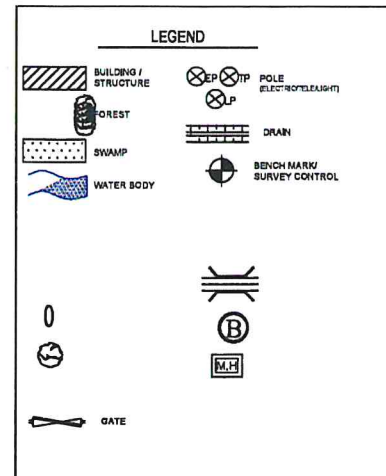


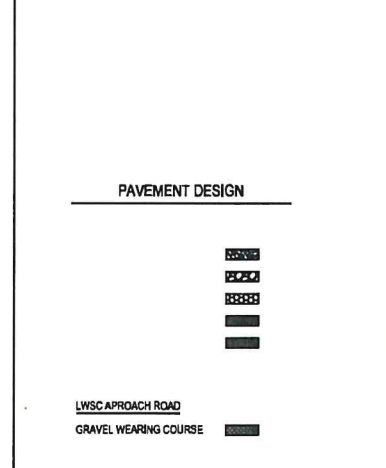
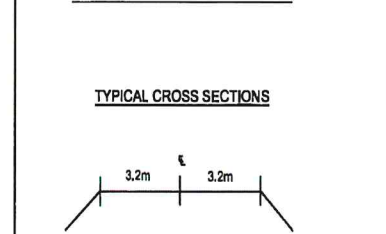
KALABE LWSC

PLAN & PROFILE OF LWSC AND APPROACH ROAD



DESIGN SPEED

OPERATION SPEED



CHAINAGE (KM)	FINISHED ROAD LEVEL - CL (m)	EXISTING GROUND LEVEL - CL (m)	FILL (+) / CUT (-) (m)
0.000	6.654	6.654	0.000
0.009	6.729	6.729	0.000
0.341	6.803	6.803	0.000
0.464	6.876	6.876	0.000
0.705	6.950	6.950	0.000
0.820	1161.204	1162.024	0+100
0.843	6.255	1162.098	0+120
0.753	1.419	1162.172	0+140
0.67	1161.575	1162.246	0+160
0.619	1161.701	1162.320	0+180
0.800	1161.550	1162.350	0+200
0.606	1161.529	1162.255	0+220
0.560	1161.410	1161.970	0+240
0.436	1161.119	1161.555	0+260
0.292	1160.756	1161.048	0+280
1.069	1159.635	1160.705	0+300
-0.053	1160.977	1160.924	0+320
-0.130	1161.512	1161.383	0+340
-0.025	1161.798	1161.773	0+360
0.130	1161.931	1162.061	0+380
0.222	1162.025	1162.248	0+400
0.419	1161.981	1162.399	0+420
0.569	1161.982	1162.551	0+440
0.659	1162.044	1162.703	0+460
0.582	1162.300	1162.882	0+480
0.535	1162.760	1163.294	0+500
0.42	1163.562	1163.982	0+520
0.247	1164.652	1164.899	0+540
-0.163	1165.003	1165.840	0+560
-0.179	1165.959	1166.780	0+580
0.000	1167.72	1167.721	0+600

HORIZONTAL SCHEMATIC

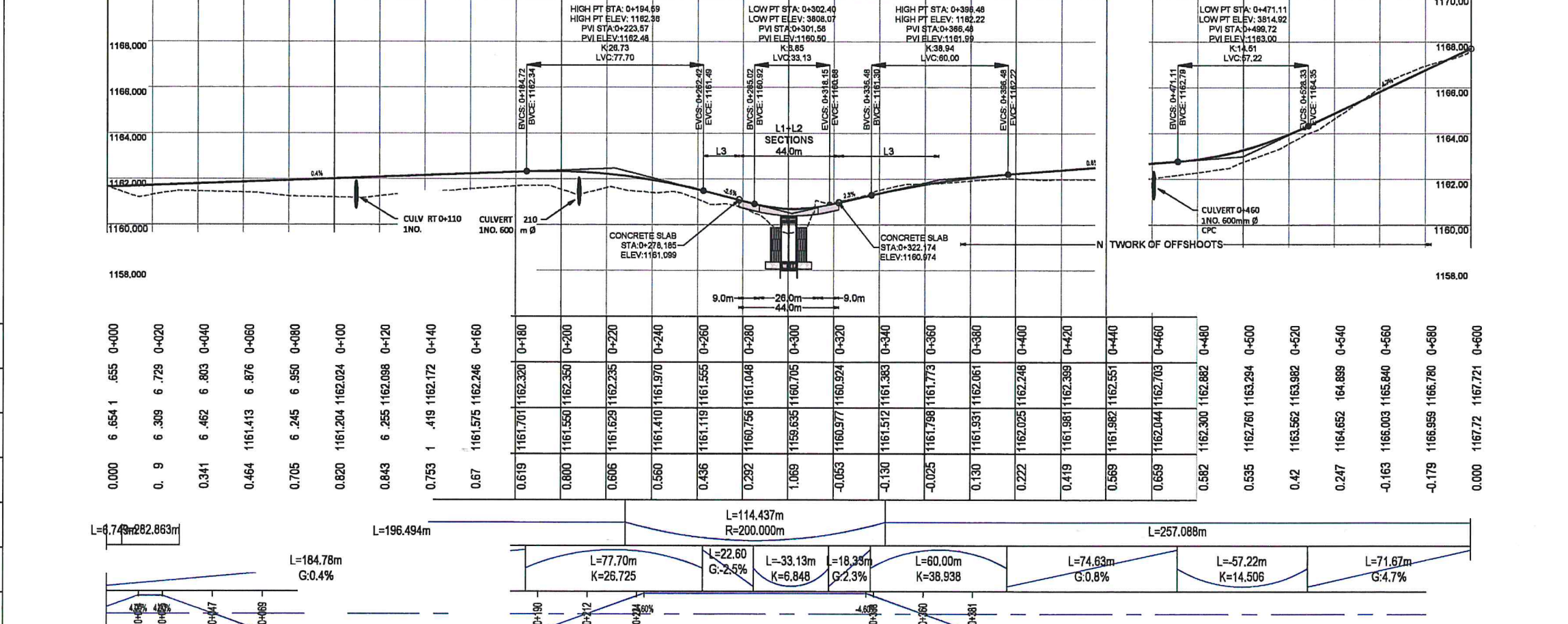
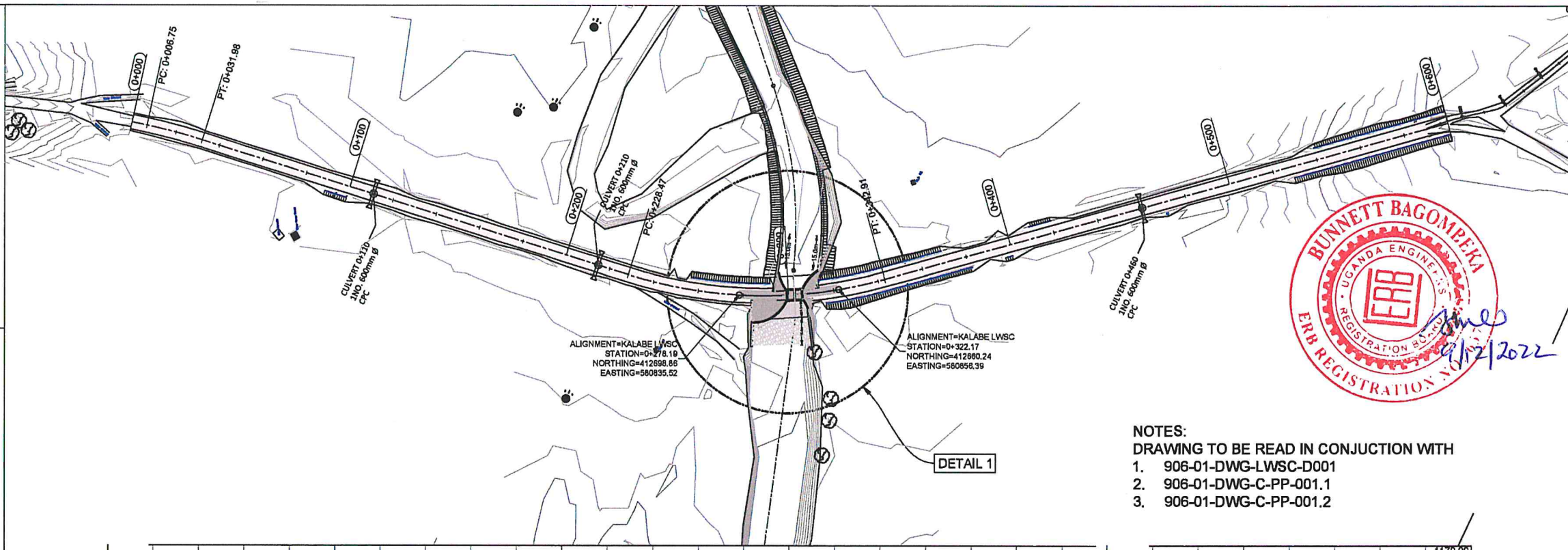
VERTICAL SCHEMATIC

SUPERELEVATION

CONSULTANT:

FUNDER:

CLIENT:

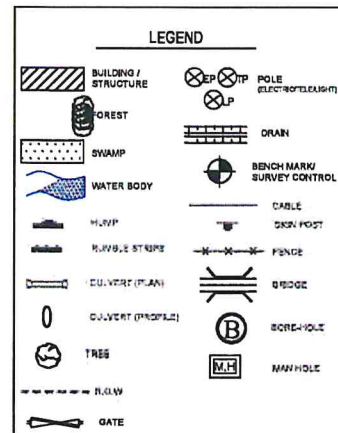


PROJECT NAME:	USAID / Uganda Architect & Engineering Design and Construction Management Consulting Services
ACTIVITY NAME:	Infrastructure for Biodiversity Conservation in Kidepo Valley NP
DRAWING DESCRIPTION:	PLAN AND LONGITUDINAL PROFILE KALABE LWSC AND APPROACH ROADS
DESIGNED BY:	BK
ENGINEER'S SEAL:	
SCALE:	HORIZONTAL: 1:1000 VERTICAL: 1:100
DATE:	18-Apr-20
PAPER:	
COPYRIGHT RESERVED	

NOTES:

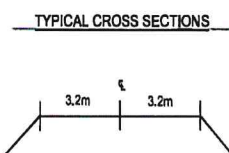
DRAWING TO BE READ IN CONJUNCTION WITH

- 906-01-DWG-LWSC-D001
- 906-01-DWG-C-PP-001.1
- 906-01-DWG-C-PP-001.2



DESIGN SPEED
50km/h

OPERATION SPEED
50km/h



PAVEMENT DESIGN

WISC	
CONCRETE	150mm
HARD CORE	150mm
GABION MATTRESS	150mm
CRUSHED STONE	150mm
GRANULAR FILL	150mm

LWSC APPROACH ROAD

GRAVEL WEARING COURSE

CHAINAGE (KM)

FINISHED ROAD LEVEL - CL (m)

EXISTING GROUND LEVEL - CL (m)

FILL (+) / CUT (-) (m)

HORIZONTAL SCHEMATIC

VERTICAL SCHEMATIC

SUPERELEVATION

CONSULTANT:



Plot 107 Kite Road, Kampala,
P.O. Box 8493, Kampala-Uganda
Tel: +256 (0)393 740800 /
0701 740800
Email: mbw@mbw.co.ug

FUNDER:



CLIENT:



Uganda Wildlife
Authority
@UgandaWildlifeAuthority
PO Box 2538, Kampala,
Uganda
Tel: +256 41 355114, 355111,
355118

PROJECT NAME:

USAID / Uganda Architect & Engineering Design and Construction
Management Consulting Services

ACTIVITY NAME:

Infrastructure for Biodiversity Conservation in Kidepo Valley NP

DRAWING DESCRIPTION:

PLAN AND LONGITUDINAL PROFILE
KALABE LWSC RIVER PROTECTION DETAILS

DESIGNED BY:

BK

DRAWN BY:

SRD

CHECKED BY:

SK

APPROVED BY:

W

ENGINEER'S SEAL

SCALE: HORIZONTAL: 1:1000 VERTICAL: 1:100

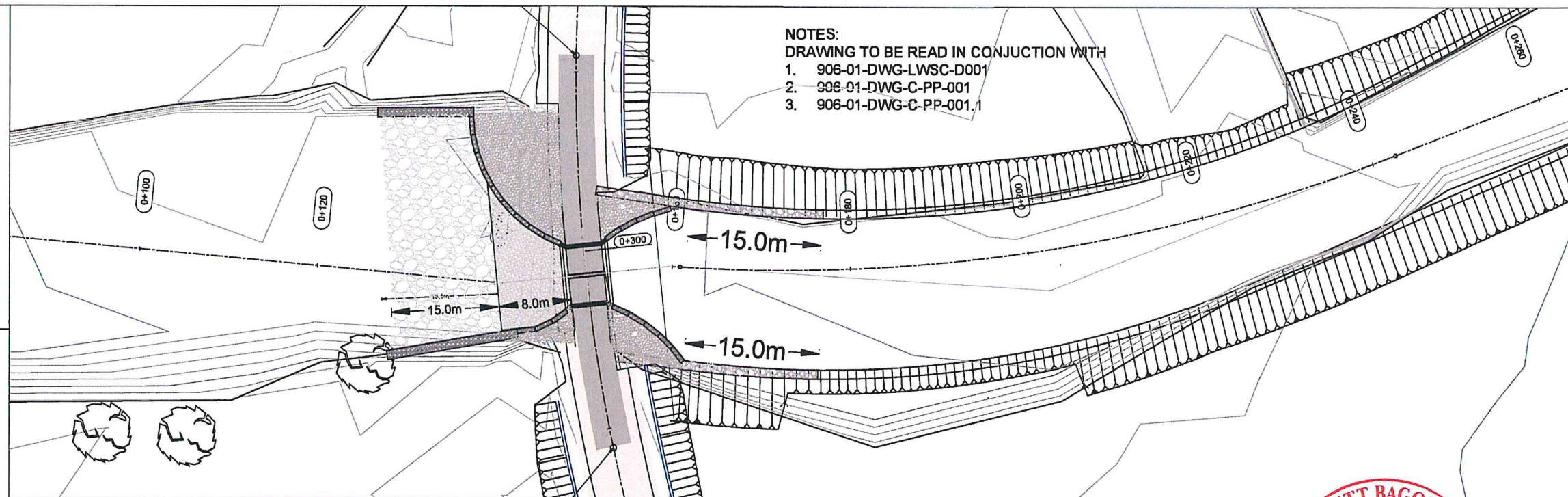
AS SCALE 1:10000 AD SCALE 1:2000

STATUS: Tender DATE: 18-Apr-20 PAPER:

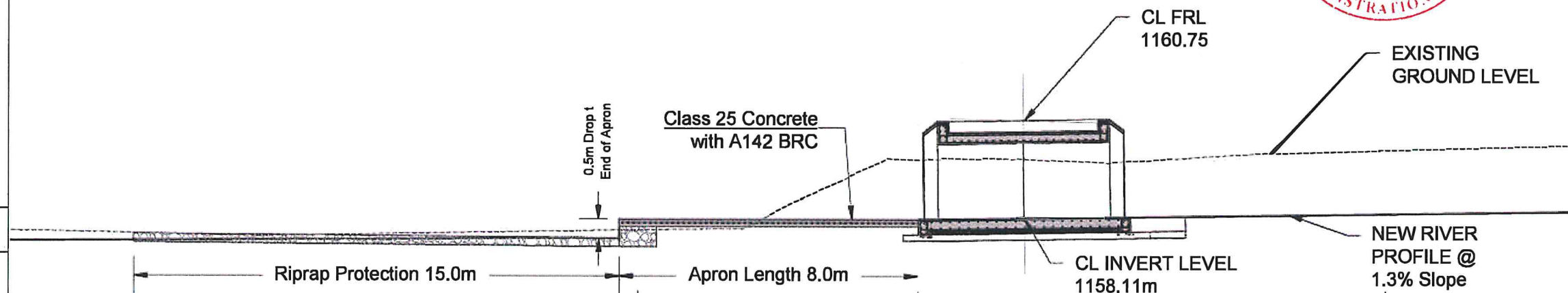
DRAWING NUMBER: 906-01-DWG-C-PP-001.3

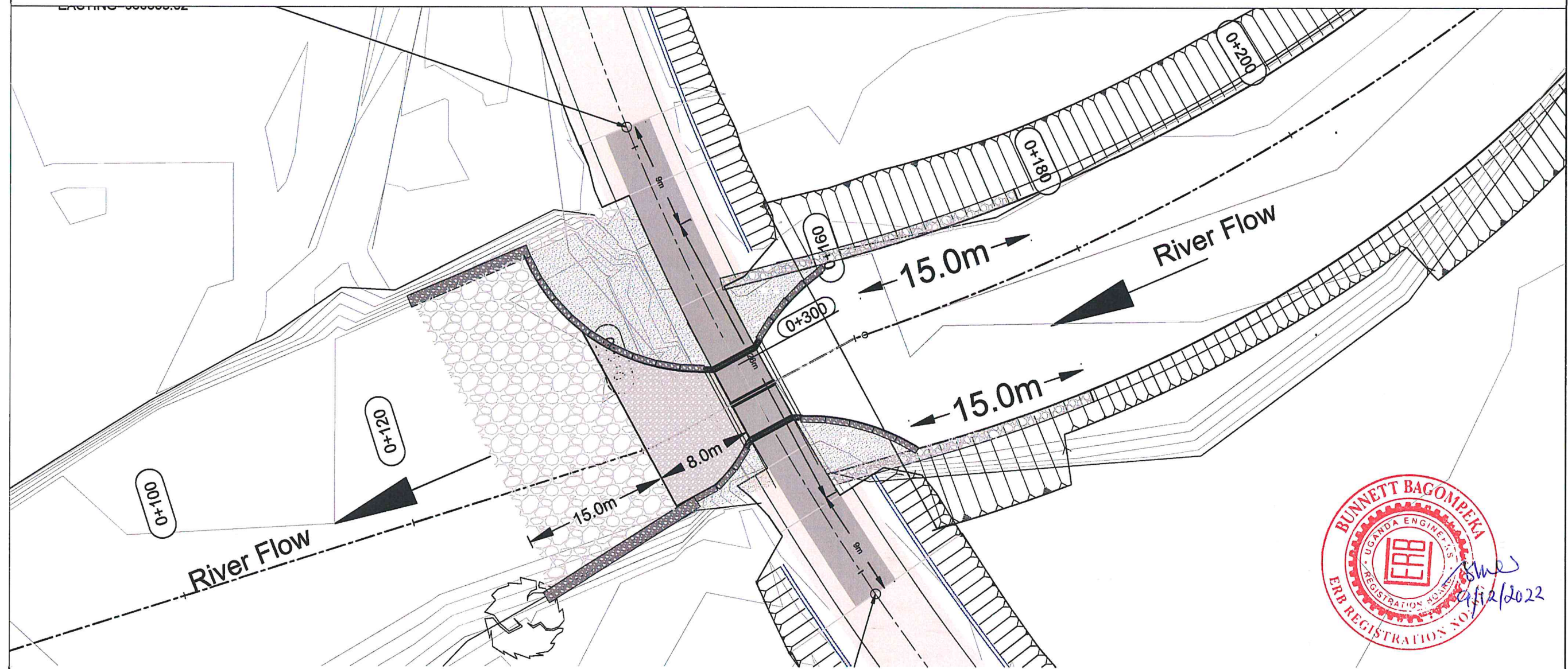
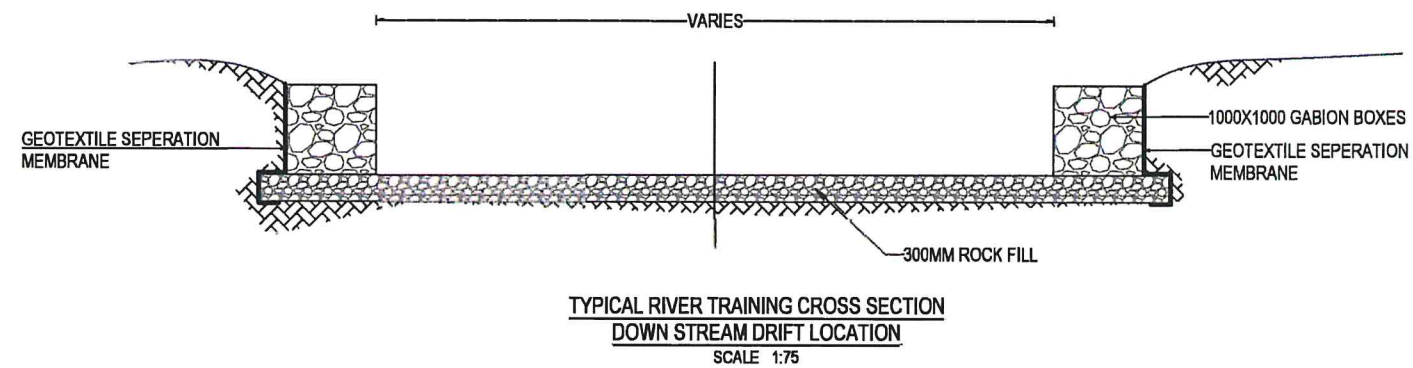
COPYRIGHT RESERVED

