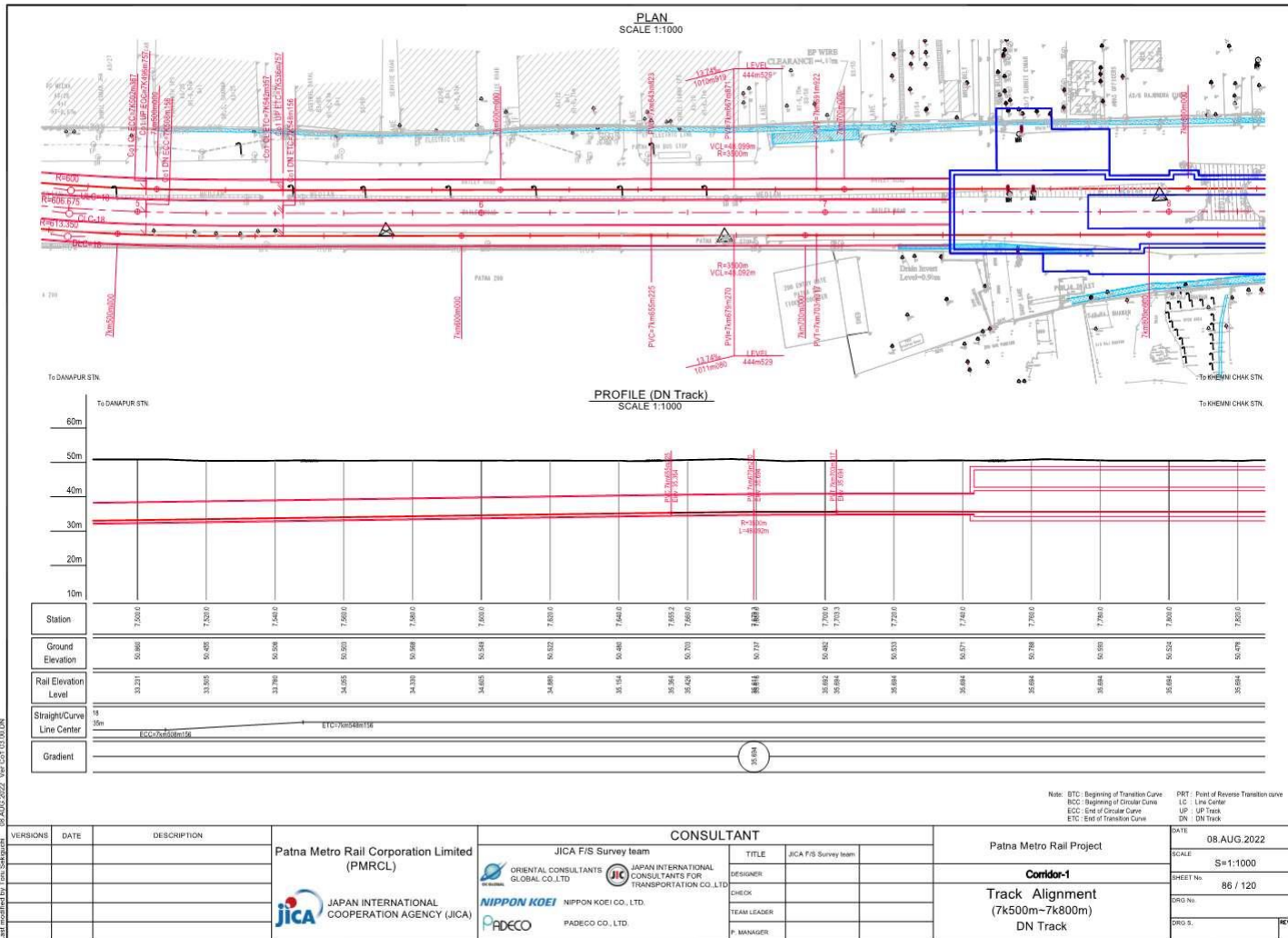


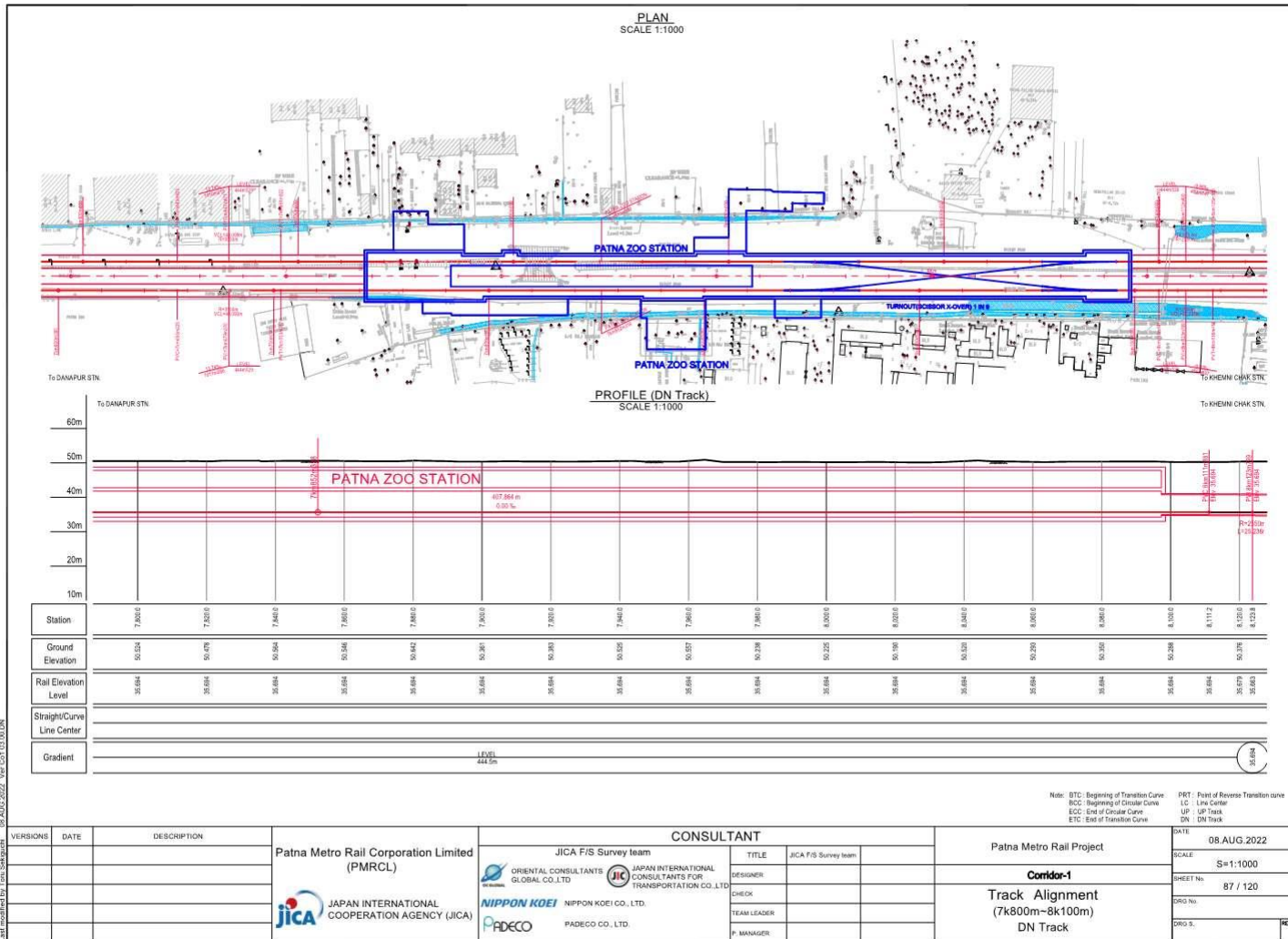
Last modified by: Jai Sahasrathi 08.AUG.2022 Ver: C01.03.00.DN



Last modified by: Tomi Saegusa / 03 AUG 2022 / 10:03:00 AM

Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 L.C: Line Center  
 UP: UP Track  
 DN: DN Track

VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE		
			<b>Patna Metro Rail Corporation Limited (PMRCL)</b> JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		<b>JICA F/S Survey team</b> ORIENTAL CONSULTANTS GLOBAL CO. LTD NIPPON KOEI CO., LTD. PADECO CO., LTD.		TITLE: JICA F/S Survey team DESIGNER: CHECK: TEAM LEADER: P. MANAGER:	Patna Metro Rail Project <b>Corridor-1</b> Track Alignment (7k500m-7k800m) DN Track	08.AUG.2022 SCALE: S=1:1000 SHEET No: 86 / 120 DRO No: DRO S:

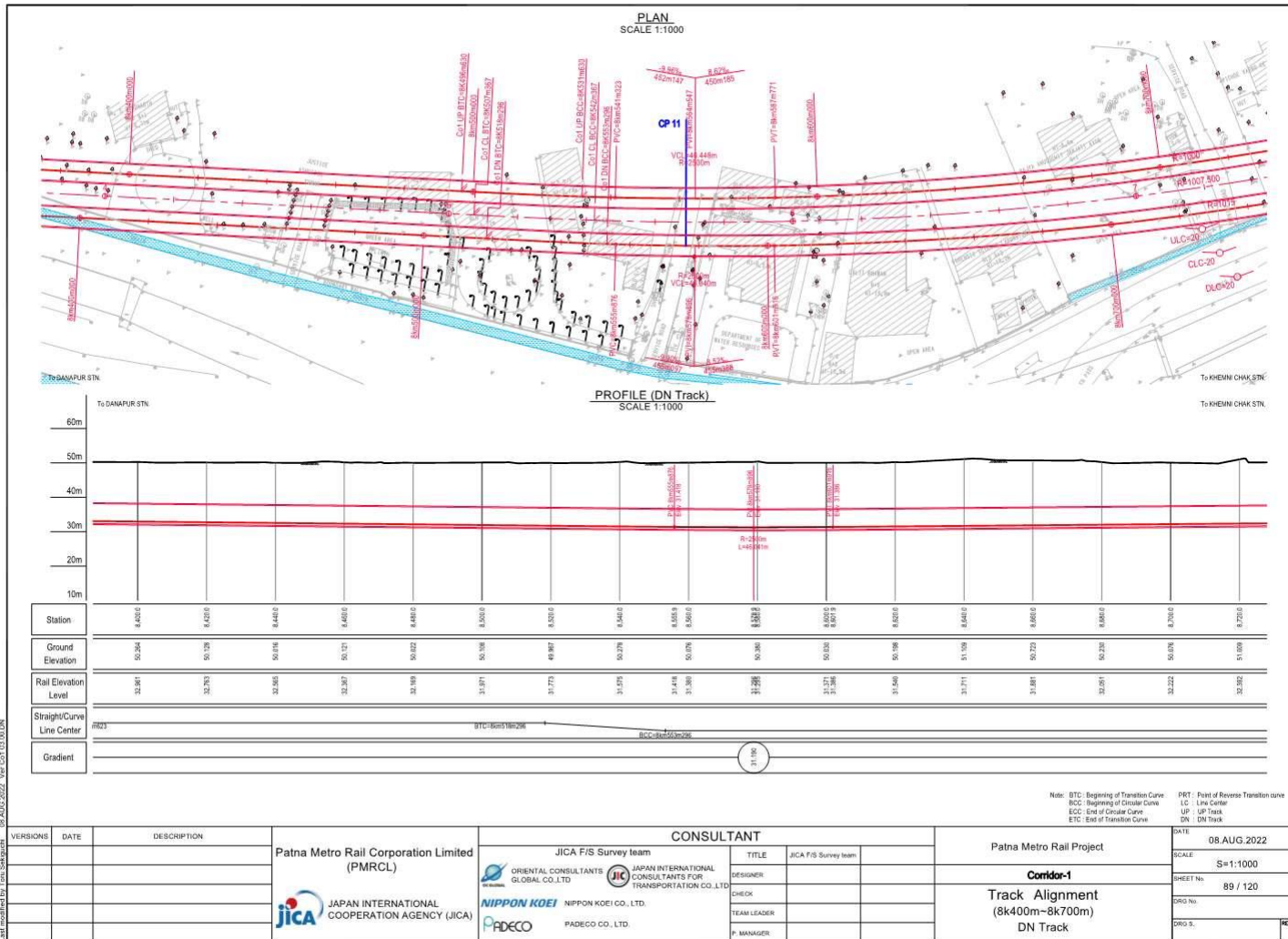


Last modified by: Tomi Saeguchi 08 AUG 2022 10:03:00 AM

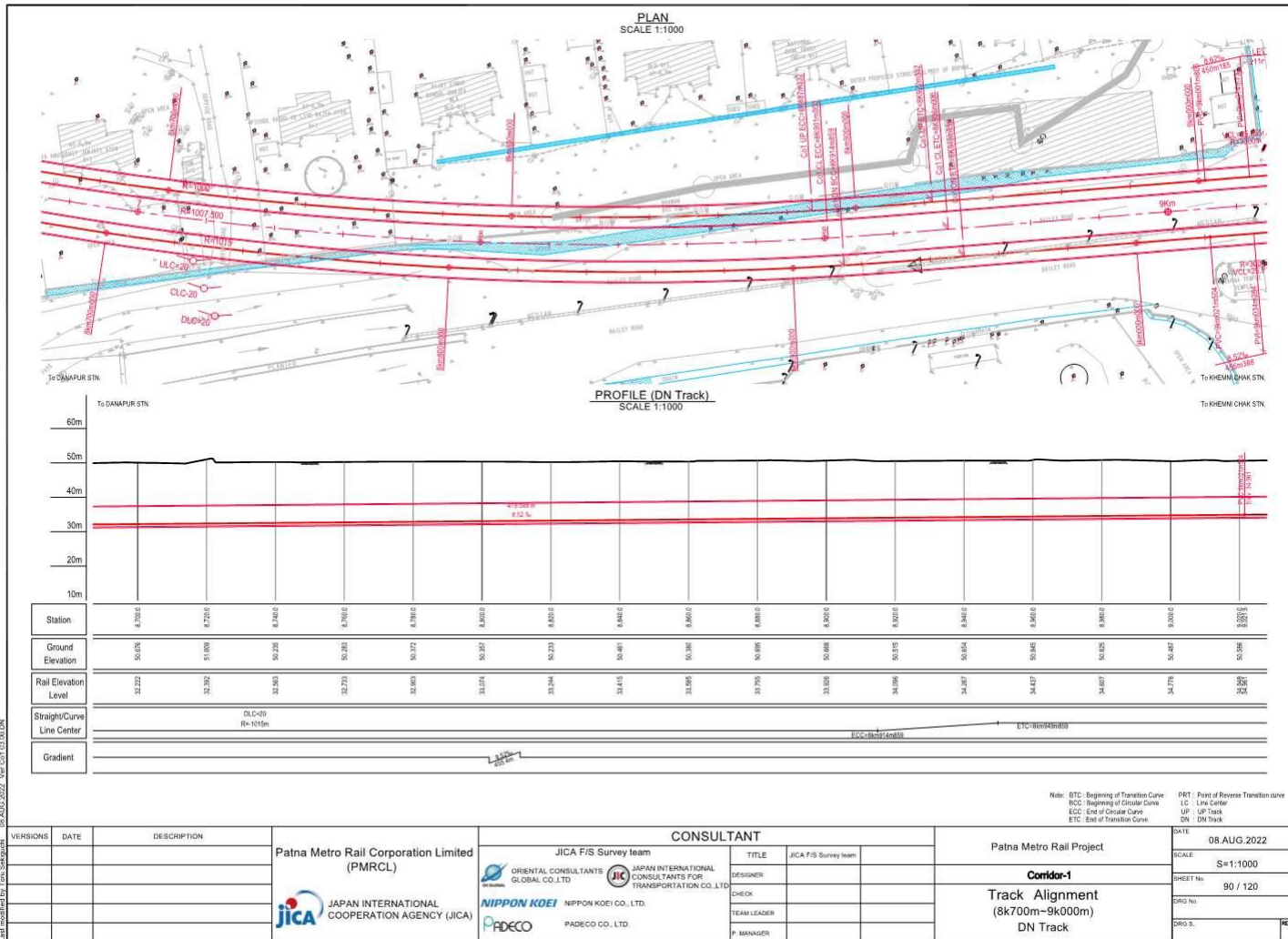
Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: DN Track

VERSIONS	DATE	DESCRIPTION	CONSULTANT			DATE
			Patna Metro Rail Corporation Limited (PMRCL) 			08 AUG 2022
			JICA F/S Survey team TITLE: JICA F/S Survey team DESIGNER: JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO., LTD. CHECK: NIPPON KOEI CO., LTD. TEAM LEADER: NIPPON KOEI CO., LTD. P. MANAGER: PAIDECO CO., LTD.			Patna Metro Rail Project Corridor-1 Track Alignment (7k800m~8k100m) DN Track
						SCALE: S=1:1000 SHEET No.: 87 / 120 DRO No.: DRO S.: REV:

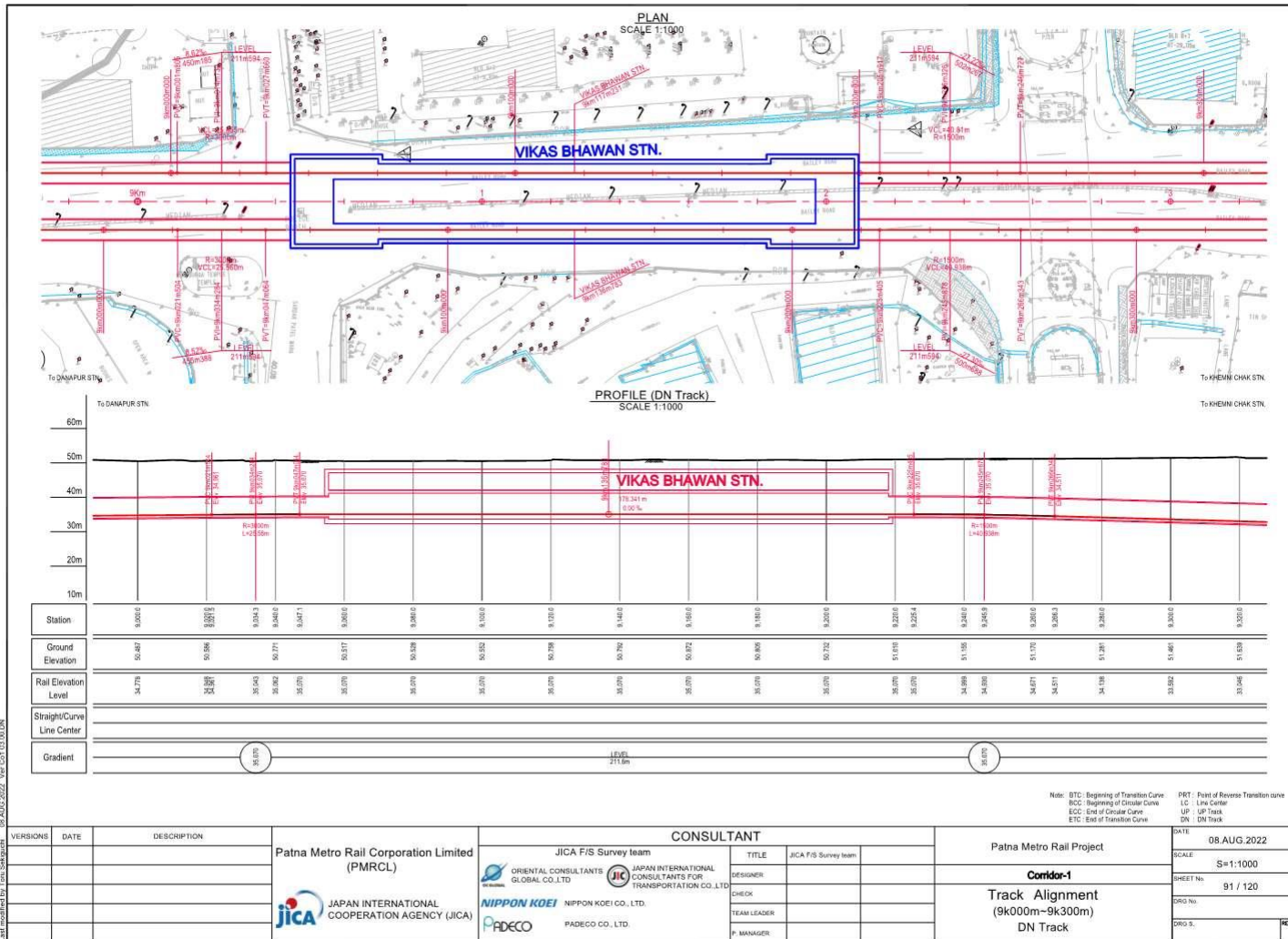




Last modified by: Tomi Saitoh / 03.AUG.2022 / Ver: 02 / 03.00.DWG



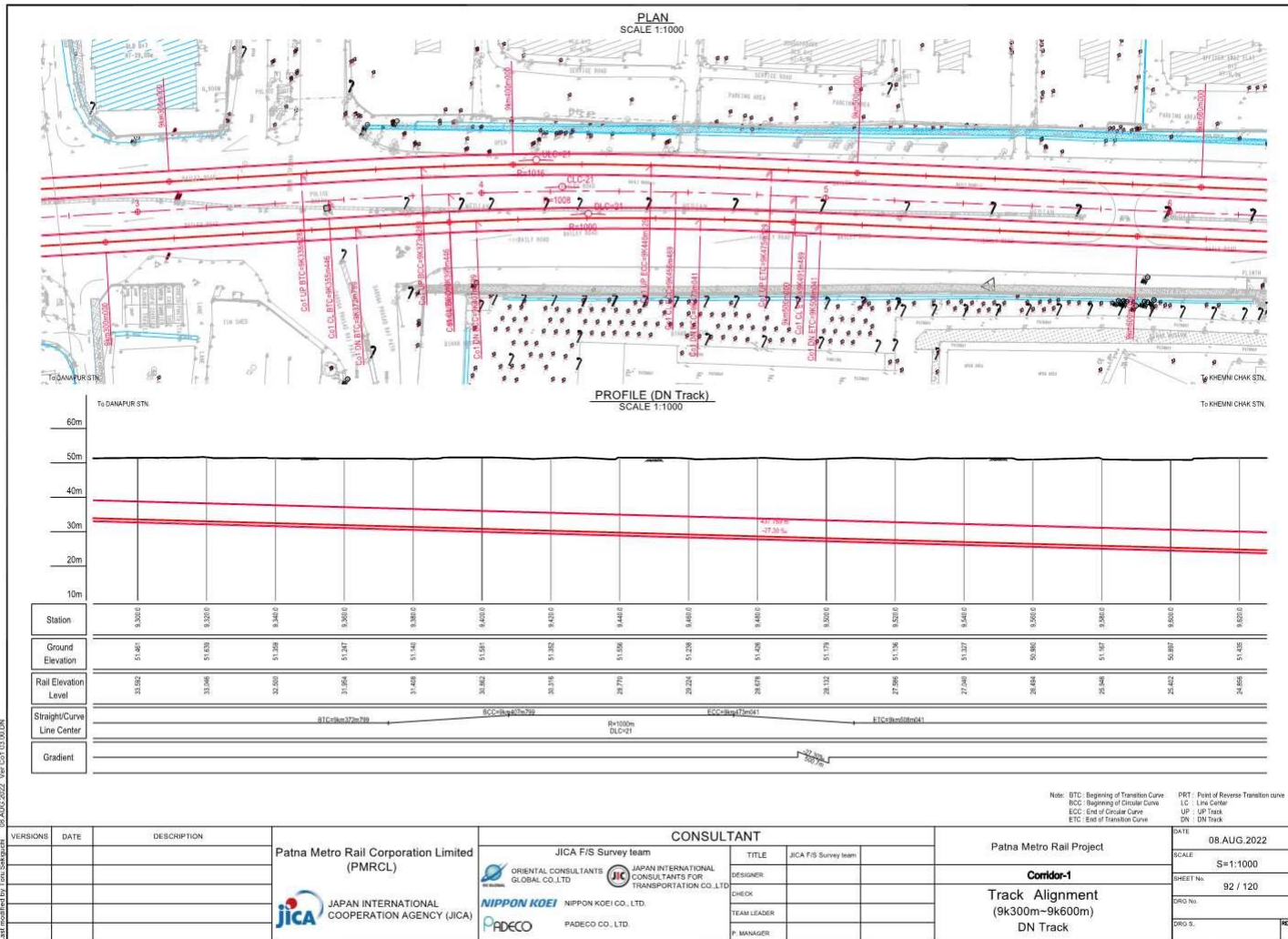
Last modified by: Tomi Saegusa 08 AUG 2022 10:00 AM



Last modified by: Tomi Saeguchi, 08 AUG 2022, 11:02:00 AM

Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 L.C: Line Center  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition Curve  
 LC: Line Center  
 UP: UP Track  
 DN: DN Track

VERSIONS	DATE	DESCRIPTION	CONSULTANT		DATE
			Patna Metro Rail Corporation Limited (PMRCL) 		08 AUG 2022
			JICA F/S Survey team DESIGNER: JICA F/S Survey team CHECK: _____ TEAM LEADER: _____ P. MANAGER: _____		SCALE: S=1:1000 SHEET No: 91 / 120 DRO No: _____ DRO S: _____ REV
			Patna Metro Rail Project Corridor-1 Track Alignment (9k000m-9k300m) DN Track		

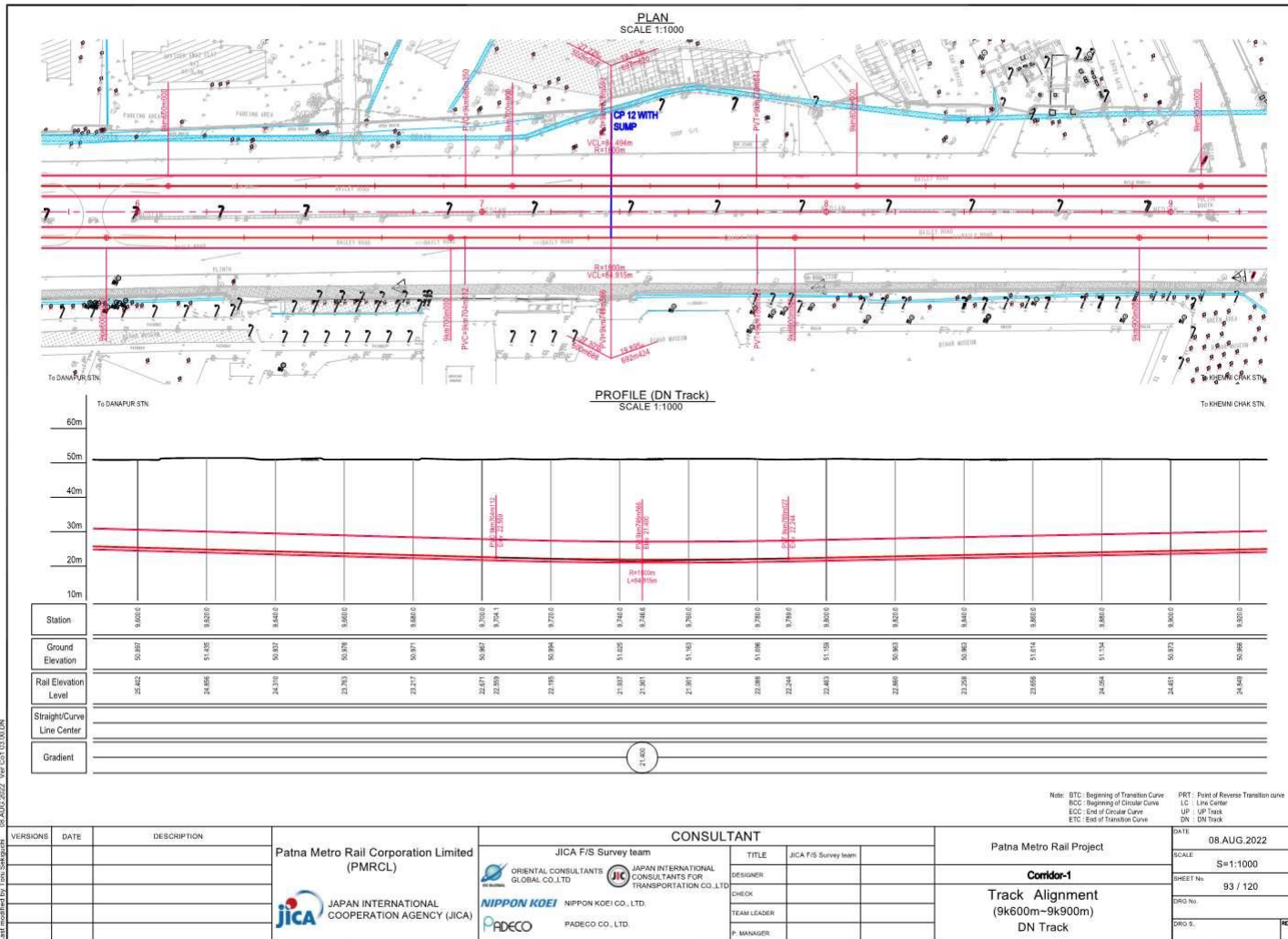


Date modified by: Tomi Saegusa 08 AUG 2022 Ver: 02 (03.00) DN

Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LCL: Line Center  
 UP: UP Track  
 DN: DN Track

VERSIONS	DATE	DESCRIPTION	CONSULTANT		DATE
			Patna Metro Rail Corporation Limited (PMRCL) JICA F/S Survey team ORIENTAL CONSULTANTS GLOBAL CO.LTD JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO.LTD NIPPON KOEI NIPPON KOEI CO., LTD. PADECO PADECO CO., LTD.		08.AUG.2022
			TITLE: JICA F/S Survey team DESIGNER: CHECK: TEAM LEADER: P. MANAGER:		SCALE: S=1:1000
			Patna Metro Rail Project Corridor-1 Track Alignment (9k300m~9k600m) DN Track		SHEET No: 92 / 120
					DRG No:
					DRG S:
					REV

