

DATE PLOTTED: 30 July 2019 3:30 PM BY: MARY DOZA



Cardno (NSW/ACT) Pty Ltd | ABN 95 001 145 035
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LENDLEASE
JORDAN SPRINGS EAST
STAGE 3D - CIVIL WORKS
DEVELOPMENT APPLICATION



SCHEDULE OF DRAWINGS

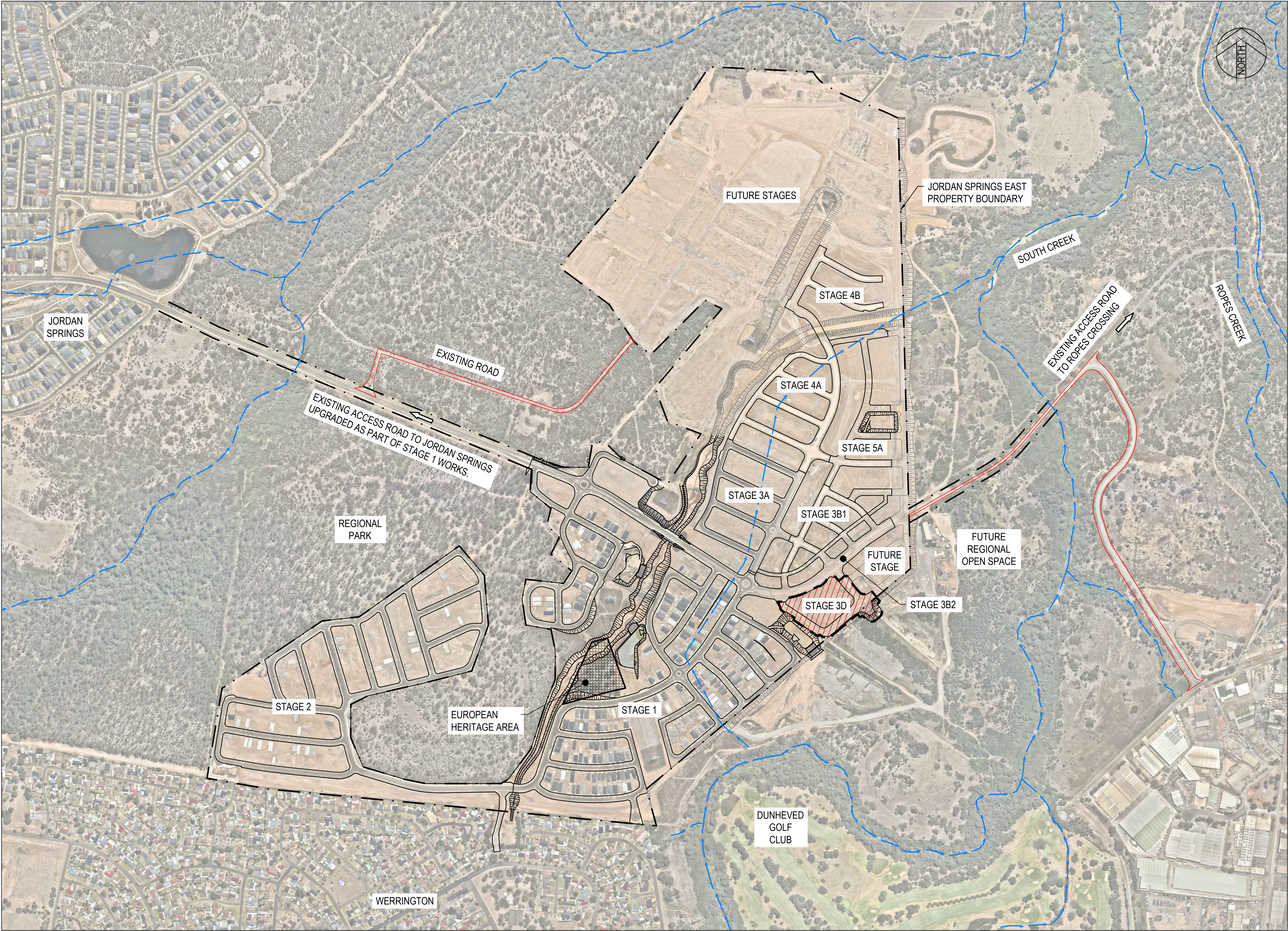
DRAWING No.	DESCRIPTION
CV-CARDNO-ST03D-1001	COVER SHEET & DRAWING SCHEDULE
CV-CARDNO-ST03D-1011	GENERAL NOTES & LEGENDS
CV-CARDNO-ST03D-1021	CONTEXT PLAN
CV-CARDNO-ST03D-1031	GENERAL ARRANGEMENT PLAN
CV-CARDNO-ST03D-1041	DEVELOPMENT APPLICATION STAGING PLAN AND ROAD HIERARCHY PLAN
CV-CARDNO-ST03D-1101	EROSION AND SEDIMENTATION CONTROL PLAN
CV-CARDNO-ST03D-1131	EROSION AND SEDIMENTATION CONTROL DETAILS
CV-CARDNO-ST03D-1251	TYPICAL ROAD CROSS SECTIONS AND PAVEMENT TYPES SHEET 1
CV-CARDNO-ST03D-1252	TYPICAL ROAD CROSS SECTIONS AND PAVEMENT TYPES SHEET 2
CV-CARDNO-ST03D-1301	CIVIL WORKS AND STORMWATER DRAINAGE PLAN
CV-CARDNO-ST03D-1351	ROAD LONGITUDINAL SECTIONS SHEET 1 ROAD 013 & 027
CV-CARDNO-ST03D-1352	ROAD LONGITUDINAL SECTIONS SHEET 2 ROAD 028
CV-CARDNO-ST03D-1601	CIVIL WORKS DETAILS SHEET 1
CV-CARDNO-ST03D-1602	CIVIL WORKS DETAILS SHEET 2
CV-CARDNO-ST03D-1701	PAVEMENT, SIGNAGE & LINEMARKING PLAN
CV-CARDNO-ST03D-2201	STORMWATER DRAINAGE DETAILS SHEET 1
CV-CARDNO-ST03D-2202	STORMWATER DRAINAGE DETAILS SHEET 2
CV-CARDNO-ST03D-2301	INTERNAL STORMWATER CATCHMENT PLAN

XREF's: CAD File: N:\Parramatta\Projects\693\FY14\020_CENTRAL PRECINCT_ADI ST MARY'S\Drawings\2\ Central Precinct Stage 3D\Drawings\CV-CARDNO-ST03D-1001-DWG(3).dwg

Rev.	Date	Description	Des.	Verif.	Appd.
3	30.07.19	REISSUED FOR DEVELOPMENT APPLICATION APPROVAL	DAC	ARM	ARM
2	22.02.19	ISSUED FOR DEVELOPMENT APPLICATION APPROVAL	DAC	ARM	ARM
1	05.06.18	ISSUED FOR DRAFT DEVELOPMENT APPLICATION	DAC	ARM	ARM

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Drawn MCD	Date 22.02.19	Status	FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES			
Checked DAC	Date 22.02.19					
Designed DAC	Date 22.02.19					
Verified ARM	Date 22.02.19	Datum AHD	Scale	Size A1		
Approved		Drawing Number CV-CARDNO-ST03D-1001		Revision 3		
ARM	22.02.19					



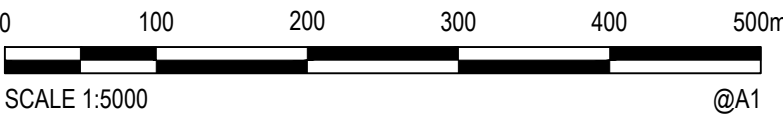
CONTEXT PLAN
SCALE 1:5000

LEGEND

STAGE 3D EXTENT

JORDAN SPRINGS EAST
BOUNDARY

EXISTING WATER COURSES AS PER
1:10000 TOPOGRAPHIC MAPS



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3	30.07.19	REISSUED FOR DEVELOPMENT APPLICATION APPROVAL	DAC	ARM	ARM
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1	05.06.18	ISSUED FOR DRAFT DEVELOPMENT APPLICATION	DAC	ARM	ARM

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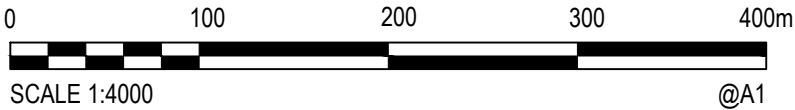
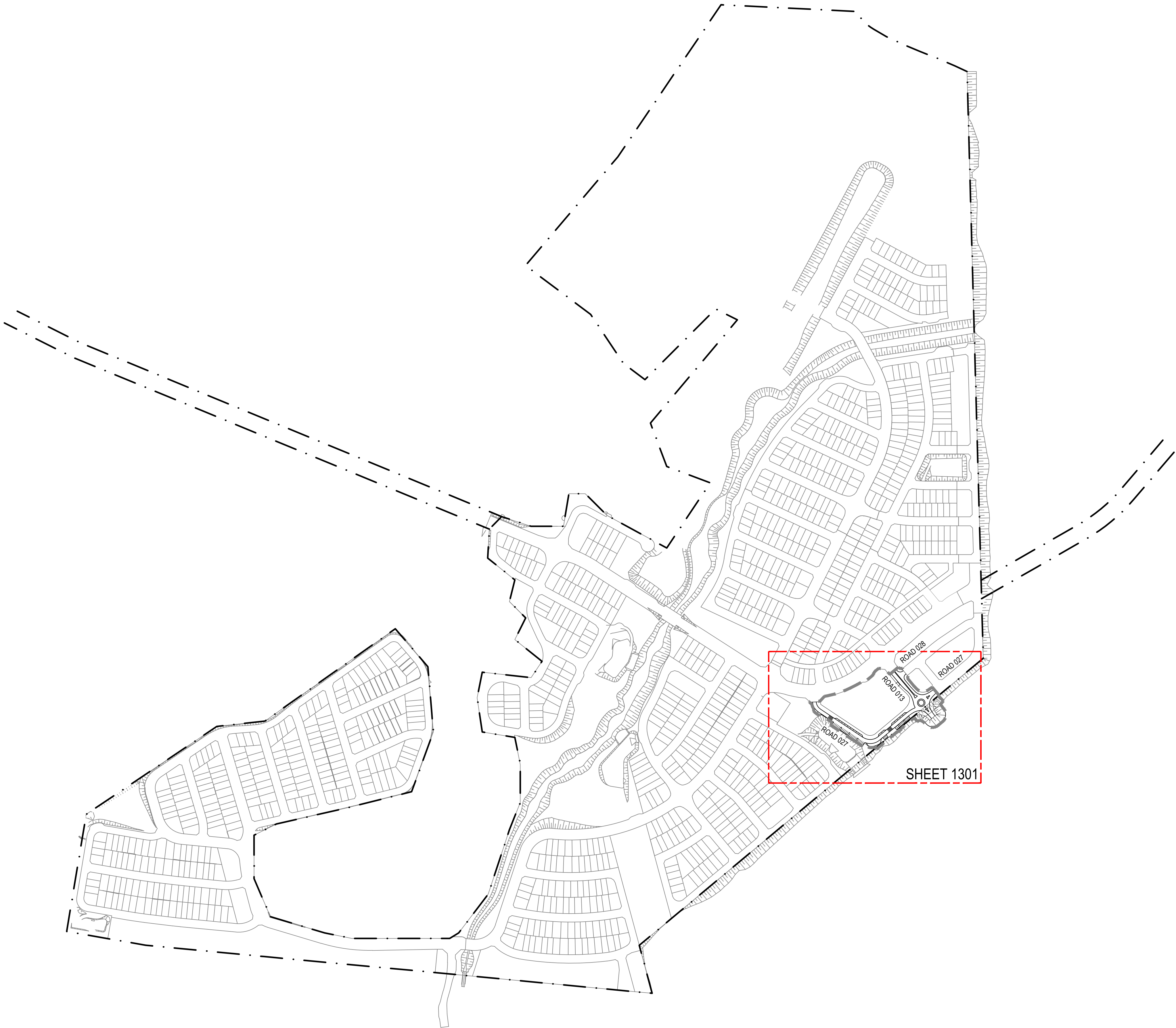
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Checked	DAC	Date	22.02.19
Designed	DAC	Date	22.02.19
Verified	ARM	Date	22.02.19
Approved	ARM	Date	22.02.19

Client	LENDELEASE
Project	JORDAN SPRINGS EAST STAGE 3D - CIVIL WORKS DEVELOPMENT APPLICATION
Title	CONTEXT PLAN

Status				<div>FOR APPROVAL</div>			
NOT TO BE USED FOR CONSTRUCTION PURPOSES							
Datum				Scale		Size	
AHD				1:5000		A1	
Drawing Number						Revision	
CV-CARDNO-ST03D-1021						3	

DATE PLOTTED: 30 July 2019 3:30 PM BY: MARY DOZA

XREFs: Xref-88914020-Client-Logos: Xref-88914020-21-CI-DESIGN: Xref-88914020-CH-MASTERPLAN
CAD File: N:\Paramatna\Projects\88914020_CENTRAL PRECINCT_ADI ST MARYS\Drawings\21 Central Precinct Stage 3D\Drawings\CV-CARDNO-ST03D-1031-DWG(4).dwg



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4	30.07.19	REISSUED FOR DEVELOPMENT APPLICATION APPROVAL	DAC	ARM	ARM
3	22.02.19	ISSUED FOR DEVELOPMENT APPLICATION APPROVAL	DAC	ARM	ARM
2	15.06.18	REISSUED FOR DRAFT DEVELOPMENT APPLICATION	DAC	ARM	ARM
1	05.06.18	ISSUED FOR DRAFT DEVELOPMENT APPLICATION	DAC	ARM	ARM



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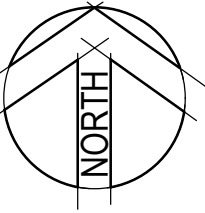
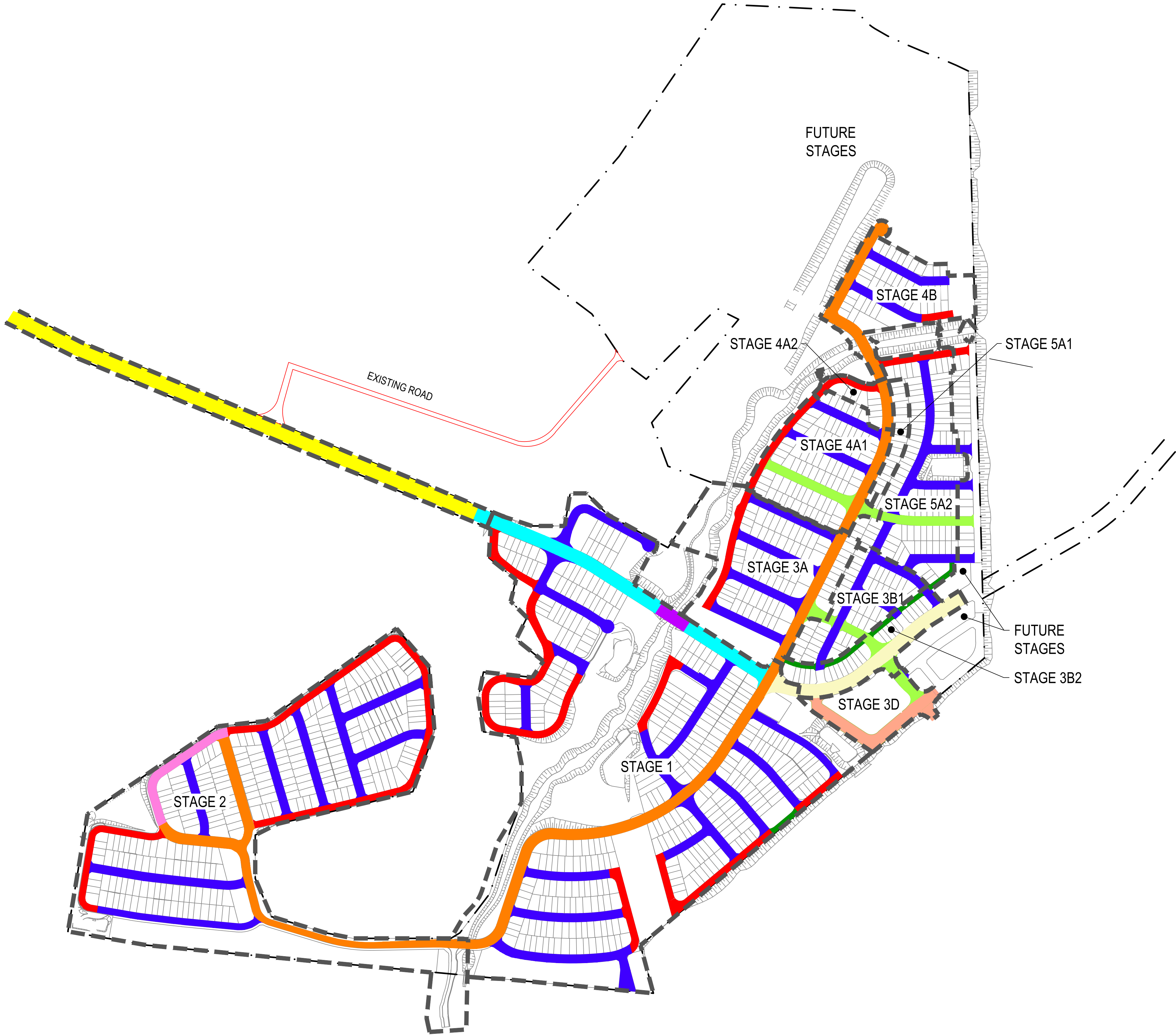


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Designed	DAC	Date	22.02.19
Verified	ARM	Date	22.02.19
Approved	ARM	Date	22.02.19

Client	LENLEASE
Project	JORDAN SPRINGS EAST STAGE 3D - CIVIL WORKS DEVELOPMENT APPLICATION
Title	GENERAL ARRANGEMENT PLAN

Status	FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES		
Datum	AHD	Scale	1:4000
Drawing Number	CV-CARDNO-ST03D-1031		Revision
			4



NOTES:

1. BASED ON INFORMATION PROVIDED BY LENDLEASE (17/09/18).
2. EXTENT OF FUTURE STAGES SUBJECT TO REFINEMENT.
3. ROAD AND LOT LAYOUTS OUTSIDE OF PROPOSED STAGING BOUNDARIES ARE BASED ON A PRELIMINARY MASTERPLAN PREPARED BY LENDLEASE AND IS SUBJECT TO FUTURE REFINEMENT.

