TO AREAS OF WORKABLE SIZE.

EROSION CONTROL

- 7. DURING WINDY WEATHER, LARGE, UNPROTECTED AREAS WILL BE KEPT MOIST (NOT WET) BY SPRINKLING WITH WATER TO KEEP DUST UNDER CONTROL.
- 8. FINAL SITE LANDSCAPING WILL BE UNDERTAKEN AS SOON AS IS PRACTICABLE AFTER THE COMPLETION OF CONSTRUCTION ACTIVITIES.

SEDIMENT CONTROL

- 9. 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.
- 10. 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.
- 11. 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.
- 12. TEMPORARY SOIL AND WATER MANAGEMENT STRUCTURES WILL BE REMOVED ONLY AFTER THE LANDS THEY ARE PROTECTING ARE REHABILITATED.
- 13. ACCEPTABLE RECEPTORS WILL BE PROVIDED FOR CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHT-WEIGHT WASTE MATERIALS AND LITTER.
- 14. ANY EXISTING TREES WHICH FORM PART OF THE FINAL LANDSCAPING PLAN WILL BE PROTECTED FROM CONSTRUCTION ACTIVITIES BY:
 - a. PROTECTING THEM WITH BARRIER FENCING OR SIMILAR MATERIALS INSTALLED OUTSIDE THE DRIP LINE
 - b. ENSURING THAT NOTHING IS NAILED TO THEM
 - c. PROHIBITING PAVING, GRADING, SEDIMENT WASH OR PLACING OF STOCKPILES WITHIN THE DRIP LINE EXCEPT UNDER THE FOLLOWING CONDITIONS.
 - (I) ENCROACHMENT ONLY OCCURS ON ONE SIDE AND NO CLOSER TO THE TRUNK THAN EITHER 1.5 METRES OR HALF THE DISTANCE BETWEEN THE OUTER EDGE OF THE DRIP LINE AND THE TRUNK, WHICH EVER IS THE GREATER
 - (II) A DRAINAGE SYSTEM THAT ALLOWS AIR AND WATER TO CIRCULATE THROUGH THE ROOT ZONE (E.G. A GRAVEL BED) IS PLACED UNDER ALL FILL LAYERS OF MORE THAN 300 MILLIMETRES DEPTH
 - (III) CARE IS TAKEN NOT TO CUT ROOTS UNNECESSARILY NOR TO COMPACT THE SOIL AROUND THEM.

NOISE

EPA AND COUNCIL REQUIREMENTS MUST BE ADHERED TO REGARDING LEVEL OF NOISE AND WORKING HOURS TO ENSURE THAT RESIDENTS AND OTHER APPLICABLE NEIGHBORS TO THE SITE ARE NOT DISTURBED UNREASONABLY. THE GENERATION OF NOISE MUST BE MINIMISED.

DUST

DUST MUST BE MINIMISED TO ENSURE THERE IS NO HEALTH RISK OR LOSS OF AMENITY.

STAGING OF WORKS

STRIPPING WORKS ARE TO BE STAGED TO MINIMISE EXTENT OF EXPOSED AREA. WEATHER CONDITIONS TO BE ASSESSED PRIOR TO UNDERTAKING STRIPPING.

STOCKPILE PROTECTION

SEDIMENT RETENTION STRUCTURES TO BE PLACED DOWNSLOPE OF ANY STOCKPILES. STOCKPILE IN PLACE > 28 DAYS TO BE TEMPORARILY GRASSED.

VEHICLE AND ROAD MANAGEMENT

SITE ACCESS TO BE RESTRICTED TO ALLOCATED TRUCK ROUTES. EXTERNAL ROADS TO BE SWEEP REGULARLY FOR DURATION OF WORKS.

EXISTING UNDERGROUND SERVICES NOTES

THE LOCATIONS OF UNDERGROUND SERVICES SHOWN IN THIS SET OF DRAWINGS HAVE BEEN PLOTTED FROM SURVEY INFORMATION AND SERVICE AUTHORITY INFORMATION. THE SERVICE INFORMATION HAS BEEN PREPARED ONLY TO SHOW THE APPROXIMATE POSITIONS OF ANY KNOWN SERVICES AND MAY NOT BE AS CONSTRUCTED OR ACCURATE. CARDNO CAN NOT GUARANTEE THAT THE SERVICES INFORMATION SHOWN ON THESE DRAWINGS ACCURATELY INDICATES THE PRESENCE OR ABSENCE OF SERVICES OR THEIR LOCATION AND WILL ACCEPT NO LIABILITY FOR INACCURACIES IN THE SERVICES INFORMATION SHOWN FROM ANY CAUSE WHATSOEVER.

CONTRACTORS SHALL TAKE DUE CARE WHEN EXCAVATING ONSITE INCLUDING HAND EXCAVATION WHERE NECESSARY. CONTRACTORS ARE TO CONTACT THE RELEVANT SERVICE AUTHORITY PRIOR TO COMMENCEMENT OF EXCAVATION WORKS. CONTRACTORS ARE TO UNDERTAKE A SERVICES SEARCH, PRIOR TO COMMENCEMENT OF WORKS ON SITE. SEARCH RESULTS ARE TO BE KEPT ON SITE AT ALL TIMES.

STORMWATER DRAINAGE NOTES

- 1. STORMWATER DESIGN CRITERIA:
 - (A) AVERAGE RECURRENCE INTERVAL:
 - 5 YEAR ARI PIPED DRAINAGE
 - 100 YEAR ARI OVERLAND FLOW
 - (B) RAINFALL INTENSITIES: TIME OF CONCENTRATION:
 - 5 MINUTES
 - 5 YEAR ARI= 126mm/hr
 - 100 YEAR ARI= 219mm/hr
- 2. PIPES 375 DIA. AND LARGER TO BE REINFORCED CONCRETE CLASS '2' APPROVED SPIGOT AND SOCKET WITH RUBBER RING JOINTS. U.N.O.
- 3. PIPES 300 DIA AND LESS SHALL BE DWV GRADE (CLASS SN8) uPVC WITH SOLVENT WELDED JOINTS.
- 4. EQUIVALENT STRENGTH FRC PIPES MIN CLASS 3 MAY BE USED SUBJECT TO PRIOR APPROVAL BY PENRITH CITY COUNCIL.
- 5. ALL PIPES ARE TO BE UNIFORMLY SUPPORTED ALONG THE LENGTH OF THE BARREL WITH SUITABLE FILL MATERIAL. REFER TO BEDDING SUPPORT TYPE.
- 6. PIPES WITH SOCKETS SHALL BE LAID IN BEDDING WHERE SUITABLE RECESSES HAVE BEEN PROVIDED TO ENSURE PIPES DO NOT BEAR ON THEIR SOCKETS.
- 7. PIPES TO BE INSTALLED TO TYPE HSI SUPPORT IN ACCORDANCE WITH AS 3725 (2007) IN ALL CASES BACKFILL TRENCH WITH SAND TO 300mm ABOVE PIPE. WHERE PIPE IS UNDER PAVEMENTS BACKFILL REMAINDER OF TRENCH TO UNDERSIDE OF PAVEMENT WITH SAND OR APPROVED GRANULAR MATERIAL COMPACTED IN 150mm LAYERS TO MINIMUM 98% STANDARD MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS 1289 5.2.1. (OR A DENSITY INDEX OF NOT LESS THAN 75).
- 8. REFER TO AS/NZS 3725:2007 TABLE B1 FOR REQUIRED FILL DEPTHS ABOVE PIPE BARREL PRIOR TO USE OF COMPACTION MACHINERY OR TRAVERSING OF PIPES BY GENERAL SITE EQUIPMENT.
- 9. WHERE WORKING METHODS REQUIRE HIGHER CLASS PIPE, THE CONTRACTOR SHALL REFER TO AS 3725 (2007) TO DETERMINE THE APPROPRIATE PIPE CLASS. PROPOSED PIPE CLASS SHALL BE REVIEWED BY CARDNO PRIOR TO INSTALLATION.
- 10. ALL INTERNAL WORKS WITHIN PROPERTY BOUNDARIES ARE TO COMPLY WITH THE REQUIREMENTS OF AS 3500.3 (2015).
- 11. THE USE OF PRECAST PITS IS ONLY PERMITTED WITH THE PRIOR APPROVAL OF PENRITH CITY COUNCIL.
- 12. ENLARGERS, CONNECTIONS AND JUNCTIONS TO BE PREFABRICATED FITTINGS WHERE PIPES ARE LESS THAN 300 DIA.
- 13. WHERE SUBSOIL DRAINS PASS UNDER FLOOR SLABS AND VEHICULAR PAVEMENTS, UNSLOTTED uPVC DWV SEWER GRADE PIPE IS TO BE USED.
- 14. CARE IS TO BE TAKEN WITH LEVELS OF STORMWATER LINES. GRADES SHOWN ARE NOT TO BE REDUCED WITHOUT APPROVAL.
- 15. GRATES AND COVERS SHALL CONFORM TO AS 3996. MINIMUM CLASS C. UNLESS NOTED OTHERWISE.
- 16. ALL BOX CULVERTS SHALL BE STRUCTURALLY DESIGNED BY THE MANUFACTURER AND DELIVERED TO SITE AS FIT FOR PURPOSE.
- 17. AT ALL TIMES DURING CONSTRUCTION OF STORMWATER PITS, ADEQUATE SAFETY PROCEDURES SHALL BE TAKEN TO ENSURE AGAINST THE POSSIBILITY OF PERSONNEL FALLING DOWN PITS.

STORMWATER DRAINAGE NOTES CONTINUED

- 18. ALL EXISTING STORMWATER DRAINAGE LINES AND PITS THAT ARE TO REMAIN ARE TO BE INSPECTED AND CLEANED. DURING THIS PROCESS ANY PART OF THE STORMWATER DRAINAGE SYSTEM THAT WARRANTS REPAIR SHALL BE REPORTED TO THE SUPERINTENDENT/ENGINEER FOR FURTHER DIRECTIONS.

TELSTRA - DUTY OF CARE NOTE

TELSTRA'S PLANS SHOW ONLY THE PRESENCE OF CABLES AND PLANT. THEY ONLY SHOW THEIR POSITION RELATIVE TO ROAD BOUNDARIES, PROPERTY FENCES ETC. AT THE TIME OF INSTALLATION AND TELSTRA DOES NOT WARRANT OR HOLD OUT THAT SUCH PLANS ARE ACCURATE THEREAFTER DUE TO CHANGES THAT MAY OCCUR OVER TIME. DO NOT ASSUME DEPTH OR ALIGNMENT OF CABLES OR PLANT AS THESE VARY SIGNIFICANTLY. THE CONTRACTOR HAS A DUTY OF CARE WHEN EXCAVATING NEAR TELSTRA CABLES AND PLANT. BEFORE USING MACHINE EXCAVATORS TELSTRA PLANT MUST FIRST BE PHYSICALLY EXPOSED BY SOFT DIG POTHOLING TO IDENTIFY IT'S LOCATION TELSTRA WILL SEEK COMPENSATION FOR DAMAGES CAUSED TO IT'S PROPERTY AND LOSSES CAUSED TO TELSTRA AND IT'S CUSTOMERS.

SURVEY NOTES

THE EXISTING SITE CONDITIONS SHOWN ON THE FOLLOWING DRAWINGS HAVE BEEN INVESTIGATED BY RPS GROUP PLC (FORMERLY WHELANS INSITES), BEING REGISTERED SURVEYORS. THE INFORMATION IS SHOWN TO PROVIDE A BASIS FOR DESIGN. CARDNO DOES NOT GUARANTEE THE ACCURACY OR COMPLETENESS OF THE SURVEY BASE OR ITS SUITABILITY AS A BASIS FOR CONSTRUCTION DRAWINGS. SHOULD DISCREPANCIES BE ENCOUNTERED DURING CONSTRUCTION BETWEEN THE SURVEY DATA AND ACTUAL FIELD DATA, CONTACT CARDNO.

ROOF WATER KERB OUTLETS

- 1. KERB OUTLETS TO BE PROVIDED IN ACCORDANCE WITH PENRITH CITY COUNCILS CIVIL WORKS SPECIFICATION AT EACH LOT WHERE INTERALLOTMENT DRAINAGE IS NOT PROVIDED
- 2. KERB OUTLETS ARE TO BE CONSTRUCTED AT THE SAME TIME KERBS ARE POURED.
- 3. ALIGNMENT OF KERB OUTLET PIPE TO BE ADJUSTED ON SITE TO AVOID SERVICE CLASHES.

STREET FURNITURE

- 1. ALL LIGHT POLES, STREET NAMES AND BUS SHELTERS IN THIS SUBDIVISION WILL BE GALVANISED BLACK POWDER COATED TO THE SATISFACTION OF PENRITH CITY COUNCIL. FURTHER THAT THESE LIGHT POLES WILL COMPLY WITH COUNCIL'S SPECIFICATIONS.
- 2. ALL LIGHT POLES ARE TO BE TYPE 'MACARTHUR'. REFER ELECTRICAL DESIGN DRAWINGS.

CONCRETE NOTES

- 1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3600 CURRENT EDITION WITH AMENDMENTS, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
- 2. CONCRETE QUALITY
 - ALL REQUIREMENTS OF THE CURRENT ACSE CONCRETE SPECIFICATION DOCUMENT 1 SHALL APPLY TO THE FORMWORK, REINFORCEMENT AND CONCRETE UNLESS NOTED OTHERWISE.

ELEMENT	AS 3600 F'c MPa AT 28 DAYS	SPECIFIED SLUMP	NOMINAL AGG. SIZE
VEHICULAR BASE	32	60	20
KERBS AND PATHS	25	80	20
PITS, FOUNDATIONS & CULVERT BASE SLABS	40	80	20

- CEMENT TYPE SHALL BE (ACSE SPECIFICATION) TYPE SL
- PROJECT CONTROL TESTING SHALL BE CARRIED OUT IN ACCORDANCE WITH AS 1379.
- 3. NO ADMIXTURES SHALL BE USED IN CONCRETE UNLESS APPROVED IN WRITING BY CARDNO.
- 4. CLEAR CONCRETE COVER TO ALL REINFORCEMENT FOR DURABILITY SHALL BE 40mm TOP AND 70mm FOR EXTERNAL EDGES UNLESS NOTED OTHERWISE.
- 5. ALL REINFORCEMENT SHALL BE FIRMLY SUPPORTED ON MILD STEEL PLASTIC TIPPED CHAIRS, PLASTIC CHAIRS OR CONCRETE CHAIRS AT NOT GREATER THAN 1m CENTRES BOTH WAYS. BARS SHALL BE TIED AT ALTERNATE INTERSECTIONS.
- 6. THE FINISHED CONCRETE SHALL BE A DENSE HOMOGENEOUS MASS, COMPLETELY FILLING THE FORMWORK, THOROUGHLY EMBEDDING THE REINFORCEMENT AND FREE OF STONE POCKETS. ALL CONCRETE INCLUDING SLABS ON GROUND AND FOOTINGS SHALL BE COMPACTED AND CURED IN ACCORDANCE WITH R.T.A. SPECIFICATION R83.

PROPOSED WORKS LEGEND

PROPOSED

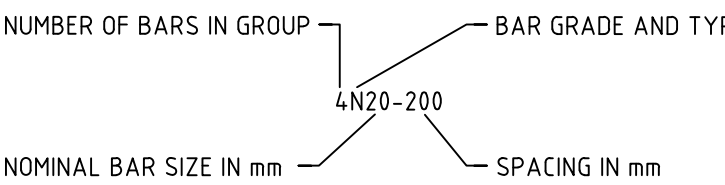
- 100.0' PROPOSED CONTOURS
- 100.0' EXISTING CONTOURS
- SITE BOUNDARY
- PROPOSED SEWER
- BATTER SLOPE
- EXTENT OF WORKS
- TREES TO BE REMOVED AS PART OF BULK EARTHWORKS PACKAGE.
- TREES TO BE RETAINED
- BATTERS
- LOT NUMBERS
- KERB & GUTTER REFER PENRITH CITY COUNCIL STANDARD DETAIL.
- MEDIAN KERB REFER DRAWING 1601 FOR DETAILS
- VEHICULAR CROSSING REFER PENRITH CITY COUNCIL STANDARD DETAIL.
- PRAM RAMP REFER PENRITH CITY COUNCIL FOR DETAIL.
- STORMWATER PIPELINE
- CONCRETE HEADWALL
- DRAINAGE LINE No. DRAINAGE PIT No.
- DRAINAGE CAP
- STORMWATER DRAINAGE PITS
- SCOUR PROTECTION
- EXISTING WATER COURSES AS PER 1:10000 TOPOGRAPHIC MAPS

EXISTING WORKS LEGEND

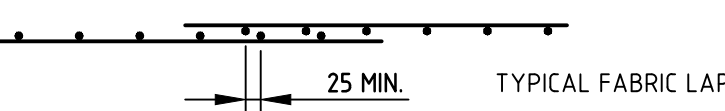
- TRANSGRID PYLON
- TRANSGRID EASEMENT
- TRANSGRID OVERHEAD ELECTRICAL
- EXISTING SEWER
- EXISTING SERVICE RELOCATED

