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LENDLEASE
CENTRAL PRECINCT
STAGE 2 - CIVIL WORKS
DEVELOPMENT APPLICATION



DRAWING SCHEDULE

89914020-ST02-1001	COVER SHEET AND DRAWING LIST	89914020-ST02-1321	PAVEMENT, SIGNAGE & LINEMARKING PLAN - SHEET 1	89914020-ST02-1476	STORMWATER DRAINAGE LONGITUDINAL SECTIONS - SHEET 16
89914020-ST02-1002	GENERAL NOTES AND LEGENDS	89914020-ST02-1322	PAVEMENT, SIGNAGE & LINEMARKING PLAN - SHEET 2	89914020-ST02-1477	STORMWATER DRAINAGE LONGITUDINAL SECTIONS - SHEET 17
89914020-ST02-1003	CONTEXT PLAN	89914020-ST02-1323	PAVEMENT, SIGNAGE & LINEMARKING PLAN - SHEET 3	89914020-ST02-1478	STORMWATER DRAINAGE LONGITUDINAL SECTIONS - SHEET 18
		89914020-ST02-1324	PAVEMENT, SIGNAGE & LINEMARKING PLAN - SHEET 4	89914020-ST02-1479	STORMWATER DRAINAGE LONGITUDINAL SECTIONS - SHEET 19
89914020-ST02-1011	GENERAL ARRANGEMENT PLAN	89914020-ST02-1325	PAVEMENT, SIGNAGE & LINEMARKING PLAN - SHEET 5	89914020-ST02-1480	STORMWATER DRAINAGE LONGITUDINAL SECTIONS - SHEET 20
89914020-ST02-1012	DEVELOPMENT APPLICATION STAGING PLAN AND ROAD HIERARCHY PLAN			89914020-ST02-1481	STORMWATER DRAINAGE LONGITUDINAL SECTIONS - SHEET 21
89914020-ST02-1021	EXISTING SERVICES AND SURVEY PLAN - SHEET 1	89914020-ST02-1361	RETAINING WALL LOCALITY PLAN AND DETAILS	89914020-ST02-1491	STORMWATER PIT SCHEDULE - SHEET 1
89914020-ST02-1022	EXISTING SERVICES AND SURVEY PLAN - SHEET 2	89914020-ST02-1371	RETAINING WALL ELEVATION - SHEET 1	89914020-ST02-1492	STORMWATER PIT SCHEDULE - SHEET 2
		89914020-ST02-1372	RETAINING WALL ELEVATION - SHEET 2	89914020-ST02-1493	STORMWATER PIT SCHEDULE - SHEET 3
89914020-ST02-1051	TYPICAL ROAD CROSS SECTIONS AND PAVEMENT TYPES	89914020-ST02-1373	RETAINING WALL ELEVATION - SHEET 3	89914020-ST02-1494	STORMWATER PIT SCHEDULE - SHEET 4
		89914020-ST02-1374	RETAINING WALL ELEVATION - SHEET 4	89914020-ST02-1495	STORMWATER PIT SCHEDULE - SHEET 5
89914020-ST02-1131	EROSION & SEDIMENT CONTROL PLAN SHEET 1	89914020-ST02-1375	RETAINING WALL ELEVATION - SHEET 5	89914020-ST02-1501	STORMWATER DRAINAGE DATA - SHEET 1
89914020-ST02-1132	EROSION & SEDIMENT CONTROL PLAN SHEET 2	89914020-ST02-1376	RETAINING WALL ELEVATION - SHEET 6	89914020-ST02-1502	STORMWATER DRAINAGE DATA - SHEET 2
		89914020-ST02-1377	RETAINING WALL ELEVATION - SHEET 7	89914020-ST02-1503	STORMWATER DRAINAGE DATA - SHEET 3
89914020-ST02-1141	EROSION & SEDIMENT CONTROL DETAILS SHEET 1	89914020-ST02-1378	RETAINING WALL ELEVATION - SHEET 8	89914020-ST02-1504	STORMWATER DRAINAGE DATA - SHEET 4
89914020-ST02-1142	EROSION & SEDIMENT CONTROL DETAILS SHEET 2				
		89914020-ST02-1401	STORMWATER CATCHMENT PLAN - SHEET 1		
89914020-ST02-1201	ROADS & STORMWATER PLAN SHEET 1	89914020-ST02-1402	STORMWATER CATCHMENT PLAN - SHEET 2		
89914020-ST02-1202	ROADS & STORMWATER PLAN SHEET 2				
89914020-ST02-1203	ROADS & STORMWATER PLAN SHEET 3	89914020-ST02-1411	STORMWATER CATCHMENT PLAN - EXTERNAL CATCHMENTS		
89914020-ST02-1204	ROADS & STORMWATER PLAN SHEET 4				
89914020-ST02-1205	ROADS & STORMWATER PLAN SHEET 5	89914020-ST02-1421	STORMWATER DRAINAGE DETAILS - SHEET 1		
		89914020-ST02-1422	STORMWATER DRAINAGE DETAILS - SHEET 2		
89914020-ST02-1211	SITWORKS DETAILS - SHEET 1	89914020-ST02-1423	STORMWATER DRAINAGE DETAILS - SHEET 3		
89914020-ST02-1212	SITWORKS DETAILS - SHEET 2				
		89914020-ST02-1461	STORMWATER DRAINAGE LONGITUDINAL SECTIONS - SHEET 1		
89914020-ST02-1221	SITE SECTIONS KEY PLAN	89914020-ST02-1462	STORMWATER DRAINAGE LONGITUDINAL SECTIONS - SHEET 2		
89914020-ST02-1222	SITE SECTIONS	89914020-ST02-1463	STORMWATER DRAINAGE LONGITUDINAL SECTIONS - SHEET 3		
		89914020-ST02-1464	STORMWATER DRAINAGE LONGITUDINAL SECTIONS - SHEET 4		
89914020-ST02-1251	ROAD LONGITUDINAL SECTIONS - SHEET 1 ROAD 003 & 070	89914020-ST02-1465	STORMWATER DRAINAGE LONGITUDINAL SECTIONS - SHEET 5		
89914020-ST02-1252	ROAD LONGITUDINAL SECTIONS - SHEET 2 ROAD 070	89914020-ST02-1466	STORMWATER DRAINAGE LONGITUDINAL SECTIONS - SHEET 6		
89914020-ST02-1253	ROAD LONGITUDINAL SECTIONS - SHEET 3 ROAD 070	89914020-ST02-1467	STORMWATER DRAINAGE LONGITUDINAL SECTIONS - SHEET 7		
89914020-ST02-1254	ROAD LONGITUDINAL SECTIONS - SHEET 4 ROAD 070	89914020-ST02-1468	STORMWATER DRAINAGE LONGITUDINAL SECTIONS - SHEET 8		
89914020-ST02-1255	ROAD LONGITUDINAL SECTIONS - SHEET 5 ROAD 071	89914020-ST02-1469	STORMWATER DRAINAGE LONGITUDINAL SECTIONS - SHEET 9		
89914020-ST02-1256	ROAD LONGITUDINAL SECTIONS - SHEET 6 ROAD 072 & 073	89914020-ST02-1470	STORMWATER DRAINAGE LONGITUDINAL SECTIONS - SHEET 10		
89914020-ST02-1257	ROAD LONGITUDINAL SECTIONS - SHEET 7 ROAD 074 & 075	89914020-ST02-1471	STORMWATER DRAINAGE LONGITUDINAL SECTIONS - SHEET 11		
89914020-ST02-1258	ROAD LONGITUDINAL SECTIONS - SHEET 8 ROAD 076 & 077	89914020-ST02-1472	STORMWATER DRAINAGE LONGITUDINAL SECTIONS - SHEET 12		
89914020-ST02-1259	ROAD LONGITUDINAL SECTIONS - SHEET 9 ROAD 078 & 079	89914020-ST02-1473	STORMWATER DRAINAGE LONGITUDINAL SECTIONS - SHEET 13		
		89914020-ST02-1474	STORMWATER DRAINAGE LONGITUDINAL SECTIONS - SHEET 14		
		89914020-ST02-1475	STORMWATER DRAINAGE LONGITUDINAL SECTIONS - SHEET 15		
89914020-ST02-1271	CHANNEL 002 LONGITUDINAL SECTION				

NOT INCLUDED
IN D.A.

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XREFs:

CAD File: N:\Paramatna\Projects\899141020_CENTRAL PRECINCT_ADI ST MARYS\Drawings\07 Central Precinct Stage 2\Drawings\89914020-ST02-1001-DWG(S).dwg

Rev.	Date	Description	Des.	Verif.	Appd.
5	18.01.2016	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
4	30.10.2015	ISSUED FOR TENDER	DAC	CEV	SCP
3	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
2	21.08.2015	ISSUED FOR CLIENT REVIEW	DAC	SCP	
1	15.05.2015	ISSUED FOR INFORMATION	DAC	SCP	

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Drawn BJH	Date 18.01.2016	Status	FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES			
Checked DAC	Date 18.01.2016					
Designed DAC	Date 18.01.2016			Scale	Size	
Verified CEV	Date 18.01.2016	Datum AHD				A1
Approved SCP	Date 18.01.2016	Drawing Number 89914020-ST02-1001	Revision 5			

1. ALL WORKS TO BE CONSTRUCTED IN ACCORDANCE WITH PENRITH CITY COUNCIL GUIDELINES.
2. PENRITH CITY COUNCIL STANDARD DETAILS TO BE USED WHERE POSSIBLE.

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, 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 TO COMPLY WITH R.M.S. FORM 3051, AND COMPACTED TO MINIMUM 95% MODIFIED DENSITY IN ACCORDANCE WITH AS 1289 5.2.1. FREQUENCY OF COMPACTION TESTING SHALL NOT BE LESS THAN 1 TEST PER 100m³ OF SUB-BASE COURSE MATERIAL PLACED.
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 CARDNO AND THE SUPERINTENDENT.

3. 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 $\pm 2\%$ 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	98%
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 MINIMUM WEIGHT 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 1000m³ OF EXPOSED SUBGRADE "LEVEL 1" TESTING SHALL BE TESTING IN ACCORDANCE WITH AS 3798 (1996).

8. FILLING TO BE PLACED IN MAXIMUM 500mm - 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.

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 LEAD LEASE'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.
 - a. LOCAL WORK SHALL BE GENERALLY CARRIED OUT IN ACCORDANCE WITH ALL LOCAL AUTHORITY REQUIREMENTS
 - b. EPA REQUIREMENTS
 - c. NSW DEPARTMENT OF HOUSING MANUAL "MANAGING URBAN STORMWATER, SOILS & 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.

EROSION CONTROL

SEDIMENT CONTROL

3. 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 15 METRES OR HALF THE DISTANCE BETWEEN THE OUTER EDGE OF THE DRIP LINE AND THE TRUNK, WHICHEVER 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 SWEEPED REGULARLY FOR DURATION OF WORKS.

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 DESIGN CRITERIA:
AVERAGE RECURRENCE INTERVAL:
5 YEAR ARI FOR CATCHMENTS <6ha
20 YEAR ARI FOR INTERMEDIATE DRAINAGE LINES
100 YEAR ARI FOR STREET DRAINAGE
2. PIPES 300 DIA. AND LARGER TO BE REINFORCED CONCRETE CLASS '2' APPROVED SPIGOT AND SOCKET WITH RUBBER RING JOINTS. U.N.O.
3. PIPES UP TO 300 DIA SHALL BE SEWER GRADE uPVC WITH SOLVENT WELDED JOINTS.
4. EQUIVALENT STRENGTH FRC PIPES MAY BE USED. SHOULD THE CONTRACTOR WISH TO USE FRC PIPES.
5. ALL STORMWATER DRAINAGE LINES UNDER PROPOSED BUILDING SLABS TO BE uPVC PRESSURE PIPE GRADE 6. ENSURE ALL VERTICALS AND DOWNPIES ARE uPVC PRESSURE PIPE, GRADE 6 FOR A MIN OF 3.0m IN HEIGHT.
6. PIPES TO BE INSTALLED TO TYPE H52 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 STANDARD 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)
7. ALL INTERNAL WORKS WITHIN PROPERTY BOUNDARIES ARE TO COMPLY WITH THE REQUIREMENTS OF AS 3500 3.1 (1998) AND AS/NZS 3500 3.2 (2000).
8. ENLARGERS, CONNECTIONS AND JUNCTIONS TO BE PREFABRICATED FITTINGS WHERE PIPES ARE LESS THAN 300 DIA.
9. WHERE SUBSOIL DRAINS PASS UNDER FLOOR SLABS AND VEHICULAR PAVEMENTS, UNDRILLED uPVC SEWER GRADE PIPE IS TO BE USED.
10. CARE IS TO BE TAKEN WITH LEVELS OF STORMWATER LINES. GRADES SHOWN ARE NOT TO BE REDUCED WITHOUT APPROVAL.
11. GRATES AND COVERS SHALL CONFORM TO AS 3996.
12. AT ALL TIMES DURING CONSTRUCTION OF STORMWATER PITS, ADEQUATE SAFETY PROCEDURES SHALL BE TAKEN TO ENSURE AGAINST THE POSSIBILITY OF PERSONNEL FALLING DOWN PITS.
13. 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'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 CABLES AND PLANT. BEFORE USING LARGE EXCAVATORS TELSTRA PLANT MUST FIRST BE PHYSICALLY EXPOSED BY SOFT GID 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.

THE EXISTING SITE CONDITIONS SHOWN ON THE FOLLOWING DRAWINGS HAVE BEEN INVESTIGATED BY 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 THE FOLLOWING NOTES HAVE BEEN TAKEN DIRECTLY FROM THE ORIGINAL SURVEY DOCUMENTS.

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.

1. ALL LIGHT POLES, STREET NAMES AND BUS SHELTERS IN THIS SUBDIVISION WILL BE BLACK POWDER COATED TO THE SATISFACTION OF PENRITH CITY COUNCIL. FURTHER THAT THESE LIGHT POLES WILL COMPLY WITH COUNCIL'S SPECIFICATIONS.

PROPOSED

- | | |
|--|---|
| | PROPOSED CONTOURS |
| | EXISTING CONTOURS |
| | SITE BOUNDARY |
| | BATTER SLOPE |
| | EXTENT OF WORKS |
| | TREES TO BE REMOVED AS PART OF BULK EARTHWORKS PACKAGE. |
| | TREES TO BE RETAINED |
| | BATTERS |
| | STACKED ROCK WALL |
| | LOT NUMBERS |
| | KERB & GUTTER
REFER PENRITH CITY COUNCIL STANDARD DETAIL. |
| | MEDIAN KERB
REFER PENRITH CITY COUNCIL STANDARD DETAIL. |
| | FLUSH KERB
REFER PENRITH CITY COUNCIL STANDARD DETAIL. |
| | VEHICULAR CROSSING
REFER PENRITH CITY COUNCIL STANDARD DETAIL. |
| | PRAM RAMP
REFER PENRITH CITY COUNCIL FOR DETAIL. |
| | INDICATIVE GARAGE/DRIVEWAY LOCATION ONLY |
| | STORMWATER PIPELINE |
| | CONCRETE HEADWALL |
| | DRAINAGE LINE No.
DRAINAGE PIT No. |
| | DRAINAGE CAP |
| | STORMWATER DRAINAGE PITS |
| | RETAINING WALL |
| | SCOUR PROTECTION |
| | EXISTING WATER COURSES AS PER 1:10000 TOPOGRAPHIC MAPS |

- 3.0m WIDE TURF & LEVEL SPREADER
TEMPORARY DRAINAGE CHANNEL.
PERMANENT DRAINAGE CHANNEL.
BIO-RETENTION PLANTING TO
LANDSCAPE ARCHITECTS DETAILS.

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- | | |
|---|------------------------------------|
|  | TRANSGRID EASEMENT |
|  | TRANSGRID OVERHEAD ELECTRICAL |
|  | EXISTING SEWER |
|  | EXISTING RECYCLED WATER |
|  | EXISTING STORMWATER PIPE |
|  | LIGHT POLE |
|  | EXISTING SERVICES TO BE DEMOLISHED |

[illegible]

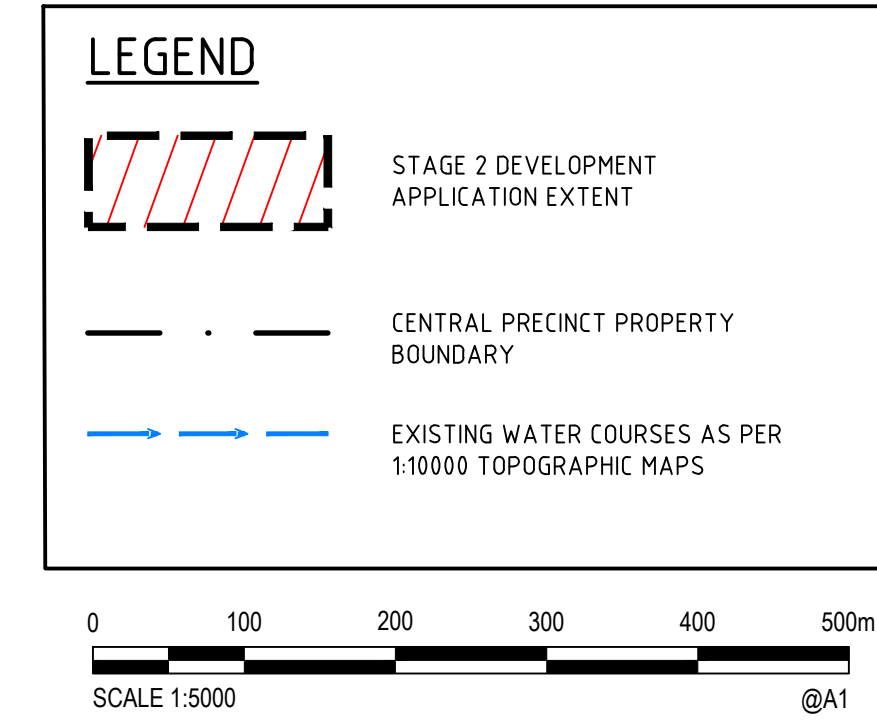
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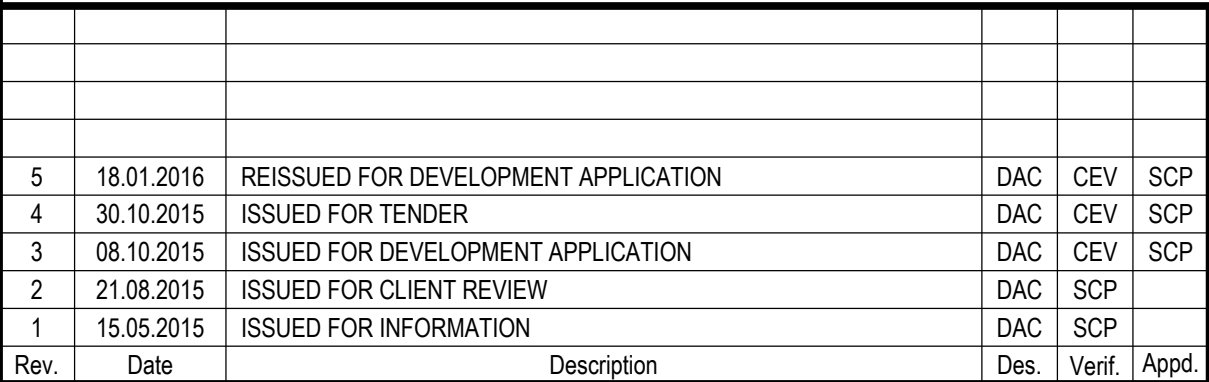
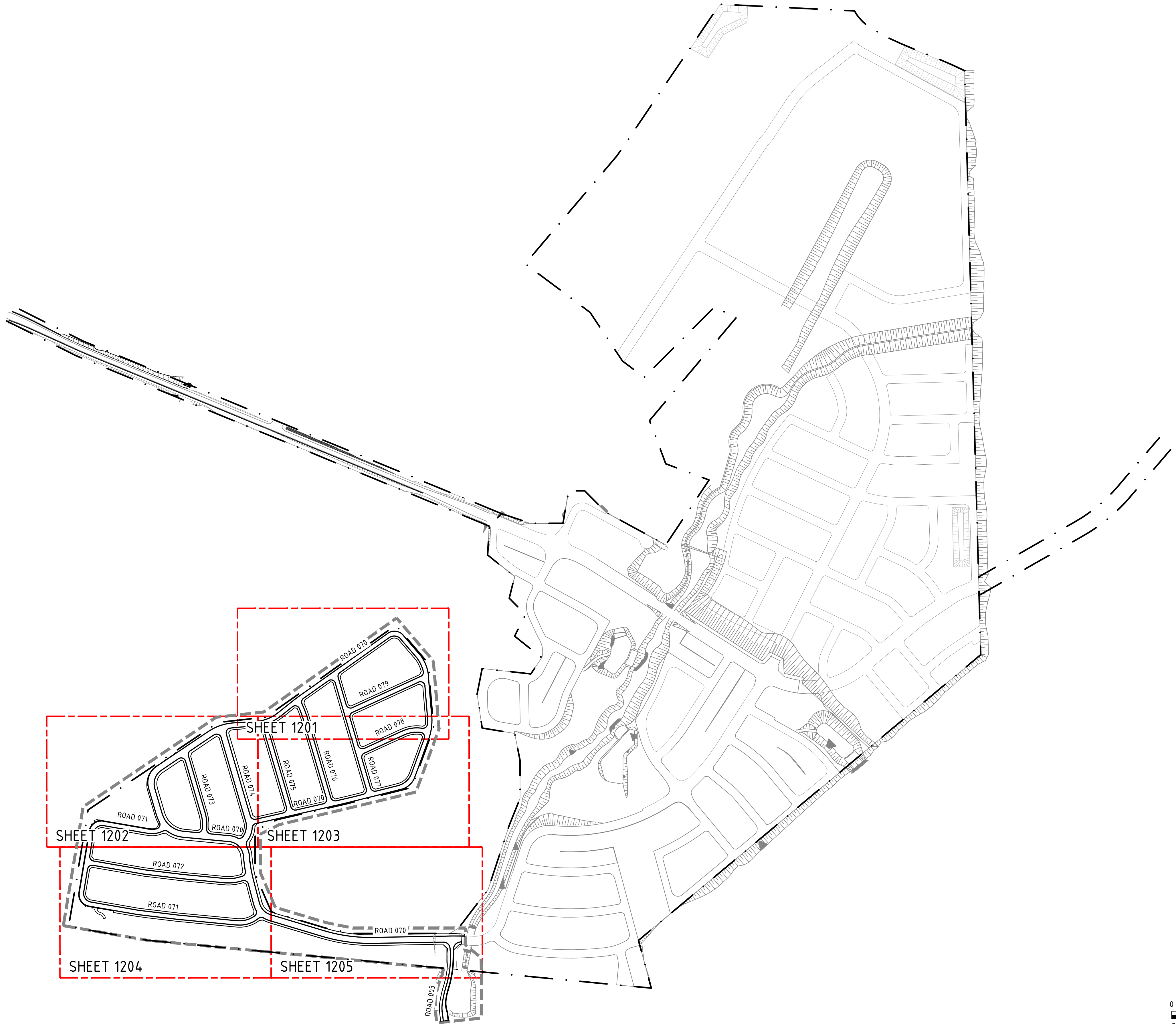
Drawn B.J.H.	Date 18.01.2016	Client LENDELEASE			
Checked	Date	Project CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION	Status FOR APPROVAL		
Designed D.A.C.	Date 18.01.2016		NOT TO BE USED FOR CONSTRUCTION PURPOSES		
Verified C.E.V.	Date 18.01.2016		Datum AHD	Scale	Size A1
Approved	Date		Drawing Number 89914020-ST02-1002	Revision 5	
SCP	18.01.2016	GENERAL NOTES AND LEGENDS			

[illegible]

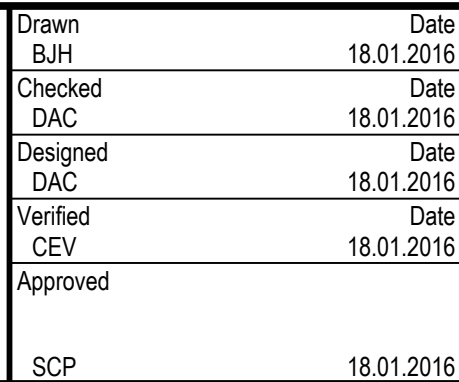
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Drawn BJH	Date 18.01.2016	Client LENLEASE	FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES						
Checked DAC	Date 18.01.2016	Project CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION					Status		
Designed DAC	Date 18.01.2016						Datum AHD	Scale 1:5000	Size A1
Verified CEV	Date 18.01.2016	Title					Drawing Number 89914020-ST02-1003		Revision 5
Approved									
SCP	18.01.2016	CONTEXT PLAN							

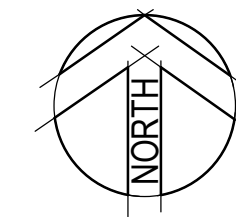


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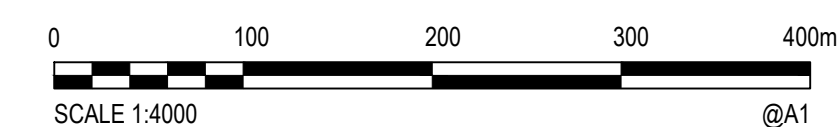
Title	GENERAL ARRANGEMENT PLAN
-------	--------------------------

Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES			
Datum AHD		Scale 1:4000	
		Size A1	
Drawing Number 89914020-ST02-1011			Revision 5



1. BASED ON INFORMATION PROVIDED BY LENDLEASE (17/07/15).
2. EXTENT OF STAGE 3, 4 & 5 SUBJECT TO REFINEMENT
3. ROAD AND LOT LAYOUTS OUTSIDE OF STAGE 1 & STAGE 2 BOUNDARY ARE BASED ON A PRELIMINARY MASTERPLAN PREPARED BY LENDLEASE AND IS SUBJECT TO FUTURE REFINEMENT.

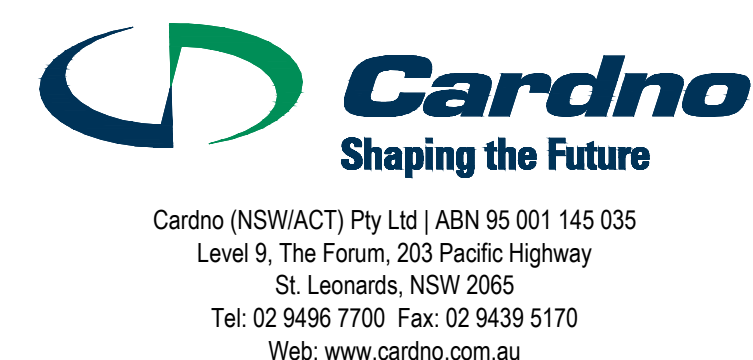
	STAGE BOUNDARY
	PROPOSED LOTS
	A2 ACCESSWAY
	BRIDGE
	B1 BUS LINK
	C3 COLLECTOR ROAD MAIN STREET
	COLLECTOR ROAD WITHOUT SWALE
	COLLECTOR ROAD WITH SWALE
	L1 MINOR LOCAL STREET
	L2 PEDESTRIAN PRIORITY
	L3 LOCAL STREET POSSIBLE BUS ROUTE
	P1 PARK EDGE ROAD
	P2 PARK EDGE ROAD POSSIBLE BUS LINK



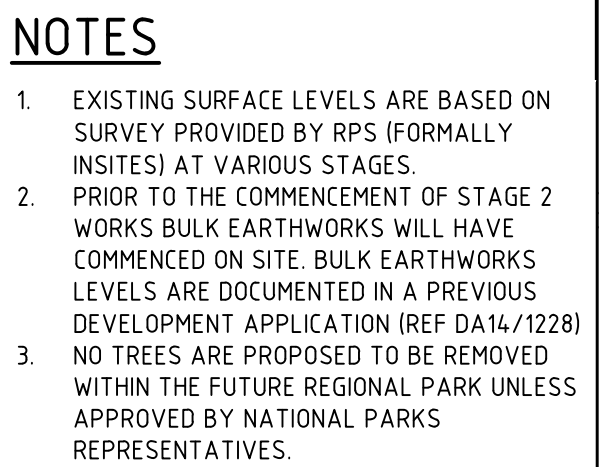
5	18.01.2016	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP	
4	30.10.2015	ISSUED FOR TENDER	DAC	CEV	SCP	
3	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP	
2	21.08.2015	ISSUED FOR CLIENT REVIEW	DAC	SCP		
1	15.05.2015	ISSUED FOR INFORMATION	DAC	SCP		
Rev.	Date	Description	Des.	Venf.	Appd.	



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Drawn B.J.H	Date 18.01.2016	Client LENDELEASE			
Checked DAC	Date 18.01.2016	Project CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION	Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES		
Designed DAC	Date 18.01.2016		Datum	Scale 1:4000	Size A1
Verified CEV	Date 18.01.2016		Drawing Number 89914020-ST02-1012		
Approved		Title DEVELOPMENT APPLICATION STAGING PLAN AND ROAD HIERARCHY PLAN	Revision 5		
SCP	18.01.2016				



REGIONAL
PARK

0 20 40 60 80 100m
SCALE 1:1000 @A1



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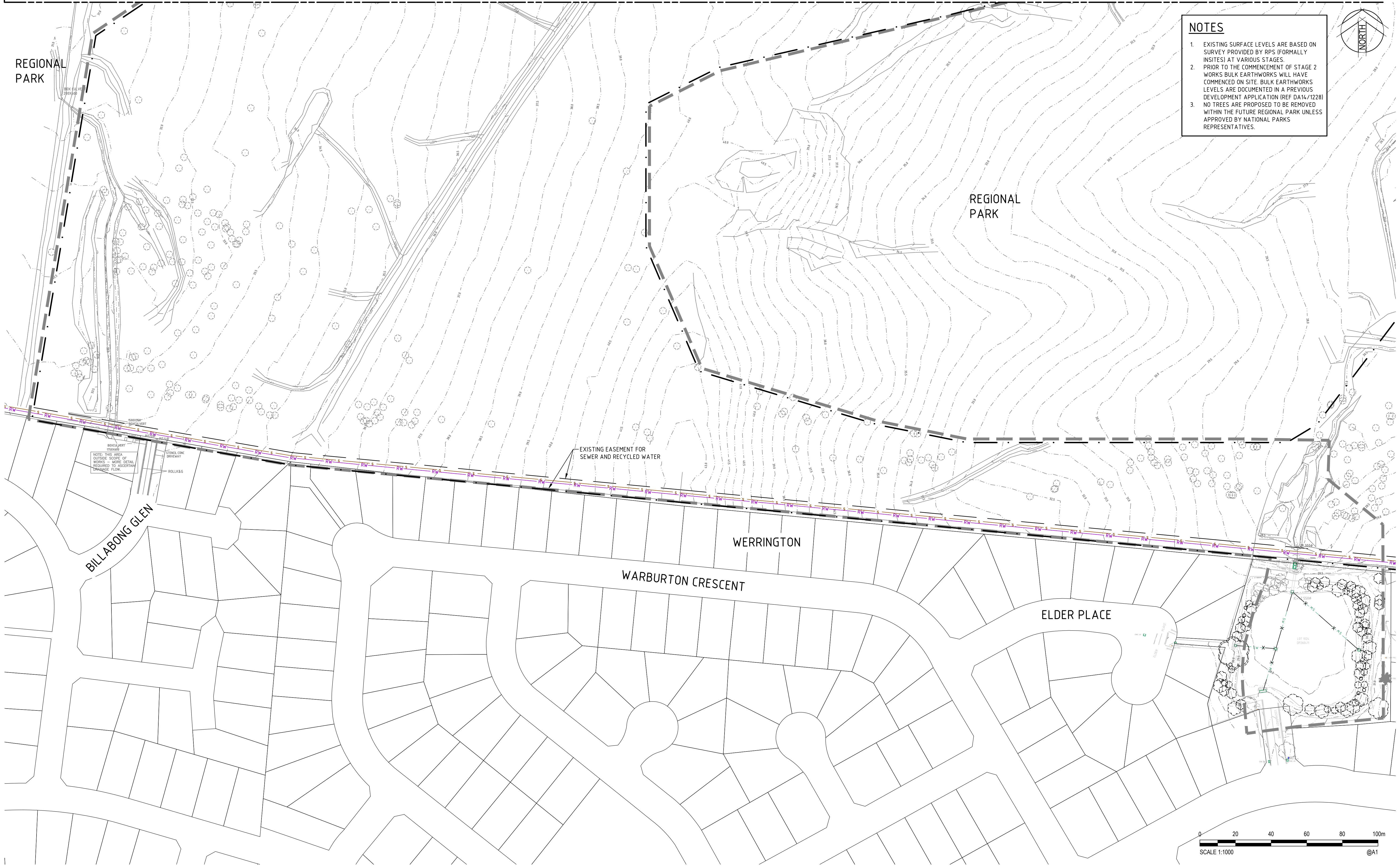
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Drawn BJH	Date 18.01.2016	Client LENDELEASE			
Checked DAC	Date 18.01.2016	Project CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION	Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES		
Designed DNC	Date 18.01.2016	Title EXISTING SERVICES AND SURVEY PLAN SHEET 1	Datum AHD	Scale 1:1000	Size A1
Verified CEV	Date 18.01.2016		Drawing Number 89914020-ST02-1021	Revision 6	
Approved					
SCP	18.01.2016				

DATE PLOTTED: 19 January 2016 12:22 PM BY: BRITTANY HOLZHEIMER

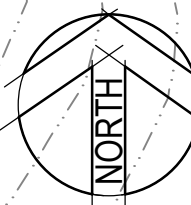
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ADJOINS DRAWING 89914020-ST02-1021



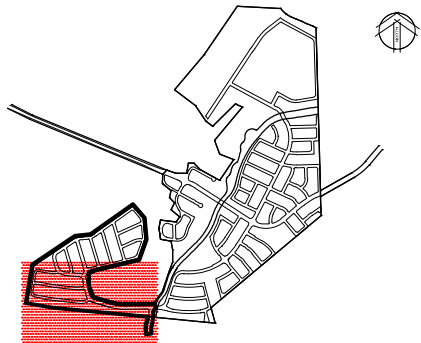
NOTES

1. EXISTING SURFACE LEVELS ARE BASED ON SURVEY PROVIDED BY RPS (FORMALLY INSITES) AT VARIOUS STAGES.
2. PRIOR TO THE COMMENCEMENT OF STAGE 2 WORKS BULK EARTHWORKS WILL HAVE COMMENCED ON SITE. BULK EARTHWORKS LEVELS ARE DOCUMENTED IN A PREVIOUS DEVELOPMENT APPLICATION (REF DA14/1228)
3. NO TREES ARE PROPOSED TO BE REMOVED WITHIN THE FUTURE REGIONAL PARK UNLESS APPROVED BY NATIONAL PARKS REPRESENTATIVES.



Rev.	Date	Description	Des.	Verif.	Appd.
6	18.01.2016	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
5	11.12.2015	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
4	30.10.2015	ISSUED FOR TENDER	DAC	CEV	SCP
3	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
2	21.08.2015	ISSUED FOR CLIENT REVIEW	DAC	SCP	
1	15.05.2015	ISSUED FOR INFORMATION	DAC	SCP	

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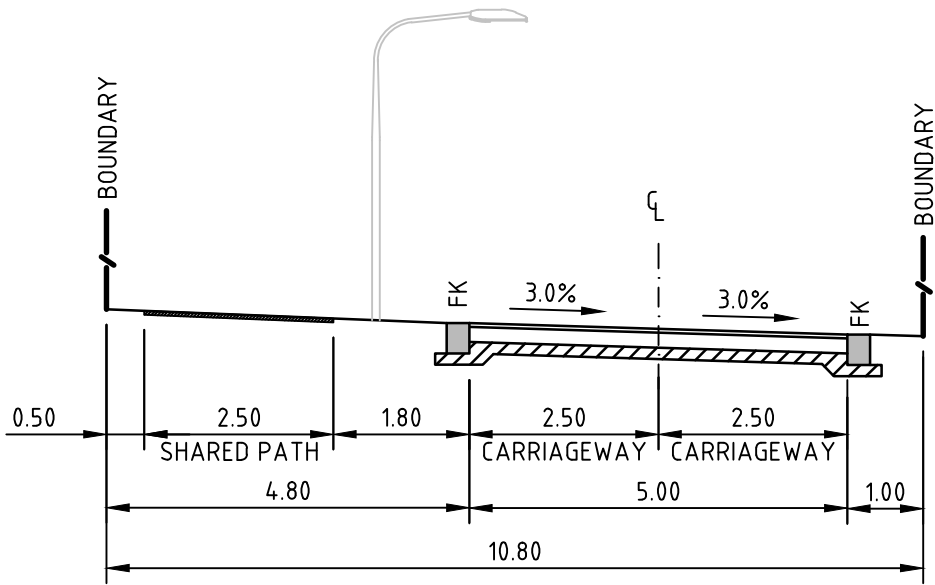
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Drawn	Date	Client
BJH	18.01.2016	LENLEASE
Checked	Date	Project
DAC	18.01.2016	CENTRAL PRECINCT
Designed	Date	STAGE 2 - CIVIL WORKS
DAC	18.01.2016	DEVELOPMENT APPLICATION
Verified	Date	Title
CEV	18.01.2016	EXISTING SERVICES AND SURVEY PLAN
Approved		SHEET 2
SCP	18.01.2016	

Status	FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION PURPOSES	
Datum	AHD
Scale	1:1000
Size	A1
Drawing Number	89914020-ST02-1022
Revision	6

- NOTES
1. PAVEMENT DEPTH BASED ON "PENRITH CITY COUNCIL DESIGN GUIDELINES FOR ENGINEERING WORKS FOR SUBDIVISIONS AND DEVELOPMENTS" (NOV 2013). PAVEMENT DEPTH IS PRELIMINARY ONLY & SUBJECT TO FUTURE DETAILED DESIGN.

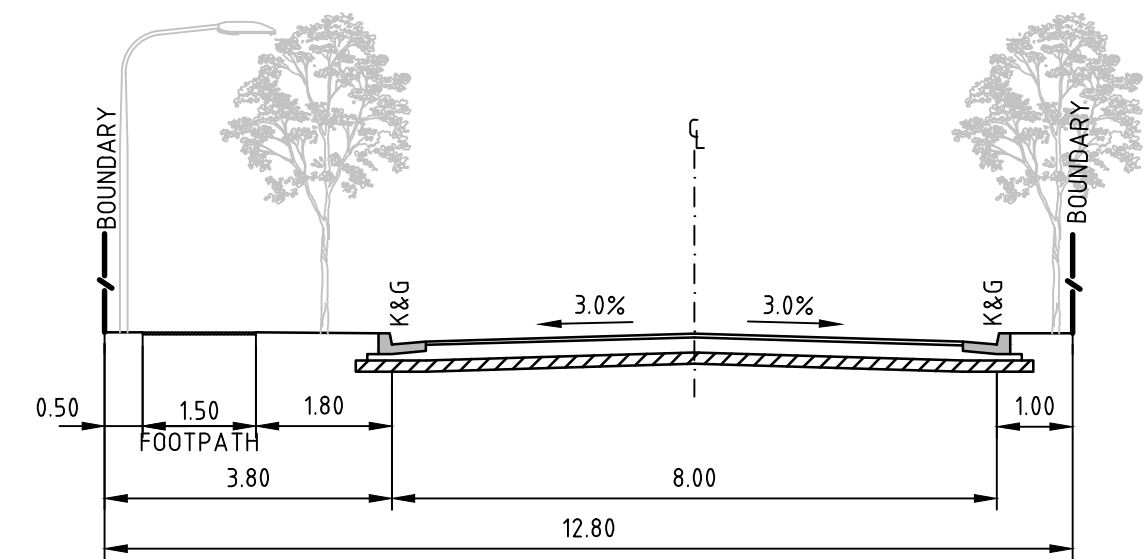
2. TYPICAL ROAD CROSS SECTIONS ARE BASED UPON INFORMATION PROVIDED BY LEND LEASE. STREET SCAPES ARE INDICATIVE ONLY & SUBJECT TO DETAILED DESIGN.



B1 BUS LINK

PAVEMENT TYPE 6
SCALE 1:100

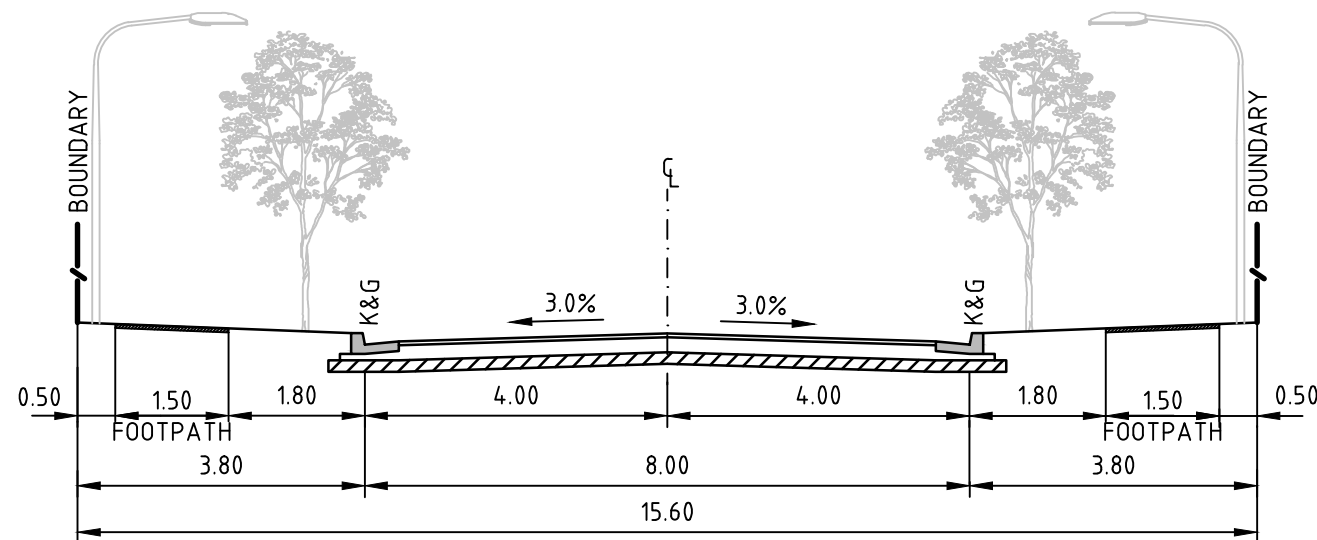
ROADS: 003



P1 PARK EDGE ROAD

PAVEMENT TYPE 2
SCALE 1:100

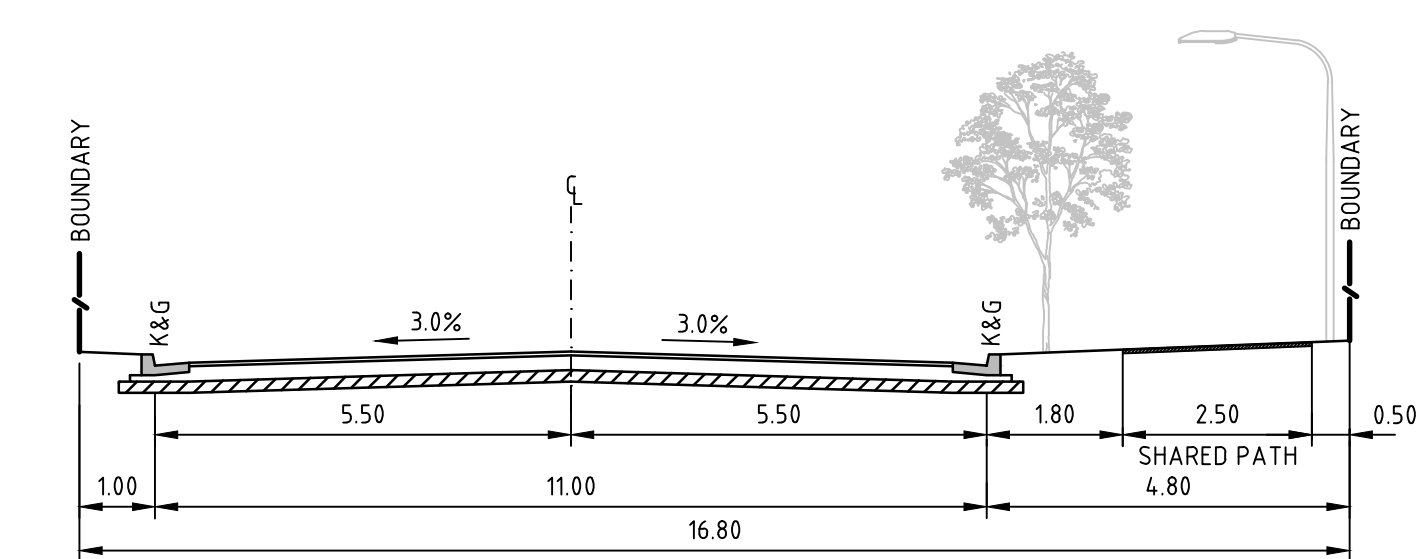
ROAD: 070 (CH900-1879)
071 (CH324-617)



L1 MINOR LOCAL STREET

PAVEMENT TYPE 2
SCALE 1:100

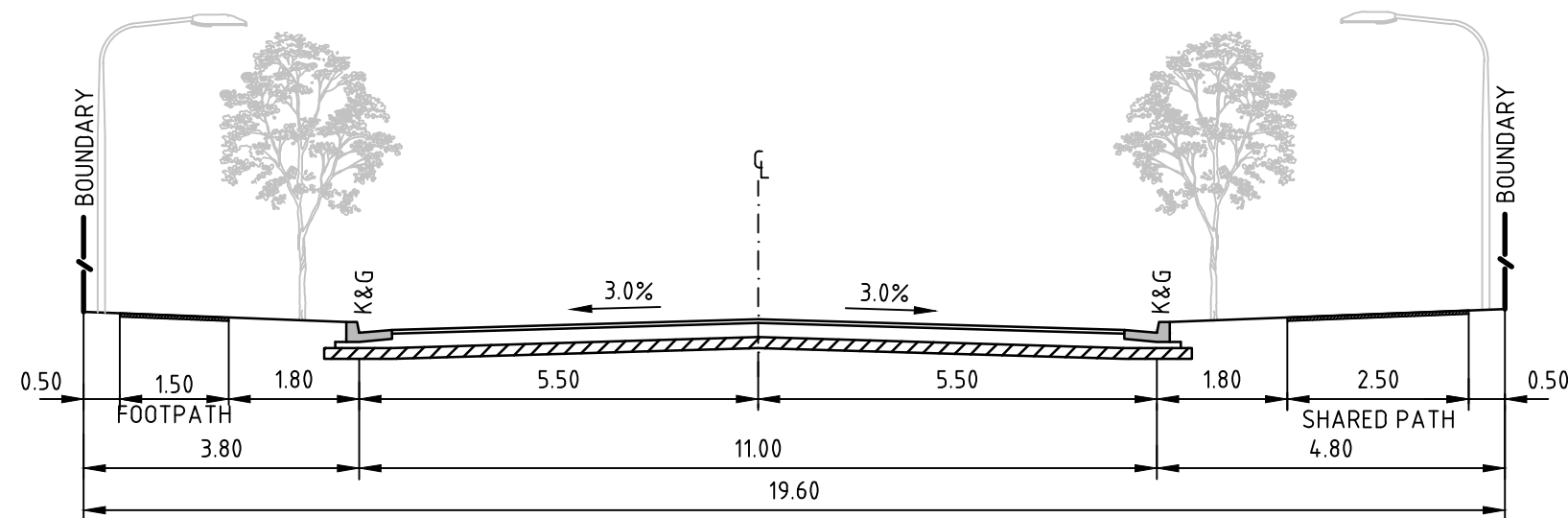
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072-073
075-079



P2 PARK EDGE POSSIBLE BUS LINK

PAVEMENT TYPE 1
SCALE 1:100

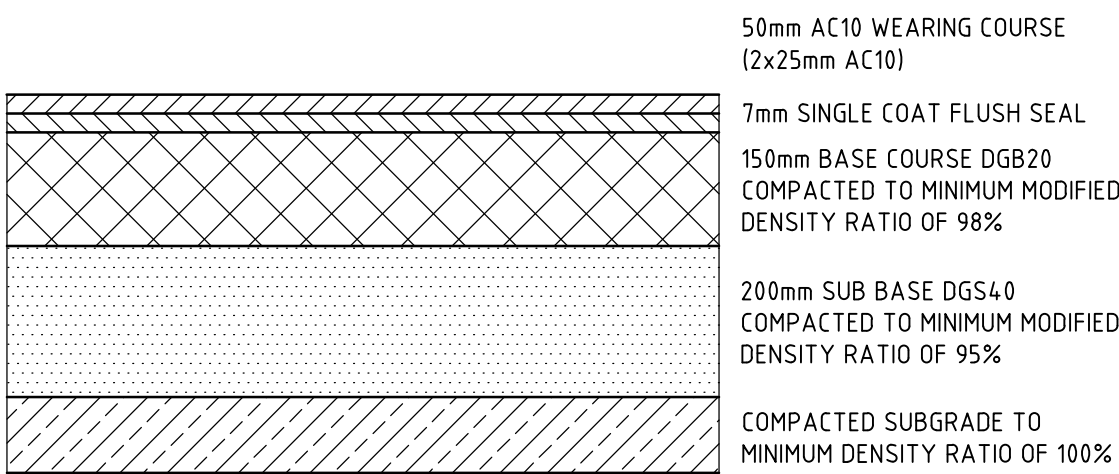
ROADS: 070 (CH650-900)