LEGEND

- STAGE BOUNDARY
- PROPOSED LOTS
- A2 ACCESSWAY
- BRIDGE
- B1 BUS LINK
- C2 COLLECTOR ROAD MAIN STREET
- C5-C8 COLLECTOR ROAD REFER DRAWING SET CV-CARDNO-ST03B2 FOR TYPICAL CROSS SECTIONS
- E1 EMPLOYMENT STREET
- JORDANS CONNECTOR ROAD REFER DRAWING SET 88914020-JC01 FOR TYPICAL CROSS SECTIONS.
- L1 MINOR LOCAL STREET
- L2 PEDESTRIAN PRIORITY
- L3 LOCAL STREET POSSIBLE BUS ROUTE
- P1 PARK EDGE ROAD
- P2 PARK EDGE ROAD POSSIBLE BUS LINK
- V1-V9 VILLAGE CENTRE LOCAL STREET. REFER DRAWING 1251 FOR TYPICAL CROSS SECTIONS



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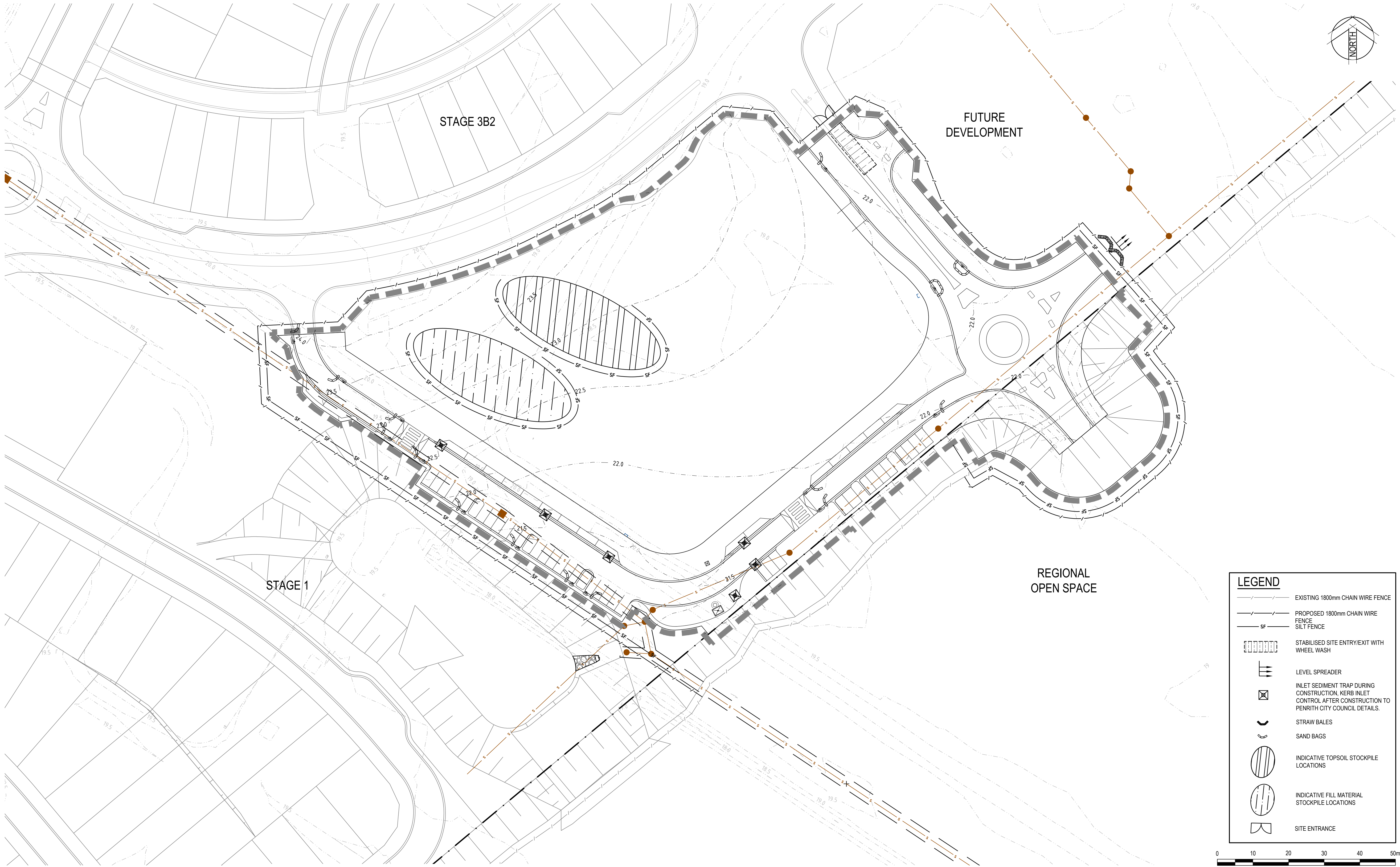
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Checked	DAC	Date	22.02.19
Designed	DAC	Date	22.02.19
Verified	ARM	Date	22.02.19
Approved	ARM	Date	22.02.19

Client	LENDLEASE
Project	JORDAN SPRINGS EAST STAGE 3D - CIVIL WORKS DEVELOPMENT APPLICATION
Title	DEVELOPMENT APPLICATION STAGING PLAN AND ROAD HIERARCHY PLAN

Status			
FOR APPROVAL			
NOT TO BE USED FOR CONSTRUCTION PURPOSES			
Datum		Scale	Size
AHD		1:4000	A1
Drawing Number			Revision
CV-CARDNO-ST03D-1041			3

DATE PLOTTED: 30 JULY 2019 3:30 PM BY: MARY DOZA

XREFs: Xref-89914020-Existing-Services, X-Contours-Existing-500, XR-89914020-21-CI-DESIGN, XR-89914020-21-CI-DRAINAGE, XR-89914020-Client-Logos, XR-89914020-21-CI-DESIGN CONTOURS 500, XR-89914020-CI-MASTERPLAN
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LEGEND	
	EXISTING 1800mm CHAIN WIRE FENCE
	PROPOSED 1800mm CHAIN WIRE FENCE
	SILT FENCE
	STABILISED SITE ENTRY/EXIT WITH WHEEL WASH
	LEVEL SPREADER
	INLET SEDIMENT TRAP DURING CONSTRUCTION, KERB INLET CONTROL AFTER CONSTRUCTION TO PENRITH CITY COUNCIL DETAILS.
	STRAW BALES
	SAND BAGS
	INDICATIVE TOPSOIL STOCKPILE LOCATIONS
	INDICATIVE FILL MATERIAL STOCKPILE LOCATIONS
	SITE ENTRANCE

0 10 20 30 40 50m
SCALE 1:500 @A1

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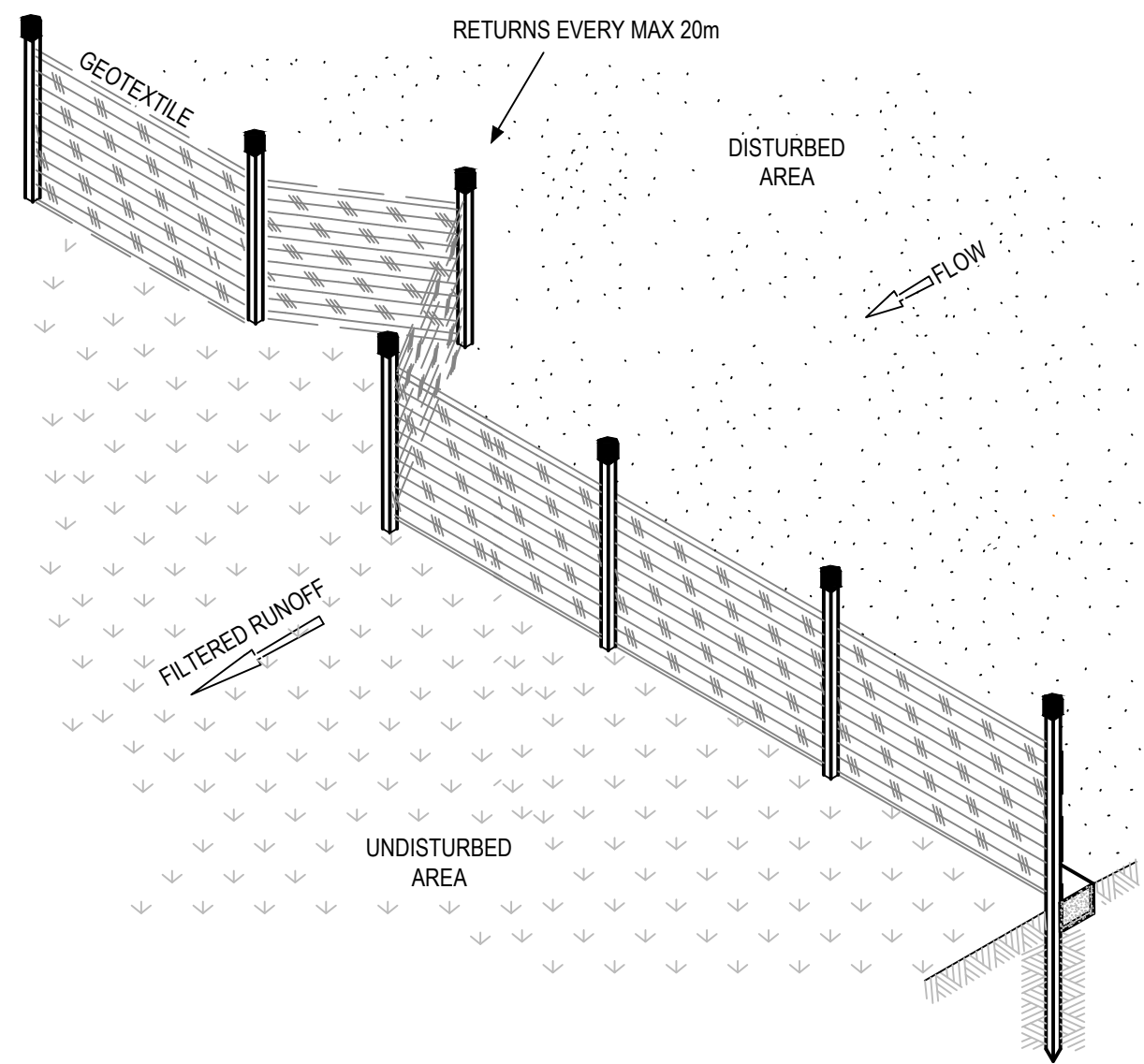


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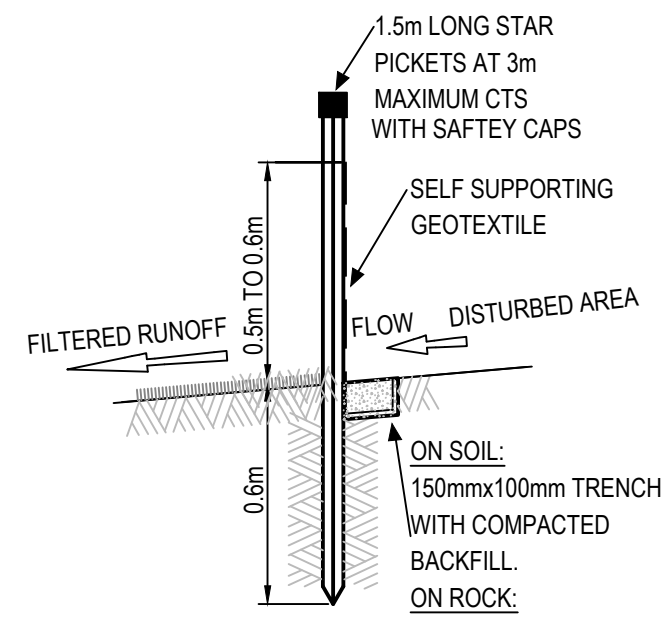
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Approved	ARM	Date	22.02.19

Client	LENDELEASE
Project	JORDAN SPRINGS EAST STAGE 3D - CIVIL WORKS DEVELOPMENT APPLICATION
Title	EROSION AND SEDIMENTATION CONTROL PLAN

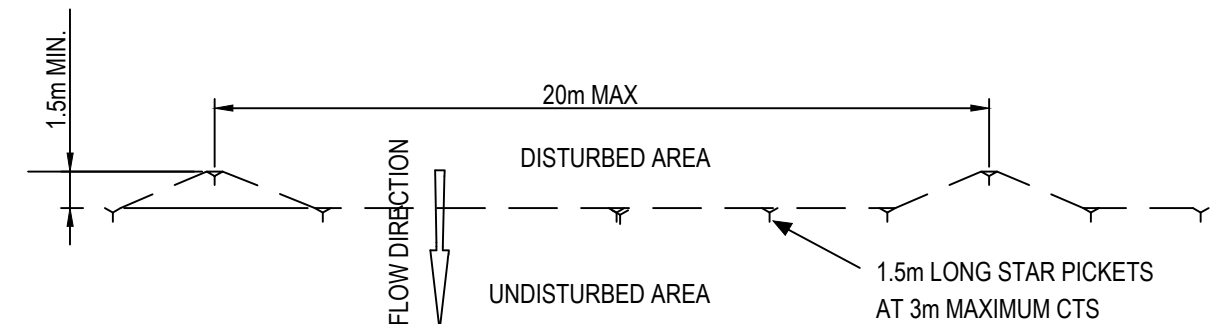
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Datum					
AHD		Scale	1:500	Size	A1
Drawing Number				Revision	
CV-CARDNO-ST03D-1101				4	



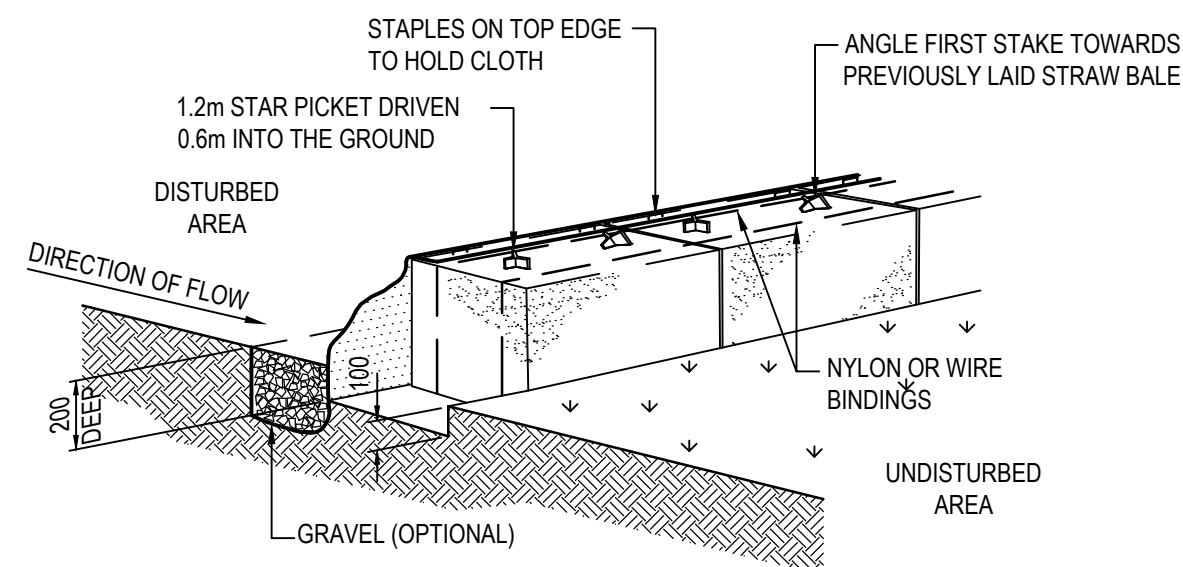
SILT FENCE
NOT TO SCALE



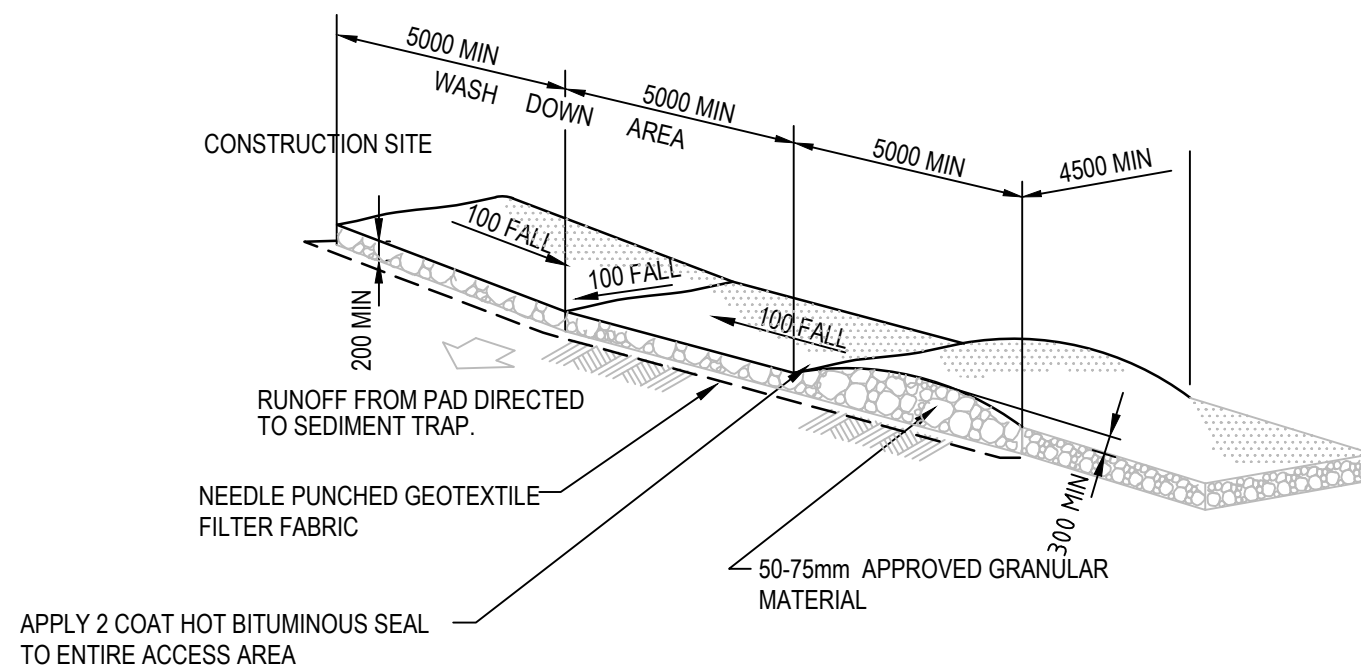
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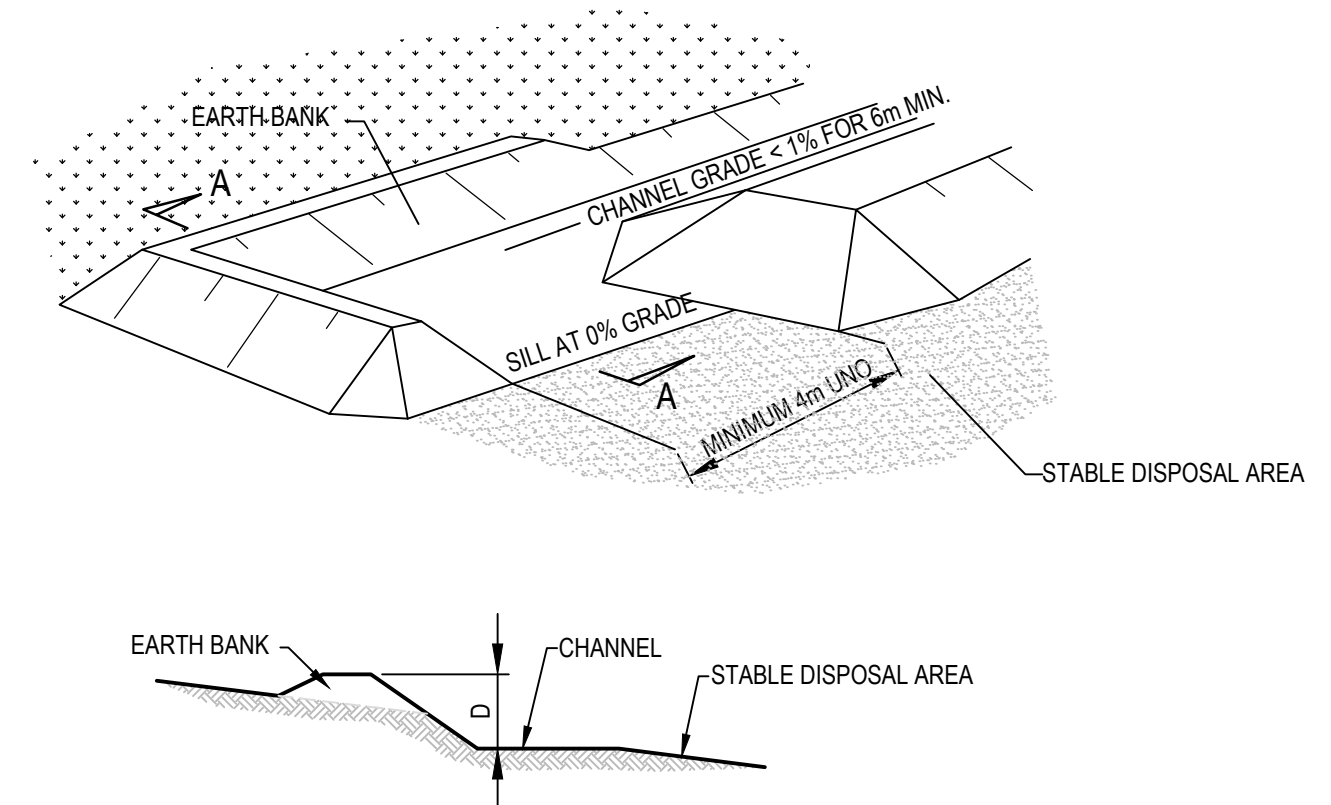
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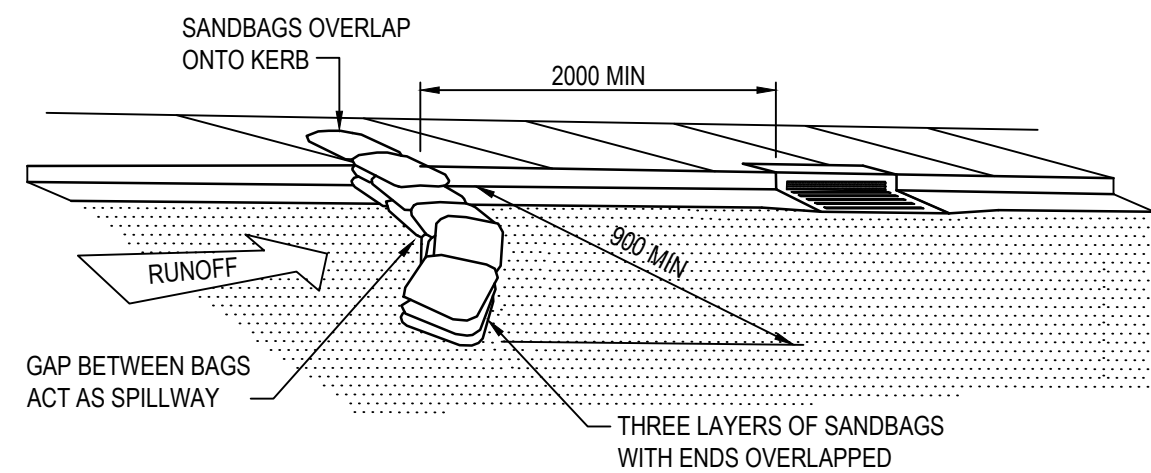
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(GEOTEXTILE FILTER FABRIC & STRAW BALE)**
NOT TO SCALE



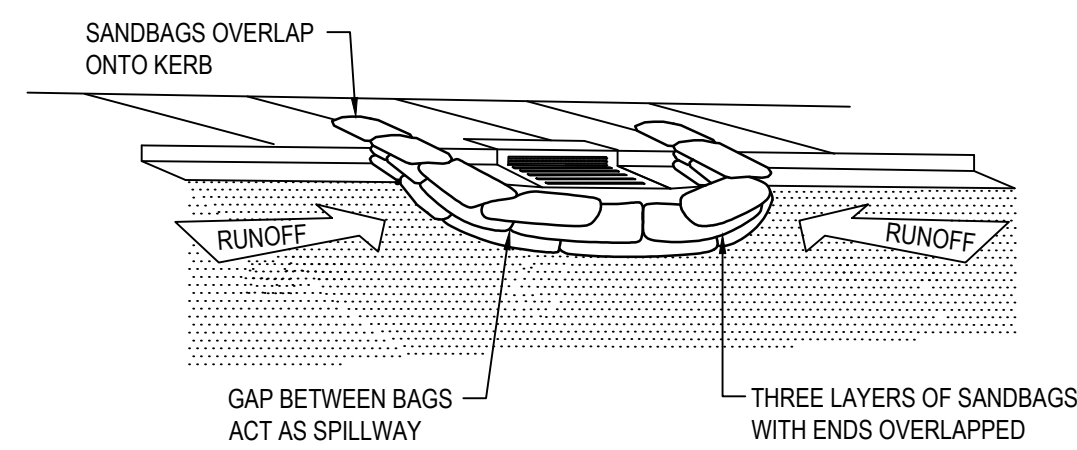
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NOT TO SCALE