REINFORCEMENT NOTES

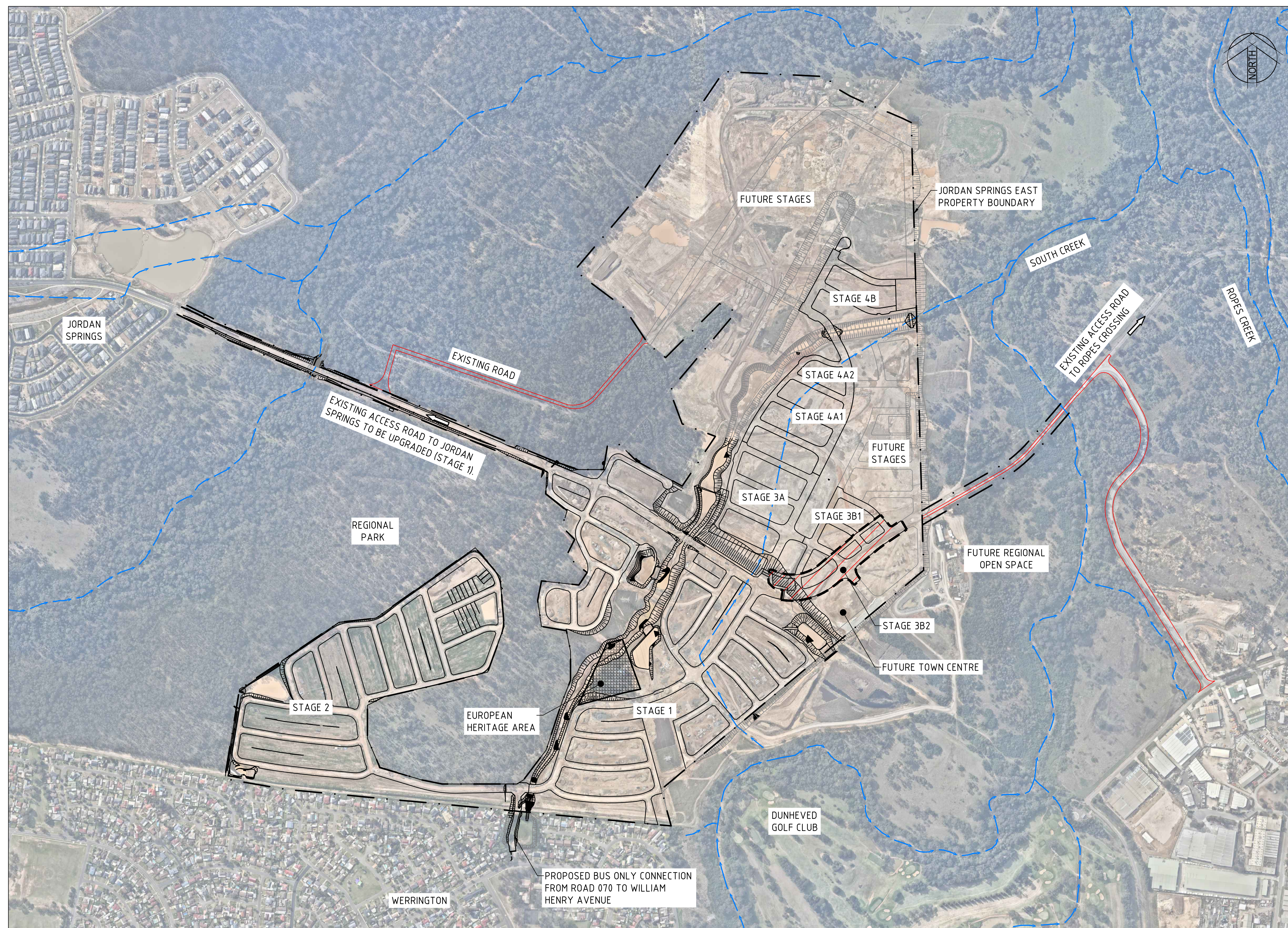
- 1. REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY. IT IS NOT NECESSARILY SHOWN IN TRUE PROJECTION.
- 2. SPLICES IN THE REINFORCEMENT SHALL BE MADE ONLY IN THE POSITIONS SHOWN. THE WRITTEN APPROVAL OF THE ENGINEER SHALL BE OBTAINED FOR ANY OTHER SPLICES. WHERE THE LAP LENGTH IS NOT SHOWN IT SHALL BE SUFFICIENT TO DEVELOP THE FULL STRENGTH OF THE REINFORCEMENT.
- 3. WELDING OF REINFORCEMENT WILL NOT BE PERMITTED UNLESS SHOWN ON THE STRUCTURAL DRAWINGS OR APPROVED IN WRITING BY THE ENGINEER.
- 4. REINFORCEMENT SYMBOLS -
 - N - DENOTES GRADE 400N TEMPORCE DEFORMED BARS TO AS 1302
 - R - DENOTES GRADE 250R HOT ROLLED PLAIN BARS TO AS 1302
 - SL - DENOTES HARD-DRAWN WIRE REINFORCING FABRIC TO AS 1304
 - W - DENOTES HARD-DRAWN PLAIN WIRE TO AS 1303
- 5. REINFORCEMENT COGS AND EXTENSIONS TO BE IN ACCORDANCE WITH AS3600.



- 5. THE FIGURES FOLLOWING THE FABRICS SYMBOL 'SL' IS THE REFERENCE NUMBER FOR FABRIC TO AS 1304.
- 6. ALL REINFORCEMENT FABRIC SHALL COMPLY WITH AS1303 AND AS1304 AND SHALL BE SUPPLIED AS FLAT SHEETS.



- FABRIC SHALL BE LAPPED 2 TRANSVERSE WIRES PLUS 50mm. BUNDLED BARS SHALL BE TIED TOGETHER AT 30 BAR DIAMETER CENTRES WITH 3 WRAPS OF WIRE.
- 7. PLACE SUFFICIENT BAR CHAIRS UNDER BOTTOM REINFORCING RODS AND TOP CROSSRODS IN SLABS TO ALLOW THEM TO BE SUPPORTED IN THEIR CORRECT POSITIONS DURING CONCRETING (NOT GREATER THAN 900mm (CENTRES BOTH WAYS))
- 8. REINFORCEMENT LAYERS DENOTED THIS UNO -
 - TT - DENOTES TOP BARS LAID LAST IN TOP
 - T - DENOTES TOP BARS LAID FIRST IN TOP
 - B - DENOTES BOTTOM BARS LAID SECOND IN BOTTOM
 - BB - DENOTES BOTTOM BARS LAID FIRST IN BOTTOM
- 9. WHERE TRANSVERSE TIE BARS ARE NOT SHOWN PROVIDE N12-300 SPLICED WHERE NECESSARY AND LAP WITH MAIN BARS 450mm UNLESS NOTED OTHERWISE.
- 10. MINIMUM LAP LENGTHS UNLESS NOTED OTHERWISE SHALL BE -
 - 500 FOR N12 BARS
 - 600 FOR N16 BARS
 - 900 FOR N20 BARS
 - 1000 FOR N24 BARS
 - 1200 FOR N28 BARS
 - 1500 FOR N32 BARS
 - 1800 FOR N36 BARS



CONTEXT PLAN
SCALE 1:5000

LEGEND

STAGE 3B2 EXTENT

JORDAN SPRINGS EAST PROPERTY BOUNDARY

EXISTING WATER COURSES AS PER 1:10000 TOPOGRAPHIC MAPS



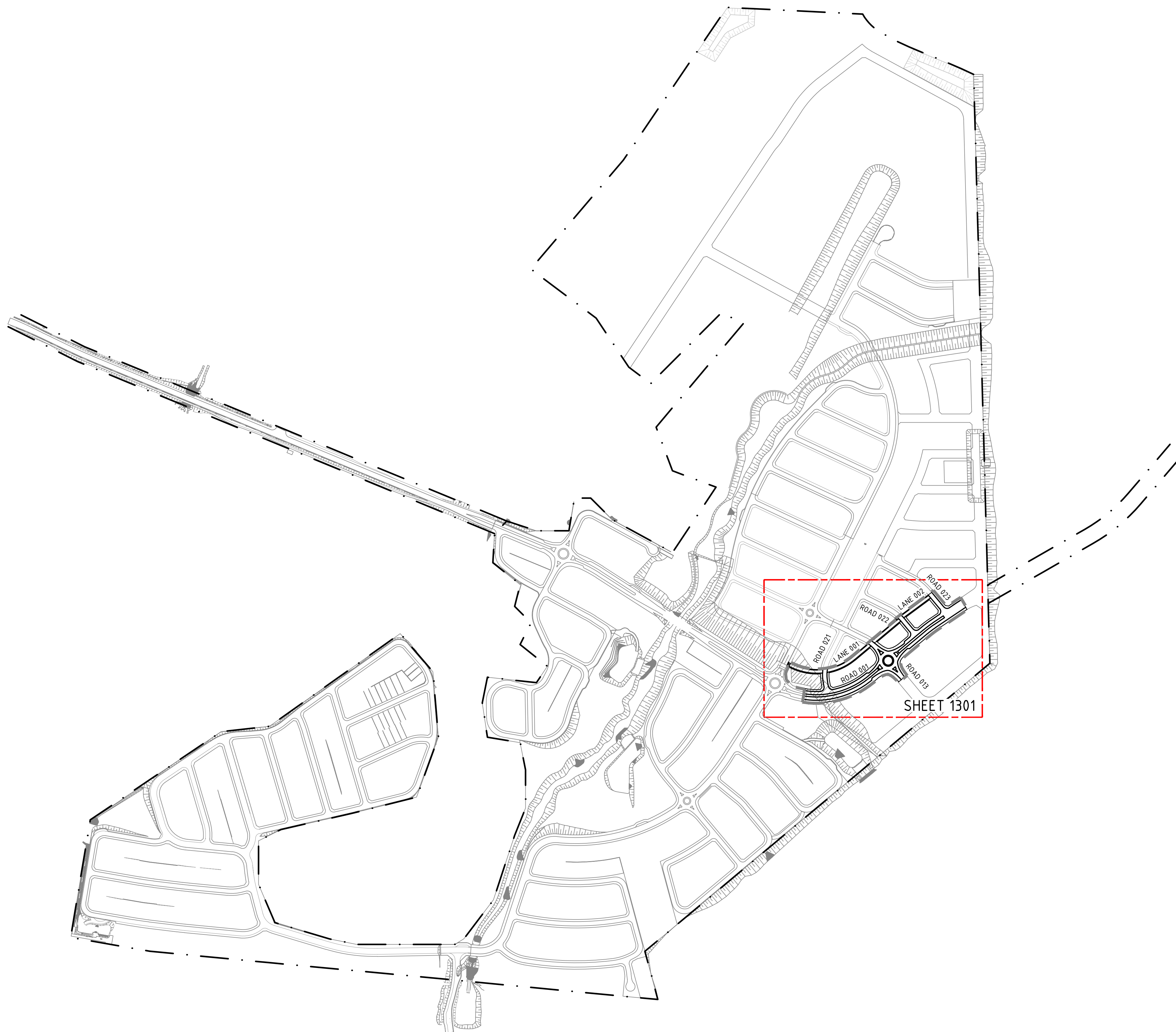
2	15.09.17	ISSUED FOR DEVELOPMENT APPLICATION APPROVAL	BJD		ARM	
1	08.09.17	DRAFT - ISSUED FOR INFORMATION	BJD		ARM	
Rev.	Date	Description	Des.	Verif.	Appd	

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Drawn MCD	Date 15.09.17	Client LENLEASE			
Checked DAC	Date 15.09.17	Project JORDAN SPRINGS EAST STAGE 3B2 - CIVIL WORKS DEVELOPMENT APPLICATION	Status FOR APPROVAL		
Designed BUD	Date 15.09.17		NOT TO BE USED FOR CONSTRUCTION PURPOSES		
Verified	Date				
Approved		Title CONTEXT PLAN	Datum AHD	Scale 1:5000	Size A1
ARM	15.09.17		Drawing Number CV-CARDNO-ST03B2-1021	Revision 2	

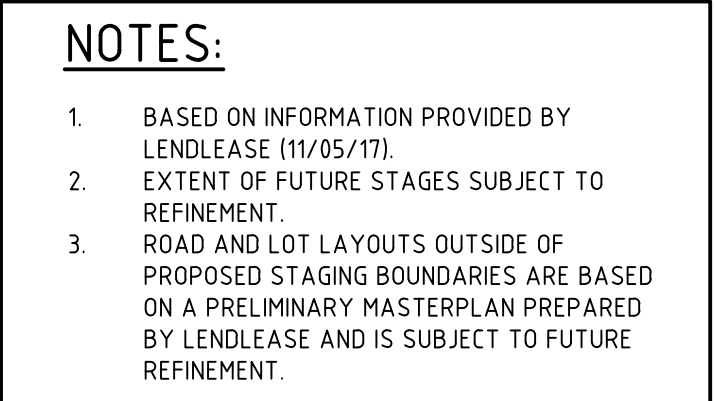
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








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DAC	15.09.17
Designed	Date
BJD	15.09.17
Verified	Date
Approved	
ARM	15.09.17

Client	LENLEASE		
Project	JORDAN SPRINGS EAST STAGE 3B2 - CIVIL WORKS DEVELOPMENT APPLICATION	Status	FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES
Title	GENERAL ARRANGEMENT PLAN	Datum	AHD
		Scale	1:4000
		Drawing Number	CV-CARDNO-ST03B2-1031
		Revision	2



	STAGE BOUNDARY
	PROPOSED LOTS
	A2 ACCESSWAY
	BRIDGE
	B1 BUS LINK
	C3 COLLECTOR ROAD MAIN STREET
	C5 COLLECTOR ROAD VILLAGE CENTRE
	E1 EMPLOYMENT STREET
	JORDANS CONNECTOR ROAD REFER DRAWING SET 89914.020 - JC01 FOR TYPICAL CROSS SECTIONS.
	L1 MINOR LOCAL STREET
	L2 PEDESTRIAN PRIORITY
	L3 LOCAL STREET POSSIBLE BUS ROUTE
	P1 PARK EDGE ROAD
	P2 PARK EDGE ROAD POSSIBLE BUS LINK
	TEMPORARY ROAD



2	15.09.17	ISSUED FOR DEVELOPMENT APPLICATION APPROVAL	B/JD		ARM
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Designed	Date
BJD	15.09.17
Verified	Date
Approved	
ARM	15.09.17

Client	LENDLEASE
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Project JORDAN SPRINGS EAST
STAGE 3B2 - CIVIL WORKS
DEVELOPMENT APPLICATION

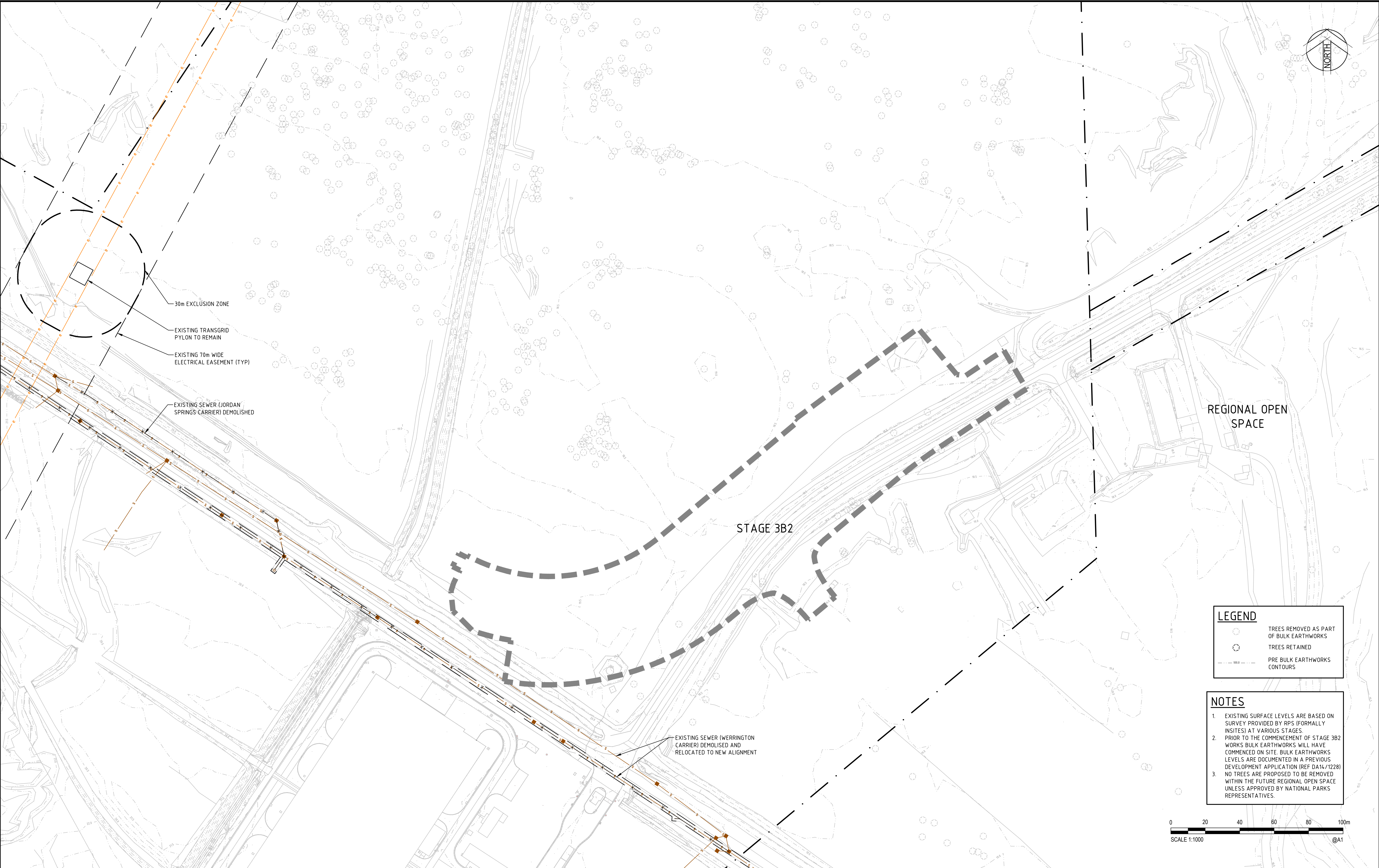
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Status **FOR APPROVAL**
NOT TO BE USED FOR CONSTRUCTION PURPOSES

Datum		Scale	Size
AHD		1:4000	A1
Drawing Number			Revision
CV-CARDNO-ST03B2-1041			2

DATE PLOTTED: 15 September 2017 2:56 PM BY: BRITTANY DEBONO

XREFs: Xref-88914020-Survey; Xref-88914020-Existing Services; Xref-88914020-Existing Trees; Xref-88914020-Client Logos; Xref-88914020-22-01-DESIGN
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LEGEND

- TREES REMOVED AS PART OF BULK EARTHWORKS
- TREES RETAINED
- PRE BULK EARTHWORKS CONTOURS

NOTES

- EXISTING SURFACE LEVELS ARE BASED ON SURVEY PROVIDED BY RPS (FORMALLY INSITES) AT VARIOUS STAGES.
- PRIOR TO THE COMMENCEMENT OF STAGE 3B2 WORKS BULK EARTHWORKS WILL HAVE COMMENCED ON SITE. BULK EARTHWORKS LEVELS ARE DOCUMENTED IN A PREVIOUS DEVELOPMENT APPLICATION (REF DA14/1228)
- NO TREES ARE PROPOSED TO BE REMOVED WITHIN THE FUTURE REGIONAL OPEN SPACE UNLESS APPROVED BY NATIONAL PARKS REPRESENTATIVES.