L3 LOCAL STREET POSSIBLE BUS ROUTE

PAVEMENT TYPE 1
SCALE 1:100

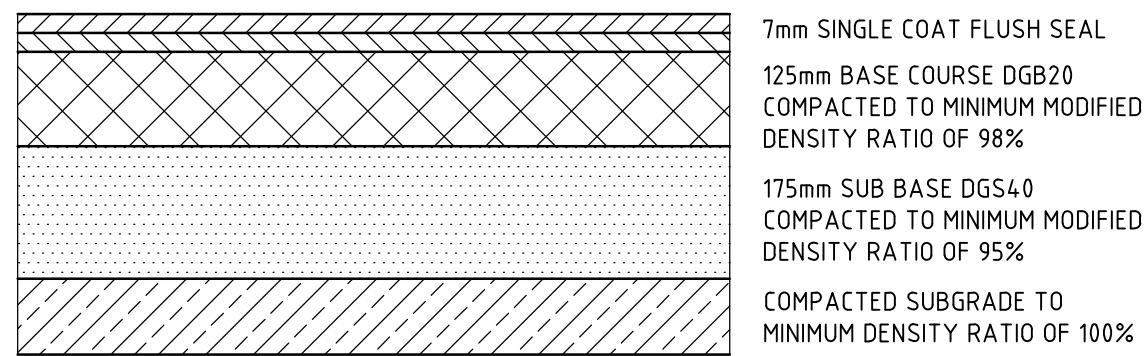
ROADS: 070 (CH0-650)
074



PAVEMENT TYPE 1

SCALE 1:10

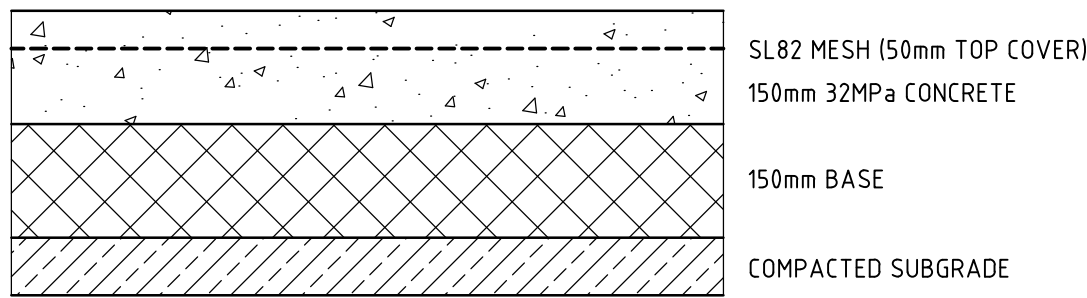
ASSUMED CBR: 3%
ASSUMED ESA: 5x10⁵



PAVEMENT TYPE 2

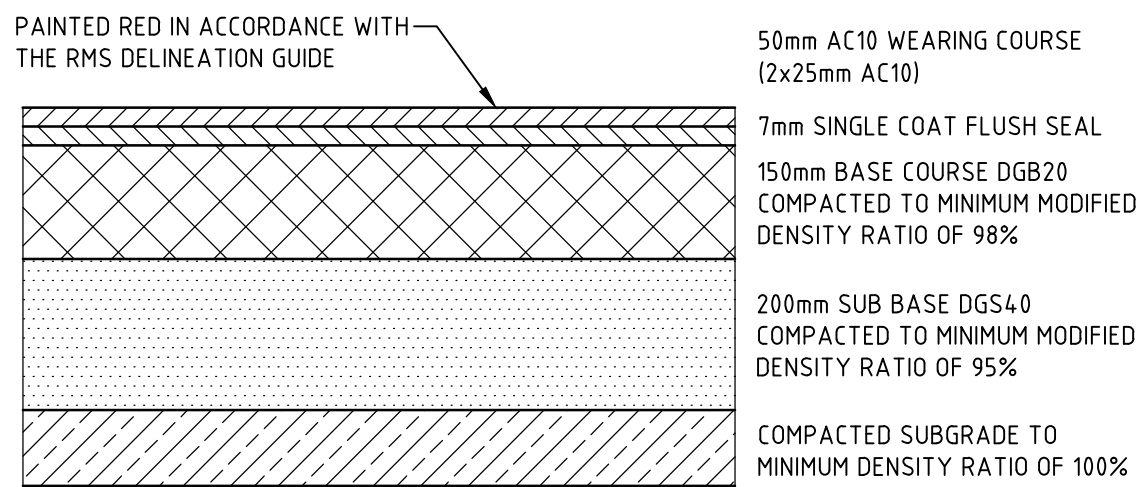
SCALE 1:10

ASSUMED CBR: 3%
ASSUMED ESA: 5x10⁴



PAVEMENT TYPE 5
CONCRETE MAINTENANCE ACCESS ROAD

SCALE 1:10



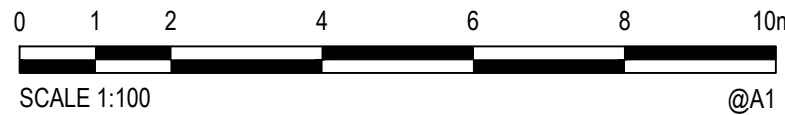
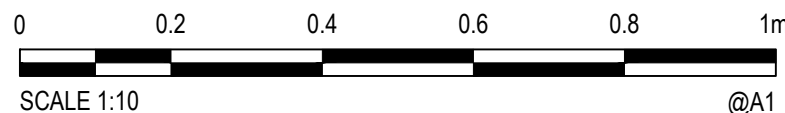
PAVEMENT TYPE 6

SCALE 1:10

ASSUMED CBR: 3%
ASSUMED ESA: 5x10⁵

NOTE

1. PROVIDE TCJ AT 4m SPACING
2. EVERY THIRD JOINT TO BE DEJ



Rev.	Date	Description	Des.	Verif.	Appd.
5	18.01.2016	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
4	30.10.2015	ISSUED FOR TENDER	DAC	CEV	SCP
3	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
2	21.08.2015	ISSUED FOR CLIENT REVIEW	DAC	SCP	
1	15.05.2015	ISSUED FOR INFORMATION	DAC	SCP	

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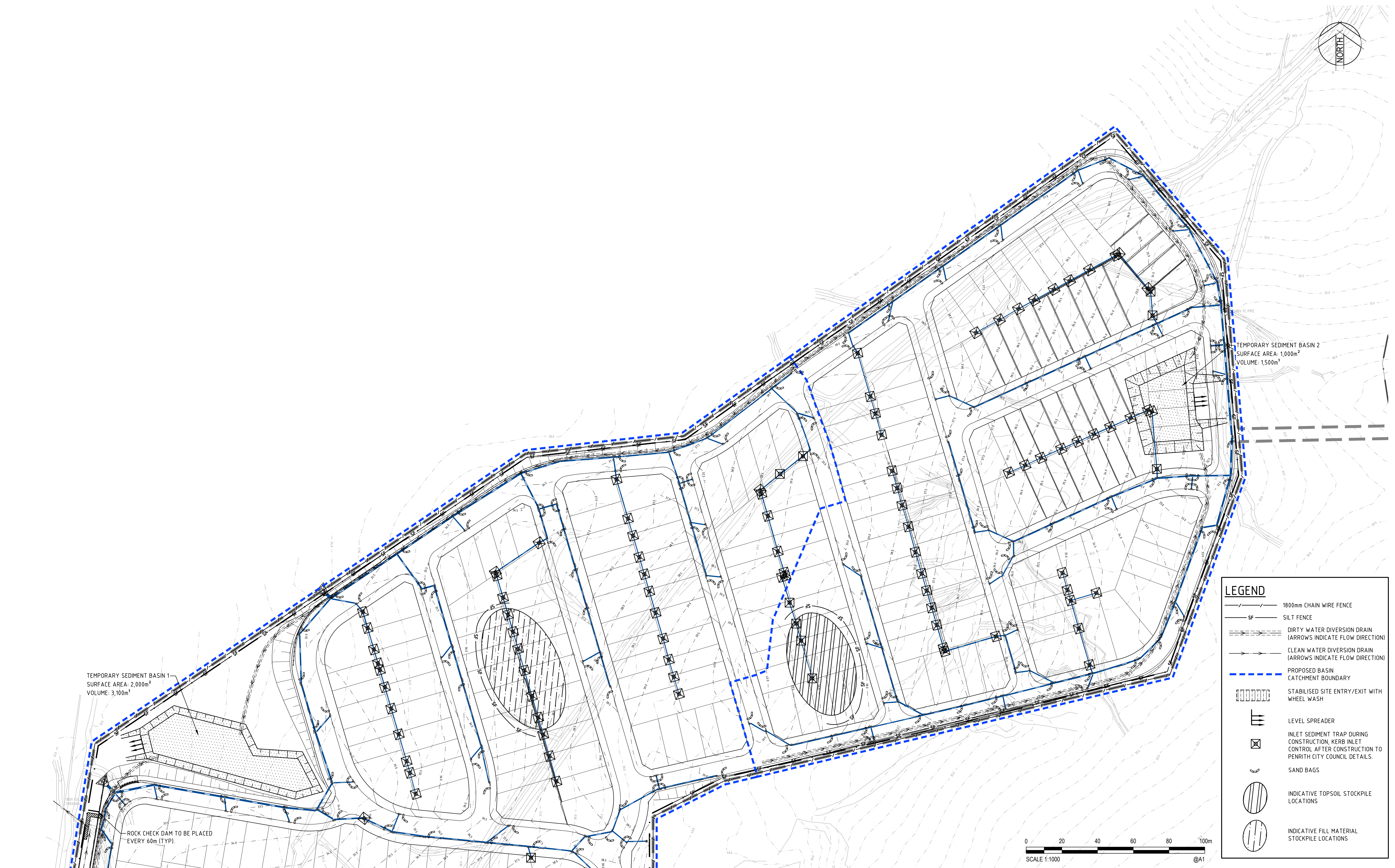


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Drawn BJH	Date 18.01.2016
Checked DAC	Date 18.01.2016
Designed DAC	Date 18.01.2016
Verified CEV	Date 18.01.2016
Approved SCP	Date 18.01.2016

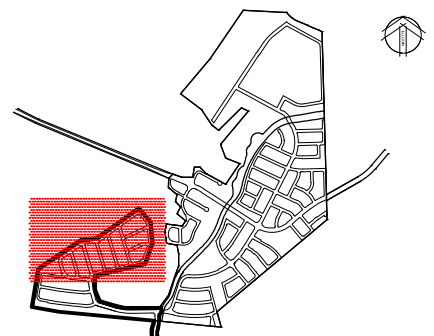
Client LENDLEASE	Project CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION
Title TYPICAL ROAD CROSS SECTIONS AND PAVEMENT TYPES	

Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES	Datum AHD	Scale AS SHOWN	Size A1
Drawing Number 89914020-ST02-1051	Revision 5		



ADJOINS DRAWING 89914020-ST02-1132

5	18.01.2016	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
4	30.10.2015	ISSUED FOR TENDER	DAC	CEV	SCP
3	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
2	21.08.2015	ISSUED FOR CLIENT REVIEW	DAC	SCP	
1	15.05.2015	ISSUED FOR INFORMATION	DAC	SCP	
Rev.	Date	Description	Des.	Verif.	Appd.



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Drawn	Date
BJH	18.01.2016
Checked	Date
DAC	18.01.2016
Designed	Date
DAC	18.01.2016
Verified	Date
CEV	18.01.2016
Approved	
SCP	18.01.2016

Client	LENLEASE
Project	CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION
Title	EROSION & SEDIMENT CONTROL PLAN SHEET 1

Status			
FOR APPROVAL			
NOT TO BE USED FOR CONSTRUCTION PURPOSES			
Datum		Scale	Size
AHD		1:1000	A1
Drawing Number			Revision
89914020-ST02-1131			5



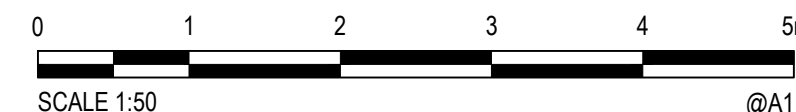
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Drawn	Date	Client	LENLEASE		
B.J.H	18.01.2016				
Checked	Date	Project	CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION		Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES
DAC	18.01.2016				
Designed	Date				
DAC	18.01.2016				
Verified	Date	Title			
CEV	18.01.2016				
Approved					
SCP	18.01.2016		EROSION & SEDIMENT CONTROL PLAN SHEET 2		AHD Scale Size 1:1000 A1 Drawing Number Revision 89914020-ST02-1132 5



TEST ANY EXISTING STORED WATER AND FLOCCULATE AS REQUIRED TO ENSURE WATER QUALITY MEETS THE REQUIREMENTS OF COUNCIL PRIOR TO PUMPING FOR DUST CONTROL. REFER TO APPENDIX E OF 'BLUE BOOK' FOR FLOCCULATION DETAILS

[illegible]

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Drawn BJH	Date 18.01.2016	Client LENLEASE			
Checked DAC	Date 18.01.2016	Project CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION	Status FOR APPROVAL		
Designed DAC	Date 18.01.2016		NOT TO BE USED FOR CONSTRUCTION PURPOSES		
Verified CEV	Date 18.01.2016				
Approved		Title			
SCP	18.01.2016	EROSION & SEDIMENT CONTROL DETAILS SHEET 1	AHD		A1
			Drawing Number	Revision	
			89914020-ST02-1141		5

DATE PLOTTED: 19 January 2016 12:23 PM BY: BRITTANY HOLZHEIMER
XREFs: Xref-89914020-Client-Logos
CAD File: N:\Paramatna\Pages\89914020-ST02-1142-DWG(5).dwg

1. Site Data Sheet

Site name: Central Precinct - Bulk Earthworks Plan

Site location: Penrith LGA

Precinct: Central Precinct

Description of site: Residential Subdivision

Site area	Site						Remarks
	1	2					
Total catchment area (ha)	13	6.5					
Disturbed catchment area (ha)	13	6.5					

Soil analysis							
Soil landscape							DIPNR mapping (if relevant)
Soil Texture Group	F	F	F	F	F	F	Sections 6.3.3(c), (d) and (e)

Rainfall data							
Design rainfall depth (days)	5	5					See Sections 6.3.4 (d) and (e)
Design rainfall depth (percentile)	80	80					See Sections 6.3.4 (f) and (g)
x-day, y-percentile rainfall event	27.4	27.4					See Section 6.3.4 (h)
Rainfall intensity: 2-year, 6-hour storm	10.1	10.1					See IFD chart for the site
Rainfall erosivity (R-factor)	2250	2250					Automatic calculation from above data

3. Volume of Sediment Basins, Type D and Type F Soils

Basin volume = settling zone volume + sediment storage zone volume

Settling Zone Volume

The settling zone volume for Type F and Type D soils is calculated to provide capacity to contain all runoff expected from up to the y-percentile rainfall event. The volume of the basin's settling zone (V) can be determined as a function of the basin's surface area and depth to allow for particles to settle and can be determined by the following equation:

$$V = 10 \times C_v \times A \times R_{y-\%ile, x-day} \text{ (m}^3\text{)}$$

where:

10 = a unit conversion factor

C_v = the volumetric runoff coefficient defined as that portion of rainfall that runs off as stormwater over the x-day period

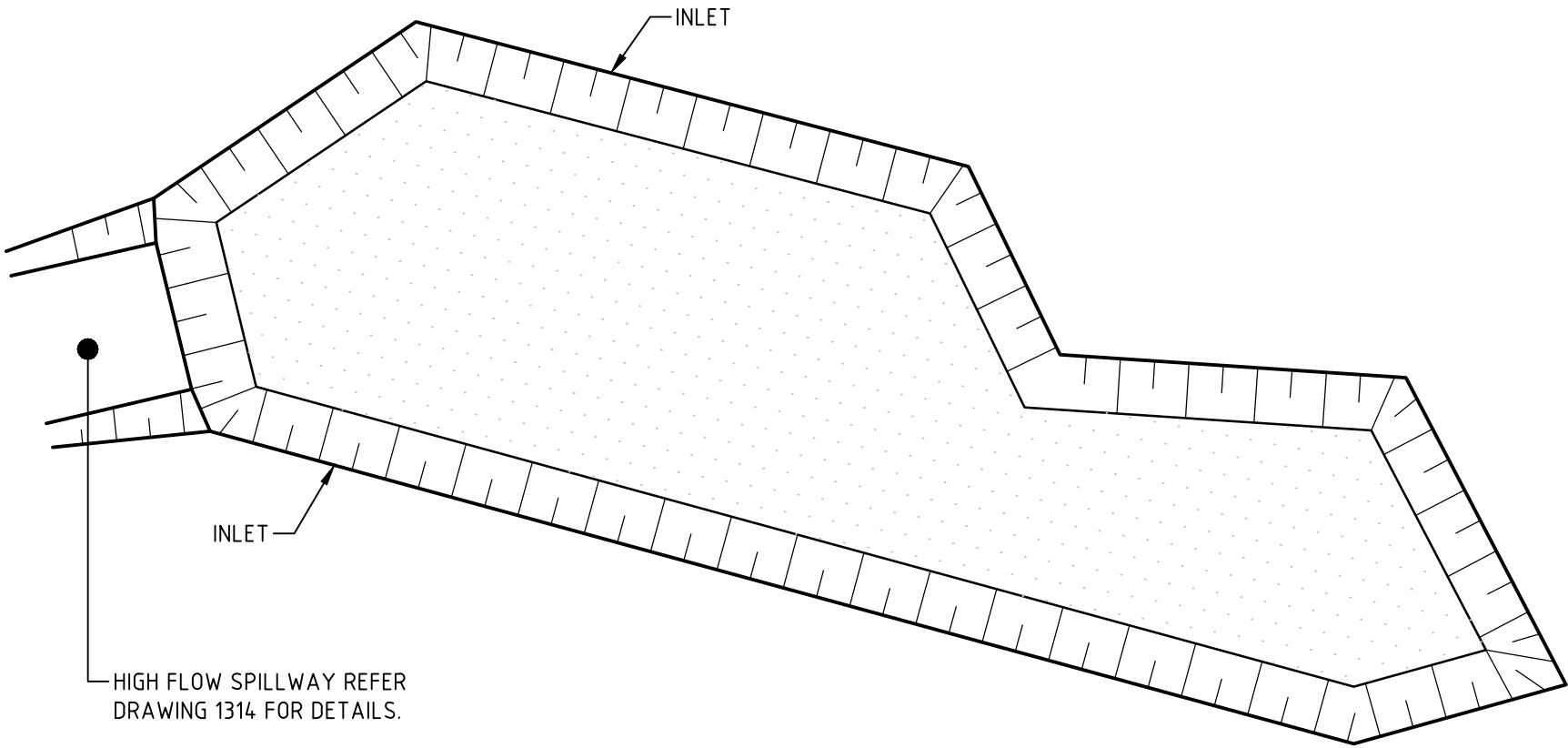
R = is the x-day total rainfall depth (mm) that is not exceeded in y percent of rainfall events. (See Sections 6.3.4(d), (e), (f), (g) and (h)).

A = total catchment area (ha)

Sediment Storage Zone Volume

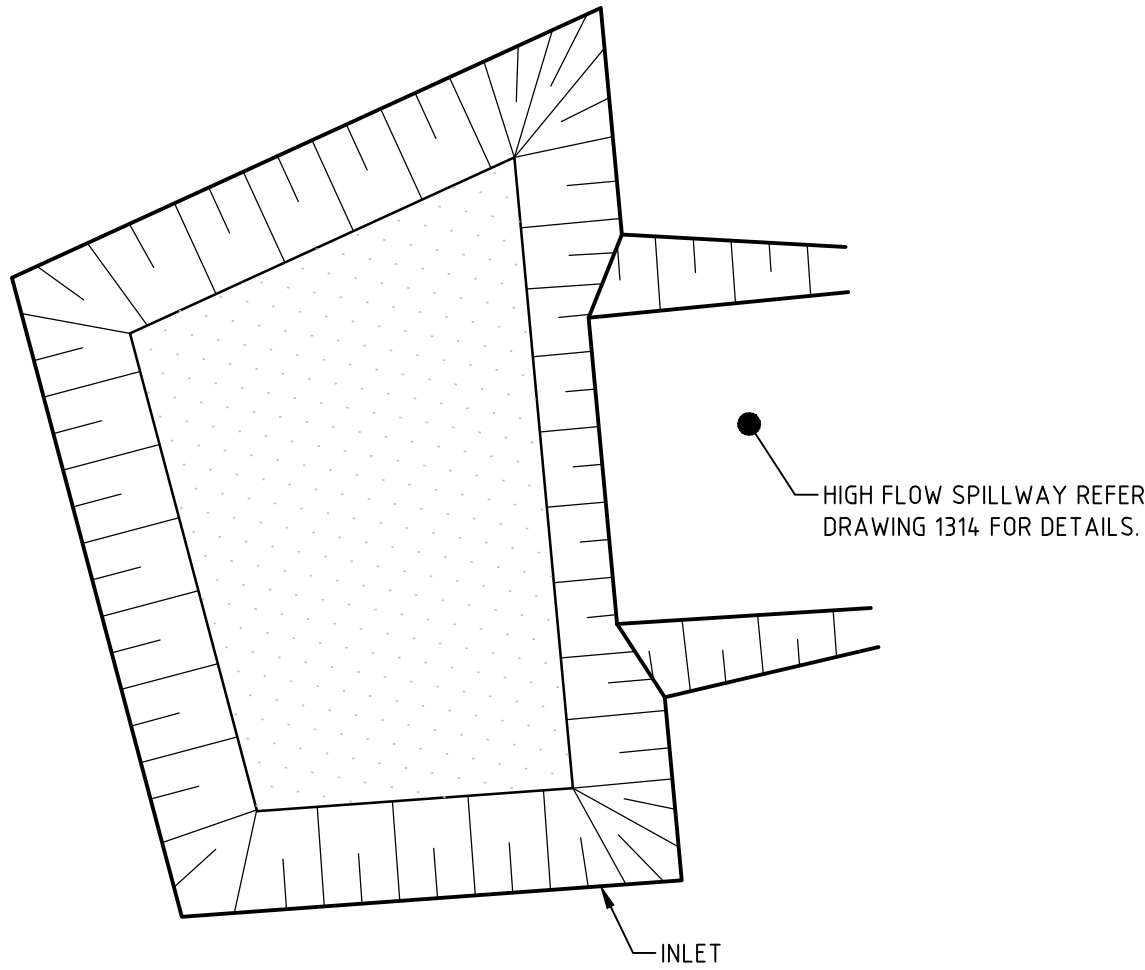
In the standard calculation, the sediment storage zone is 50 percent of the setting zone. However, designers can work to capture the 2-month soil loss as calculated by the RUSLE (Section 6.3.4(i)(ii)), in which case the "Detailed Calculation" spreadsheets should be used.

Total Basin Volume						
Site	C_v	R x-day y-%ile	Total catchment area (ha)	Settling zone volume (m ³)	Sediment storage volume (m ³)	Total basin volume (m ³)
1	0.64	35	13.1	2934	1467	4402
2	0.64	35	6.3	1411	706	2117
3	0.64	35	2.8	627	314	941



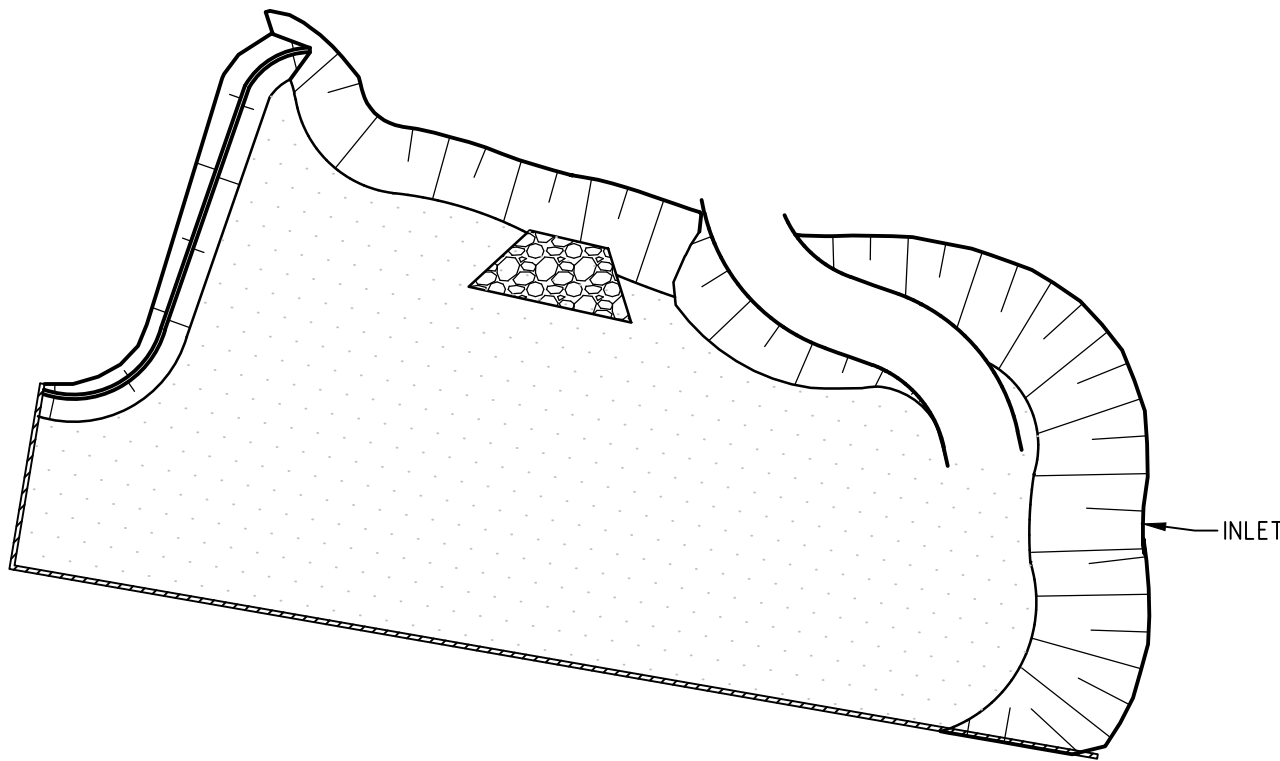
SEDIMENT BASIN 1 PLAN

SCALE 1:500



SEDIMENT BASIN 2 PLAN

SCALE 1:500



SEDIMENT BASIN 3 PLAN

SCALE 1:500



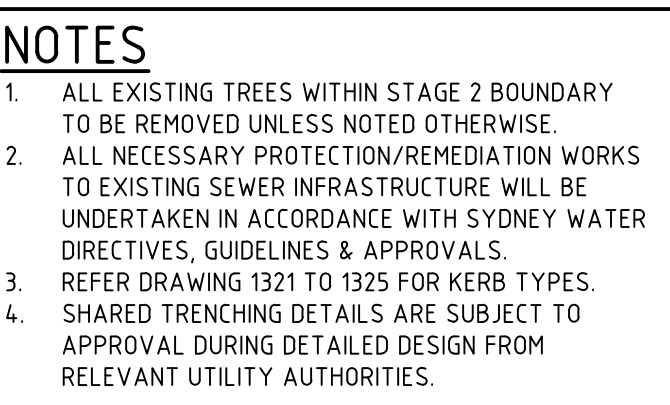
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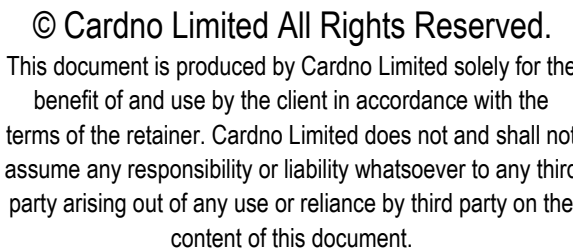
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DAC	18.01.2016	
Designed	Date	
DAC	18.01.2016	
Verified	Date	
CEV	18.01.2016	
Approved		
SCP	18.01.2016	

Project	CENTRAL PRECINCT
STAGE 2 - CIVIL WORKS	
DEVELOPMENT APPLICATION	
Title	
EROSION & SEDIMENT CONTROL DETAILS	
SHEET 2	

Status	FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION PURPOSES	
Datum	AHD
Scale	1:500
Size	A1
Drawing Number	89914020-ST02-1142
Revision	5

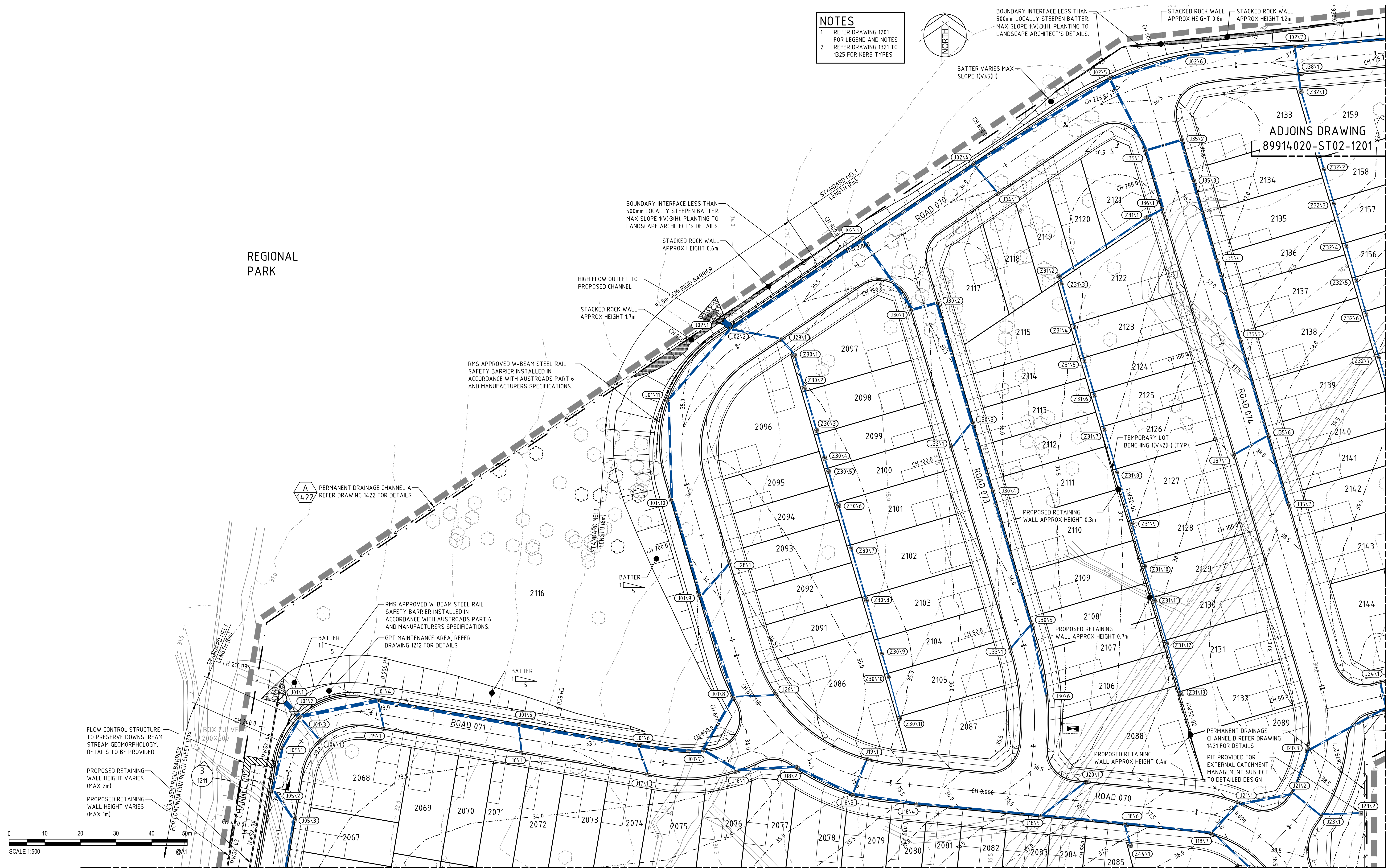


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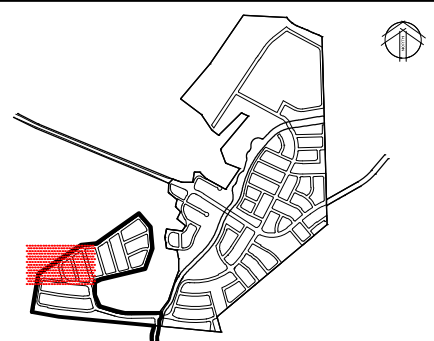
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Checked	Date
DAC	18.01.2016
Designed	Date
DAC	18.01.2016
Verified	Date
CEV	18.01.2016
Approved	
SCP	18.01.2016

Status			
FOR APPROVAL			
NOT TO BE USED FOR CONSTRUCTION PURPOSES			
Date		Scale	Size
AHD		1:500	A1
Drawing Number			Revision
89914020-ST02-1201			7



ADJOINS DRAWING 89914020-ST02-1204

7	18.01.2016	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
	6	11.12.2015	REISSUED FOR DEVELOPMENT APPLICATION		
5	25.11.2015	ISSUED IN RESPONSE TO TENDERER RFI	DAC	CEV	SCP
	4	30.10.2015	ISSUED FOR TENDER	DAC	CEV
3	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
2	21.08.2015	ISSUED FOR CLIENT REVIEW	DAC	SCP	
1	15.05.2015	ISSUED FOR INFORMATION	DAC	SCP	
Rev.	Date	Description	Des.	Verif.	Appd.



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Checked DAC	Date 18.01.2016
Designed DAC	Date 18.01.2016
Verified CEV	Date 18.01.2016
Approved	
SCP	18.01.2016

Client	LENDEASE
Project	CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION
Title	ROADS & STORMWATER PLAN SHEET 2

Status			
FOR APPROVAL			
NOT TO BE USED FOR CONSTRUCTION PURPOSES			
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Drawing Number			Revision
89914020-ST02-1202			7



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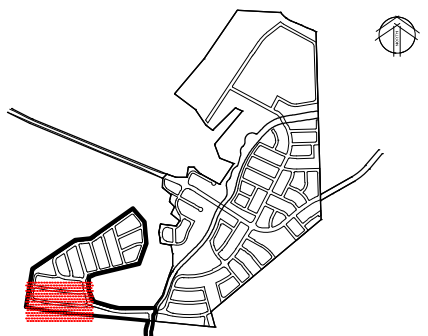
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Drawn	Date B.J.H	18.01.2016	Client			LENDLEASE		
Checked	Date DAC	18.01.2016	Project		CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION	Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES		
Designed	Date DAC	18.01.2016	Title		ROADS & STORMWATER PLAN SHEET 3	Datum AHD	Scale 1:500	Size A1
Verified	Date CEV	18.01.2016				Drawing Number 89914020-ST02-1203		Revision 7
Approved								
SCP		18.01.2016						

7	18.01.2016	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
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3	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
2	21.08.2015	ISSUED FOR CLIENT REVIEW	DAC	SCP	
1	15.05.2015	ISSUED FOR INFORMATION	DAC	SCP	
Rev.	Date	Description	Des.	Verif.	Appd.



7	18.01.2016	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
	6	11.12.2015	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV
5	25.11.2015	ISSUED IN RESPONSE TO TENDERER RFI	DAC	CEV	SCP
4	30.10.2015	ISSUED FOR TENDER	DAC	CEV	SCP
3	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
2	21.08.2015	ISSUED FOR CLIENT REVIEW	DAC	SCP	
1	15.05.2015	ISSUED FOR INFORMATION	DAC	SCP	
Rev.	Date	Description	Des.	Verif.	Appd.



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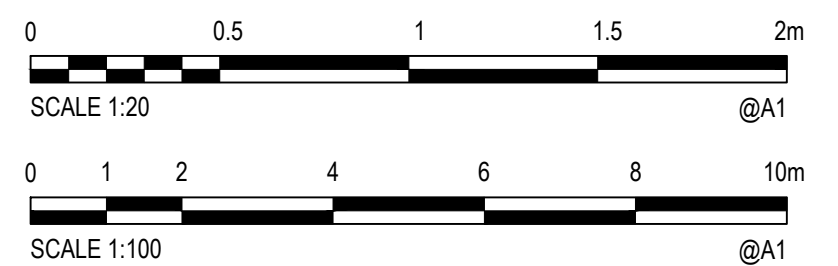
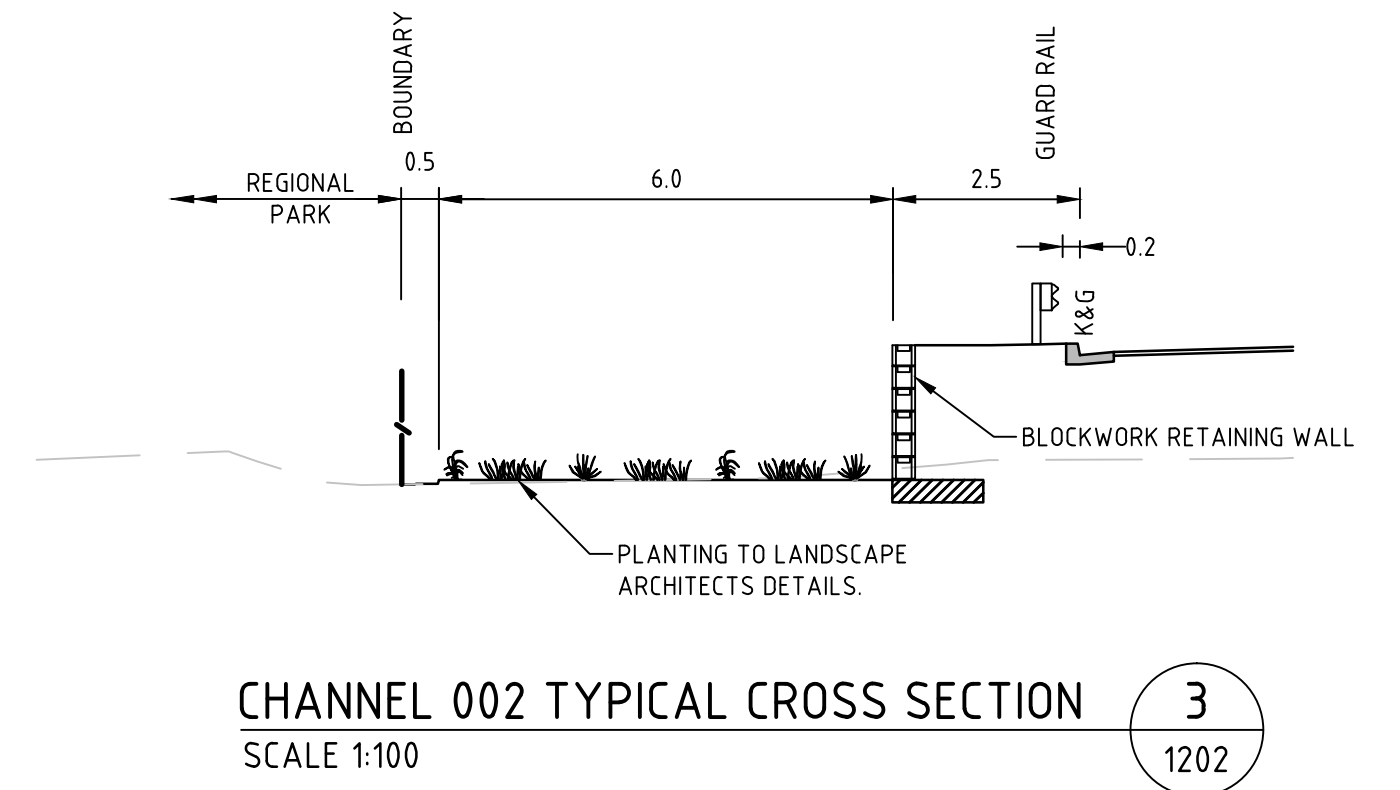
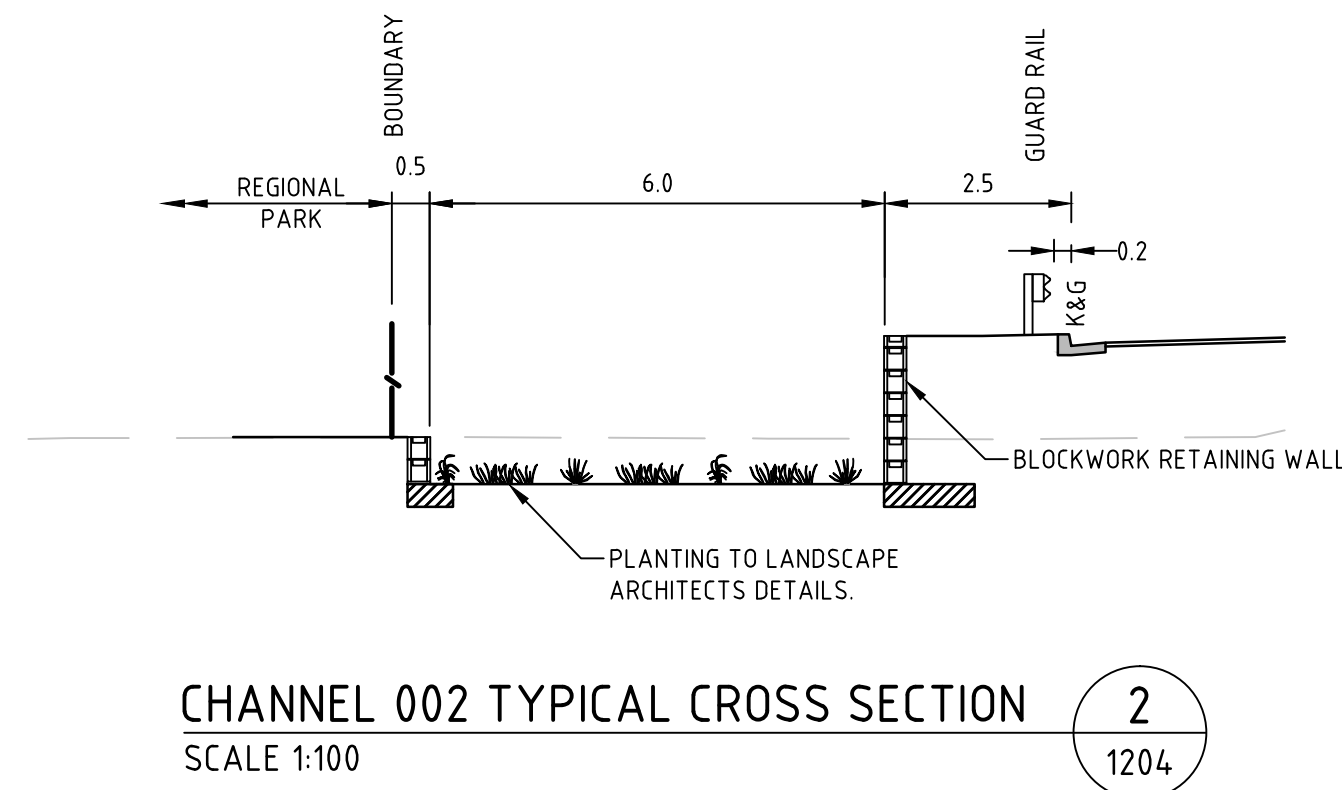
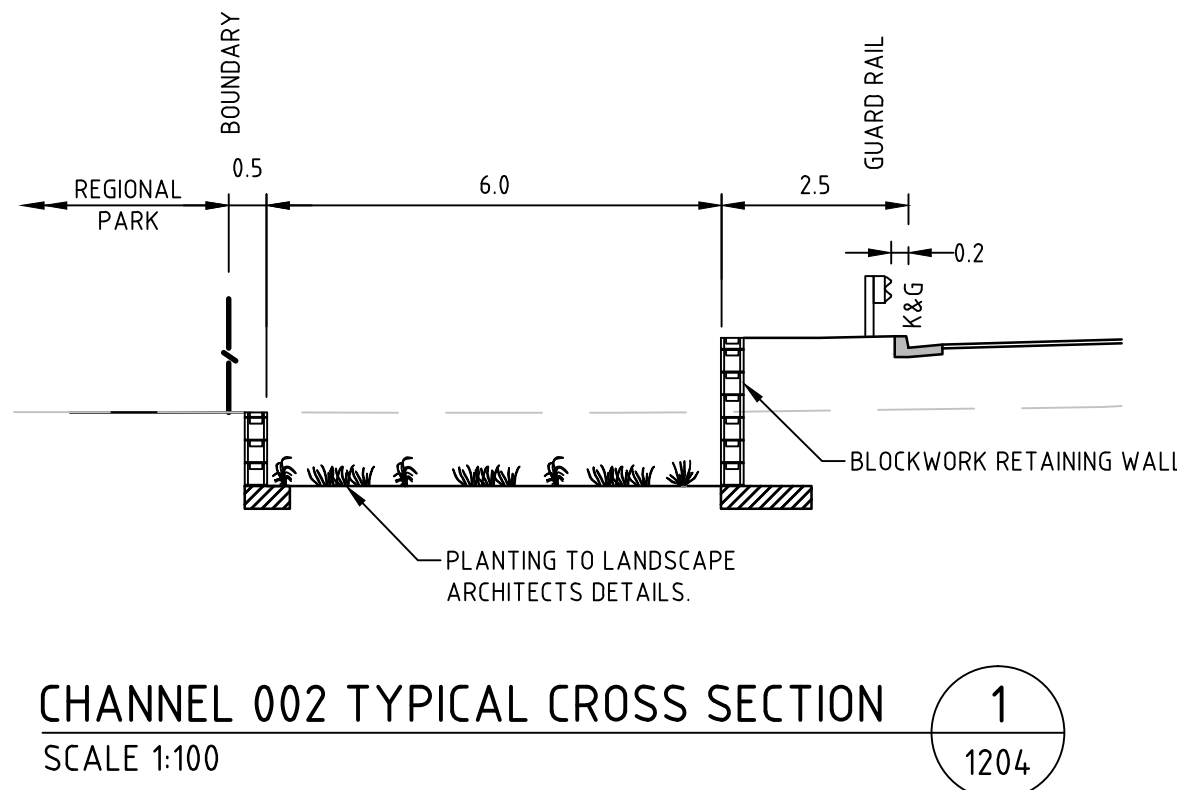
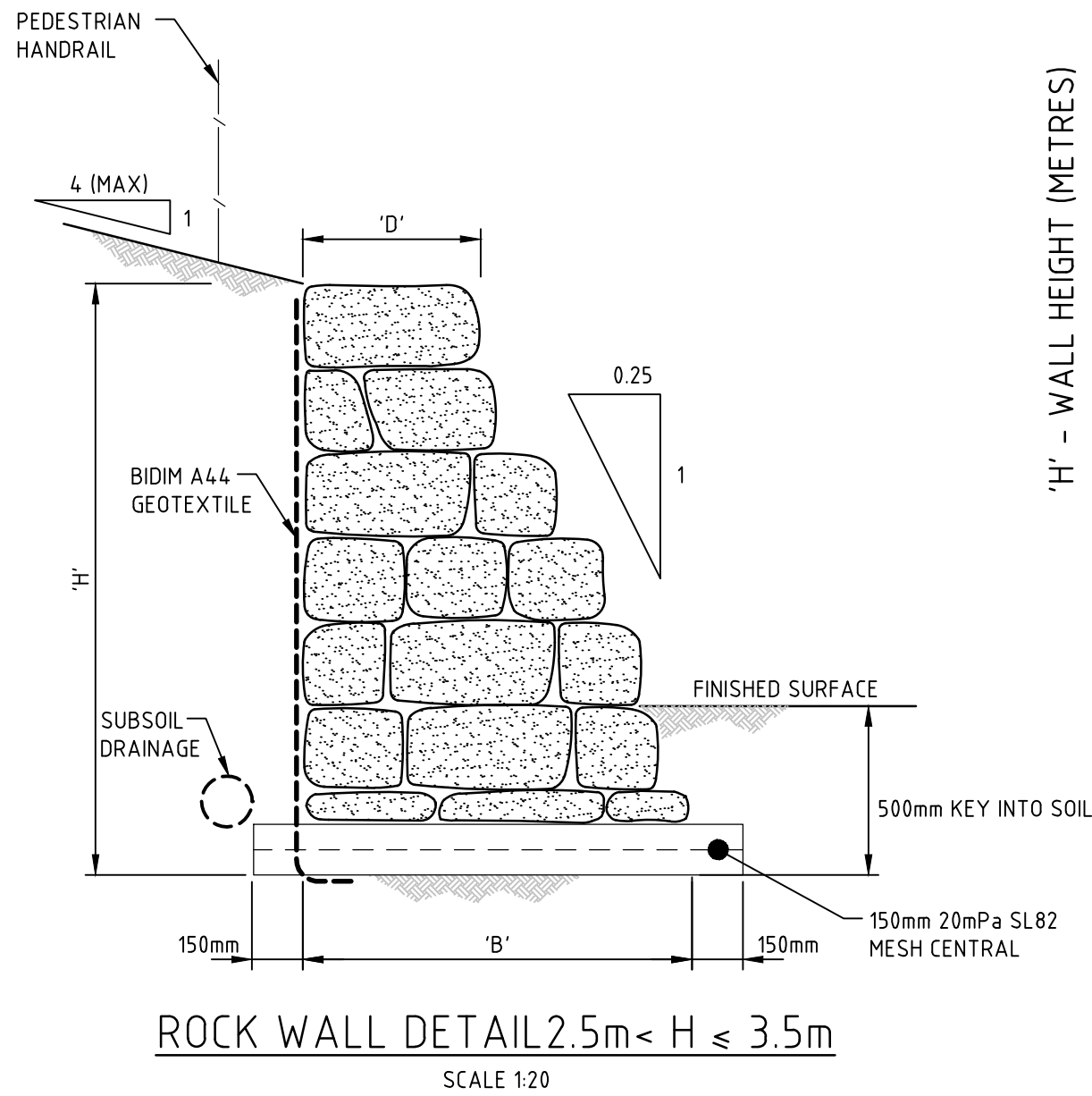
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Designed DAC	Date 18.01.2016
Verified CEV	Date 18.01.2016
Approved	
SCP	18.01.2016