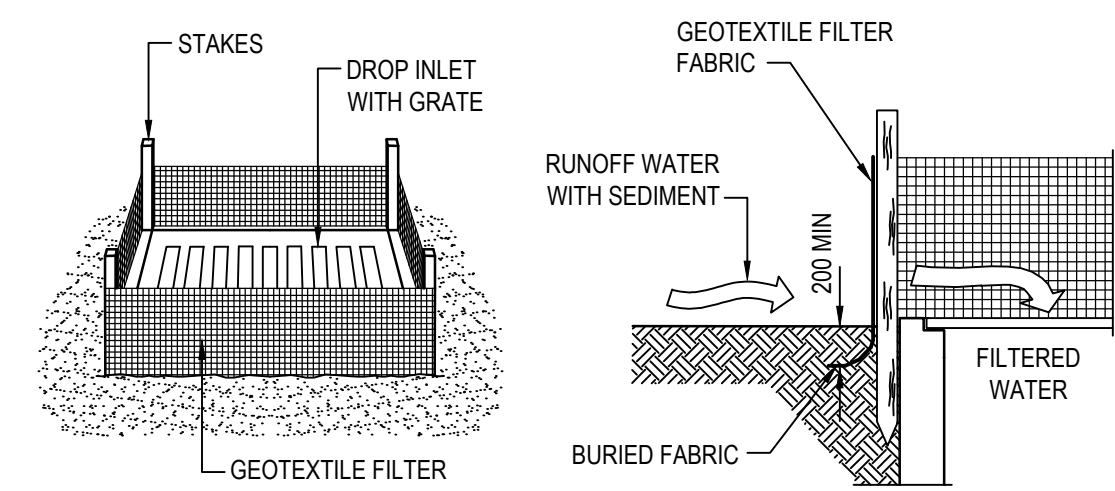
LEVEL SPREADER DETAIL
NOT TO SCALE



**SEDIMENT TRAP FOR KERB INLET
(ON GRADE - SANDBAG)**
NOT TO SCALE



**SEDIMENT TRAP FOR KERB INLET
(AT LOW POINT - SANDBAG)**
NOT TO SCALE



**SEDIMENT TRAP FOR DROP INLET
(GEOTEXTILE FILTER FABRIC)**
NOT TO SCALE

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1	05.06.18	ISSUED FOR DRAFT DEVELOPMENT APPLICATION	DAC	ARM	ARM

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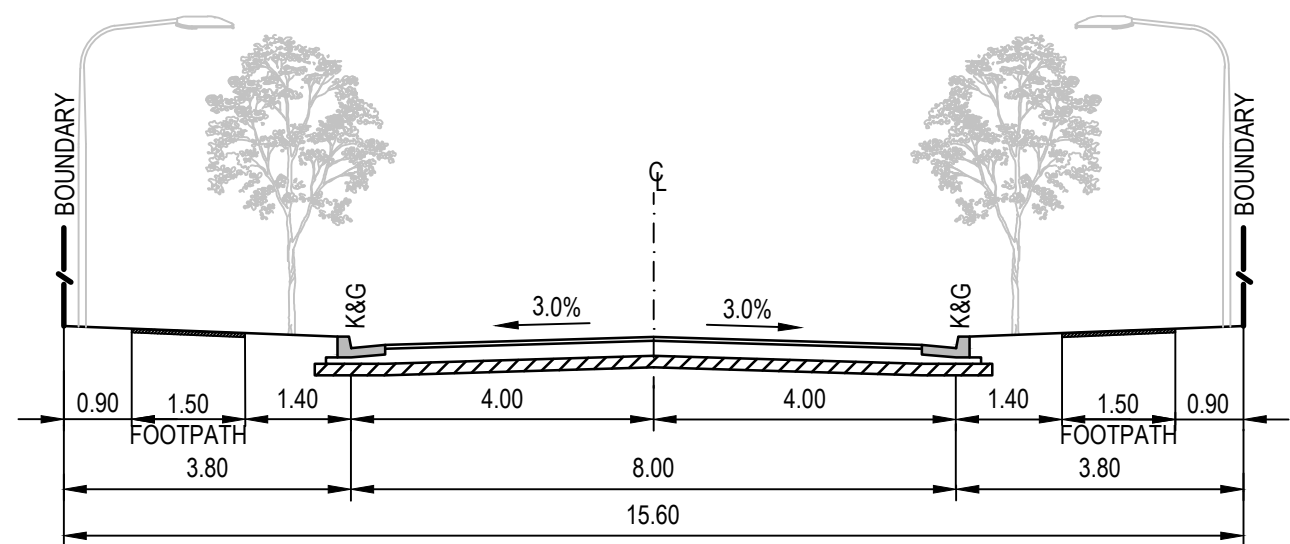
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Approved	ARM	Date	22.02.19

Client	LENLEASE
Project	JORDAN SPRINGS EAST STAGE 3D - CIVIL WORKS DEVELOPMENT APPLICATION
Title	EROSION AND SEDIMENTATION CONTROL DETAILS

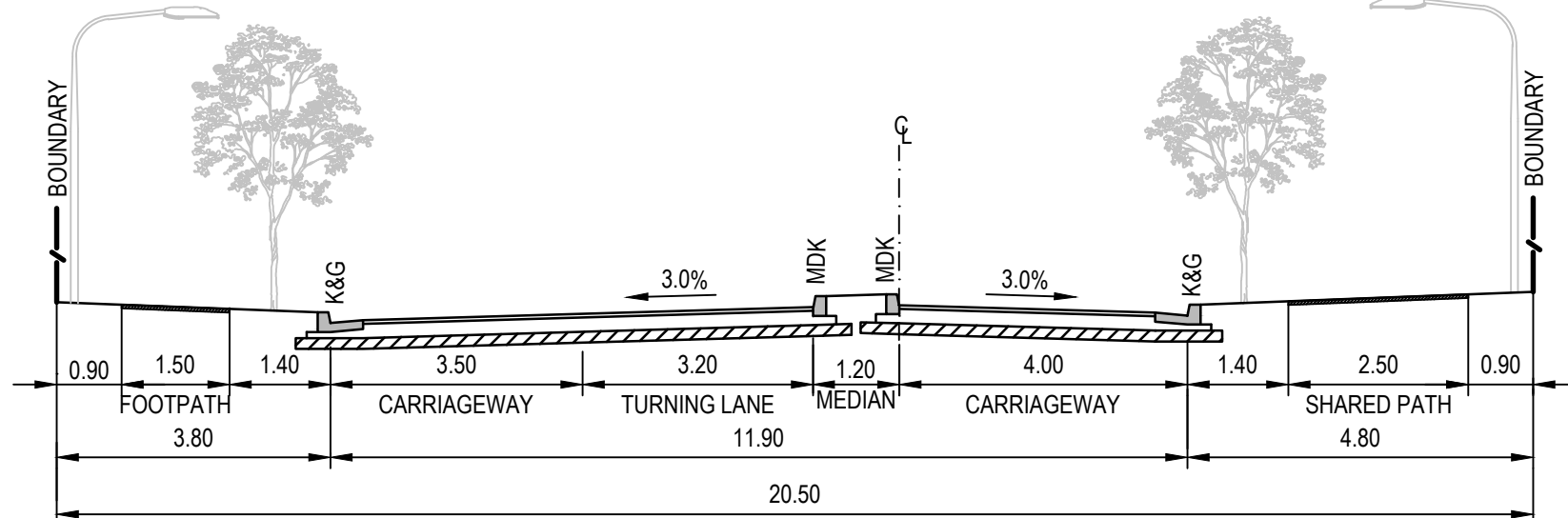
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Datum	AHD
Scale	AS SHOWN
Size	A1
Drawing Number	CV-CARDNO-ST03D-1131
Revision	3



L1 MINOR LOCAL STREET

PAVEMENT TYPE 2
SCALE 1:100

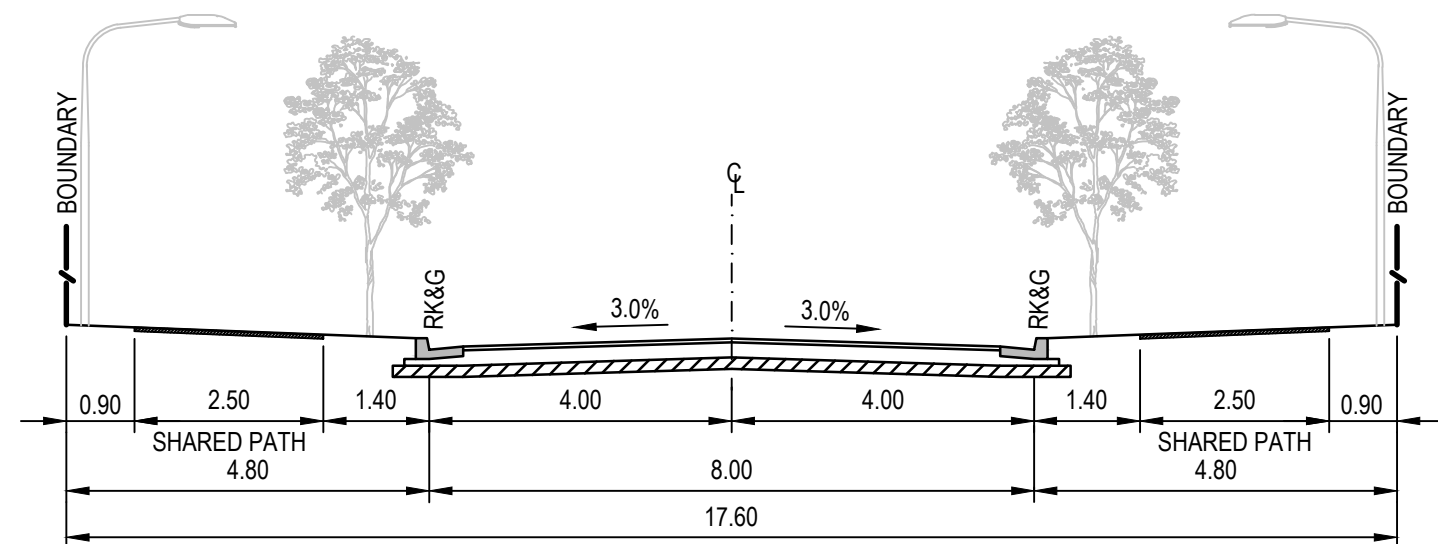
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L2 PEDESTRIAN PRIORITY
(WITH MEDIAN)

PAVEMENT TYPE 1
SCALE 1:100

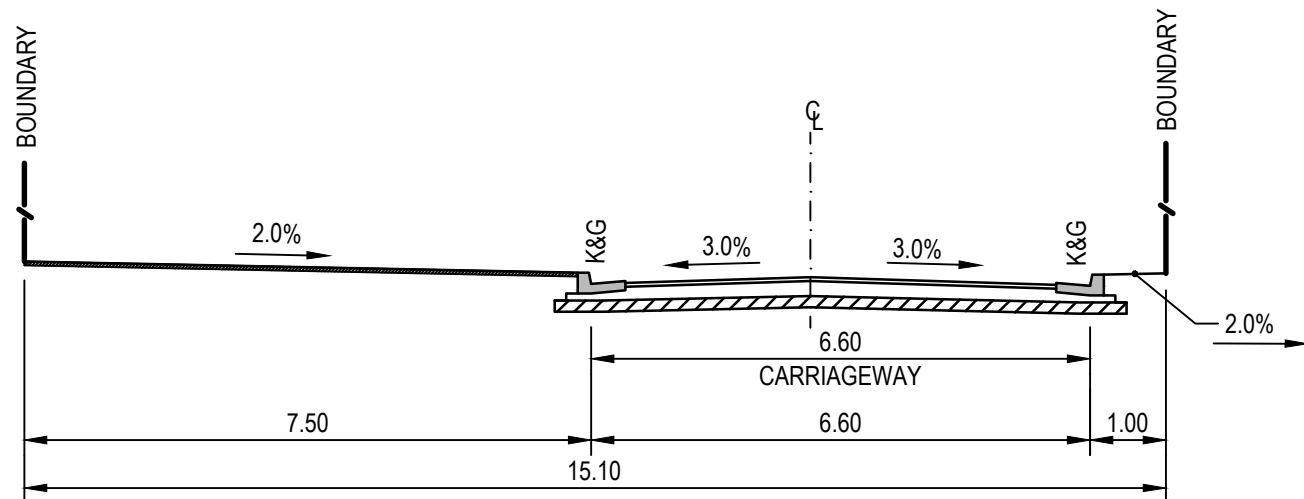
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V1 VILLAGE LOCAL STREET

PAVEMENT TYPE 2
SCALE 1:100

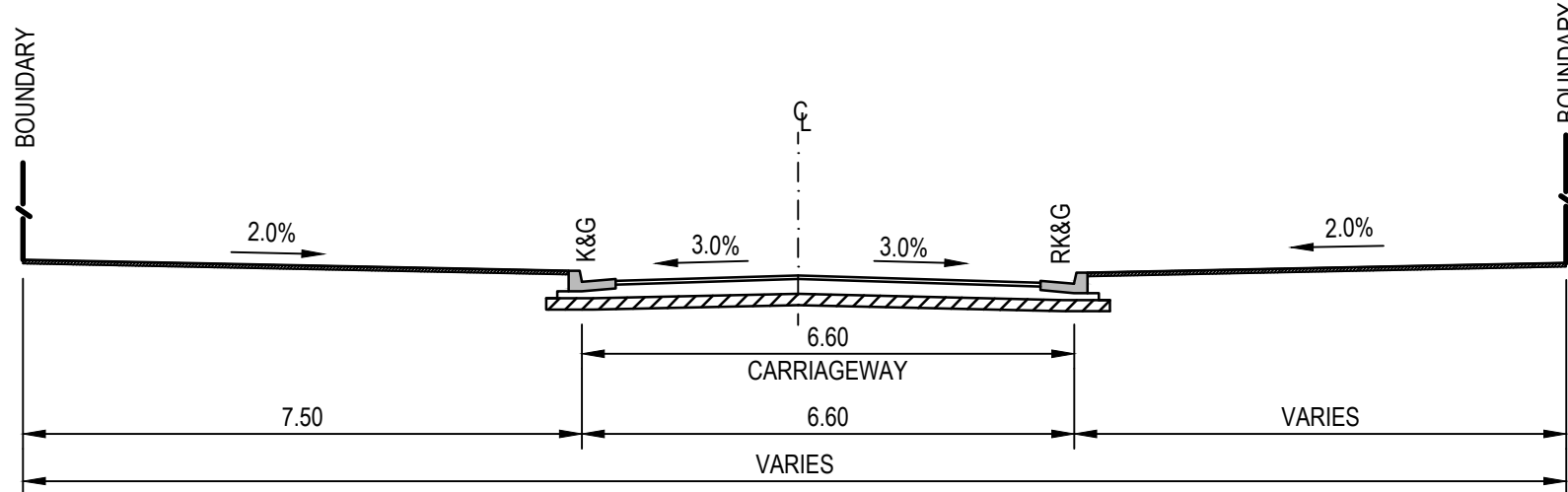
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V2 VILLAGE CENTRE LOCAL STREET

PAVEMENT TYPE 1
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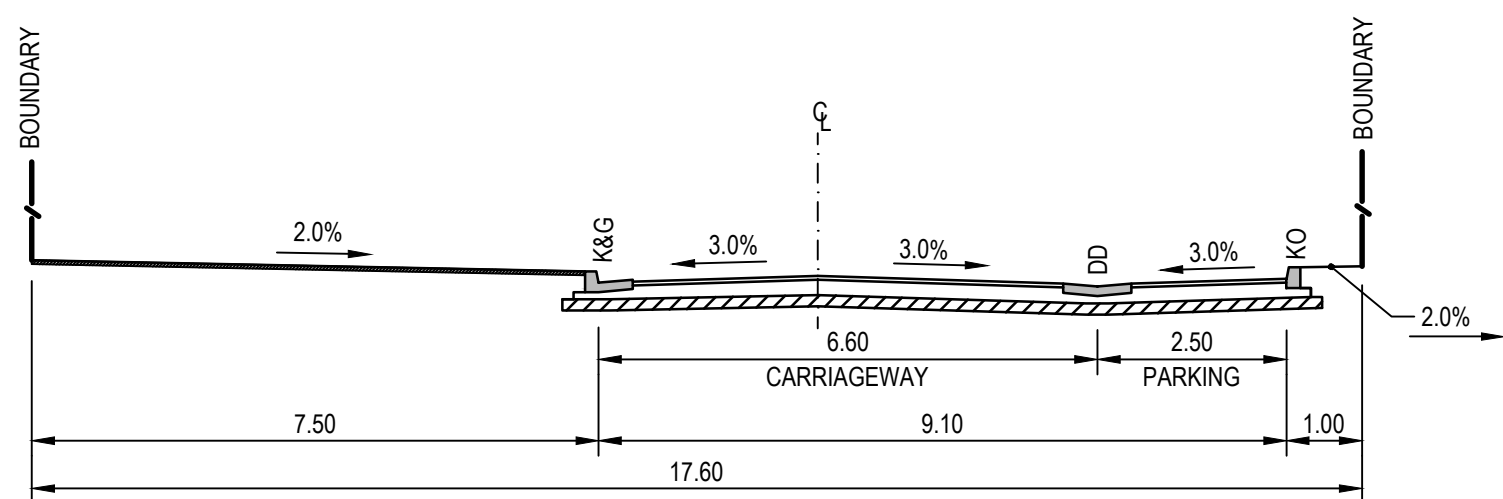
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V3 VILLAGE CENTRE LOCAL STREET

PAVEMENT TYPE 1
SCALE 1:100

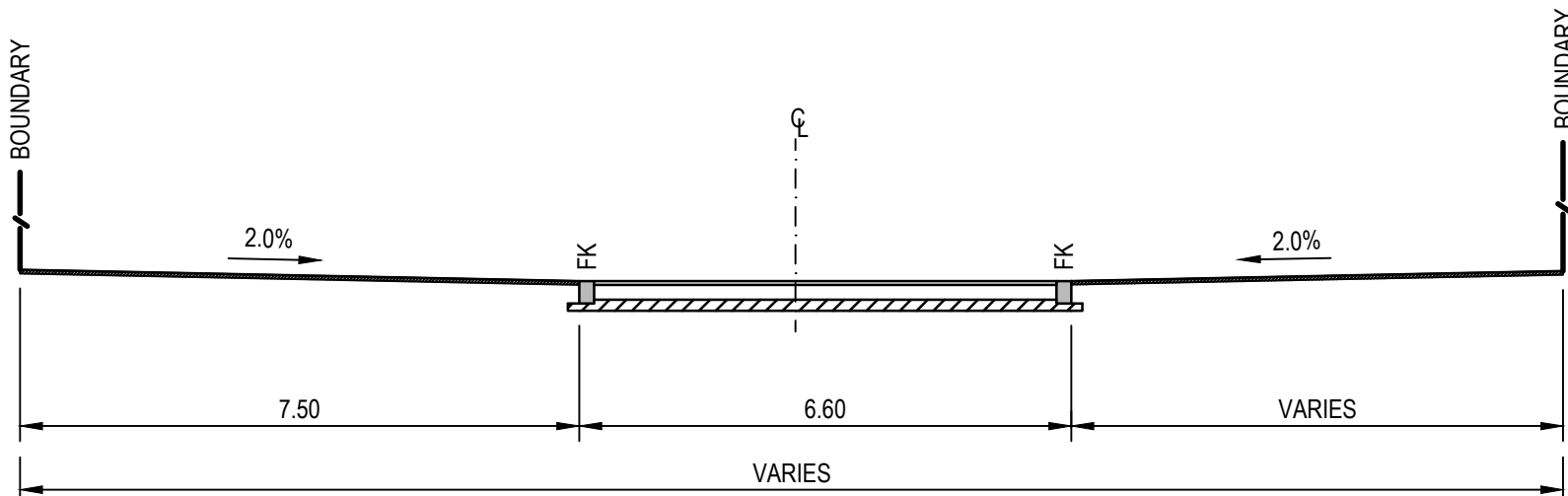
ROADS: 027 (CH141-167)