NOTES:
DRAWING TO BE READ IN CONJUNCTION WITH
1. 906-01-DWG-LWSC-D001
2. 906-01-DWG-C-PP-001
3. 906-01-DWG-C-PP-001.1

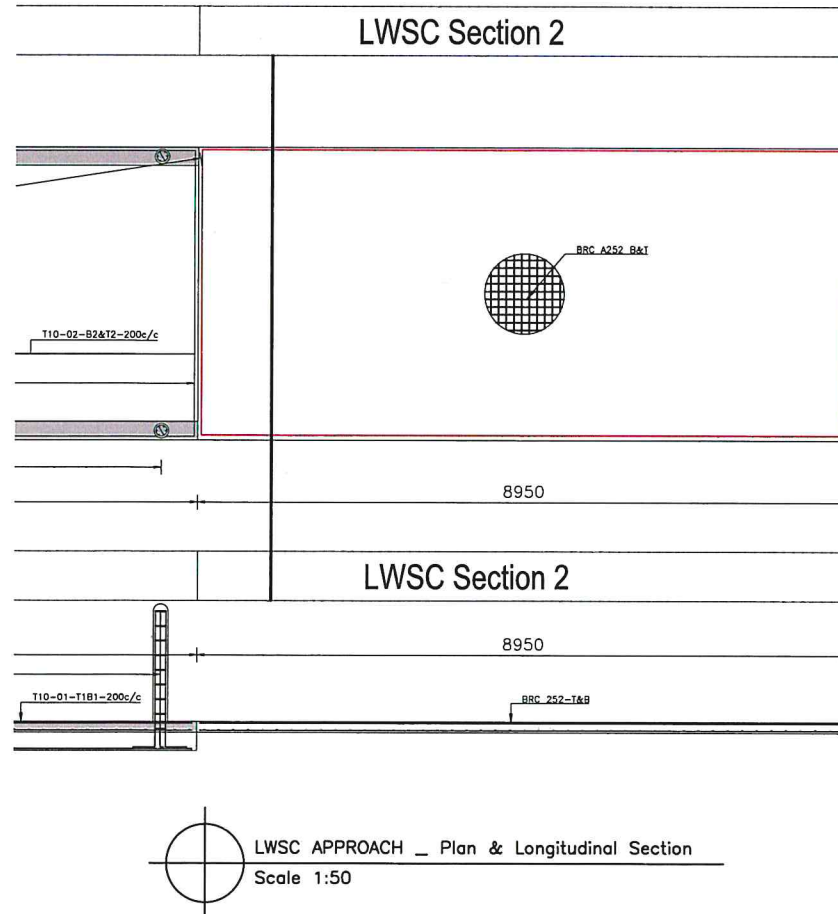
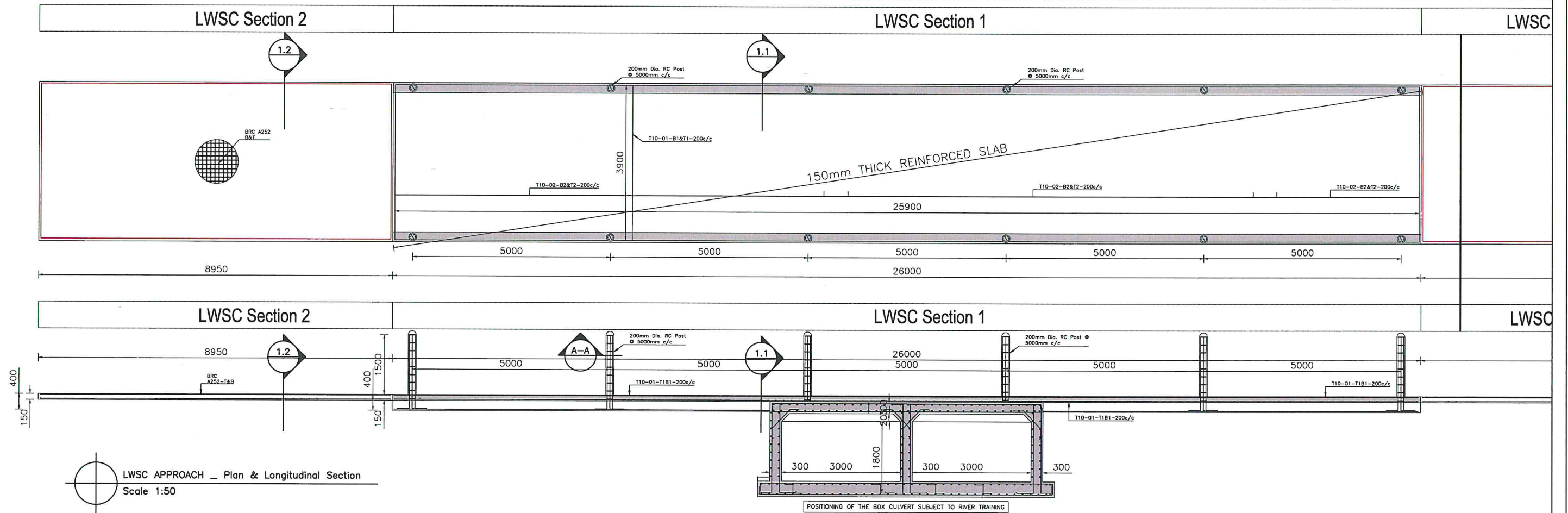


1. RIVER TRAINING DETAIL

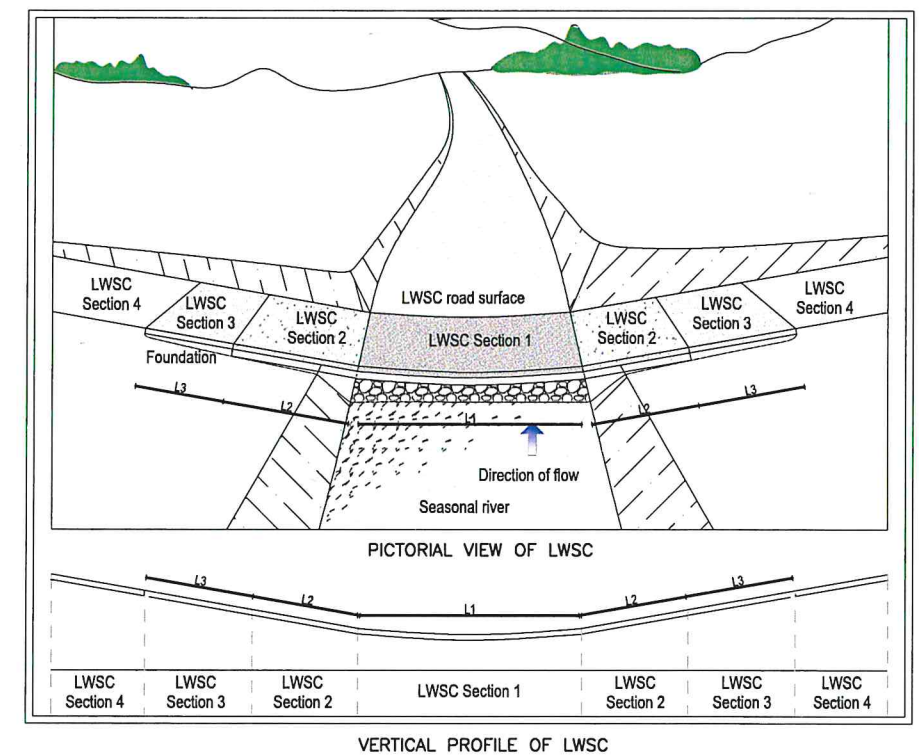




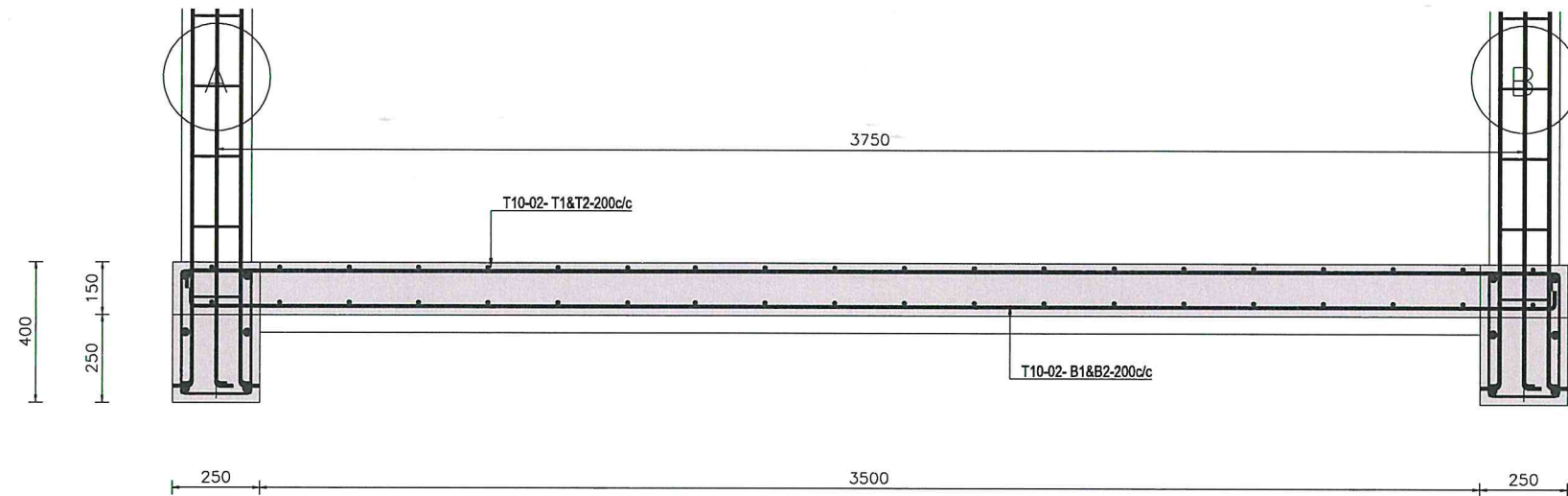
CONSULTANT:		FUNDER:		CLIENT:		PROJECT NAME:		DESIGNED BY:		ENGINEER'S SEAL		SCALE:		REF. FILE:			
 Plot 107 Kira Road, Kamukya, P.O.Box 8493, Kampala-Uganda Tel: +256 (0)393 740800 / 0701 740800 Email: mbw@mbw.co.ug		 FROM THE AMERICAN PEOPLE		 Uganda Wildlife Authority Community for Conservation PO Box 3530, Kampala, Uganda Tel: +256-41-353114, 353115, 353118		USAID / Uganda Architect & Engineering Design and Construction Management Consulting Services		SND					AS NOTED		---		
						ACTIVITY NAME:		DRAWN BY:									
						Infrastructure for Biodiversity Conservation in Kidepo Valley NP		SND									
						DRAWING DESCRIPTION:		CHECKED BY:									
Low Water Stream Crossings and Approach Roads		BK										Tender		23-Apr-20		A3	
Detail 01: Typical River Scour Protection For Kalabe		WF										DRAWING NUMBER:		008-01-008-0-15-001.4		COPYRIGHT RESERVED	
								REV. No		DATE		DESCRIPTION OF REVISION		BY			