Client	LENLEASE
Project	CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION
Title	ROADS & STORMWATER PLAN SHEET 4

Status			
FOR APPROVAL			
NOT TO BE USED FOR CONSTRUCTION PURPOSES			
Date		Scale	Size
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Drawing Number			Revision
89914020-ST02-1204			7

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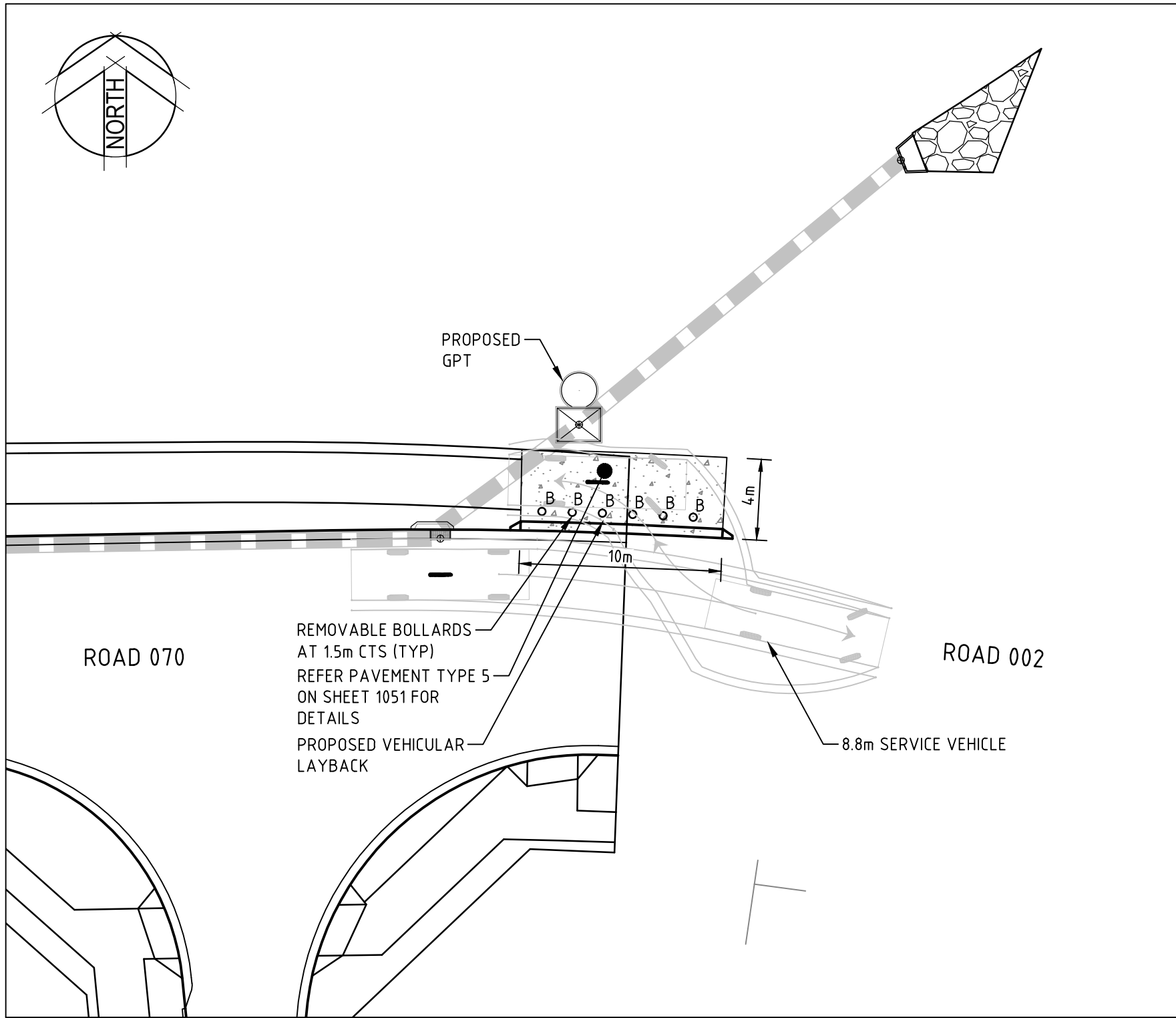
- THE NORMAL LOADING CONDITION ASSUMES THAT THE WATER TABLE IS BELOW THE BASE OF THE WALL.
- BACKFILL MATERIALS TO BE ESSENTIALLY GRANULAR FREE DRAINING MATERIAL.
- THE HEIGHT OF THE WALL IS MEASURED FROM TOP OF WALL TO UNDERSIDE OF FOUNDATION/KEY.
- THE RETAINING WALLS ARE DESIGNED FOR A 20kPa SURCHARGE. A 20kPa SURCHARGE ADEQUATELY COVERS THE B99 VEHICLE (AS/ZS 2830), FULLY LOADED. ALL SURCHARGES IN EXCESS OF 20kPa WILL REQUIRE SITE SPECIFIC DESIGN.
- WALLS OF LESS THAN 2.5m IN HEIGHT MAY BE PLACED ON SUITABLE SOIL FOUNDATIONS. SUITABLE FOUNDING SOILS WOULD NORMALLY BE RESIDENTIAL SANDSTONE OR OTHER DENSE CLAYEY SANDS. CLEAN SANDS, SILTY SANDS OR HIGH CLAY CONTENT SOILS SUCH AS RESIDUAL SHALE ARE GENERALLY UNACCEPTABLE AS FOUNDING MATERIALS FOR ROCK RETAINING WALLS.
- A FOUNDATION SAFE BEARING CAPACITY OF 200kPa MUST BE ACHIEVED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
- WALLS BETWEEN 2.5m AND 3.5m SHALL BE CONSTRUCTED ON 150mm 20mPa SL82 REINFORCED CONCRETE WITHIN THE 500mm KEY.
- ALL SURFACE RUNOFF SHALL BE DIRECTED AWAY FROM THE BACK OF THE WALL SO AS TO PREVENT INFILTRATION OF SUCH SURFACE RUNOFF INTO THE GRANULAR BACKFILL. IN THE CASE OF THE WALLS FOUNDED ON SOIL THE SURFACE RUNOFF SHALL BE DIRECTED SO AS TO PREVENT EROSION AND POSSIBLE UNDERCUTTING ALONG THE TOE OF THE WALL.
- MATERIALS USED FOR CONSTRUCTION OF THE WALL SHALL BE LARGE, DURABLE BOULDERS, IN GENERAL AT LEAST 0.5 SQUARE METRES IN AREA.
- THE EXPOSED FOUNDATION SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 300mm, WETTED TO BRING IT NEAR THE STANDARD OPTIMUM MOISTURE CONTENT AND COMPACTED TO A MINIMUM DRY DENSITY RATIO OF 95% STANDARD. ANY AREA WHICH REMAINS SOFT OR SPONGY AFTER THE COMPACTION, SHALL BE EXCAVATED AND FILLED.
- WHERE THE ROCK SURFACE FALLS AWAY BELOW THE TOE OF THE WALL, PARTICULAR CARE SHALL BE TAKEN TO ENSURE THAT THE WALL IS FOUNDED ADEQUATELY AND NOT A FOUNDATION OF FLOATERS.
- WHERE THE ADDITIONAL RESISTANCE TO SLIDING IS REQUIRED THE BASE OF THE WALL SHALL BE LAID INTO THE FOUNDATION ROCK BY CONCRETING THE BASE COURSE OF BOULDERS.
- WHERE THE WALL IS TO BE FOUNDED ON AS COMPACT SOIL THE BASE OF THE WALL SHALL BE AT A LEVEL WHICH IS A MINIMUM DEPTH OF 500mm BELOW THE FINISHED SURFACE LEVEL AT THE TOE OF THE WALL.
- ROCK IS TO BE PLACED TO ENSURE THAT THE INDIVIDUAL BLOCKS ARE INTERLOCKING. TO ACHIEVE THIS, BLOCKS SHOULD BE LAID ROUGHLY COURSED AND BEDDED ON THEIR BROADEST BASES. ALL VERTICAL JOINTS BETWEEN BLOCKS SHALL BE BOKEN. FILTER CLOTH SHALL BE PLACED BEHIND THE ROCK WALL UNDER THE BASE.
- ANY COMPACTION OF FILL PLACED BEHIND THE WALL SHE BE CAREFULLY CARRIED OUT TO MINIMISE THE INDUCED LATERAL STRESS AGAINST THE WALL.
- ALL FILL SHOULD BE PLACED IN LAYERS WITH MAXIMUM LOOSE THICKNESS OF 250mm AND COMPACTED TO A DRY DENSITY RATIO OF NOT LESS THAN 95% BASED ON STANDARD COMPACTION.
- WHERE PAVEMENT CONSTRUCTION IS TO TAKE PLACE USING THE BACKFILL AS SUBGRADE MATERIAL, NEAR SURFACE COMPACTION OF THE BACKFILL SHALL BE CARRIED OUT IN ACCORDANCE WITH PAVEMENT COMPACTION REQUIREMENTS AND SURCHARGE LOADS BY COMPACTION MACHINERY.
- WHERE REQUIRED THE OVERALL STABILITY OF THE SLOPE AND ROCK WALL SHALL BE MODIFIED BY A SUITABLY QUALIFIED CIVIL ENGINEER, PRACTICING GEOTECHNICAL ENGINEERING, PRIOR TO COMMENCING PLACEMENT OF THE WALL ROCK.
- WHERE PIPES ARE TO PASS THROUGH OR BENEATH THE ROCK WALL THEY SHALL BE ENCASED IN CONCRETE TO ENSURE THAT THE BASE OF THE WALL IS FOUNDED IN COMPETENT MATERIAL.
- A HANDRAIL SHALL BE IN ACCORDANCE WITH RMS PIPE HANDRAIL DETAILS DRAWING MD.R201.C20.A. THE HANDRAIL FOOTINGS ARE TO BE LOCATED BEHIND THE TOP OF THE WALL WITHIN THE GRANULAR FREE DRAINING BACKFILL.
- THE NONSTANDARD CONDITIONS THAT WARRANT SPECIAL DESIGN CONSIDERATION ARE:
 - BACKFILL SLOPE STEEPER THAN 1 (V) IN 4 (H)
 - UNIFORM SURCHARGE GREATER THAN 20kPa OR LARGE ISOLATED LOADS WITHIN A DISTANCE OF ONE WALL HEIGHT OF THE EDGE OF THE WALL
 - BUILDING WITHIN A DISTANCE OF ONE WALL HEIGHT OF THE EDGE OF THE WALL
 - WALLS HIGHER THAN 7m
 - WALLS IN DESIGNATED LANDSLIP AREAS.
 - WALLS WHERE THE SITE CONDITIONS ARE SUCH THAT THE BACKFILL WILL NOT BE FULLY DRAINED.
 - WALLS > 3.5m ON SOIL FOUNDATIONS.

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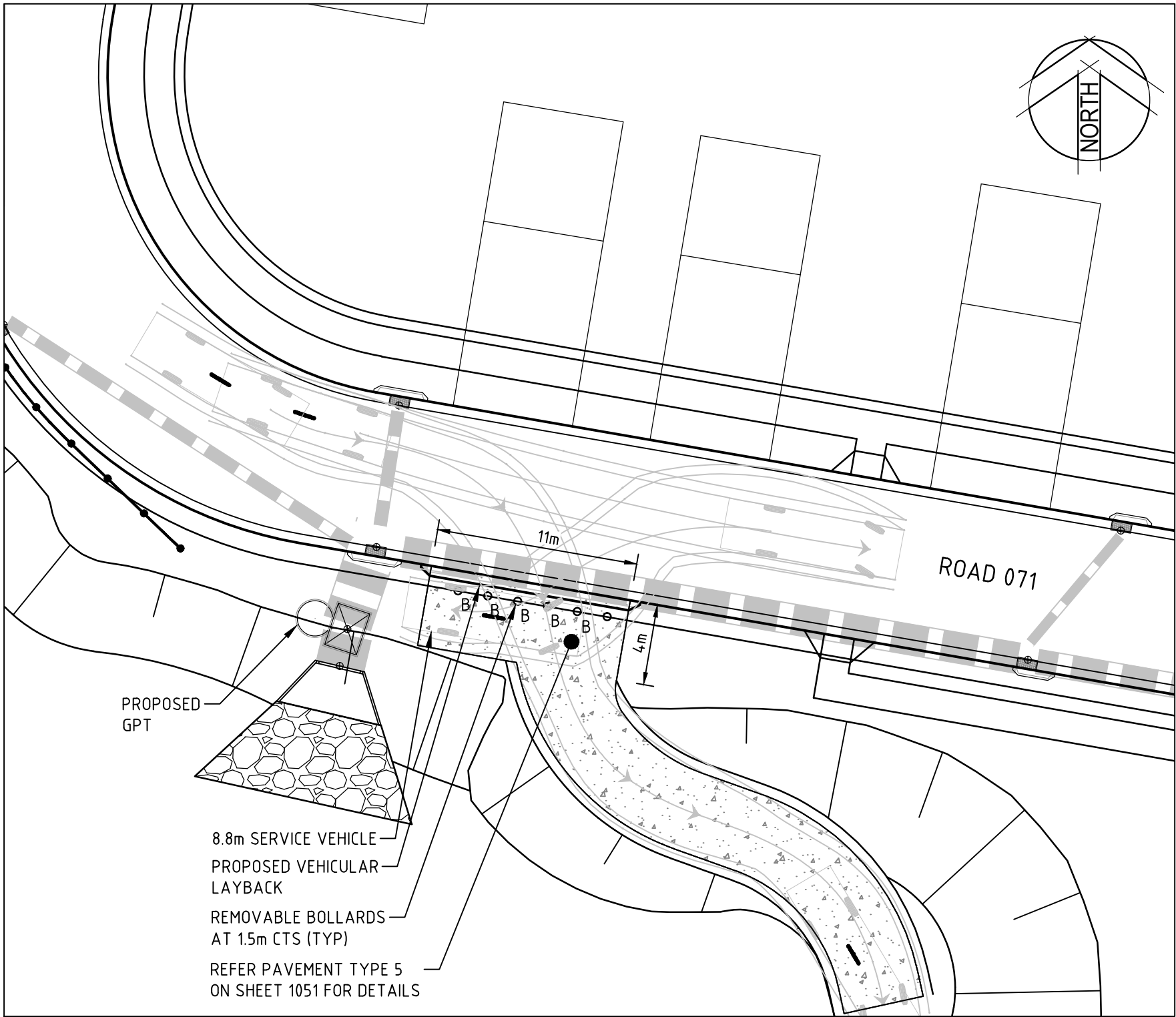


Drawn BJH	Date 18.01.2016	Client LENLEASE		
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Designed DAC	Date 18.01.2016		NOT TO BE USED FOR CONSTRUCTION PURPOSES	
Verified CEV	Date 18.01.2016	Title SITWORKS DETAILS SHEET 1	Datum AHD	Scale AS SHOWN
Approved			Size A1	
SCP	18.01.2016		Drawing Number 89914020-ST02-1211	Revision 3



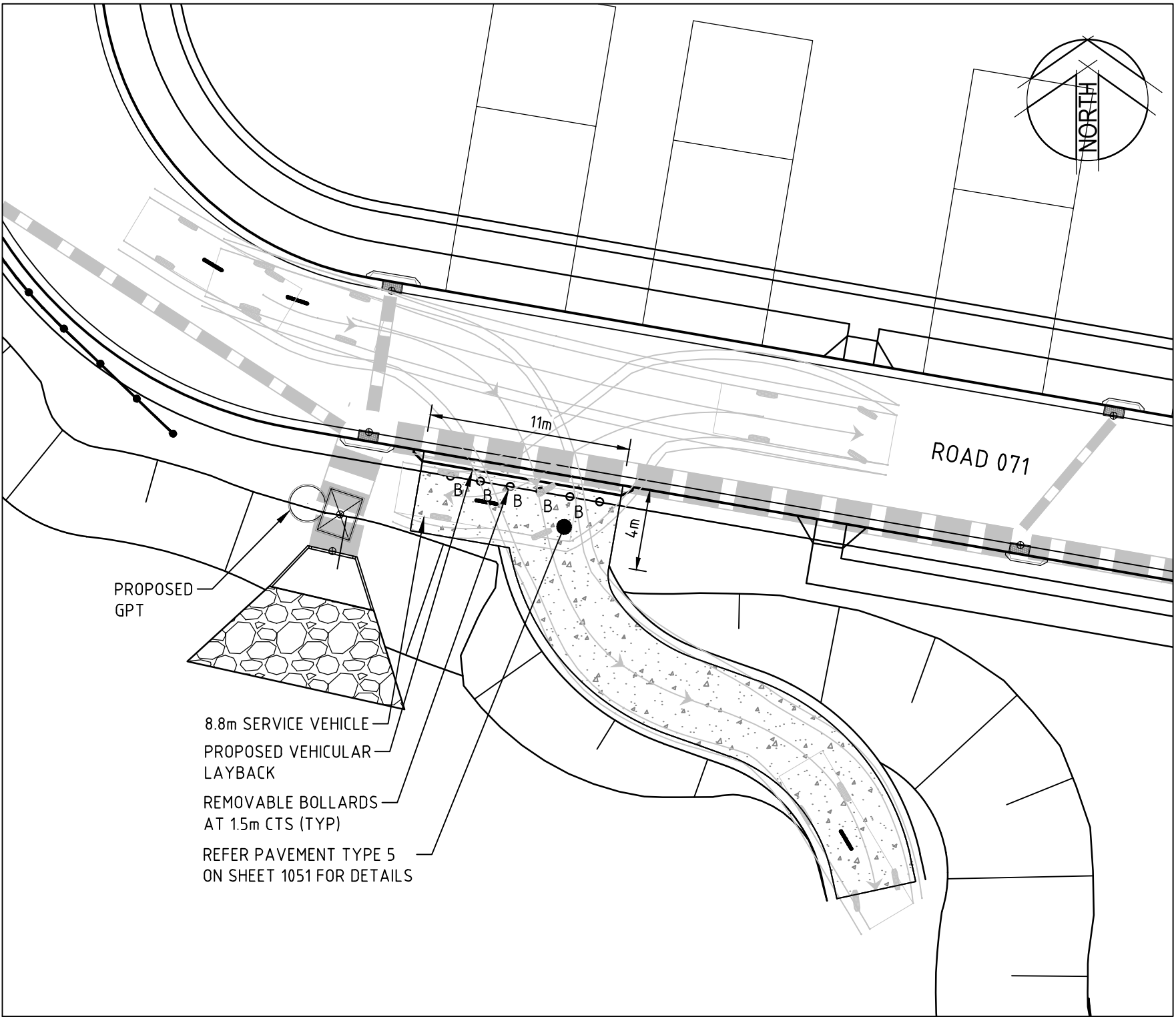
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(ROAD 002 & ROAD 070)

SCALE 1:250



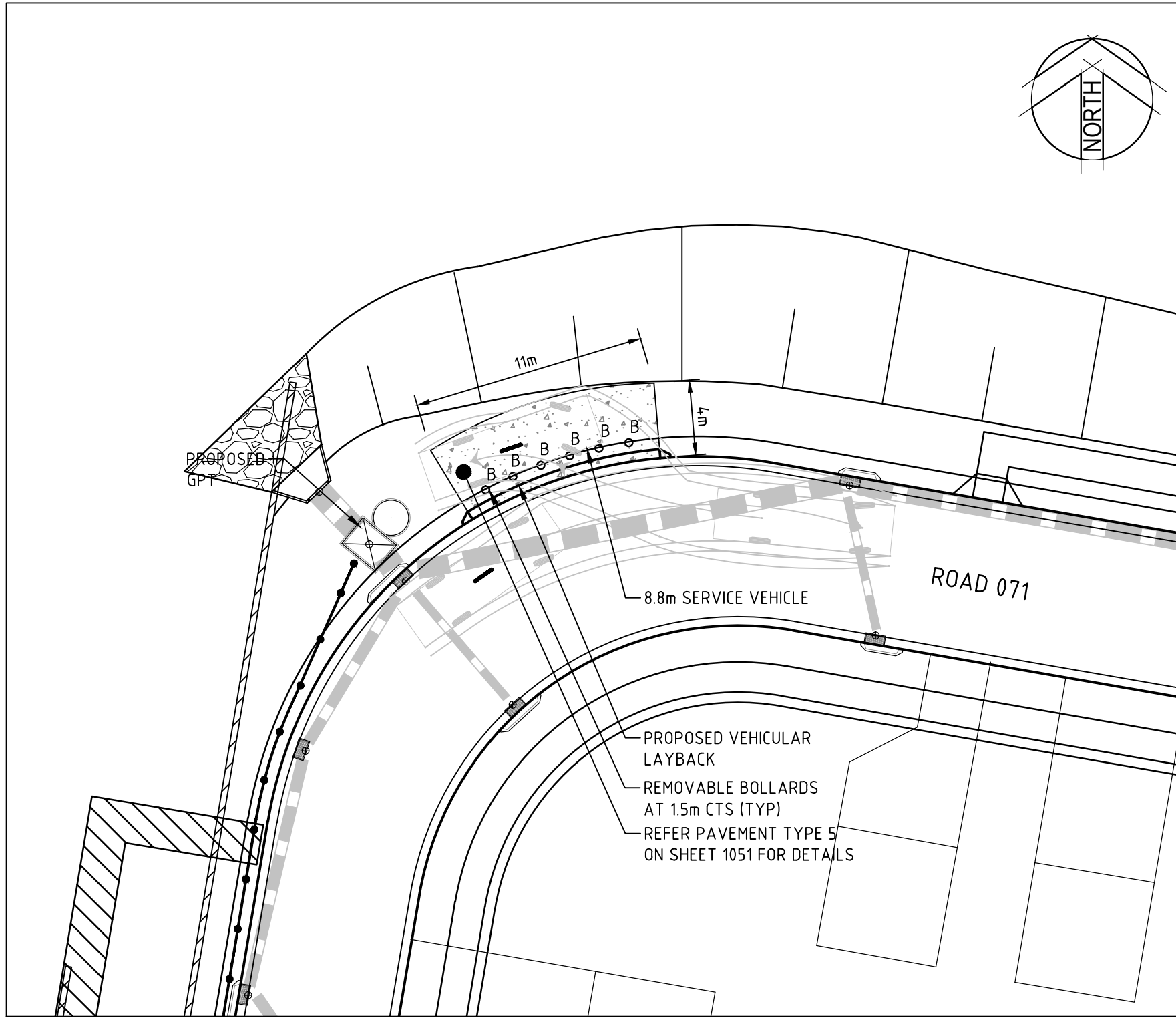
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(ROAD 071 SOUTH)

SCALE 1:250



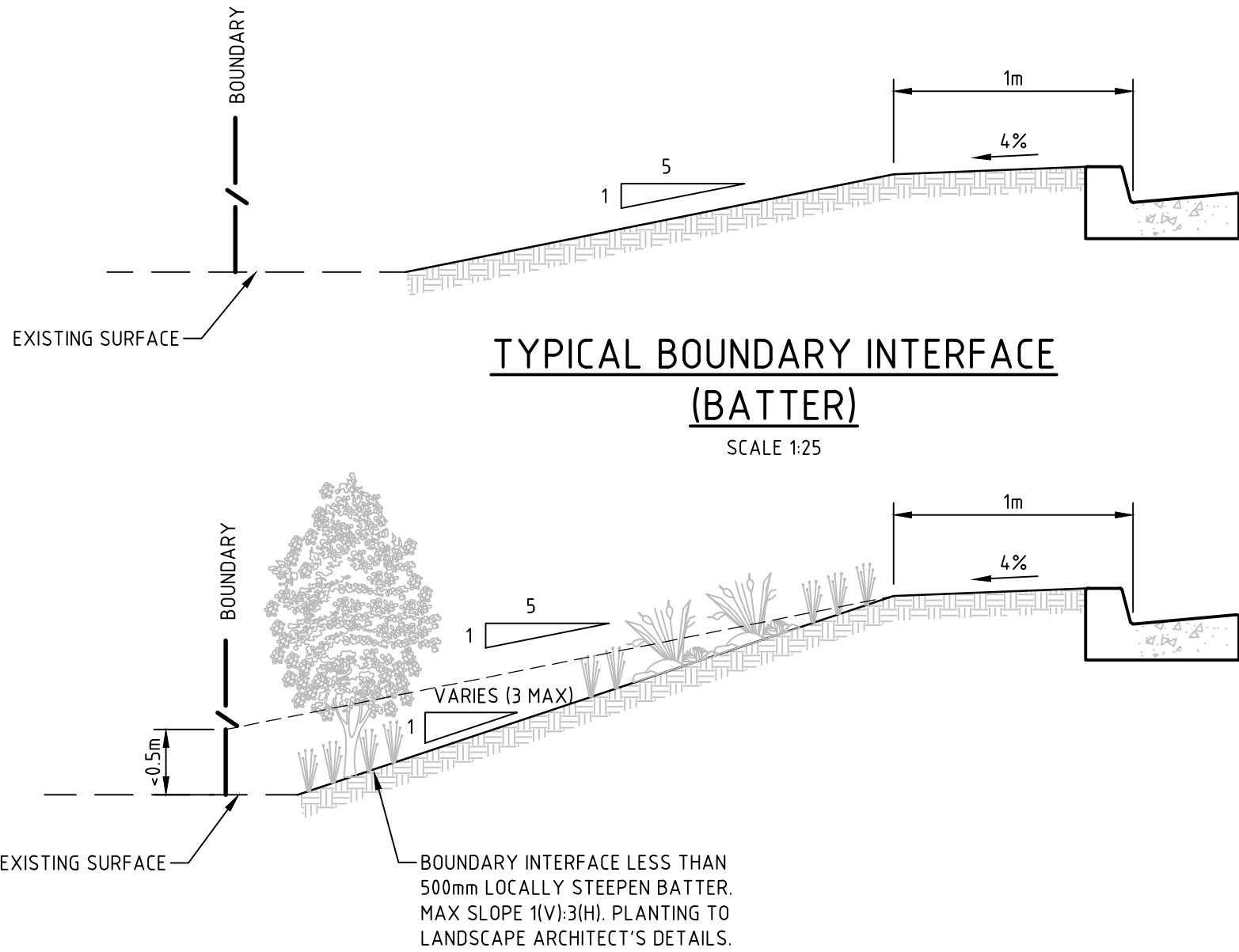
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SCALE 1:250



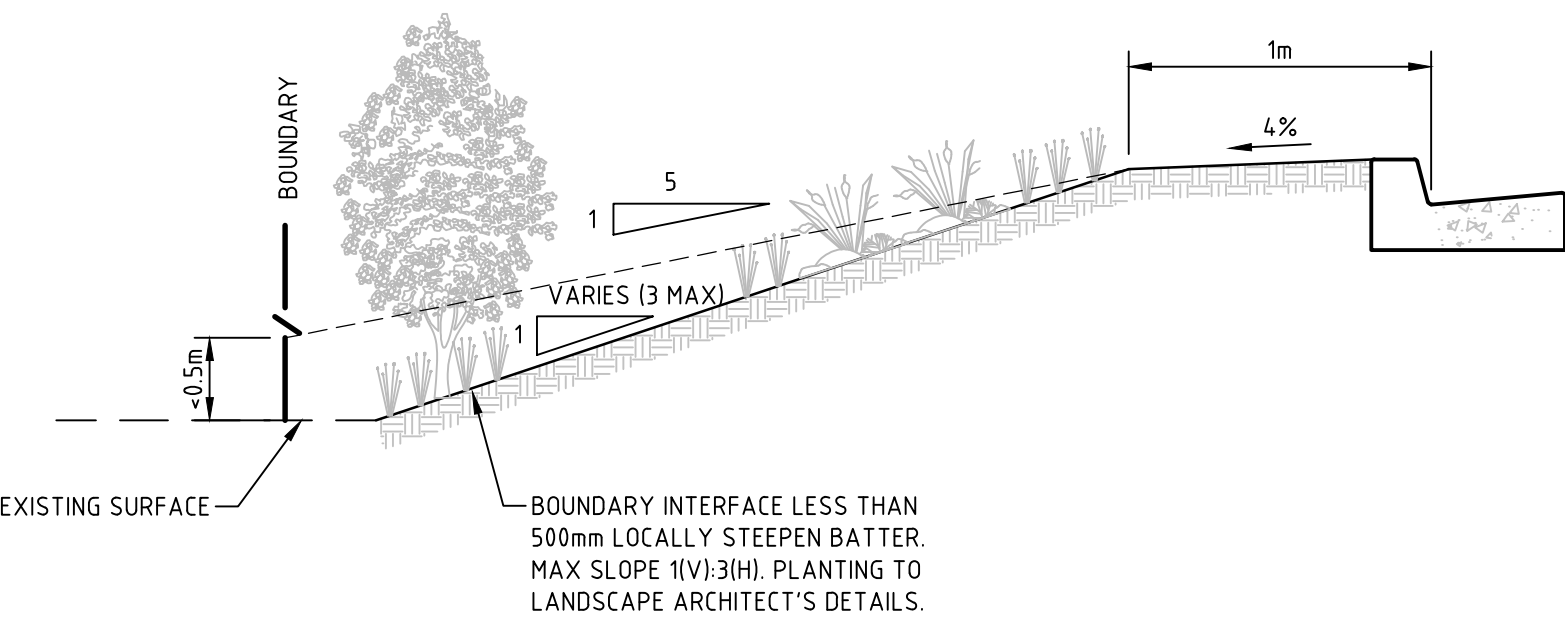
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(ROAD 071 NORTH)

SCALE 1:250



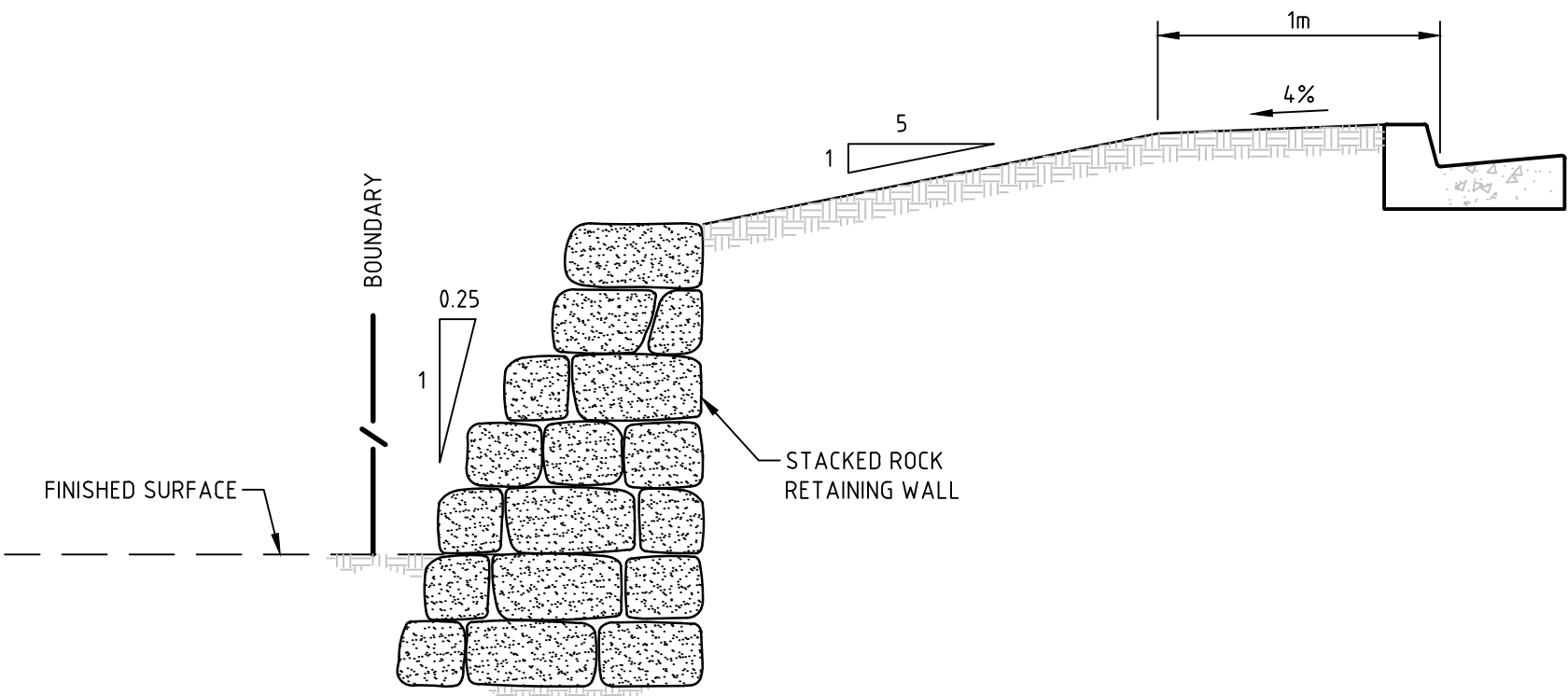
TYPICAL BOUNDARY INTERFACE
(BATTER)

SCALE 1:25



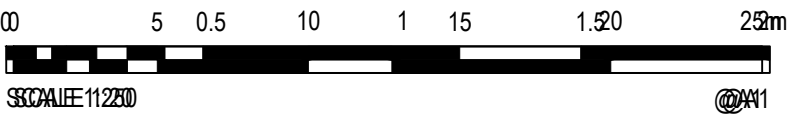
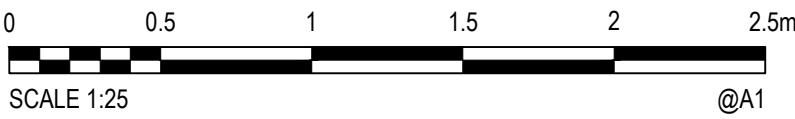
TYPICAL BOUNDARY INTERFACE
LEVEL DIFFERENCE <500mm (BATTER)

SCALE 1:25



TYPICAL BOUNDARY INTERFACE LEVEL
DIFFERENCE >500mm (STACKED ROCK WALL)

SCALE 1:25



Rev.	Date	Description	Des.	Verif.	Appd.
3	18.01.2016	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
2	30.10.2015	ISSUED FOR TENDER	DAC	CEV	SCP
1	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	SCP	

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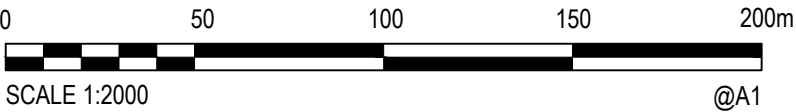
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DAC	18.01.2016	
Designed	Date	
DAC	18.01.2016	
Verified	Date	
CEV	18.01.2016	
Approved	Date	
SCP	18.01.2016	

Project	CENTRAL PRECINCT STAGE 2 - 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	89914020-ST02-1212
Revision	3

DATE PLOTTED: 19 January 2016 12:25 PM BY: BRITTANY HOLZHEIMER

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Rev.	Date	Description	Des.	Verif.	Appd.
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3	30.10.2015	ISSUED FOR TENDER	DAC	CEV	SCP
2	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
1	21.08.2015	ISSUED FOR CLIENT REVIEW	DAC	SCP	

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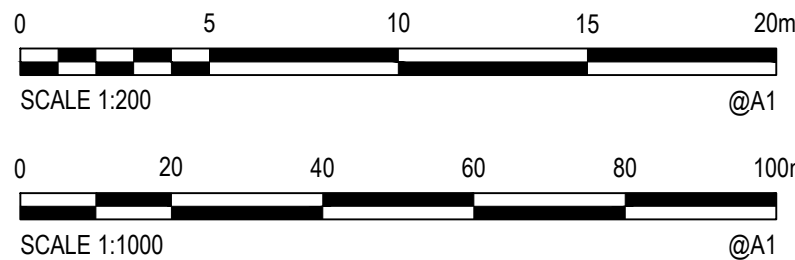
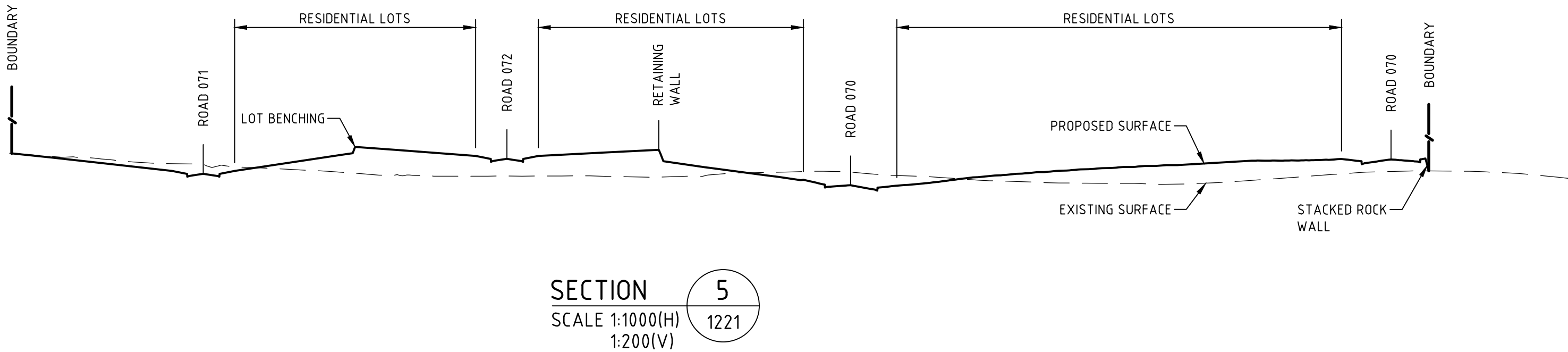
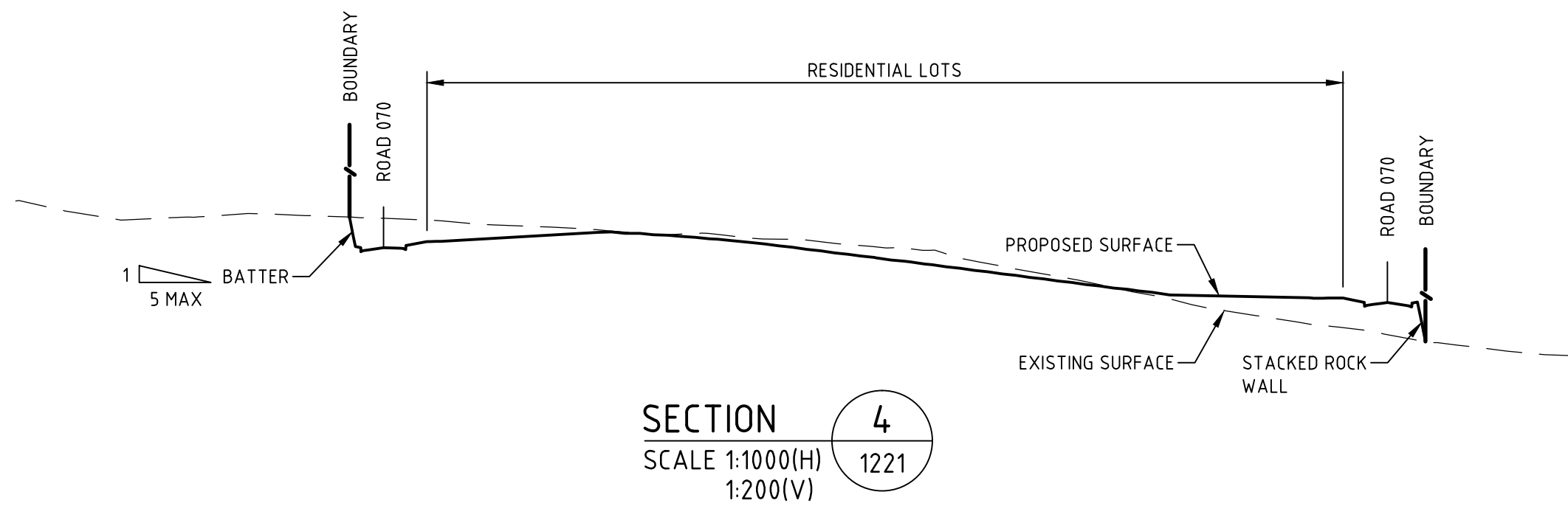
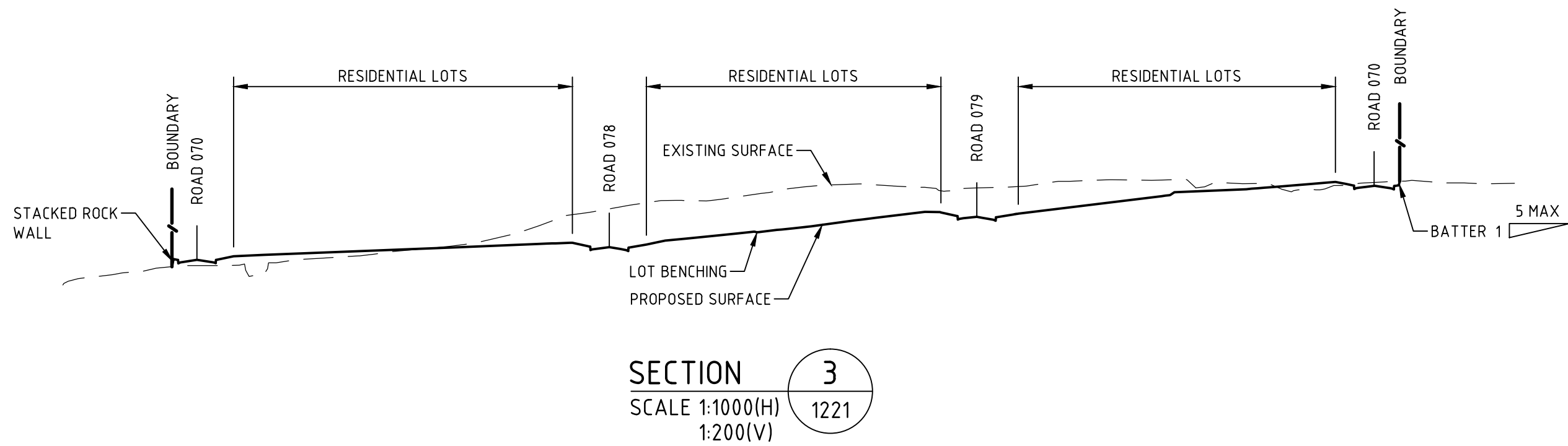
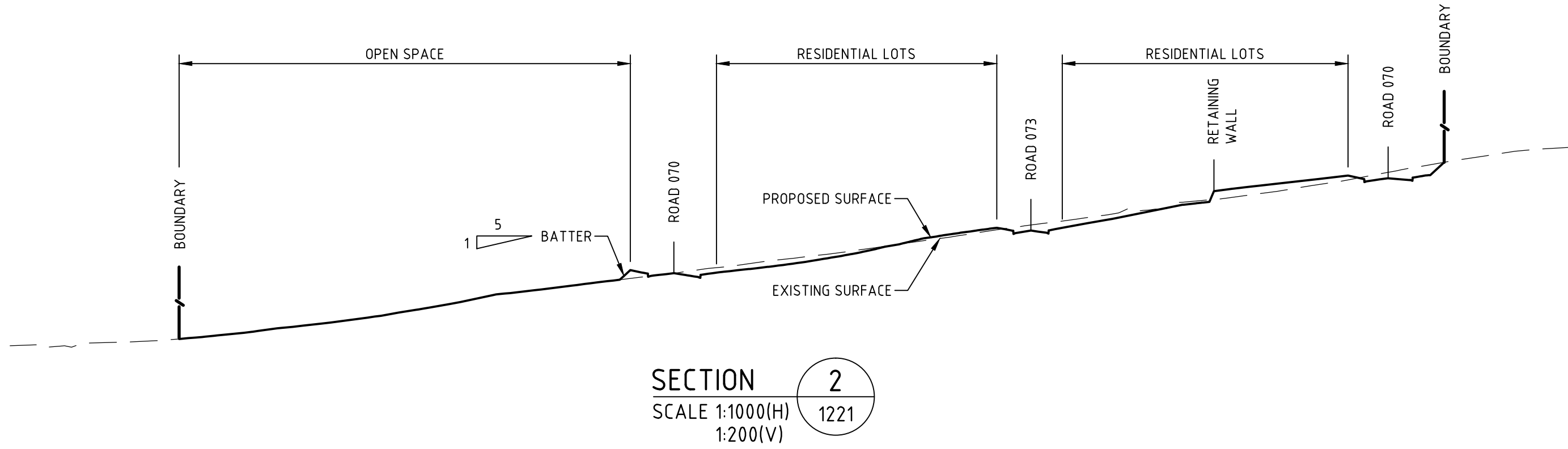
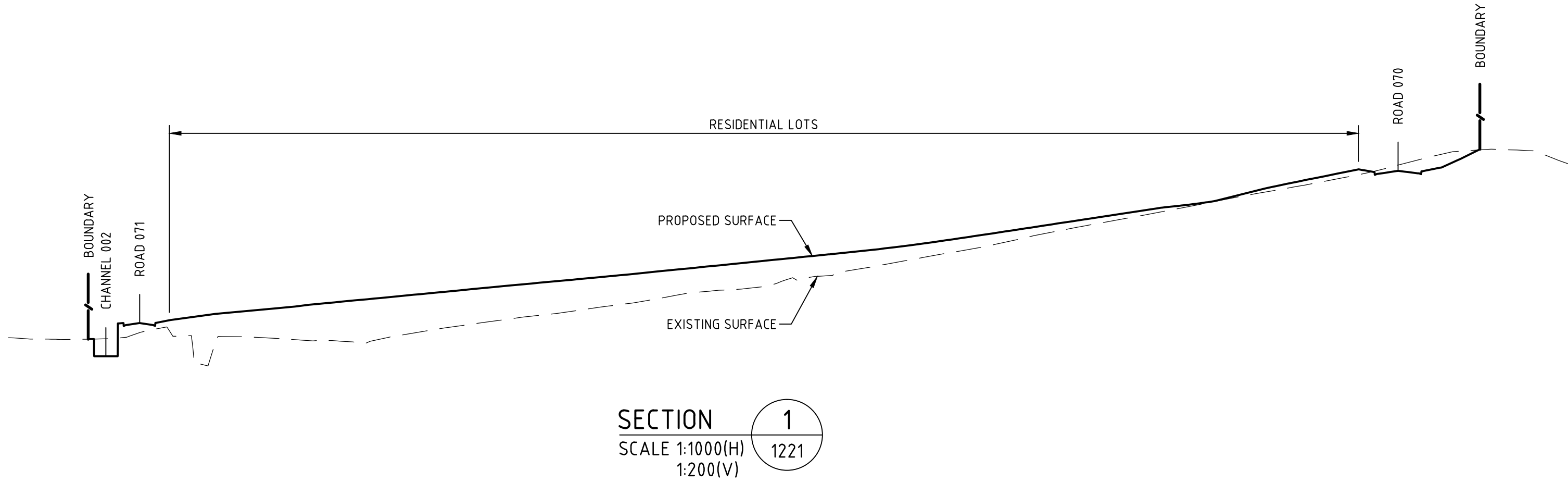
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Checked	Date	Project
DAC	18.01.2016	CENTRAL PRECINCT
Designed	Date	STAGE 2 - CIVIL WORKS
DAC	18.01.2016	DEVELOPMENT APPLICATION
Verified	Date	Title
CEV	18.01.2016	SITE SECTIONS KEY PLAN
Approved		
SCP	18.01.2016	

Datum	Scale	Size
AHD	1:2000	A1
Drawing Number	Revision	
89914020-ST02-1221	5	

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

DATE PLOTTED: 19 January 2016 12:25 PM BY: BRITTANY HOLZHEIMER

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Rev.	Date	Description	Des.	Verif.	Appd.
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3	30.10.2015	ISSUED FOR TENDER	DAC	CEV	SCP
2	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
1	21.08.2015	ISSUED FOR CLIENT REVIEW	DAC	SCP	

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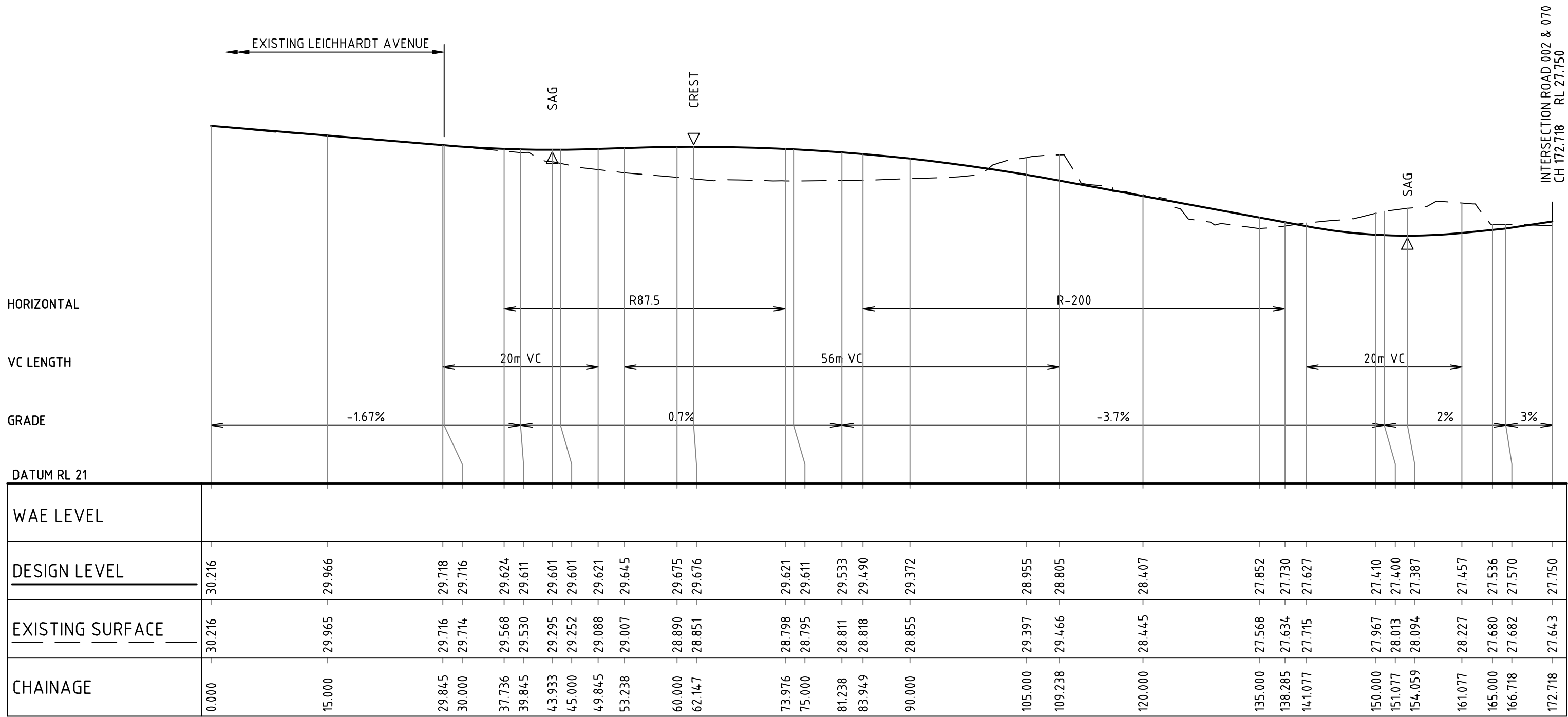
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Drawn	BJH	Date	18.01.2016
Checked	DAC	Date	18.01.2016
Designed	DAC	Date	18.01.2016
Verified	CEV	Date	18.01.2016
Approved	SCP	Date	18.01.2016

Client	LENLEASE
Project	CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION
Title	SITE SECTIONS

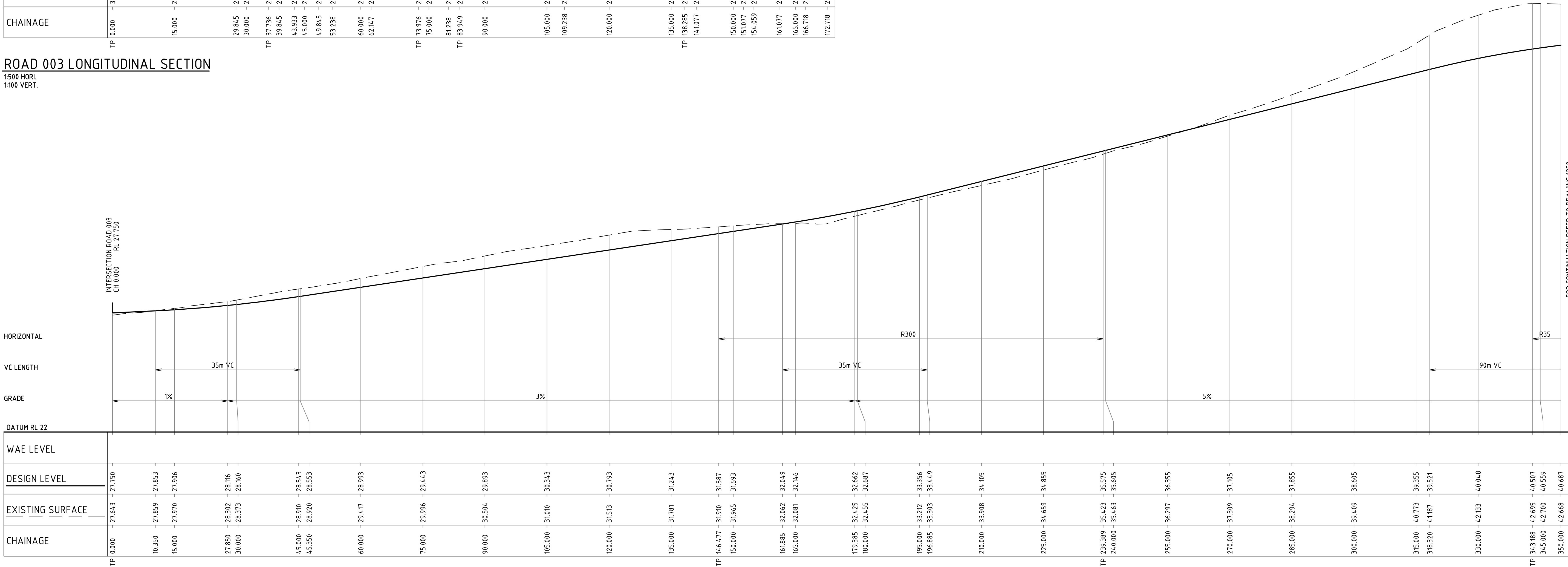
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NOT TO BE USED FOR CONSTRUCTION PURPOSES			
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Drawing Number			Revision
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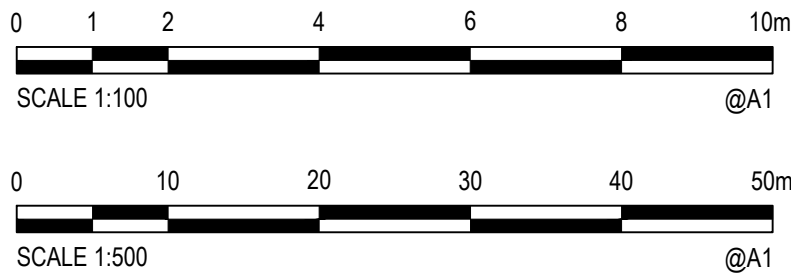
ROAD 003 LONGITUDINAL SECTION

1:500 HORI.
1:100 VERT.