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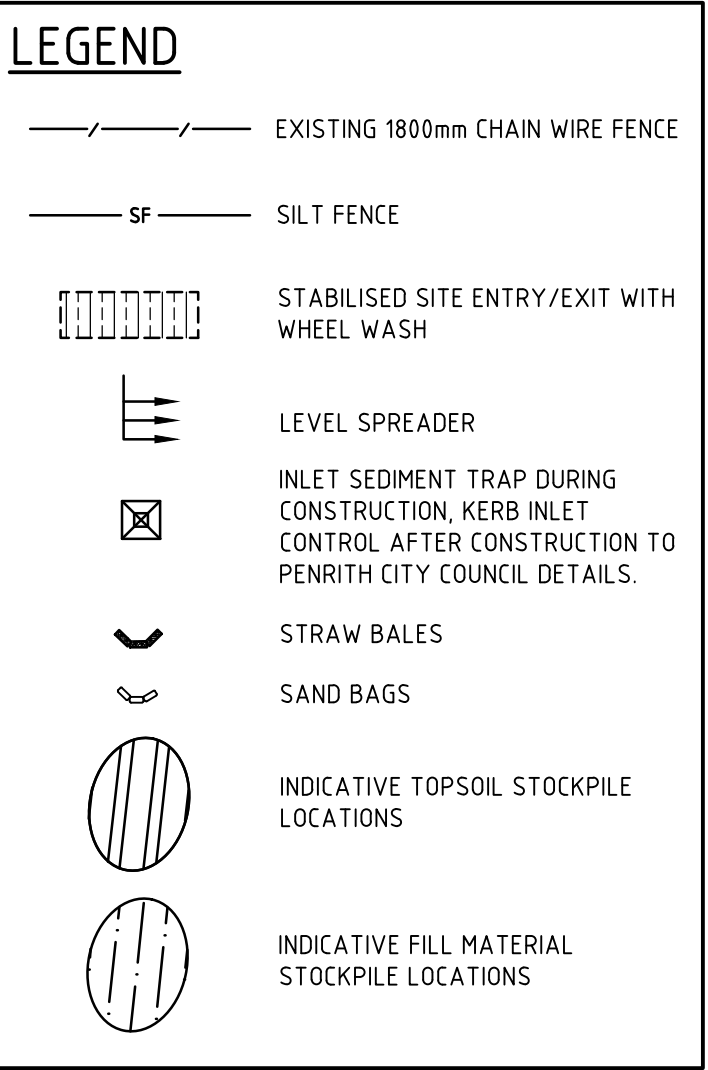
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Verified		Date	
Approved		Date	
ARM		Date	15.09.17

Client	LENLEASE
Project	JORDAN SPRINGS EAST STAGE 3B2 - CIVIL WORKS DEVELOPMENT APPLICATION
Title	EXISTING SERVICES AND SURVEY PLAN

Status	FOR APPROVAL		
NOT TO BE USED FOR CONSTRUCTION PURPOSES			
Datum		Scale	Size
AHD		1:1000	A1
Drawing Number			Revision
CV-CARDNO-ST03B2-1051			2



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	Designed	Date
	SJD	15.09.17
	Verified	Date
	Approved	
	ARM	15.09.17

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CV-CARDNO-ST03B2-1101			2



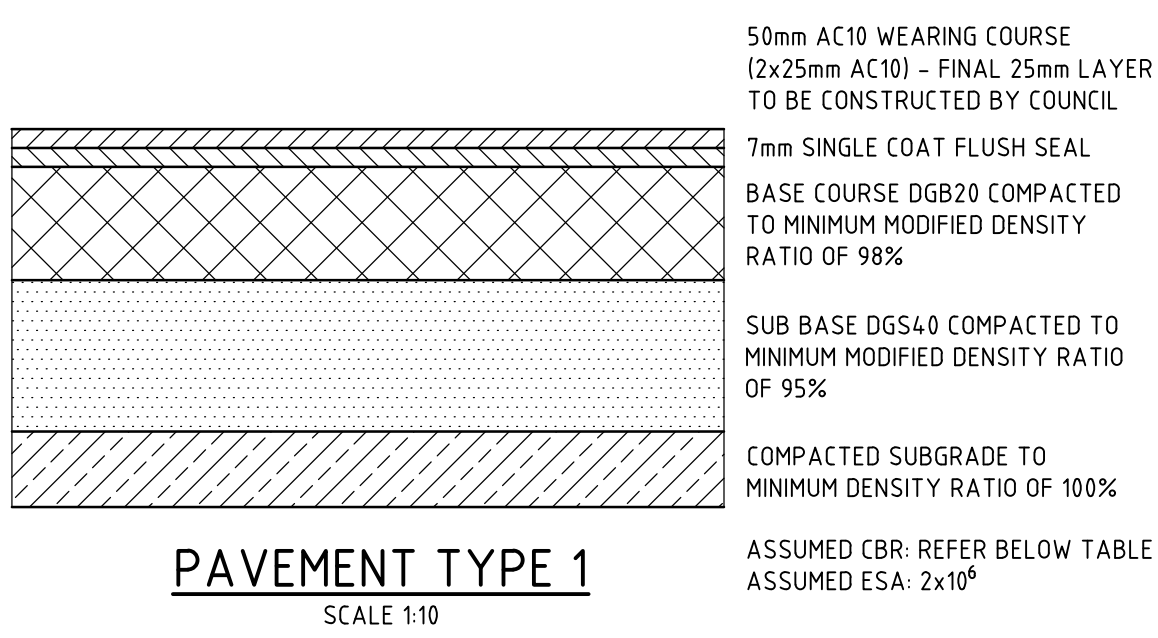
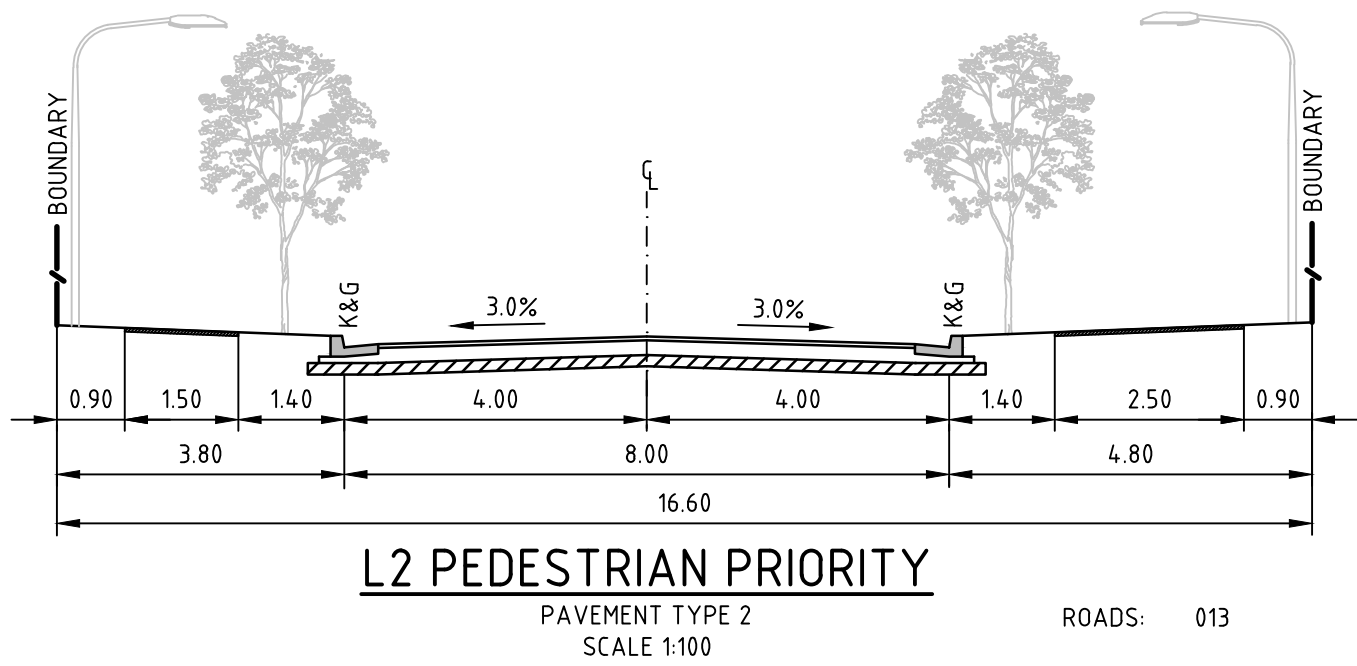
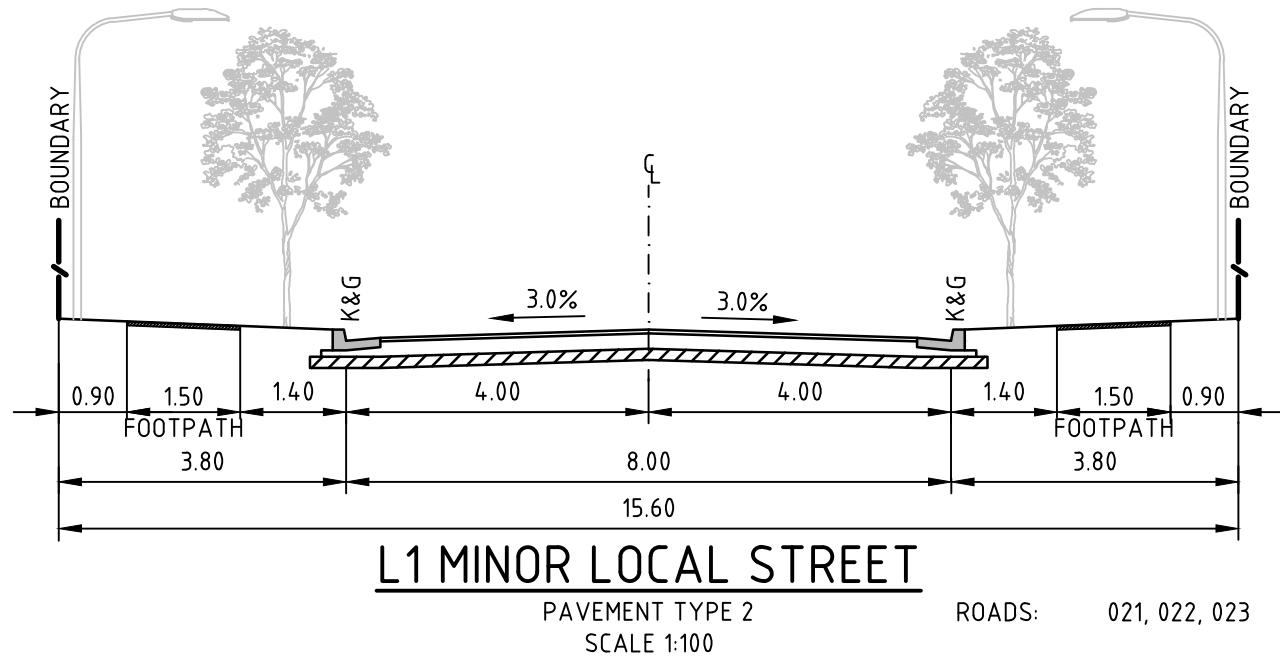
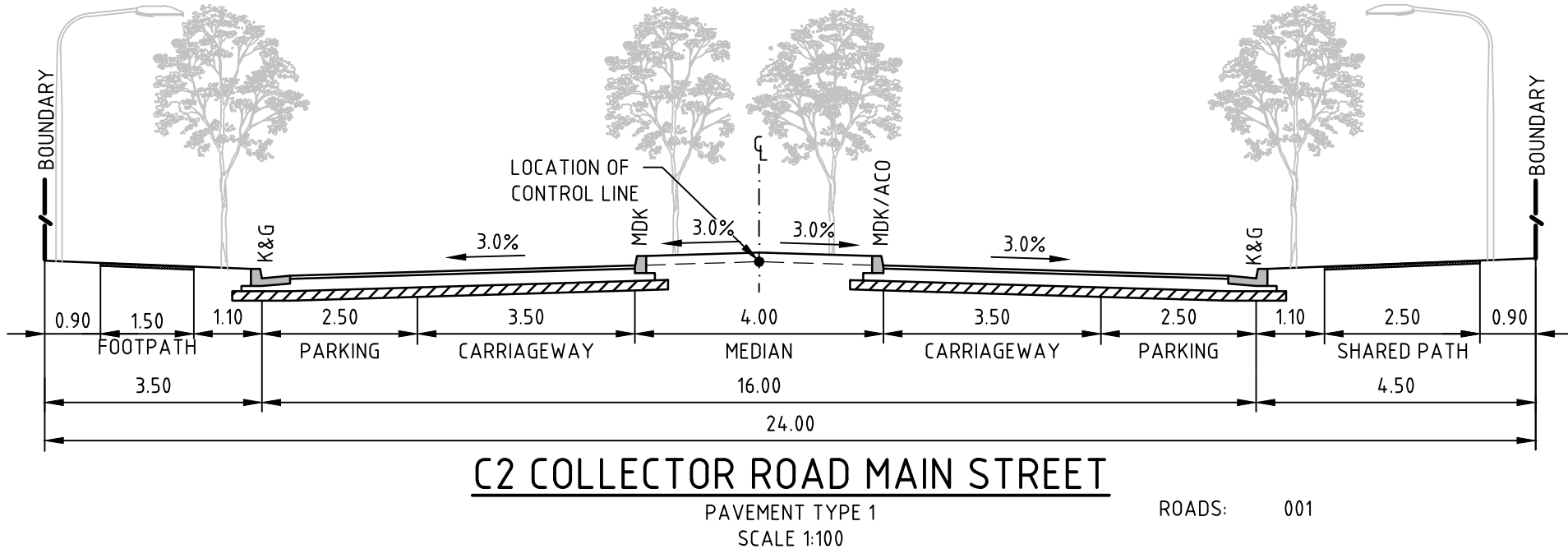
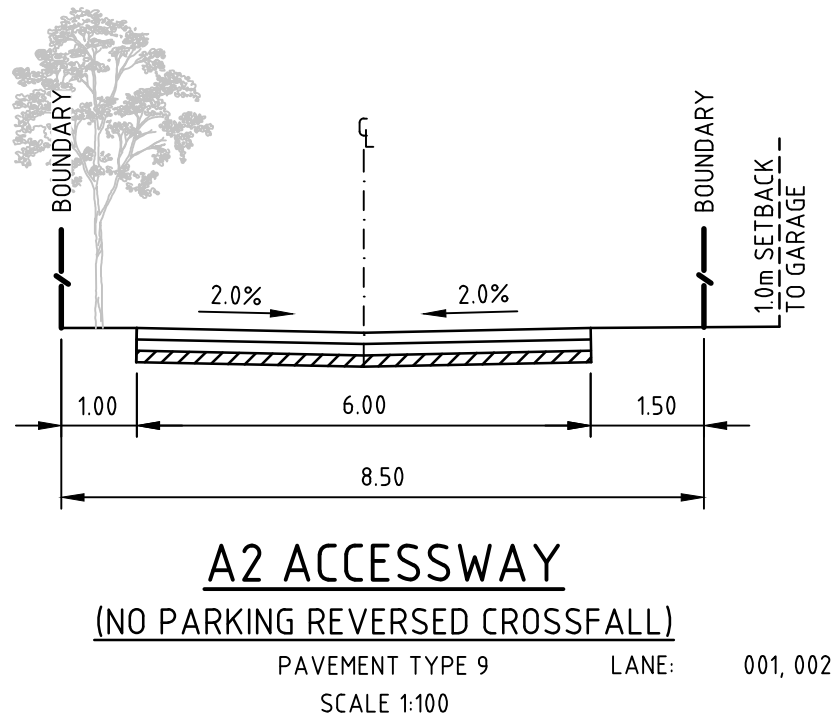
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1	08.09.17	DRAFT - ISSUED FOR INFORMATION		BJD	ARM
Rev.	Date	Description		Des.	Verif. Appd.