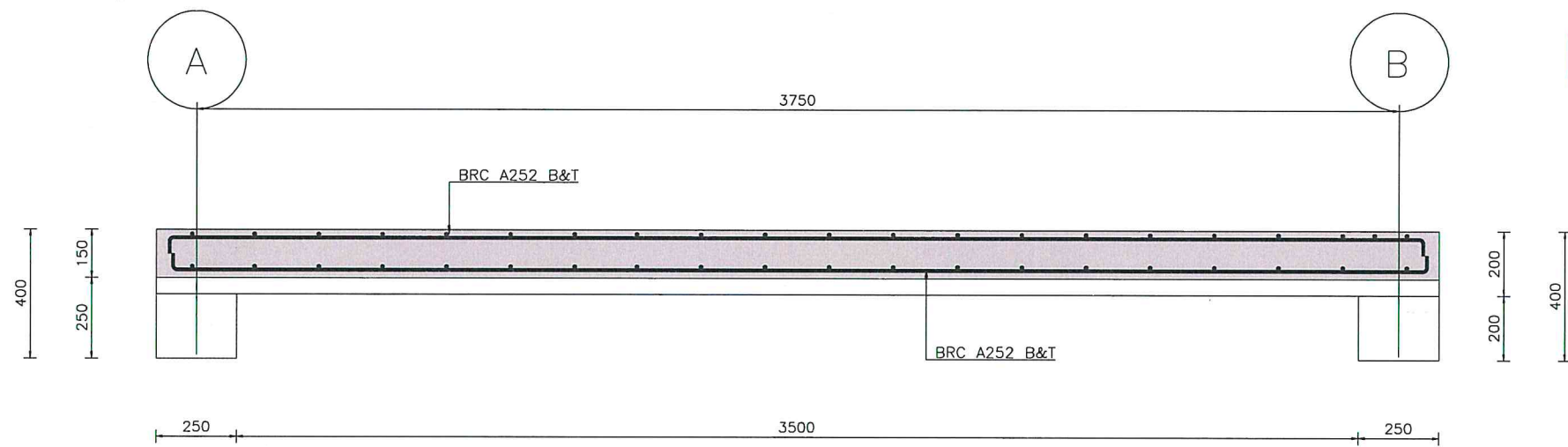
LWSC	Splash apron (m)	L1 (m)	L2 (m)	L3 (m)
Kalabe	8.00	26.00	9.00	-



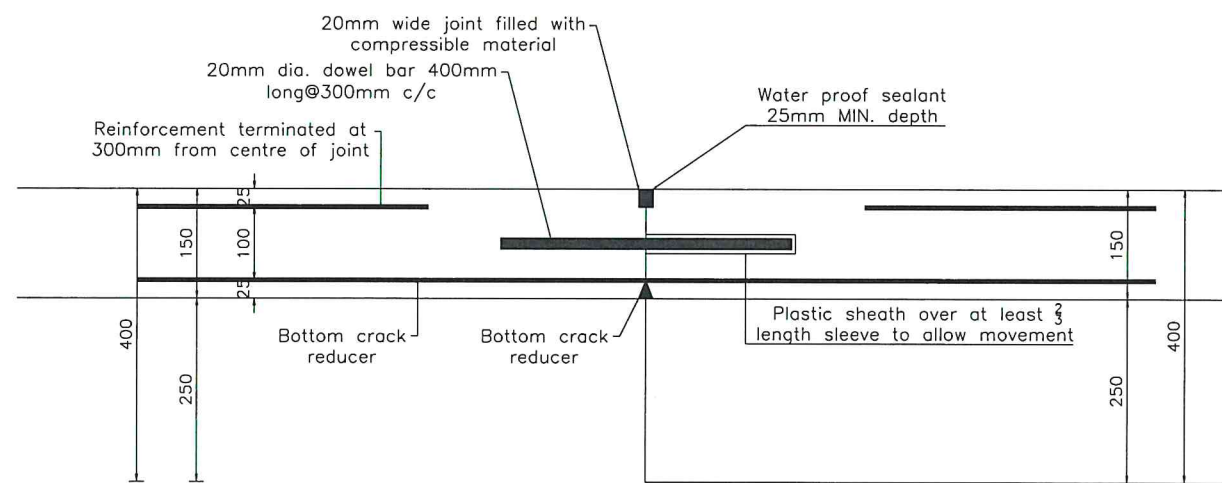
CONSULTANT: Plot 107 Kira Road, Kampala, Uganda P.O. Box 8493, Kampala-Uganda Tel: +256 (0)393 740600 / 0701 740600 Email: mbw@mbw.co.ug	FUNDER: USAID FROM THE AMERICAN PEOPLE	CLIENT: Uganda Wildlife Authority @ugandawildlifeauthority PO Box 3530, Kampala, Uganda Tel: +256 41-355114, 355111, 355118	PROJECT NAME: USAID / Uganda Architect & Engineering Design and Construction Management Services ACTIVITY NAME: Infrastructure for Biodiversity Conservation in Kidepo Valley NP DRAWING DESCRIPTION: LWSC AND APPROACH ROADS STRUCTURAL PLAN AND LONGITUDINAL SECTION FOR KALABE	DESIGNED BY: BB DRAWN BY: BK CHECKED BY: BB APPROVED BY: WF	ENGINEER'S SEAL: SCALE: As Noted STATUS: Construction DATE: SEP. 2022 PAPER: A3 DRAWING NUMBER: 906-01-DWG-C-TS-001.5 COPYRIGHT RESERVED
---	---	--	--	--	---



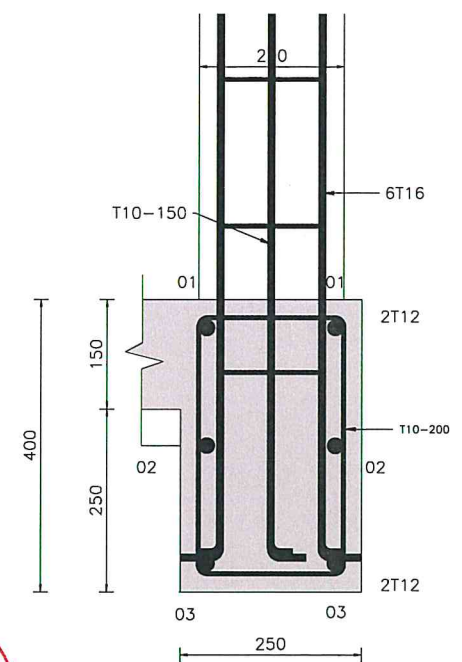
Section 1-1
Scale 1:10



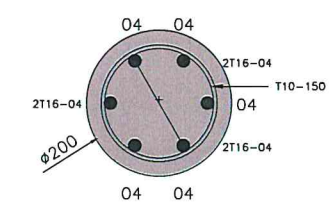
Section 2-2
Scale 1:10



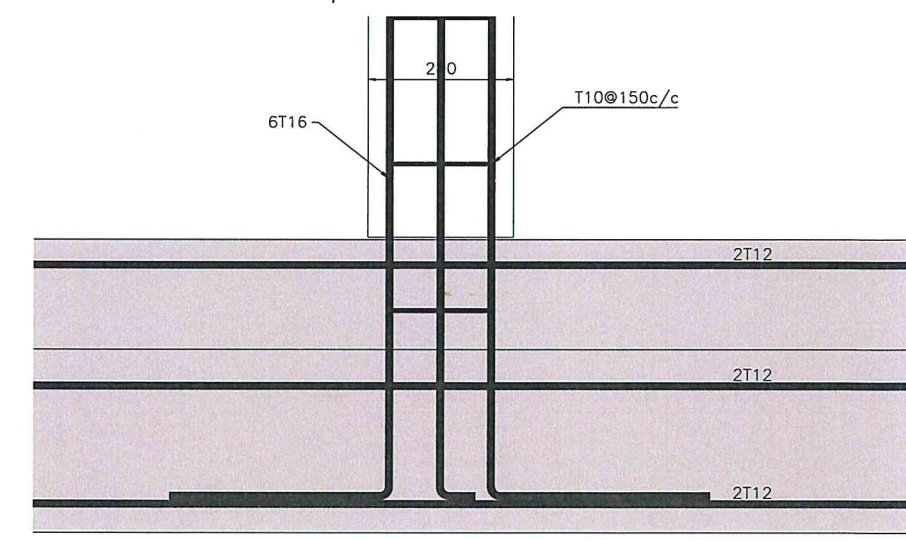
FORMED DOWELED CONNECTION Joint Detail (@4.0m only in LWSC section 2)
Scale 1:5