ROAD 070 LONGITUDINAL SECTION

1:500 HORI.
1:100 VERT.



Rev.	Date	Description	Des.	Verif.	Appd.
5	18.01.2016	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
4	30.10.2015	ISSUED FOR TENDER	DAC	CEV	SCP
3	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
2	21.08.2015	ISSUED FOR CLIENT REVIEW	DAC	SCP	
1	15.05.2015	ISSUED FOR INFORMATION	DAC	SCP	

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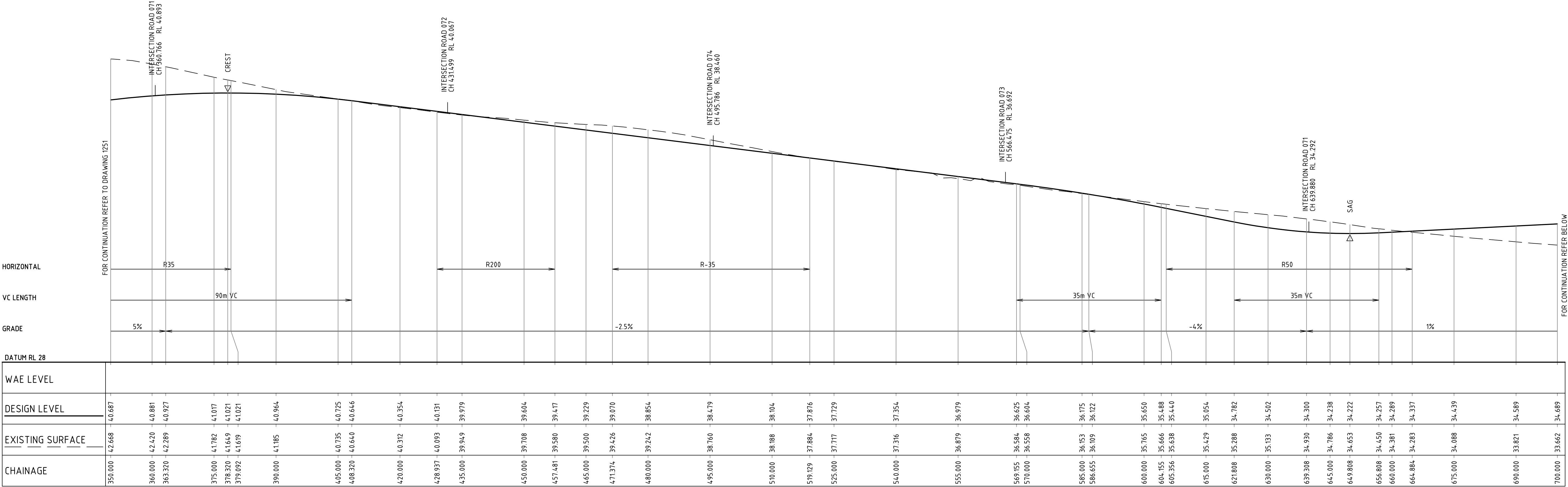
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Verified CEV	Date 18.01.2016
Approved SCP	Date 18.01.2016

Client LENDDLEASE	Project CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION
Title ROAD LONGITUDINAL SECTIONS SHEET 1 ROAD 003 & 070	

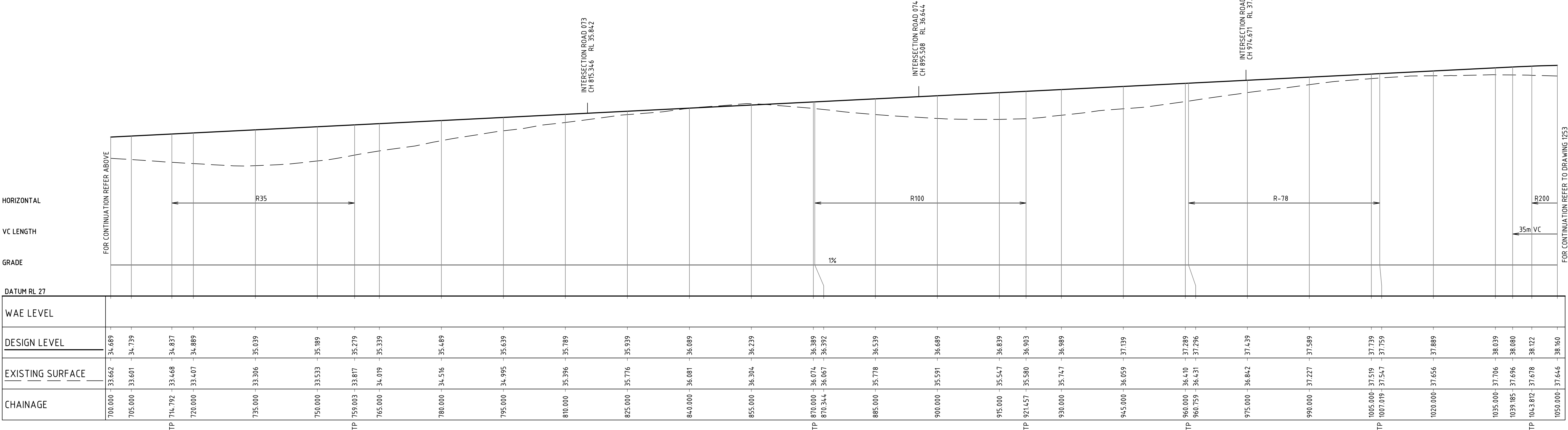
Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES	Datum AHD	Scale AS SHOWN	Size A1
Drawing Number 89914020-ST02-1251	Revision 5		

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DATE PLOTTED: 19 January, 2016 12:25 PM BY: BRITTANY HOLZHEIMER



ROAD 070 LONGITUDINAL SECTION

1:500 HORI.
1:100 VERT.



ROAD 070 LONGITUDINAL SECTION

1:500 HORI.
1:100 VERT.



Rev.	Date	Description	Des.	Verif.	Appd.
5	18.01.2016	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
4	30.10.2015	ISSUED FOR TENDER	DAC	CEV	SCP
3	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
2	21.08.2015	ISSUED FOR CLIENT REVIEW	DAC	SCP	
1	15.05.2015	ISSUED FOR INFORMATION	DAC	SCP	



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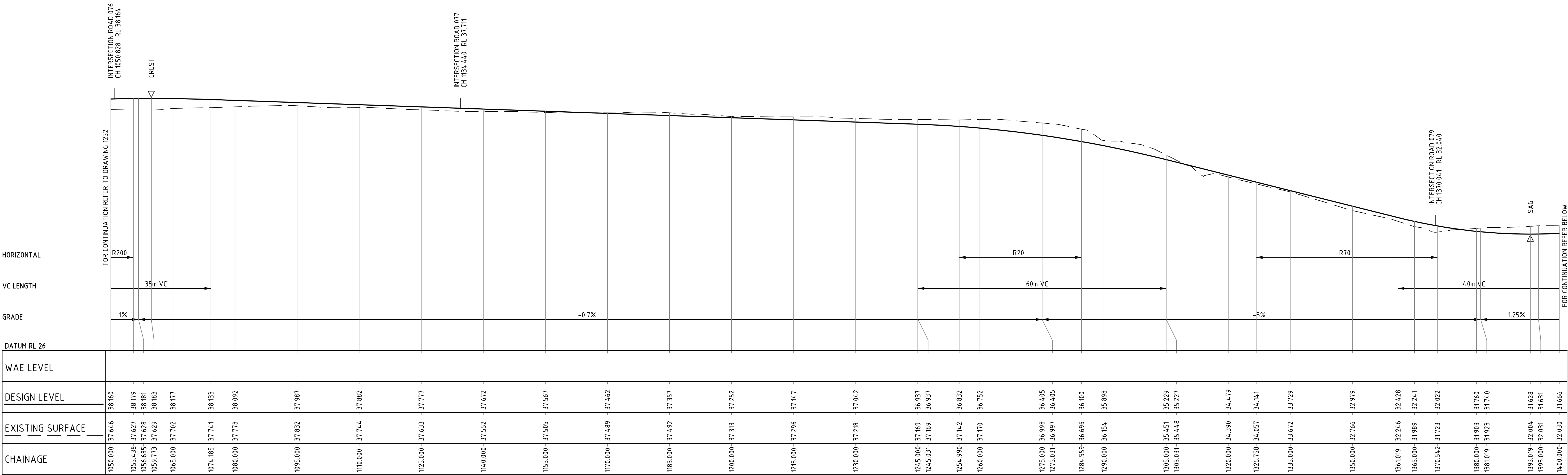
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Approved SCP	Date 18.01.2016

Client LENLEASE	Status FOR APPROVAL
Project CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION	NOT TO BE USED FOR CONSTRUCTION PURPOSES
Drawing Number 89914020-ST02-1252	Revision 5

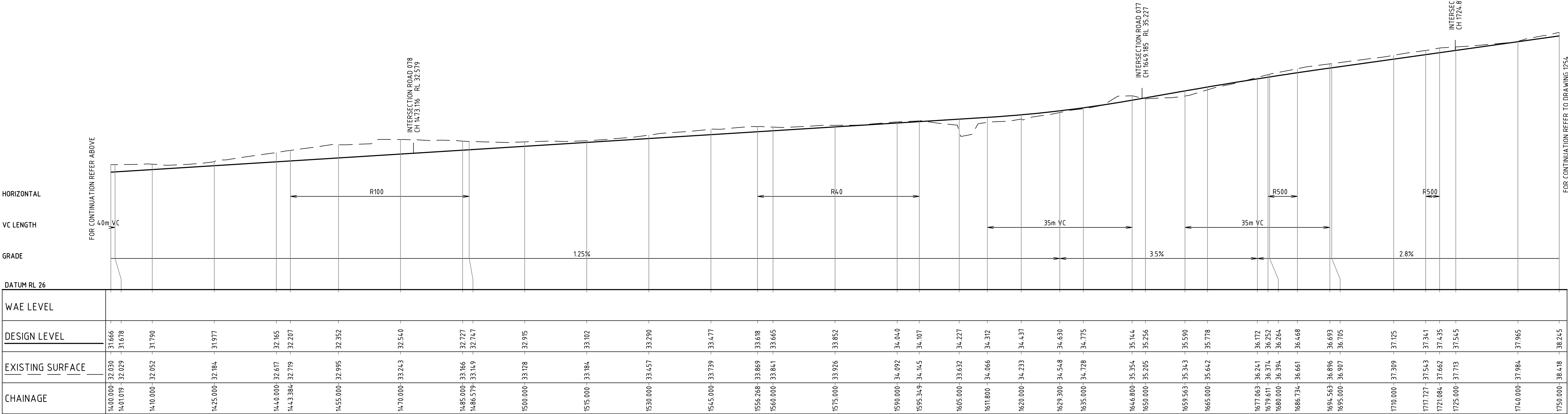
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DATE PLOTTED: 19 January 2016 12:25 PM BY: BRITTANY HOLZHEIMER



ROAD 070 LONGITUDINAL SECTION

1:500 HORI.
1:100 VERT.



ROAD 070 LONGITUDINAL SECTION

1:500 HORI.
1:100 VERT.



Rev.	Date	Description	Des.	Verif.	Appd.
5	18.01.2016	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
4	30.10.2015	ISSUED FOR TENDER	DAC	CEV	SCP
3	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
2	21.08.2015	ISSUED FOR CLIENT REVIEW	DAC	SCP	
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Client LENDLEASE

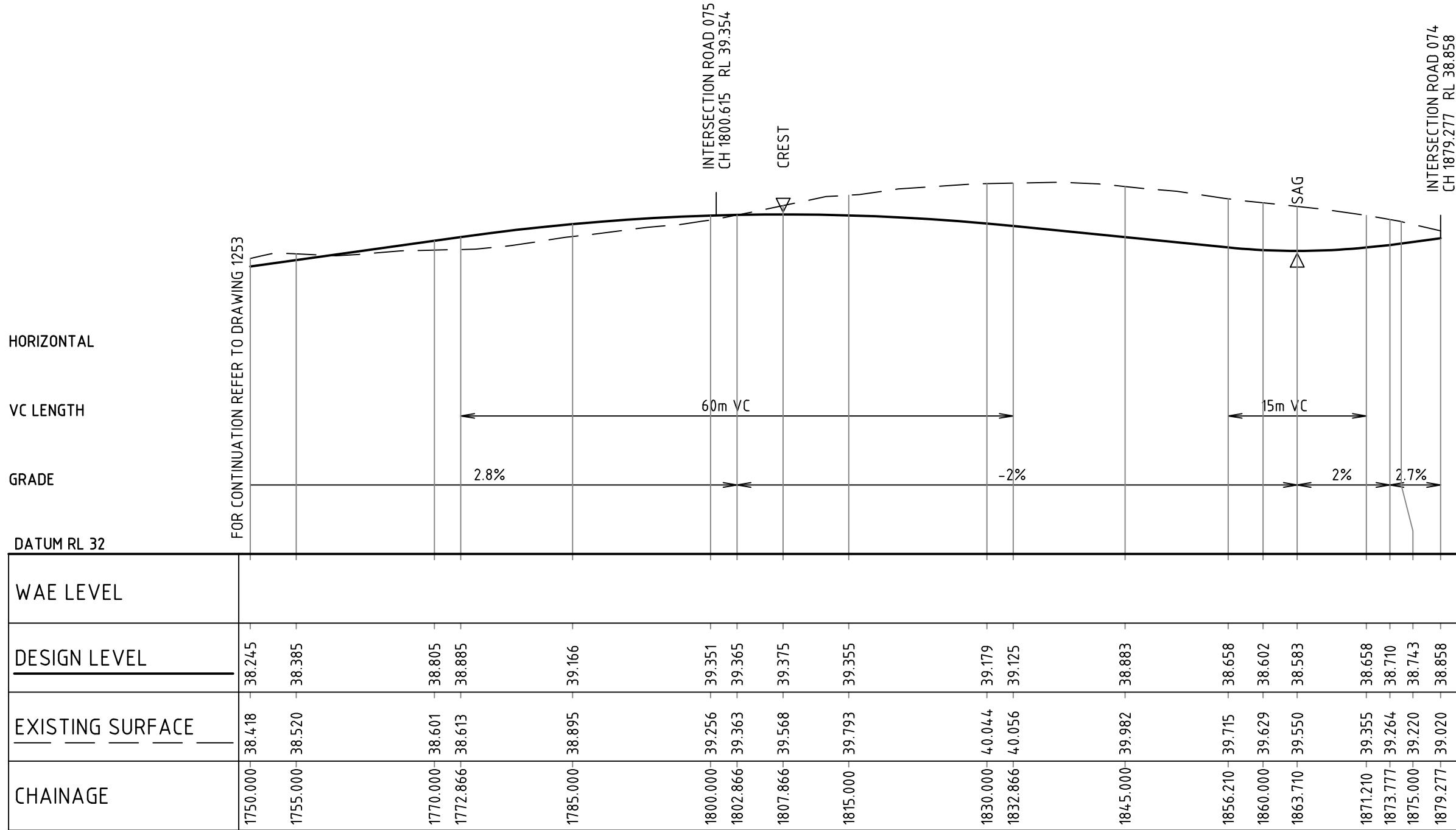
Project CENTRAL PRECINCT
STAGE 2 - CIVIL WORKS
DEVELOPMENT APPLICATION

Title ROAD LONGITUDINAL SECTIONS
SHEET 3 ROAD 070

Status FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION PURPOSES

Datum AHD	Scale AS SHOWN	Size A1
Drawing Number 89914020-ST02-1253	Revision 5	

XREFs: X:LS-ROAD-0701; X:LS-ROAD-0702; X:LS-ROAD-0703; X:LS-ROAD-0704; X:LS-ROAD-0705; X:LS-ROAD-0711; X:LS-ROAD-0712; X:LS-ROAD-0721; X:LS-ROAD-0731; X:LS-ROAD-0741; X:LS-ROAD-0761; X:LS-ROAD-0771; X:LS-ROAD-0781; X:LS-ROAD-0786; X:LS-ROAD-0787; X:LS-ROAD-0791; Xref:89914020-ClientLogos; X:LS-ROAD-0031
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DATE PLOTTED: 19 January, 2016 12:25 PM BY: BRITTANY HOLZHEIMER



ROAD 070 LONGITUDINAL SECTION
1:500 HORI.
1:100 VERT.



5	18.01.2016	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
4	30.10.2015	ISSUED FOR TENDER	DAC	CEV	SCP
3	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
2	21.08.2015	ISSUED FOR CLIENT REVIEW	DAC	SCP	
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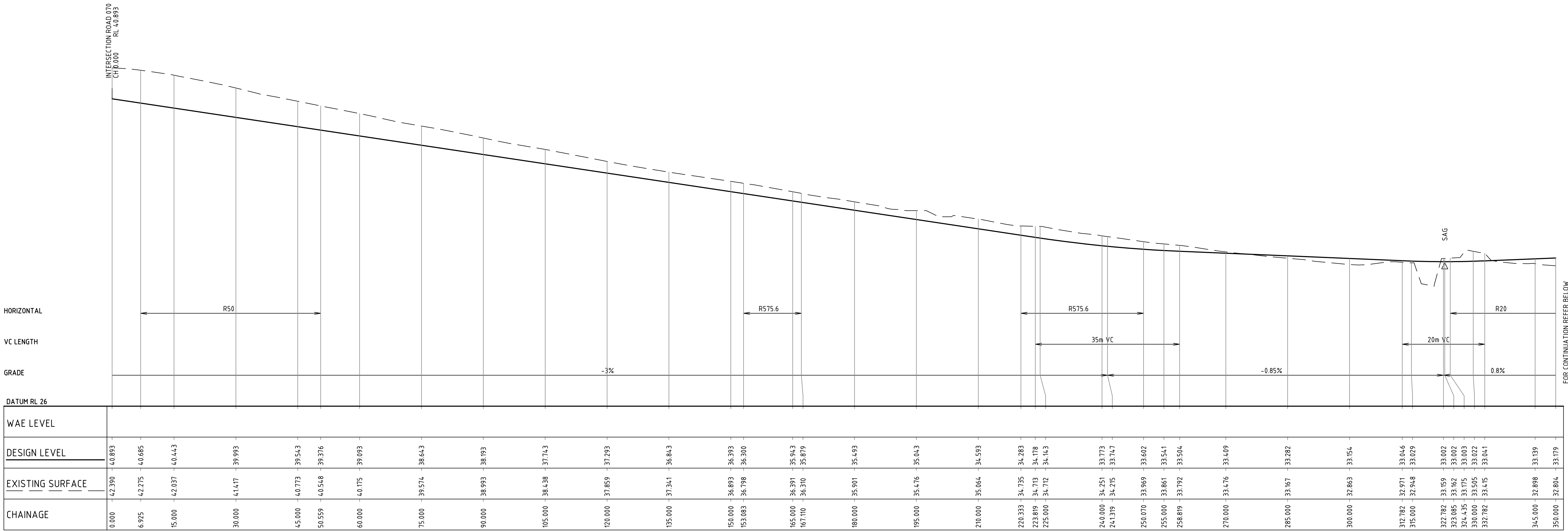
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Drawn	Date
BJH	18.01.2016
Checked	Date
DAC	18.01.2016
Designed	Date
DAC	18.01.2016
Verified	Date
CEV	18.01.2016
Approved	
SCP	18.01.2016

Client	LENdleASE
Project	CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION
Title	ROAD LONGITUDINAL SECTIONS SHEET 4 ROAD 070

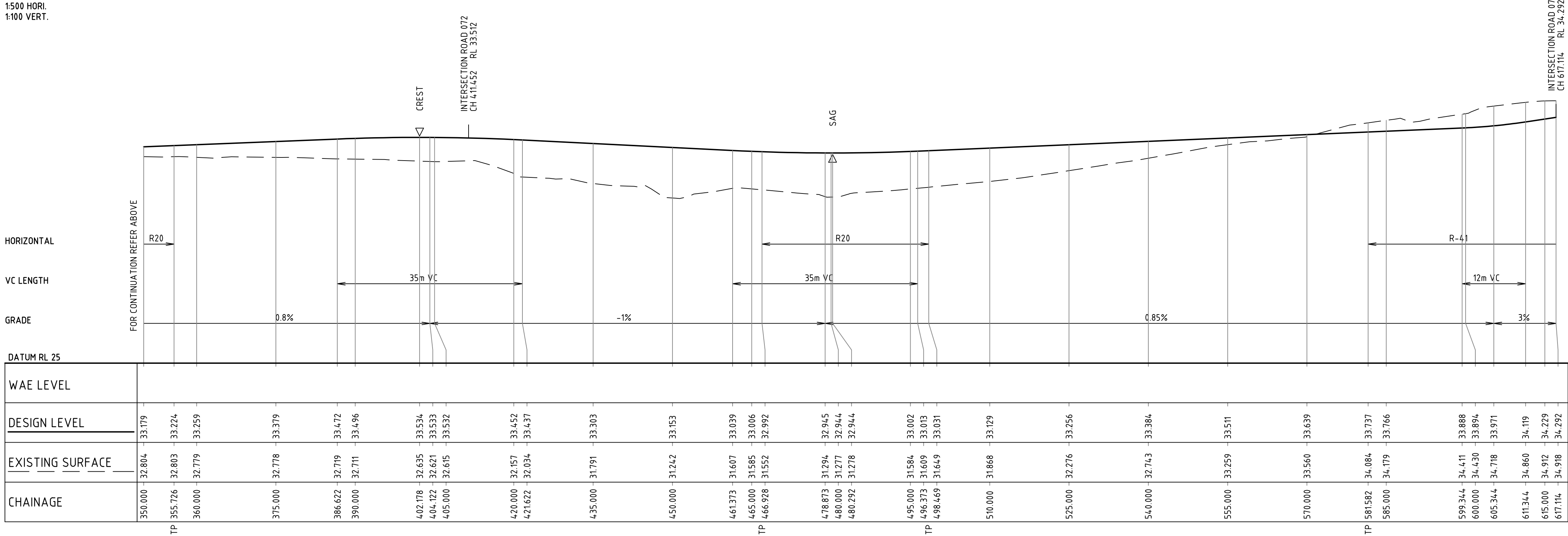
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Size	A1		
Drawing Number	89914020-ST02-1254		Revision
			5

XREFs: X:LS-ROAD-0701; X:LS-ROAD-0702; X:LS-ROAD-0703; X:LS-ROAD-0704; X:LS-ROAD-0705; X:LS-ROAD-0711; X:LS-ROAD-0712; X:LS-ROAD-0721; X:LS-ROAD-0731; X:LS-ROAD-0741; X:LS-ROAD-0751; X:LS-ROAD-0761; X:LS-ROAD-0771; X:LS-ROAD-0781; X:LS-ROAD-0791; Xref:89914020-Client Logos; X:LS-ROAD-0031
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DATE PLOTTED: 19 January 2016 12:25 PM BY: BRITTANY HOLZHEIMER



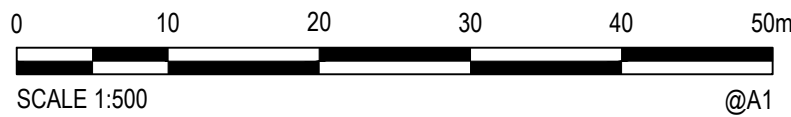
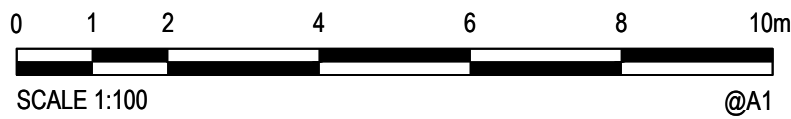
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1:500 HORI.
1:100 VERT.



ROAD 071 LONGITUDINAL SECTION

1:500 HORI.
1:100 VERT.



Rev.	Date	Description	Des.	Verif.	Appd.
5	18.01.2016	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
4	30.10.2015	ISSUED FOR TENDER	DAC	CEV	SCP
3	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
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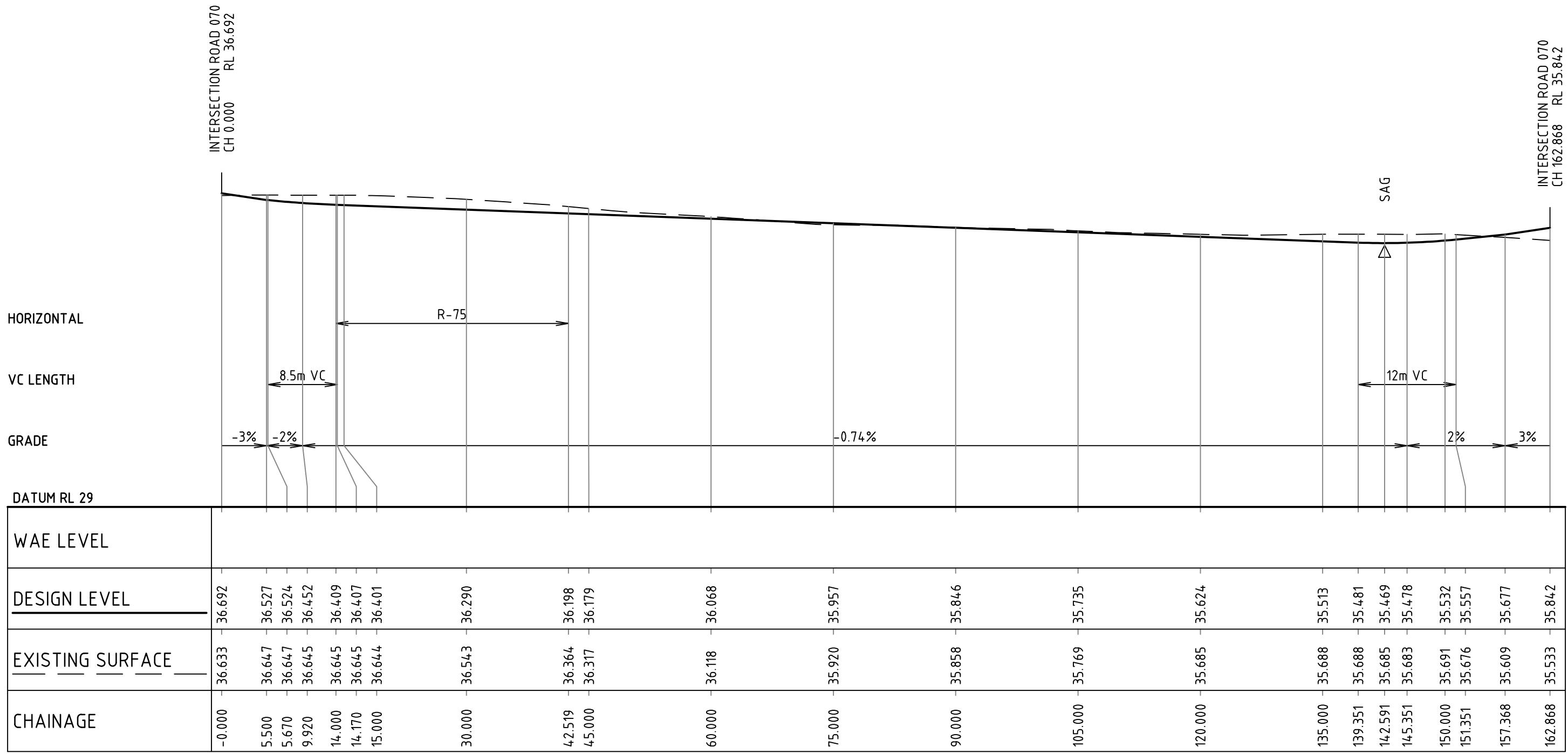
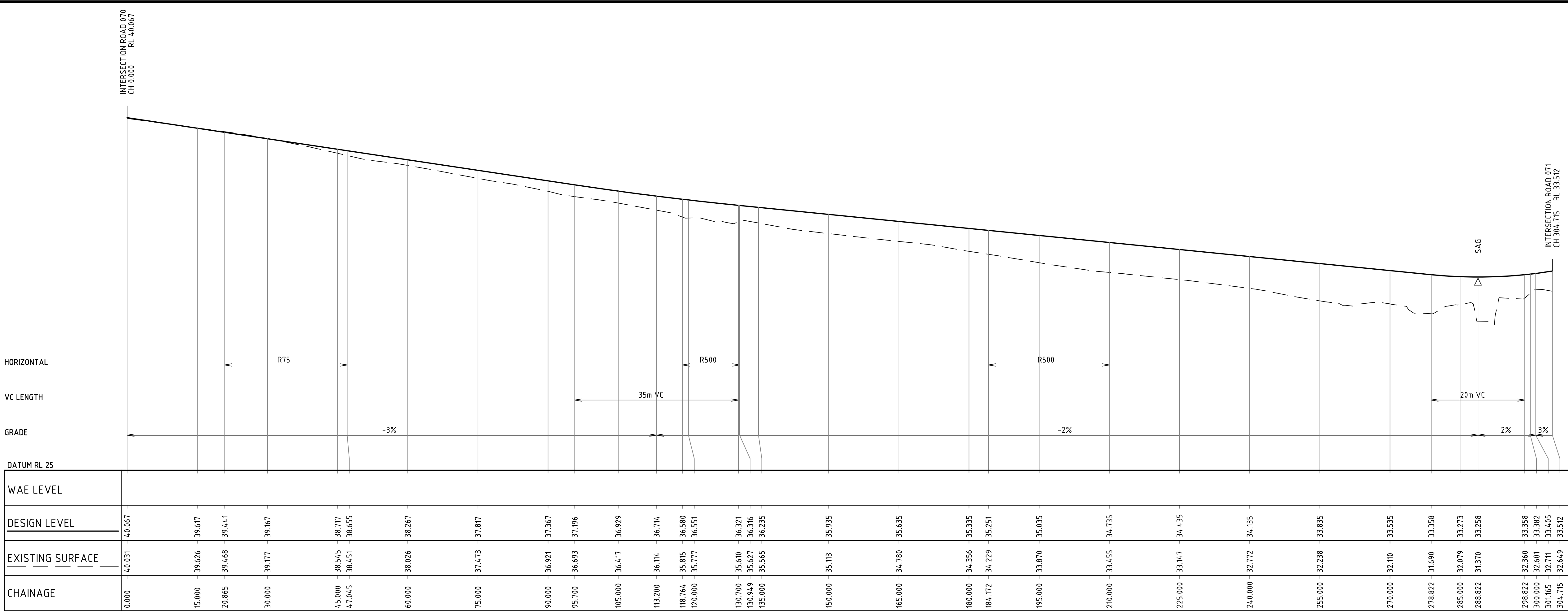
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Checked DAC	Date 18.01.2016
Designed DAC	Date 18.01.2016
Verified CEV	Date 18.01.2016
Approved SCP	Date 18.01.2016

Client LENLEASE	Project CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION
Title ROAD LONGITUDINAL SECTIONS SHEET 5 ROAD 071	

Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES	Datum AHD	Scale AS SHOWN	Size A1
Drawing Number 89914020-ST02-1255	Revision 5		

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4	30.10.2015	ISSUED FOR TENDER	DAC	CEV	SCP
3	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
2	21.08.2015	ISSUED FOR CLIENT REVIEW	DAC	SCP	
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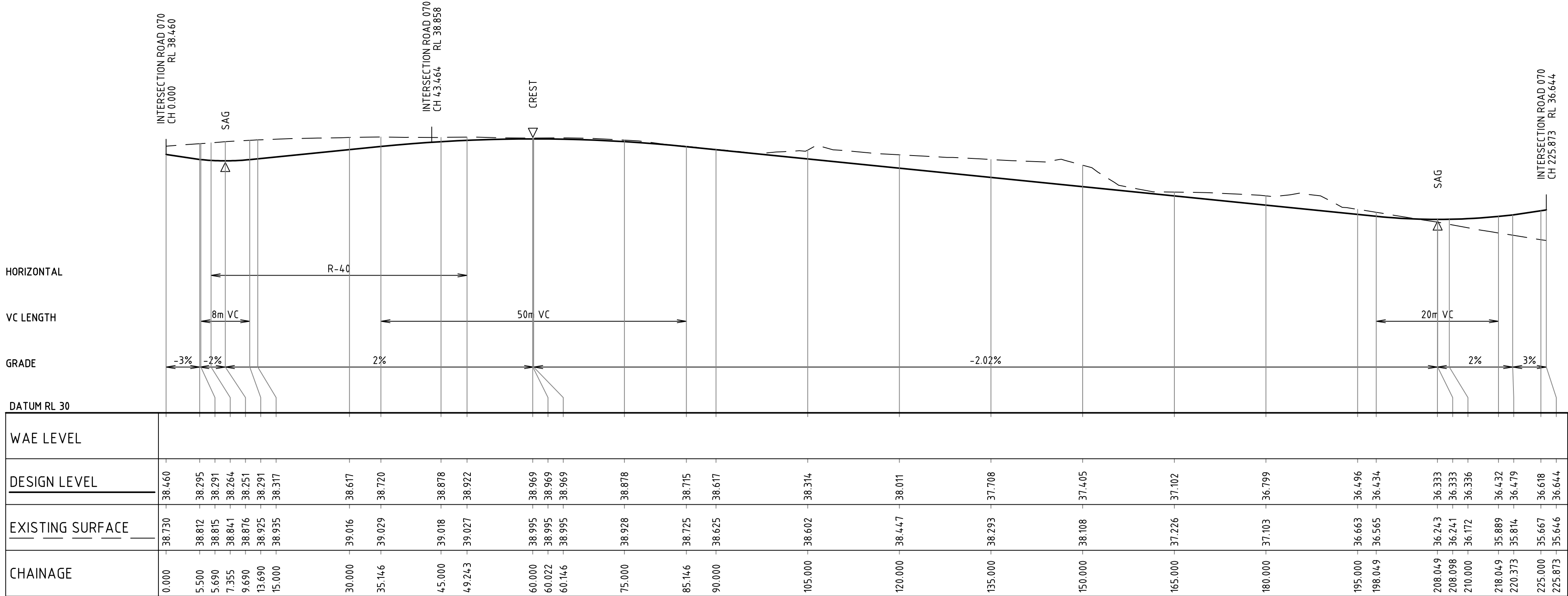


Drawn BJH	Date 18.01.2016
Checked DAC	Date 18.01.2016
Designed DAC	Date 18.01.2016
Verified CEV	Date 18.01.2016
Approved SCP	Date 18.01.2016

Client LENLEASE	Project CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION
Title ROAD LONGITUDINAL SECTIONS SHEET 6 ROAD 072 & 073	

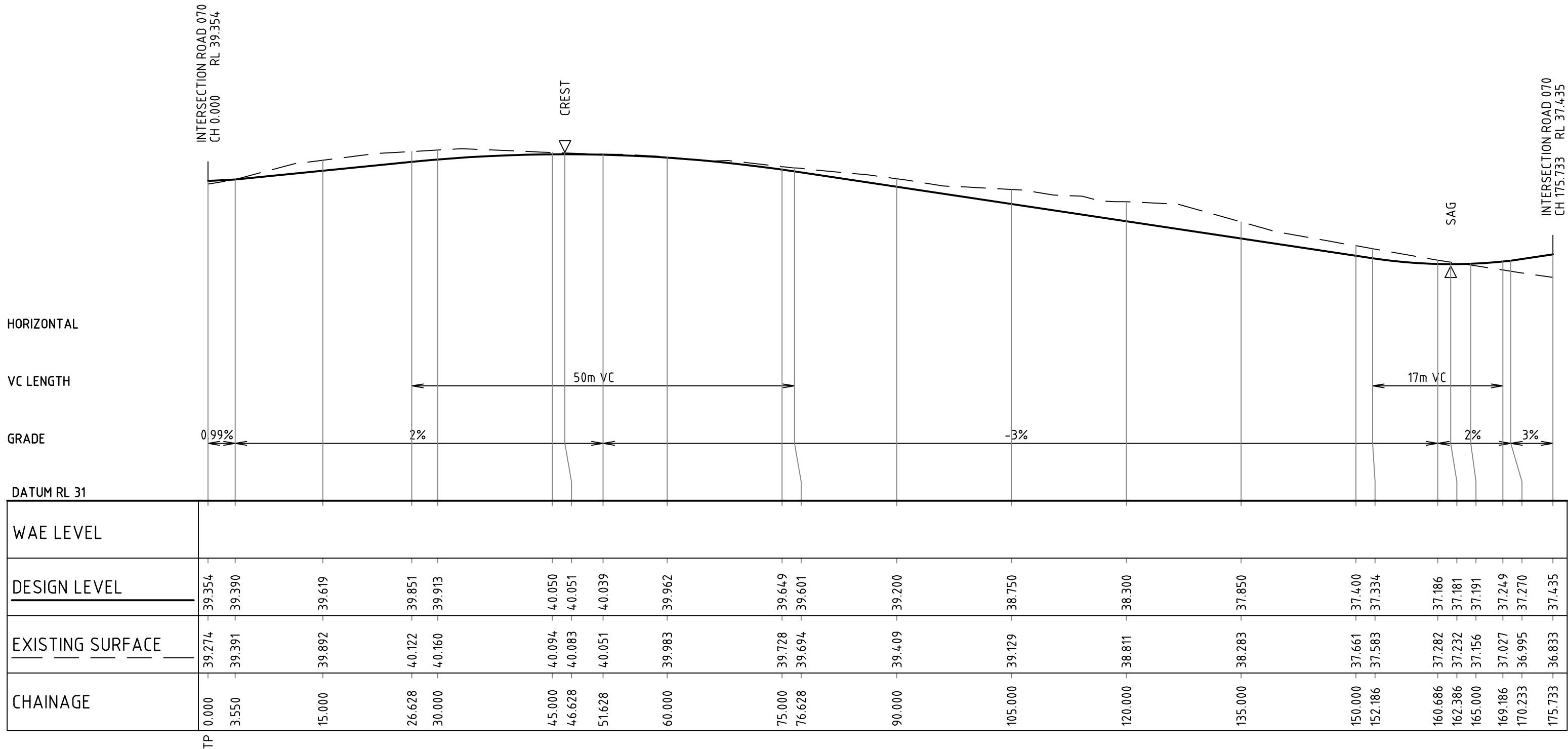
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Drawing Number 89914020-ST02-1256	Revision 5		

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ROAD 074 LONGITUDINAL SECTION

1:500 HORI.
1:100 VERT.



ROAD 075 LONGITUDINAL SECTION

1:500 HORI.
1:100 VERT.



5	18.01.2016	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP	
4	30.10.2015	ISSUED FOR TENDER	DAC	CEV	SCP	
3	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP	
2	21.08.2015	ISSUED FOR CLIENT REVIEW	DAC	SCP		
1	15.05.2015	ISSUED FOR INFORMATION	DAC	SCP		
Rev.	Date	Description	Des.	Verif.	Appd.	

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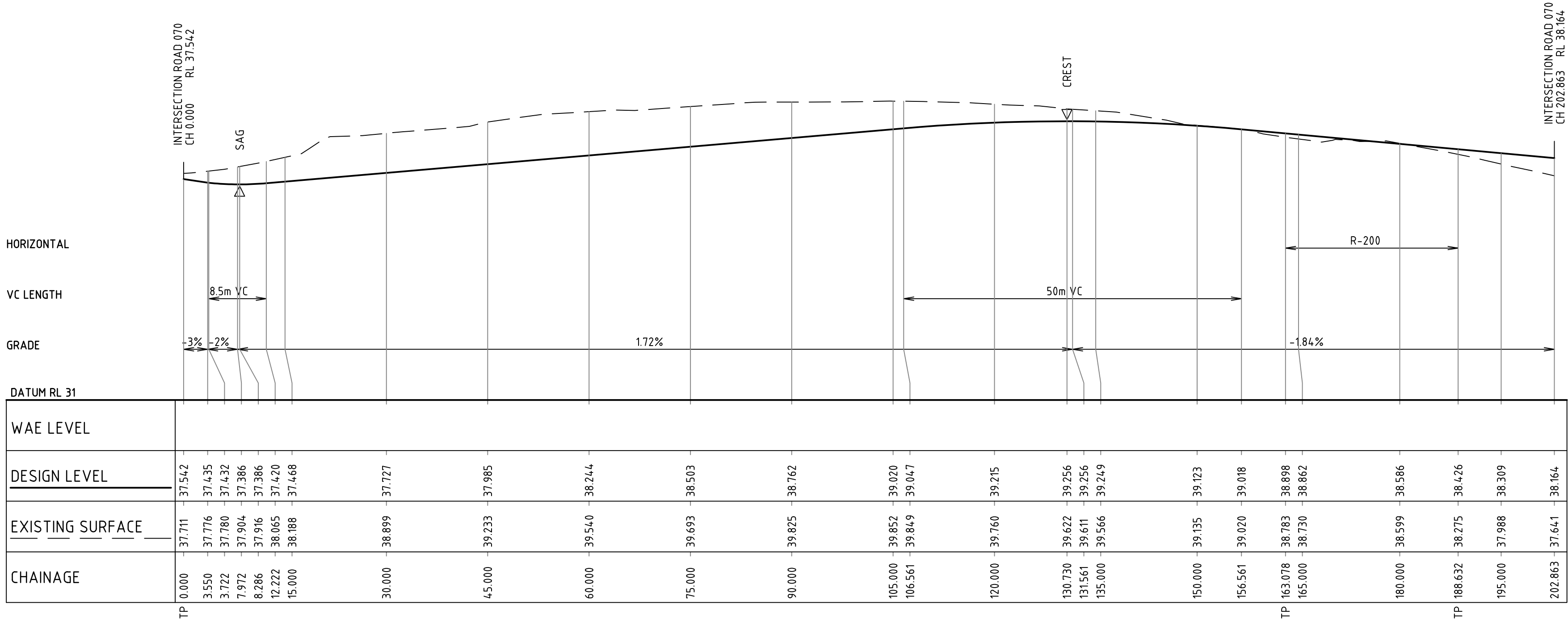
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DAC	18.01.2016
Designed	Date
DAC	18.01.2016
Verified	Date
CEV	18.01.2016
Approved	
SCP	18.01.2016

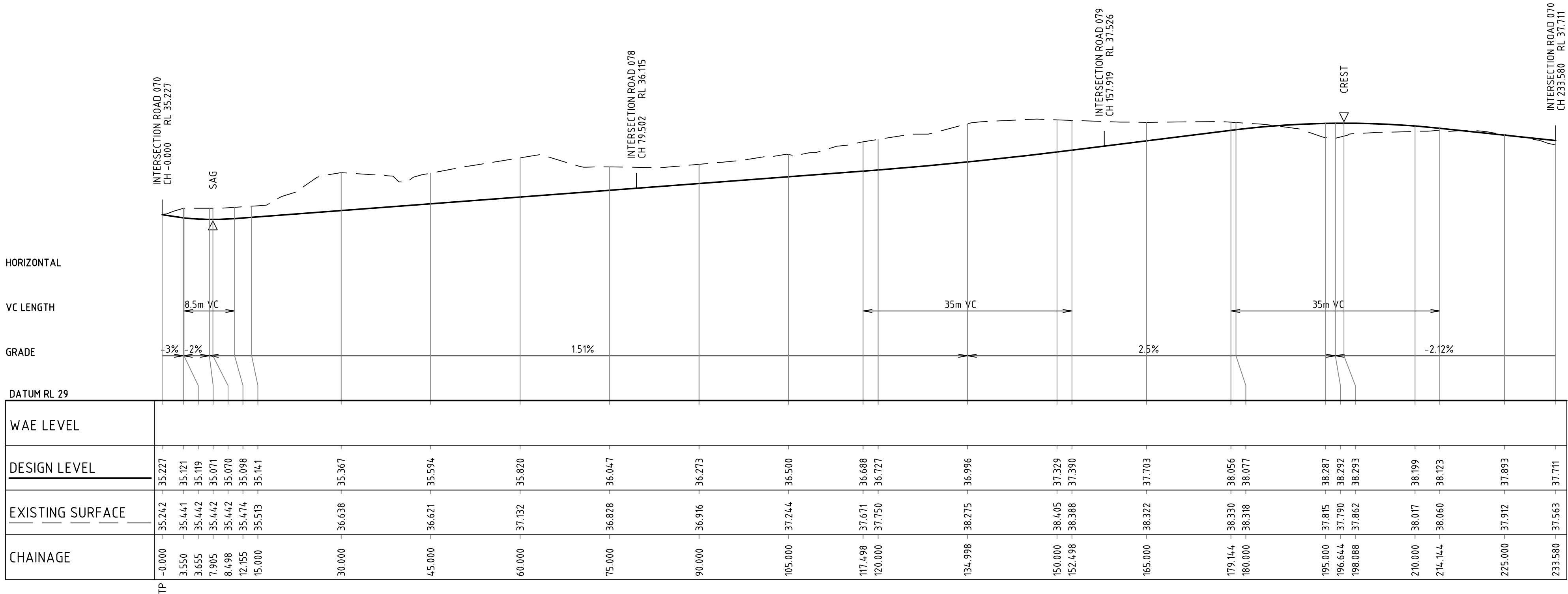
Client	LENLEASE	Status	FOR APPROVAL
Project	CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION	NOT TO BE USED FOR CONSTRUCTION PURPOSES	
Datum	AHD	Scale	AS SHOWN
Size	A1		
Drawing Number	89914020-ST02-1257	Revision	5
Title	ROAD LONGITUDINAL SECTIONS SHEET 7 ROAD 074 & 075		

XREFs: X:LS-ROAD-0701; X:LS-ROAD-0702; X:LS-ROAD-0703; X:LS-ROAD-0704; X:LS-ROAD-0705; X:LS-ROAD-0711; X:LS-ROAD-0712; X:LS-ROAD-0721; X:LS-ROAD-0731; X:LS-ROAD-0741; X:LS-ROAD-0751; X:LS-ROAD-0761; X:LS-ROAD-0771; X:LS-ROAD-0781; X:LS-ROAD-0791; Xref:89914020-ClientLogos; X:LS-ROAD-0031
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DATE PLOTTED: 19 January, 2016 12:25 PM BY: BRITTANY HOLZHEIMER



ROAD 076 LONGITUDINAL SECTION

1:500 HORI.
1:100 VERT.