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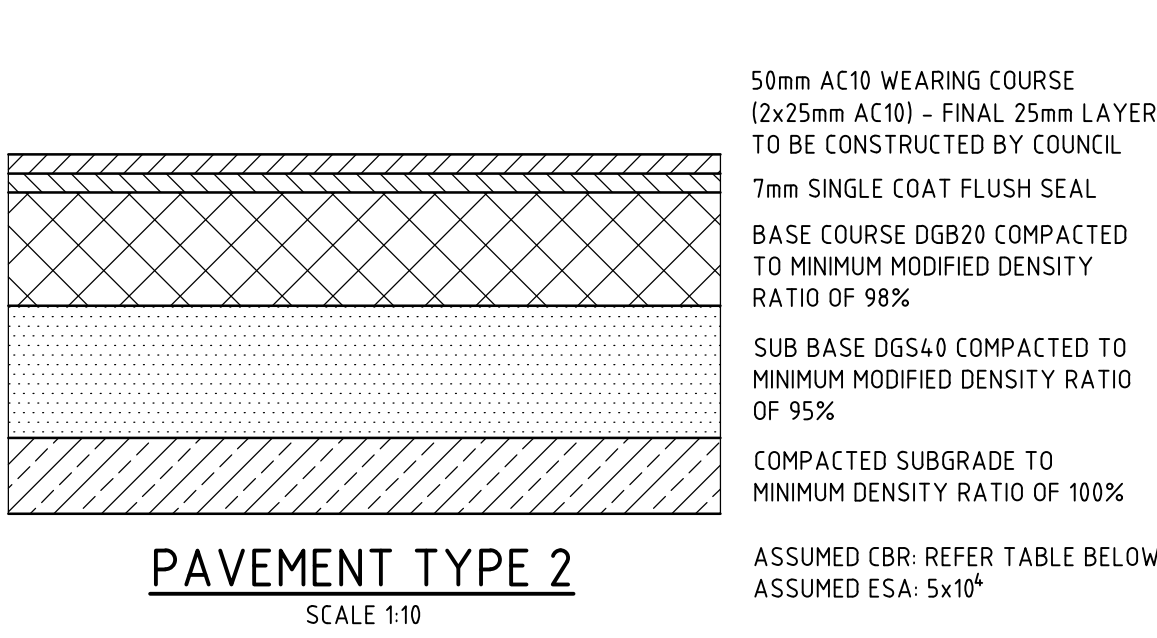
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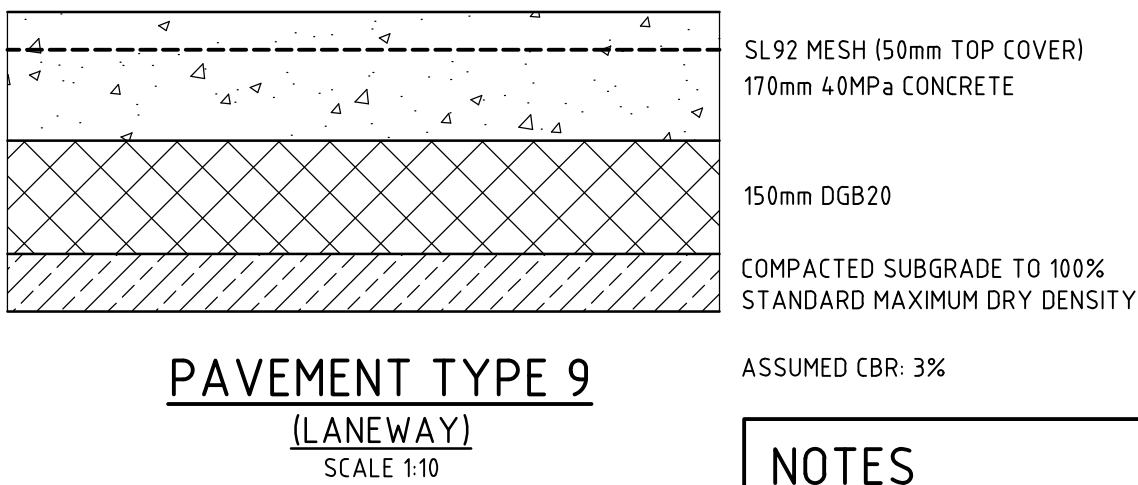
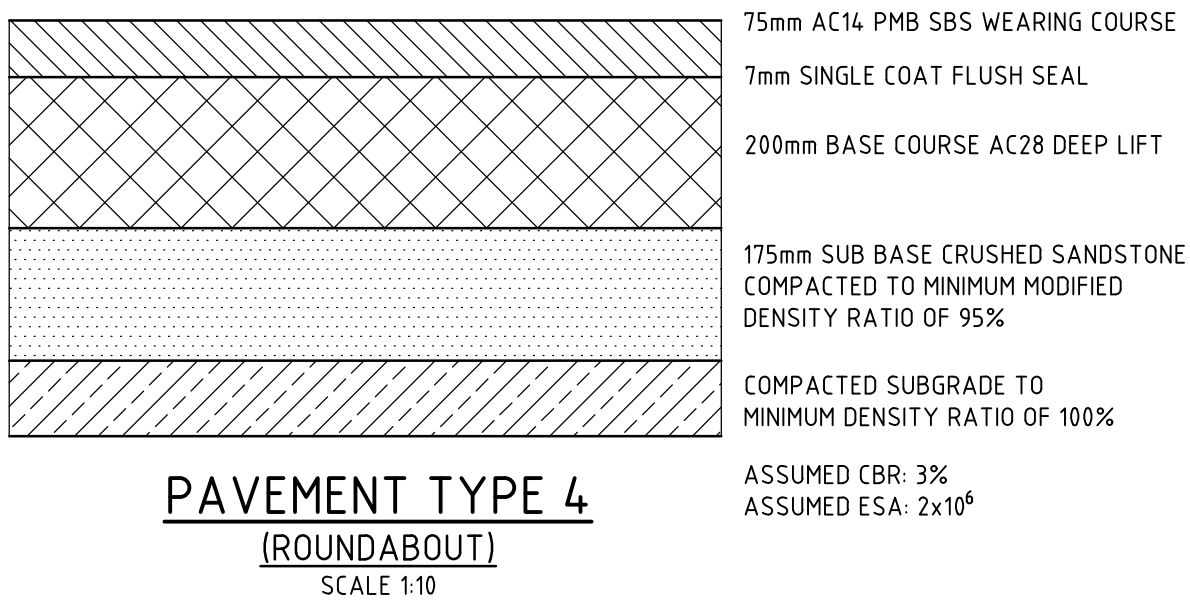
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Checked	Date	Project	JORDAN SPRINGS EAST STAGE 3B2 - CIVIL WORKS DEVELOPMENT APPLICATION		
DAC	15.09.17				
Designed	Date				
BUD	15.09.17				
Verified	Date		Status NOT TO BE USED FOR CONSTRUCTION PURPOSES		
Approved		Title	Datum AHD		
ARM	15.09.17	EROSION AND SEDIMENTATION CONTROL DETAILS	Scale AS SHOWN	Size A1	Drawing Number CV-CARDNO-ST03B2-1131
				Revision	2



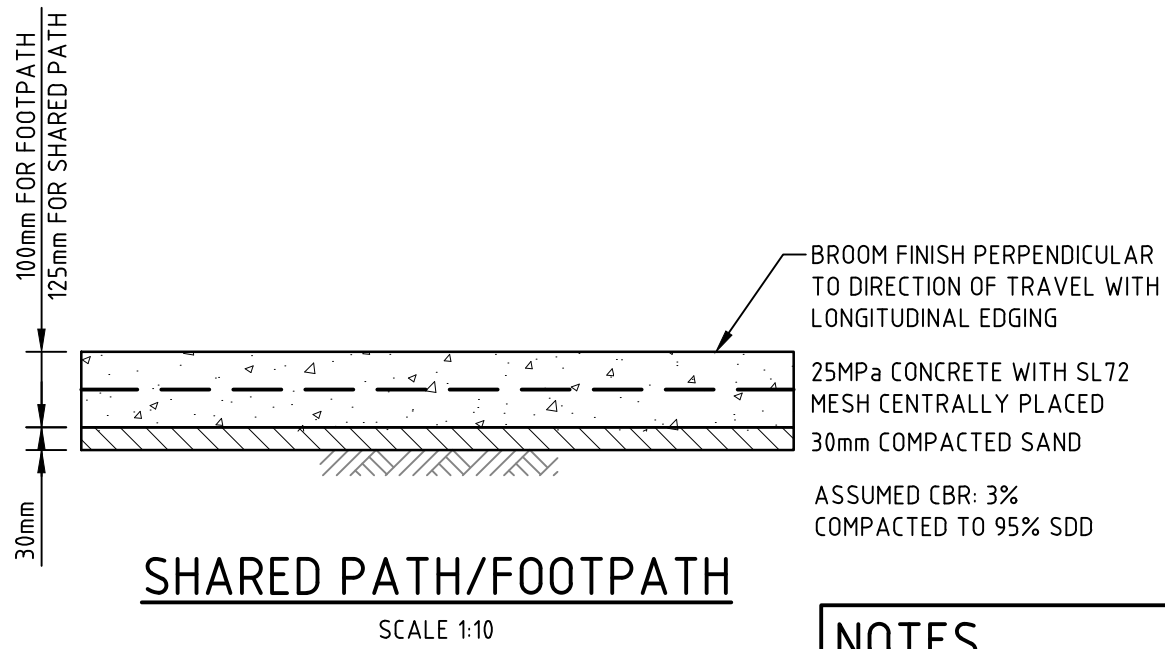
PAVEMENT 1 DESIGN		
DESIGN SUBGRADE	CBR 3%	CBR 5%
WEARING SURFACE	50mm AC10	50mm AC10
SINGLE COAT FLUSH SEAL	7mm	7mm
BASECOURSE	150mm	150mm
SUBBASE	410mm	290mm
TOTAL THICKNESS	610mm	490mm



PAVEMENT 2 DESIGN		
DESIGN SUBGRADE	CBR 3%	CBR 5%
WEARING SURFACE	50mm AC10	50mm AC10
SINGLE COAT FLUSH SEAL	7mm	7mm
BASECOURSE	150mm	150mm
SUBBASE	275mm	175mm
TOTAL THICKNESS	475mm	375mm

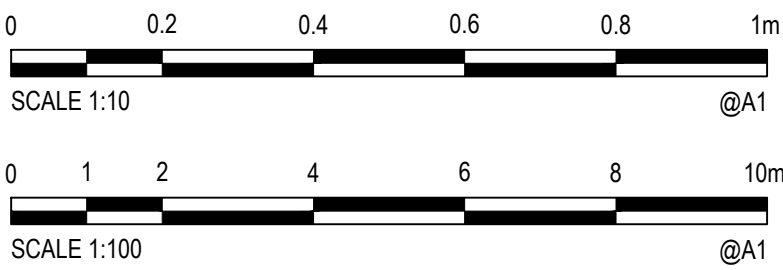


- NOTES**
- SAWCUT PATH OR TROWELLED DUMMY JOINT AT 4m SPACING.
 - EVERY THIRD JOINT TO BE FULL DEPTH DOWELLED EXPANSION JOINT.
 - REFER DRAWING 1601 FOR JOINT DETAILS.



- NOTES**
- SAWCUT PATH OR TROWELLED DUMMY JOINT AT 2m SPACING.
 - EVERY THIRD JOINT TO BE FULL DEPTH DOWELLED EXPANSION JOINT.
 - REFER DRAWING 1601 FOR JOINT DETAILS.

- NOTES**
- STREET SCAPES SHOWN ARE INDICATIVE ONLY AND SUBJECT TO DETAILED LANDSCAPING DESIGN AND APPROVAL.
 - FOOTPATHS TO BE GRADED AT MAXIMUM 2.5%. REMAINING VERGE AREAS TO BE GRADED TO ACHIEVE OVERALL 4.0% GRADE FROM TOP OF KERB TO ROAD RESERVE BOUNDARY.
 - CONSTRUCTION OF FOOTPATH AND SHARED PATH TO BE DEFERRED UNTIL DIRECTED BY THE SITE SUPERINTENDENT.
 - REFER DRAWING 1701 FOR PAVEMENT PLAN.



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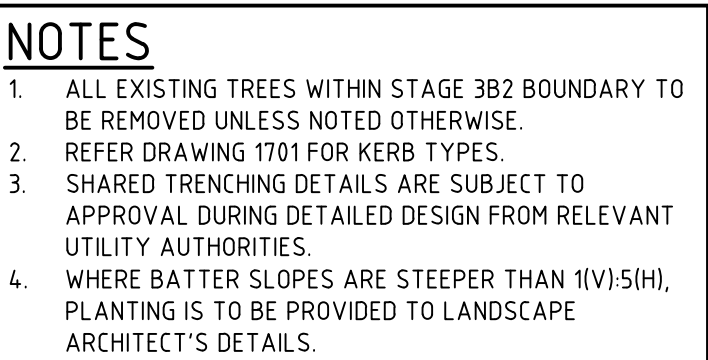
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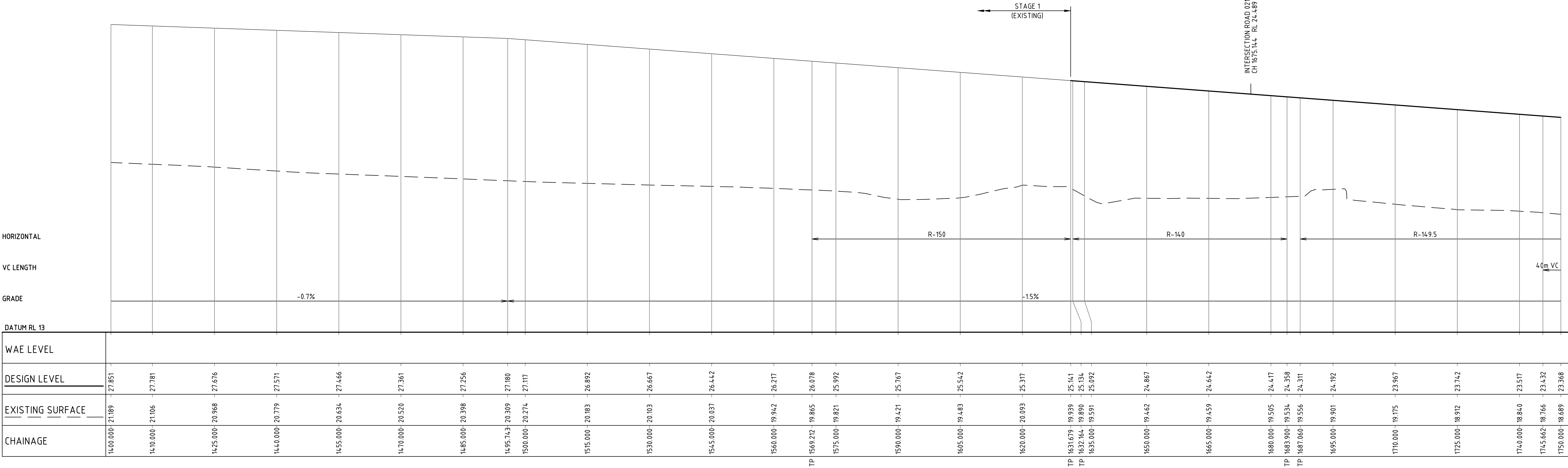
Drawn	MCD	Date	15.09.17
Checked	DAC	Date	15.09.17
Designed	BJD	Date	15.09.17
Verified		Date	
Approved	ARM	Date	15.09.17

Client	LENLEASE
Project	JORDAN SPRINGS EAST STAGE 3B2 - CIVIL WORKS DEVELOPMENT APPLICATION
Title	TYPICAL ROAD CROSS SECTIONS

Status	FOR APPROVAL
Datum	AHD
Scale	AS SHOWN
Size	A1
Drawing Number	CV-CARDNO-ST03B2-1251
Revision	2

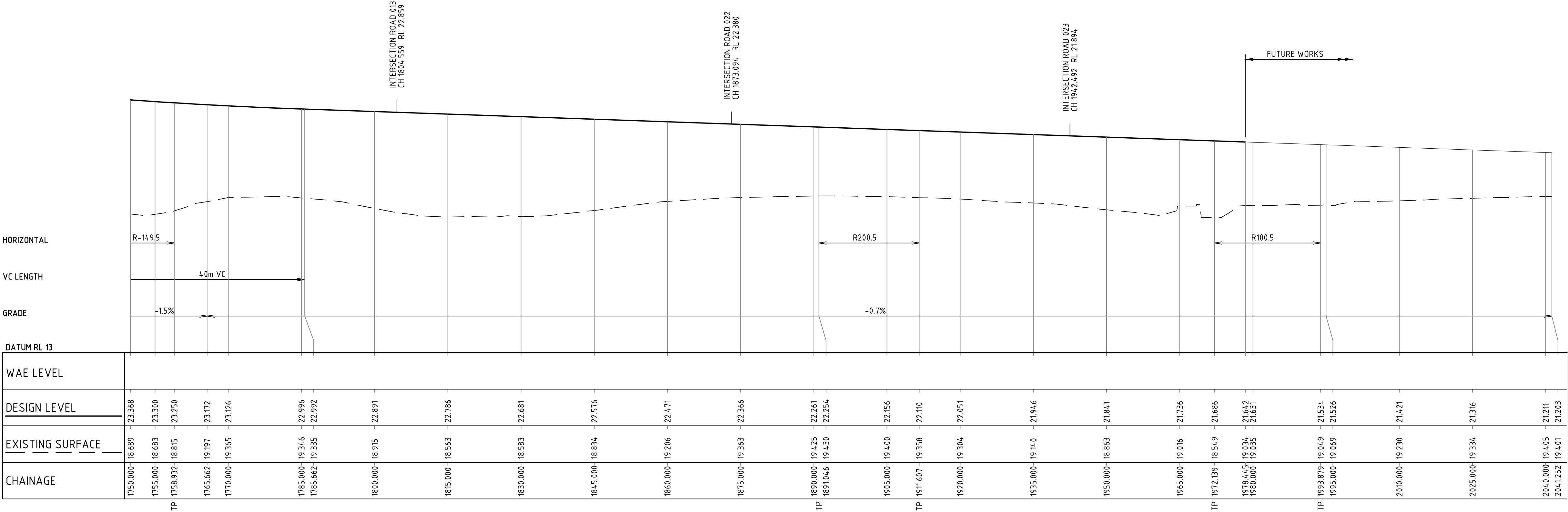


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NOT TO BE USED FOR CONSTRUCTION PURPOSES					
Datum		Scale		Size	
AHD		1:500		A1	
Drawing Number					Revision
CV-CARDNO-ST03B2-1301					2



ROAD 001 LONGITUDINAL SECTION

1:500 HORI.
1:100 VERT.