Beam Section 1-1
Scale 1:5



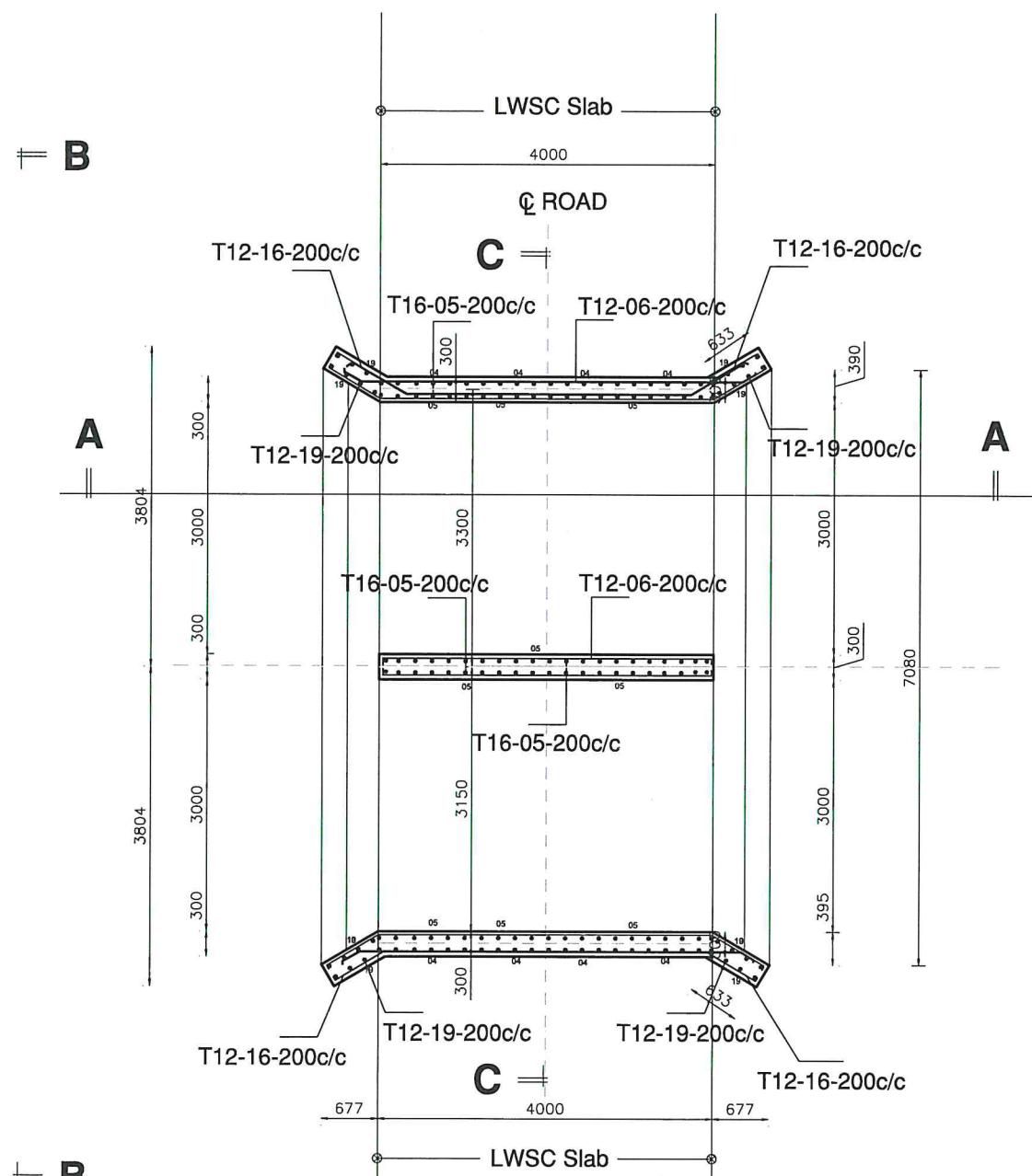
REINFORCED CONCRETE PILLAR Section A-A
Scale 1:5



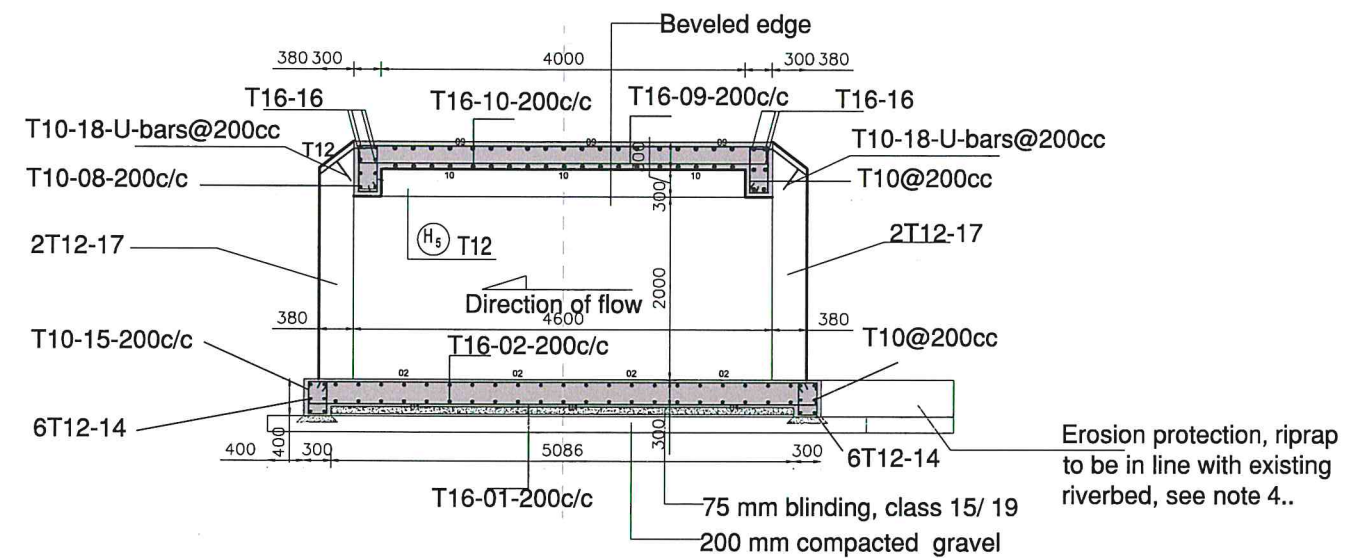
Detail at Pillar-Beam connection
Scale 1:5



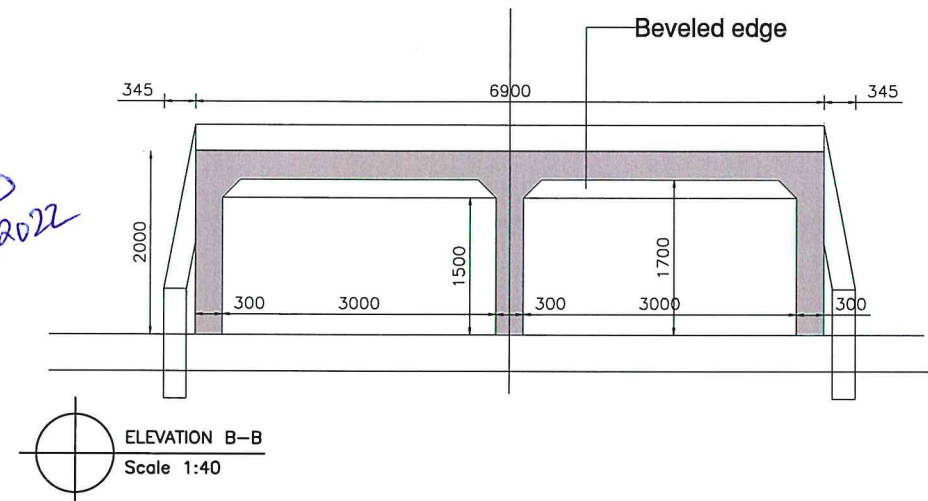
CONSULTANT:		FUNDER:		CLIENT:		PROJECT NAME:		DESIGNED BY:						ENGINEER'S SEAL	
 Plot 107 Kira Road, Kamukoya, P.O.Box 8493, Kampala-Uganda Tel: +256 (0)393 740600 / 0701 740600 Email: mbw@mbw.co.ug		 USAID FROM THE AMERICAN PEOPLE		 Uganda Wildlife Authority @ugandawildlifeauthority PO Box 3330, Kampala, Uganda Tel +256-41-355114, 355111, 355118		USAID / Uganda Architect & Engineering Design and Construction Management Services		DRAWN BY: BK							
						ACTIVITY NAME: Infrastructure for Biodiversity Conservation in Kidepo Valley NP		CHECKED BY: BB							
						DRAWING DESCRIPTION: LWSC AND APPROACH ROADS STRUCTURAL SECTIONAL DETAILS FOR KALABE		APPROVED BY: WF		REV.No.		DATE		DESCRIPTION OF REVISION	
												BY		COPYRIGHT RESERVED	
														SCALE: As Noted REF FILE:	
														STATUS: Construction DATE: SEP. 2022 PAPER: A3	
														DRAWING NUMBER: 906-01-DWG-C-TS-001.6	



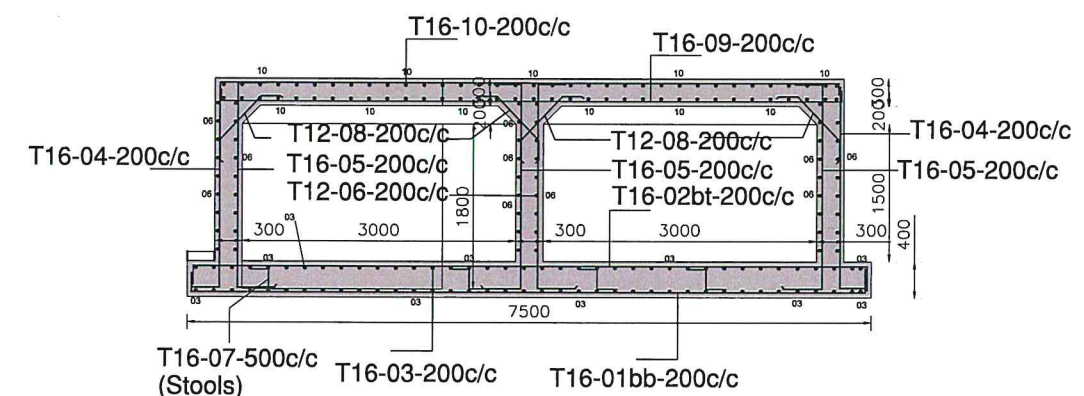
LAYOUT_ 2 CELL BOX CULVERT
Scale 1:40



LWSC APPROACH_Section A-A
Scale 1:40



ELEVATION B-B
Scale 1:40



SECTION C-C
Scale 1:40

CONSULTANT:		FUNDER:		CLIENT:		PROJECT NAME:		DESIGNED BY:		ENGINEER'S SEAL			
MBW CONSULTING Plot 107 Kira Road, Kampala, P.O.Box 8493, Kampala-Uganda Tel: +256 (0)393 740800 / 0701 740800 Email: mbw@mbw.co.ug USAID FROM THE AMERICAN PEOPLE		UGANDA WILDLIFE AUTHORITY UWA Caring for Generations Uganda Wildlife Authority @ugandawildlifeauthority PO Box 3530, Kampala, Uganda Tel +256-41-355114, 355111, 355118 <td colspan="2">USAID / Uganda Architect & Engineering Design and Construction Management Services</td> <td colspan="2">BB</td>		USAID / Uganda Architect & Engineering Design and Construction Management Services		BB							
				ACTIVITY NAME:		DRAWN BY:							
				Infrastructure for Biodiversity Conservation in Kidepo Valley NP		BK							
LWSC AND APPROACH ROADS 2 CELL BOX CULVERT DETAILS FOR KALABE		DRAWING DESCRIPTION:		CHECKED BY:		REV.No.		DATE		DESCRIPTION OF REVISION		BY	
				BB									
								APPROVED BY:					
								WF					