V4 VILLAGE CENTRE LOCAL STREET

PAVEMENT TYPE 1
SCALE 1:100

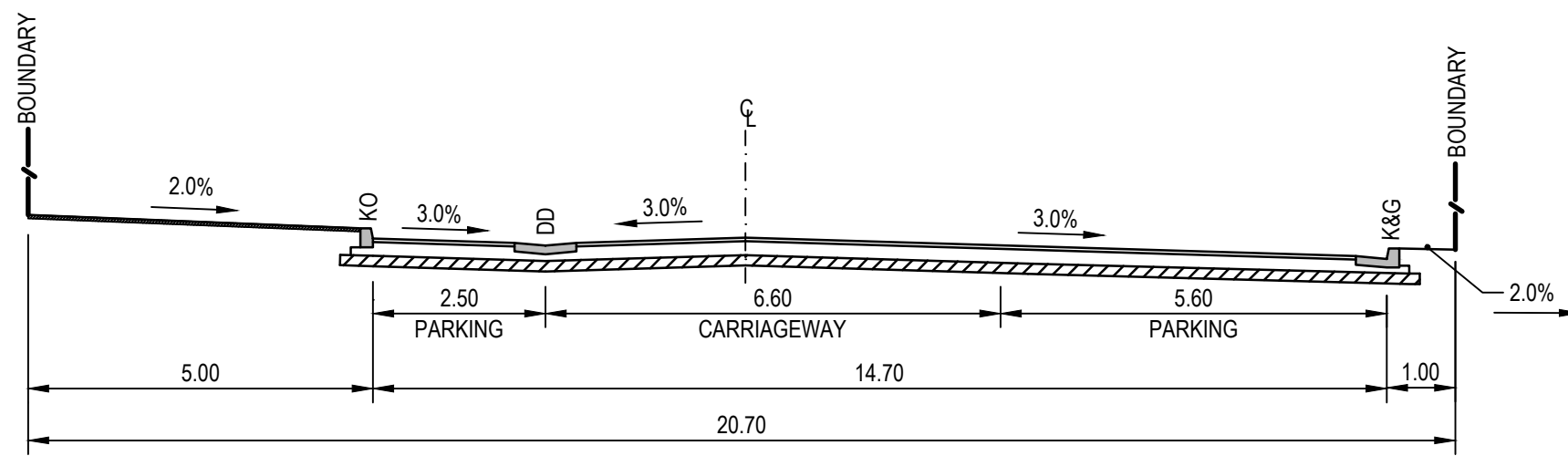
ROADS: 027 (CH32-48)



V5 VILLAGE CENTRE LOCAL STREET
(RAISED PEDESTRIAN CROSSING)

PAVEMENT TYPE 10
SCALE 1:100

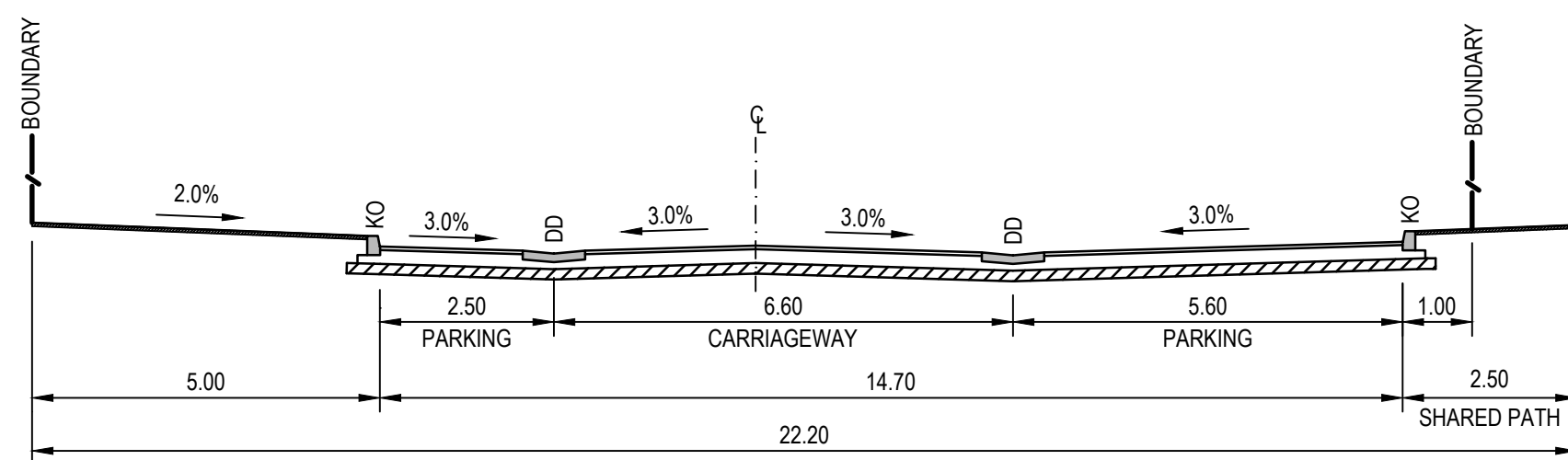
ROADS: 027 (CH60-68, CH188-197)



V6 VILLAGE CENTRE LOCAL STREET
(PARKING ON BOTH SIDES)

PAVEMENT TYPE 1
SCALE 1:100

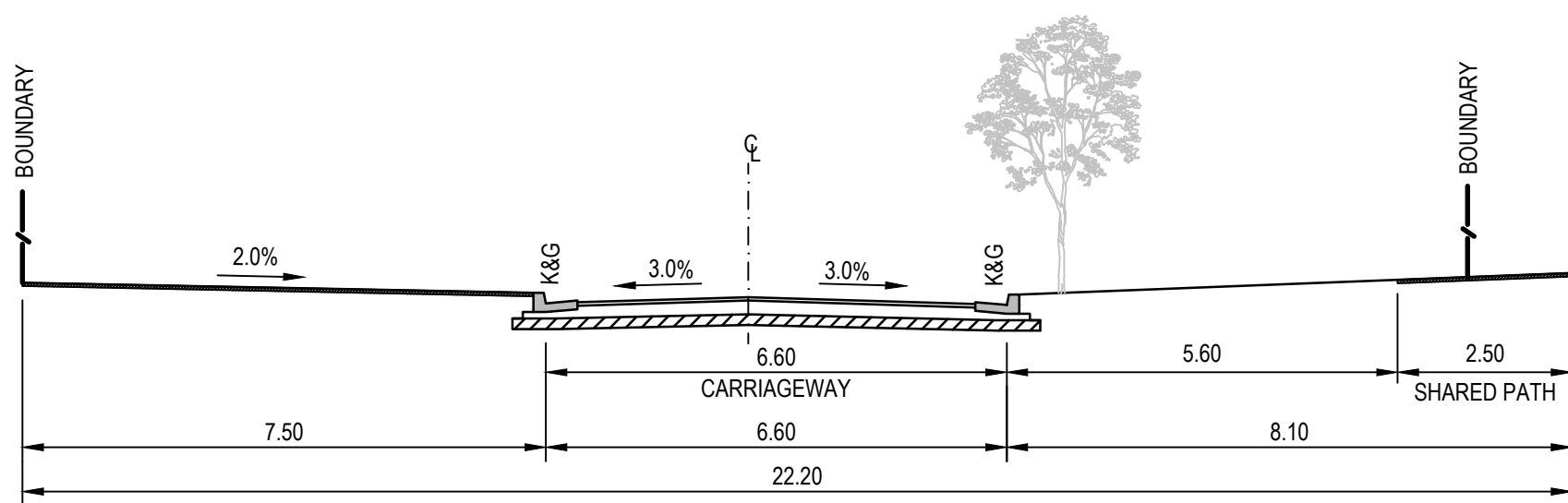
ROADS: 027 (CH70-141)



V7 VILLAGE CENTRE LOCAL STREET
(PARKING ON BOTH SIDES)

PAVEMENT TYPE 1
SCALE 1:100

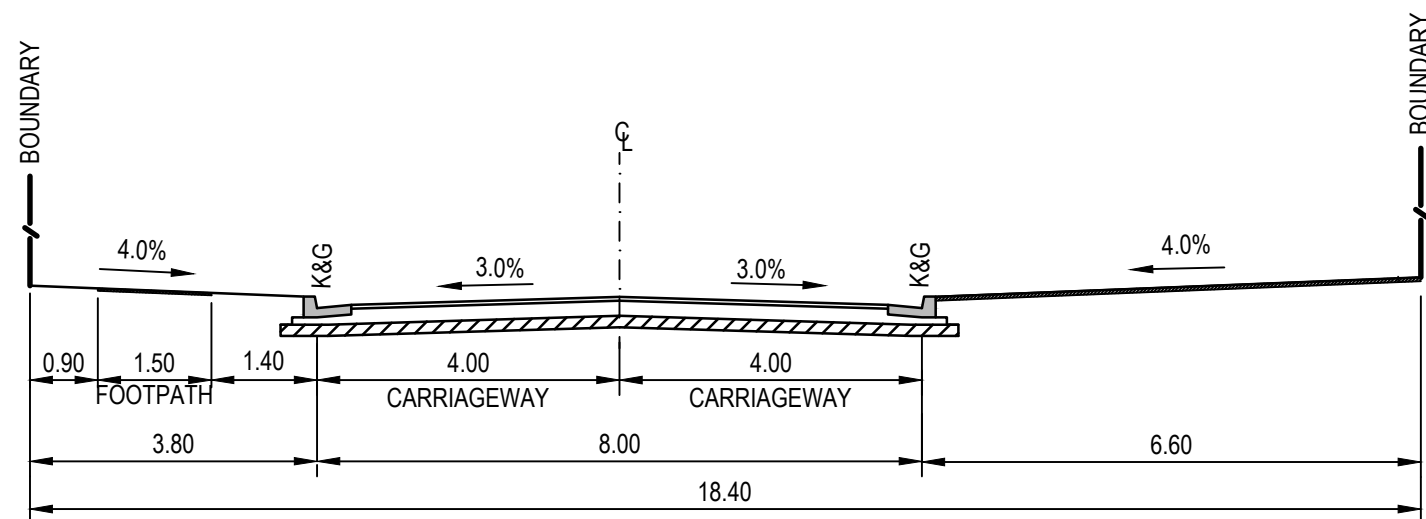
ROADS: 027 (CH167-188, CH197-237)



V8 VILLAGE CENTRE LOCAL STREET

PAVEMENT TYPE 1
SCALE 1:100

ROADS: 027 (CH237-255)



V9 VILLAGE CENTRE LOCAL STREET

PAVEMENT TYPE 2
SCALE 1:100

ROADS: 027 (CH293-301)

NOTES

- STREET SCAPES SHOWN ARE INDICATIVE ONLY AND SUBJECT TO DETAILED LANDSCAPING DESIGN AND APPROVAL
- FOOTPATHS TO BE GRADED AT MAXIMUM 2.0%. REMAINING VERGE AREAS TO BE GRADED TO ACHIEVE OVERALL 4.0% GRADE FROM TOP OF KERB TO ROAD RESERVE BOUNDARY.
- CONSTRUCTION OF FOOTPATH AND SHARED PATH TO BE DEFERRED UNTIL DIRECTED BY THE SITE SUPERINTENDENT.
- REFER DRAWINGS 1701 FOR PAVEMENT PLANS

0 1 2 4 6 8 10m

SCALE 1:100

@A1

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5	01.08.19	REISSUED FOR DEVELOPMENT APPLICATION APPROVAL	DAC	ARM	ARM
4	30.07.19	REISSUED FOR DEVELOPMENT APPLICATION APPROVAL	DAC	ARM	ARM
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2	14.06.18	REISSUED FOR DRAFT DEVELOPMENT APPLICATION	DAC	ARM	ARM
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DEVELOPMENT APPLICATION**

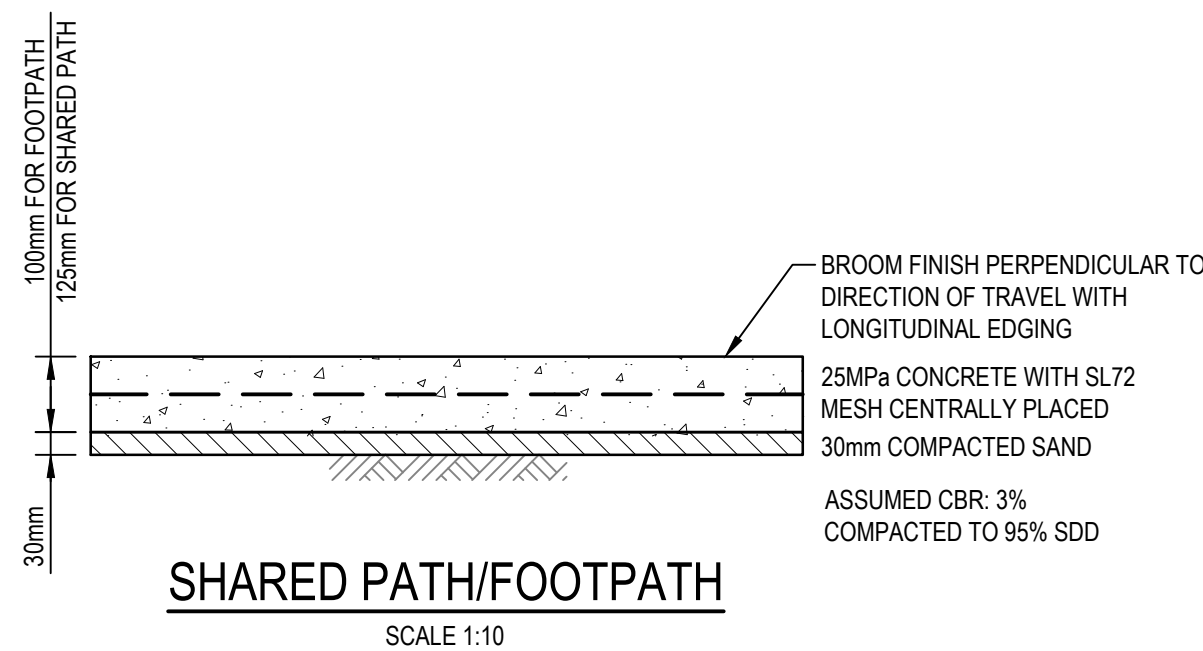
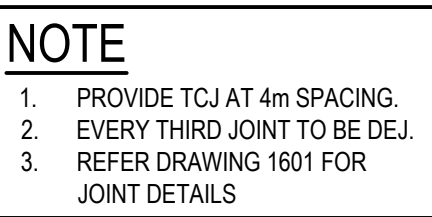
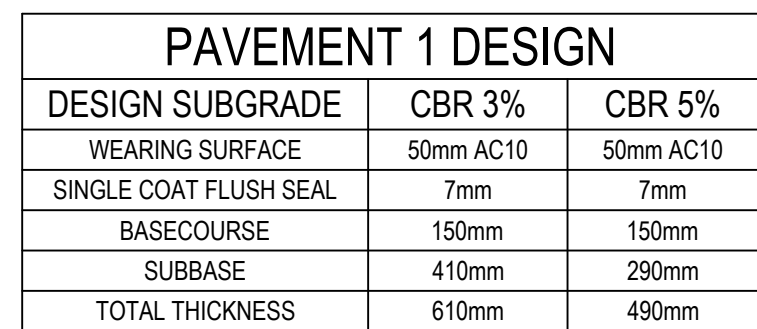
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AND PAVEMENT TYPES SHEET 1**

Status

FOR APPROVAL

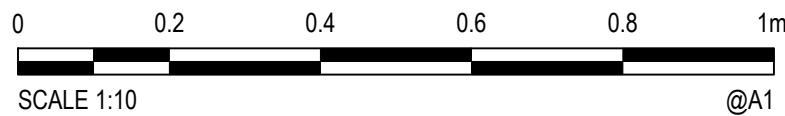
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Datum		Scale	Size
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Drawing Number			Revision
CV-CARDNO-ST03D-1251			5

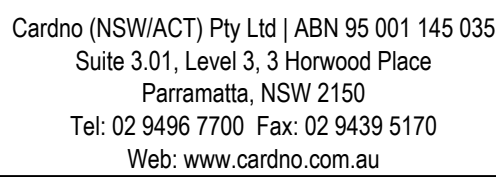


- ## NOTES
1. SAWCUT PATH OR TROWELLED DUMMY JOINT AT 2m SPACING.
 2. EVERY THIRD JOINT TO BE FULL DEPTH DOWELLED EXPANSION JOINT. REFER DRAWING 1601 FOR DETAILS.

- ## NOTES
1. STREET SCAPES SHOWN ARE INDICATIVE ONLY AND SUBJECT TO DETAILED LANDSCAPING DESIGN AND APPROVAL
 2. FOOTPATHS TO BE GRADED AT MAXIMUM 2.0% REMAINING VERGE AREAS TO BE GRADED TO ACHIEVE OVERALL 4.0% GRADE FROM TOP OF KERB TO ROAD RESERVE BOUNDARY.
 3. CONSTRUCTION OF FOOTPATH AND SHARED PATH TO BE DEFERRED UNTIL DIRECTED BY THE SITE SUPERINTENDENT.
 4. REFER DRAWINGS 1701 FOR PAVEMENT PLANS

[illegible]

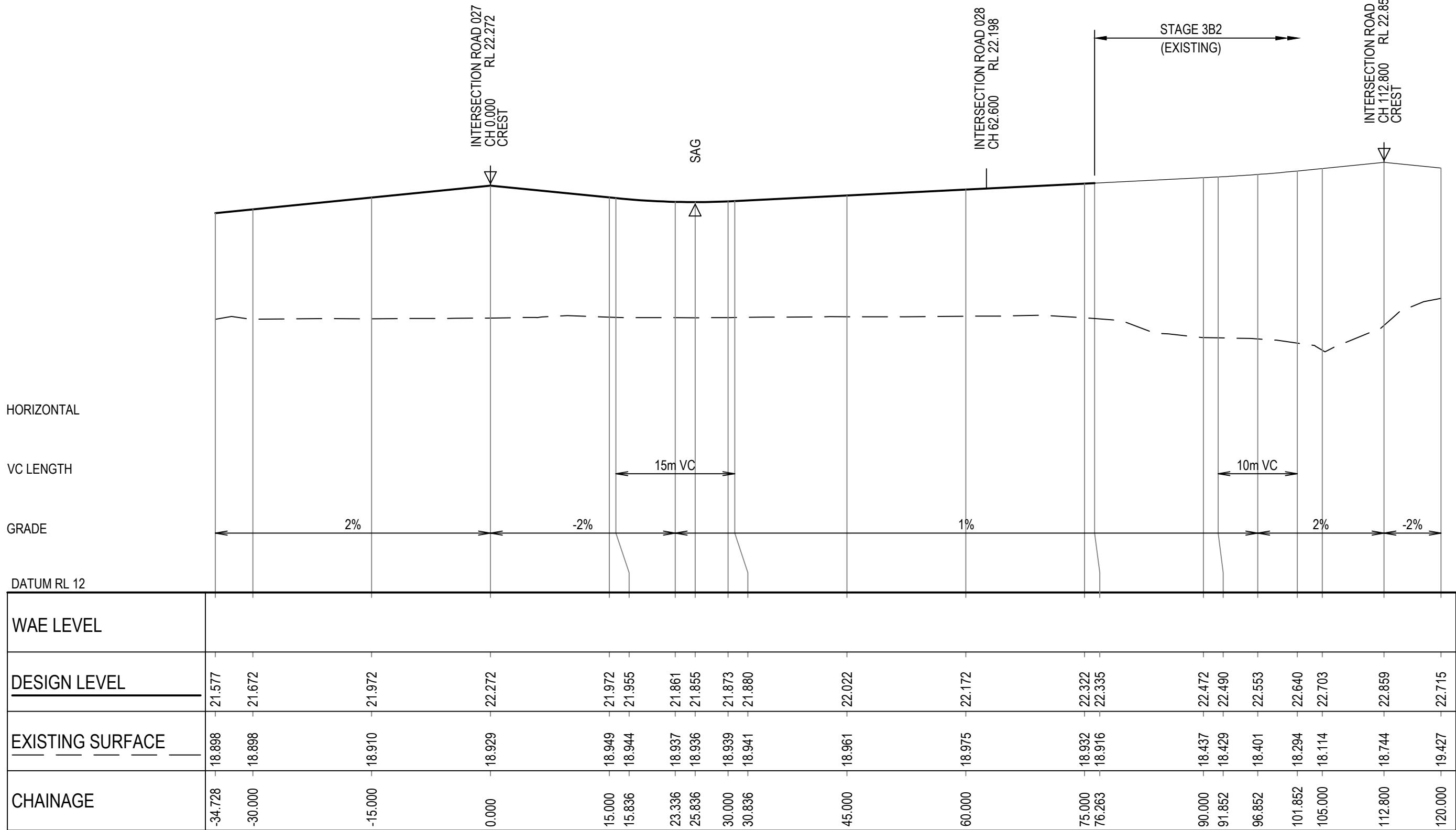
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MCD	22.02.19
Checked	Date
DAC	22.02.19
Designed	Date
DAC	22.02.19
Verified	Date
ARM	22.02.19
Approved	
ARM	22.02.19

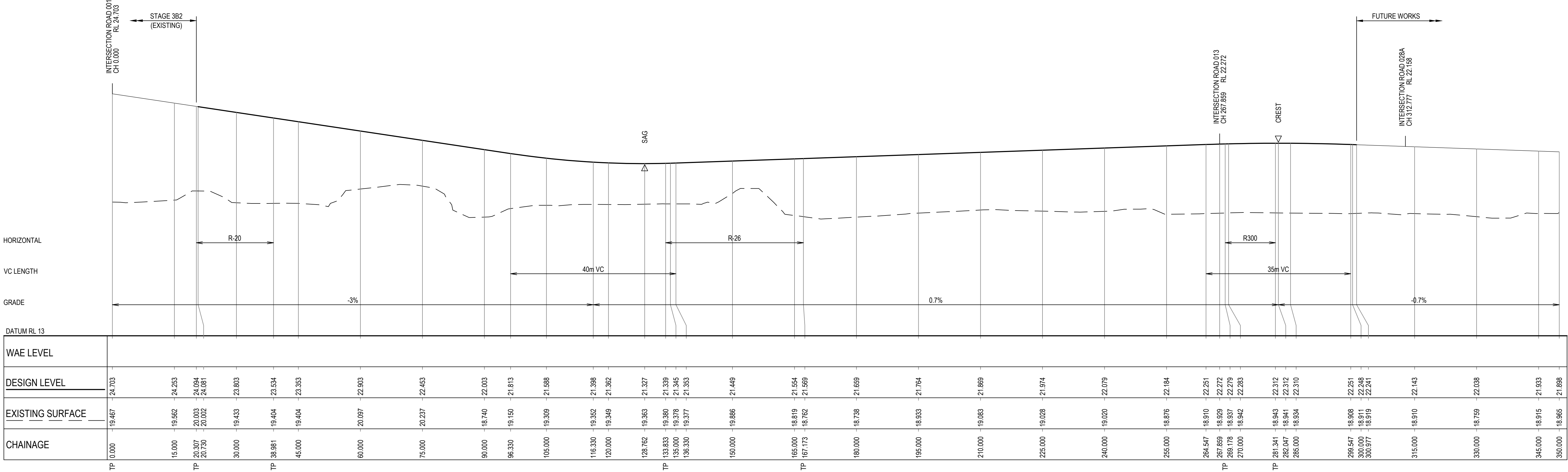
Project	JORDAN SPRINGS EAST STAGE 3D - CIVIL WORKS DEVELOPMENT APPLICATION
Title	TYPICAL ROAD CROSS SECTIONS AND PAVEMENT TYPES SHEET 2

Datum AHD	Scale 1:10	Size A1
Drawing Number CV GARDING ST22D 1250		Revision 5



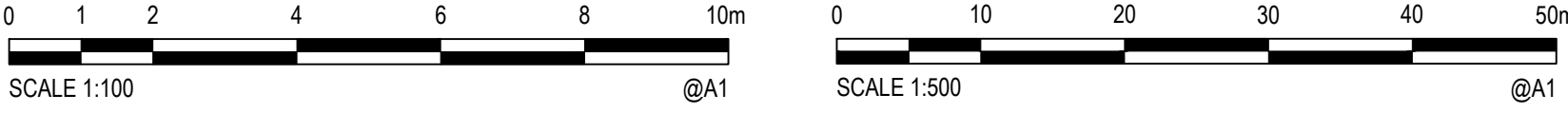
ROAD 013 LONGITUDINAL SECTION

1:500 HORI.
1:100 VERT.