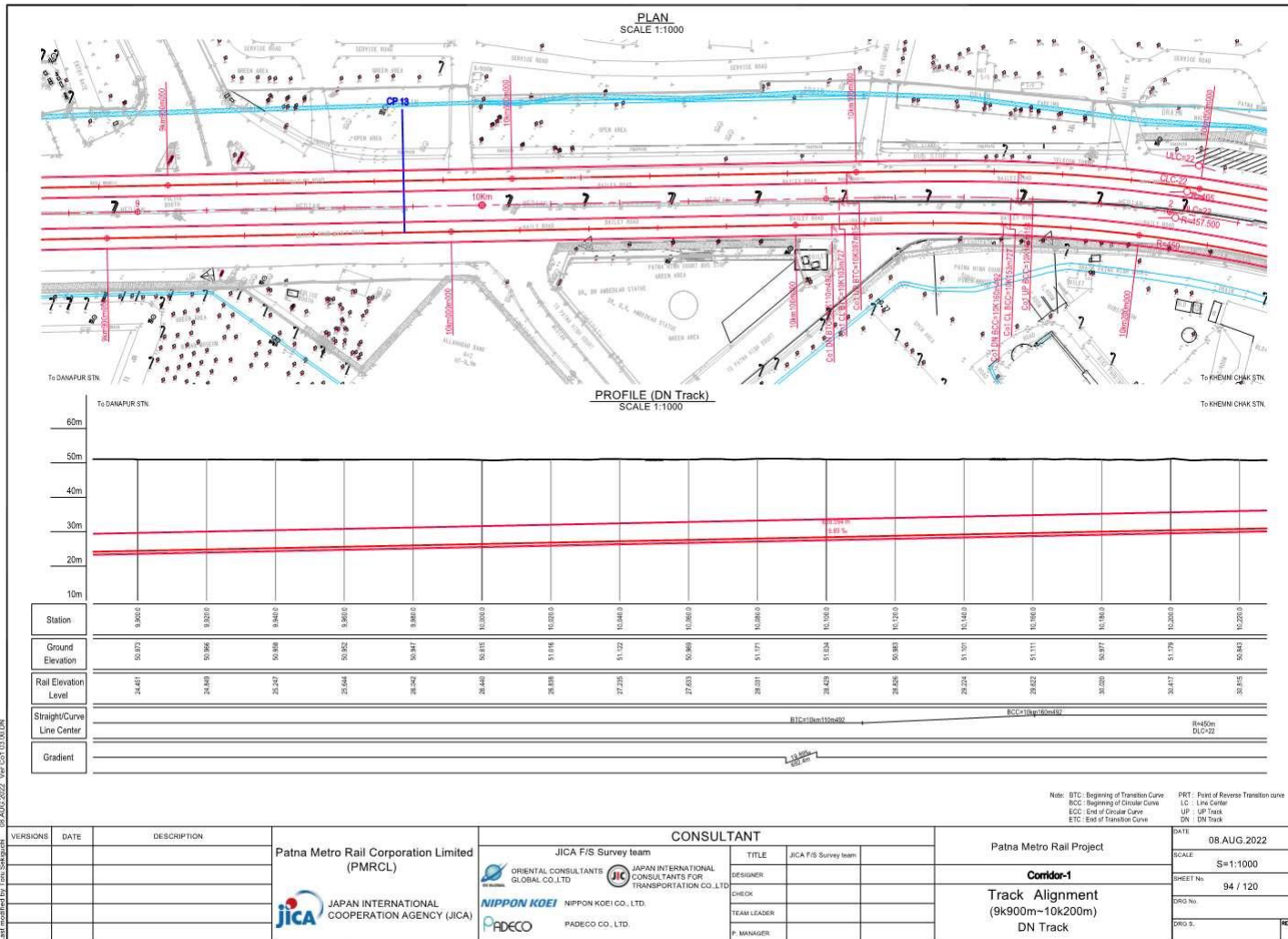




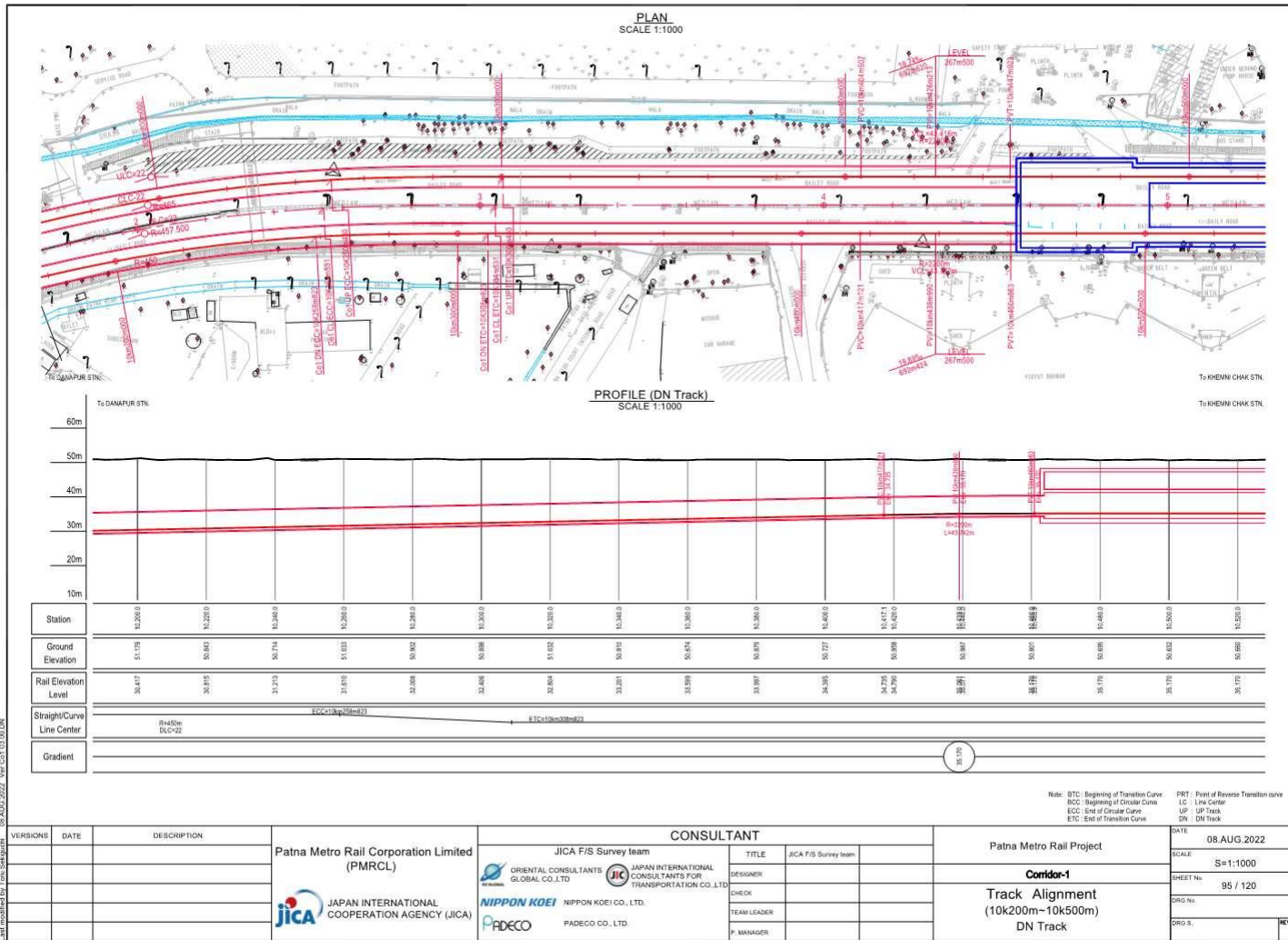
Date modified by: Tom Saitoh / 08 AUG 2022 / Ver: 02 / 03.00 DN

Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: DN Track

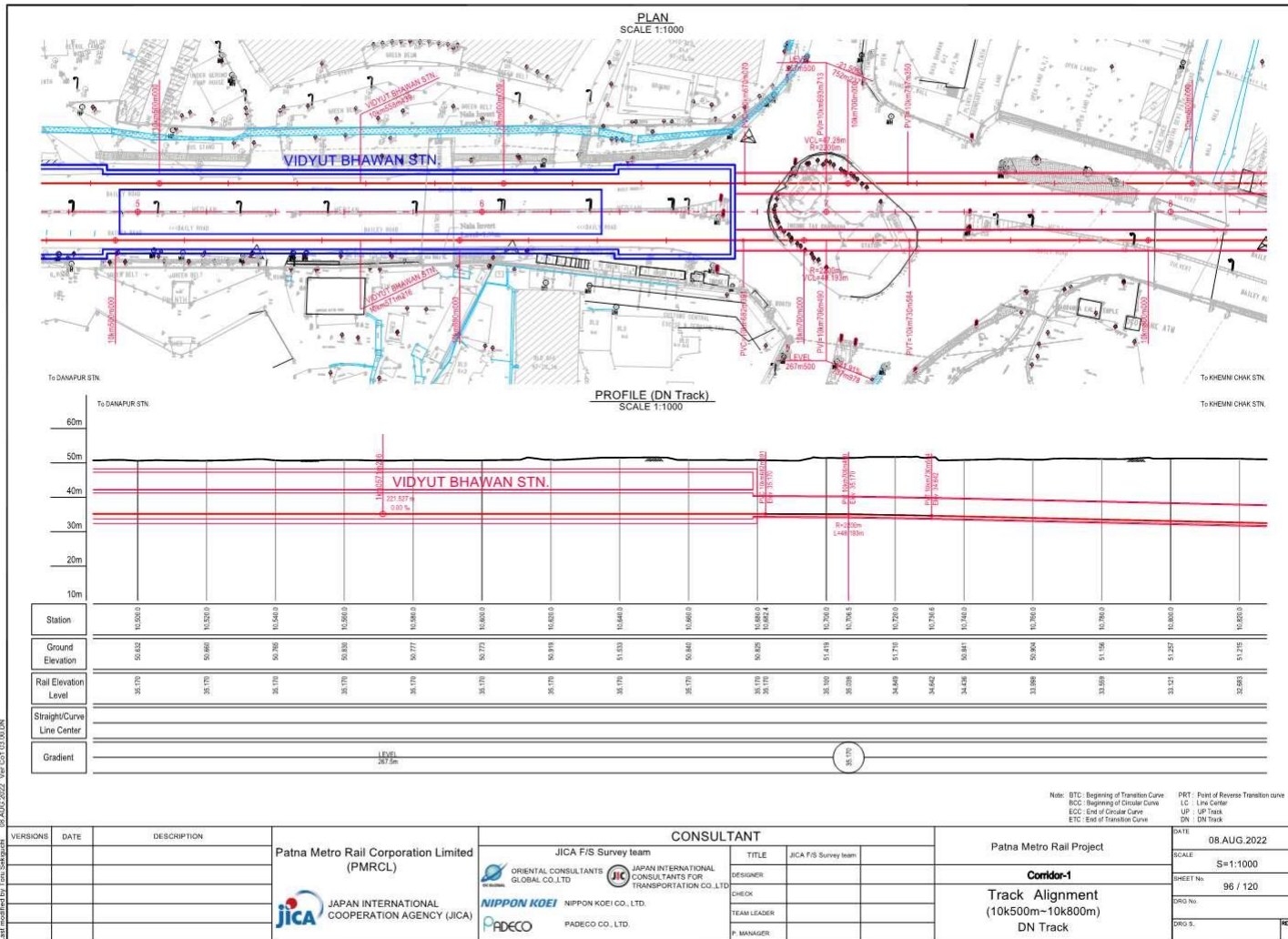
VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE
			Patna Metro Rail Corporation Limited (PMRCL) JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	JICA F/S Survey team ORIENTAL CONSULTANTS GLOBAL CO. LTD. NIPPON KOEI CO., LTD. PAIDECO CO., LTD.	JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO. LTD.	TITLE: JICA F/S Survey team DESIGNER: CHECK: TEAM LEADER: P. MANAGER:	08.AUG.2022
							Patna Metro Rail Project Corridor-1 Track Alignment (9k600m~9k900m) DN Track