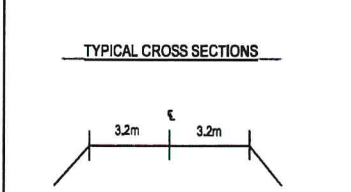
KURAO LWSC

PLAN & PROFILE OF LWSC AND APPROACH ROAD

LEGEND

DESIGN SPEED
50KPH

OPERATION SPEED
30KPH



PAVEMENT DESIGN

WISC	
CONCRETE	
HARD CORE	
GABION MATRESS	
CRUSHED STONE	
GRANULAR FILL	

WISC APPROACH ROAD
GRAVEL WEARING COURSE

CHAINAGE (KM)
FINISHED ROAD LEVEL - CL (m)
EXISTING GROUND LEVEL - CL (m)
FILL (+) / CUT (-) (m)
HORIZONTAL SCHEMATIC
VERTICAL SCHEMATIC
SUPERELEVATION

CONSULTANT:

MBW CONSULTING

Plot 107 Kira Road, Kampala, Uganda
P.O. Box 6403, Kampala-Uganda
Tel: +256 (0)393 740800 / 0701 740800
Email: mbw@mbw.co.ug

FUNDER:

USAID

FROM THE AMERICAN PEOPLE

CLIENT:

Uganda Wildlife Authority

UWA
Extending the Conservation

PROJECT NAME:
USAID / Uganda Architect & Engineering Design and Construction Management Consulting Services

ACTIVITY NAME:
Infrastructure for Biodiversity Conservation in Kidepo Valley NP

DRAWING DESCRIPTION:
PLAN AND LONGITUDINAL PROFILE
LOIPRIR LWSC AND APPROACH ROADS

DESIGNED BY:
BK

DRAWN BY:
TRD

CHECKED BY:
SK

APPROVED BY:
AT

REV. No. DATE DESCRIPTION OF REVISION BY

ENGINEER'S SEAL

BUNNETT BAGOMPEKA
UGANDA ENGINEER
REGISTRATION BOARD
REGISTRATION NO. 631/2022

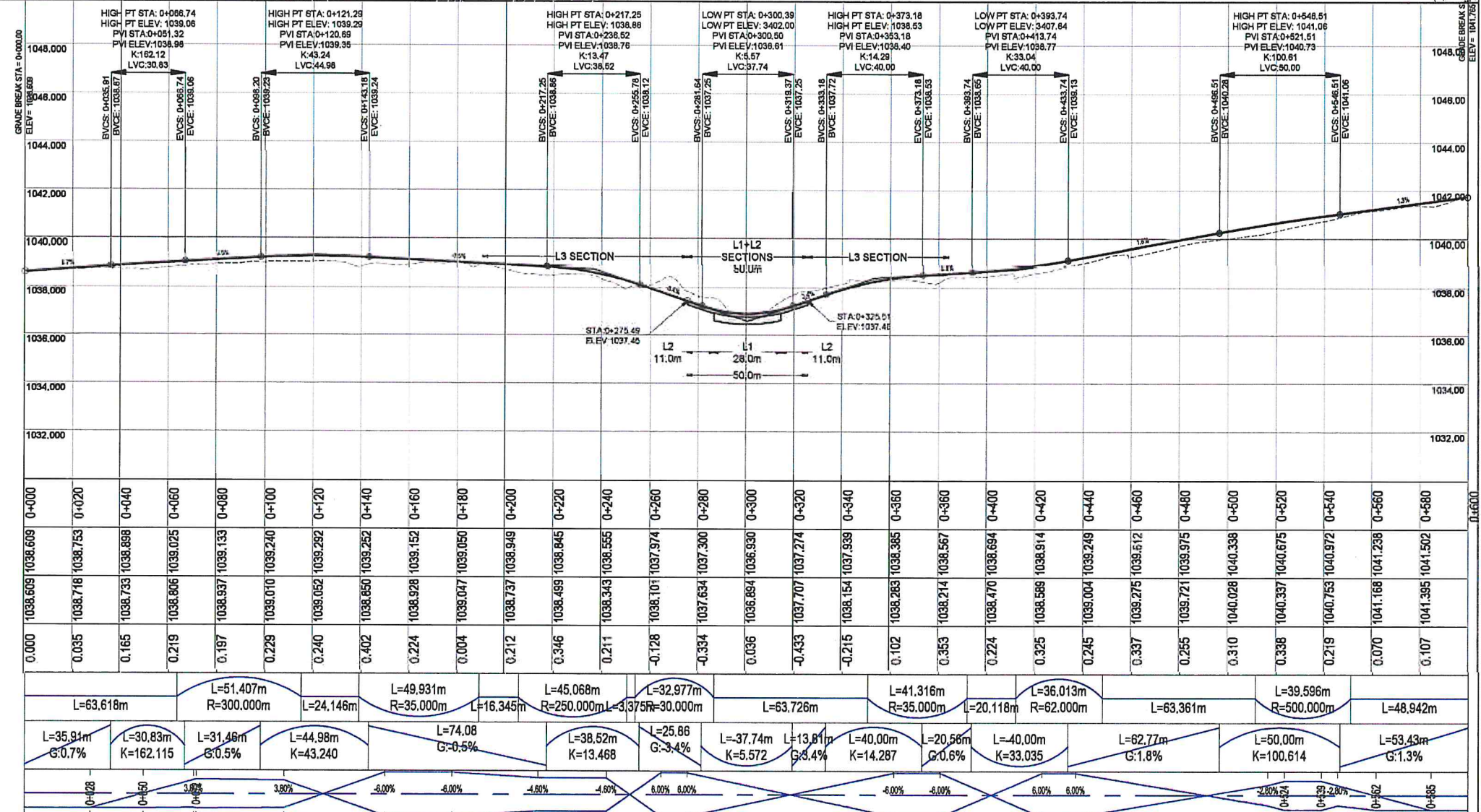
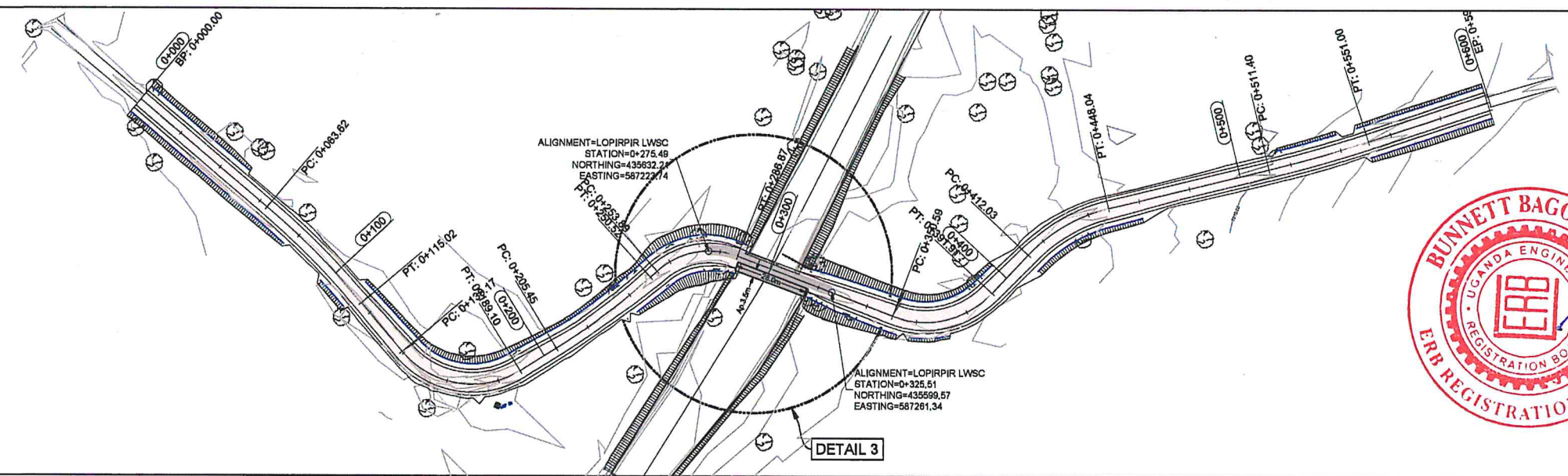
SCALE:
AS SHOWN
AS SHOWN
AS SHOWN