ROAD 027 LONGITUDINAL SECTION

1:500 HORI.
1:100 VERT.



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Approved	ARM	Date	22.02.19

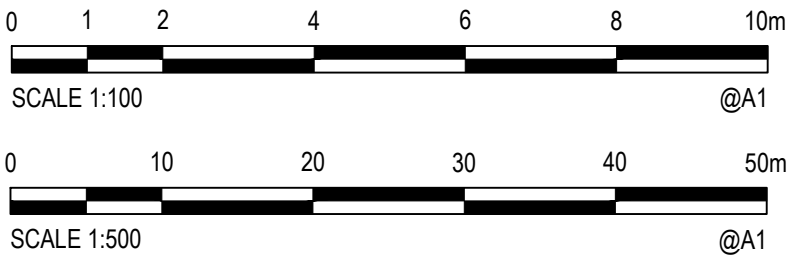
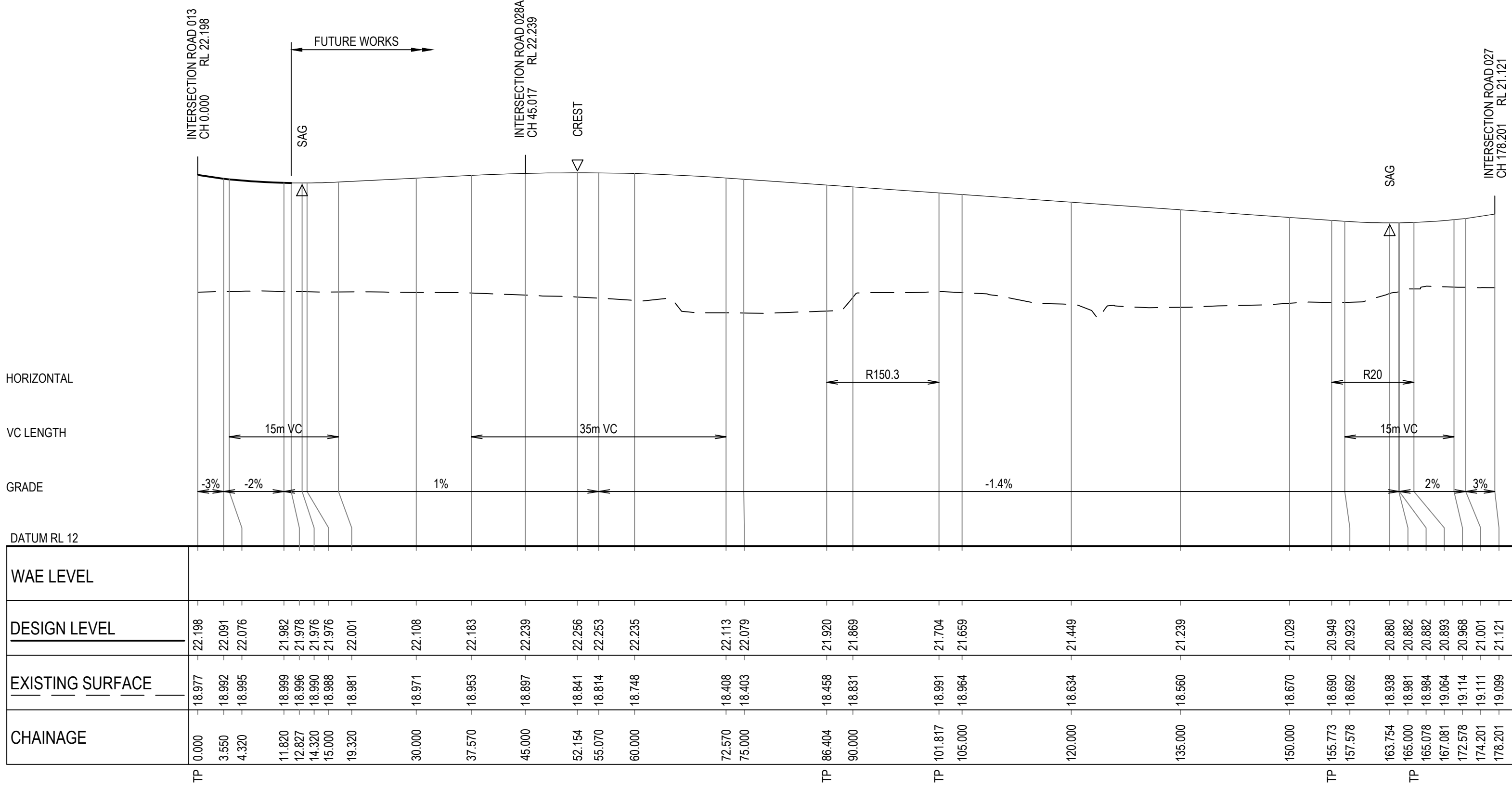
Client LENDLEASE

Project JORDAN SPRINGS EAST
STAGE 3D - CIVIL WORKS
DEVELOPMENT APPLICATION
ROAD LONGITUDINAL SECTIONS
SHEET 1 ROAD 013 & 027

Status				FOR APPROVAL	
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Datum	AHD		Scale	AS SHOWN	
Size			A1		
Drawing Number			CV-CARDNO-ST03D-1351		
			Revision		
			3		

3	30.07.19	REISSUED FOR DEVELOPMENT APPLICATION APPROVAL	DAC	ARM	ARM
2	22.02.19	ISSUED FOR DEVELOPMENT APPLICATION APPROVAL	DAC	ARM	ARM
1	05.06.18	ISSUED FOR DRAFT DEVELOPMENT APPLICATION	DAC	ARM	ARM
Rev.	Date	Description	Des.	Verif.	Appd.

DATE PLOTTED: 30 July 2019 3:31 PM BY: MARY DOZA



XREFs: X:LS-ROAD-0131; X:LS-ROAD-0271; X:LS-ROAD-0281; Xref-89914020-Client-Logos
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3	30.07.19	REISSUED FOR DEVELOPMENT APPLICATION APPROVAL	DAC	ARM	ARM
2	22.02.19	ISSUED FOR DEVELOPMENT APPLICATION APPROVAL	DAC	ARM	ARM
1	05.06.18	ISSUED FOR DRAFT DEVELOPMENT APPLICATION	DAC	ARM	ARM
Rev.	Date	Description	Des.	Verif.	Appd.



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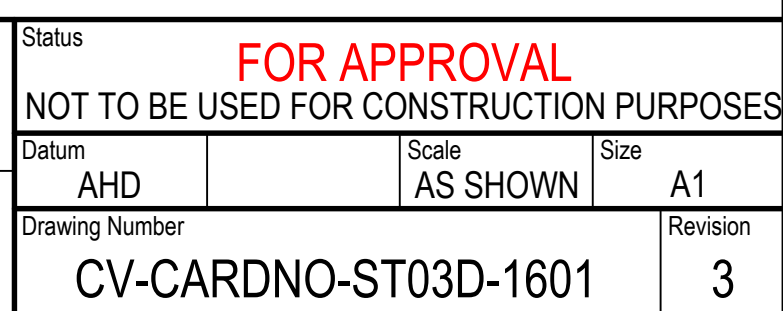


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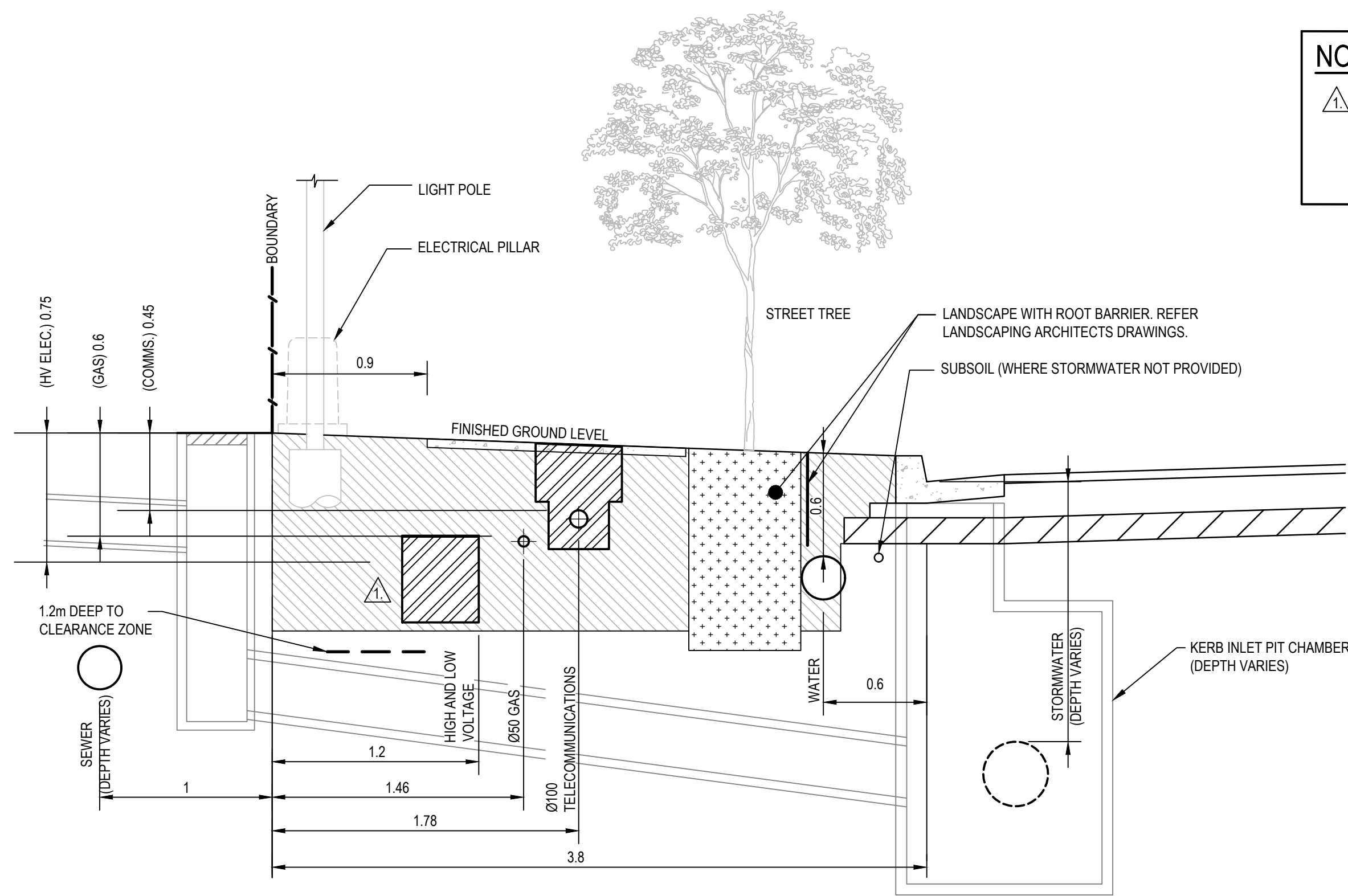
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Checked	DAC	Date	22.02.19
Designed	DAC	Date	22.02.19
Verified	ARM	Date	22.02.19
Approved			
ARM		22.02.19	

Client	LENDELEASE
Project	JORDAN SPRINGS EAST STAGE 3D - CIVIL WORKS DEVELOPMENT APPLICATION
Title	ROAD LONGITUDINAL SECTIONS SHEET 2 ROAD 028

Status	FOR APPROVAL NOT TO BE USED FOR CONSTRUCTION PURPOSES
Datum	AHD
Scale	AS SHOWN
Size	A1
Drawing Number	CV-CARDNO-ST03D-1352
Revision	3

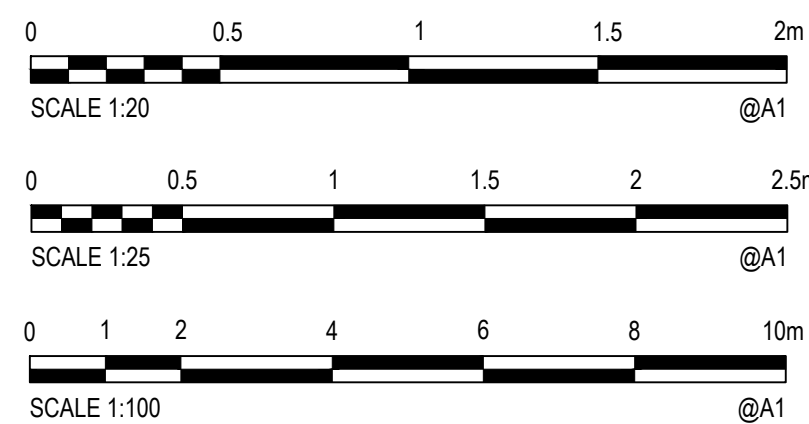
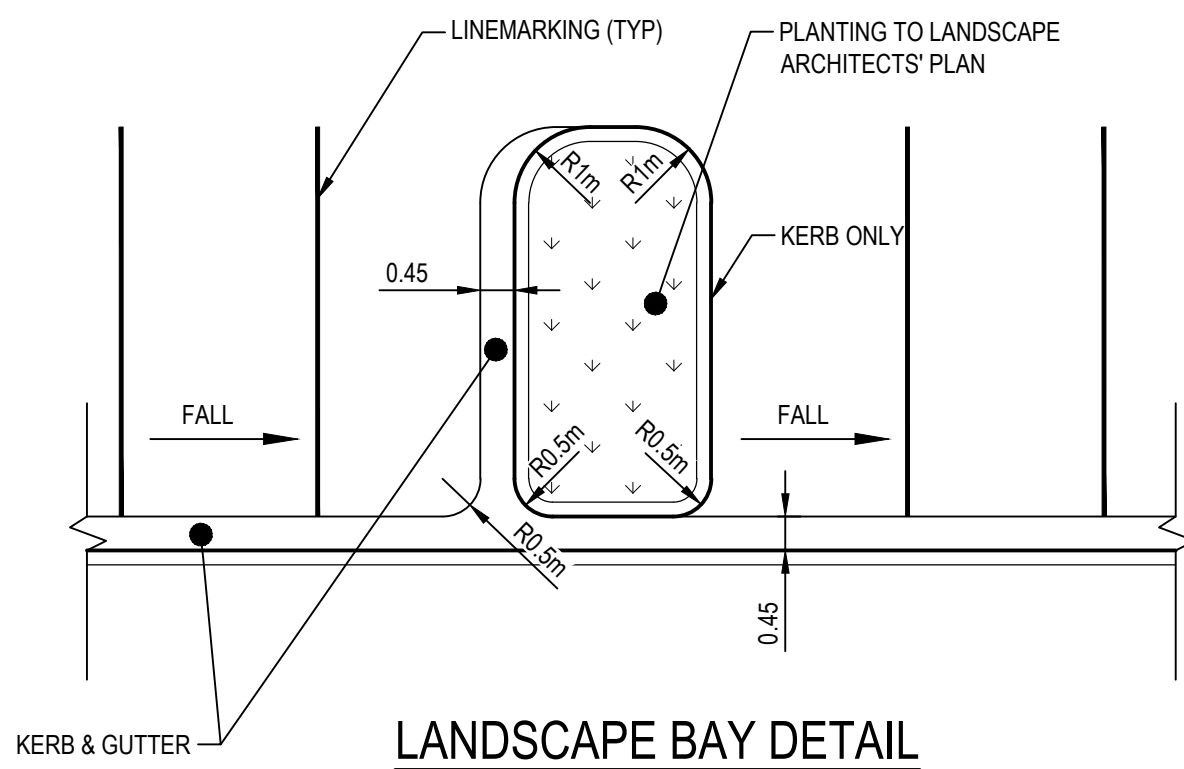
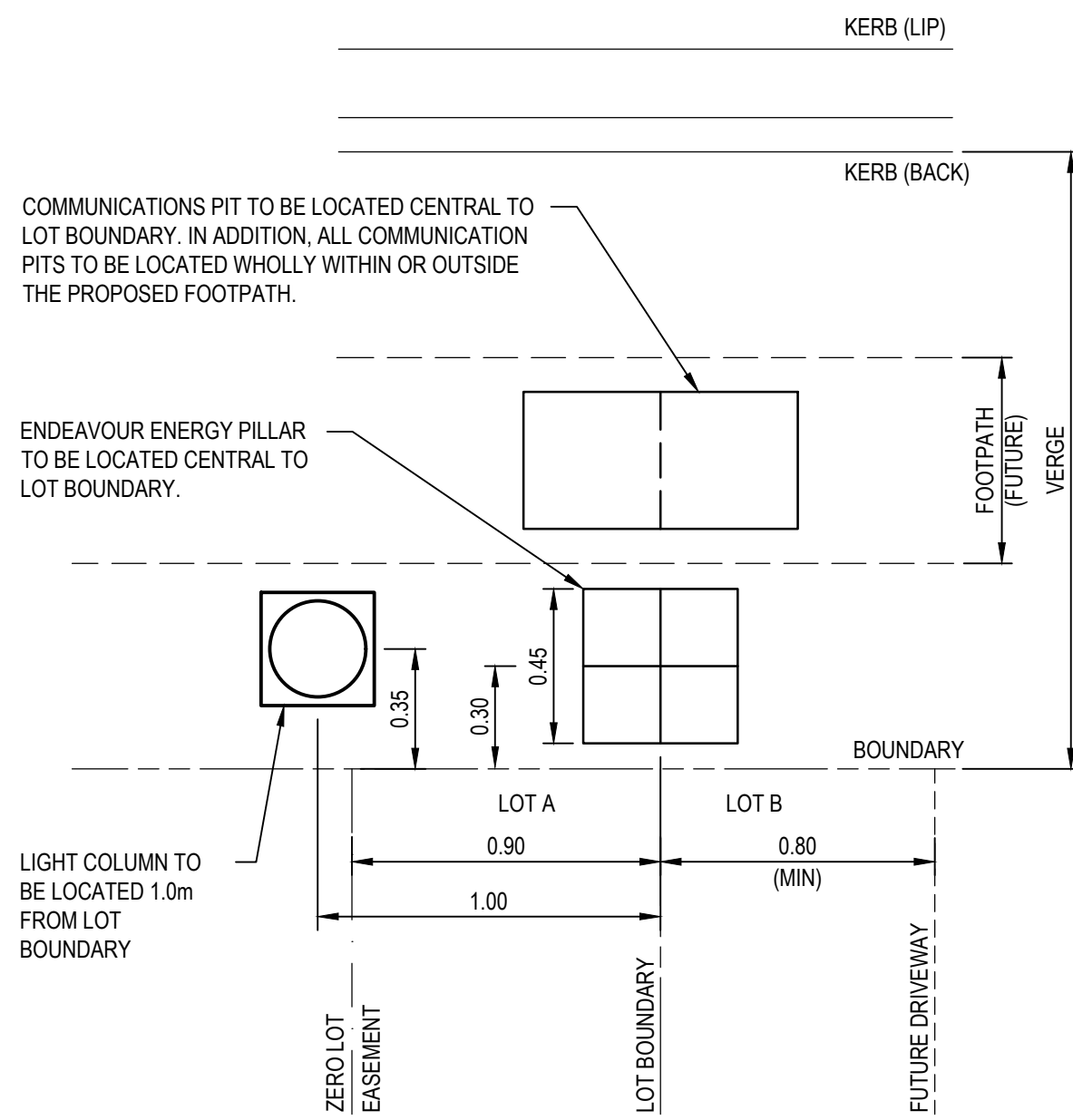
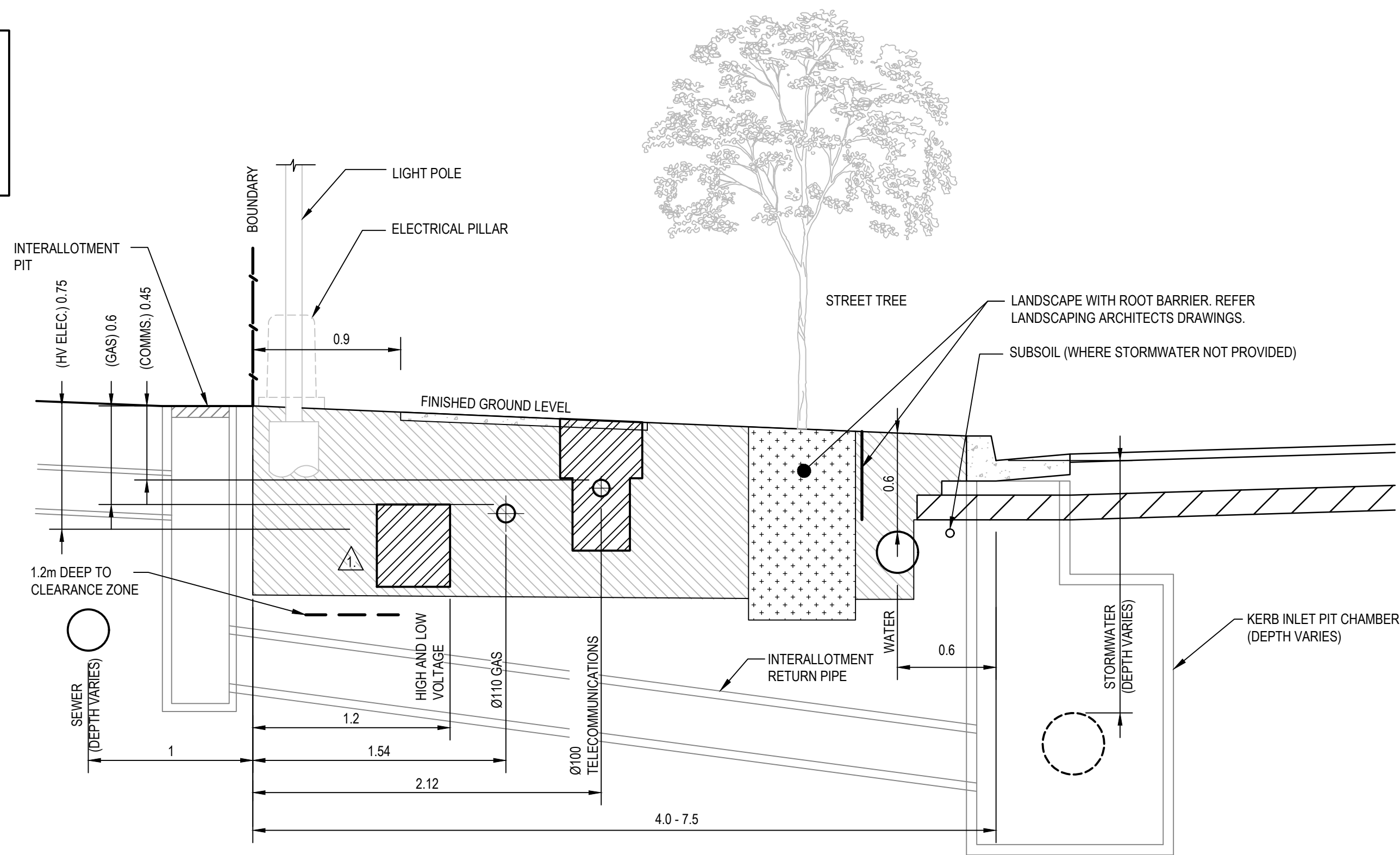