ROAD 077 LONGITUDINAL SECTION

1:500 HORI.
1:100 VERT.



Rev.	Date	Description	Des.	Verif.	Appd.
5	18.01.2016	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
4	30.10.2015	ISSUED FOR TENDER	DAC	CEV	SCP
3	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
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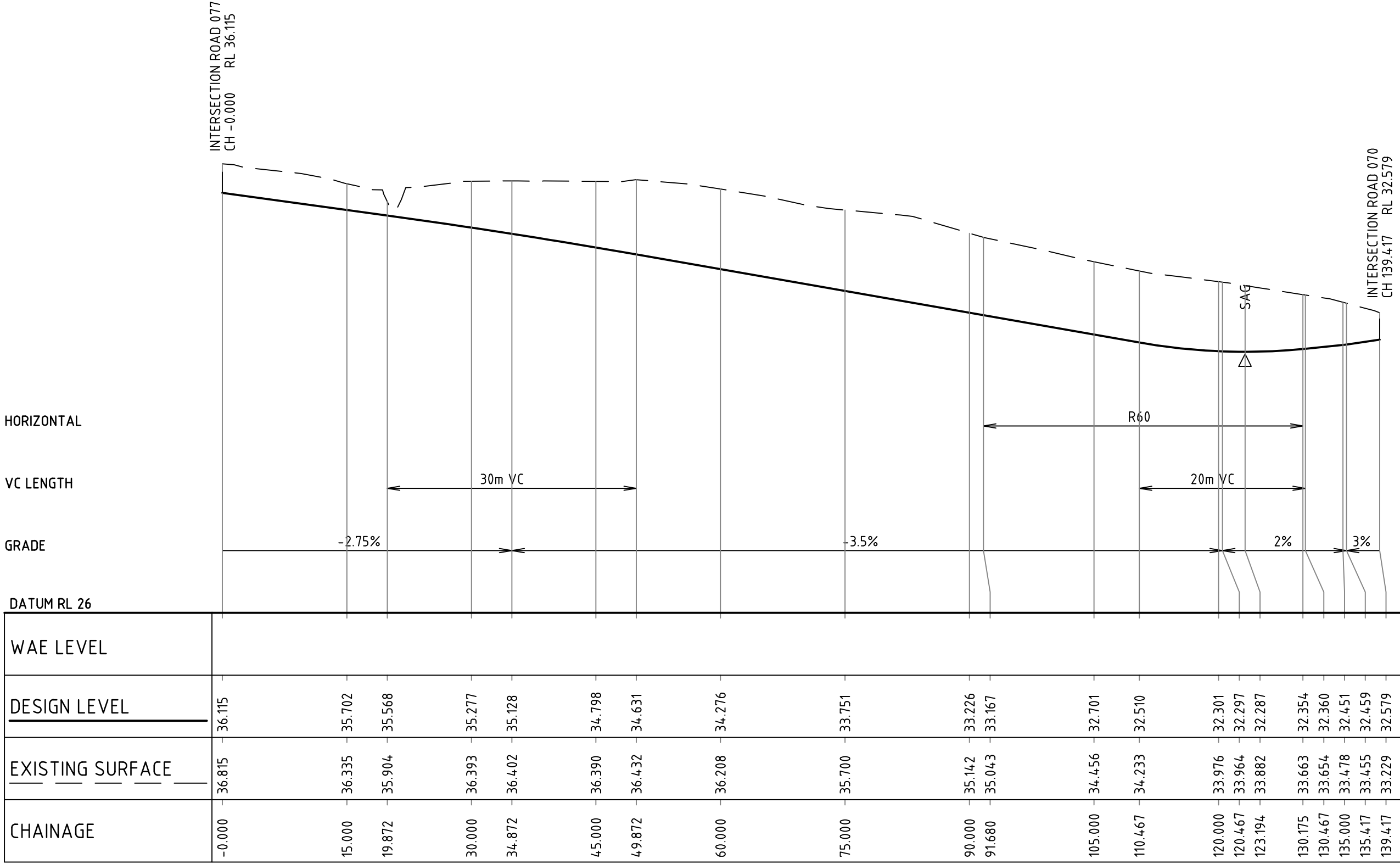


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Checked	Date
DAC	18.01.2016
Designed	Date
DAC	18.01.2016
Verified	Date
CEV	18.01.2016
Approved	
SCP	18.01.2016

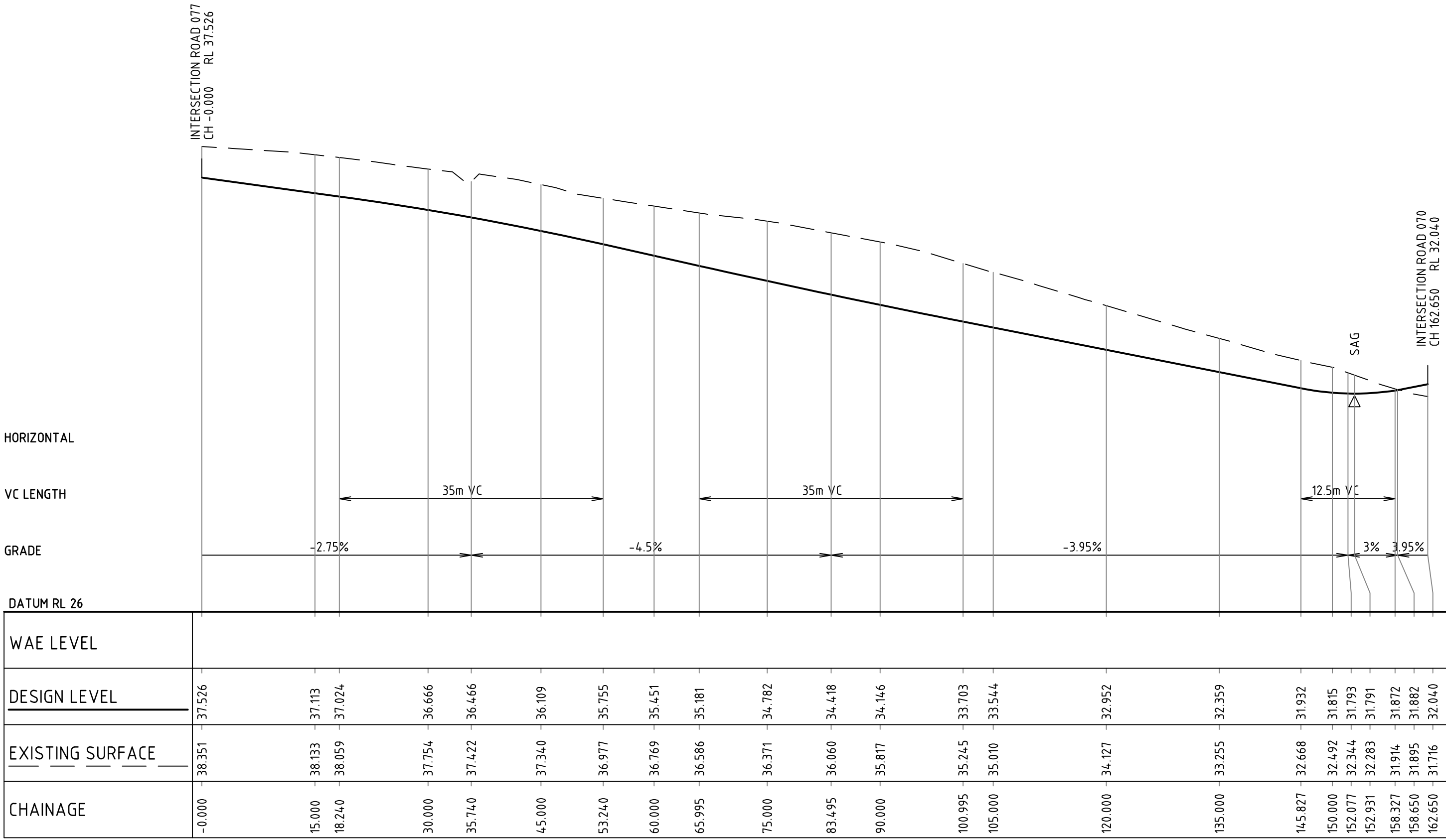
Client	LENLEASE	Status	FOR APPROVAL
Project	CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION	NOT TO BE USED FOR CONSTRUCTION PURPOSES	
Datum	AHD	Scale	AS SHOWN
Drawing Number	89914020-ST02-1258	Size	A1
Title	ROAD LONGITUDINAL SECTIONS SHEET 8 ROAD 076 & 077	Revision	5

XREFs: X:LS-ROAD-0701; X:LS-ROAD-0702; X:LS-ROAD-0703; X:LS-ROAD-0704; X:LS-ROAD-0705; X:LS-ROAD-0711; X:LS-ROAD-0712; X:LS-ROAD-0721; X:LS-ROAD-0731; X:LS-ROAD-0741; X:LS-ROAD-0751; X:LS-ROAD-0761; X:LS-ROAD-0771; X:LS-ROAD-0781; X:LS-ROAD-0791; Xref:89914020-ClientLogos; X:LS-ROAD-0031
CAD File: N:\Paramatna\Projects\899141020_CENTRAL PRECINCT_ADI ST MARYS\Drawings\07 Central Precinct Stage 2\Drawings\89914020-ST02-1259-DWG(5).dwg
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ROAD 078 LONGITUDINAL SECTION

1:500 HORI.
1:100 VERT.



ROAD 079 LONGITUDINAL SECTION

1:500 HORI.
1:100 VERT.



5	18.01.2016	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
4	30.10.2015	ISSUED FOR TENDER	DAC	CEV	SCP
3	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
2	21.08.2015	ISSUED FOR CLIENT REVIEW	DAC	SCP	
1	15.05.2015	ISSUED FOR INFORMATION	DAC	SCP	
Rev.	Date	Description	Des.	Verif.	Appd.



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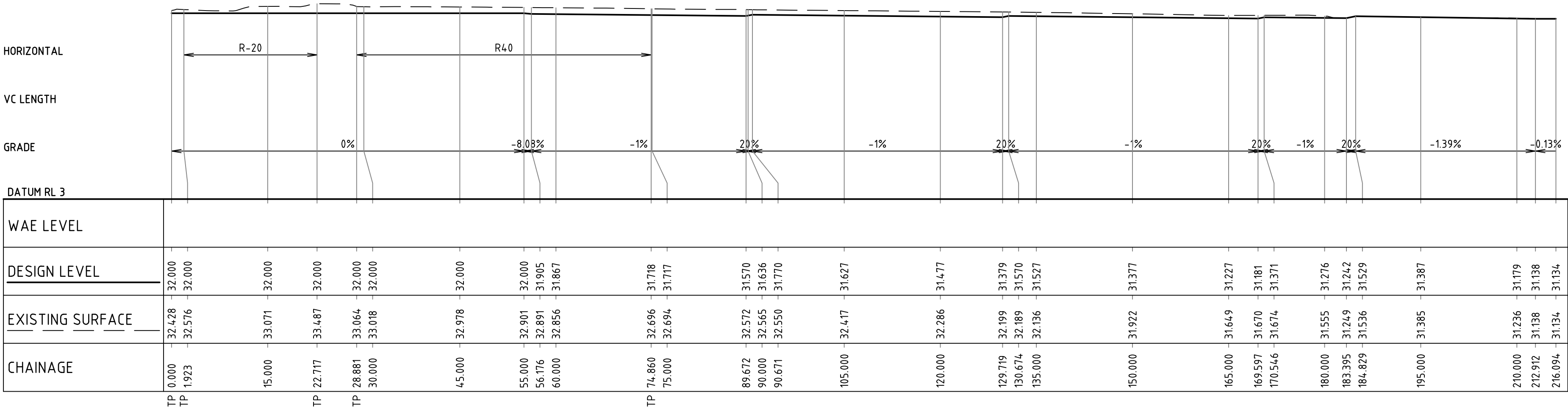
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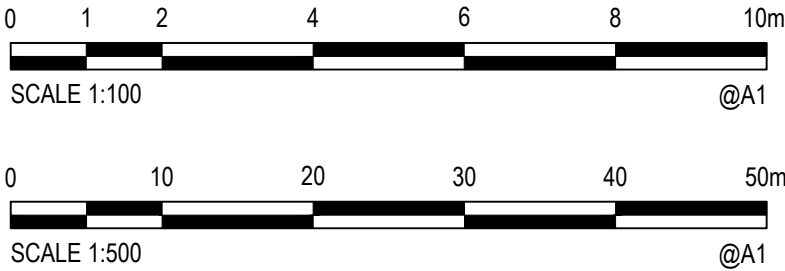
Drawn	Date	Client
BJH	18.01.2016	LENLEASE
Checked	Date	
DAC	18.01.2016	
Designed	Date	
DAC	18.01.2016	
Verified	Date	
CEV	18.01.2016	
Approved		
SCP	18.01.2016	

Project	CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION
Title	ROAD LONGITUDINAL SECTIONS SHEET 9 ROAD 078 & 079

Status	FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES
Datum	AHD
Scale	AS SHOWN
Size	A1
Drawing Number	89914020-ST02-1259
Revision	5



CHANNEL 02 LONGITUDINAL SECTION
1:500 HORI.
1:500 VERT.



5	18.01.2016	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
4	30.10.2015	ISSUED FOR TENDER	DAC	CEV	SCP
3	30.10.2015	ISSUED FOR TENDER	DAC	CEV	SCP
2	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
1	21.08.2015	ISSUED FOR CLIENT REVIEW	DAC	SCP	
Rev.	Date	Description	Des.	Verif.	Appd.



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Drawn BJH	Date 18.01.2016	Client LENLEASE
Checked DAC	Date 18.01.2016	Project CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION
Designed DAC	Date 18.01.2016	Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES
Verified CEV	Date 18.01.2016	Datum AHD
Approved SCP	Date 18.01.2016	Scale AS SHOWN
		Size A1
		Drawing Number 89914020-ST02-1271
		Revision 5

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DATE PLOTTED: 19 January 2016 12:28 PM BY: BRITTANY HOLZHEIMER

LEGEND

SP	STREET SIGNS TO BE INSTALLED IN ACCORDANCE WITH PENRITH CITY COUNCIL STANDARDS.
K&G	KERB AND GUTTER
PR	PRAM RAMP
VC	VEHICULAR CROSSING
MK	MEDIAN KERB
FK	FLUSH KERB

PAVEMENT TYPE 1 BUS ROUTE	
PAVEMENT TYPE 2 LOCAL ROAD	
SHARED PATH/FOOTPATH TO DETAIL	
PAVEMENT TYPE 5 CONCRETE MAINTENANCE ACCESS ROAD	
PAVEMENT TYPE 6 BUS LINK	
REFER DRAWING 1051 FOR PAVEMENT DETAILS	

PAVEMENT MARKING SCHEDULE

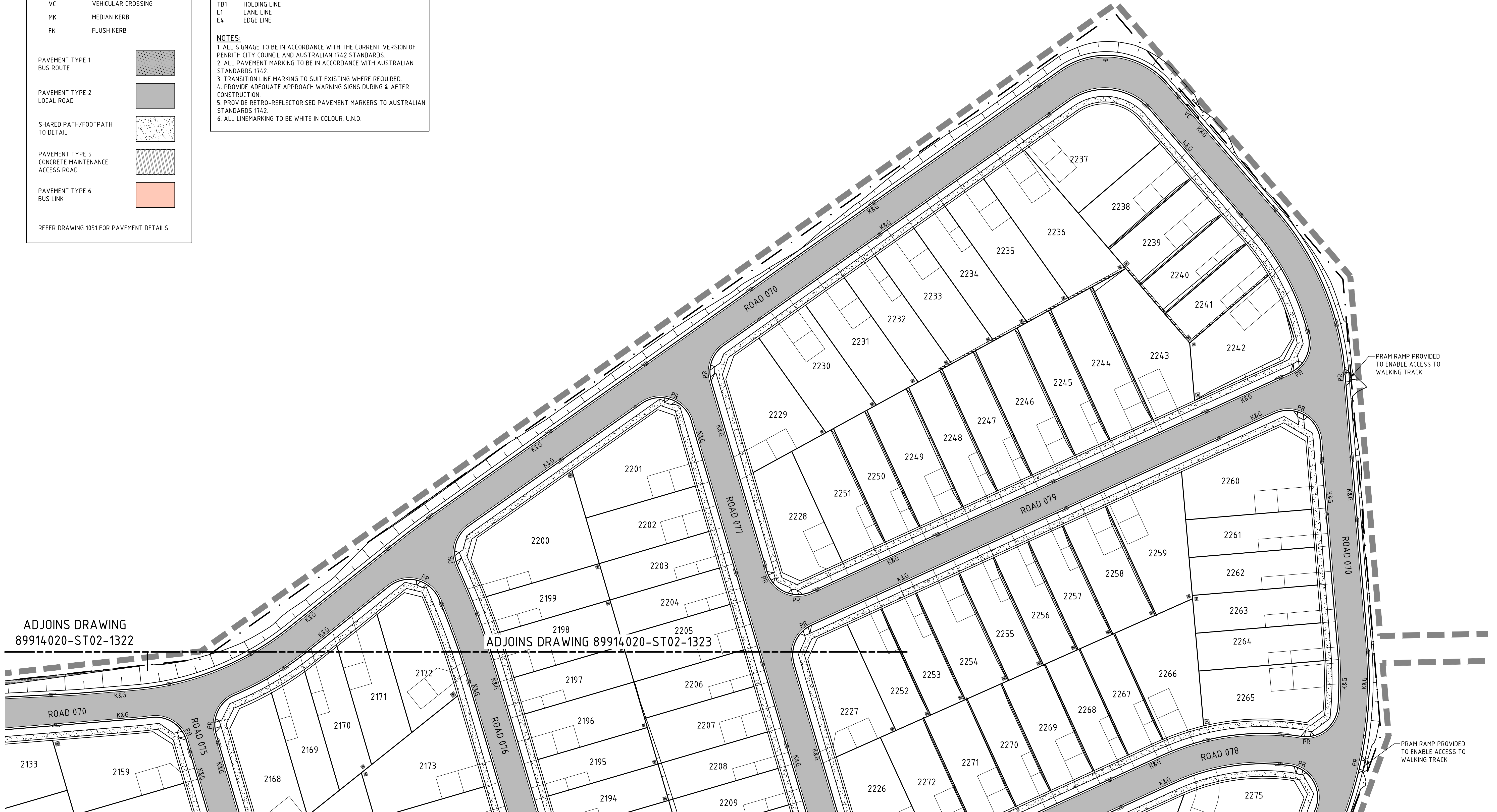
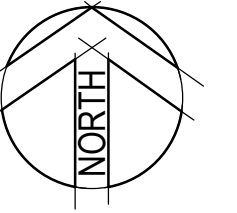
BB LINE WITH BIDIRECTIONAL RETROREFLECTIVE RAISED PAVEMENT MARKERS TO AUSTRALIAN STANDARDS 1742.

BB(26m TOTAL LENGTH, ARC RAD. 9m) - AS EXAMPLE

T8	HOLDING LINE
T81	HOLDING LINE
L1	LANE LINE
E4	EDGE LINE

NOTES:

1. ALL SIGNAGE TO BE IN ACCORDANCE WITH THE CURRENT VERSION OF PENRITH CITY COUNCIL AND AUSTRALIAN 1742 STANDARDS.
2. ALL PAVEMENT MARKING TO BE IN ACCORDANCE WITH AUSTRALIAN STANDARDS 1742.
3. TRANSITION LINE MARKING TO SUIT EXISTING WHERE REQUIRED.
4. PROVIDE ADEQUATE APPROACH WARNING SIGNS DURING & AFTER CONSTRUCTION.
5. PROVIDE RETRO-REFLECTORISED PAVEMENT MARKERS TO AUSTRALIAN STANDARDS 1742.
6. ALL LINEMARKING TO BE WHITE IN COLOUR. U.N.O.



ADJOINS DRAWING
89914020-ST02-1322

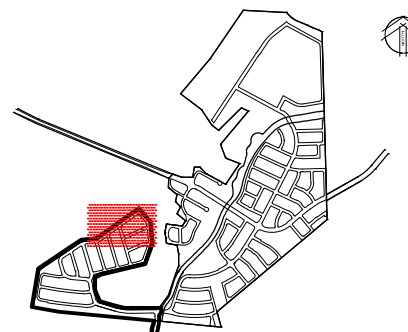
ADJOINS DRAWING 89914020-ST02-1323

PRAM RAMP PROVIDED
TO ENABLE ACCESS TO
WALKING TRACK

PRAM RAMP PROVIDED
TO ENABLE ACCESS TO
WALKING TRACK

Rev.	Date	Description	Des.	Verif.	Appd.
5	18.01.2016	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
4	30.10.2015	ISSUED FOR TENDER	DAC	CEV	SCP
3	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
2	21.08.2015	ISSUED FOR CLIENT REVIEW	DAC	SCP	
1	15.05.2015	ISSUED FOR INFORMATION	DAC	SCP	

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Drawn	BJH	Date	18.01.2016
Checked	DAC	Date	18.01.2016
Designed	DAC	Date	18.01.2016
Verified	CEV	Date	18.01.2016
Approved	SCP	Date	18.01.2016

Client **LENLEASE**
Project **CENTRAL PRECINCT
STAGE 2 - CIVIL WORKS
DEVELOPMENT APPLICATION**
Title **PAVEMENT, SIGNAGE & LINEMARKING PLAN
SHEET 1**

Status		FOR APPROVAL	
NOT TO BE USED FOR CONSTRUCTION PURPOSES			
Datum		Scale	Size
AHD		1:500	A1
Drawing Number			Revision
89914020-ST02-1321			5

XREFs: Xref:89914020-07-Future Works: Xref:89914020-07-Stage 2 Boundary: Xref:89914020-07-Keyplan: Xref:89914020-07-Pavement Hatches: Xref:89914020-07-Signage: Xref:89914020-07-Linemarking & Signage: Xref:89914020-07-Drainage
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DATE PLOTTED: 19 January 2016 12:26 PM BY: BRITTANY HOLZHEIMER

NOTES
1. REFER DRAWING 1321
FOR LEGEND AND NOTES



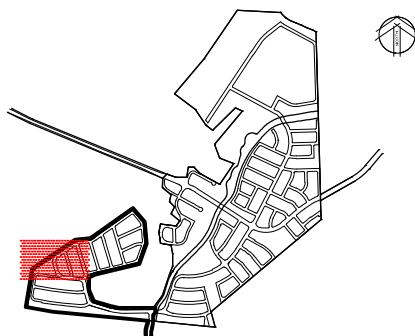
ADJOINS DRAWING 89914020-ST02-1324

ADJOINS DRAWING
89914020-ST02-1321

ADJOINS DRAWING 89914020-ST02-1323

Rev.	Date	Description	Des.	Verif.	Appd.
5	18.01.2016	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
4	30.10.2015	ISSUED FOR TENDER	DAC	CEV	SCP
3	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
2	21.08.2015	ISSUED FOR CLIENT REVIEW	DAC	SCP	
1	15.05.2015	ISSUED FOR INFORMATION	DAC	SCP	

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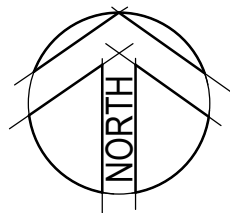
Drawn	BJH	Date	18.01.2016
Checked	DAC	Date	18.01.2016
Designed	DAC	Date	18.01.2016
Verified	CEV	Date	18.01.2016
Approved	SCP	Date	18.01.2016

Client	LENLEASE
Project	CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION
Title	PAVEMENT, SIGNAGE & LINEMARKING PLAN SHEET 2

Status	FOR APPROVAL
Datum	AHD
Scale	1:500
Size	A1
Drawing Number	89914020-ST02-1322
Revision	5

XREFs: Xref:89914020-07-Future Works: Xref:89914020-07-Stage 2 Boundary: Xref:89914020-07-Keyplan: Xref:89914020-07-Pavement Hatches: Xref:89914020-07-Lot Layout: Xref:89914020-07-Design: Xref:89914020-07-Sheet Layout: Xref:89914020-07-Road Centrelines: Xref:89914020-07-Linemarking & Signage: Xref:89914020-07-Lot Layout: Xref:89914020-07-Drainage
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DATE PLOTTED: 19 January 2016 12:28 PM BY: BRITTANY HOLZHEIMER

ADJOINS DRAWING 89914020-ST02-1322

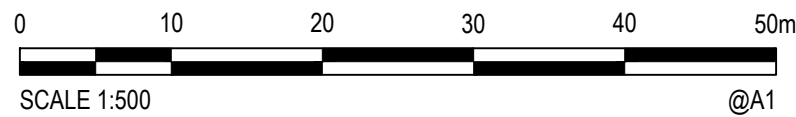


PRAM RAMP PROVIDED
TO ENABLE ACCESS TO
WALKING TRACK

ADJOINS DRAWING 89914020-ST02-1321

ADJOINS DRAWING
89914020-ST02-1324

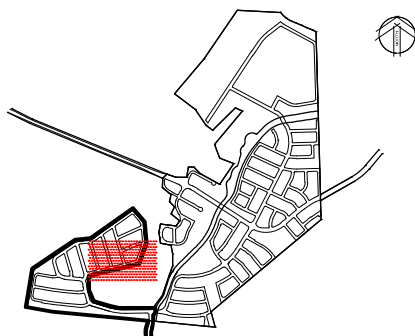
NOTES
1. REFER DRAWING 1321
FOR LEGEND AND NOTES



ADJOINS DRAWING 89914020-ST02-1325

Rev.	Date	Description	Des.	Verif.	Appd.
5	18.01.2016	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
4	30.10.2015	ISSUED FOR TENDER	DAC	CEV	SCP
3	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
2	21.08.2015	ISSUED FOR CLIENT REVIEW	DAC	SCP	
1	15.05.2015	ISSUED FOR INFORMATION	DAC	SCP	

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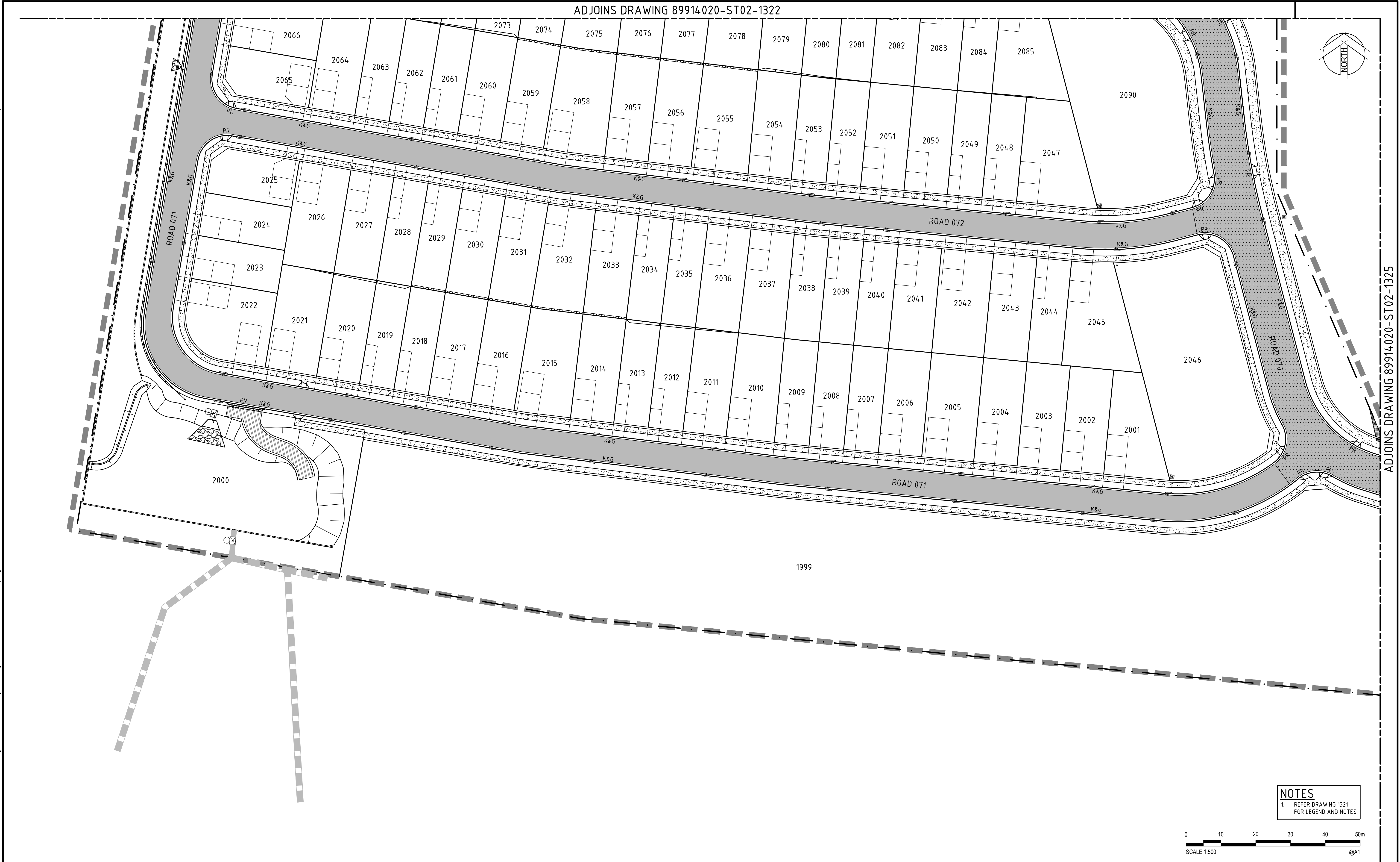
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St Leonards, NSW 2005
Tel: 02 9496 7700 Fax: 02 9439 5170
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Drawn	BJH	Date	18.01.2016
Checked	DAC	Date	18.01.2016
Designed	DAC	Date	18.01.2016
Verified	CEV	Date	18.01.2016
Approved	SCP	Date	18.01.2016

Client	LENLEASE
Project	CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION
Title	PAVEMENT, SIGNAGE & LINEMARKING PLAN SHEET 3

Status	FOR APPROVAL
Datum	AHD
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Size	A1
Drawing Number	89914020-ST02-1323
Revision	5

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DATE PLOTTED: 19 January 2016 12:26 PM BY: BRITTANY HOLZHEIMER



Rev.	Date	Description	Des.	Verif.	Appd.
5	18.01.2016	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
4	30.10.2015	ISSUED FOR TENDER	DAC	CEV	SCP
3	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
2	21.08.2015	ISSUED FOR CLIENT REVIEW	DAC	SCP	
1	15.05.2015	ISSUED FOR INFORMATION	DAC	SCP	

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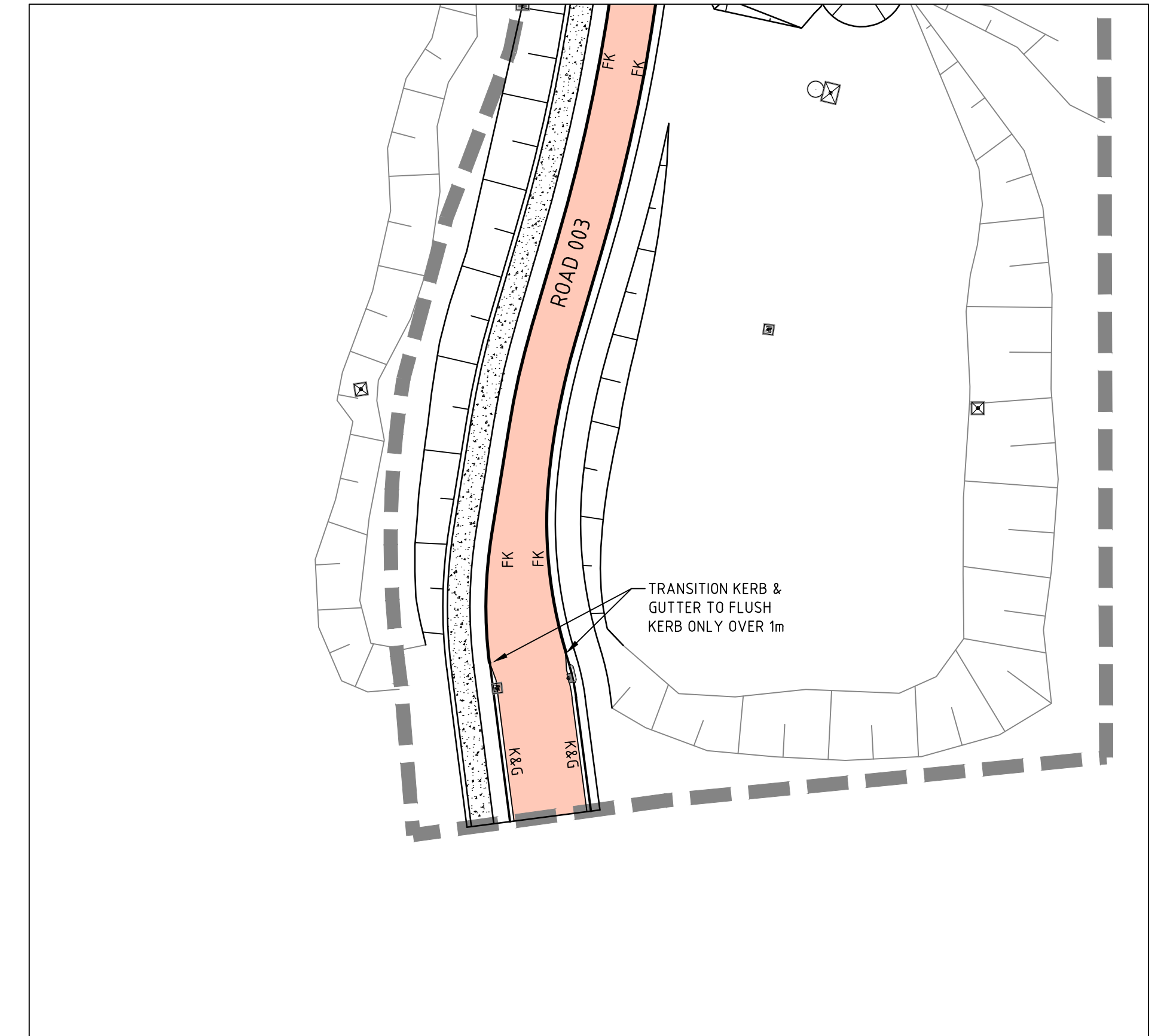
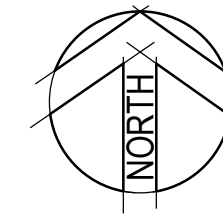
Drawn	Date	Client
BJH	18.01.2016	LENDELEASE
Checked	Date	Project
DAC	18.01.2016	CENTRAL PRECINCT
Designed	Date	STAGE 2 - CIVIL WORKS
DAC	18.01.2016	DEVELOPMENT APPLICATION
Verified	Date	Title
CEV	18.01.2016	PAVEMENT, SIGNAGE & LINEMARKING PLAN
Approved		SHEET 4
SCP	18.01.2016	

Status	FOR APPROVAL
Datum	AHD
Scale	1:500
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Drawing Number	89914020-ST02-1324
Revision	5

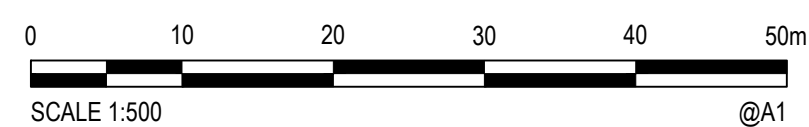
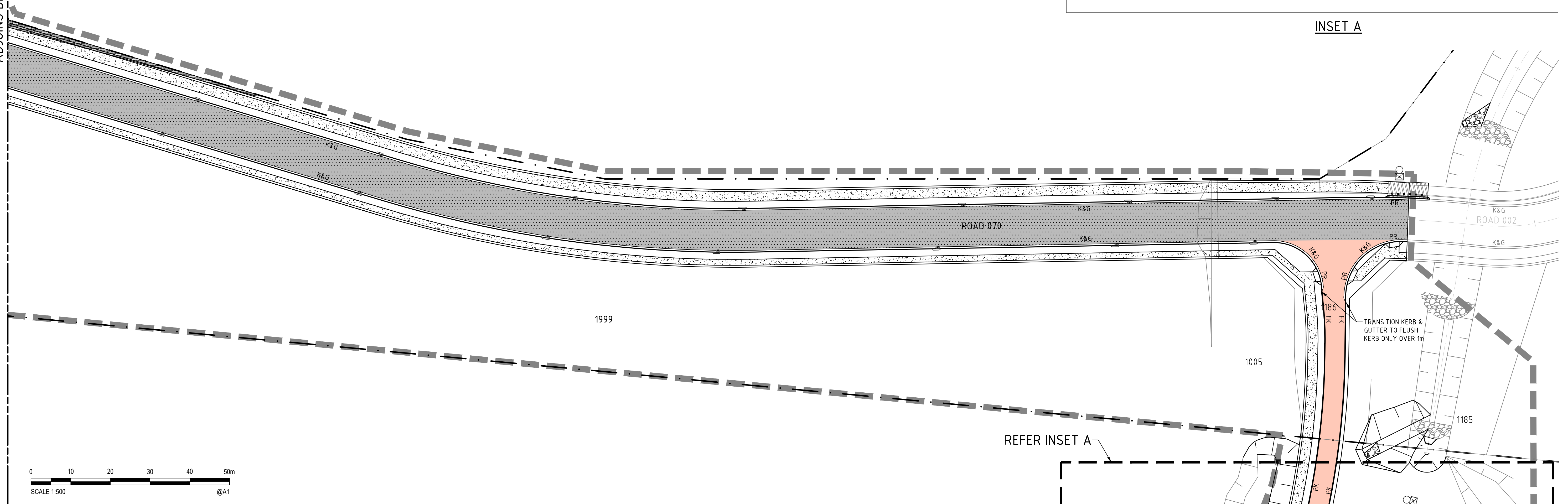
NOT TO BE USED FOR CONSTRUCTION PURPOSES
89914020-ST02-1324
5

NOTES

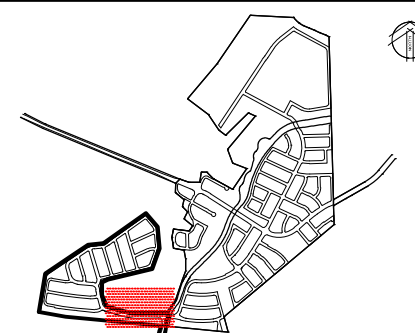
1. REFER DRAWING 1321
FOR LEGEND AND NOTES



INSET A



5	18.01.2016	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
4	30.10.2015	ISSUED FOR TENDER	DAC	CEV	SCP
3	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
2	21.08.2015	ISSUED FOR CLIENT REVIEW	DAC	SCP	
1	15.05.2015	ISSUED FOR INFORMATION	DAC	SCP	
Rev.	Date	Description	Des.	Verif.	Appd.



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Drawn	Date
BJH	18.01.2016
Checked	Date
DAC	18.01.2016
Designed	Date
DAC	18.01.2016
Verified	Date
CEV	18.01.2016
Approved	
SCP	18.01.2016

Client LENDLEASE

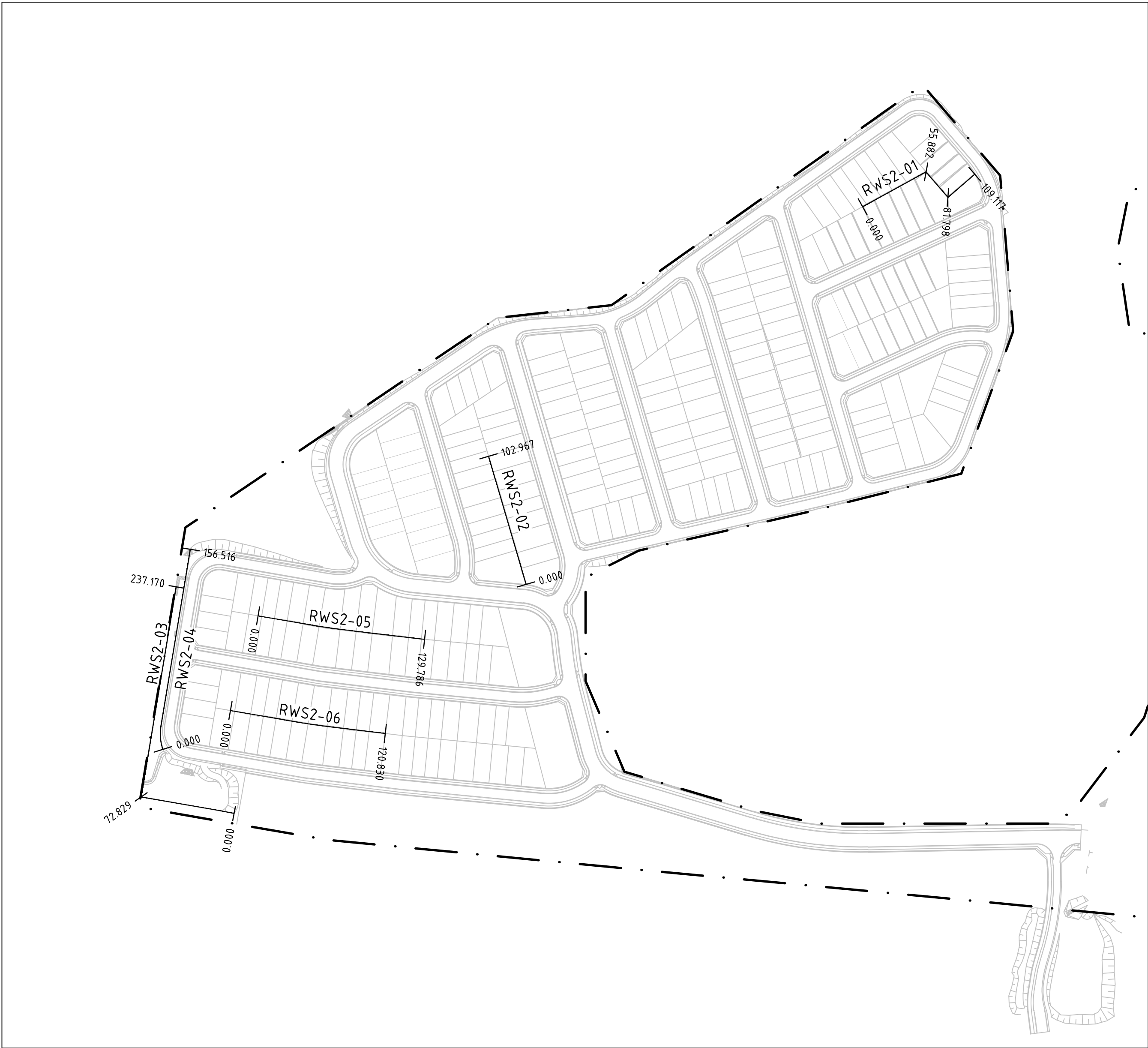
Project	CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION
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6	Title	PAVEMENT, SIGNAGE & LINEMARKING PLAN SHEET 5
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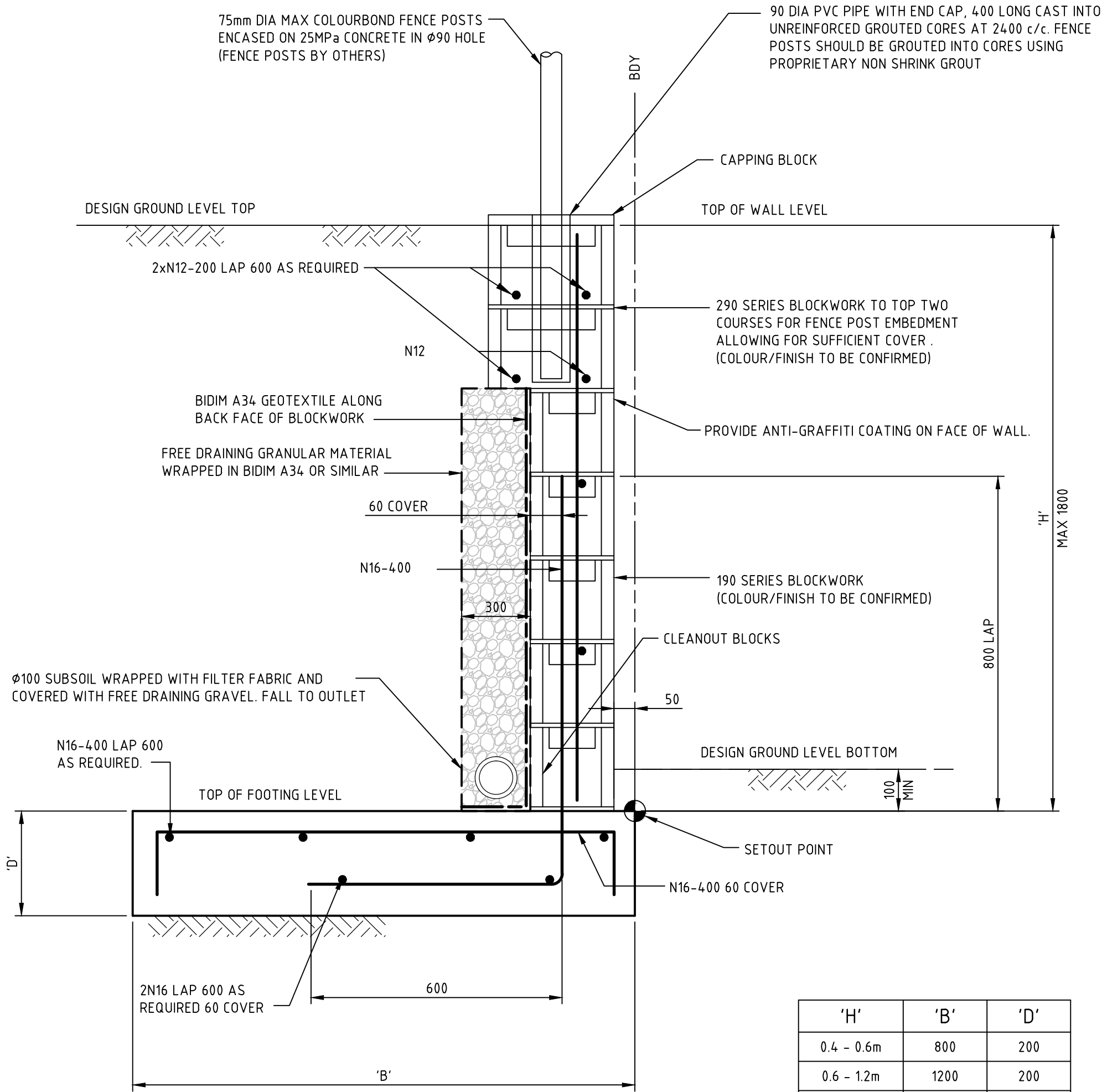
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Datum	Scale	Size
AHD	1:500	A1