ROAD 001 LONGITUDINAL SECTION

1:500 HORI.
1:100 VERT.



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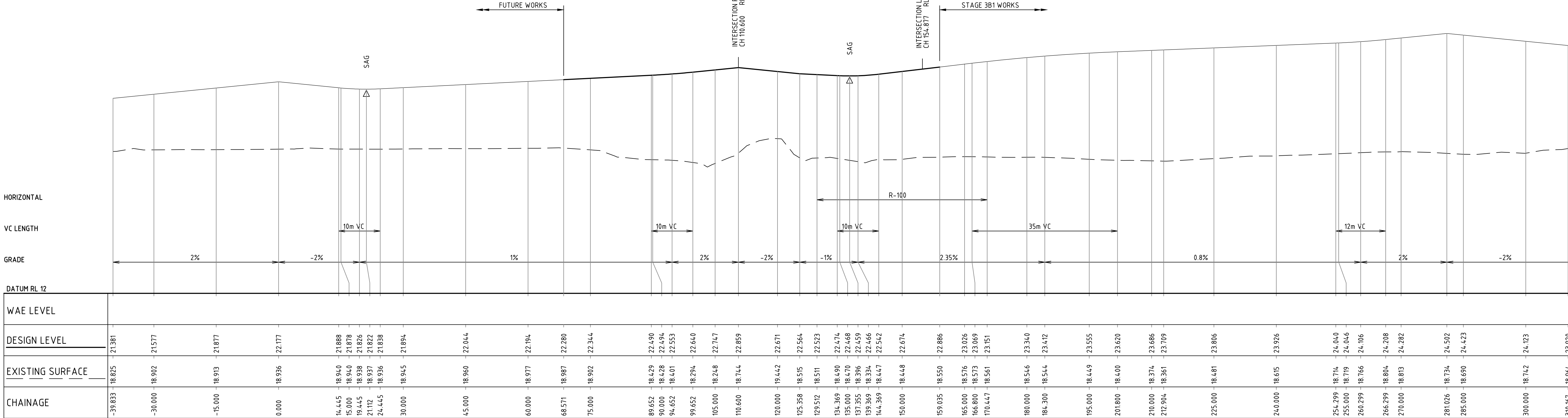
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Designed	BJD	Date	15.09.17
Verified		Date	
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ARM		Date	15.09.17

Client **LENLEASE**

Project **JORDAN SPRINGS EAST
STAGE 3B2 - CIVIL WORKS
DEVELOPMENT APPLICATION**

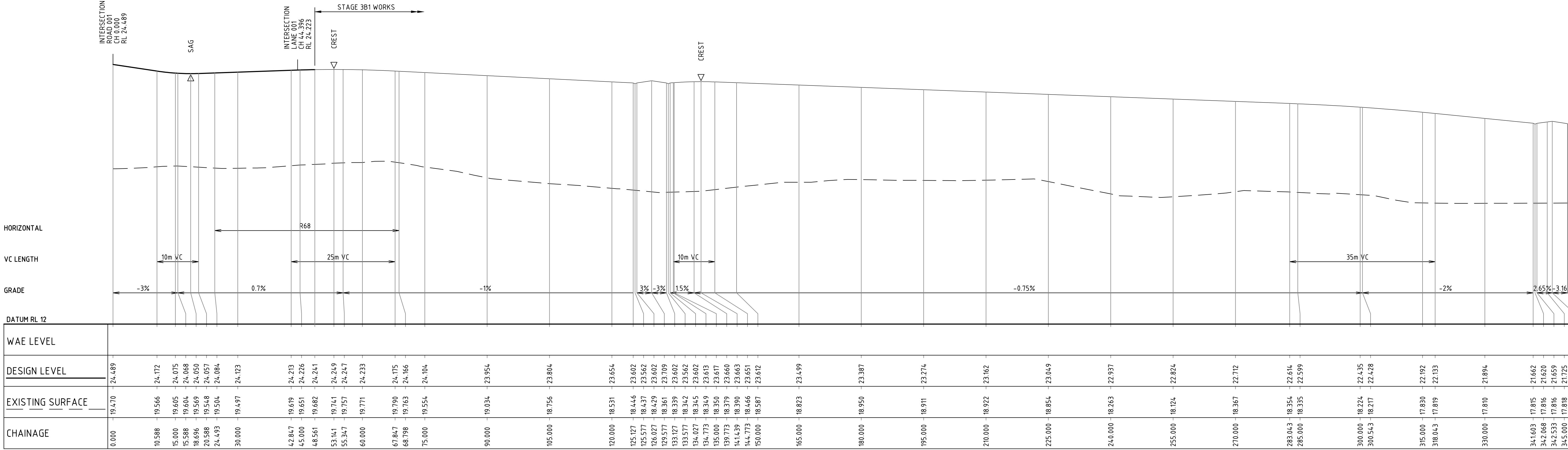
Title **ROAD LONGITUDINAL SECTIONS
SHEET 1 ROAD 001**

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FOR APPROVAL			
NOT TO BE USED FOR CONSTRUCTION PURPOSES			
Datum		Scale	Size
AHD		AS SHOWN	A1
Drawing Number			Revision
CV-CARDNO-ST03B2-1351			2



ROAD 013 LONGITUDINAL SECTION

1:500 HORI.
1:100 VERT.



ROAD 021 LONGITUDINAL SECTION

1:500 HORI.
1:100 VERT.



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Verified		Date	
Approved	ARM	Date	15.09.17

Client	LENLEASE
Project	JORDAN SPRINGS EAST STAGE 3B2 - CIVIL WORKS DEVELOPMENT APPLICATION
Title	ROAD LONGITUDINAL SECTIONS SHEET 2 ROAD 013 & 021

Status	FOR APPROVAL
Datum	AHD
Scale	AS SHOWN
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Drawing Number	CV-CARDNO-ST03B2-1352
Revision	2

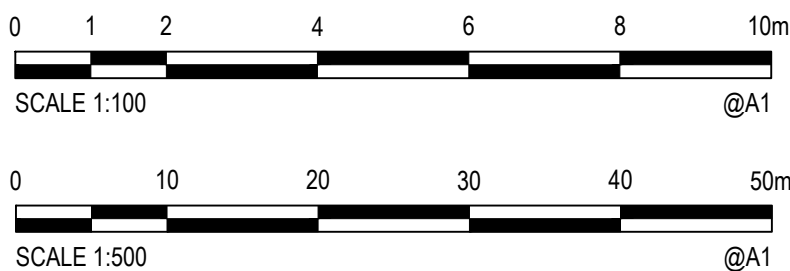


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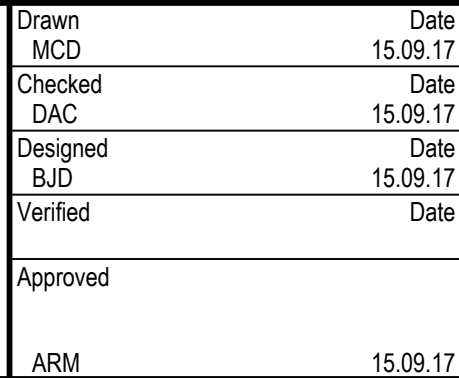
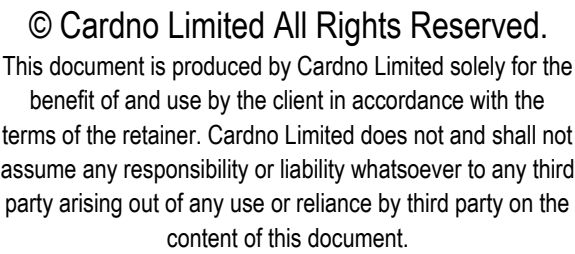


Drawn	Date
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DAC	15.09.17
Designed	Date
BJD	15.09.17
Verified	Date
Approved	
ARM	15.09.17

Client				LENDLEASE			
Project				JORDAN SPRINGS EAST STAGE 3B2 - CIVIL WORKS DEVELOPMENT APPLICATION			
Title				ROAD LONGITUDINAL SECTIONS SHEET 3 ROAD 022 & 023			
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				Datum		Scale	
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				Drawing Number		Size	
				CV-CARDNO-ST03B2-1353		A1	
						Revision	
						2	



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Rev.	Date	Description	Des.	Verif.	Appd.



Client LENDLEASE				
Project JORDAN SPRINGS EAST STAGE 3B2 - CIVIL WORKS DEVELOPMENT APPLICATION			Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES	
Title ROAD LONGITUDINAL SECTIONS SHEET 4 LANE 001 & 002			Datum AHD	Scale AS SHOWN
			Size A1	Revision 2
			Drawing Number CV-CARDNO-ST03B2-1354	

ROUNABOUT CENTRE ISLAND PLAN

ROUNDAABOUT CENTRE ISLAND DETAIL

TYPICAL ROUNDABOUT SPLITTER ISLAND DETAIL

NOTES

ROUNDABOUT ANNULUS SHALL BE GRADED AT 3%
RELATIVE TO ROAD GRADE NOT 3% ABSOLUTE.

TYPICAL CENTRAL MEDIAN DETAIL

TRANSVERSE CONTRACTION JOINT (TCJ)

DETAIL  A

NTS  -

DOWELED EXPANSION JOINT (DEJ)
SCALE 1:10

DISH DRAIN (DD)
SCALE 1:10

MEDIAN KERB (MDK)
(RMS SF KERB)
SCALE 1:10

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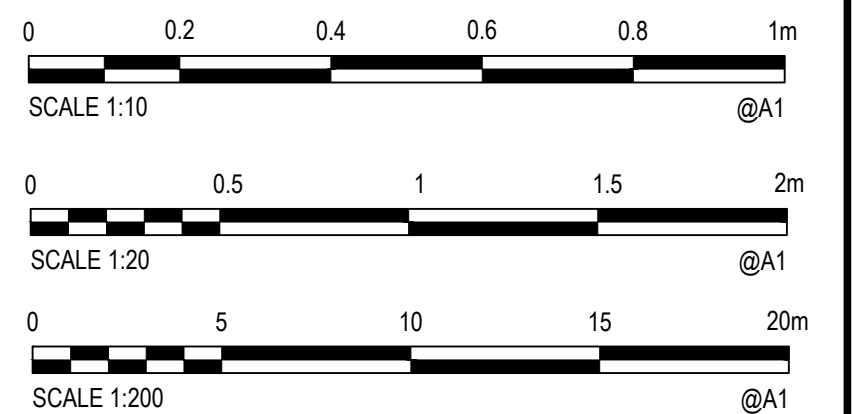


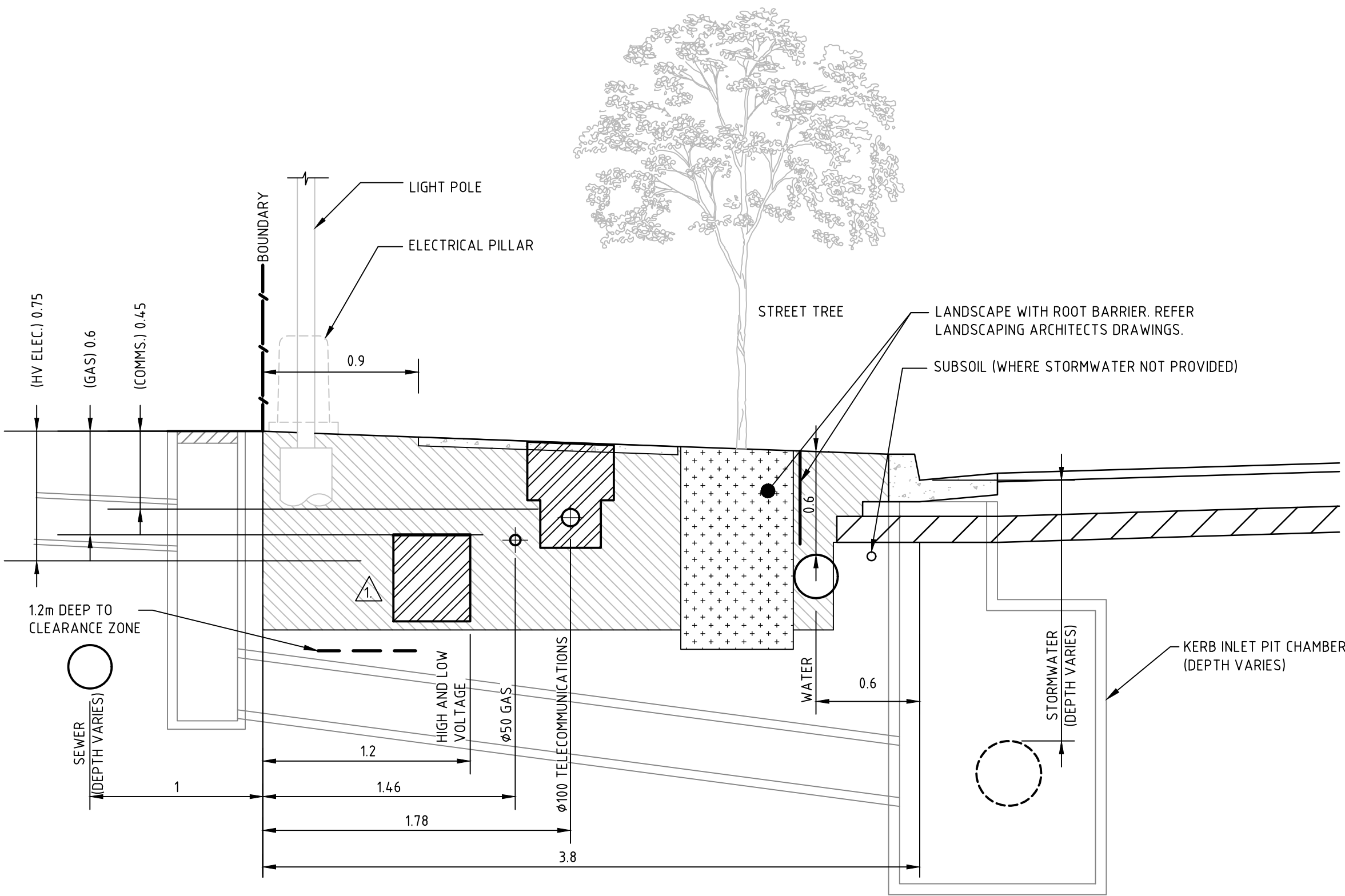
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ARM	15.09.17

Client	LENDDLEASE
Project	JORDAN SPRINGS EAST STAGE 3B2 - CIVIL WORKS DEVELOPMENT APPLICATION
Title	SITWORKS DETAILS SHEET 1

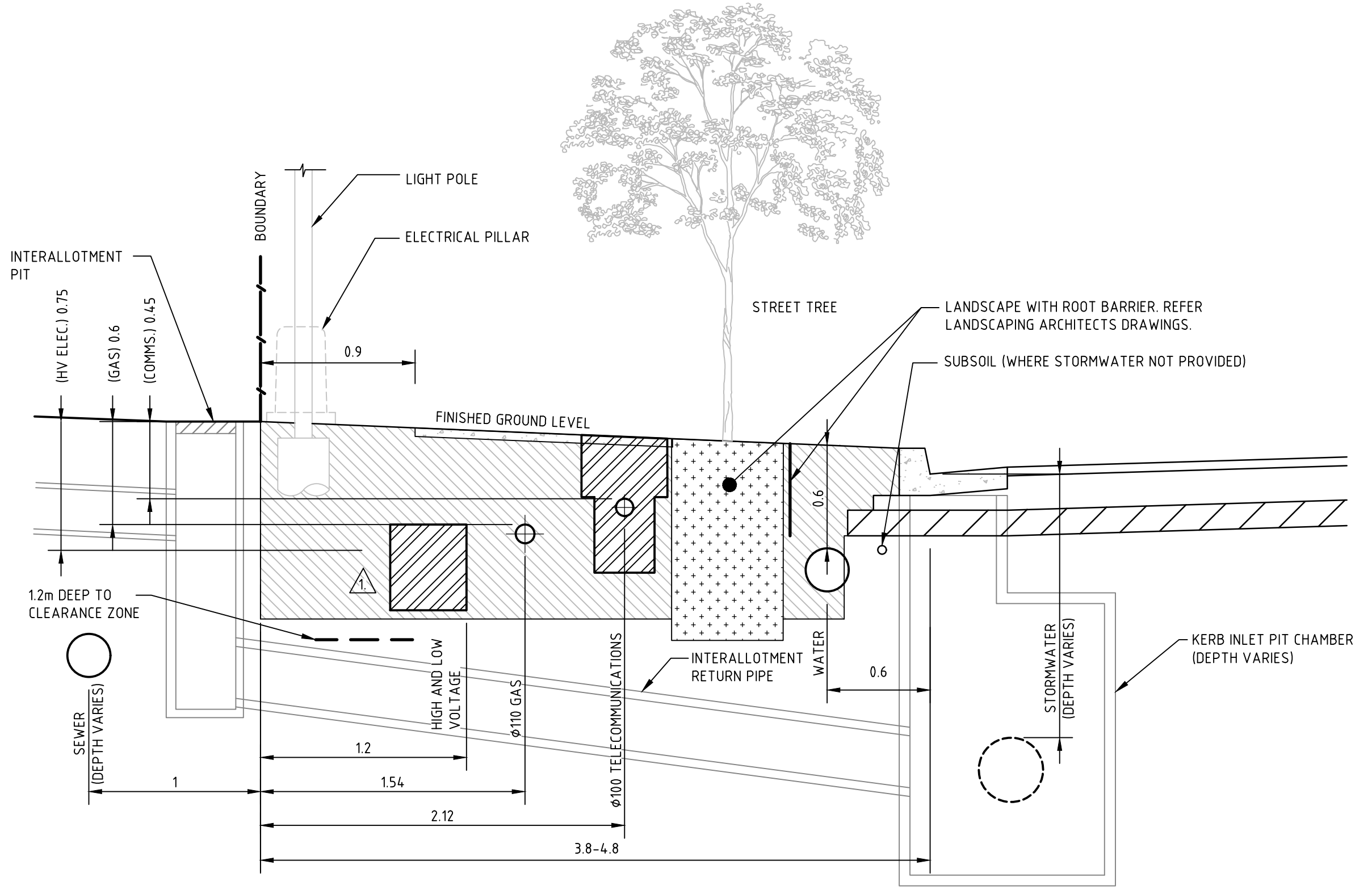
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FOR APPROVAL			
NOT TO BE USED FOR CONSTRUCTION PURPOSES			
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CV-CARDNO-ST03B2-1601			2