DATE PLOTTED: 30 JULY 2019 3:31 PM BY: MARY DOZA



NOTE

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



XREFs: XR-88914020-21-CI-DESIGN, Xref-88914020-Client Logos, XR-88914020-21-CI-DRAINAGE
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Rev	Date	Description	Des.	Verif.	Appd.
3	30.07.19	REISSUED FOR DEVELOPMENT APPLICATION APPROVAL	DAC	ARM	ARM
2	22.02.19	ISSUED FOR DEVELOPMENT APPLICATION APPROVAL	DAC	ARM	ARM
1	05.06.18	ISSUED FOR DRAFT DEVELOPMENT APPLICATION	DAC	ARM	ARM

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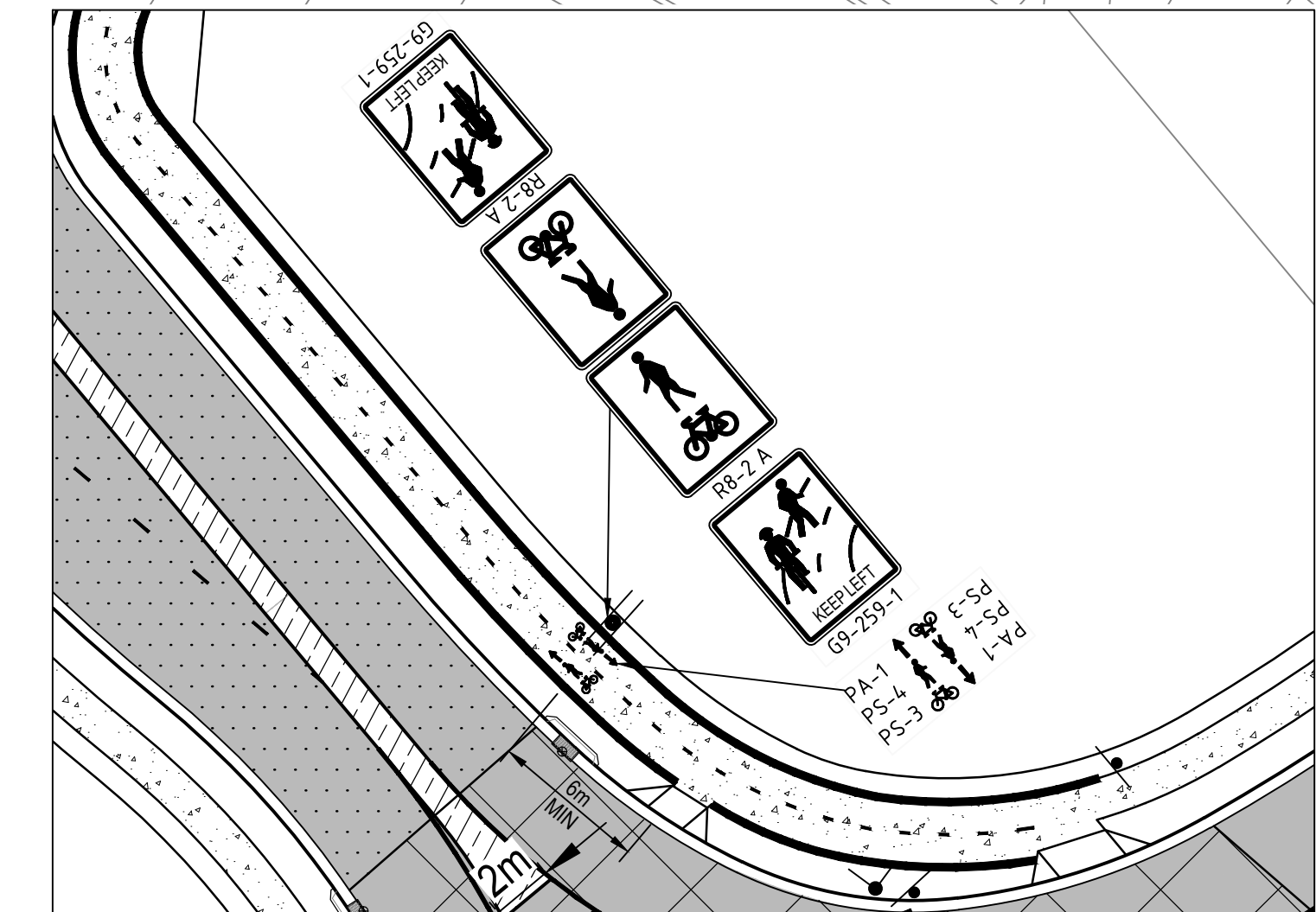
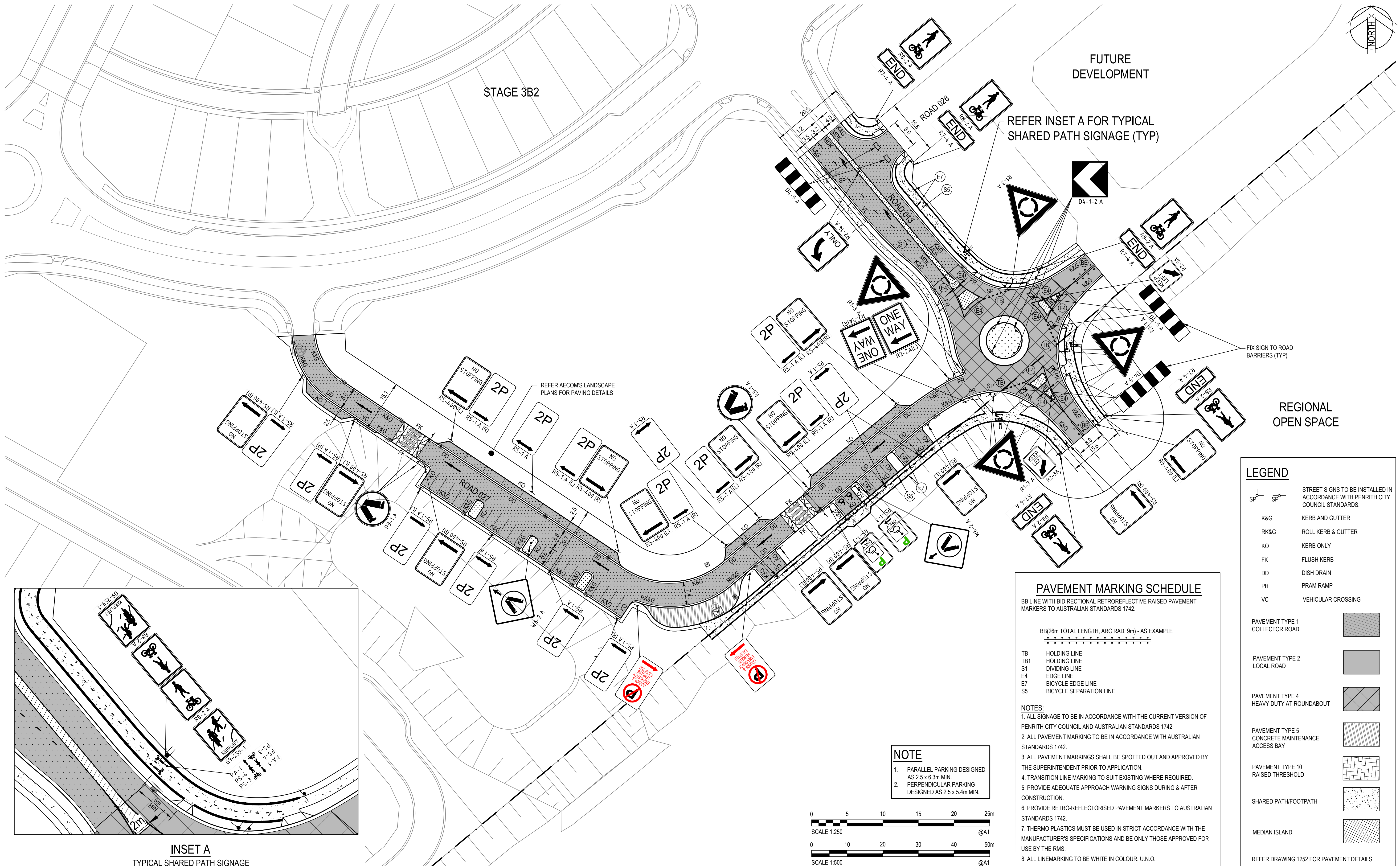
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Client	LENDELEASE
Project	JORDAN SPRINGS EAST STAGE 3D - CIVIL WORKS DEVELOPMENT APPLICATION
Title	CIVIL WORKS DETAILS SHEET 2

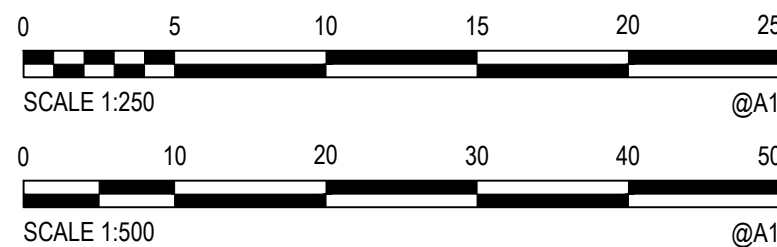
Status	FOR APPROVAL
Datum	AHD
Scale	AS SHOWN
Size	A1
Drawing Number	CV-CARDNO-ST03D-1602
Revision	3



INSET A
TYPICAL SHARED PATH SIGNAGE
SCALE 1:250

NOTE

1. PARALLEL PARKING DESIGNED AS 2.5 x 6.3m MIN.
2. PERPENDICULAR PARKING DESIGNED AS 2.5 x 5.4m MIN.



PAVEMENT MARKING SCHEDULE

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

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

TB HOLDING LINE
TB1 HOLDING LINE
S1 DIVIDING LINE
E4 EDGE LINE
E7 BICYCLE EDGE LINE
S5 BICYCLE SEPARATION LINE

- NOTES:**
1. ALL SIGNAGE TO BE IN ACCORDANCE WITH THE CURRENT VERSION OF PENRITH CITY COUNCIL AND AUSTRALIAN STANDARDS 1742.
 2. ALL PAVEMENT MARKING TO BE IN ACCORDANCE WITH AUSTRALIAN STANDARDS 1742.
 3. ALL PAVEMENT MARKINGS SHALL BE SPOTTED OUT AND APPROVED BY THE SUPERINTENDENT PRIOR TO APPLICATION.
 4. TRANSITION LINE MARKING TO SUIT EXISTING WHERE REQUIRED.
 5. PROVIDE ADEQUATE APPROACH WARNING SIGNS DURING & AFTER CONSTRUCTION.
 6. PROVIDE RETRO-REFLECTORISED PAVEMENT MARKERS TO AUSTRALIAN STANDARDS 1742.
 7. THERMO PLASTICS MUST BE USED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND BE ONLY THOSE APPROVED FOR USE BY THE RMS.
 8. ALL LINEMARKING TO BE WHITE IN COLOUR. U.N.O.

LEGEND

SP STREET SIGNS TO BE INSTALLED IN ACCORDANCE WITH PENRITH CITY COUNCIL STANDARDS.

K&G KERB AND GUTTER
RK&G ROLL KERB & GUTTER
KO KERB ONLY
FK FLUSH KERB
DD DISH DRAIN
PR PRAM RAMP
VC VEHICULAR CROSSING

PAVEMENT TYPE 1 COLLECTOR ROAD

PAVEMENT TYPE 2 LOCAL ROAD

PAVEMENT TYPE 4 HEAVY DUTY AT ROUNDABOUT

PAVEMENT TYPE 5 CONCRETE MAINTENANCE ACCESS BAY

PAVEMENT TYPE 10 RAISED THRESHOLD

SHARED PATH/FOOTPATH

MEDIAN ISLAND

REFER DRAWING 1252 FOR PAVEMENT DETAILS

Rev.	Date	Description	Des.	Verif.	Appd.
5	30.07.19	REISSUED FOR DEVELOPMENT APPLICATION APPROVAL	DAC	ARM	ARM
4	15.05.19	REISSUED FOR DEVELOPMENT APPLICATION APPROVAL	DAC	ARM	ARM
3	22.02.19	ISSUED FOR DEVELOPMENT APPLICATION APPROVAL	DAC	ARM	ARM
2	14.06.18	REISSUED FOR DRAFT DEVELOPMENT APPLICATION	DAC	ARM	ARM
1	05.06.18	ISSUED FOR DRAFT DEVELOPMENT APPLICATION	DAC	ARM	ARM

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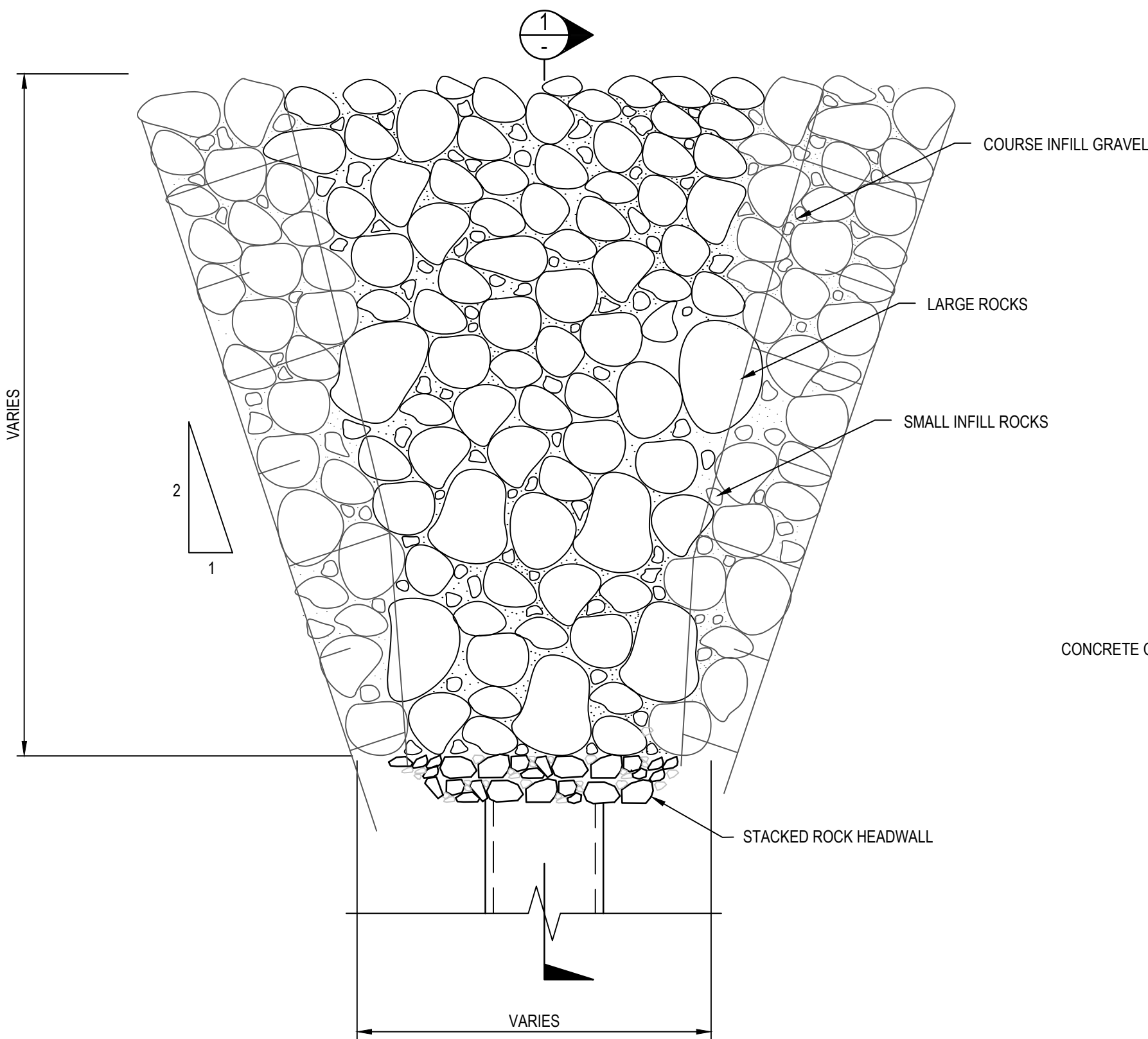
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Checked DAC Date 22.02.19
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Client **LENLEASE**
Project **JORDAN SPRINGS EAST
STAGE 3D - CIVIL WORKS
DEVELOPMENT APPLICATION
PAVEMENT, SIGNAGE & LINEMARKING
PLAN**

Status **FOR APPROVAL**
NOT TO BE USED FOR CONSTRUCTION PURPOSES
Datum **AHD** Scale **AS SHOWN** Size **A1**
Drawing Number **CV-CARDNO-ST03D-1701** Revision **5**