Drawing Number
89914020-ST02-1325

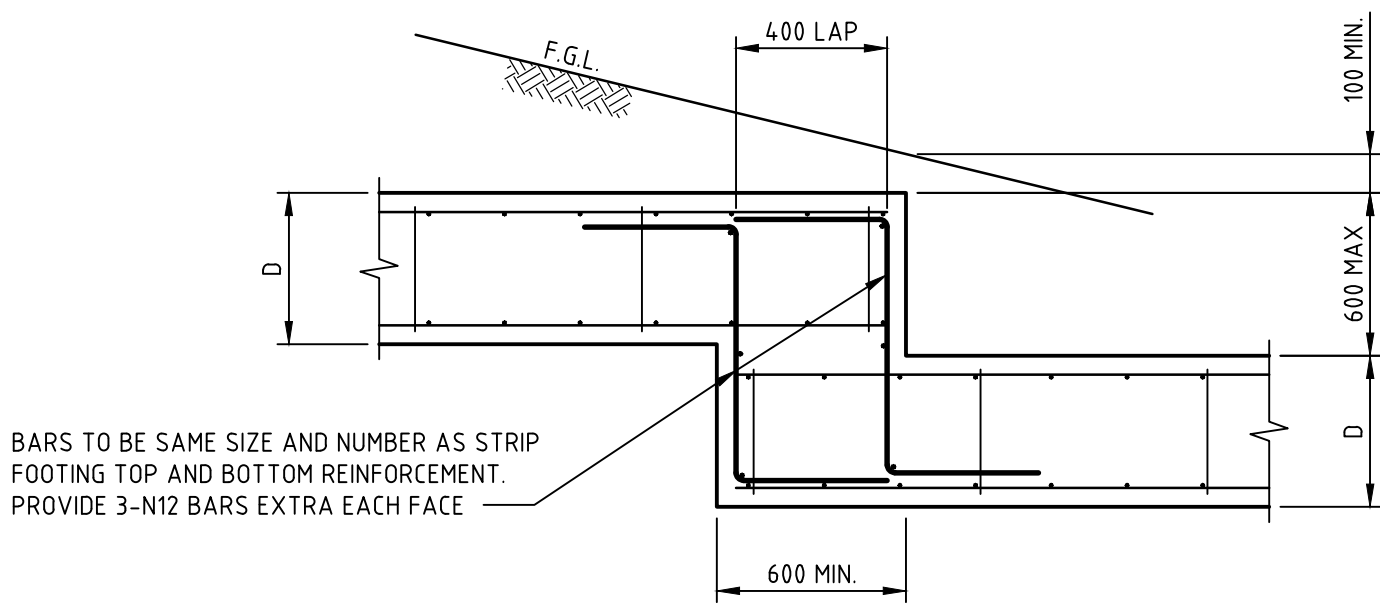


RETAINING WALL PLAN
SCALE 1:2500

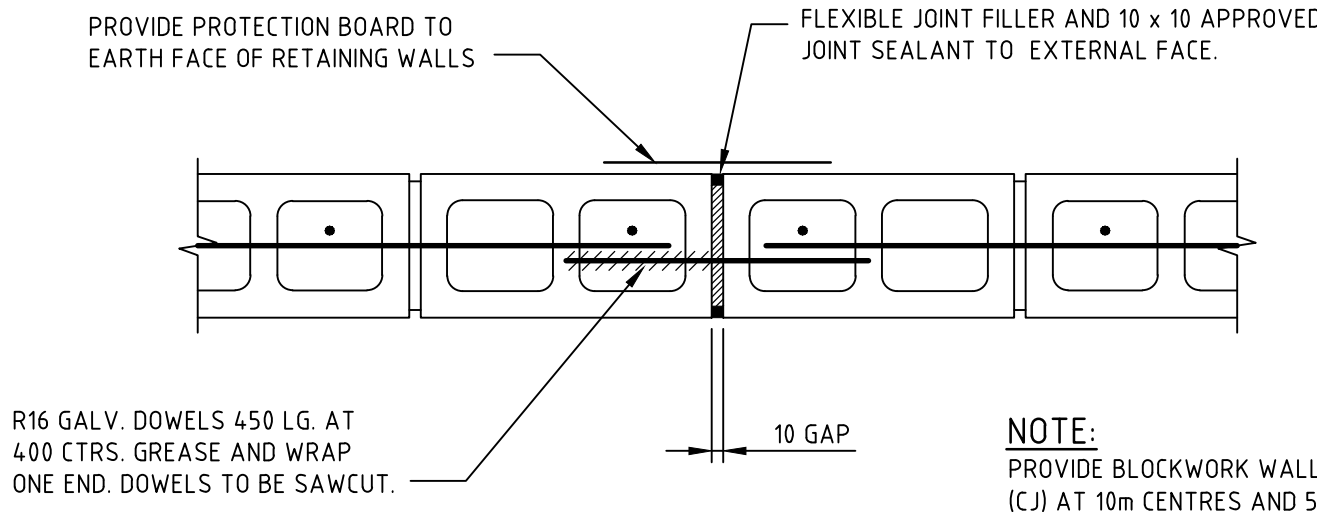


BLOCKWORK RETAINING WALL
SCALE 1:10

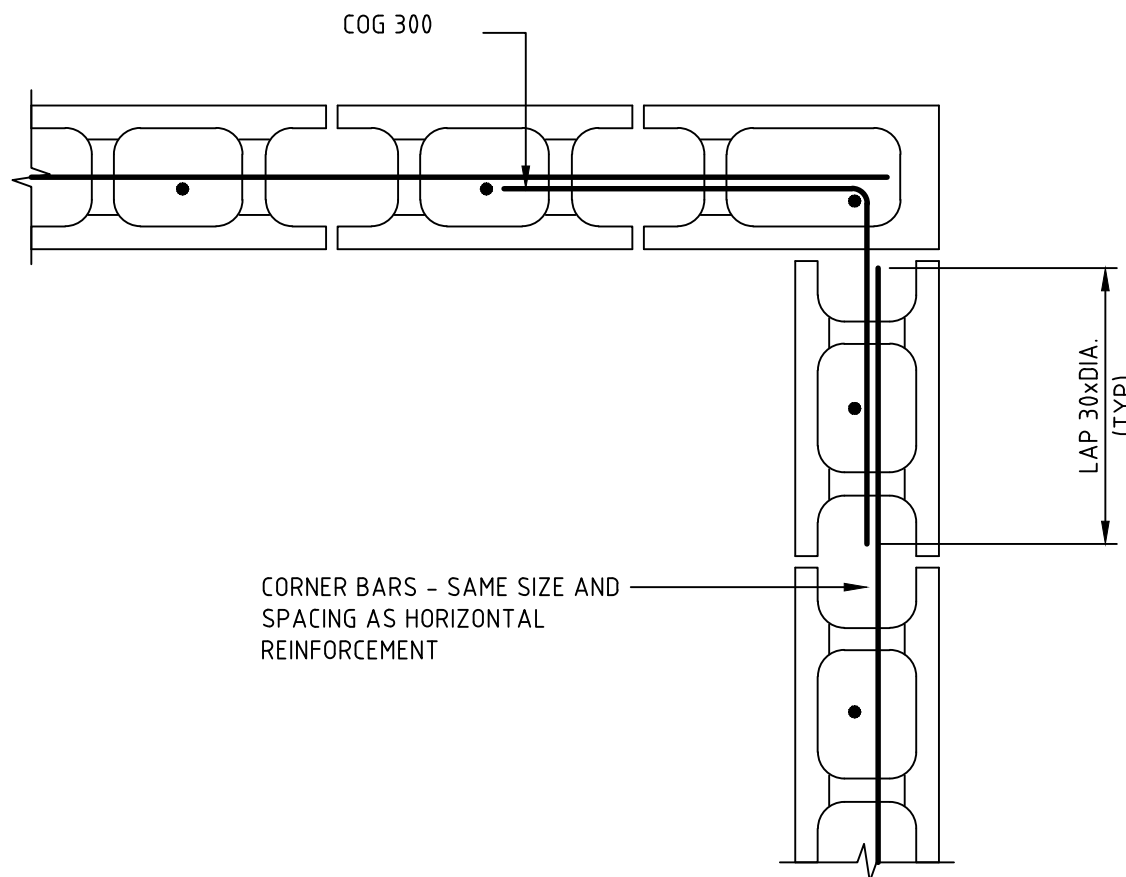
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0.4 - 0.6m	800	200
0.6 - 1.2m	1200	200
1.2 - 1.8m	1600	250
1.8 - 3.0m	2000	250



TYPICAL STRIP FOOTING STEP DETAIL
SCALE 1:20

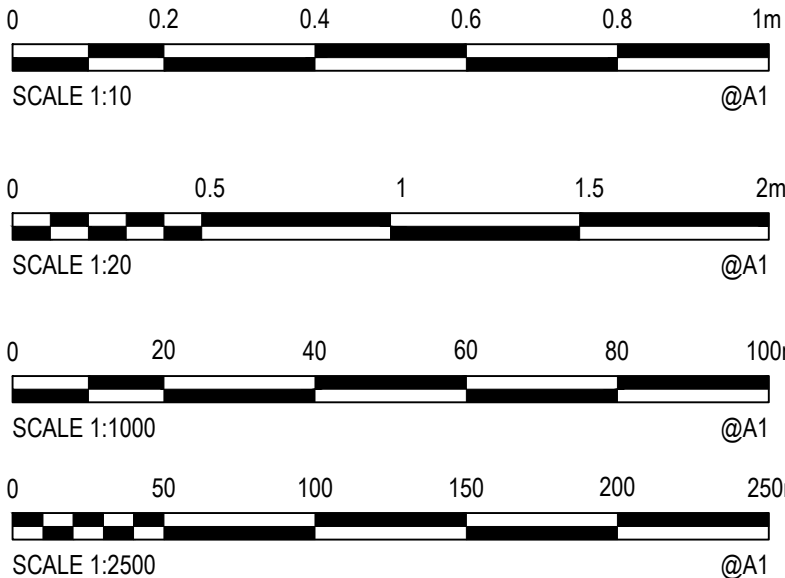


BLOCKWORK WALL CONTROL JOINT (C.J.)
SCALE 1:10



BLOCKWORK WALL CORNER DETAIL
SCALE 1:10

NOTES
1. RETAINING WALL DETAIL PRELIMINARY
ONLY SUBJECT TO DETAILED DESIGN.



Rev.	Date	Description	Des.	Verif.	Appd.
2	18.01.2016	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
1	30.10.2015	ISSUED FOR TENDER	DAC	SCP	

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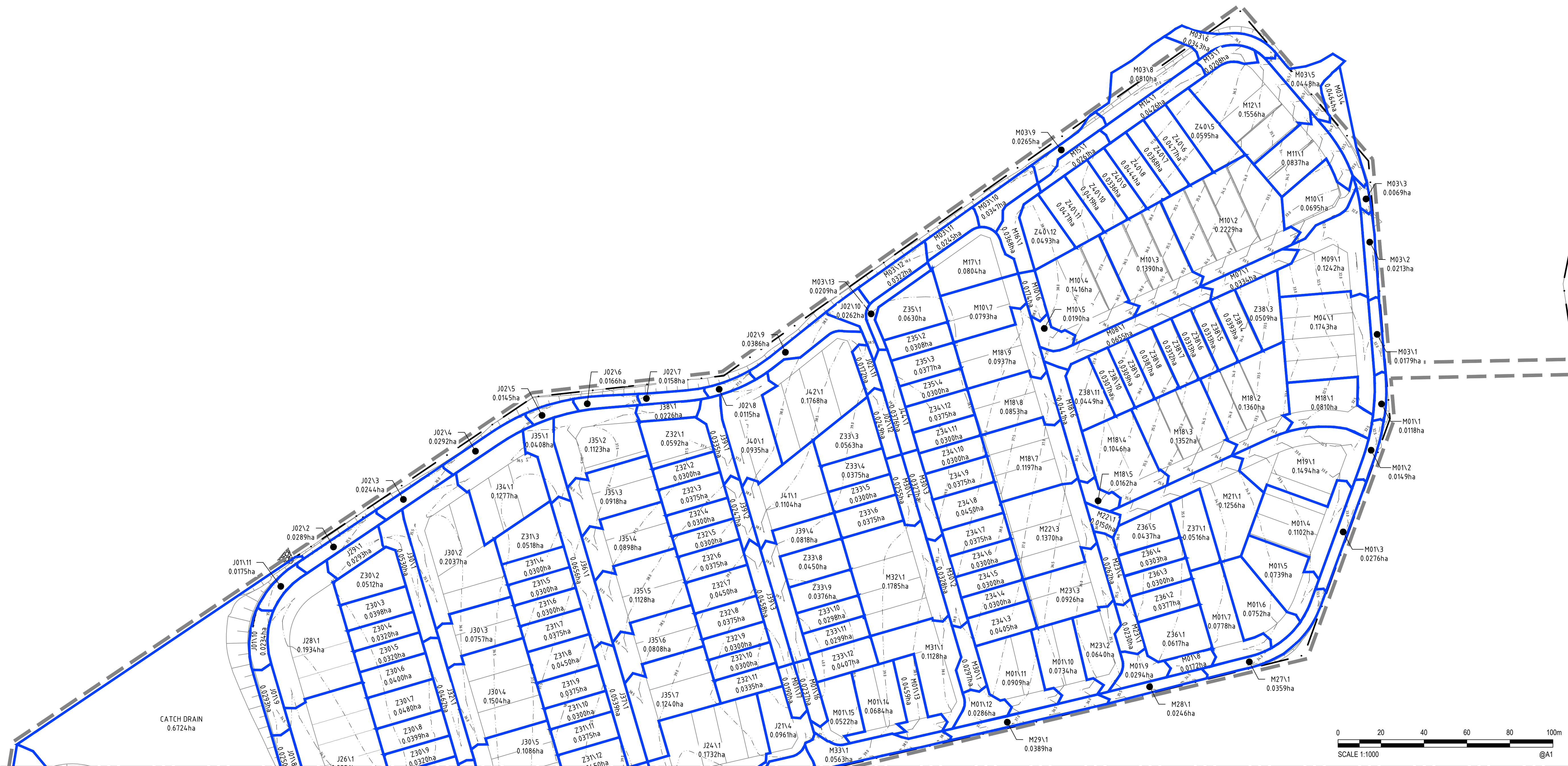
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Drawn BJH	Date 18.01.2016
Checked DAC	Date 18.01.2016
Designed DAC	Date 18.01.2016
Verified CEV	Date 18.01.2016
Approved SCP	Date 18.01.2016

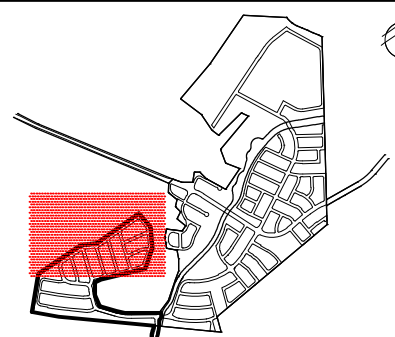
Client LENLEASE	Project CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION
Title RETAINING WALL LOCALITY PLAN AND DETAILS	

Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES	Datum AHD	Scale AS SHOWN	Size A1
Drawing Number 89914020-ST02-1361	Revision 2		



ADJOINS DRAWING 89914020-ST02-1402

4	18.01.2016	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
3	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
2	21.08.2015	ISSUED FOR CLIENT REVIEW	DAC	SCP	
1	15.05.2015	ISSUED FOR INFORMATION	DAC	SCP	
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Drawn	Date
BJH	18.01.2016
Checked	Date
DAC	18.01.2016
Designed	Date
DAC	18.01.2016
Verified	Date
CEV	18.01.2016
Approved	
SCP	18.01.2016

Client	LENDLEASE
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Project	CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION
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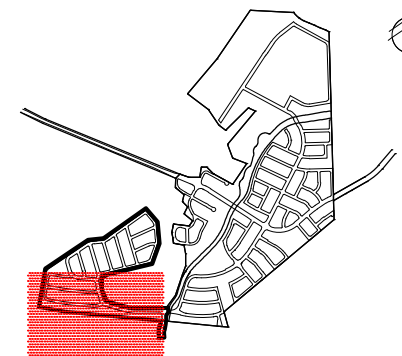
STORMWATER CATCHMENT PLAN
SHEET 1

Status	FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES
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Datum AHD	Scale 1:1000	Size A1
Drawing Number 89914020-ST02-1401		Revision 4



4	18.01.2016	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP	
3	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP	
2	21.08.2015	ISSUED FOR CLIENT REVIEW	DAC	SCP		
1	15.05.2015	ISSUED FOR INFORMATION	DAC	SCP		
Rev.	Date	Description	Des.	Verif.	Appd.	



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Drawn	Date
BJH	18.01.2016
Checked	Date
DAC	18.01.2016
Designed	Date
DAC	18.01.2016
Verified	Date
CEV	18.01.2016
Approved	
SCP	18.01.2016

Project	CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION
---------	--

Title	STORMWATER CATCHMENT PLAN SHEET 2
-------	--------------------------------------

Datum AHD	Scale 1:1000	Size A1
Drawing Number 89914020-ST02-1402		Revision 4

DATE PLOTTED: 19 January, 2016 12:27 PM BY: BRITTANY HOLZHEIMER

XREFs: X-GIS Base: Xref-89914020-Design; Xref-89914020-Layout; Xref-89914020-Client Logos; Xref-89914020-07-Cadastral; Xref-89914020-07-Design
CAD File: N:\Paramatna\Projects\89914020_CENTRAL_PRECINCT_ADI_ST_MARYS\Drawings\07_Central Precinct Stage 2\Drawings\89914020-ST02-1411-DWG(4).dwg

LEGEND

EXISTING CONTOUR

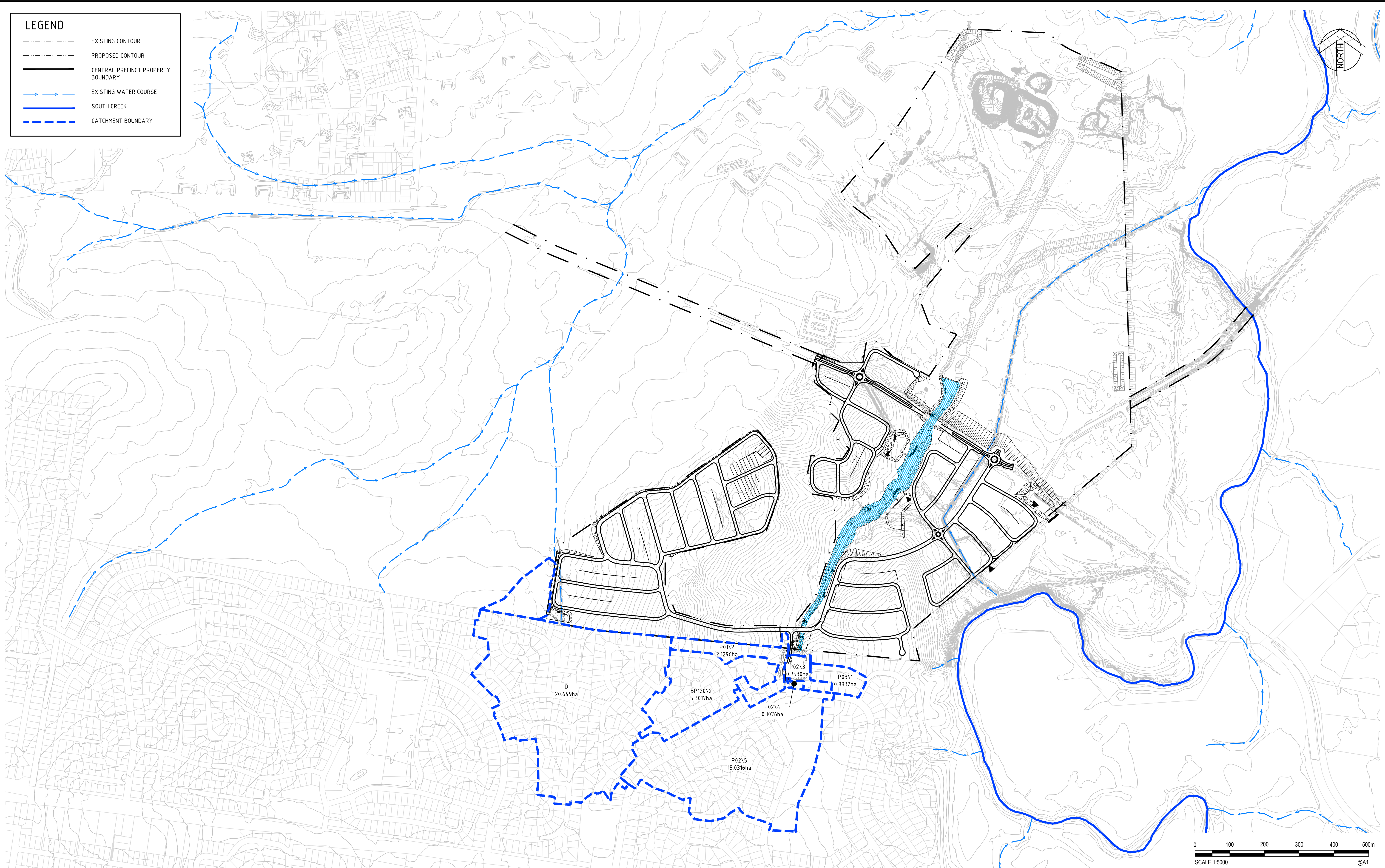
PROPOSED CONTOUR

CENTRAL PRECINCT PROPERTY BOUNDARY

EXISTING WATER COURSE

SOUTH CREEK

CATCHMENT BOUNDARY



Rev.	Date	Description	Des.	Verif.	Appd.
4	18.01.2016	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
3	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
2	21.08.2015	ISSUED FOR CLIENT REVIEW	DAC	SCP	
1	15.05.2015	ISSUED FOR INFORMATION	DAC	SCP	

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Drawn	Date	Client
BJH	18.01.2016	LENLEASE
Checked	Date	Project
DAC	18.01.2016	CENTRAL PRECINCT
Designed	Date	STAGE 2 - CIVIL WORKS
DAC	18.01.2016	DEVELOPMENT APPLICATION
Verified	Date	Title
CEV	18.01.2016	STORMWATER CATCHMENT PLAN
Approved		EXTERNAL CATCHMENTS
SCP	18.01.2016	

Project			
CENTRAL PRECINCT			
STAGE 2 - CIVIL WORKS			
DEVELOPMENT APPLICATION			
Title			
STORMWATER CATCHMENT PLAN			
EXTERNAL CATCHMENTS			

Status			
FOR APPROVAL			
NOT TO BE USED FOR CONSTRUCTION PURPOSES			
Datum	Scale	Size	
AHD	1:5000	A1	
Drawing Number			Revision
89914020-ST02-1411			4

NOTES:

BIO-FILTRATION BASIN WEIR NOTES:

1. GROUTED STONE PITCHING-STONES 75-100mm, 300mm THICK ON 2.5mm HDPE LINER. BUND SUBSOIL COMPACTION TO BE IN ACCORDANCE WITH GEOTECHNICAL ASSESSMENT REFER LANDSCAPE DRAWINGS FOR PLANTING DETAILS.

ROCK ARMOUR NOTES:

1. 200mm THICK ROCK ARMOUR LAYER. Dmax=130mm AND D85=50mm NOT MORE THAN 15% BY MASS OF THE TOTAL MATERIAL IS TO BE FINER THAN A NOMINAL DIAMETER OF 25mm.

DIVERSION CHANNEL NOTES:

1. WHERE CHANNEL IS STEEPER THAN 3% INCLUDE D50 = 200mm ROCK BUNDS AT 20m INTERVALS.

BIO-FILTRATION FILTER MEDIA SPECIFICATION

MATERIALS:

BIO-FILTRATION FILTER MEDIA, TRANSITION LAYER AND DRAINAGE LAYERS TO BE IN ACCORDANCE WITH CURRENT VERSION OF FAWB DOCUMENT "STORMWATER BIO-FILTRATION SYSTEMS ADOPTION GUIDELINES" AND THE FOLLOWING:

A) BIO-FILTRATION FILTER MEDIA

1. BIO-FILTRATION MEDIA IS TO BE FREE OF RUBBISH AND DELETERIOUS MATERIAL.
2. BIO-FILTRATION FILTER MEDIA SATURATED HYDRAULIC CONDUCTIVITY TO BE A MAXIMUM OF 125mm/hr USING TEST METHOD ASTM F1815-06.
3. IT IS DESIRABLE THAT THE BIO-FILTRATION FILTER MEDIA PARTICLE SIZE DISTRIBUTION IS AS FOLLOWS:

CLAY & SILT	<3%	(<0.05mm)
VERY FINE SAND	5-30%	(0.05-0.15mm)
FINE SAND	10-30%	(0.15-0.25mm)
MEDIUM TO COARSE SAND	40-60%	(0.25-1.0mm)
COARSE SAND	7-10%	(1.0-2.0mm)
FINE GRAVEL	<3%	(2.0-3.4mm)

THE COMBINED PERCENTAGE OF CLAY AND SILT MUST NOT EXCEED 3% (W/W) UNDER ANY CIRCUMSTANCES.

4. BIO-FILTRATION FILTER MEDIA IS TO BE TESTED AND COMPLY WITH THE FOLLOWING REQUIREMENTS:

- a) ORGANIC MATTER CONTENT IN ACCORDANCE WITH AS4419 AT LEAST 3% (W/W)
b) TOTAL NITROGEN (TN) CONTENT <800mg/kg
c) ORTHOPHOSPHATE (PO4³⁻) CONTENT <20mg/kg WHERE PLANTS WITH MODERATE PHOSPHOROUS SENSITIVITY ARE TO BE USED, TOTAL PHOSPHOROUS CONCENTRATION SHOULD BE <20mg/kg.
d) AS SPECIFIED FOR "NATURAL SOILS AND SOIL BLENDS" AS4419 - pH 5.5-7.5 (pH 1.5 IN WATER)
e) ELECTRICAL CONDUCTIVITY (EC) AS SPECIFIED FOR "NATURAL SOILS AND SOILS BLENDS" AS4419 <1.2ds/m
f) DISPENSABILITY - AS SPECIFIED FOR "NATURAL SOILS AND SOIL BLENDS" AS4419 CATEGORY 1 OR 2
g) TEXTURE - LOAMY SAND AS PER AS4419

5. PRIOR TO PLACEMENT OF THE FILTER MEDIA A STATEMENT IS TO BE SUBMITTED FROM A QUALIFIED HORTICULTURIST CONFIRMING THAT THE SOIL IS CAPABLE OF SUPPORTING A HEALTHY COMMUNITY OF VEGETATION.

6. TESTS CONFIRMING THE REQUIREMENTS OF ITEMS 1 TO 4 ARE TO BE SUBMITTED FOR APPROVAL PRIOR TO PLACEMENT OF FILTER MEDIA.

B) TRANSITION LAYER

- 1) TRANSITION LAYER MATERIAL SHALL BE A CLEAN, WELL GRADED SAND MATERIAL CONTAINING <2% FINES.
2) THE PARTICLE SIZE DISTRIBUTION OF THE SAND TO BE ASSESSED TO ENSURE. D15 (TRANSITION LAYER) LESS THAN OR EQUAL TO 5 x D85 (FILTER MEDIA)

WHERE: D15 (TRANSITION LAYER) IS THE 15TH PERCENTILE PARTICLE SIZE IN THE TRANSITION LAYER MATERIAL (i.e. 15% OF THE SAND IS SMALLER THAN D15 mm), AND D85 (FILTER MEDIA) IS THE 85th PERCENTILE PARTICLE SIZE IN THE FILTER MEDIA.

C) DRAINAGE LAYER

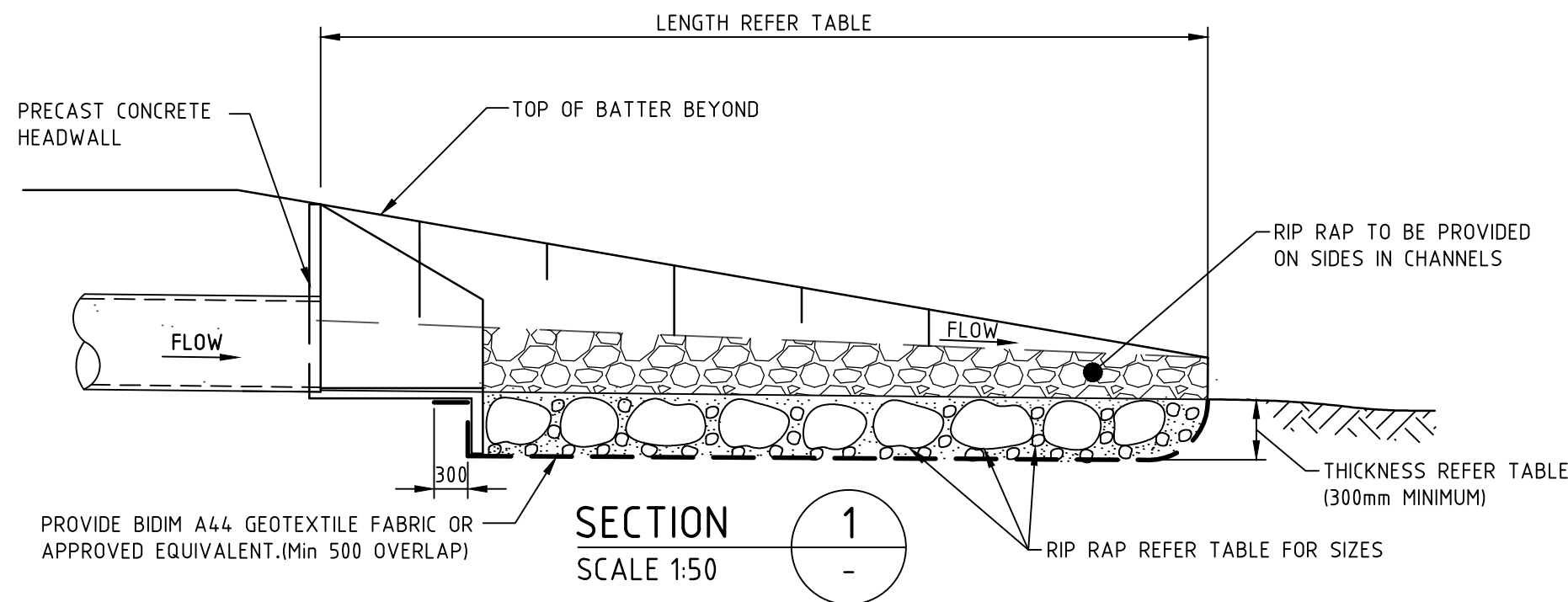
DRAINAGE LAYER MATERIAL IS TO BE CLEAN, FINE GRAVEL, SUCH AS A 5mm WASHED SCREENINGS. THE PARTICLE SIZE DISTRIBUTION TO BE: D15 (DRAINAGE LAYER) < 5 x D85 (TRANSITION LAYER)
WHERE: D15 (DRAINAGE LAYER) IS THE 15TH PERCENTILE PARTICLE SIZE IN THE TRANSITION LAYER MATERIAL (i.e. 15% OF THE SAND IS SMALLER THAN D15 mm), AND D85 (TRANSITION LAYER) IS THE 85th PERCENTILE PARTICLE SIZE IN THE FILTER MEDIA.

INSTALLATION:

FILTER MATERIAL IS TO BE LIGHTLY COMPACTED (E.G. A SINGLE PASS WITH A DRUM LAWN ROLLER) UNDER NO CIRCUMSTANCES SHOULD HEAVY EQUIPMENT OR MULTIPLE PASSES BE MADE. FILTER MEDIA SHOULD BE INSTALLED IN TWO LIFTS UNLESS THE DEPTH IS LESS THAN 500mm.

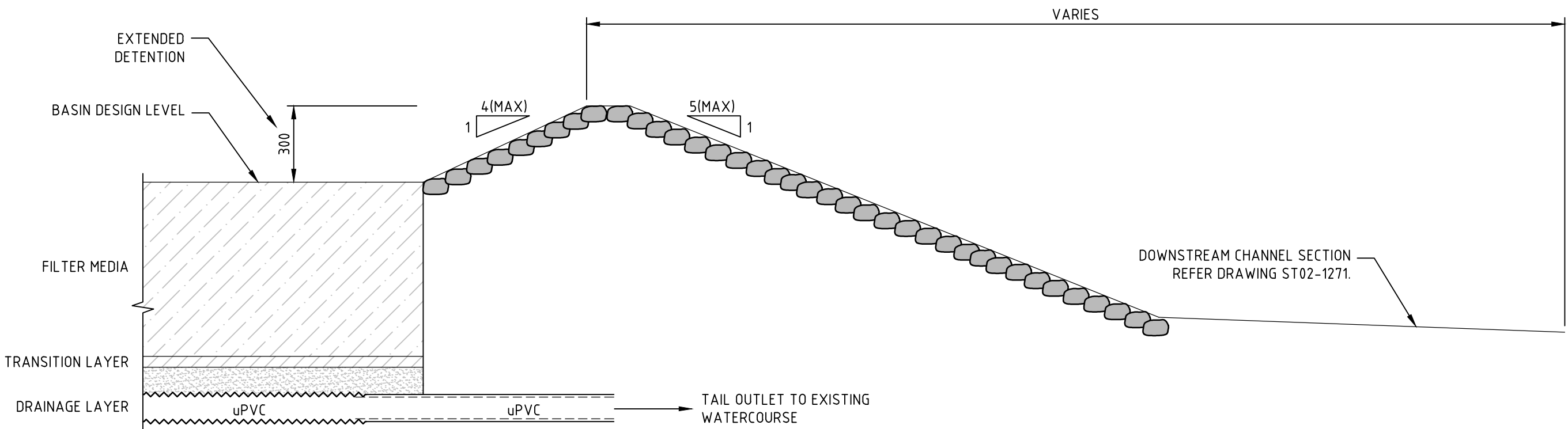
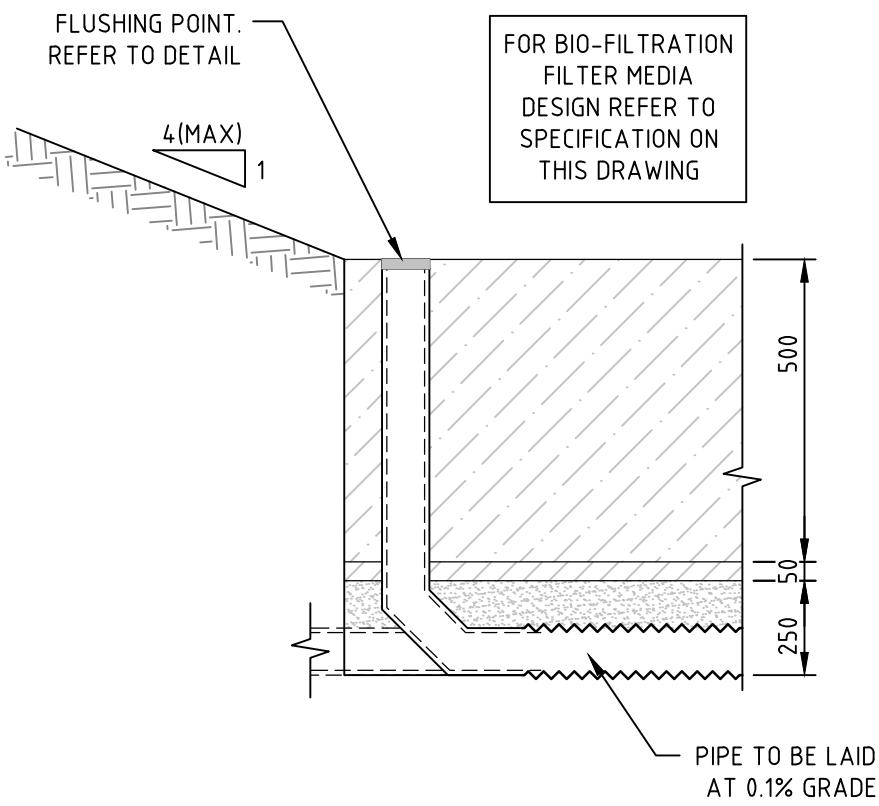
HEADWALL RIP-RAP SCOUR PROTECTION (MINIMUM DIMENSIONS)

OUTLET NUMBER	LENGTH (mm)	WIDTH (mm)	THICKNESS (mm)	D50 (mm)
J01\1	6000	1900	500	300
J02\1	6000	2200	700	400
J03\1	6000	1300	500	300
K01\1	1400	2800	400	200
L08\1	2300	1400	500	300
P01\1	2300	1400	300	100
P02\1	4800	1900	700	400



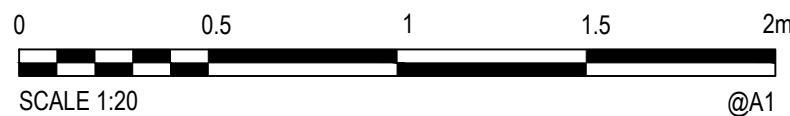
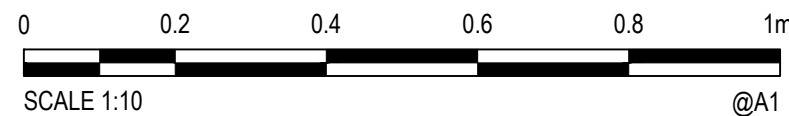
TYPICAL OUTLET HEADWALL SCOUR PROTECTION DETAIL

SCALE 1:50



BIO-FILTRATION BASIN TYPICAL SECTION

SCALE 1:20



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Drawn	BJH	Date	18.01.2016
Checked	DAC	Date	18.01.2016
Designed	DAC	Date	18.01.2016
Verified	CEV	Date	18.01.2016
Approved	SCP	Date	18.01.2016

Client	LENDEASE
Project	CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION
Title	STORMWATER DRAINAGE DETAILS

Status	FOR APPROVAL
Datum	AHD
Scale	AS SHOWN
Size	A1
Drawing Number	89914020-ST02-1421
Revision	4

NOTES:

BIO-FILTRATION BASIN WEIR NOTES:

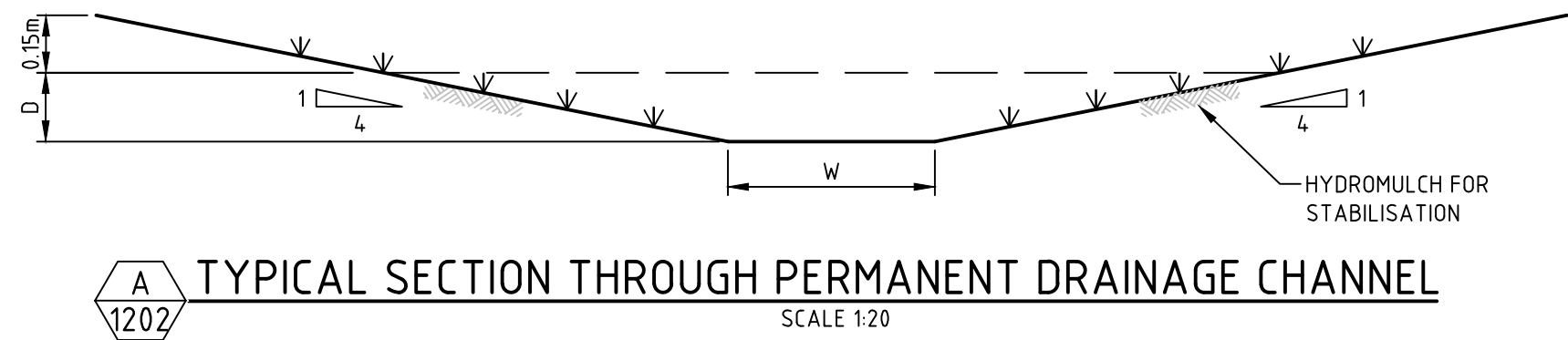
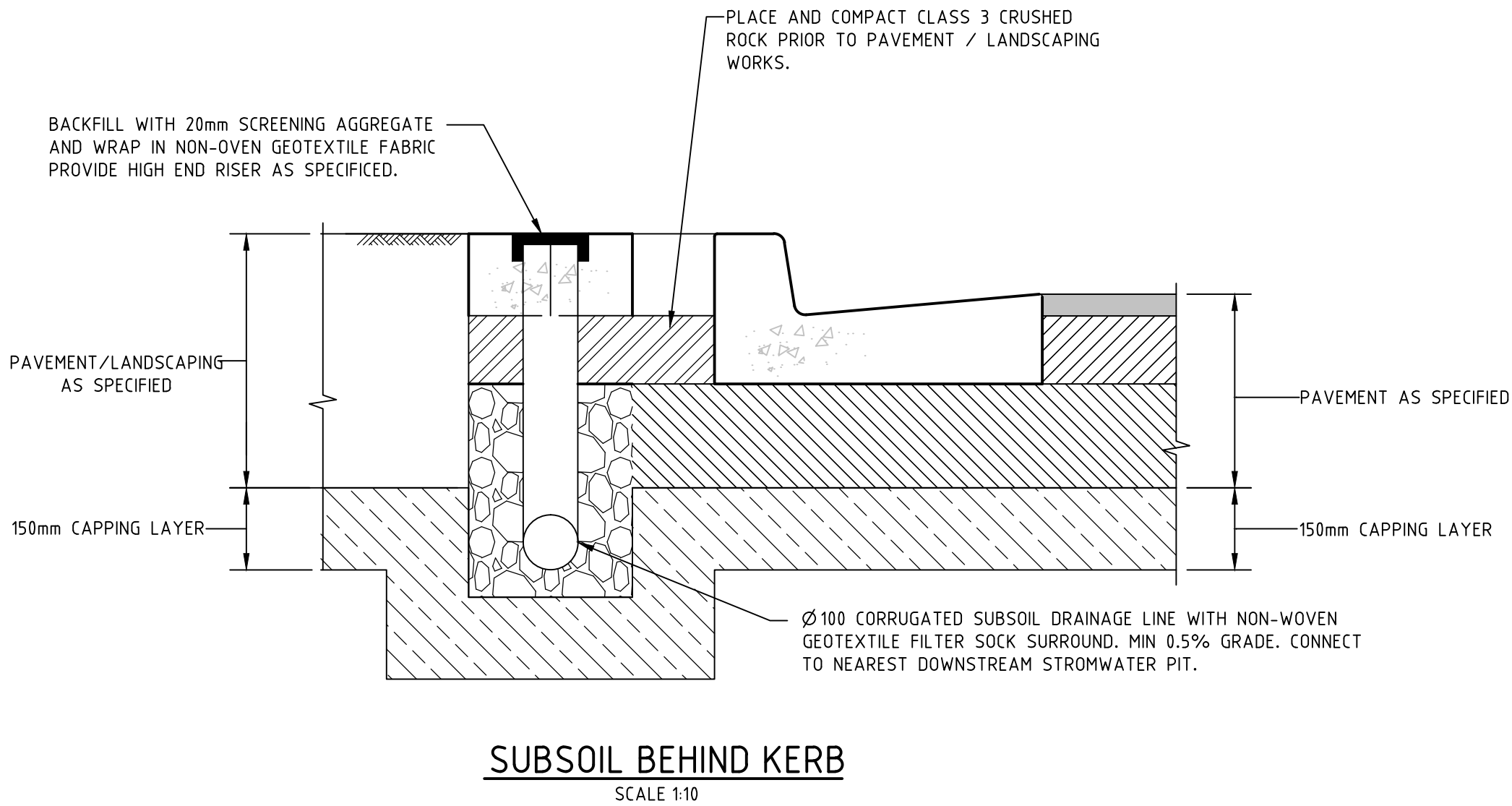
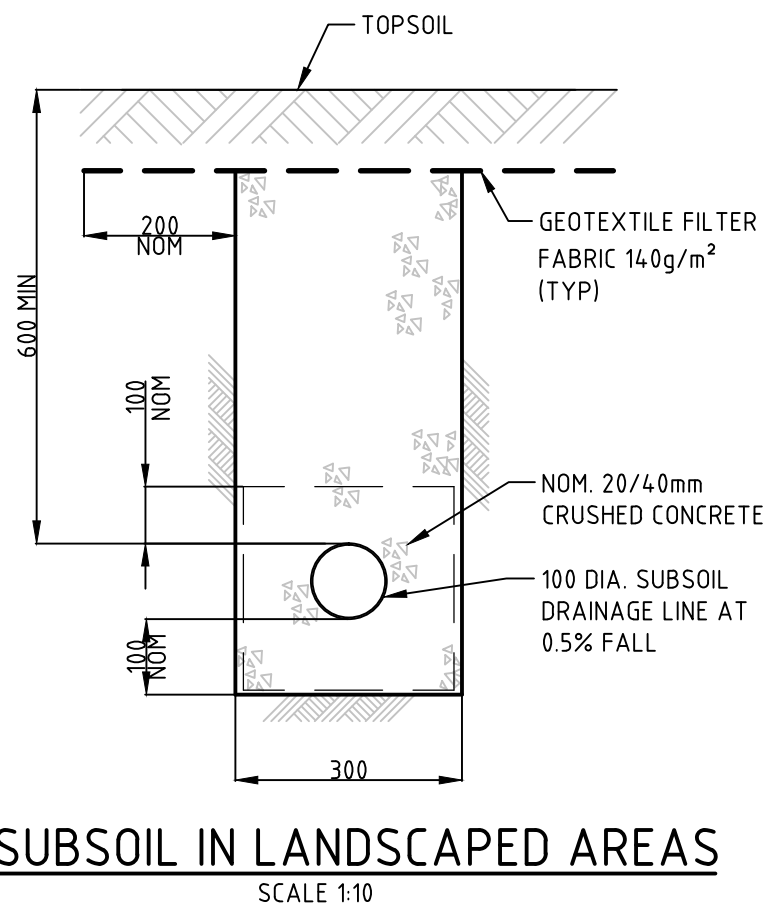
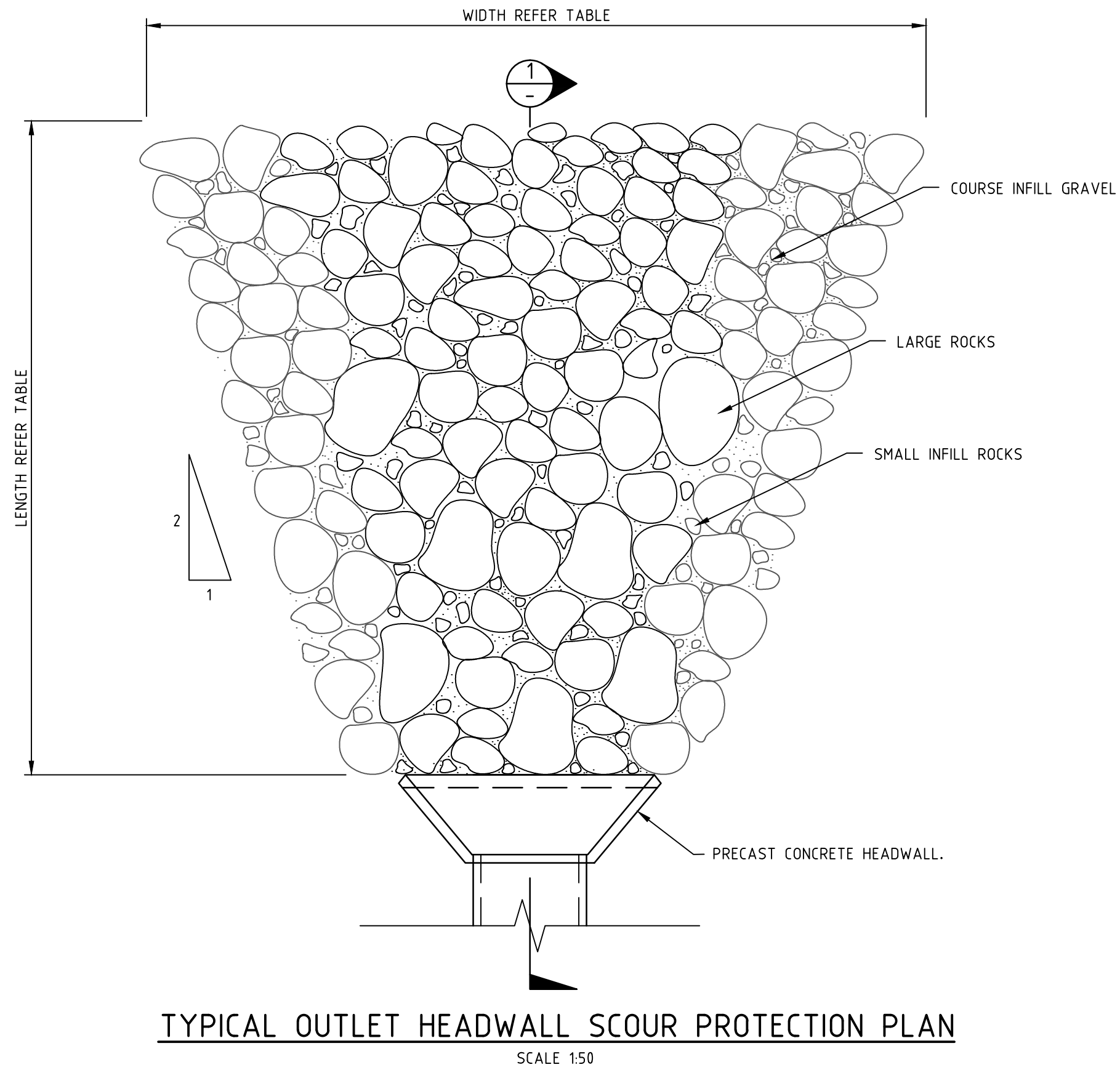
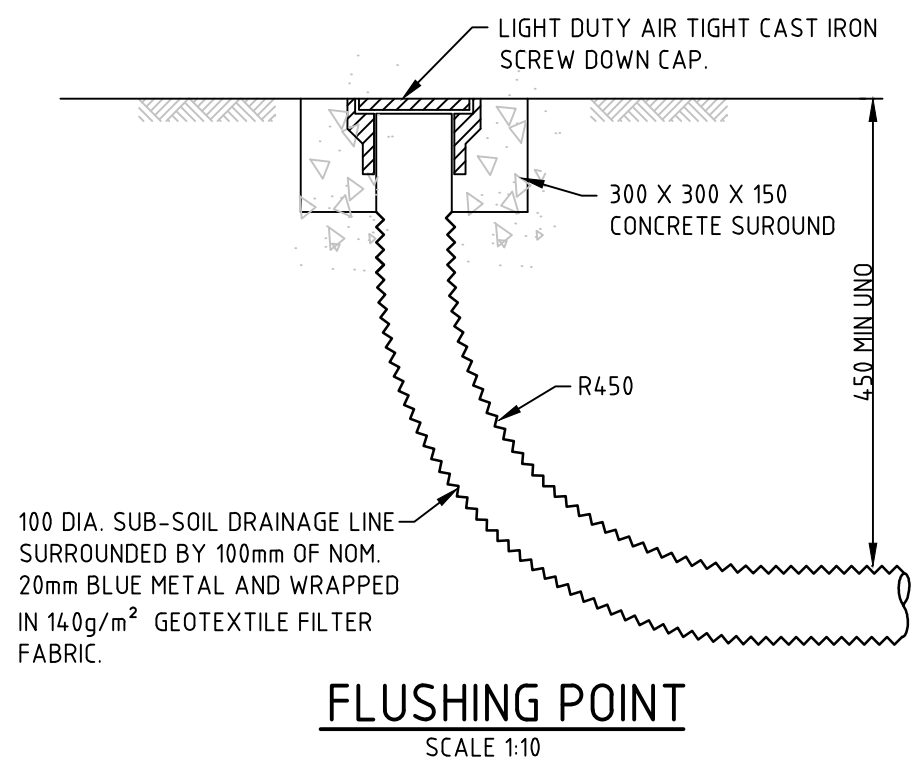
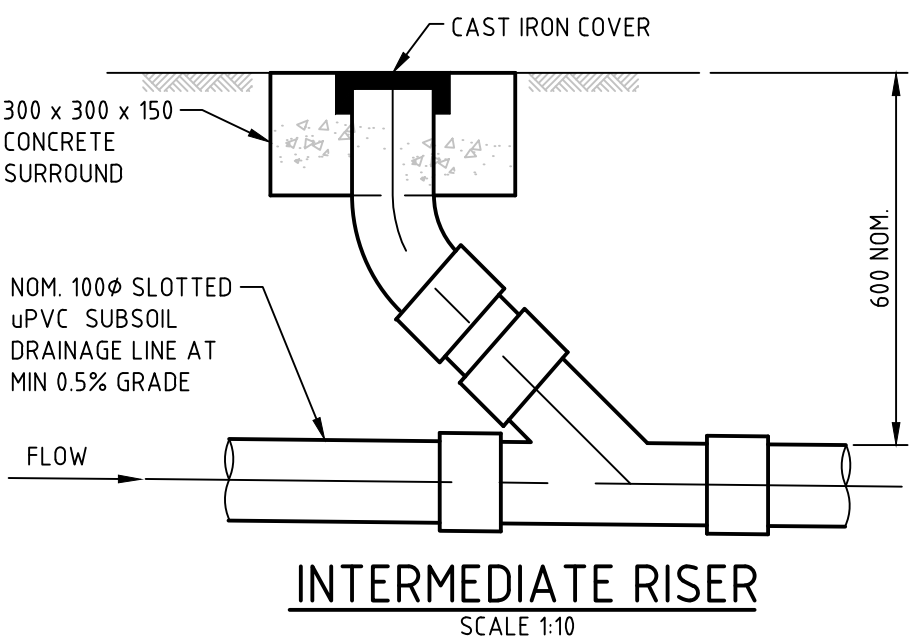
1. GROUTED STONE PITCHING-STONES 75-100mm, 300mm THICK ON 2.5mm HDPE LINER. BUND SUBSOIL COMPACTION TO BE IN ACCORDANCE WITH GEOENVIRO SALINITY AND GEOTECHNICAL ASSESSMENT REFER LANDSCAPE DRAWINGS FOR PLANTING DETAILS.