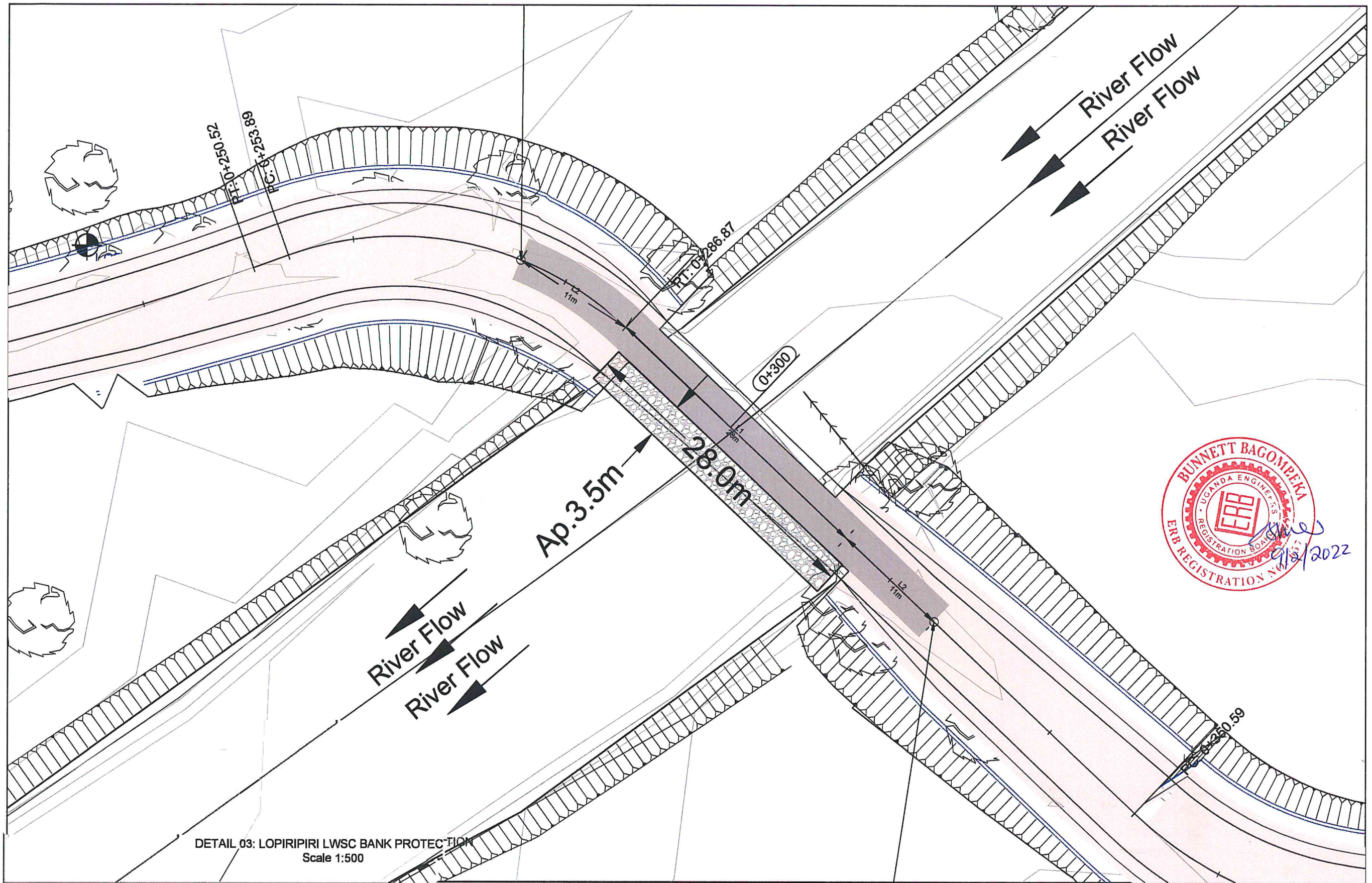
STATUS:
Tender

DATE:
18-Apr-20

PROJECT NUMBER:
908-01-DWG-C-PP-003

COPYRIGHT RESERVED

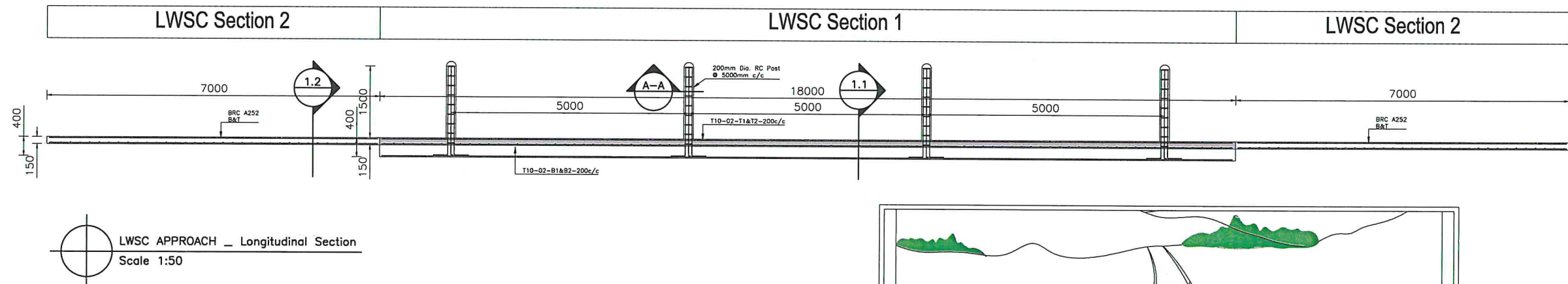
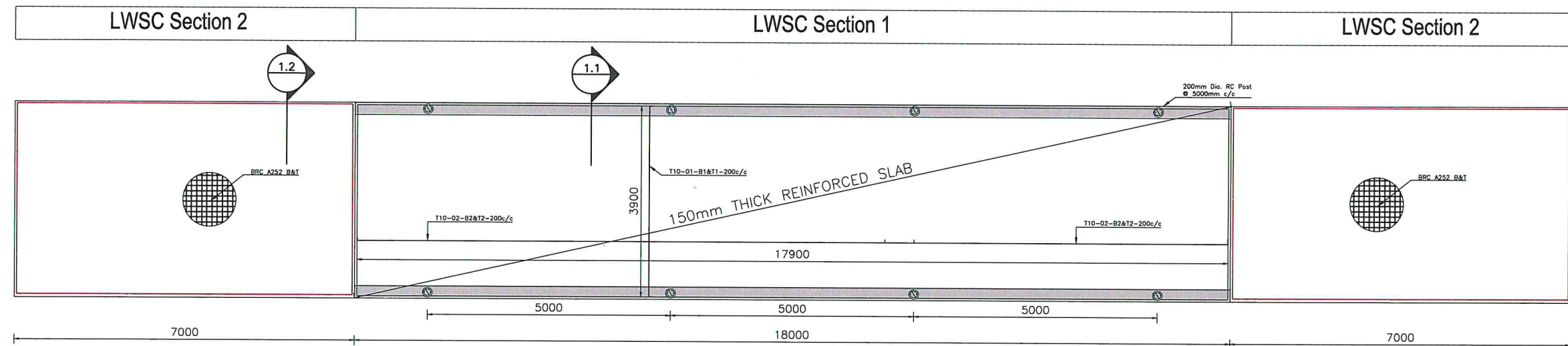




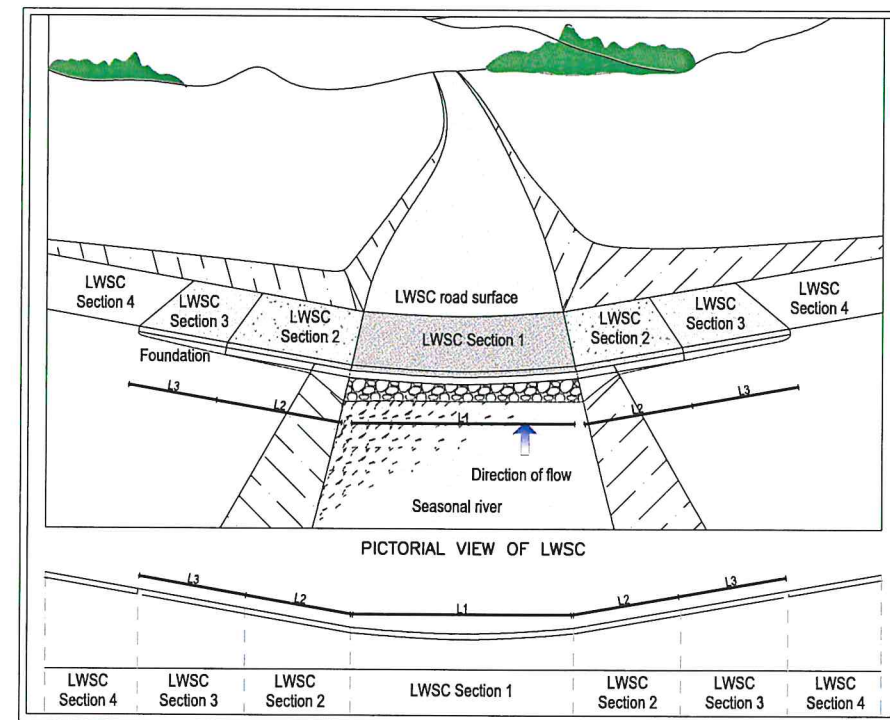
Signature
6/12/2022

DETAIL 03: LOPIRIPIRI LWSC BANK PROTECTION
Scale 1:500

CONSULTANT:		FUNDER:		CLIENT:		PROJECT NAME:		DESIGNED BY:		ENGINEER'S SEAL			
 Plot 107 Kira Road, Kamukoya, P.O.Box 6493, Kampala-Uganda Tel: +256 (0)393 740800 / 0701 740800 Email: mbw@mbw.co.ug		 FROM THE AMERICAN PEOPLE		 Uganda Wildlife Authority @wpauganda/uganda PO Box 3531, Kampala, Uganda Tel: +256-41-355111, 355111, 355119		USAID / Uganda Architect & Engineering Design and Construction Management Consulting Services		SRO					
						ACTIVITY NAME:		DRAWN BY:					
						DRAWING DESCRIPTION:		CHECKED BY:					
Low Water Stream Crossings and Approach Roads		SK		APPROVED BY:		REV. No		DATE		DESCRIPTION OF REVISION		BY	
Detail 03: Detailed Sections For Lopiripiri		WF											



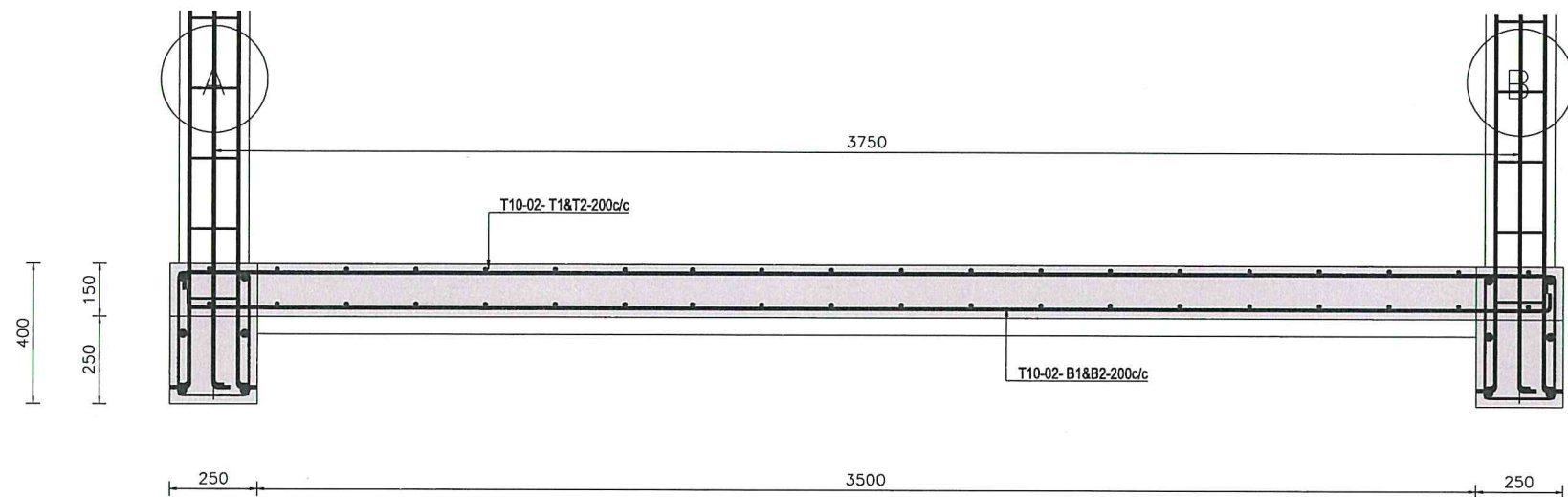
LWSC	Splash apron (m)	L1 (m)	L2 (m)	L3 (m)
Kurao	1.90	18.00	7.00	-