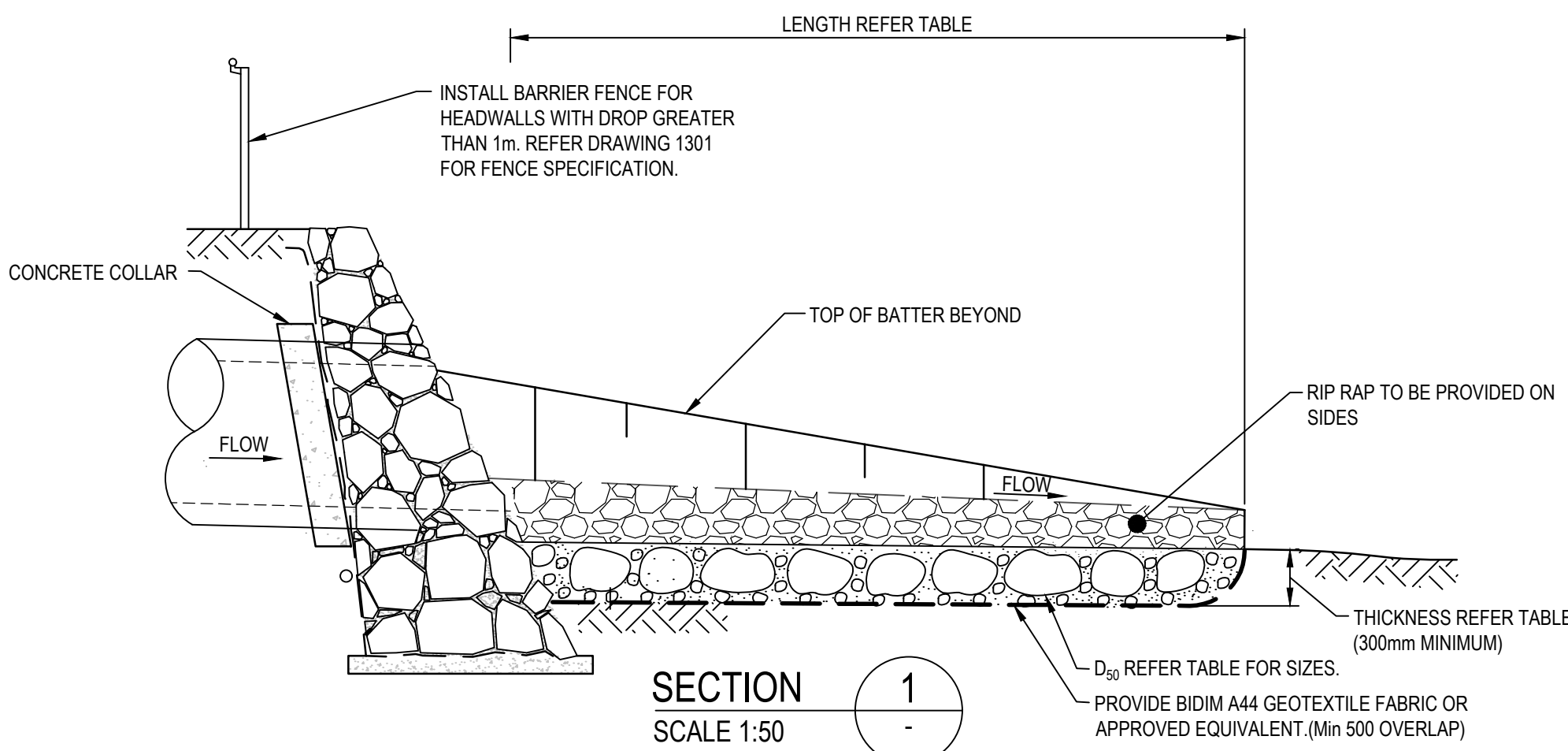


TYPICAL OUTLET HEADWALL SCOUR PROTECTION PLAN
SCALE 1:50

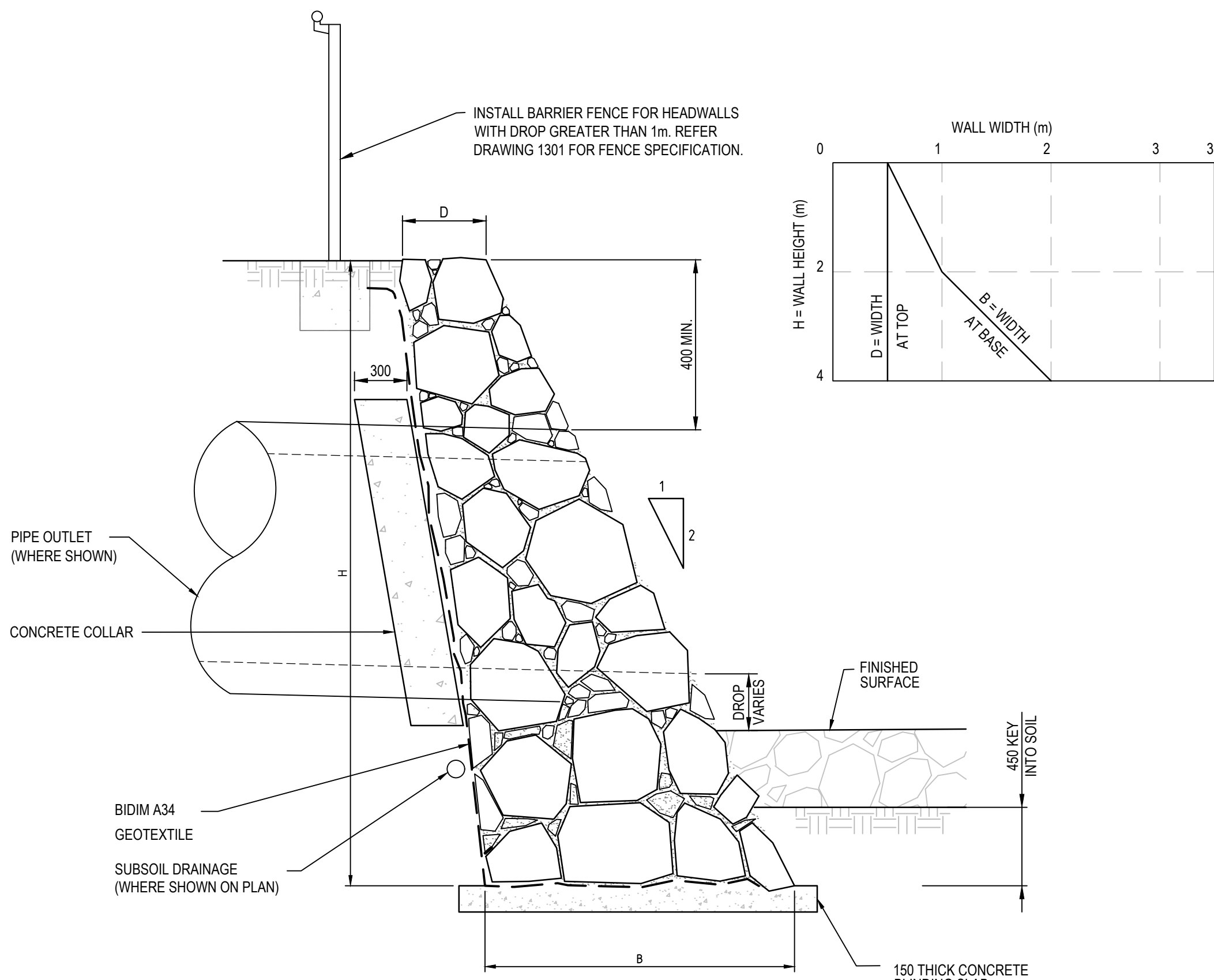
HEADWALL RIP-RAP SCOUR PROTECTION (MINIMUM DIMENSIONS)				
OUTLET NUMBER	LENGTH (mm)	WIDTH (mm)	THICKNESS (mm)	D50 (mm)
x	x	x	x	x

NOTE:

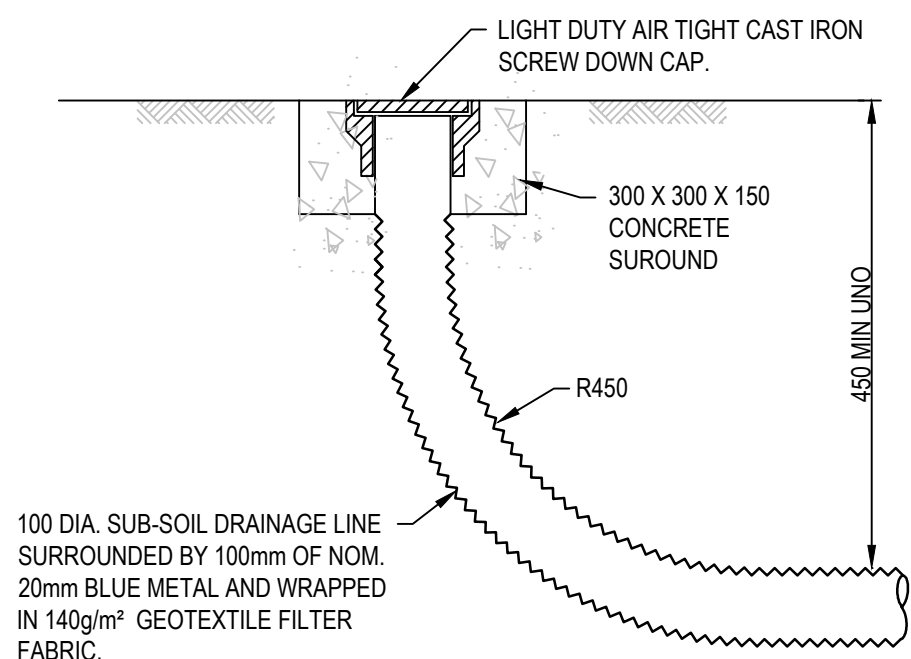
1. TABLE VALUES TO BE DETERMINED AT DETAILED DESIGN.



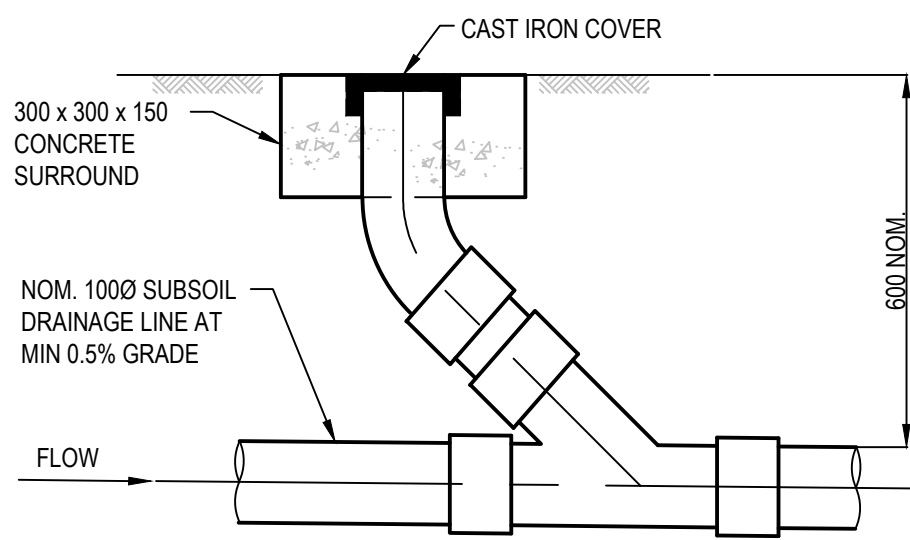
TYPICAL OUTLET HEADWALL SCOUR PROTECTION DETAIL
SCALE 1:50



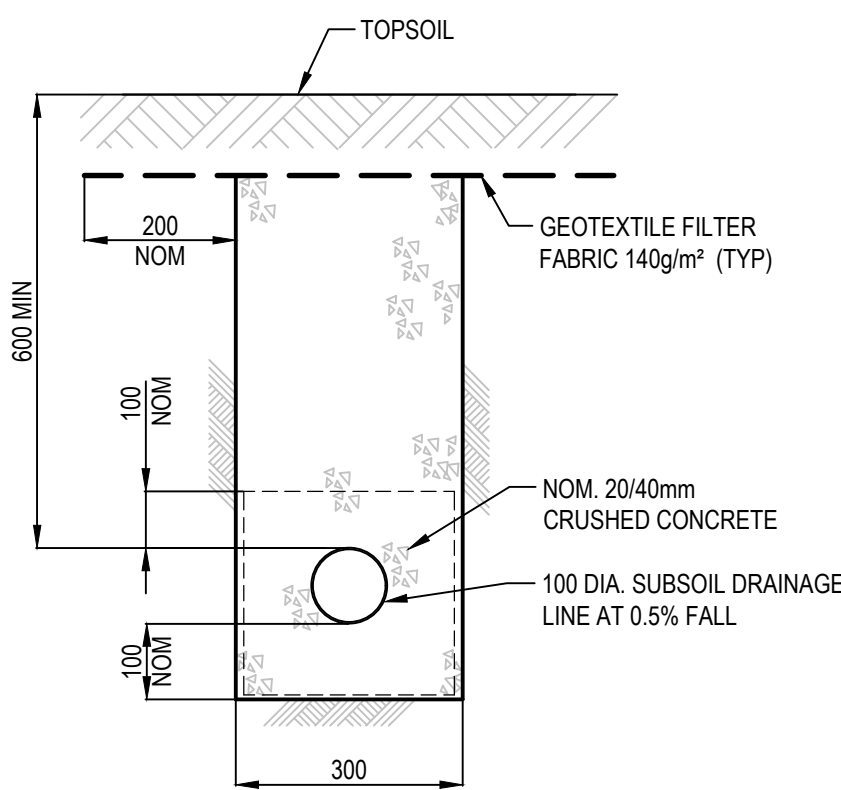
STACKED ROCK HEADWALL
SCALE 1:25



FLUSHING POINT
SCALE 1:10



INTERMEDIATE RISER
SCALE 1:10



SUBSOIL IN LANDSCAPED AREAS
SCALE 1:10

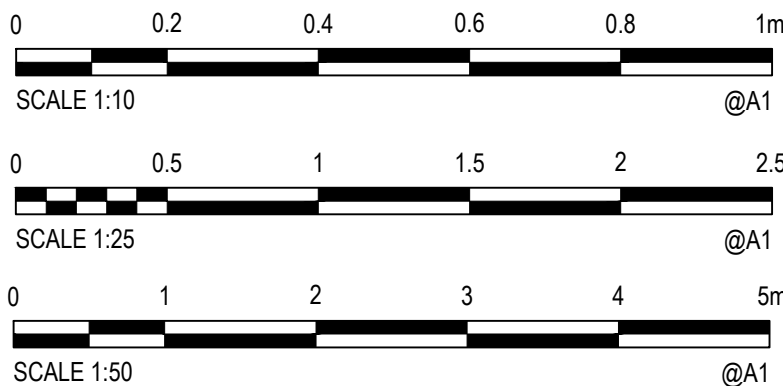
NOTES:

ROCK RIPRAP

1. ALL RIPRAP MUST CONSIST OF ANGULAR RUN-OF-QUARRY DURABLE ROCK PLACED OVER A 200MM LAYER OF ANGULAR COBBLES D50=100MM MIXED WITH GRAVEL D50=10MM.
2. ALL ROCK IS TO BE A HARD, DURABLE ROCK WITH A POINT INDEX LOAD IS50 GREATER THAN 1.0MPA AS DETERMINED IN ACCORDANCE WITH AS4133.4.1-2007.
3. RIPRAP IS TO BE PLACED BY HAND AND CROW-BARERED INTO PLACE TO ENSURE FIT WITH MINIMUM VOIDS.
4. ALL ROCK AND COBBLES TO BE PLACED WITH TOPSOIL. GAPS IN RIPRAP TO BE PLANTED AS SPECIFIED IN LANDSCAPING PLANS.
 - 4.1. M50 - 60KG (NDW 300MD)
 - 4.2. M15 - 25KG
 - 4.3. 100 - 120KG

SUBSOIL DRAINAGE BEHIND KERB

REFER PENRITH CITY COUNCIL STANDARD DRAWING SD2004 FOR DETAILS.



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3	30.07.19	REISSUED FOR DEVELOPMENT APPLICATION APPROVAL	DAC	ARM	ARM
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1	05.06.18	ISSUED FOR DRAFT DEVELOPMENT APPLICATION	DAC	ARM	ARM