Date modified by: Tomi Saegusa 08.AUG.2022 Ver: 02.03.00.DN



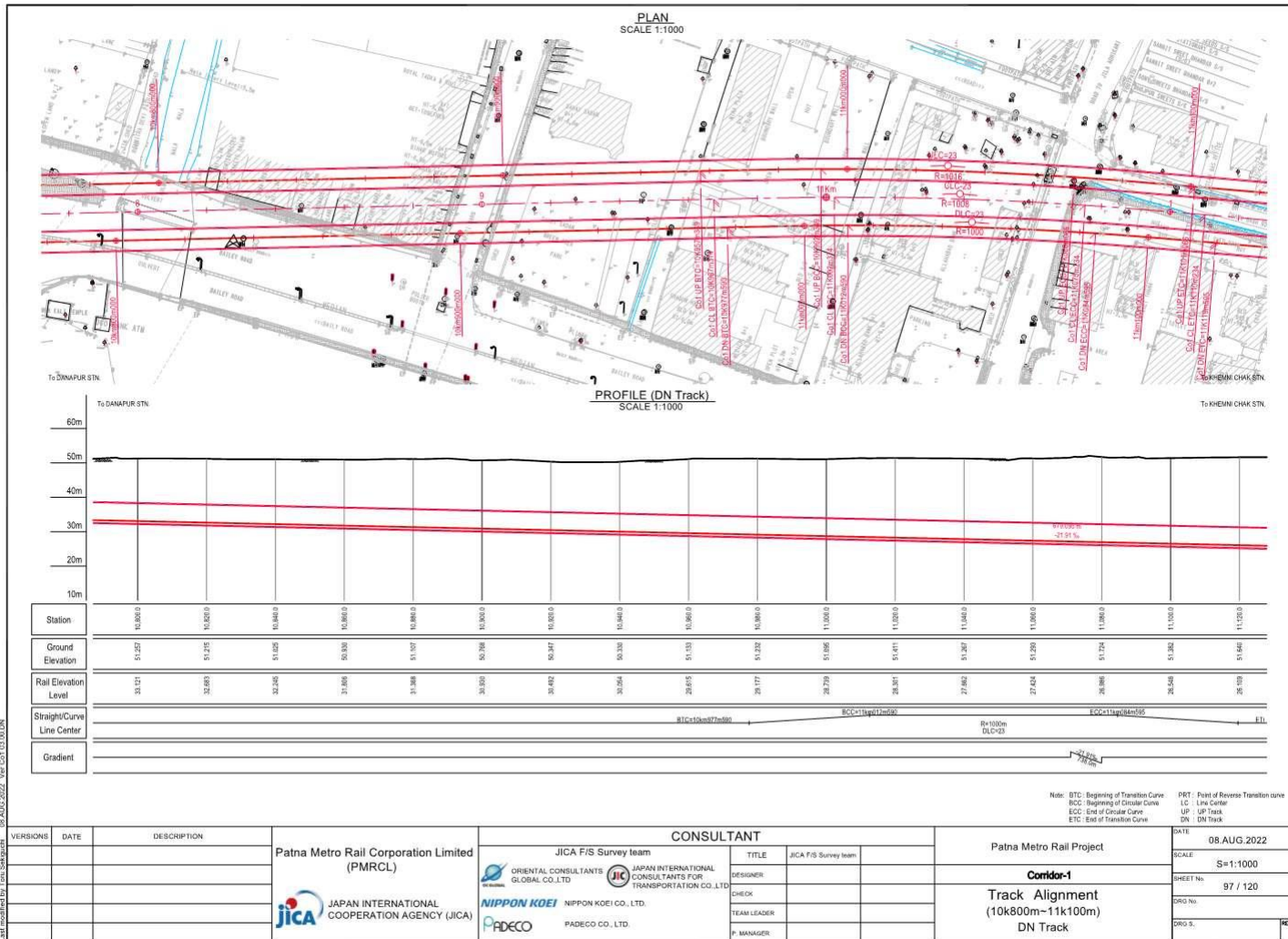
Last modified by: Tomi Saegusa 08.AUG.2022 Ver: 02.03.00.DM



Date modified by: Tomi Saitoh / 03 AUG 2022 / Ver: 02 / 03.00 DN

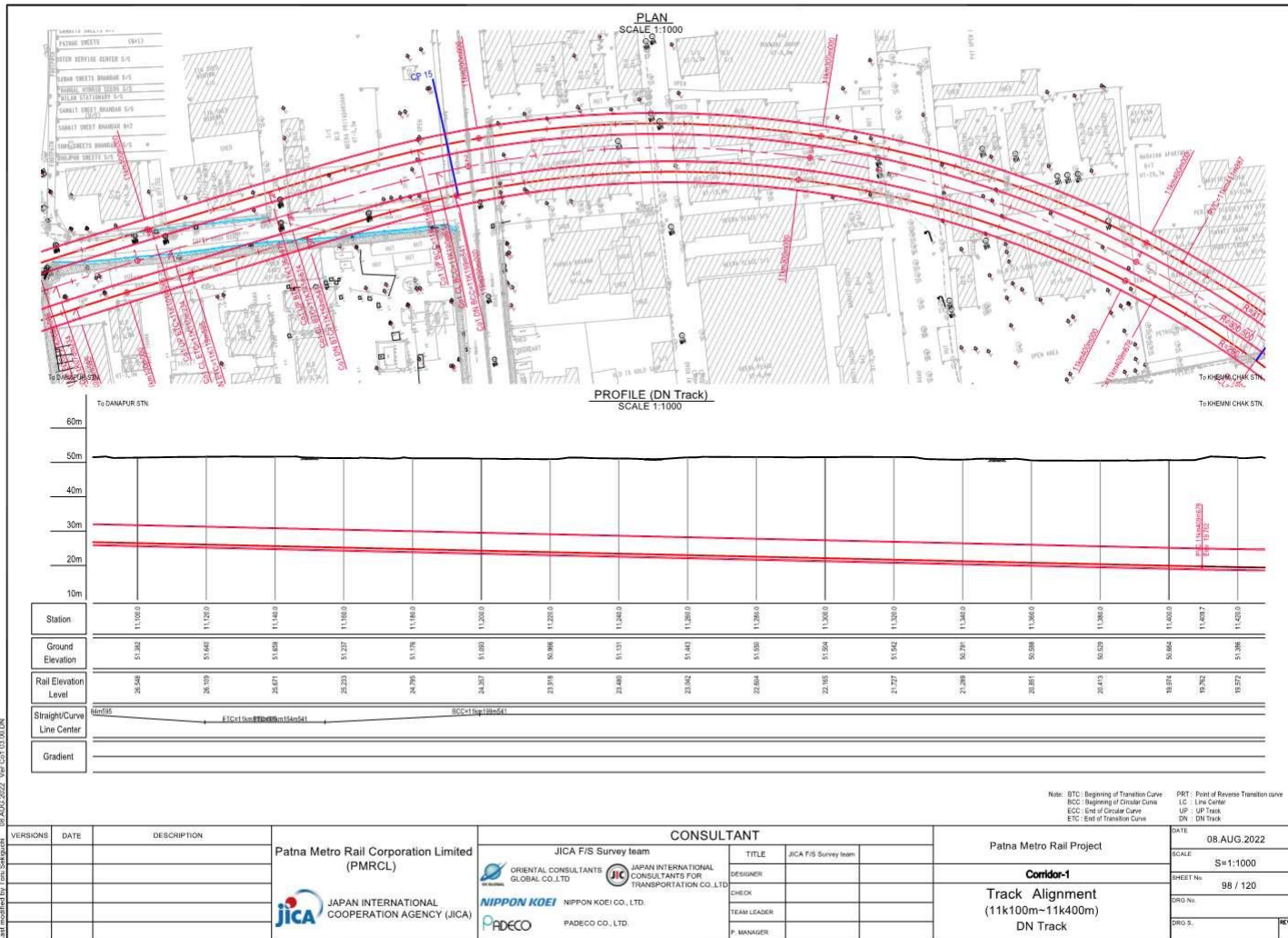
Note: BTC: Beginning of Transition Curve  
 BVC: Beginning of Circular Curve  
 EOC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: DN Track

VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE	SCALE	SHEET No.	DRG No.	DRG S.	REV
			Patna Metro Rail Corporation Limited (PMRCL)	JICA F/S Survey team	TITLE	JICA F/S Survey team	08.AUG.2022	S=1:1000	96 / 120			
			JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	ORIENTAL CONSULTANTS GLOBAL CO.,LTD	DESIGNER		Patna Metro Rail Project					
				JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO.,LTD	CHECK		Corridor-1					
				NIPPON KOEI NIPPON KOEI CO., LTD.	TEAM LEADER		Track Alignment					
				PADECO PADECO CO., LTD.	P. MANAGER		(10k500m~10k800m)					
							DN Track					



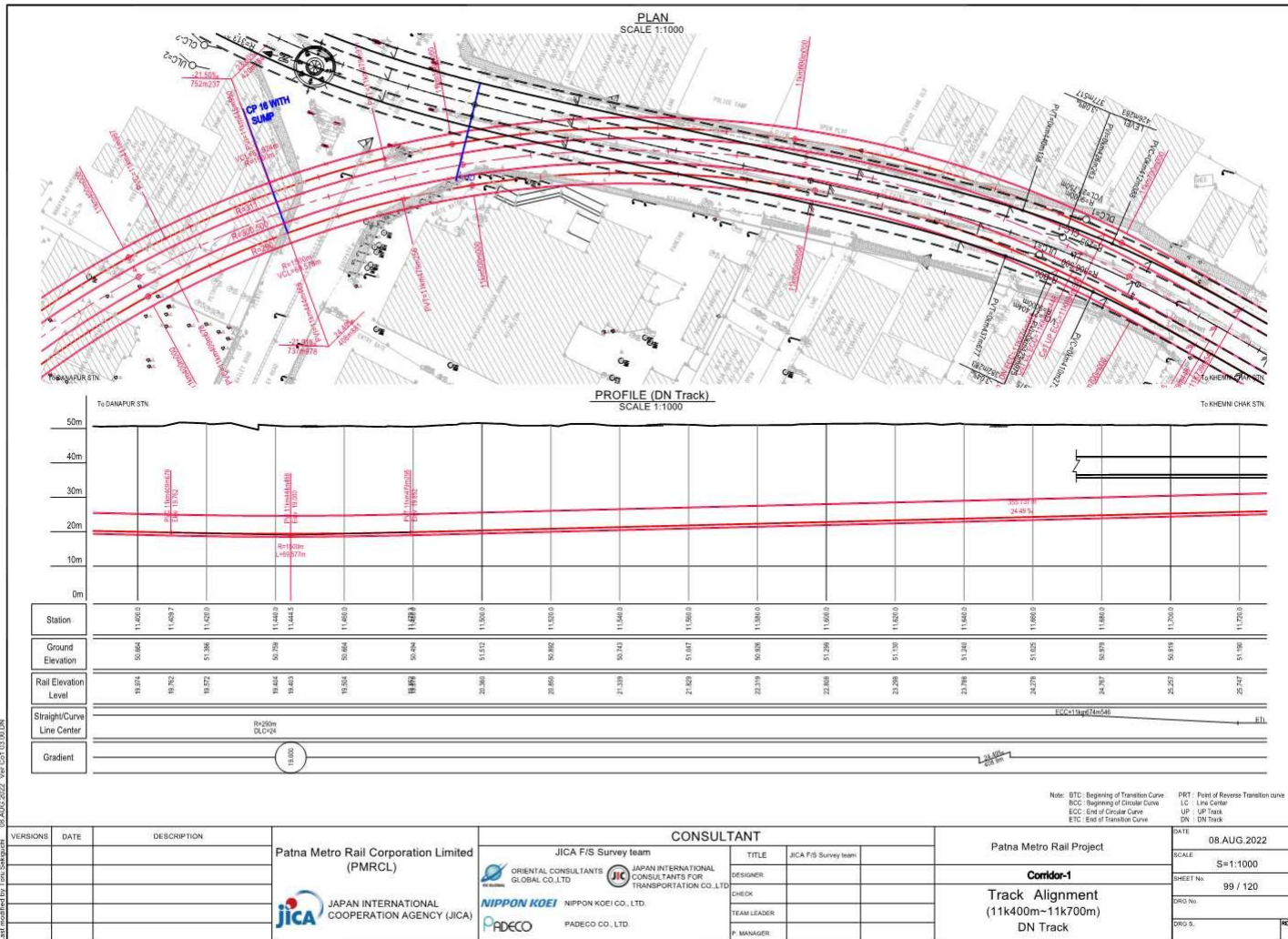
Last modified by: Tomi Saegusa 08 AUG 2022 10:03:00 AM