ROCK ARMOUR NOTES:

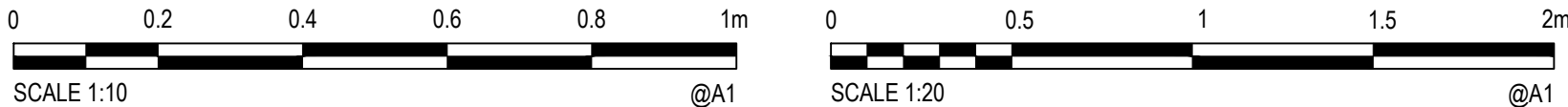
1. 200mm THICK ROCK ARMOUR LAYER. D_{max}=130mm AND D₅₀=50mm NOT MORE THAN 15% BY MASS OF THE TOTAL MATERIAL IS TO BE FINER THAN A NOMINAL DIAMETER OF 25mm.

DIVERSION CHANNEL NOTES:

1. WHERE CHANNEL IS STEEPER THAN 3% INCLUDE D₅₀ = 200mm ROCK BUNDS AT 20m INTERVALS.



PERMANENT DRAINAGE CHANNEL DETAILS					
CHANNEL	GRADE	D DEPTH OF WATER (m)	W BASE WIDTH OF CHANNEL (m)	DESIGN CAPACITY (m³/s)	100 YEAR PEAK FLOW (m³/s)
A	1.5%	0.3	1.75	0.9	-
B	1.3%	0.125	0.5	0.04	-



Rev.	Date	Description	Des.	Verif.	Appd.
4	18.01.2016	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
3	30.10.2015	ISSUED FOR TENDER	DAC	CEV	SCP
2	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
1	21.08.2015	ISSUED FOR CLIENT REVIEW	DAC	SCP	

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Drawn BJH	Date 18.01.2016
Checked DAC	Date 18.01.2016
Designed DAC	Date 18.01.2016
Verified CEV	Date 18.01.2016
Approved SCP	Date 18.01.2016

Client LENDELEASE	Project CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION
Title STORMWATER DRAINAGE DETAILS	

Status FOR APPROVAL	NOT TO BE USED FOR CONSTRUCTION PURPOSES
Datum AHD	Scale AS SHOWN
Drawing Number 89914020-ST02-1422	Size A1
Revision 4	

DATE PLOTTED: 19 January, 2016 12:27 PM BY: BRITTANY HOLZHEIMER

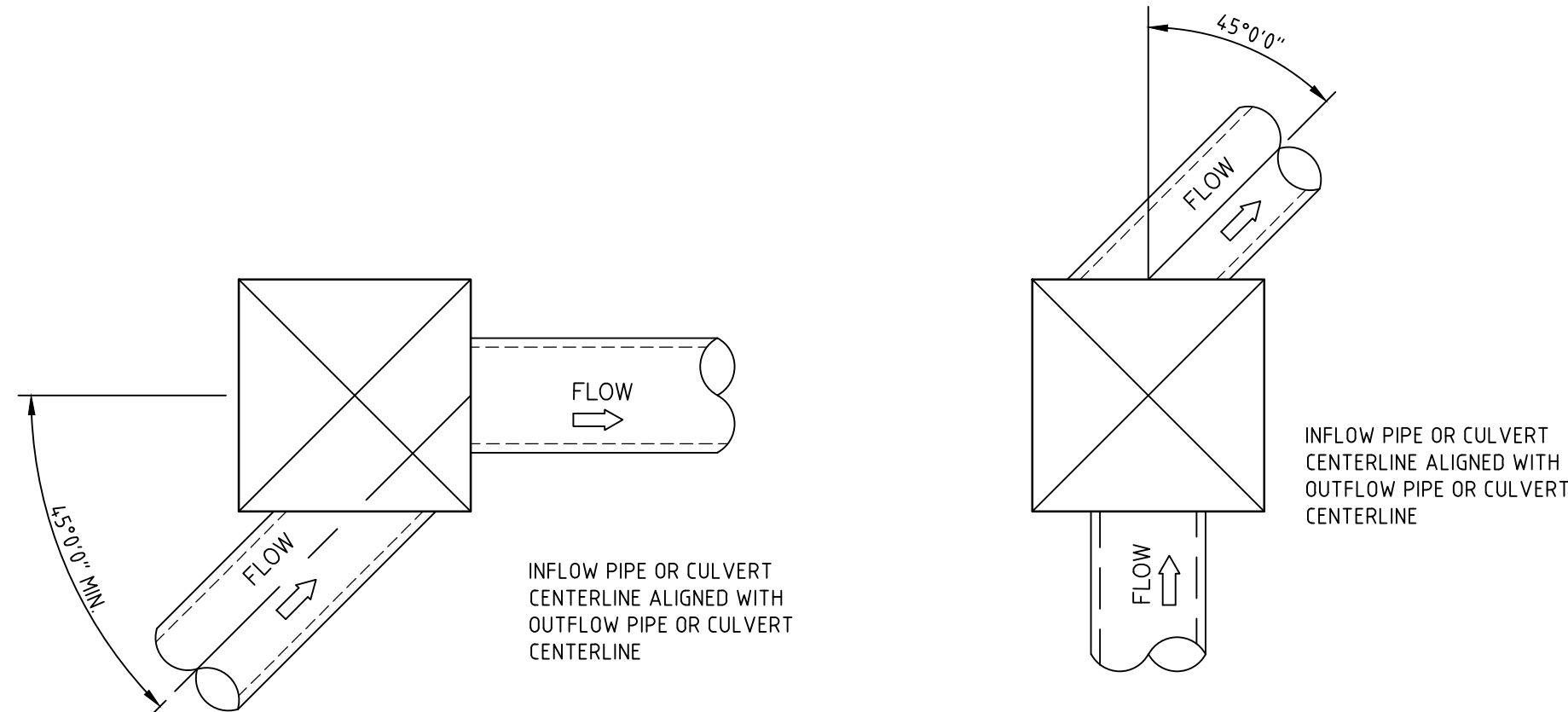
IMPORTANT NOTE: PIT STANDARD DETAILS

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 STANDARD DRAWINGS BELOW.

NON PCC STORMWATER PIT REINFORCEMENT SCHEDULE						
PIT DIMENSIONS(mm)		WALL DIMENSIONS(mm)		VERTICAL REINFORCEMENT	HORIZONTAL REINFORCEMENT	BASE REINFORCEMENT
LENGTH 'L'	DEPTH 'H'	BASE THICKNESS 'D'	WALL THICKNESS 'W'			
1200*W<3300	2000*H<3900	200	200	N12-200 E.F.	N12-200 E.F.	N12-200 E.F.
3301*W<4000	3901*H<4600	230	230	N16-250 E.F.	N16-250 E.F.	N16-250 E.F.

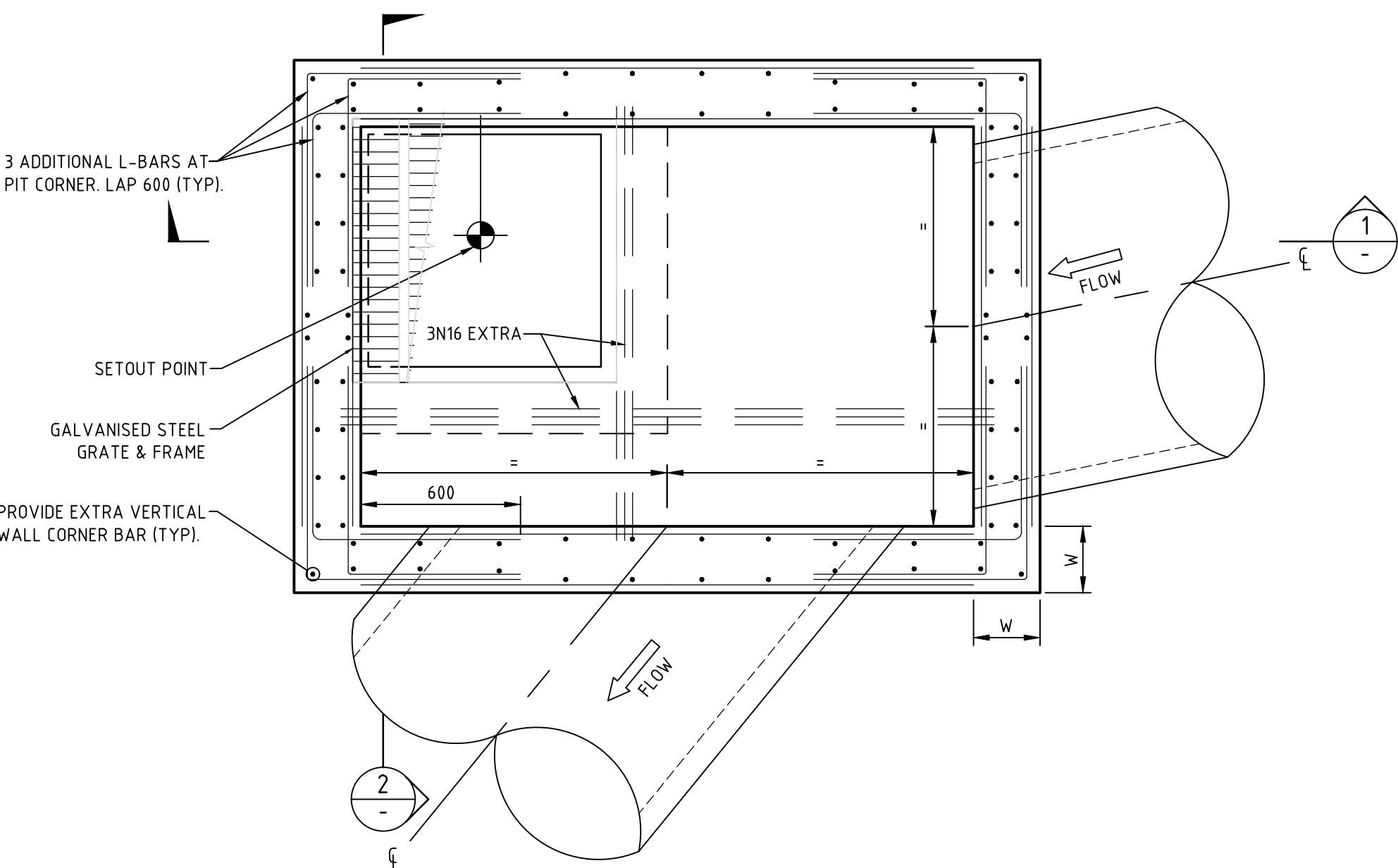
NOTE: PIT REINFORCEMENT TO BE SELECTED USING MAXIMUM PIT DIMENSION



DEFLECTION ANGLE GREATER THAN 45° (SIDE OF PIT)

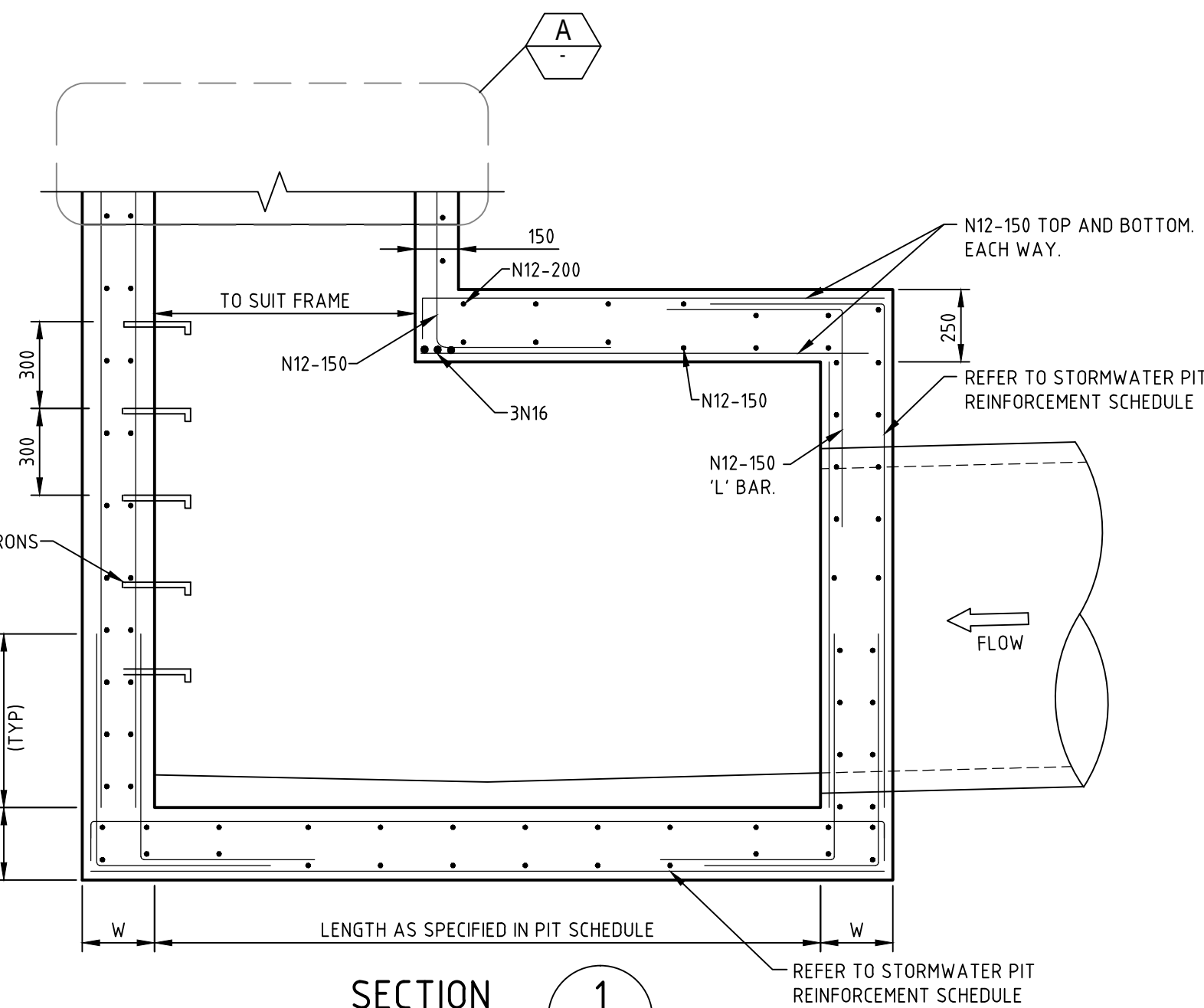
PIT ALIGNMENT REQUIREMENTS

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.



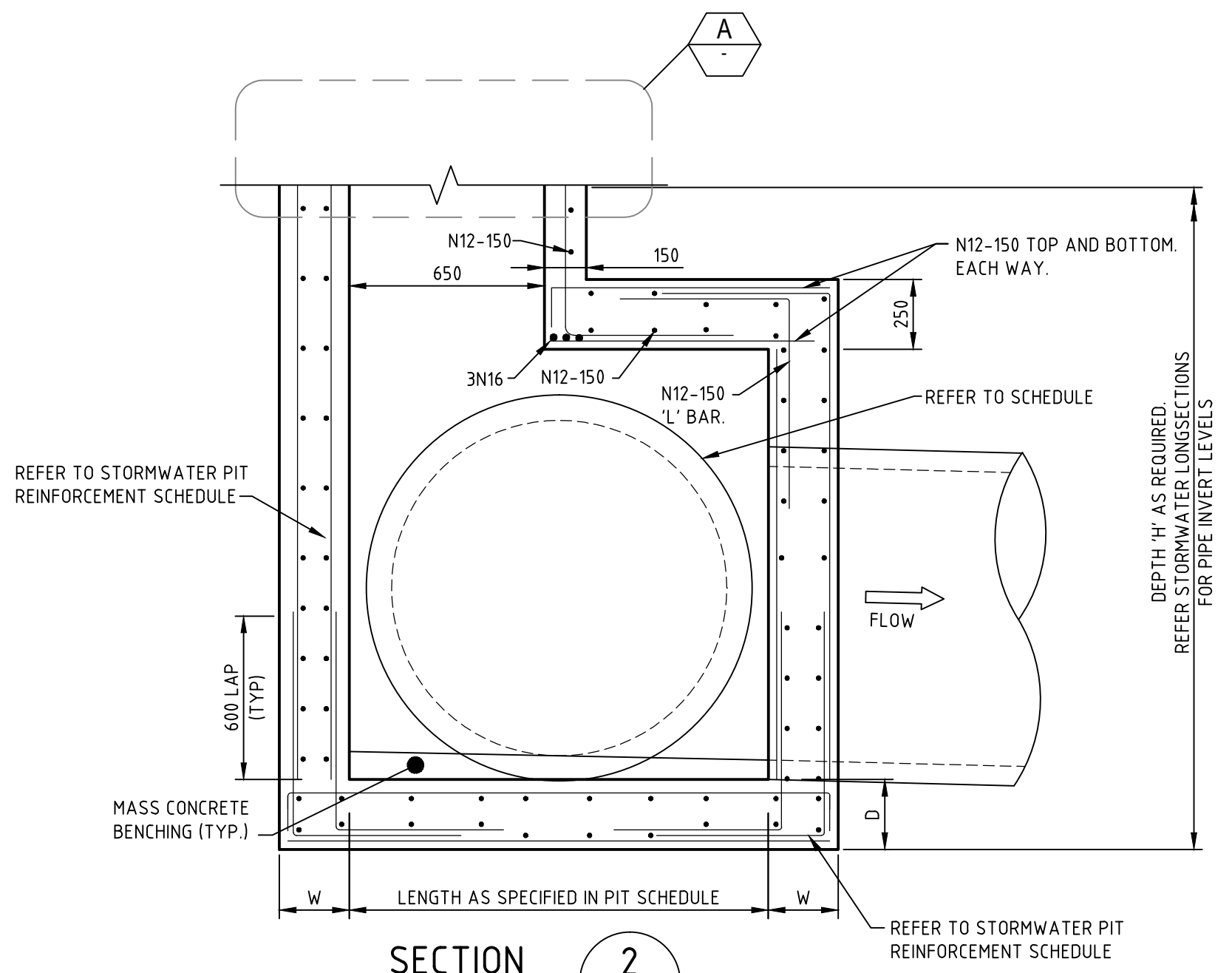
NON PCC STANDARD STORMWATER PIT

SCALE 1:20



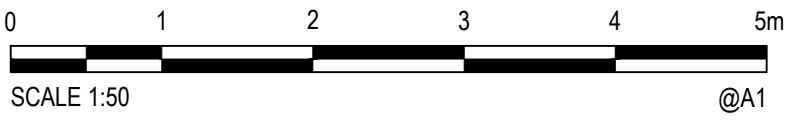
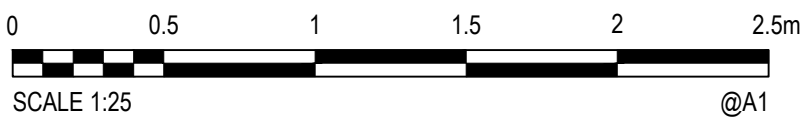
SECTION 1

SCALE 1:20



SECTION 2

SCALE 1:20



XREFs: Xref-88914020-Client-Logos, Xref-88914020-Stormwater-Details
CAD File: N:\Paramatna\Projects\88914020-ST02-1423-DWG(4).dwg

Rev.	Date	Description	Des.	Verif.	Appd.
4	18.01.2016	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
3	30.10.2015	ISSUED FOR TENDER	DAC	CEV	SCP
2	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
1	21.08.2015	ISSUED FOR CLIENT REVIEW	DAC	SCP	

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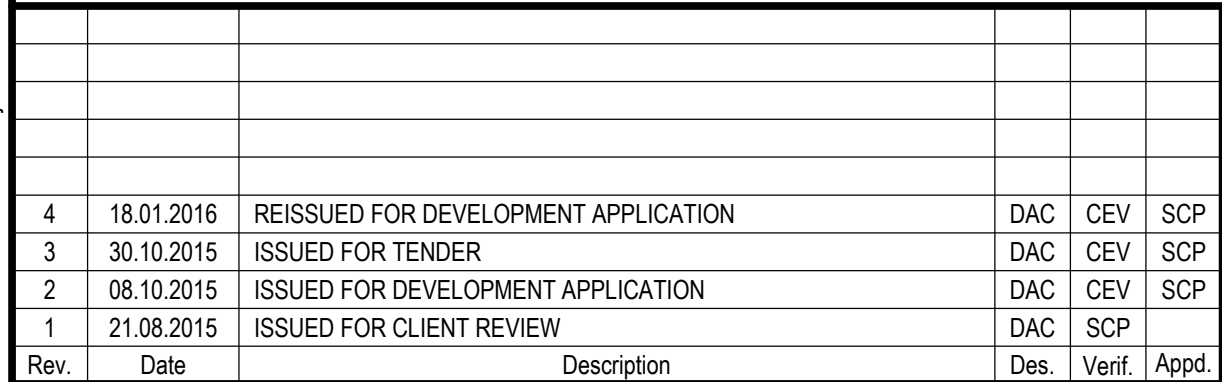
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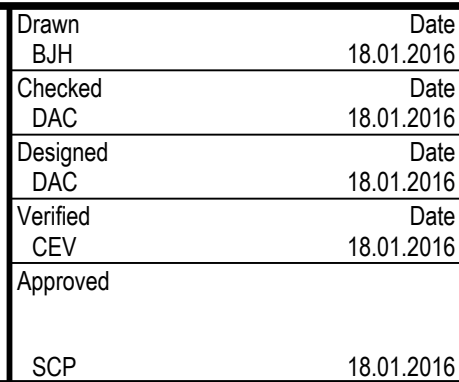
Drawn BJH	Date 18.01.2016
Checked DAC	Date 18.01.2016
Designed DAC	Date 18.01.2016
Verified CEV	Date 18.01.2016
Approved SCP	Date 18.01.2016

Client LENLEASE	Project CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION
Title STORMWATER DRAINAGE DETAILS	

Status FOR APPROVAL	NOT TO BE USED FOR CONSTRUCTION PURPOSES
Datum AHD	Scale AS SHOWN
Drawing Number 89914020-ST02-1423	Size A1
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Project CENTRAL PRECINCT
STAGE 2 - CIVIL WORKS
DEVELOPMENT APPLICATION

STORMWATER DRAINAGE LONGITUDINAL SECTIONS
SHEET 1

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

Date AHD	Scale AS SHOWN	Size A1
Drawing Number 89914020-ST02-1461		Revision 4



4	18.01.2016	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
3	30.10.2015	ISSUED FOR TENDER	DAC	CEV	SCP
2	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
1	21.08.2015	ISSUED FOR CLIENT REVIEW	DAC	SCP	
Rev.	Date	Description	Des	Verif.	Appd.

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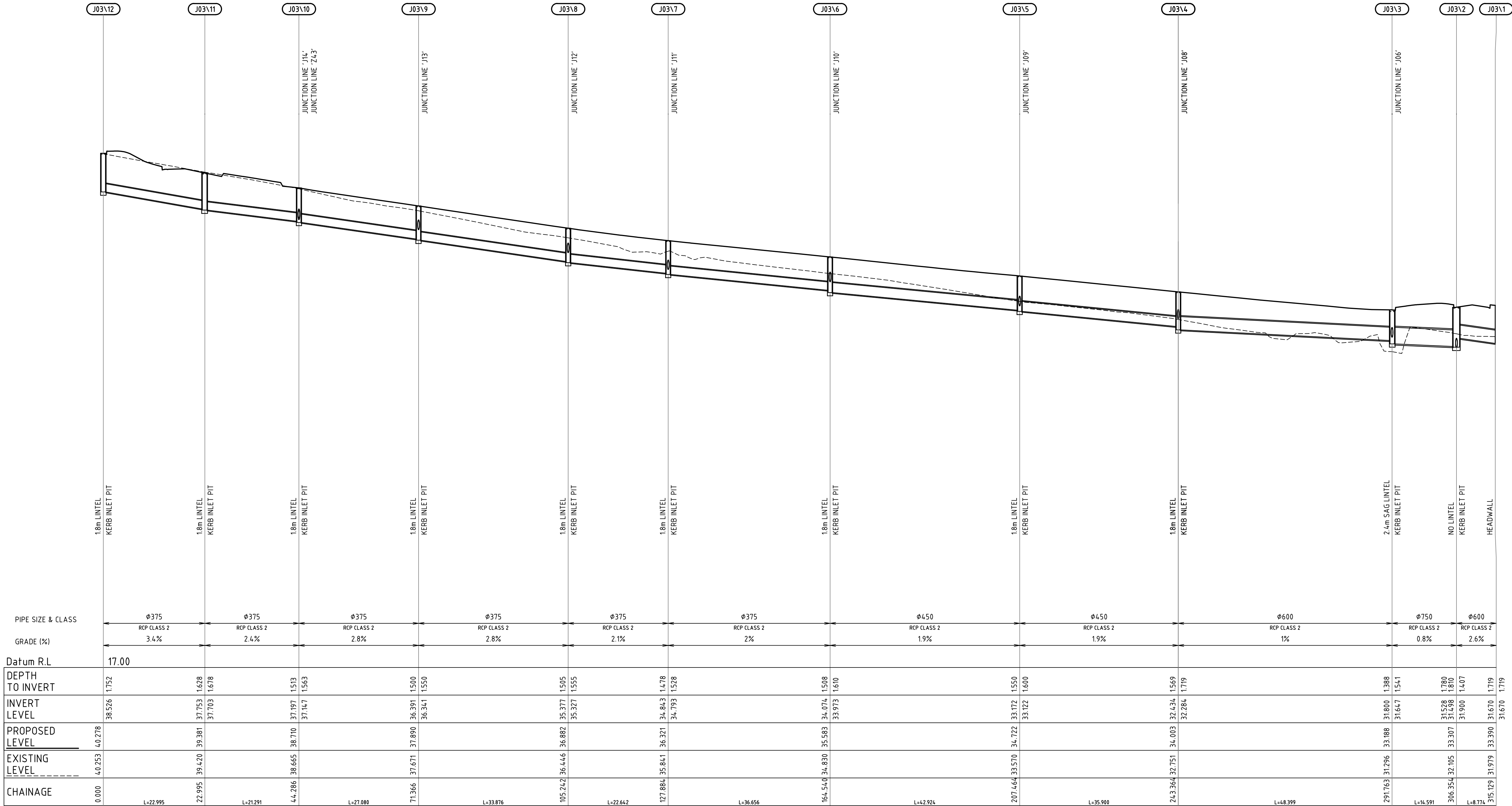
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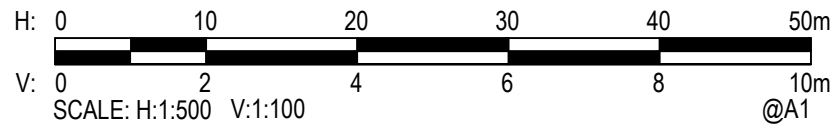
Drawn BJH	Date 18.01.2016
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Verified CEV	Date 18.01.2016
Approved	
SCP	18.01.2016

Client	LANDLEASE
Project	CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION
Title	STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 2

Status			
FOR APPROVAL			
NOT TO BE USED FOR CONSTRUCTION PURPOSES			
Datum		Scale	Size
AHD		AS SHOWN	A1
Drawing Number			Revision
89914020-ST02-1462			4



LINE J03



4	18.01.2016	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP	
3	30.10.2015	ISSUED FOR TENDER	DAC	CEV	SCP	
2	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP	
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Rev.	Date	Description	Des.	Verif.	Appd.	



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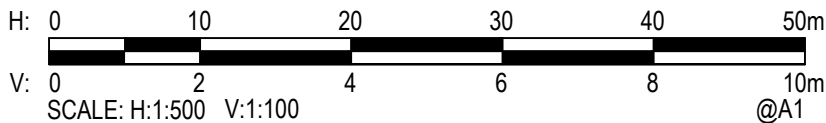
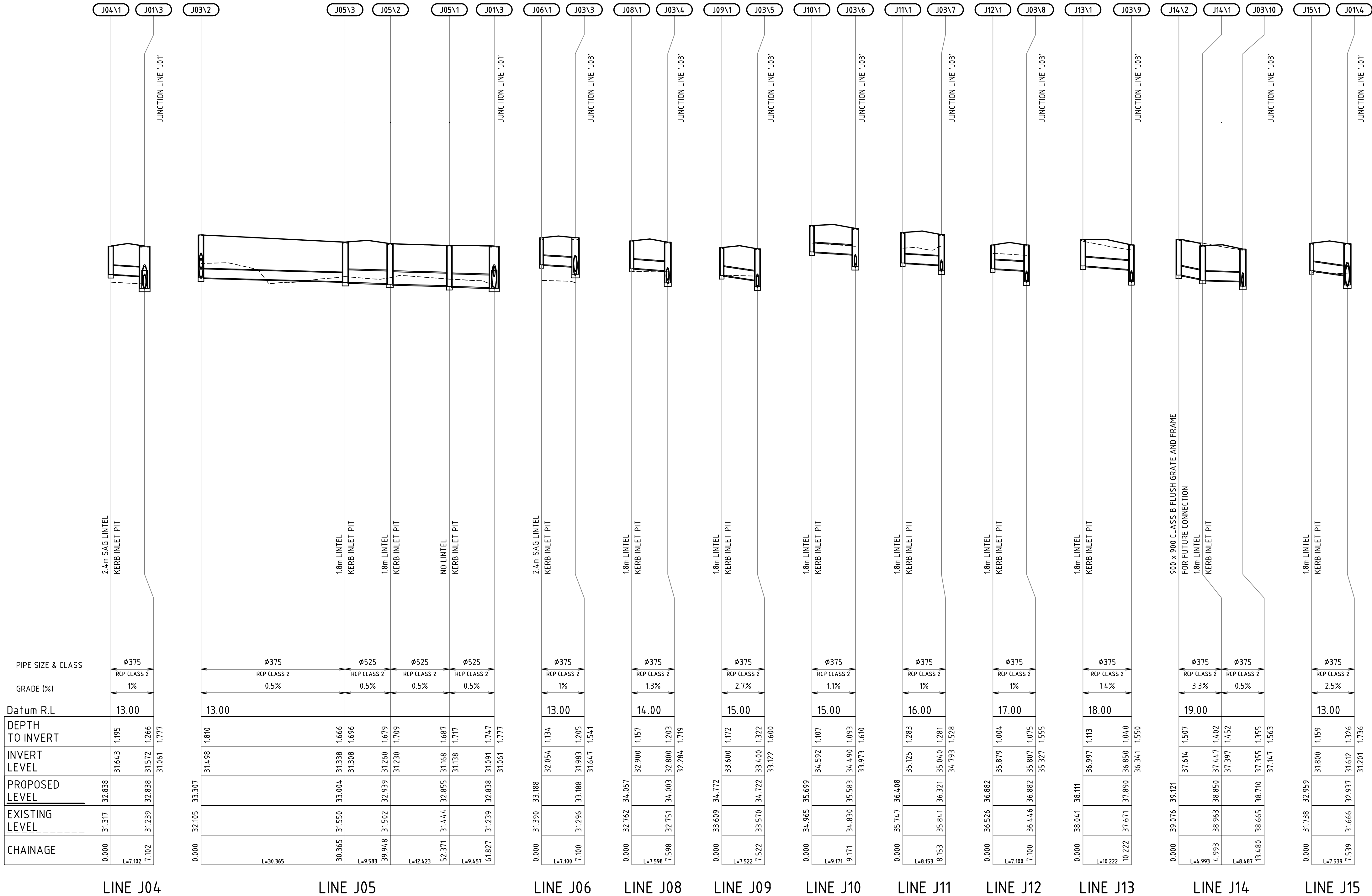
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Checked	DAC	Date	18.01.2016
Designed	DAC	Date	18.01.2016
Verified	CEV	Date	18.01.2016
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Client	LENLEASE
Project	CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION
Title	STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 3

Status	FOR APPROVAL
Datum	AHD
Scale	AS SHOWN
Size	A1
Drawing Number	89914020-ST02-1463
Revision	4



Rev.	Date	Description	Des.	Verif.	Appd.
4	18.01.2016	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
3	30.10.2015	ISSUED FOR TENDER	DAC	CEV	SCP
2	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
1	21.08.2015	ISSUED FOR CLIENT REVIEW	DAC	SCP	

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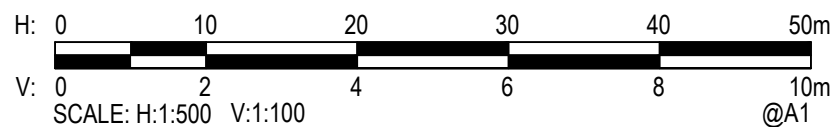
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Drawn	Date	Client
BJH	18.01.2016	LENLEASE
Checked	Date	Project
DAC	18.01.2016	CENTRAL PRECINCT
Designed	Date	STAGE 2 - CIVIL WORKS
DAC	18.01.2016	DEVELOPMENT APPLICATION
Verified	Date	Title
CEV	18.01.2016	STORMWATER DRAINAGE LONGITUDINAL SECTIONS
Approved		SHEET 4
SCP	18.01.2016	

Project			
CENTRAL PRECINCT			
STAGE 2 - CIVIL WORKS			
DEVELOPMENT APPLICATION			
Title			
STORMWATER DRAINAGE LONGITUDINAL SECTIONS			
SHEET 4			

Status			
FOR APPROVAL			
NOT TO BE USED FOR CONSTRUCTION PURPOSES			
Datum	Scale	Size	Revision
AHD	AS SHOWN	A1	
Drawing Number			Revision
89914020-ST02-1464			4

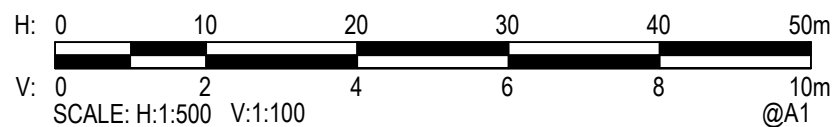


4	18.01.2016	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP	
3	30.10.2015	ISSUED FOR TENDER	DAC	CEV	SCP	
2	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP	
1	21.08.2015	ISSUED FOR CLIENT REVIEW	DAC	SCP		
Rev.	Date	Description	Des	Verif.	Appd.	

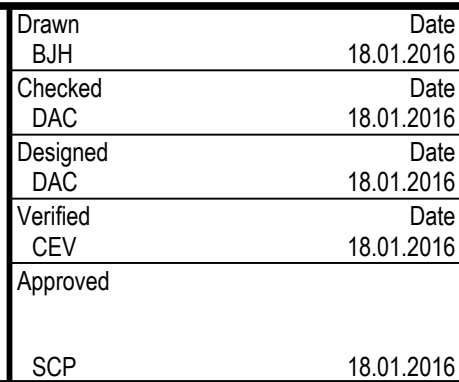
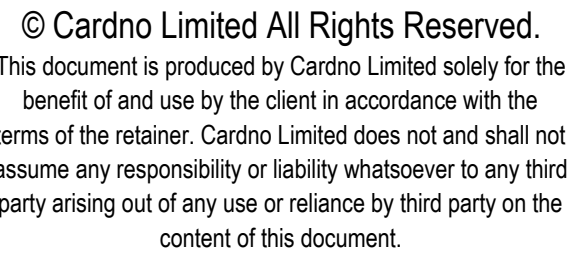
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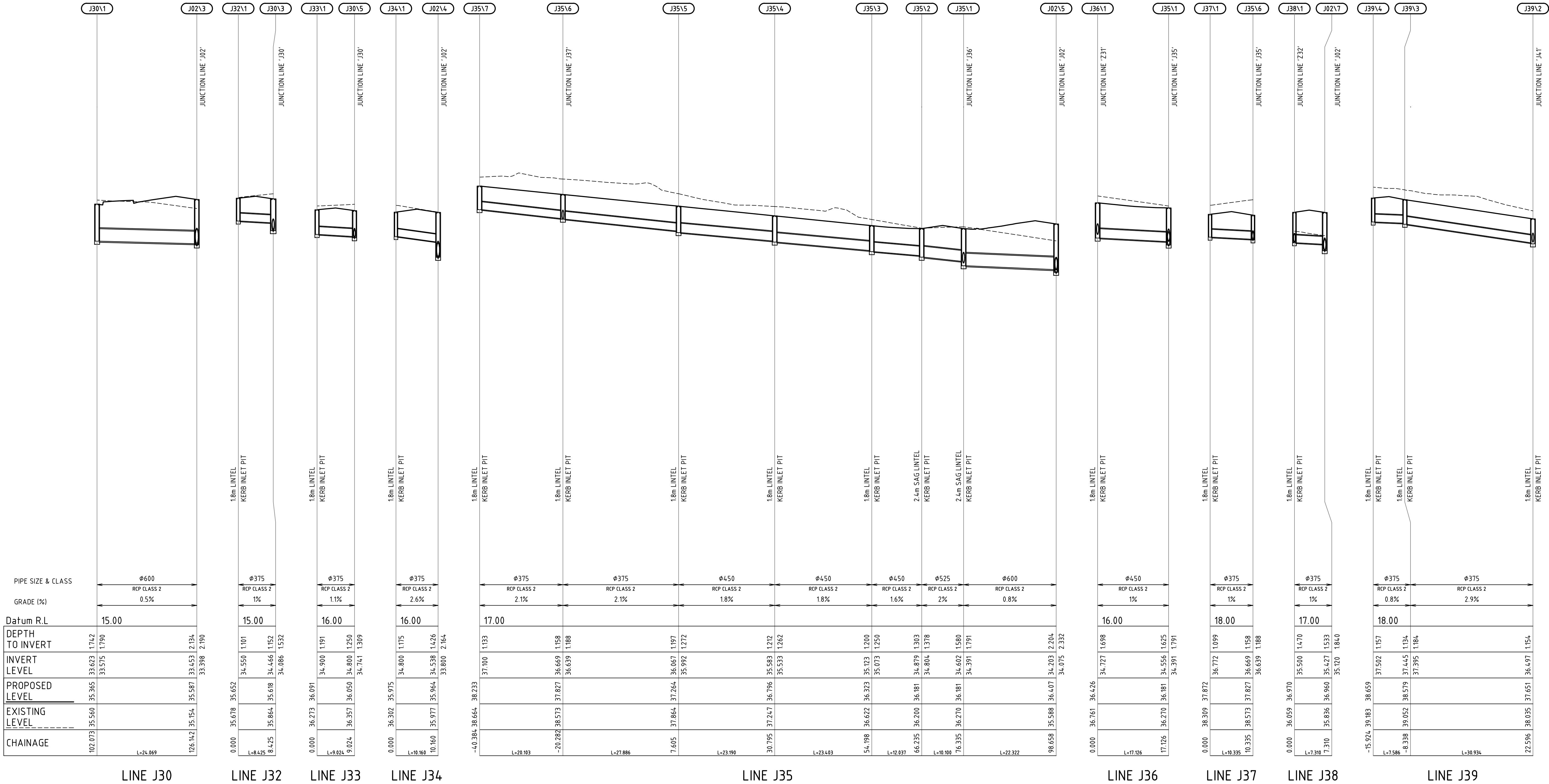
Drawn BJH	Date 18.01.2016	Client LENLEASE			
Checked DAC	Date 18.01.2016	Project CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION		Status FOR APPROVAL	
Designed DAC	Date 18.01.2016			NOT TO BE USED FOR CONSTRUCTION PURPOSES	
Verified CEV	Date 18.01.2016			Datum AHD	
Approved	Date 18.01.2016			Scale AS SHOWN	
Title		Revision		A1	
SCP		STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 5		Drawing Number 89914020-ST02-1465	
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4	18.01.2016	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP	
3	30.10.2015	ISSUED FOR TENDER	DAC	CEV	SCP	
2	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP	
1	21.08.2015	ISSUED FOR CLIENT REVIEW	DAC	SCP		
Rev.	Date	Description	Des	Verif.	Appd.	



Client	LENDLEASE			
Project	CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION		Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES	
Title	STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 6		Datum AHD	Scale AS SHOWN
			Drawing Number 89914020-ST02-1466	Size A1 Revision 4



LINE J30

LINE J32

LINE J33

LINE J34

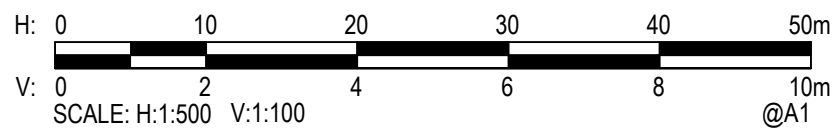
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LINE J36

LINE J37

LINE J38

LINE J39



Rev.	Date	Description	Des.	Verif.	Appd.
4	18.01.2016	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
3	30.10.2015	ISSUED FOR TENDER	DAC	CEV	SCP
2	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
1	21.08.2015	ISSUED FOR CLIENT REVIEW	DAC	SCP	

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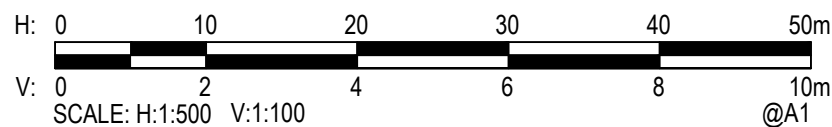
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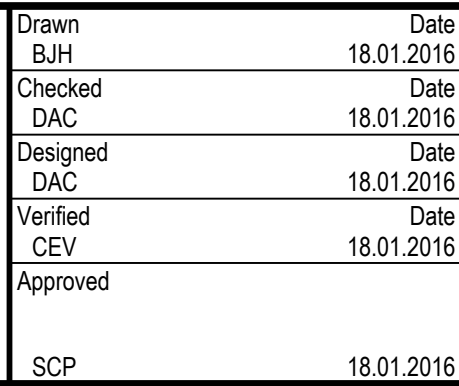
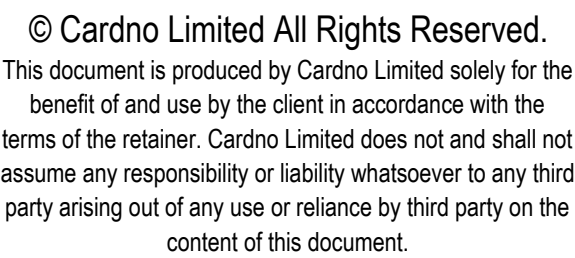
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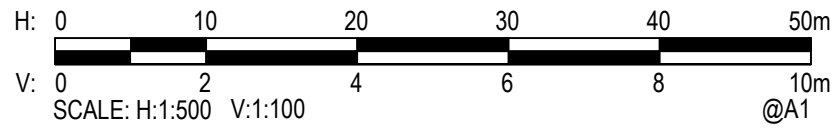
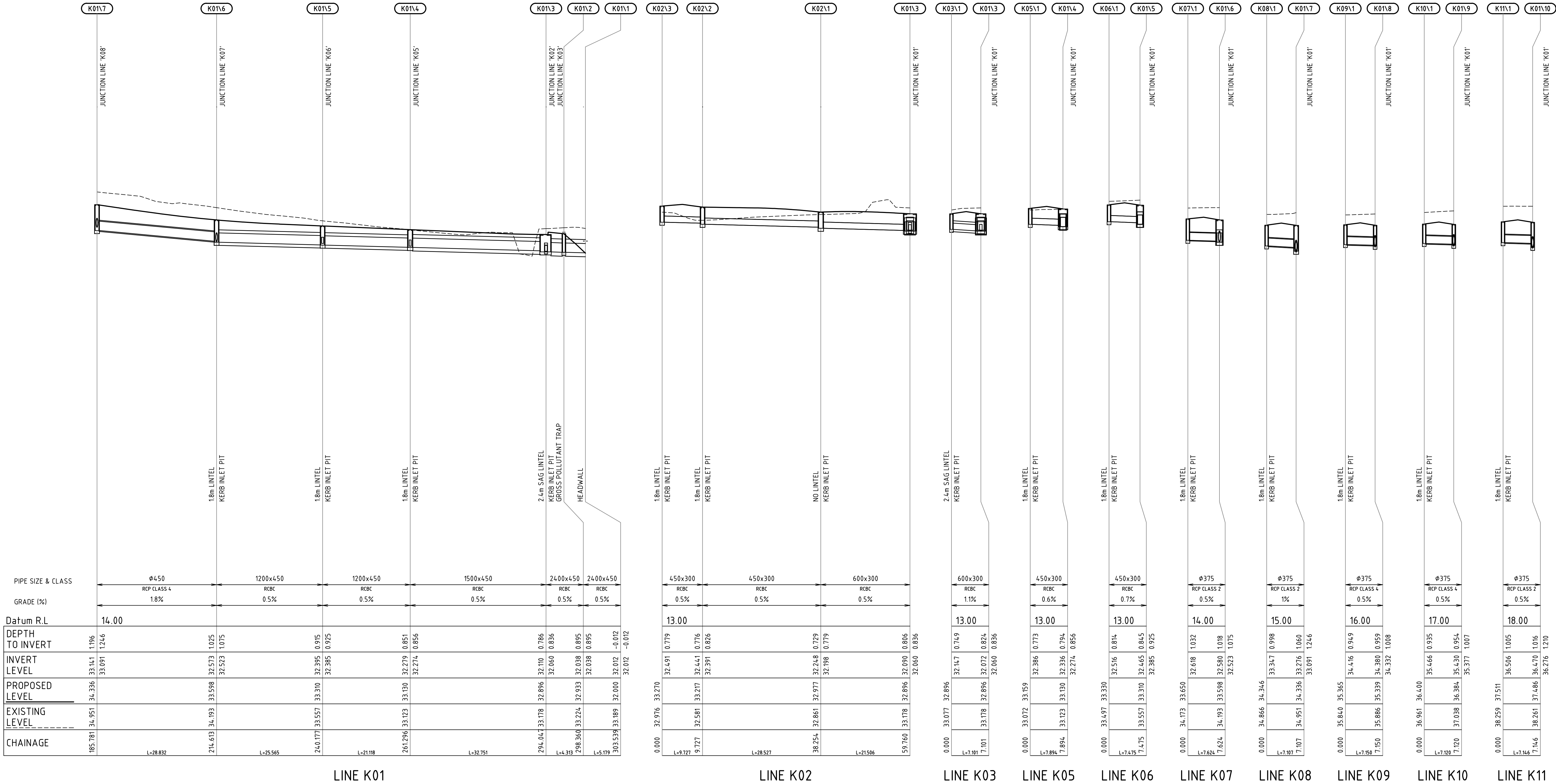
Drawn BJH	Date 18.01.2016	Client LENLEASE
Checked DAC	Date 18.01.2016	Project CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION
Designed DAC	Date 18.01.2016	Title STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 7
Verified CEV	Date 18.01.2016	Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES
Approved SCP	Date 18.01.2016	Datum AHD
		Scale AS SHOWN
		Size A1
		Drawing Number 89914020-ST02-1467
		Revision 4



4	18.01.2016	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
3	30.10.2015	ISSUED FOR TENDER	DAC	CEV	SCP
2	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
1	21.08.2015	ISSUED FOR CLIENT REVIEW	DAC	SCP	
Rev.	Date	Description	Des.	Verif.	Appd.