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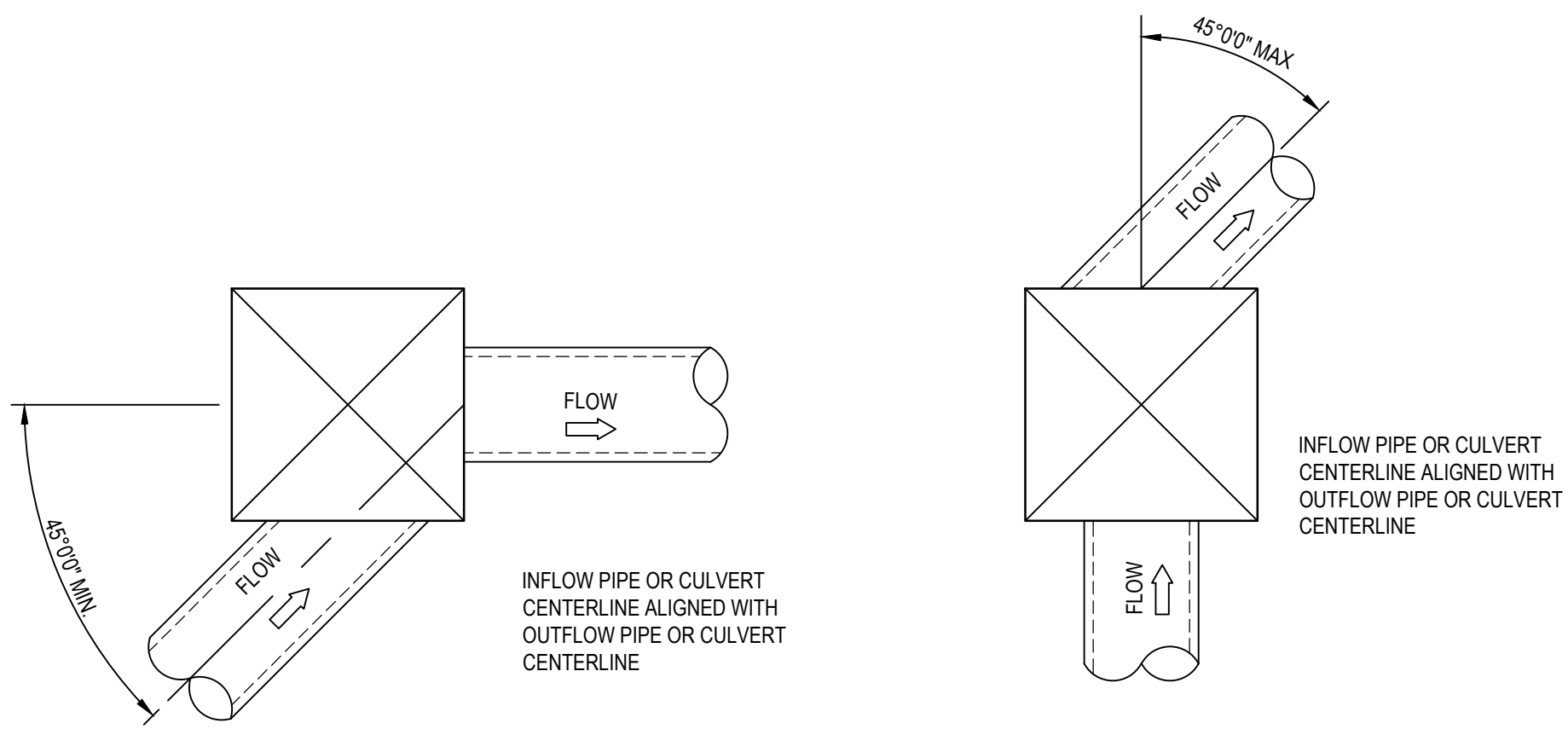
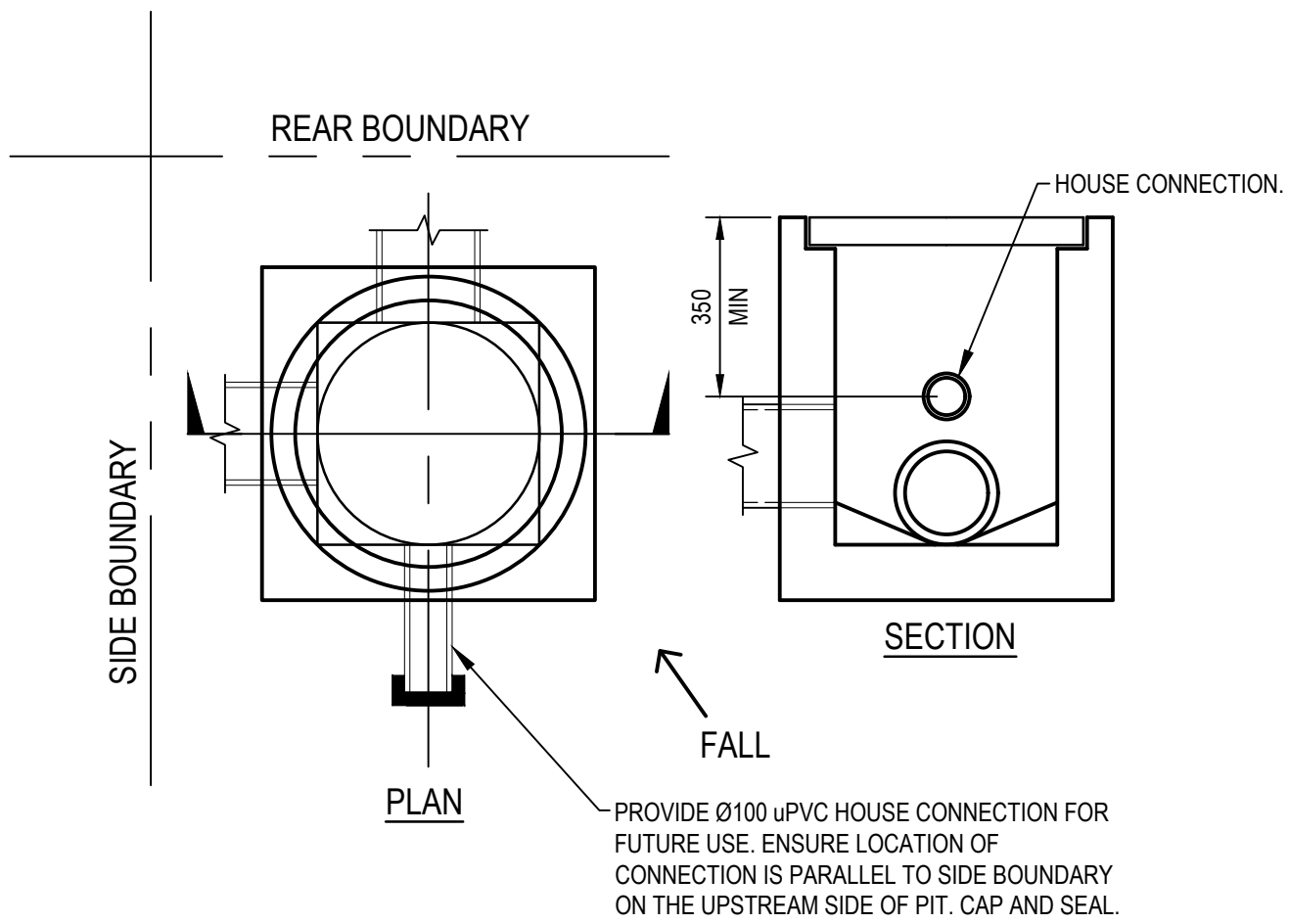
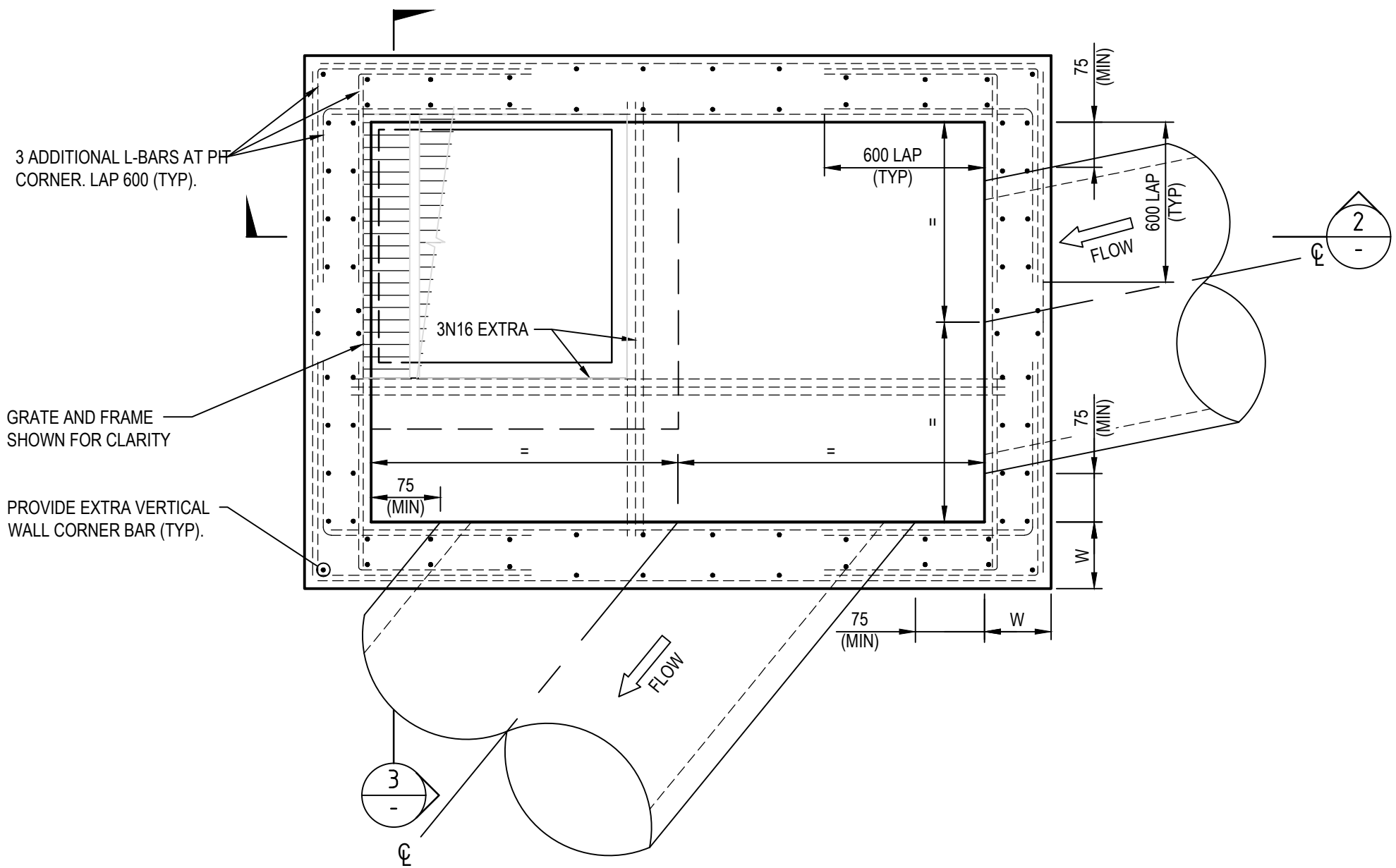
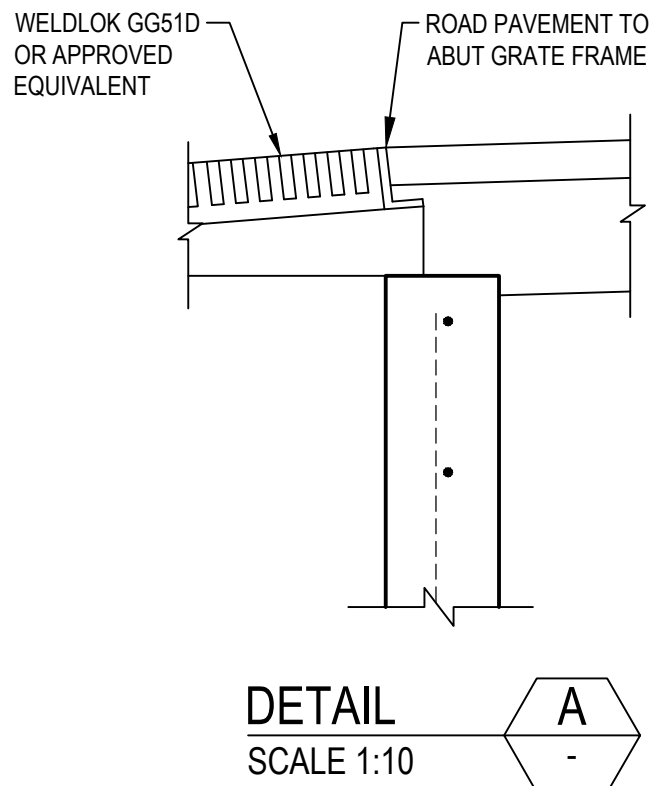
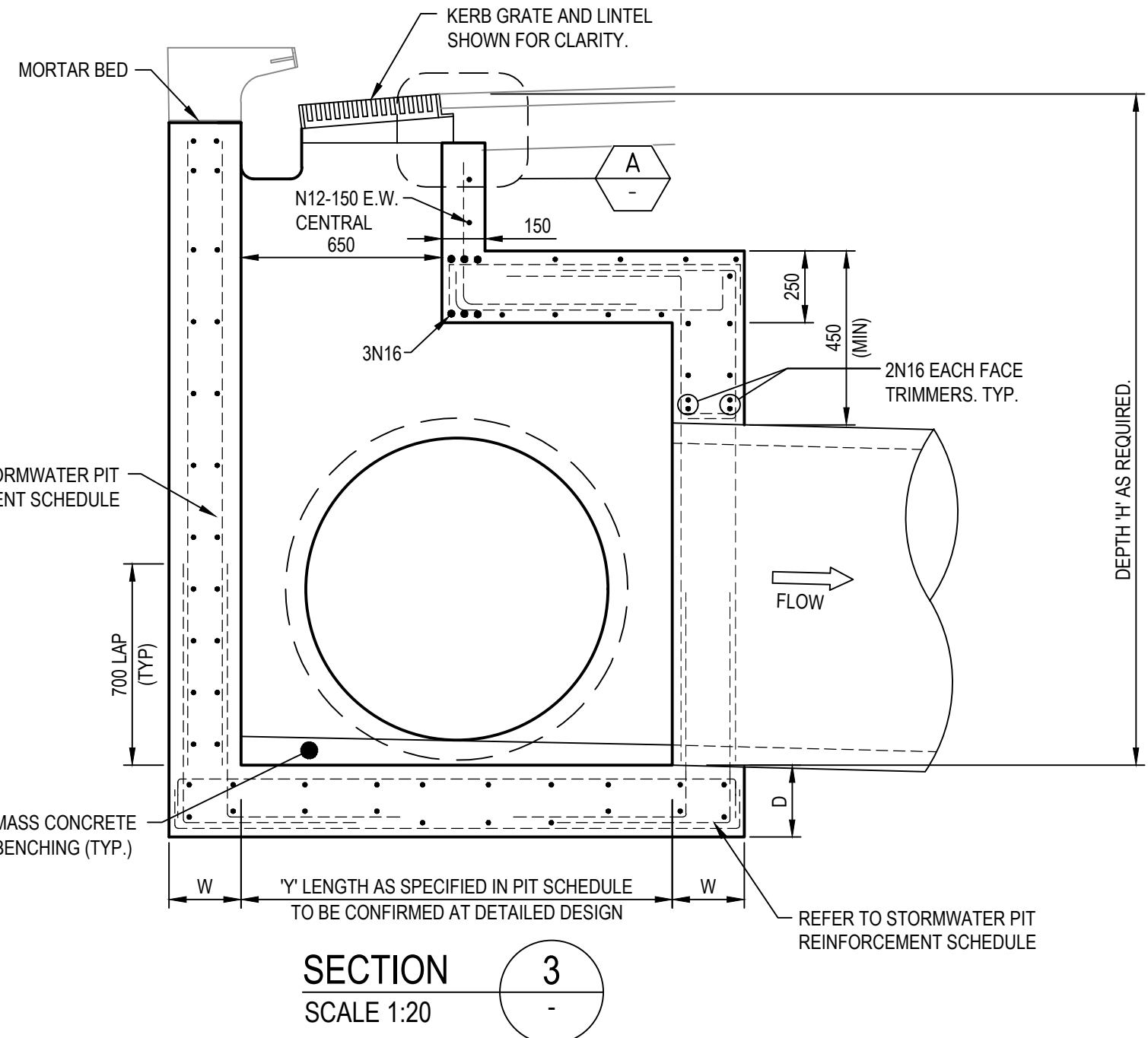
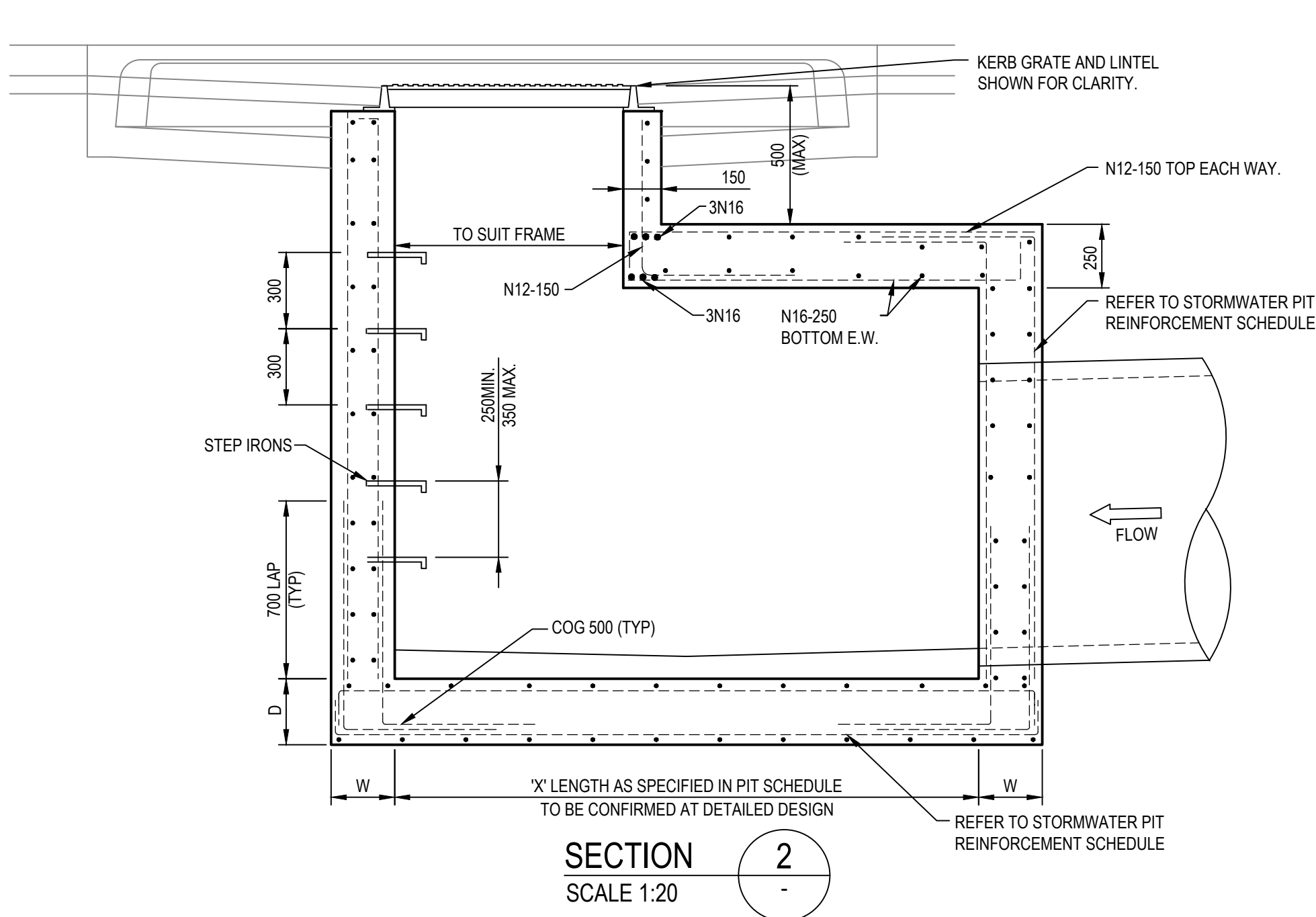
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Approved	ARM	Date	22.02.19

Client	LENLEASE
Project	JORDAN SPRINGS EAST STAGE 3D - CIVIL WORKS DEVELOPMENT APPLICATION
Title	STORMWATER DRAINAGE DETAILS SHEET 1

Status	FOR APPROVAL
Datum	AHD
Scale	AS SHOWN
Size	A1
Drawing Number	CV-CARDNO-ST03D-2201
Revision	3



NON PENRITH CITY COUNCIL STANDARD STORMWATER PIT
SCALE 1:20

PENRITH CITY COUNCIL STANDARD
INTERALLOTMENT DRAINAGE PIT
SCALE 1:20

DEFLECTION ANGLE GREATER THAN 45° (SIDE OF PIT)
SCALE 1:25
PIT ALIGNMENT REQUIREMENTS
TYPICAL DETAILS OF STORMWATER PIPE OR CULVERT ALIGNMENTS THROUGH STORMWATER PITS. STORMWATER PIPE OR CULVERT ALIGNMENTS NOT SHOWN SHOULD BE CONSTRUCTED SIMILARLY IN ORDER TO STREAMLINE FLOWS FROM UPSTREAM TO DOWNSTREAM AND MINIMISE HEADLOSS.

IMPORTANT NOTE: PIT STANDARD DETAILS

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

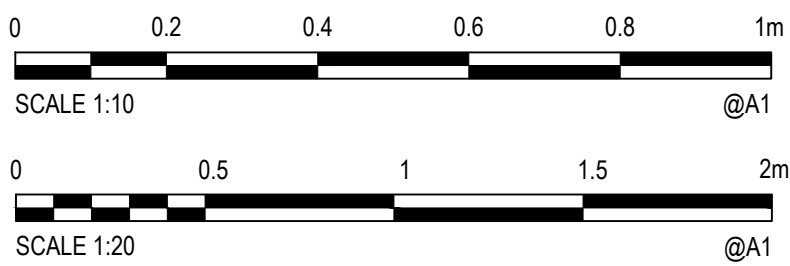
FOR PITS WIDER THAN 1200mm AND/OR DEEPER THAN 2000mm REFER TO THE BELOW TABLE AND DETAILS.

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

NOTE: PIT REINFORCEMENT TO BE SELECTED USING MAXIMUM PIT DIMENSION

NOTES:

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



Rev	Date	Description	Des.	Verif.	Appd.
3	30.07.19	REISSUED FOR DEVELOPMENT APPLICATION APPROVAL	DAC	ARM	ARM
2	22.02.19	ISSUED FOR DEVELOPMENT APPLICATION APPROVAL	DAC	ARM	ARM
1	05.06.18	ISSUED FOR DRAFT DEVELOPMENT APPLICATION	DAC	ARM	ARM

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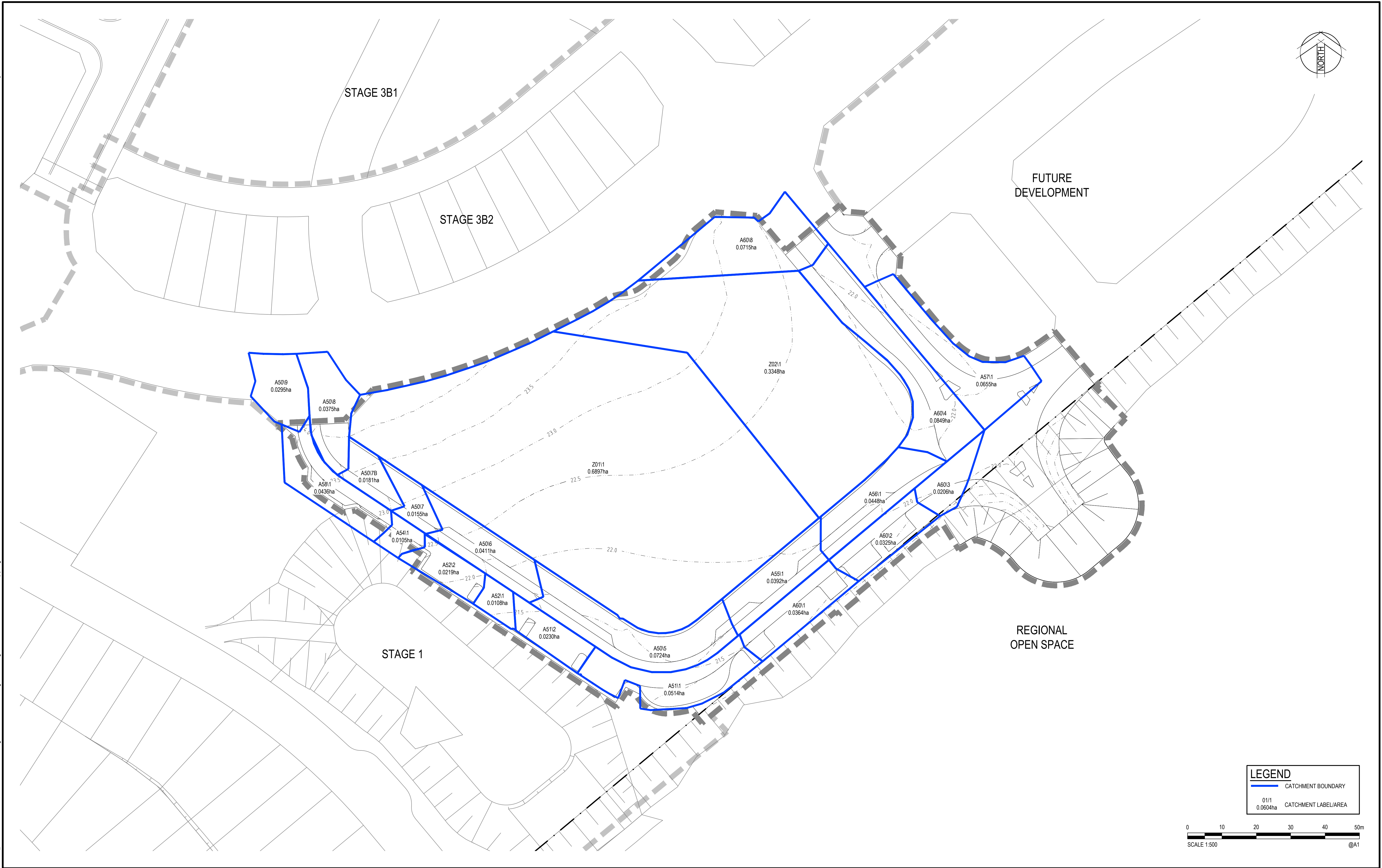
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Client **LENDELEASE**
Project **JORDAN SPRINGS EAST
STAGE 3D - CIVIL WORKS
DEVELOPMENT APPLICATION**
Title **STORMWATER DRAINAGE
DETAILS SHEET 2**

Status				FOR APPROVAL	
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Datum		Scale		Size	
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Drawing Number				Revision	
CV-CARDNO-ST03D-2202				3	



4	30.07.19	REISSUED FOR DEVELOPMENT APPLICATION APPROVAL	DAC	ARM	ARM	
3	22.02.19	ISSUED FOR DEVELOPMENT APPLICATION APPROVAL	DAC	ARM	ARM	
2	15.06.18	REISSUED FOR DRAFT DEVELOPMENT APPLICATION	DAC	ARM	ARM	
1	05.06.18	ISSUED FOR DRAFT DEVELOPMENT APPLICATION	DAC	ARM	ARM	
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Drawn	Date
MCD	22.02.19
Checked	Date
DAC	22.02.19
Designed	Date
DAC	22.02.19
Verified	Date
ARM	22.02.19
Approved	
ARM	22.02.19

Client	LENDELEASE
Project	JORDAN SPRINGS EAST STAGE 3D - CIVIL WORKS DEVELOPMENT APPLICATION
Title	INTERNAL STORMWATER CATCHMENT PLAN

Status			
FOR APPROVAL			
NOT TO BE USED FOR CONSTRUCTION PURPOSES			
Date	Scale	Size	
AHD	1:500	A1	
Drawing Number			Revision
CV-CARDNO-ST03D-2301			4