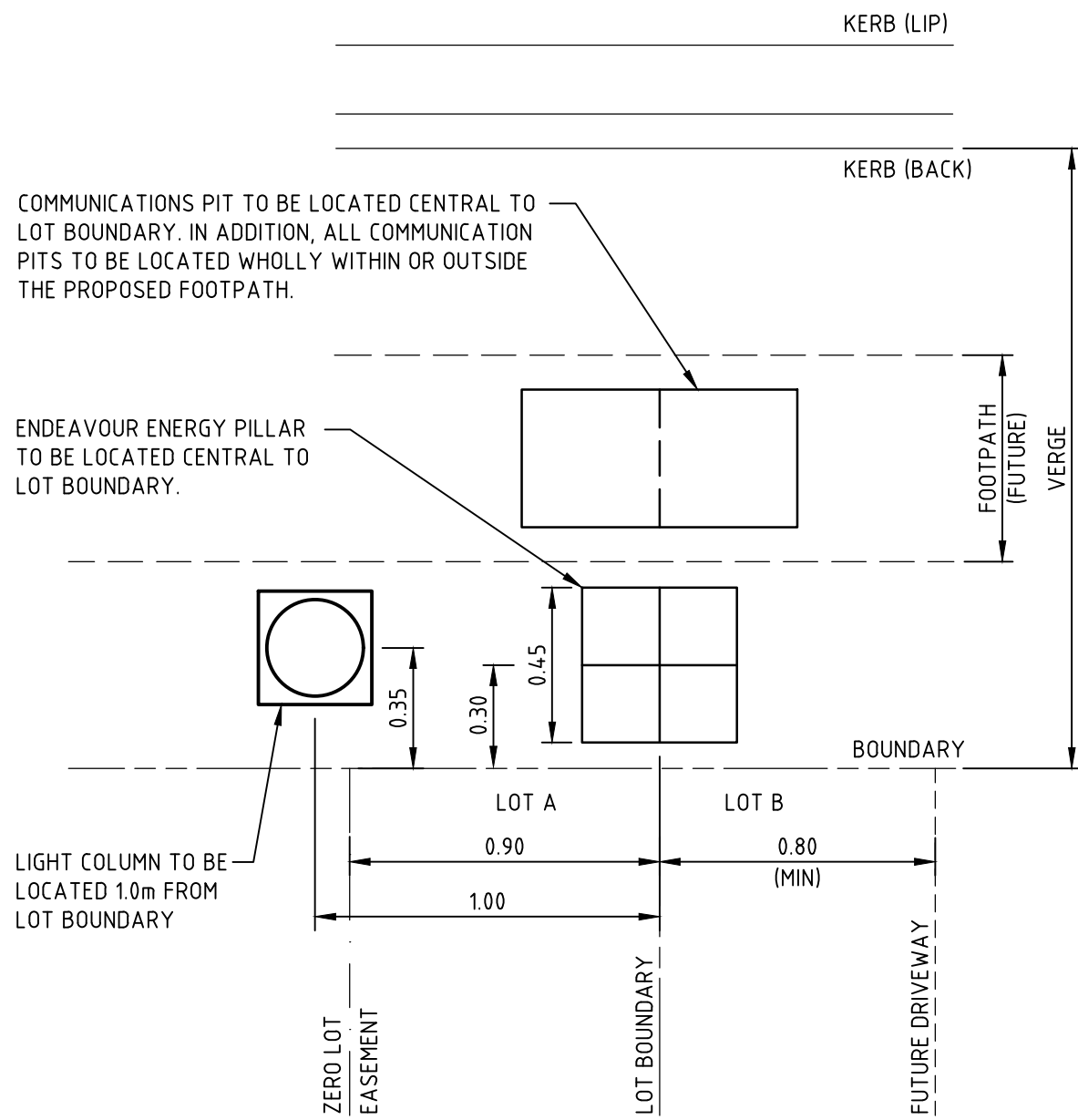


TYPICAL LOCAL ROAD SERVICES
TRENCH EXCAVATION
SCALE 1:25

NOTE
⚠ WHERE STORMWATER ENEROACHES INTO ELECTRICAL CLEARANCE ZONE, COVER MAY BE REDUCED FROM 750mm TO 500mm AND CONDUITS CONCRETE ENCASED. SUPERINTENDENT IS TO APPROVE CONCRETE ENCASEMENT PRIOR TO WORKS COMMENCING UNLESS SPECIFIED ON CERTIFIED ELECTRICAL DRAWINGS.

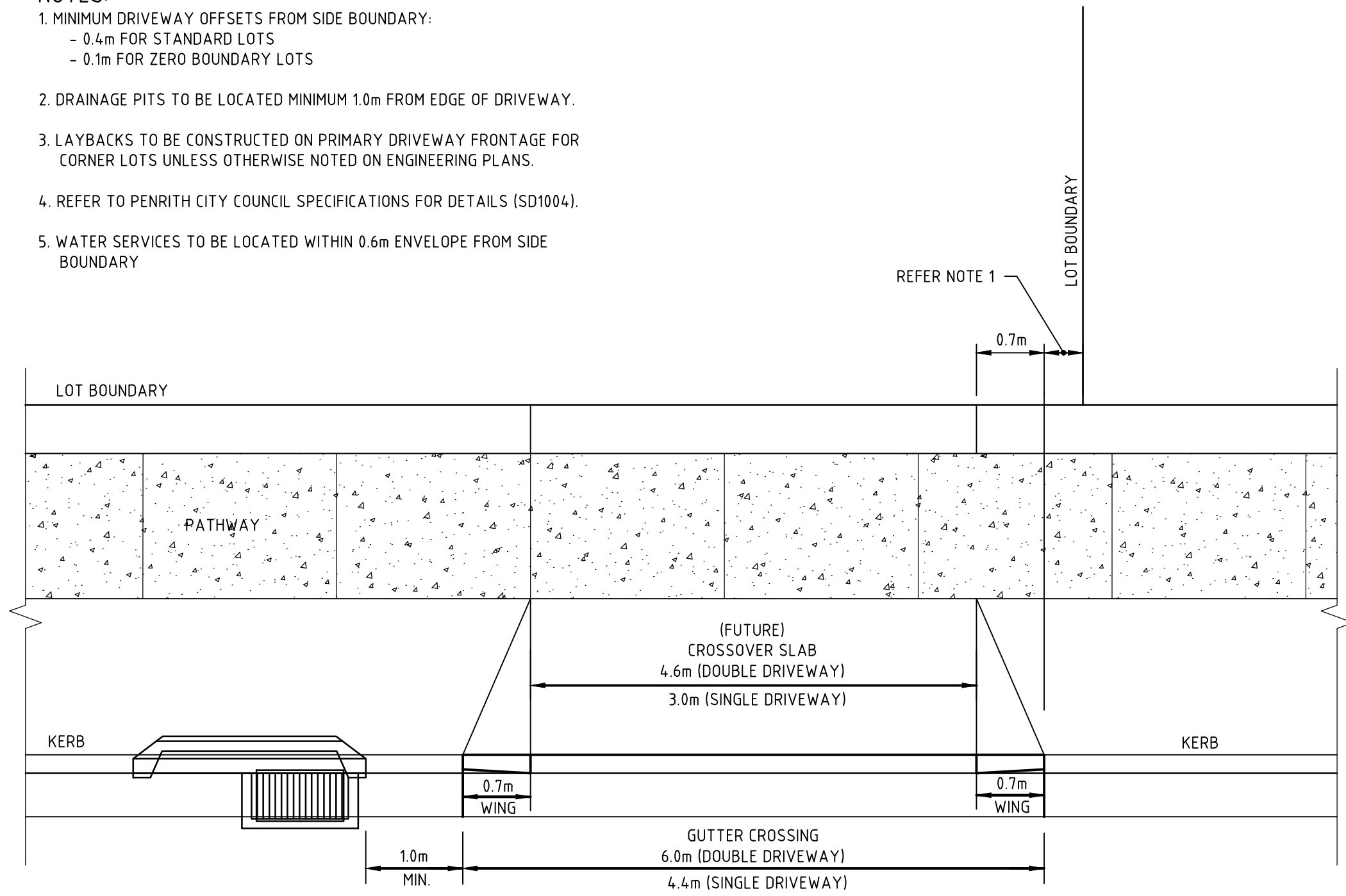


TYPICAL COLLECTOR ROAD SERVICES
TRENCH EXCAVATION
SCALE 1:25

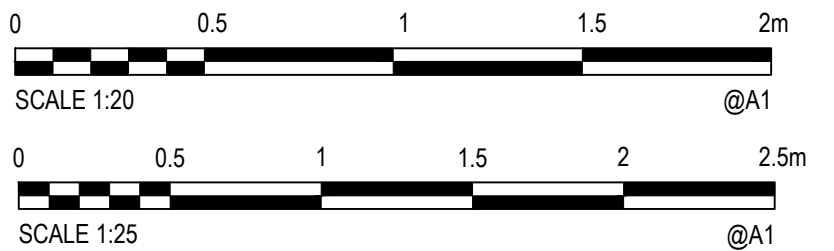


TYPICAL SURFACE UTILITY LAYOUT
SCALE 1:20
(LIGHT COLUMN AND ELECTRICAL PILLAR)

- NOTES:**
- MINIMUM DRIVEWAY OFFSETS FROM SIDE BOUNDARY:
 - 0.4m FOR STANDARD LOTS
 - 0.1m FOR ZERO BOUNDARY LOTS
 - DRAINAGE PITS TO BE LOCATED MINIMUM 1.0m FROM EDGE OF DRIVEWAY.
 - LAYBACKS TO BE CONSTRUCTED ON PRIMARY DRIVEWAY FRONTAGE FOR CORNER LOTS UNLESS OTHERWISE NOTED ON ENGINEERING PLANS.
 - REFER TO PENRITH CITY COUNCIL SPECIFICATIONS FOR DETAILS (SD1004).
 - WATER SERVICES TO BE LOCATED WITHIN 0.6m ENVELOPE FROM SIDE BOUNDARY



TYPICAL VEHICULAR CROSSING LOCATION DETAIL (VC)
N.T.S.



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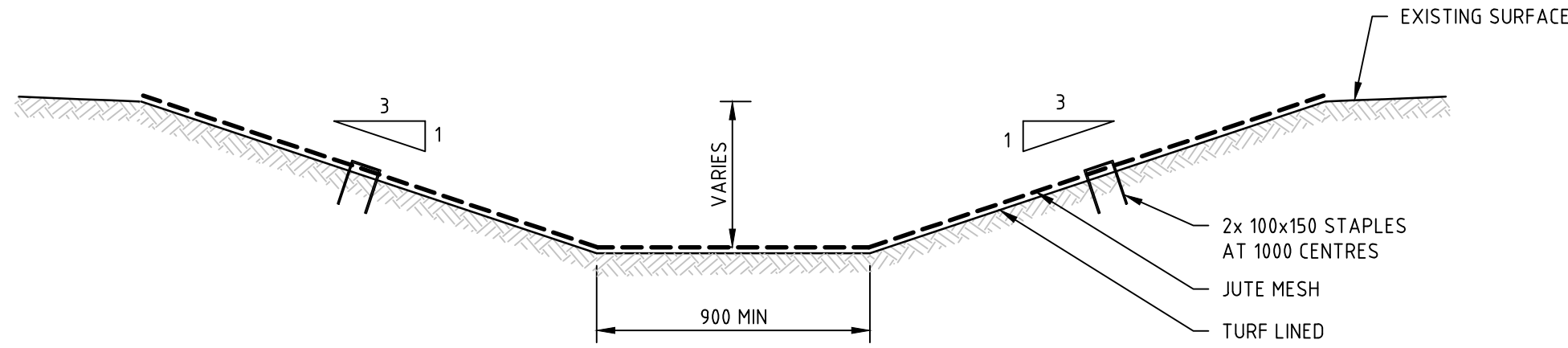
Drawn: MCD
Checked: DAC
Designed: BJD
Verified:
Approved:
ARM

Date: 15.09.17
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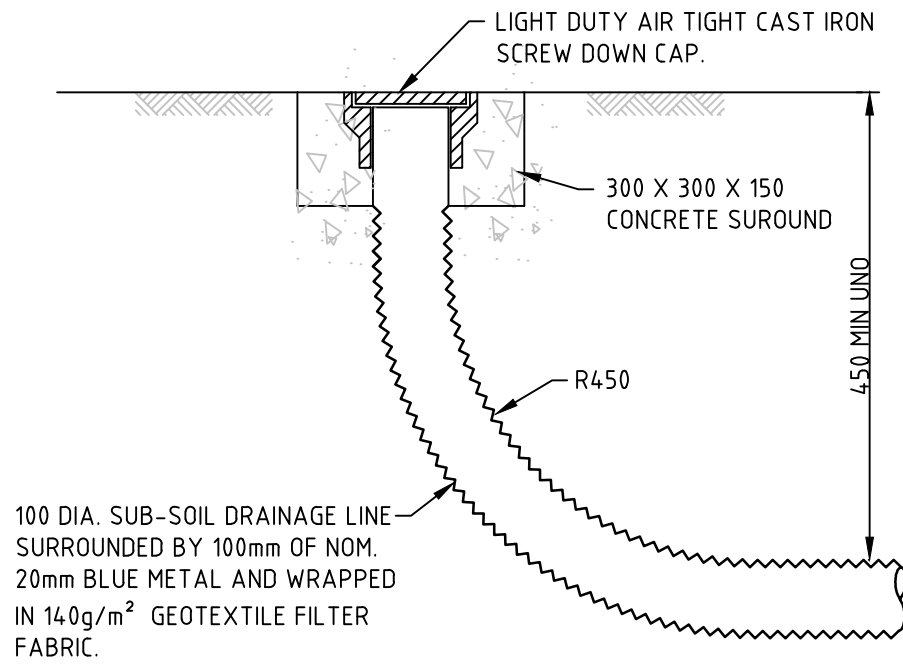
Client: LENDLEASE
Project: JORDAN SPRINGS EAST
STAGE 3B2 - CIVIL WORKS
DEVELOPMENT APPLICATION
Title: SITWORKS DETAILS
SHEET 2

Status: **FOR APPROVAL**
NOT TO BE USED FOR CONSTRUCTION PURPOSES
Datum: AHD
Scale: AS SHOWN
Size: A1
Drawing Number: CV-CARDNO-ST03B2-1602
Revision: 2

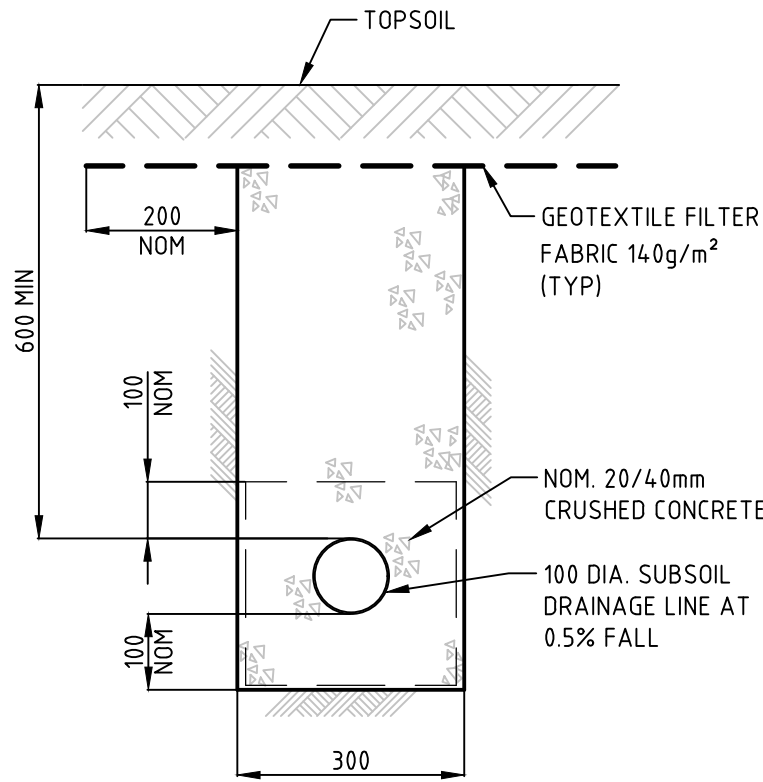
DATE PLOTTED: 15 September 2017 2:57 PM BY: BRITTANY DEBONO