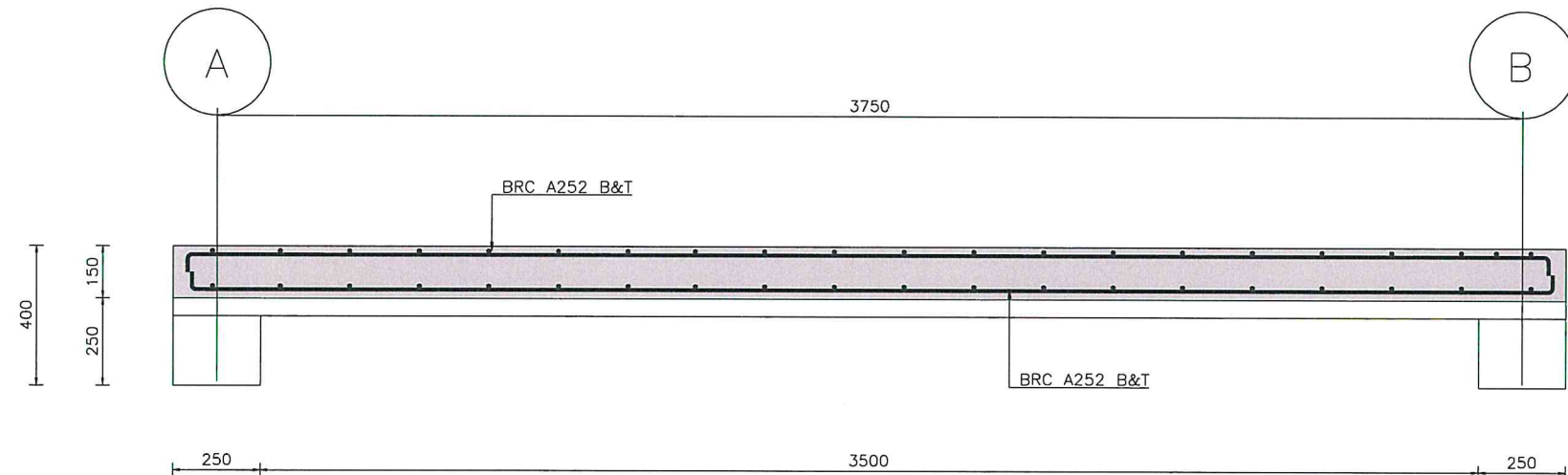
VERTICAL PROFILE OF LWSC
SCHEMATIC DIAGRAM OF LWSC



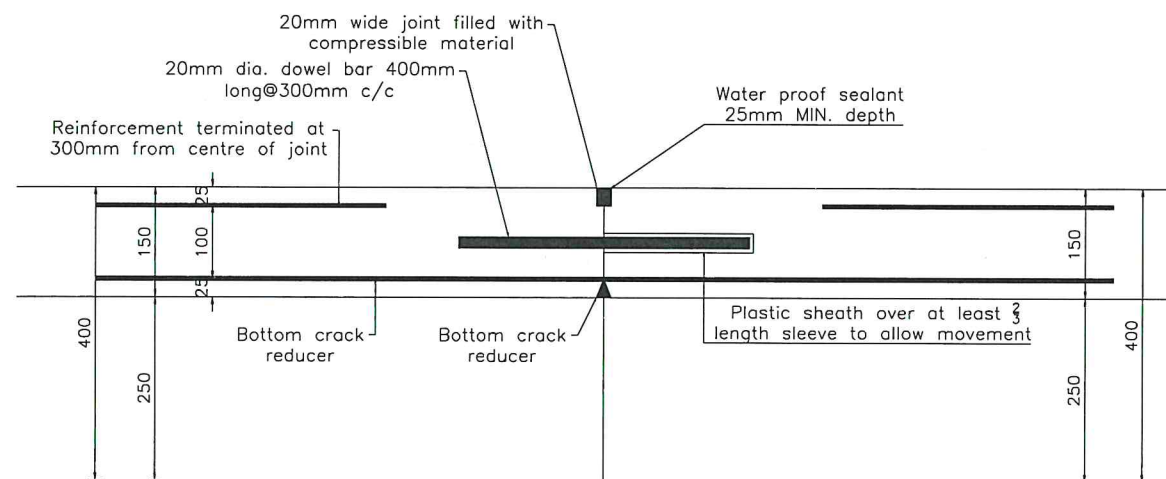
CONSULTANT: 	FUNDER: 	CLIENT: 	PROJECT NAME: USAID / Uganda Architect & Engineering Design and Construction Management Services		DESIGNED BY: BB		ENGINEER'S SEAL 	SCALE: As Noted		REF FILE:			
			ACTIVITY NAME: Infrastructure for Biodiversity Conservation in Kidepo Valley NP		DRAWN BY: BK			STATUS: Construction		DATE: SEP. 2022		PAPER: A3	
			DRAWING DESCRIPTION: LWSC AND APPROACH ROADS STRUCTURAL PLAN AND LONGITUDINAL SECTION FOR KURAO		CHECKED BY: BB			DRAWING NUMBER: 906-01-DWG-C-TS-002.3		COPYRIGHT RESERVED			
			APPROVED BY: WF		REV.No. DATE			DESCRIPTION OF REVISION		BY			



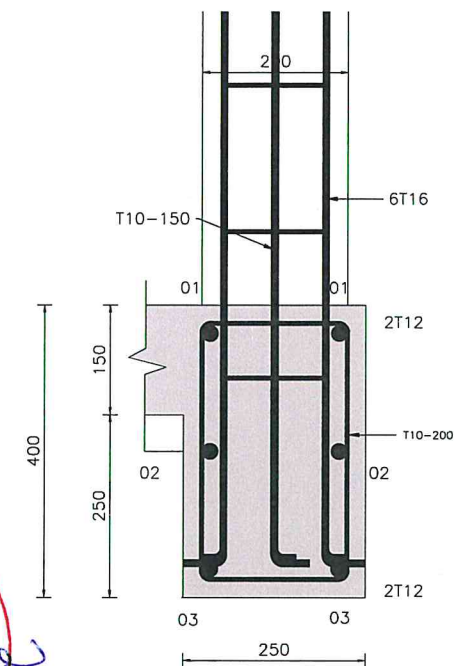
Section 1-1
Scale 1:10



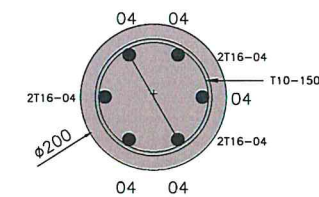
Section 2-2
Scale 1:10



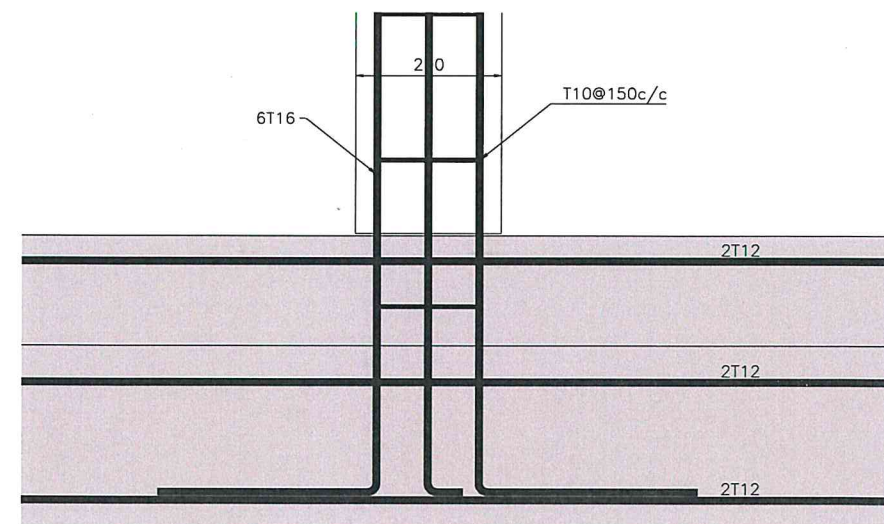
FORMED DOWELED CONNECTION Joint Detail (@4.0m only in LWSC section 2)
Scale 1:5



Beam Section 1-1
Scale 1:5



REINFORCED CONCRETE PILLAR Section A-A
Scale 1:5



Detail at Pillar-Beam connection
Scale 1:5



CONSULTANT: MBW CONSULTING Plot 107 Kira Road, Kamwokya, P.O.Box 8493, Kampala-Uganda Tel: +256 (0)393 740800 / 0701 740800 Email: mbw@mbw.co.ug	FUNDER: USAID FROM THE AMERICAN PEOPLE	CLIENT: Uganda Wildlife Authority @ugandawildlifeauthority PO Box 3530, Kampala, Uganda Tel +256-41-355114, 355111, 355118 UWA Conserving for Generations	PROJECT NAME: USAID / Uganda Architect & Engineering Design and Construction Management Services	DESIGNED BY: BB						ENGINEER'S SEAL SCALE: As Noted REF FILE: STATUS: DATE: PAPER: Construction SEP. 2022 A3 DRAWING NUMBER: 906-01-DWG-C-TS-002.4 COPYRIGHT RESERVED
			ACTIVITY NAME: Infrastructure for Biodiversity Conservation in Kidepo Valley NP	DRAWN BY: BK						
			DRAWING DESCRIPTION: LWSC AND APPROACH ROADS STRUCTURAL SECTIONAL DETAILS FOR KURAO	CHECKED BY: BB						
				APPROVED BY: WF						
					REV.No.	DATE	DESCRIPTION OF REVISION	BY		