Client	LENDLEASE			
Project	CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION		Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES	
Title	STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 8		Datum AHD Scale AS SHOWN Drawing Number 89914020-ST02-1468	Size A1 Revision 4



Rev.	Date	Description	Des.	Verif.	Appd.
4	18.01.2016	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
3	30.10.2015	ISSUED FOR TENDER	DAC	CEV	SCP
2	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
1	21.08.2015	ISSUED FOR CLIENT REVIEW	DAC	SCP	

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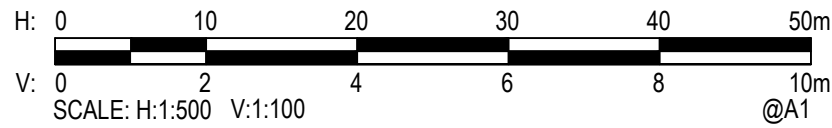
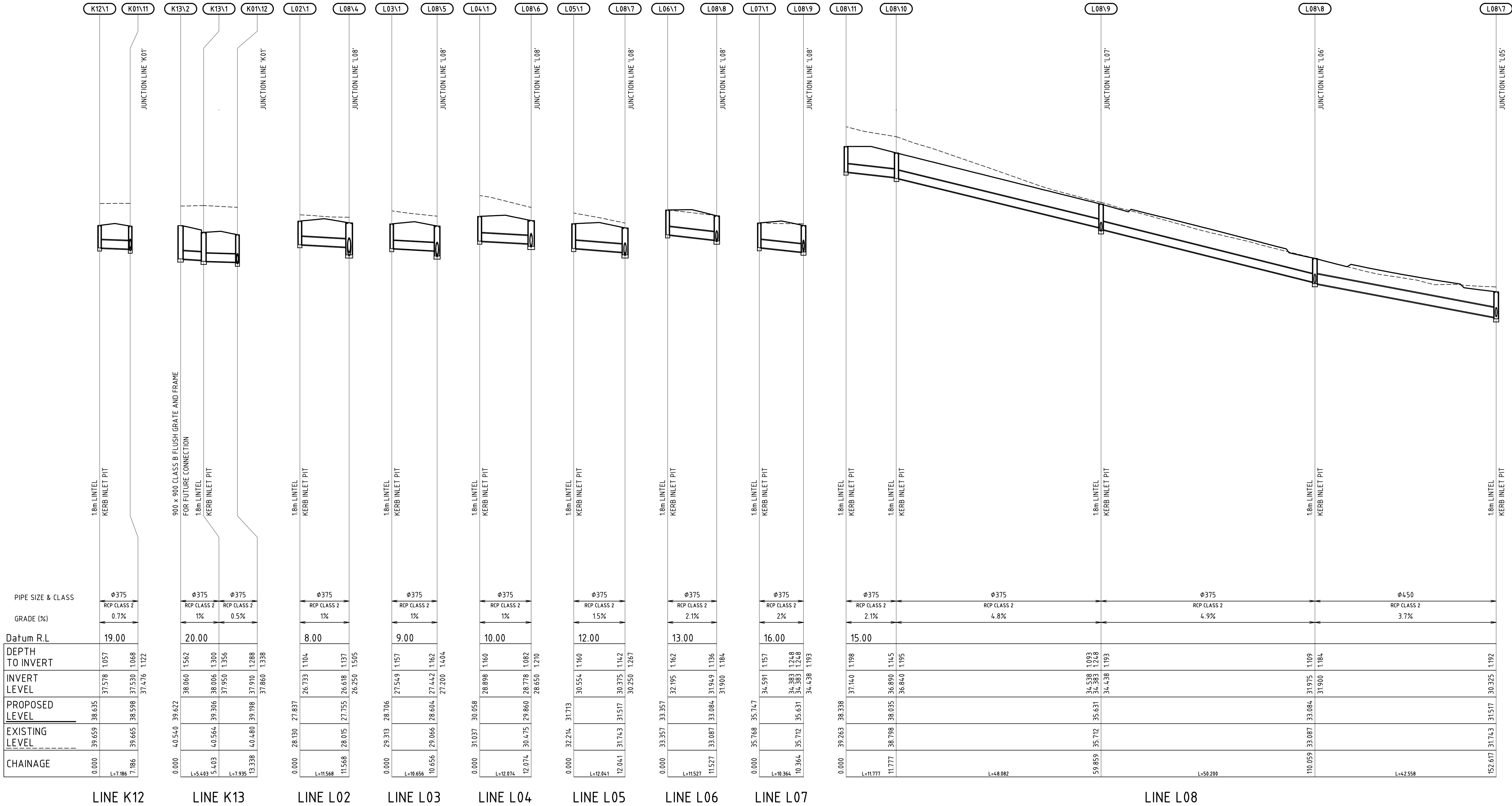
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Drawn BJH	Date 18.01.2016
Checked DAC	Date 18.01.2016
Designed DAC	Date 18.01.2016
Verified CEV	Date 18.01.2016
Approved SCP	Date 18.01.2016

Client LENLEASE	Project CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION
Title STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 9	

Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES	Datum AHD	Scale AS SHOWN	Size A1
Drawing Number 89914020-ST02-1469	Revision 4		

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DATE PLOTTED: 19 January 2016 12:28 PM BY: BRITTANY HOLZHEIMER



Rev.	Date	Description	Des.	Verif.	Appd.
4	18.01.2016	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
3	30.10.2015	ISSUED FOR TENDER	DAC	CEV	SCP
2	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
1	21.08.2015	ISSUED FOR CLIENT REVIEW	DAC	SCP	

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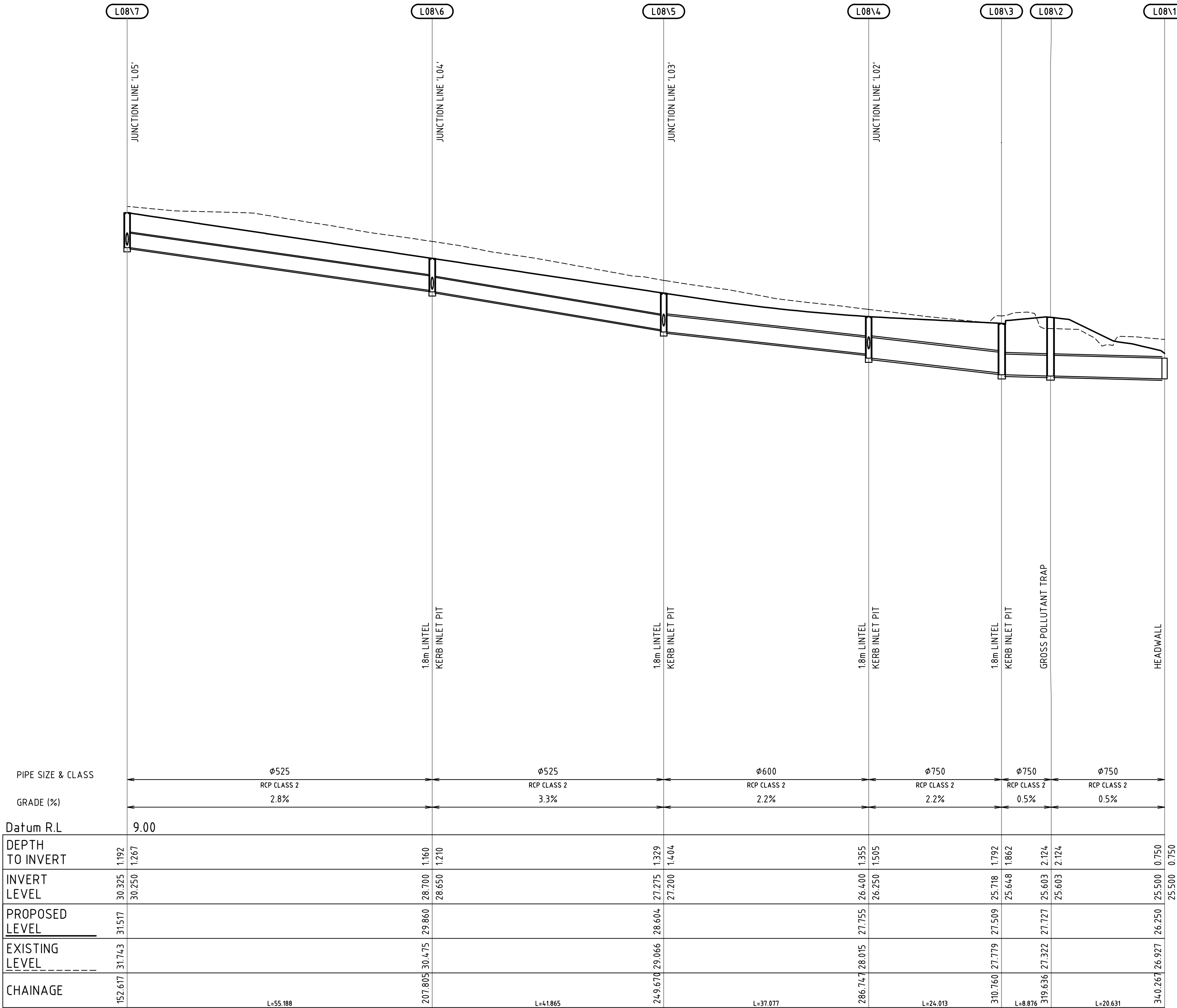
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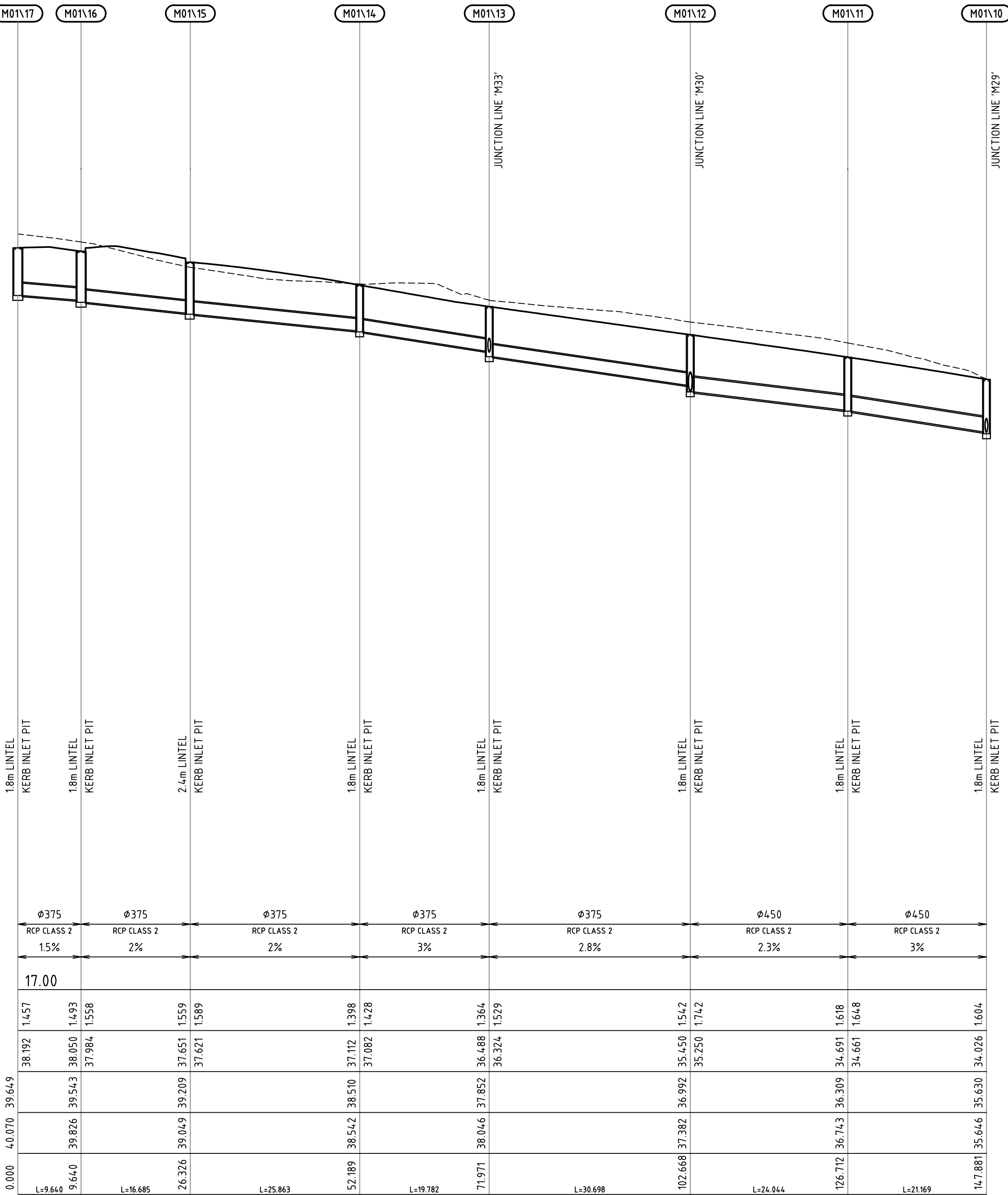
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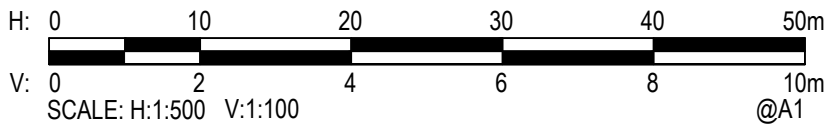
Drawn BJH	Date 18.01.2016	Client LENLEASE
Checked DAC	Date 18.01.2016	Project CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION
Designed DAC	Date 18.01.2016	Title STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 10
Verified CEV	Date 18.01.2016	Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES
Approved SCP	Date 18.01.2016	Datum AHD
		Scale AS SHOWN
		Size A1
		Drawing Number 89914020-ST02-1470
		Revision 4



LINE L08



LINE M01



Rev.	Date	Description	Des.	Verif.	Appd.
4	18.01.2016	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
3	30.10.2015	ISSUED FOR TENDER	DAC	CEV	SCP
2	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
1	21.08.2015	ISSUED FOR CLIENT REVIEW	DAC	SCP	



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Drawn BJH	Date 18.01.2016
Checked DAC	Date 18.01.2016
Designed DAC	Date 18.01.2016
Verified CEV	Date 18.01.2016
Approved SCP	Date 18.01.2016

Client LENLEASE	Project CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION
Title STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 11	

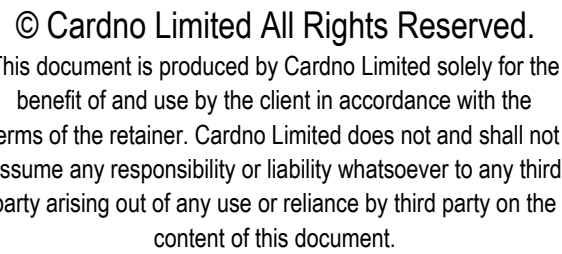
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Datum AHD	Scale AS SHOWN
Drawing Number 89914020-ST02-1471	Revision 4



LINE M03



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3	30.10.2015	ISSUED FOR TENDER	DAC	CEV	SCP
2	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
1	21.08.2015	ISSUED FOR CLIENT REVIEW	DAC	SCP	
Rev.	Date	Description	Des.	Verif.	Appd.



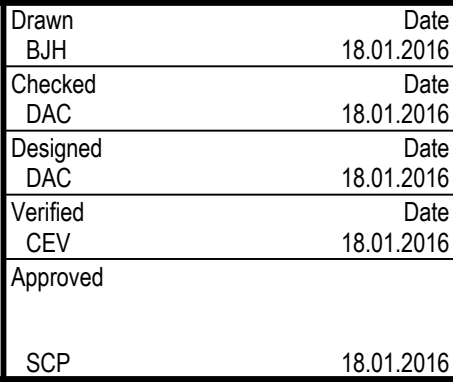
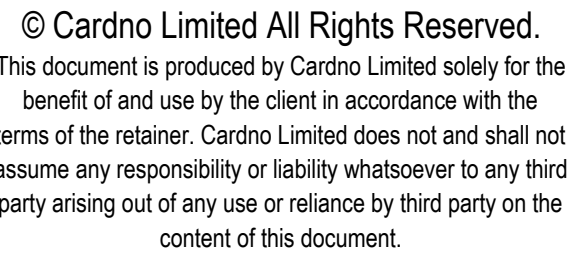
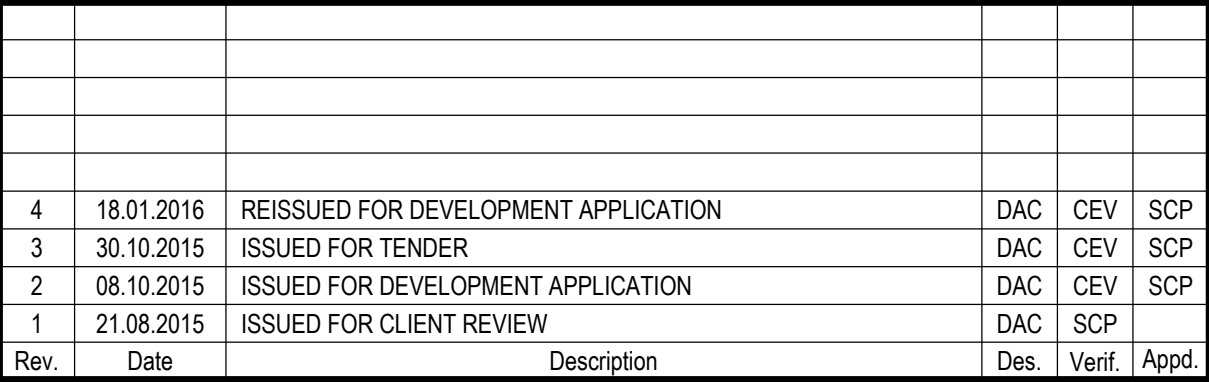
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Drawn	Date
BJH	18.01.2016
Checked	Date
DAC	18.01.2016
Designed	Date
DAC	18.01.2016
Verified	Date
CEV	18.01.2016
Approved	
SCP	18.01.2016

Client	LENDELEASE
Project	CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION
Title	STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 12

Status			
FOR APPROVAL			
NOT TO BE USED FOR CONSTRUCTION PURPOSES			
Date	Date	Scale	Size
AHD		AS SHOWN	A1
Drawing Number			Revision
89914020-ST02-1472			4

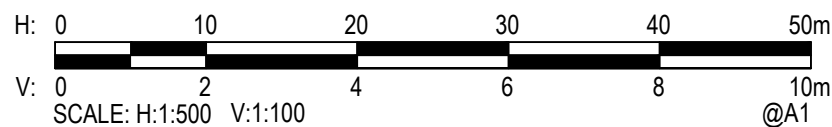
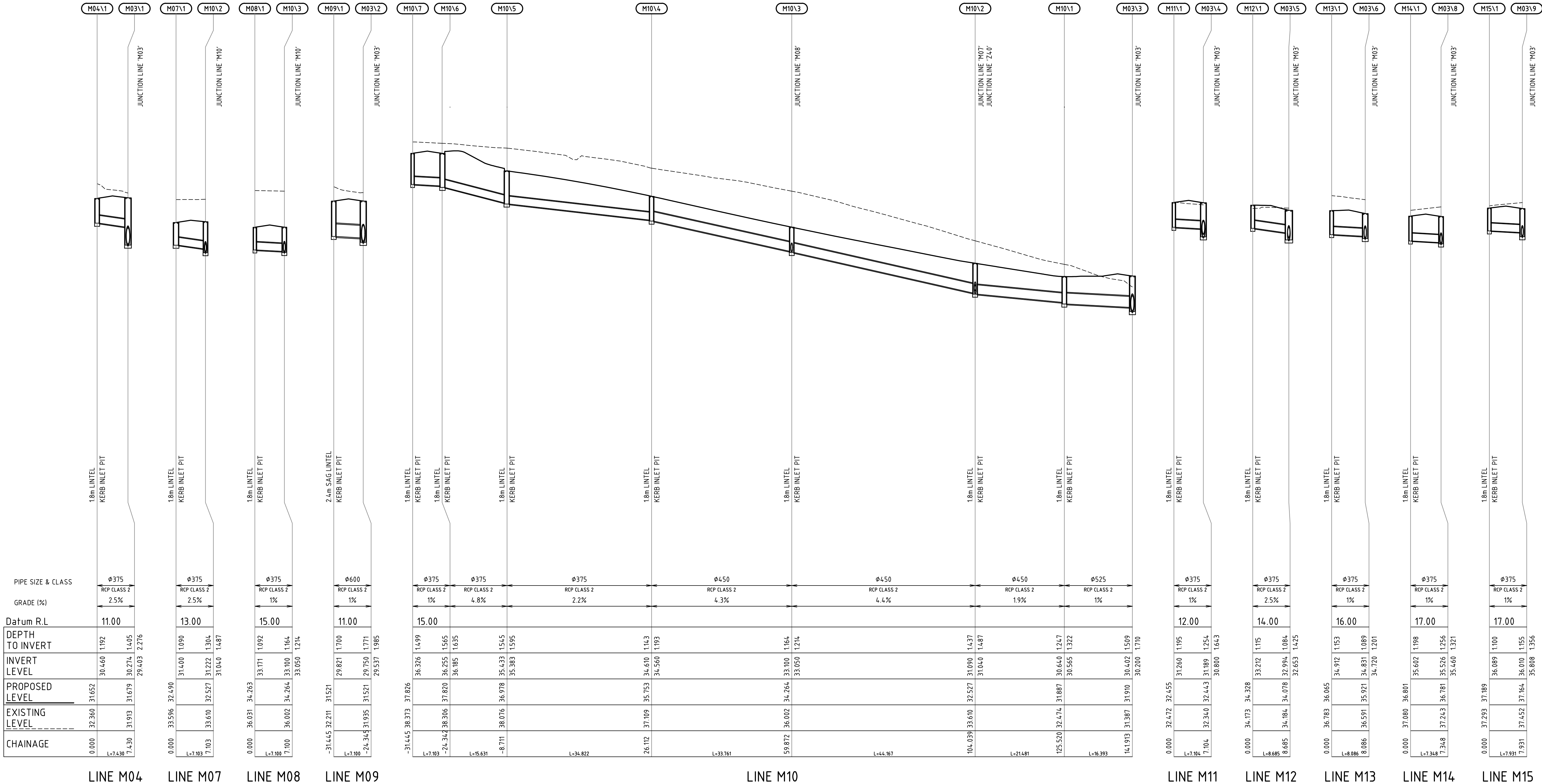


Client	LENDELEASE
Project	CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION
Title	STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 13

Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES			
Datum	Scale	Size	
AHD	AS SHOWN	A1	
Drawing Number			Revision
89914020-ST02-1473			4

DATE PLOTTED: 19 January 2016 12:28 PM BY: BRITTANY HOLZHEIMER

XREFs: Xref-89914020-Stormwater Drainage Long Sections: Xref-89914020-Client Logos: Xref-89914020-07-Stormwater Drainage Long Sections
CAD File: N:\Paramatta\Projects\89914020-CENTRAL PRECINCT_ADI ST MARYS\Drawings\07 CENTRAL PRECINCT_ADI ST MARYS\Drawings\07 Central Precinct Stage 2\Drawings\89914020-ST02-1474-DWG(4).dwg



Rev.	Date	Description	Des.	Verif.	Appd.
4	18.01.2016	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
3	30.10.2015	ISSUED FOR TENDER	DAC	CEV	SCP
2	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
1	21.08.2015	ISSUED FOR CLIENT REVIEW	DAC	SCP	

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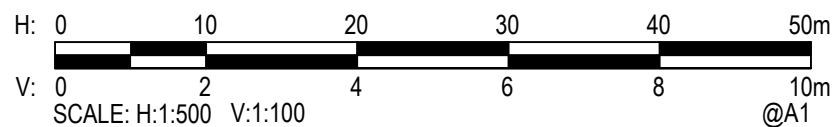
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Drawn BJH	Date 18.01.2016
Checked DAC	Date 18.01.2016
Designed DAC	Date 18.01.2016
Verified CEV	Date 18.01.2016
Approved SCP	Date 18.01.2016

Client LENDELEASE	Project CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION
Title STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 14	

Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES	Scale AS SHOWN	Size A1
Drawing Number 89914020-ST02-1474	Revision 4	

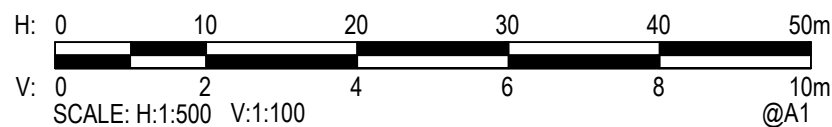


4	18.01.2016	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP	
3	30.10.2015	ISSUED FOR TENDER	DAC	CEV	SCP	
2	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP	
1	21.08.2015	ISSUED FOR CLIENT REVIEW	DAC	SCP		
Rev.	Date	Description	Des.	Verif.	Appd.	

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Drawn BJH	Date 18.01.2016	Client LENDELEASE			
Checked DAC	Date 18.01.2016	Project CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION	Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES		
Designed DAC	Date 18.01.2016				
Verified CEV	Date 18.01.2016	Title	Datum AHD	Scale AS SHOWN	Size A1
Approved			Drawing Number		
SCP	18.01.2016	STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 15	89914020-ST02-1475		Revision 4

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BJH	18.01.2016
Checked	Date
DAC	18.01.2016
Designed	Date
DAC	18.01.2016
Verified	Date
CEV	18.01.2016
Approved	
SCP	18.01.2016

Client	LENDLEASE
Project	CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION
Title	STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 16

Status				FOR APPROVAL			
NOT TO BE USED FOR CONSTRUCTION PURPOSES							
Datum				Scale		Size	
AHD				AS SHOWN		A1	
Drawing Number						Revision	
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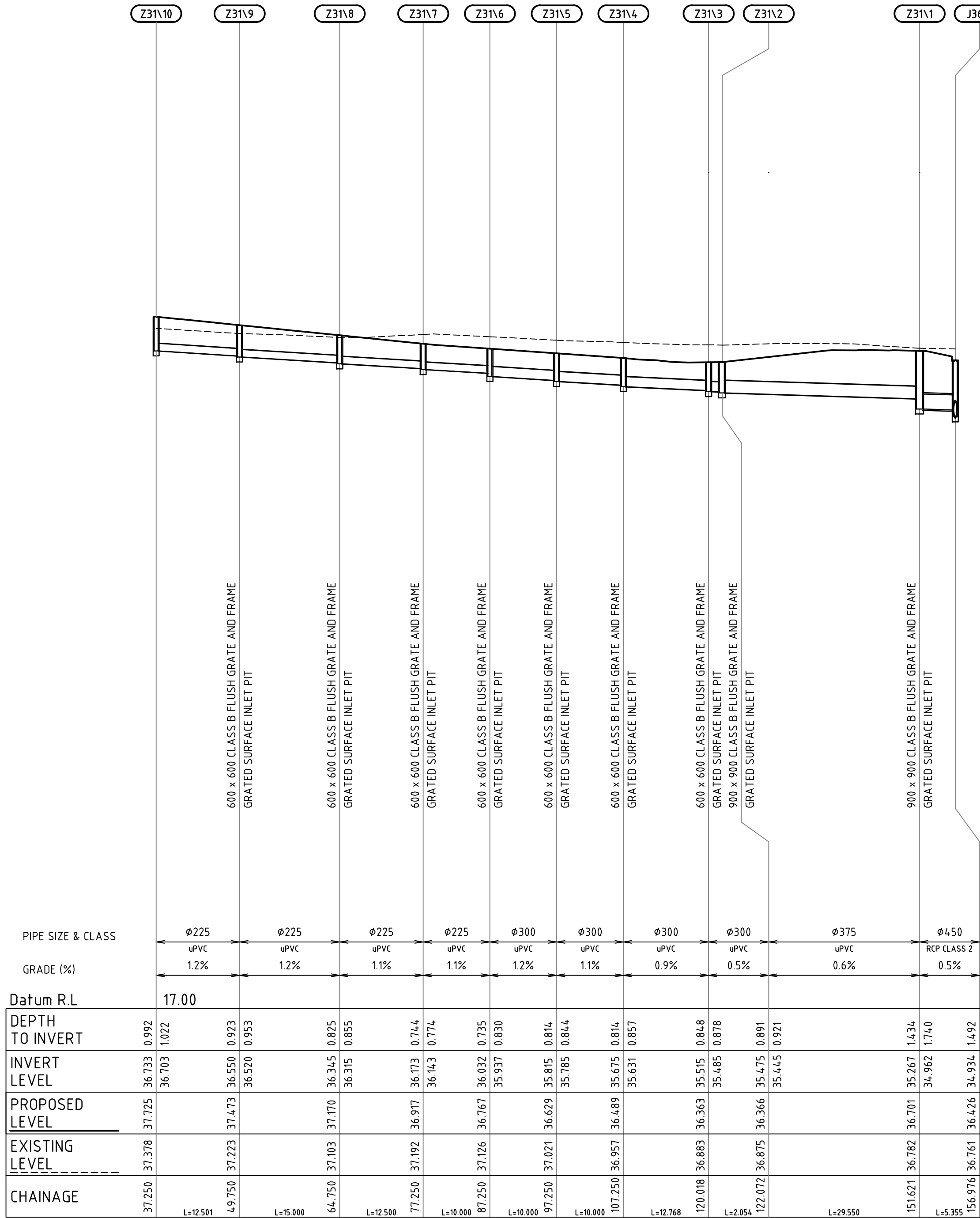
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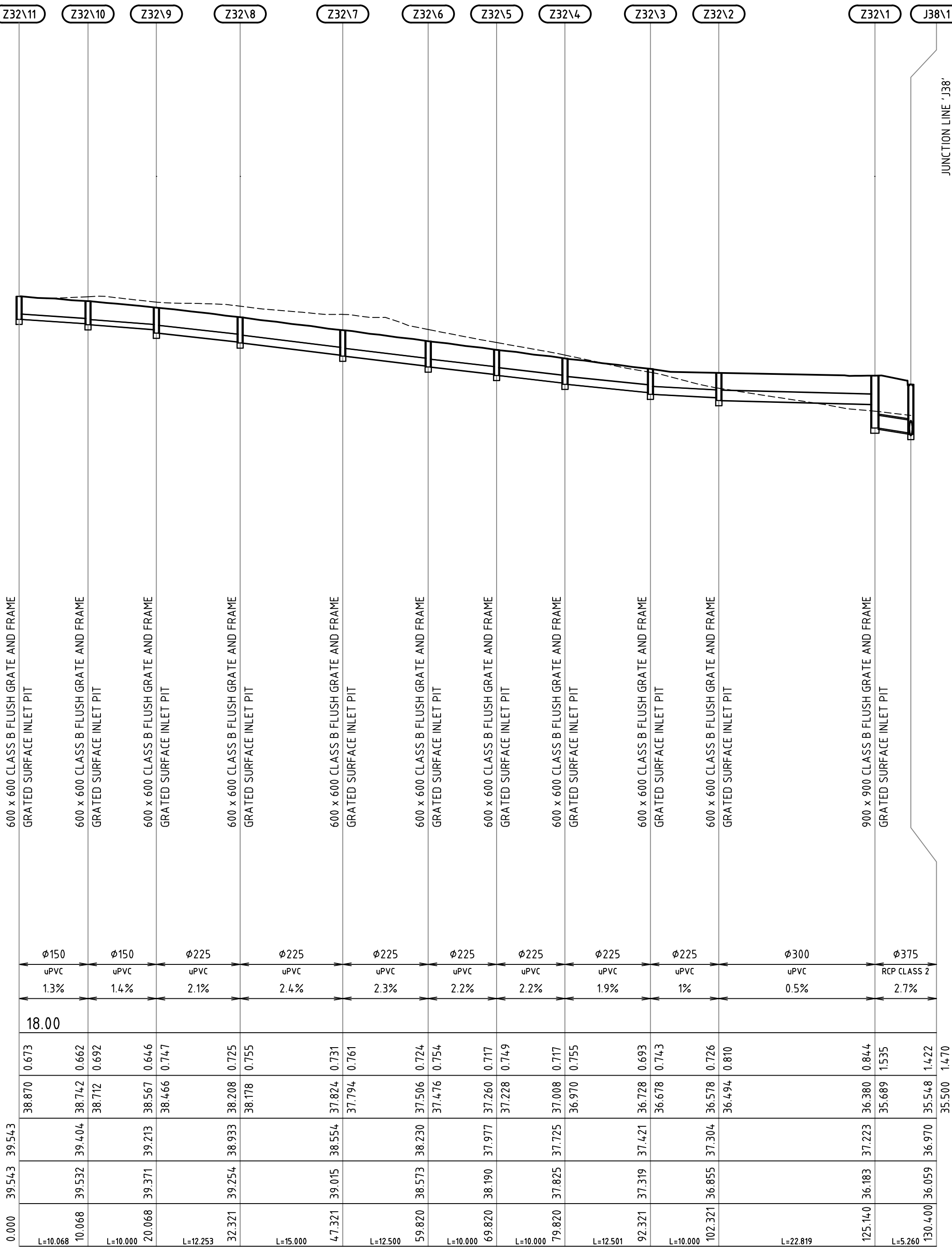


Client	LANDLEASE
Project	CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION
Title	STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 17

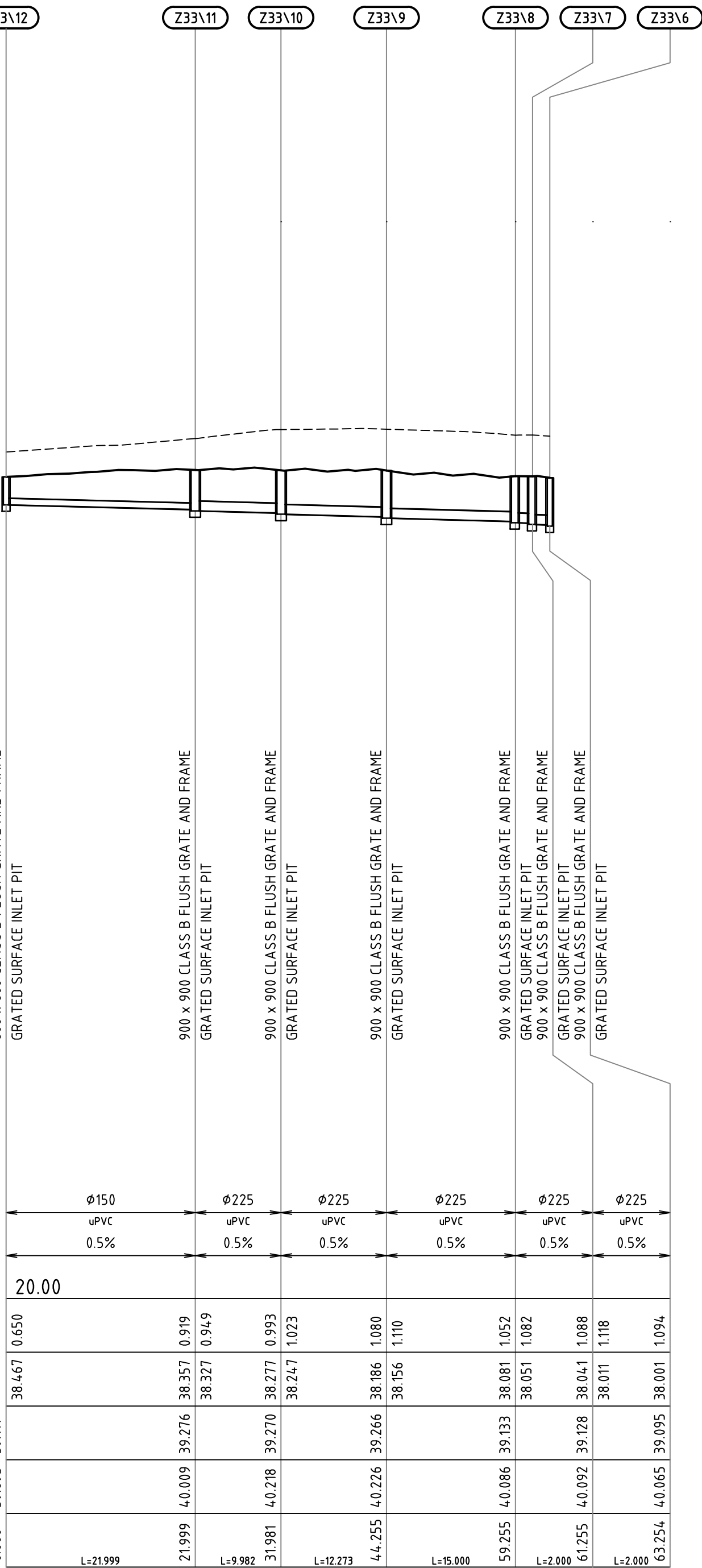
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FOR APPROVAL			
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AHD		AS SHOWN	A1
Drawing Number			Revision
89914020-ST02-1477			4



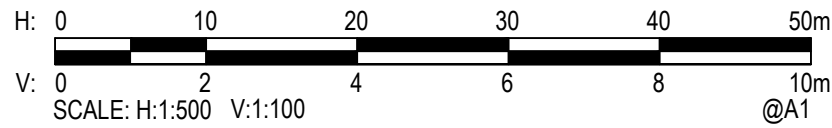
LINE Z31



LINE Z32



LINE Z33



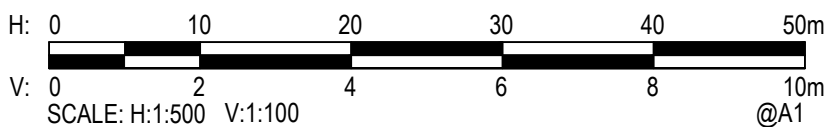
Rev.	Date	Description	Des.	Verif.	Appd.
4	18.01.2016	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
3	30.10.2015	ISSUED FOR TENDER	DAC	CEV	SCP
2	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
1	21.08.2015	ISSUED FOR CLIENT REVIEW	DAC	SCP	



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Drawn BJH 18.01.2016	Date 18.01.2016	Client LENLEASE
Checked DAC 18.01.2016	Date 18.01.2016	Project CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION
Designed DAC 18.01.2016	Date 18.01.2016	Status FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES
Verified CEV 18.01.2016	Date 18.01.2016	Datum AHD
Approved SCP 18.01.2016	Title STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 18	Scale AS SHOWN
		Size A1
		Revision 4
		Drawing Number 89914020-ST02-1478



4	18.01.2016	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
3	30.10.2015	ISSUED FOR TENDER	DAC	CEV	SCP
2	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
1	21.08.2015	ISSUED FOR CLIENT REVIEW	DAC	SCP	
Rev.	Date	Description	Des.	Verif.	Appd.

lendlease

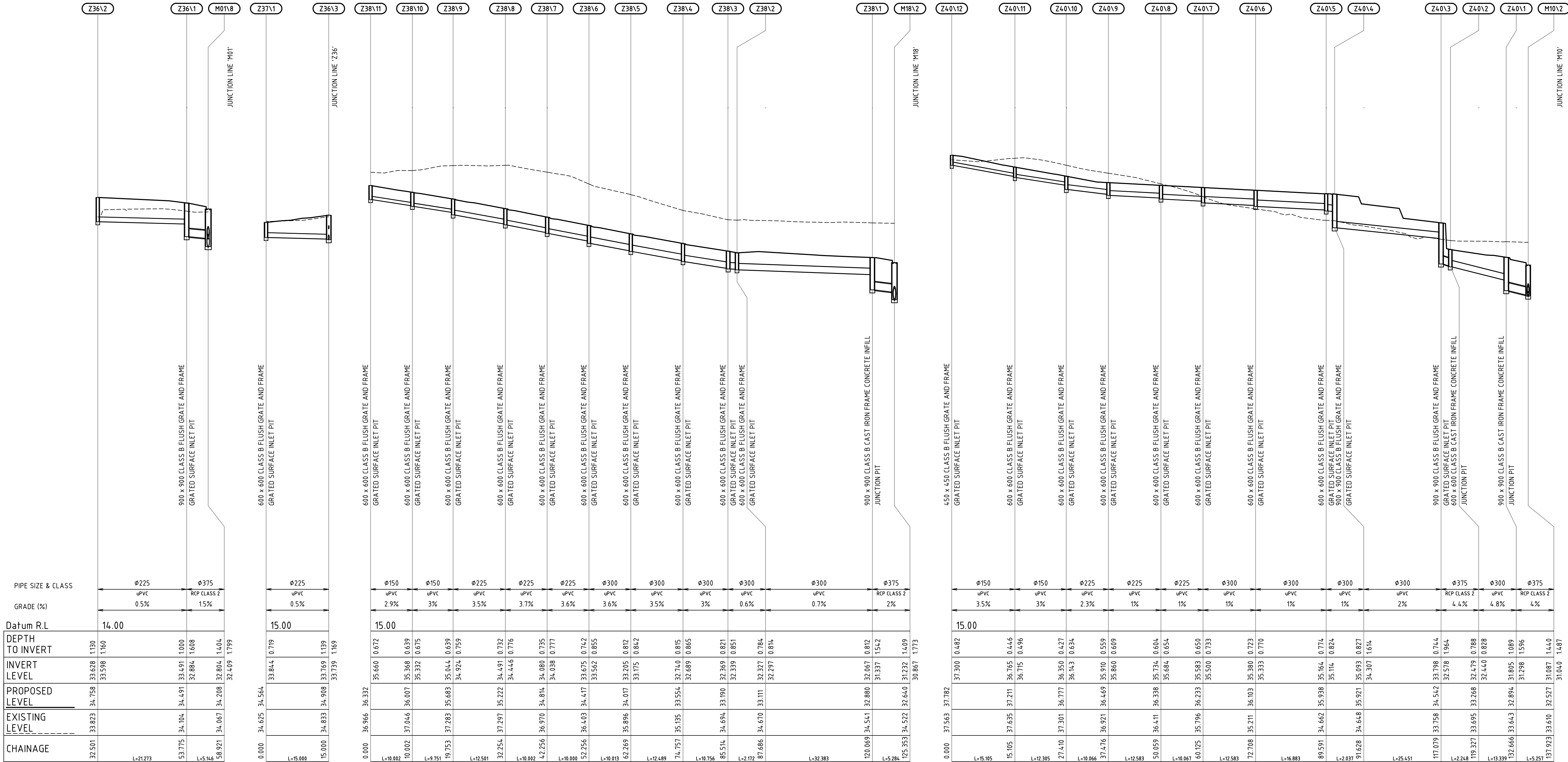
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Drawn	Date
BJH	18.01.2016
Checked	Date
DAC	18.01.2016
Designed	Date
DAC	18.01.2016
Verified	Date
CEV	18.01.2016
Approved	
SCP	18.01.2016

Client	LENDELESE
Project	CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION
Title	STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 19

Status			
FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES			
Datum	Scale	Size	
AHD	AS SHOWN		A1
Drawing Number			Revision
89914020-ST02-1479			4

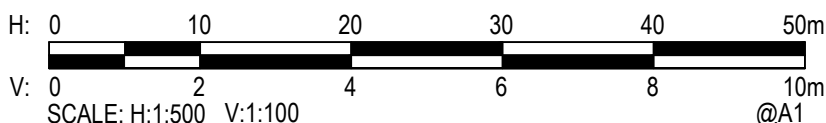


LINE Z36

LINE Z37

LINE Z38

LINE Z40



Rev.	Date	Description	Des.	Verif.	Appd.
4	18.01.2016	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
3	30.10.2015	ISSUED FOR TENDER	DAC	CEV	SCP
2	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP
1	21.08.2015	ISSUED FOR CLIENT REVIEW	DAC	SCP	



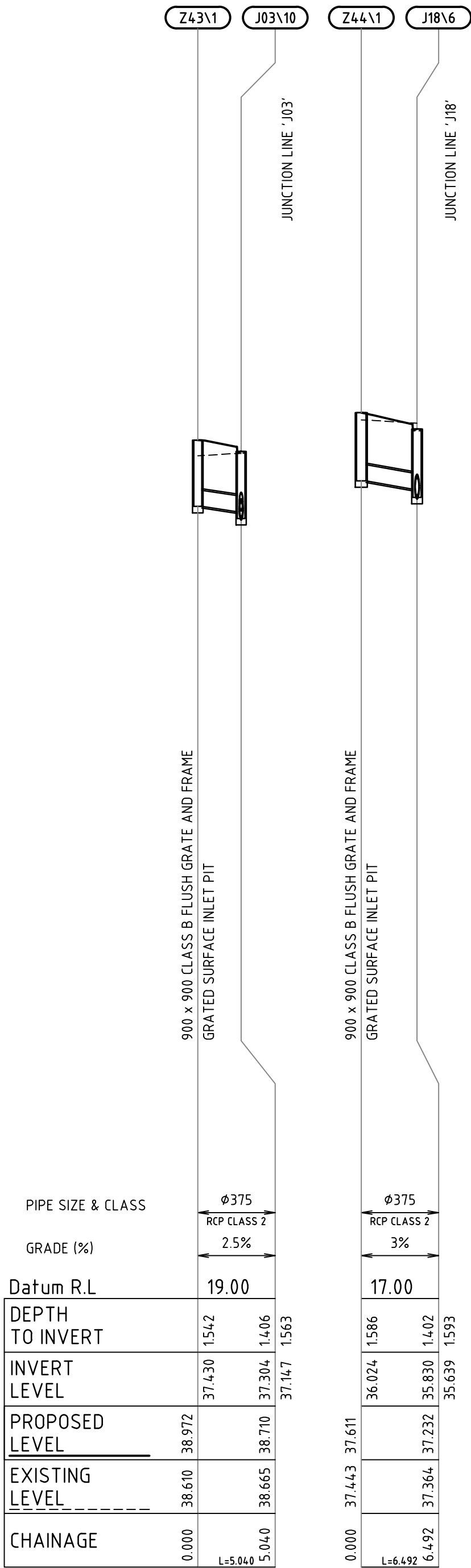
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Drawn BJH	Date 18.01.2016
Checked DAC	Date 18.01.2016
Designed DAC	Date 18.01.2016
Verified CEV	Date 18.01.2016
Approved SCP	Date 18.01.2016

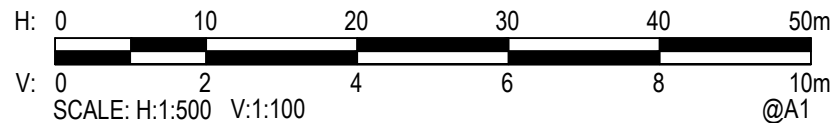
Client LENLEASE	Project CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION
Title STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 20	

Status NOT TO BE USED FOR CONSTRUCTION PURPOSES	FOR APPROVAL
Datum AHD	Scale AS SHOWN
Drawing Number 89914020-ST02-1480	Size A1
Revision 4	



LINE Z43

LINE Z44



4	18.01.2016	REISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP	
3	30.10.2015	ISSUED FOR TENDER	DAC	CEV	SCP	
2	08.10.2015	ISSUED FOR DEVELOPMENT APPLICATION	DAC	CEV	SCP	
1	21.08.2015	ISSUED FOR CLIENT REVIEW	DAC	SCP		
Rev.	Date	Description	Des.	Verif.	Appd.	



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BJH	18.01.2016
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DAC	18.01.2016
Designed	Date
DAC	18.01.2016
Verified	Date
CEV	18.01.2016
Approved	
SCP	18.01.2016

Client	LENLEASE
Project	CENTRAL PRECINCT STAGE 2 - CIVIL WORKS DEVELOPMENT APPLICATION
Title	STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 21

Status	FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES		
Datum	AHD	Scale	AS SHOWN
Drawing Number	89914020-ST02-1481		Revision
		4	