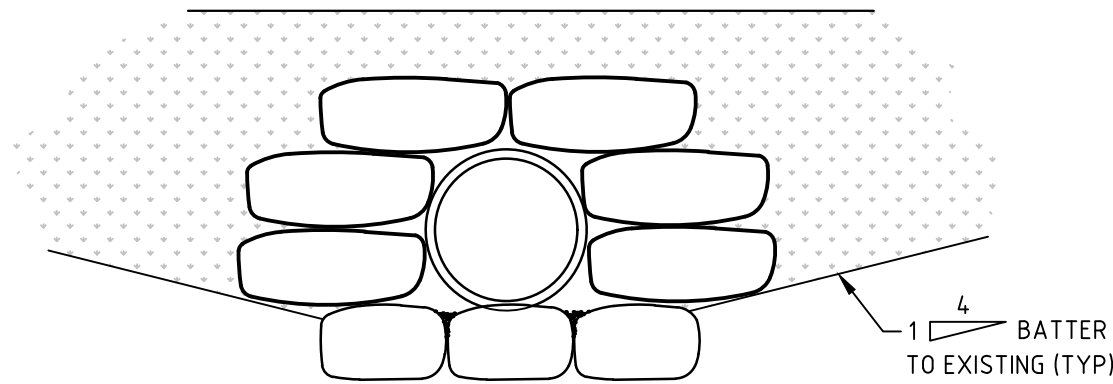
TYPICAL SECTION THROUGH DIVERSION CHANNEL
SCALE 1:20



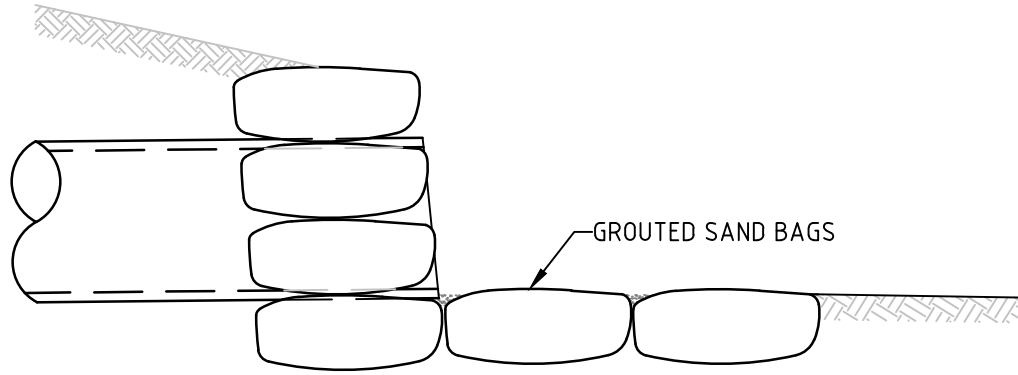
FLUSHING POINT
SCALE 1:10



SUBSOIL IN LANDSCAPED AREAS
SCALE 1:10



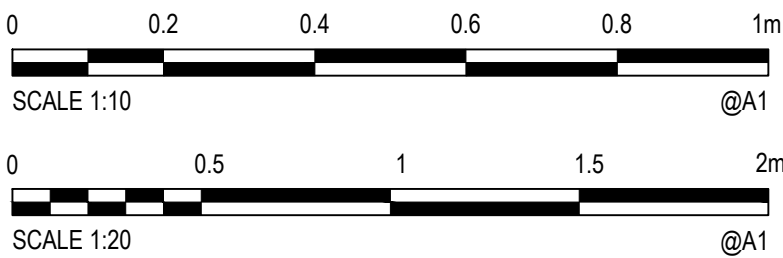
TEMPORARY SANDBAG HEADWALL
SCALE 1:20



TEMPORARY SANDBAG HEADWALL SECTION
SCALE 1:20

NOTES:

SUBSOIL DRAINAGE BEHIND KERB
REFER PENRITH CITY COUNCIL STANDARD DRAWING SD2004 FOR DETAILS.



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Drawn MCD Date 15.09.17
Checked DAC Date 15.09.17
Designed BJD Date 15.09.17
Verified Date
Approved
ARM 15.09.17

Client **LENDELEASE**

Project **JORDAN SPRINGS EAST
STAGE 3B2 - CIVIL WORKS
DEVELOPMENT APPLICATION**

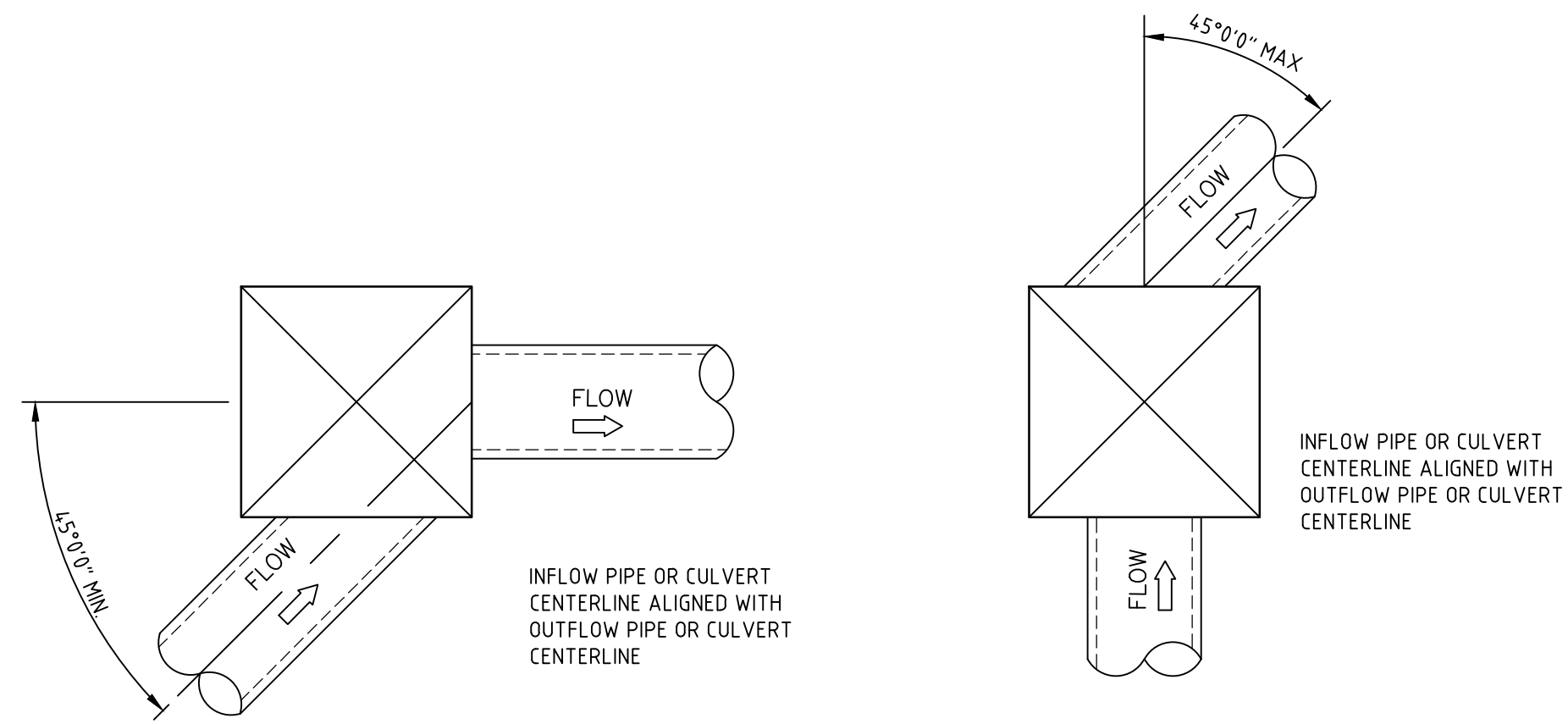
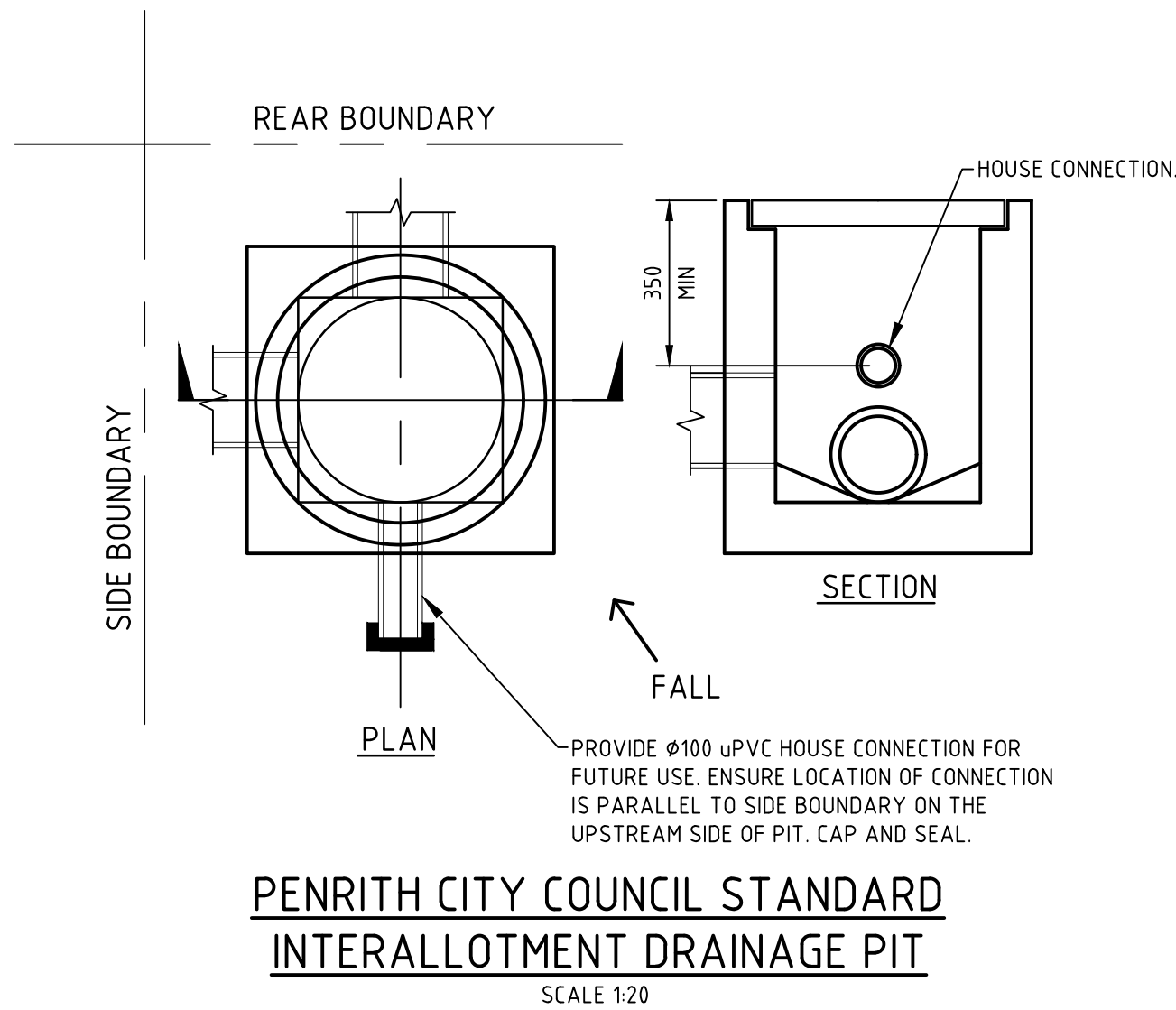
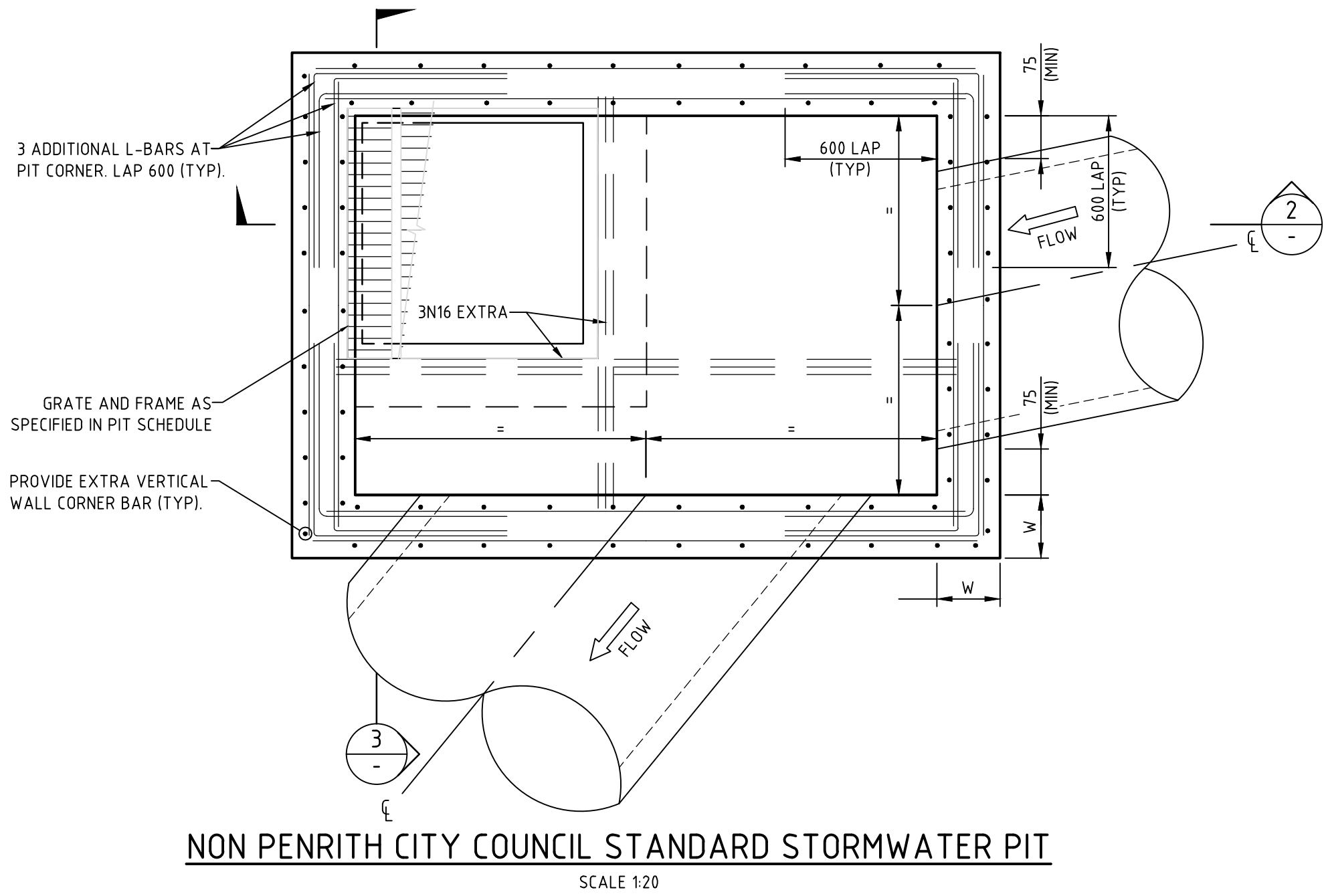
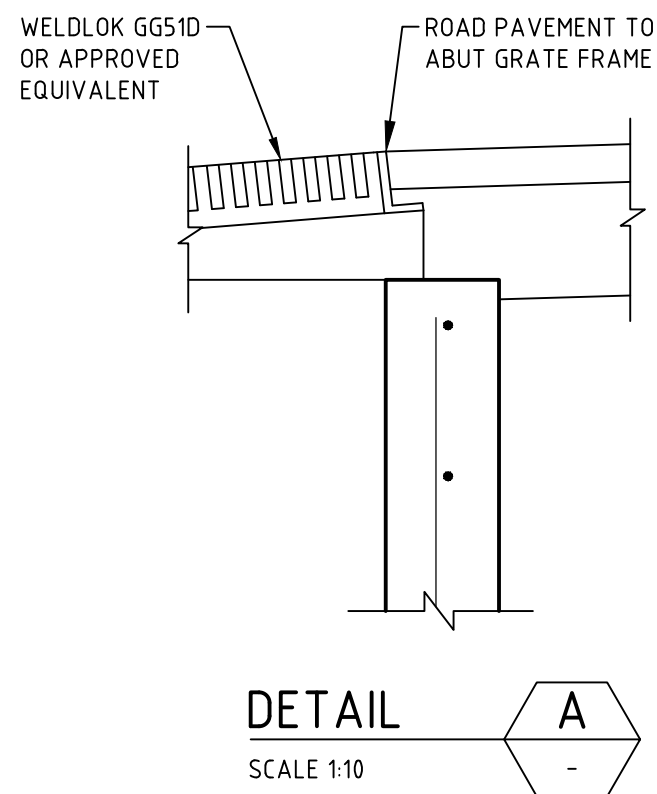
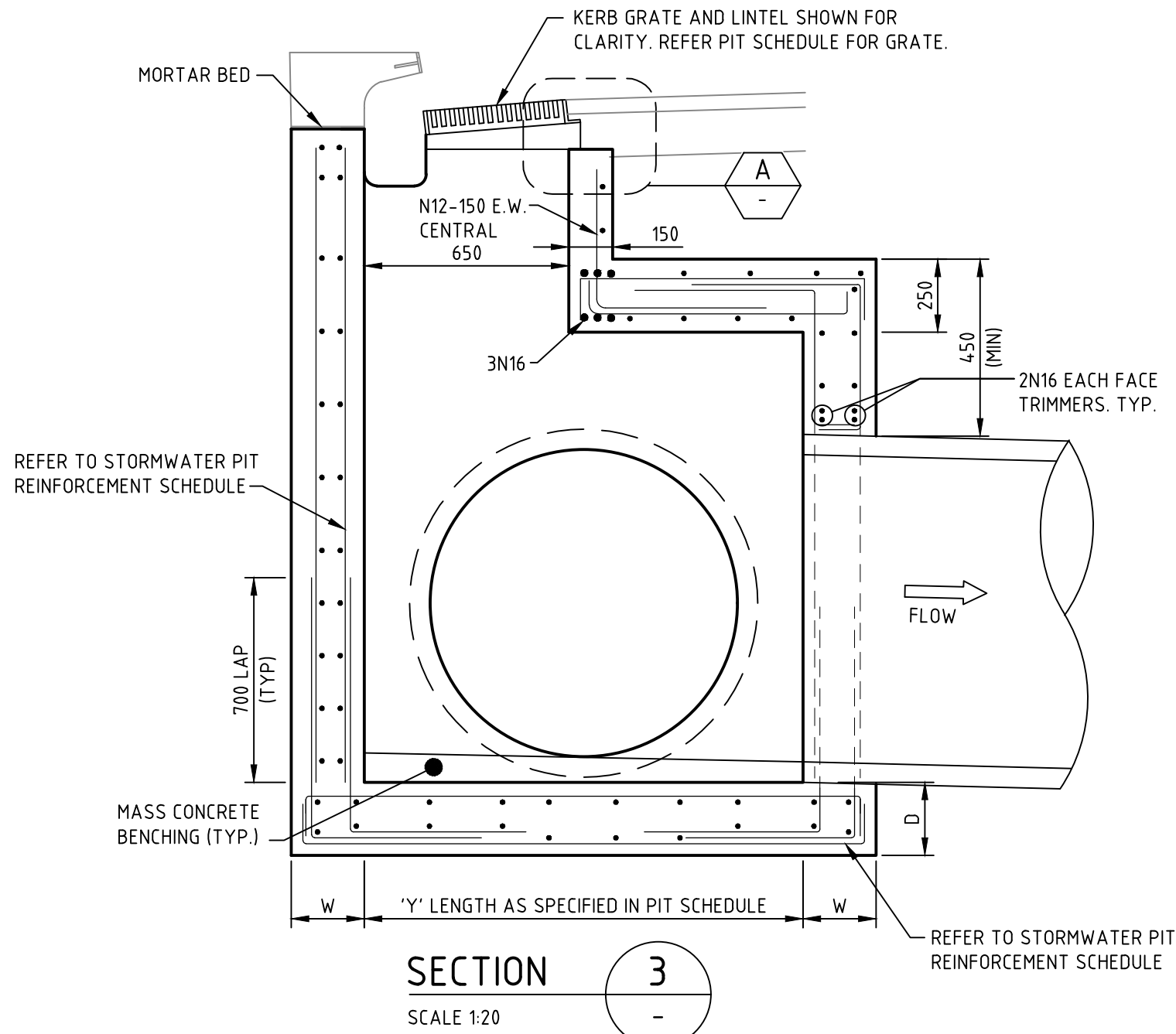
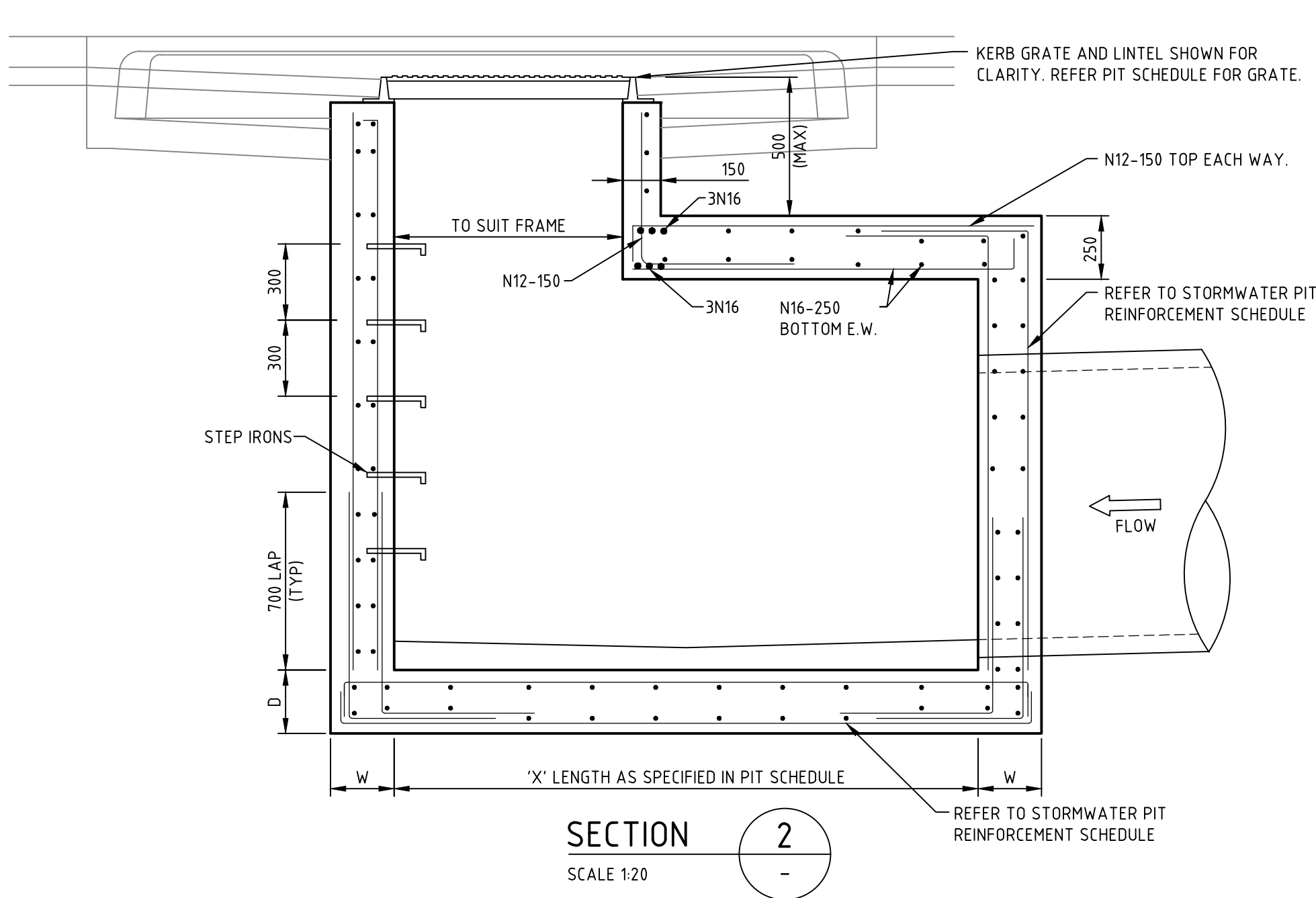
Title **STORMWATER DRAINAGE DETAILS
SHEET 1**

Status **FOR APPROVAL**
NOT TO BE USED FOR CONSTRUCTION PURPOSES

Datum **AHD** Scale **AS SHOWN** Size **A1**

Drawing Number **CV-CARDNO-ST03B2-2201** Revision **2**

Rev.	Date	Description	Des.	Verif.	Appd.
2	15.09.17	ISSUED FOR DEVELOPMENT APPLICATION APPROVAL	BJD	ARM	
1	08.09.17	DRAFT - ISSUED FOR INFORMATION	BJD	ARM	



DEFLECTION ANGLE GREATER THAN 45° (SIDE OF PIT)

PIT ALIGNMENT REQUIREMENTS

TYPICAL DETAILS OF STORMWATER PIPE OR CULVERT ALIGNMENTS THROUGH STORMWATER PITS. STORMWATER PIPE OR CULVERT ALIGNMENTS NOT SHOWN SHOULD BE CONSTRUCTED SIMILARLY IN ORDER TO STREAMLINE FLOWS FROM UPSTREAM TO DOWNSTREAM AND MINIMISE HEADLOSS.

IMPORTANT NOTE: PIT STANDARD DETAILS

PENRITH COUNCIL STANDARD GRATED GULLY PITS DETAIL, SD2001 TO BE USED FOR PIT DETAILS WHERE:
A. PIT INTERNAL WIDTH IN ANY DIRECTION IS LESS THAN OR EQUAL TO 1200mm, AND
B. PIT DEPTH FROM SETOUT POINT TO INVERT IS LESS THAN OR EQUAL TO 2000mm.

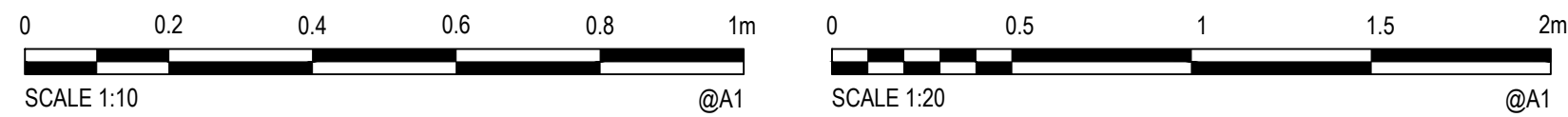
FOR PITS WIDER THAN 1200mm AND/OR DEEPER THAN 2000mm REFER TO THE BELOW TABLE AND DETAILS.

NON PCC STORMWATER PIT REINFORCEMENT SCHEDULE					
PIT DIMENSIONS(mm)		WALL DIMENSIONS(mm)		VERTICAL REINFORCEMENT	HORIZONTAL REINFORCEMENT
LENGTH 'X', 'Y'	DEPTH 'H'	BASE THICKNESS 'D'	WALL THICKNESS 'W'		
1200-X,Y<3300	2000-H<3900	230	230	N12-200 E.F.	N12-200 E.F.
X,Y<1200	H<6000	230	230	N16-250 E.F.	N16-250 E.F.

NOTE: PIT REINFORCEMENT TO BE SELECTED USING MAXIMUM PIT DIMENSION

NOTES:

- PIT REINFORCEMENT TO BE SELECTED USING MAXIMUM PIT DIMENSION.
- MINIMUM COVER TO REINFORCING AND CONCRETE STRENGTH AS SPECIFIED ON SHEET 1011.



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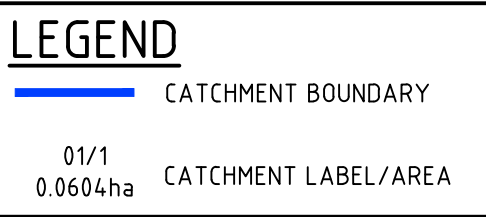
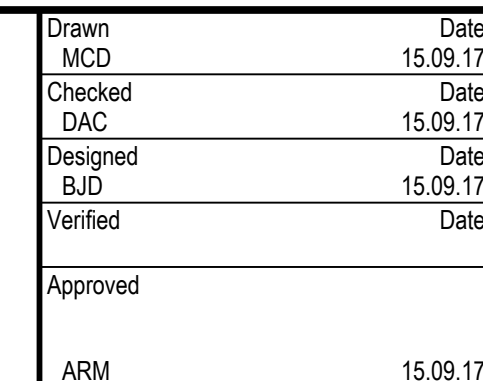
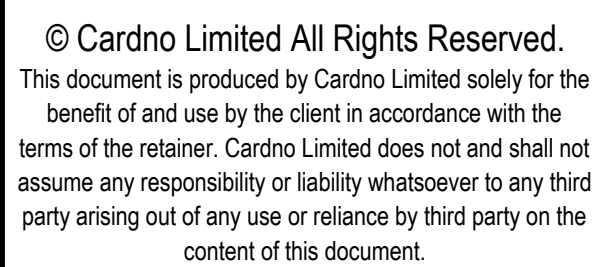
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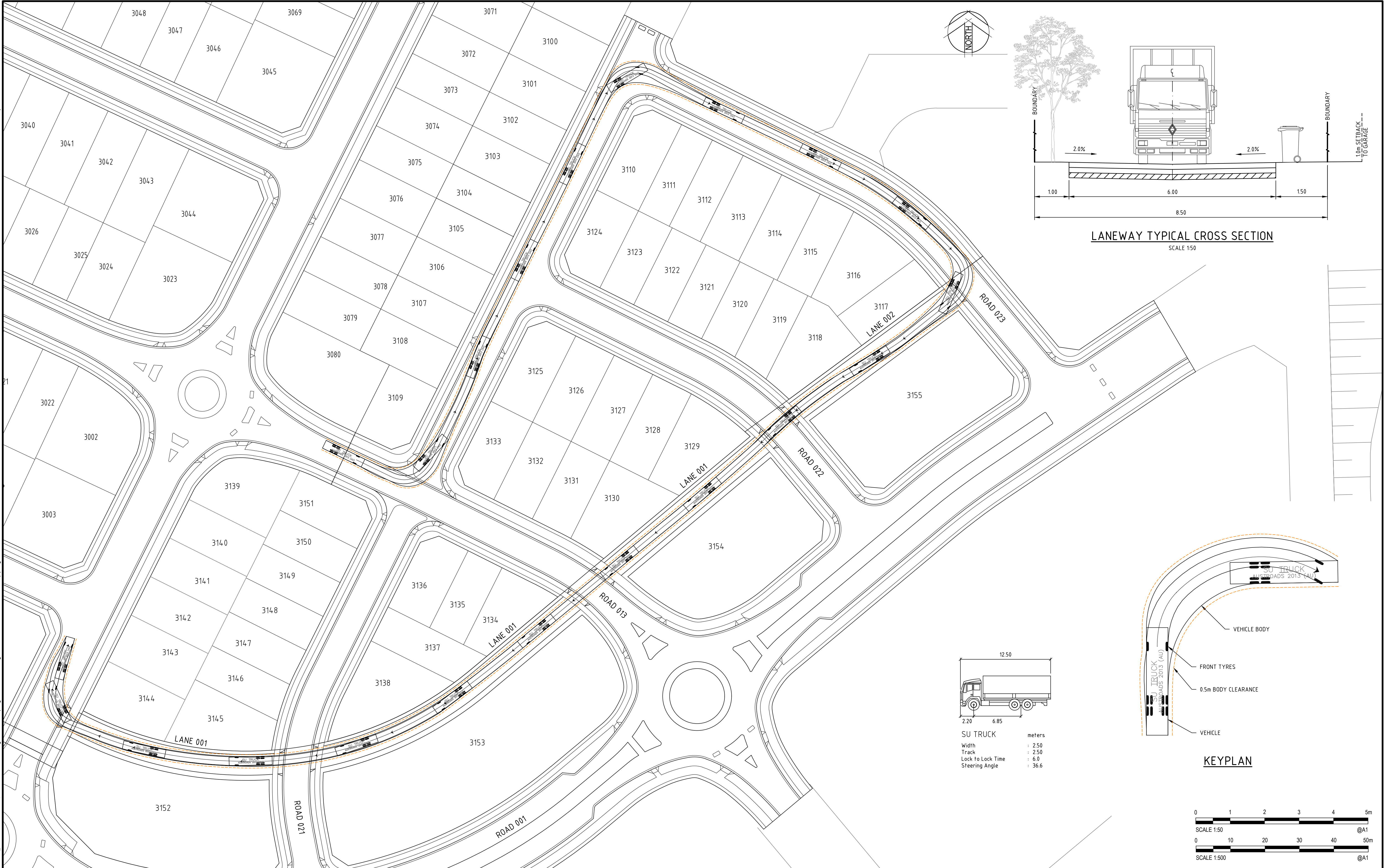
Client **LENLEASE**
Project **JORDAN SPRINGS EAST STAGE 3B2 - CIVIL WORKS DEVELOPMENT APPLICATION**
Title **STORMWATER DRAINAGE DETAILS SHEET 2**

Status **FOR APPROVAL**
NOT TO BE USED FOR CONSTRUCTION PURPOSES
Datum **AHD** Scale **AS SHOWN** Size **A1**
Drawing Number **CV-CARDNO-ST03B2-2202** Revision **2**

[illegible]

Client		LENDLEASE		
Project	JORDAN SPRINGS EAST STAGE 3B2 - CIVIL WORKS DEVELOPMENT APPLICATION		Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES	
Title	INTERNAL STORMWATER CATCHMENT PLAN		Datum AHD	Scale 1:1000
			Size A1	Drawing Number CV-CARDNO-ST03B2-2301
				Revision 2

DATE PLOTTED: 15 September 2017 3:40 PM BY: BRITTANY DEBONO
XREFS: XR-88914020-20-CH-DESIGN, XR-88914020-20-CH-LOT LAYOUT, XR-88914020-22-CH-DESIGN, XR-88914020-22-CH-LOT LAYOUT, XR-88914020-22-CH-FUTURE WORKS
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Rev.	Date	Description	Des.	Verif.	Appd.
2	15.09.17	ISSUED FOR DEVELOPMENT APPLICATION APPROVAL	BJD	ARM	
1	08.09.17	DRAFT - ISSUED FOR INFORMATION	BJD	ARM	



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Drawn MCD 15.09.17	Date 15.09.17	Client LENLEASE
Checked DAC 15.09.17	Date 15.09.17	Project JORDAN SPRINGS EAST STAGE 3B2 - CIVIL WORKS DEVELOPMENT APPLICATION
Designed BJD 15.09.17	Date 15.09.17	Title LANEWAY GARBAGE COLLECTION TURNING PATH
Verified	Date	Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES
Approved ARM 15.09.17	Date 15.09.17	Datum AHD
		Scale AS SHOWN
		Size A1
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		Revision 2