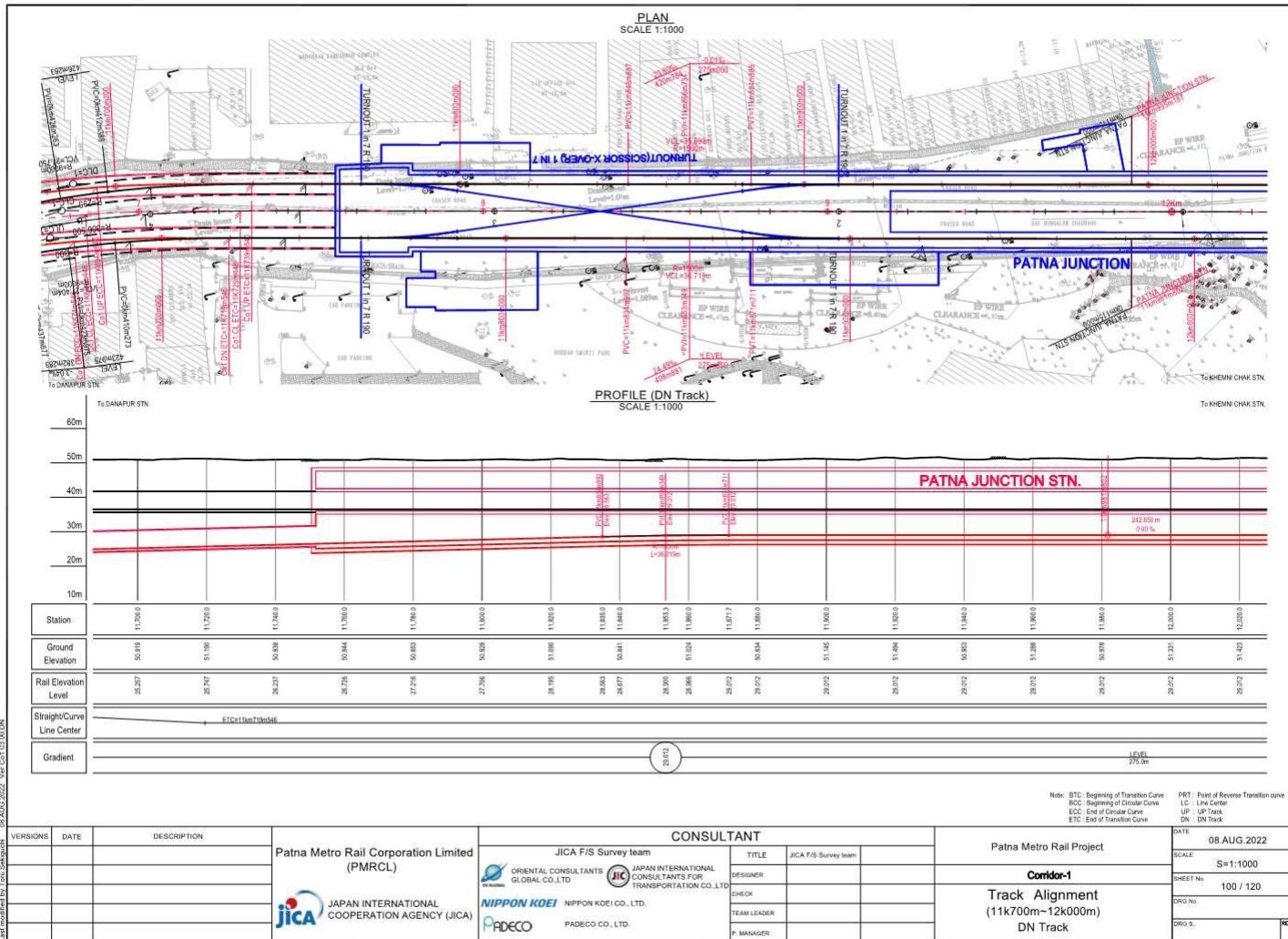
VERSIONS	DATE	DESCRIPTION	CONSULTANT		DATE
			Patna Metro Rail Corporation Limited (PMRCL)	JICA F/S Survey team	08 AUG 2022
			JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	ORIENTAL CONSULTANTS GLOBAL CO. LTD.	SCALE: S=1:1000
				JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO. LTD.	SHEET No: 97 / 120
				NIPPON KOEI CO., LTD.	DRG No:
				PADECO CO., LTD.	DRG S:
					REV



Last modified by: Tomi Saitoh / 09 AUG 2022 10:02:00 AM

VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE
			<b>Patna Metro Rail Corporation Limited (PMRCL)</b> 		<b>JICA F/S Survey team</b> 		08.AUG.2022
					<b>Patna Metro Rail Project</b> <b>Corridor-1</b> <b>Track Alignment (11k100m~11k400m)</b> <b>DN Track</b>		SCALE: S=1:1000
							SHEET No: 98 / 120
							DRG No:
							DRG S: REV





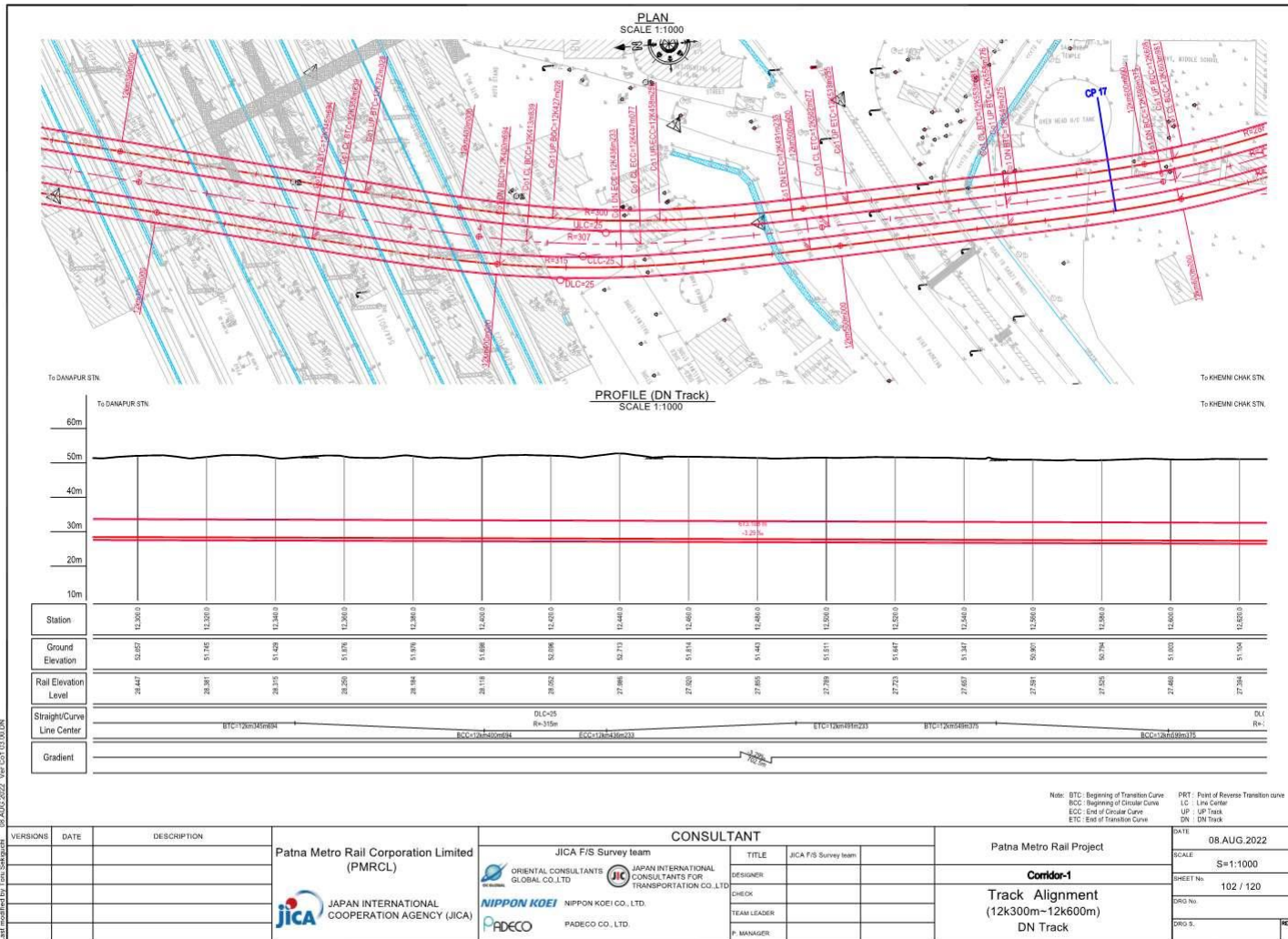
Last modified by: Tomi Saegusa 09 AUG 2022 Wed 02:03:00 PM

Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: DN Track

VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE
			Patna Metro Rail Corporation Limited (PMRCL) JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		JICA F/S Survey team ORIENTAL CONSULTANTS GLOBAL CO. LTD NIPPON KOEI CO., LTD. PADECO CO., LTD.		08 AUG 2022
					TITLE: JICA F/S Survey team DESIGNER: CHECK: TEAM LEADER: P. MANAGER:		SCALE: S=1:1000 SHEET No.: 100 / 120 DRO No.: DRO S.:
					Patna Metro Rail Project Corridor-1 Track Alignment (11k700m~12k000m) DN Track		REV:



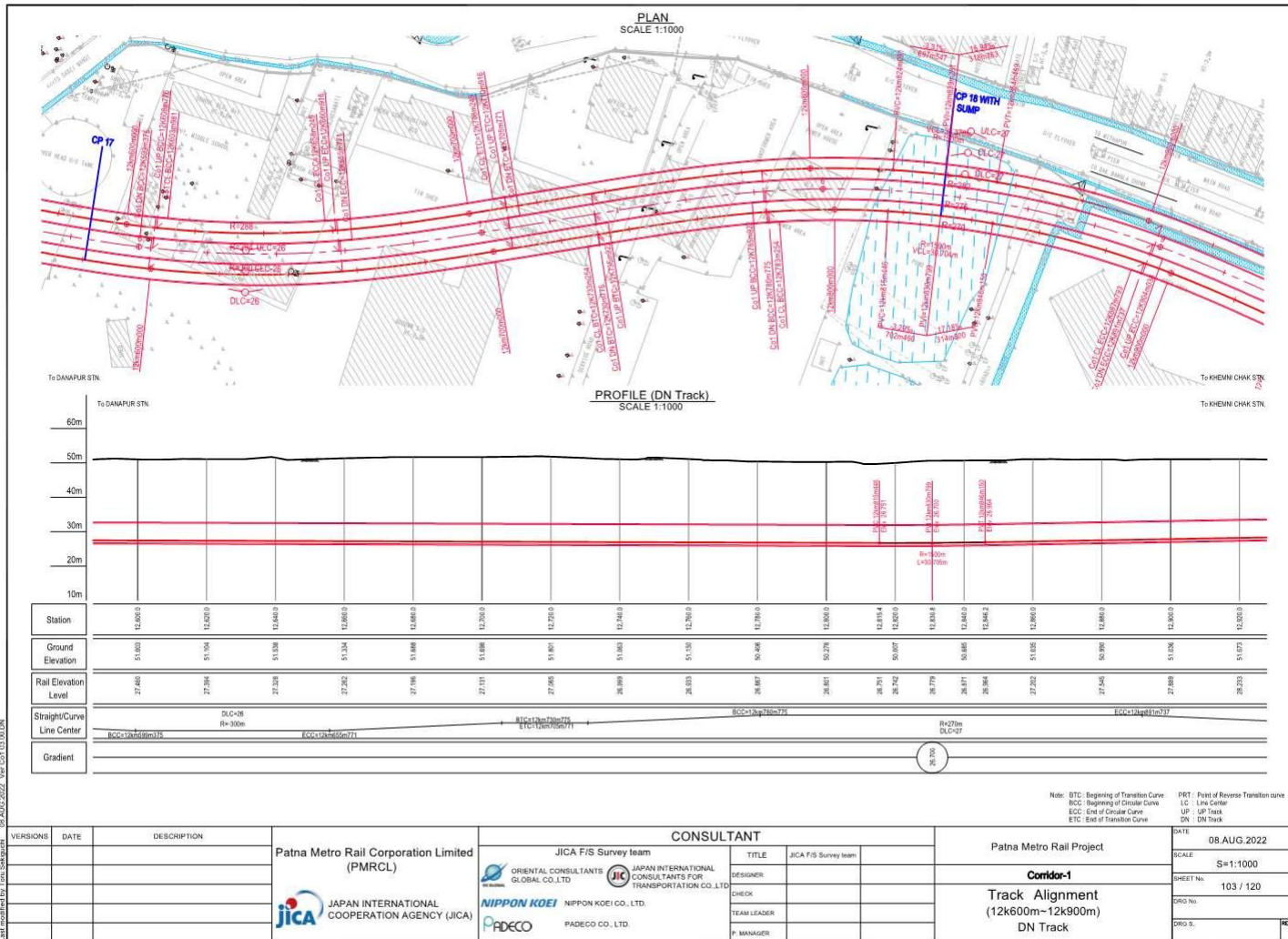




Date modified by: Tomi Saitoh 08 AUG 2022 Ver: 02 (0.00) DN

Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 L.C: Line Center  
 UP: UP Track  
 DN: DN Track

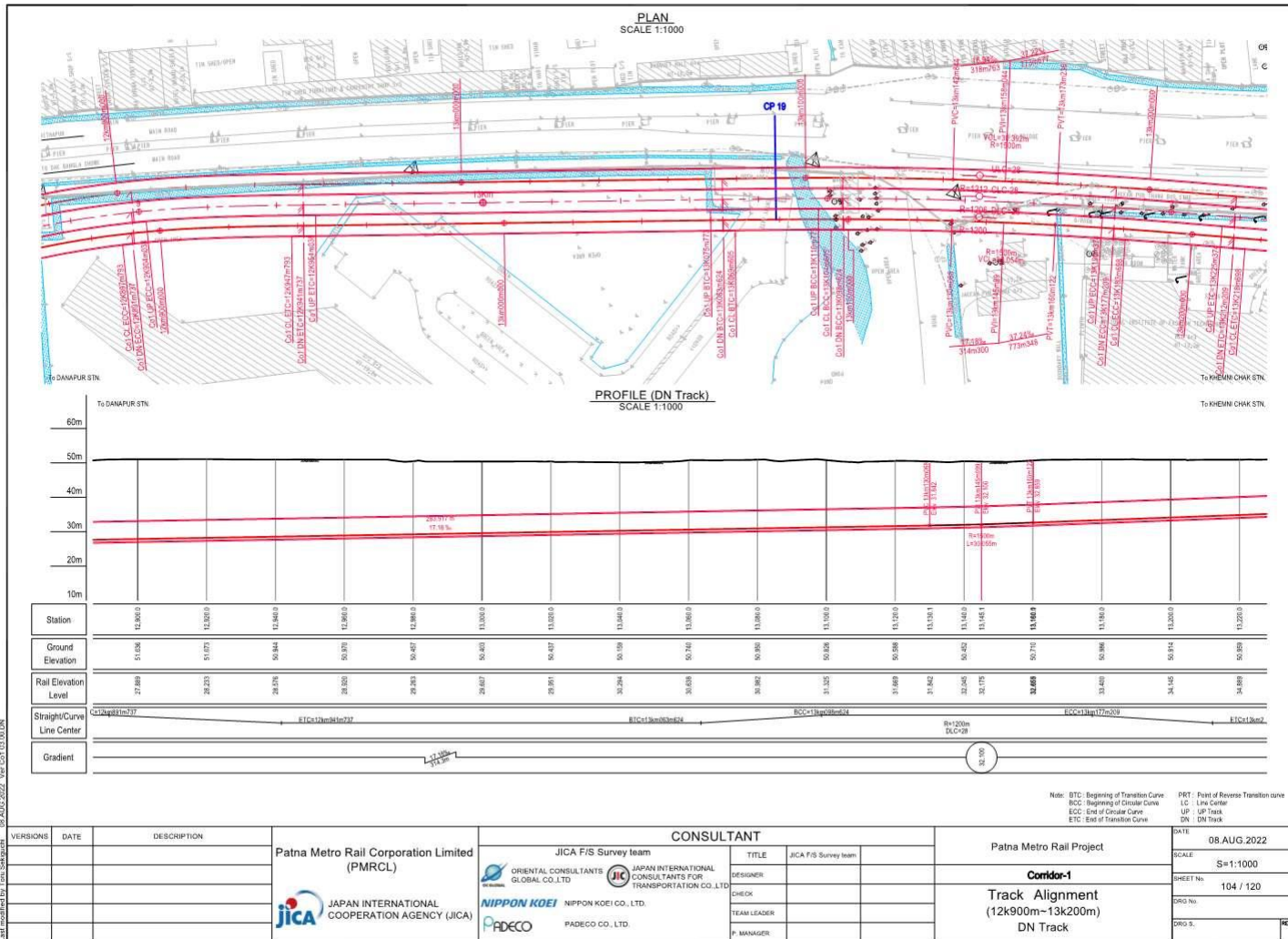
VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE
			<b>Patna Metro Rail Corporation Limited (PMRCL)</b> 		<b>JICA F/S Survey team</b> 		08.AUG.2022
					<b>Patna Metro Rail Project</b> <b>Corridor-1</b> <b>Track Alignment (12k300m~12k600m)</b> <b>DN Track</b>		SCALE: S=1:1000 SHEET No: 102 / 120 DRO No: DRO S:
							REV



Date modified by: Tomi Saitoh 08 AUG 2022 Ver: 02.00 DN

Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: DN Track

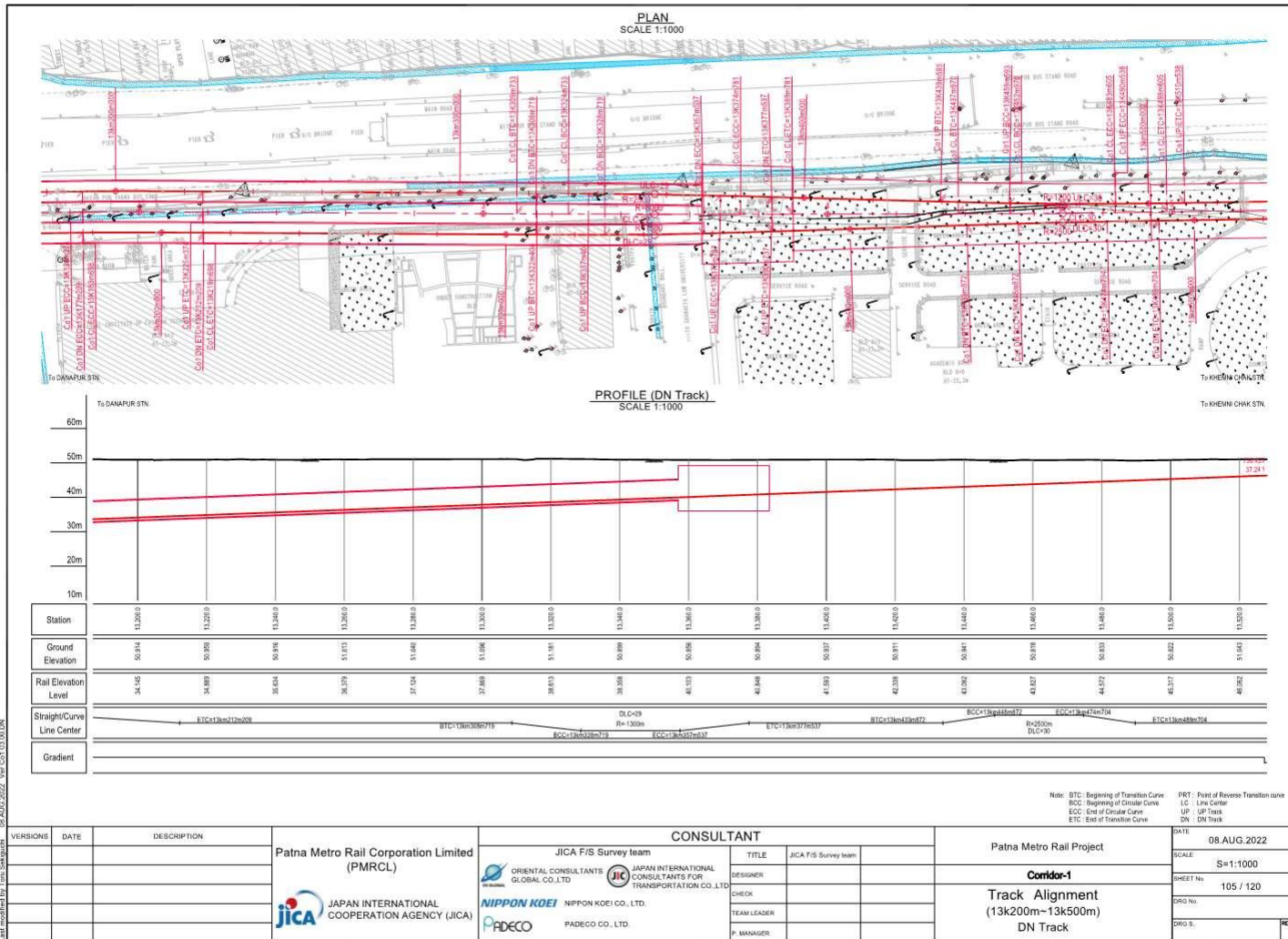
VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE
			<b>Patna Metro Rail Corporation Limited (PMRCL)</b> JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		<b>JICA F/S Survey team</b> ORIENTAL CONSULTANTS GLOBAL CO. LTD NIPPON KOEI CO., LTD. PADECO CO., LTD.		08.AUG.2022
					TITLE: JICA F/S Survey team DESIGNER: CHECK: TEAM LEADER: P. MANAGER:		SCALE: S=1:1000 SHEET No: 103 / 120 DRO No: DRO S:
					Patna Metro Rail Project <b>Corridor-1</b> Track Alignment (12k600m~12k900m) DN Track		REV:



Last modified by: Tomi Saegusa 08 AUG 2022 Ver: 02 (03.00 DN)

Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition Curve  
 LC: Line Center  
 UP: UP Track  
 DN: DN Track

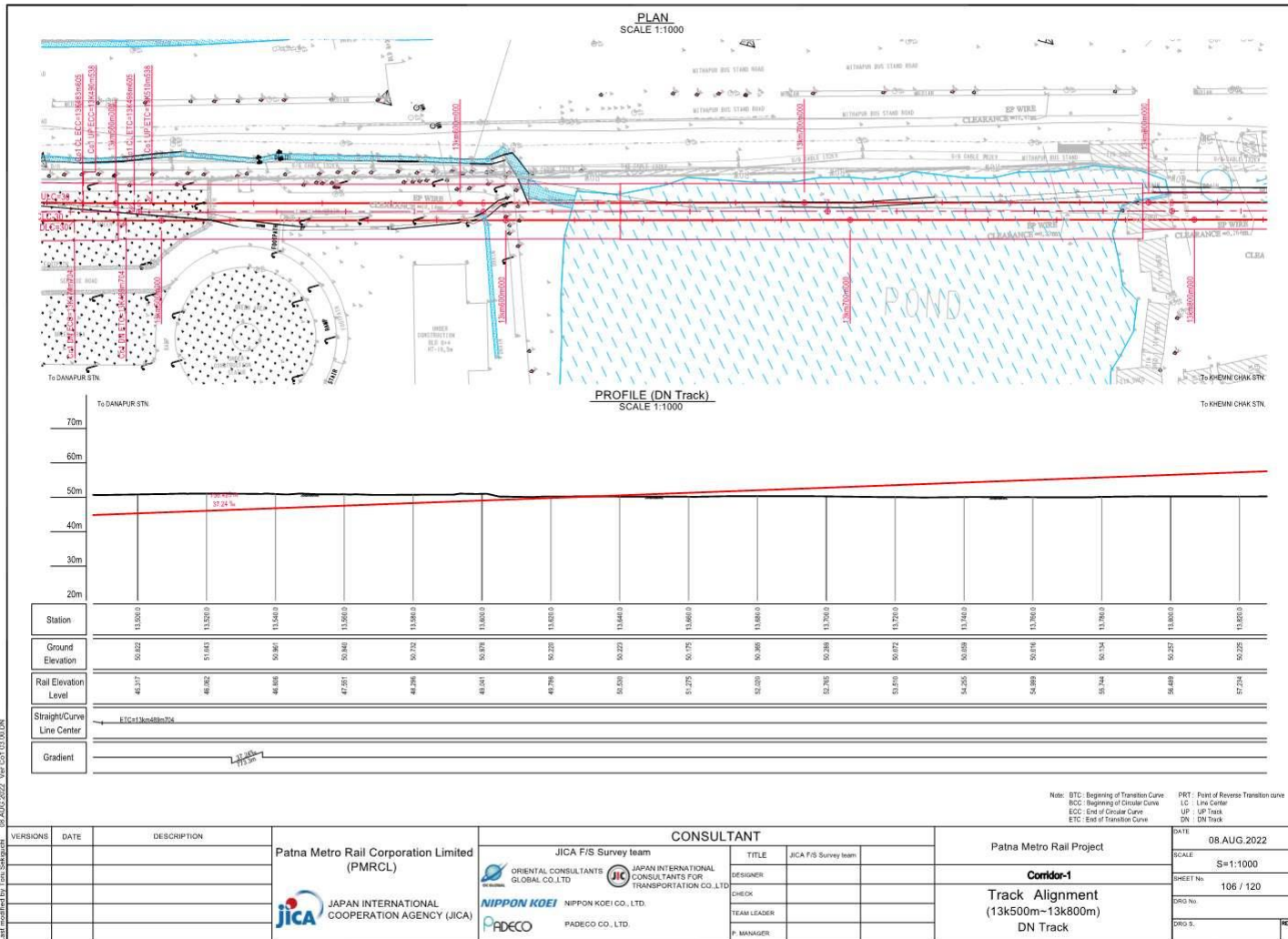
VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE
			Patna Metro Rail Corporation Limited (PMRCL) JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		JICA F/S Survey team ORIENTAL CONSULTANTS GLOBAL CO. LTD NIPPON KOEI CO., LTD. PAIDECO CO., LTD.		08.AUG.2022
					TITLE: JICA F/S Survey team DESIGNER: CHECK: TEAM LEADER: P. MANAGER:		SCALE: S=1:1000 SHEET No: 104 / 120 DRO No: DRO S:
					Patna Metro Rail Project Corridor-1 Track Alignment (12k900m~13k200m) DN Track		REV:



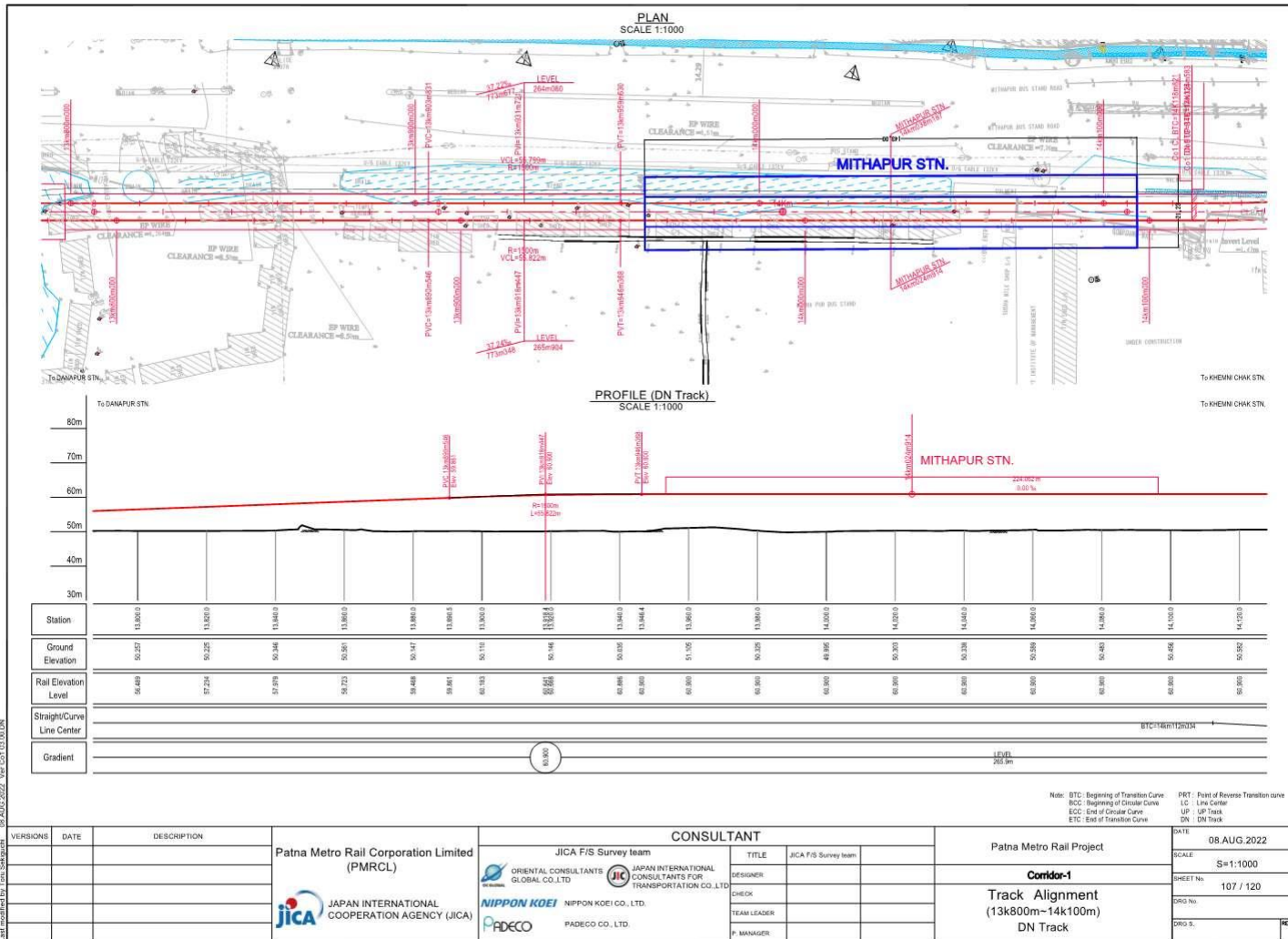
Date modified by: Tomi Saitoh / 03 AUG 2022 / Ver: 02 / 03.00.DWG

Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 L.C: Line Center  
 EOC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 UP: UP Track  
 DN: DN Track

VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE
			Patna Metro Rail Corporation Limited (PMRCL)		JICA F/S Survey team		08.AUG.2022
			JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		ORIENTAL CONSULTANTS GLOBAL CO.LTD NIPPON KOEI CO., LTD. PADECO CO., LTD.		SCALE: S=1:1000
					TITLE: JICA F/S Survey team		SHEET No: 105 / 120
					DESIGNER: JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO.LTD		DRG No:
					CHECK: NIPPON KOEI CO., LTD.		DRG S:
					TEAM LEADER: PADECO CO., LTD.		REV
					P. MANAGER:		
					Patna Metro Rail Project		
					Corridor-1		
					Track Alignment (13k200m~13k500m)		
					DN Track		



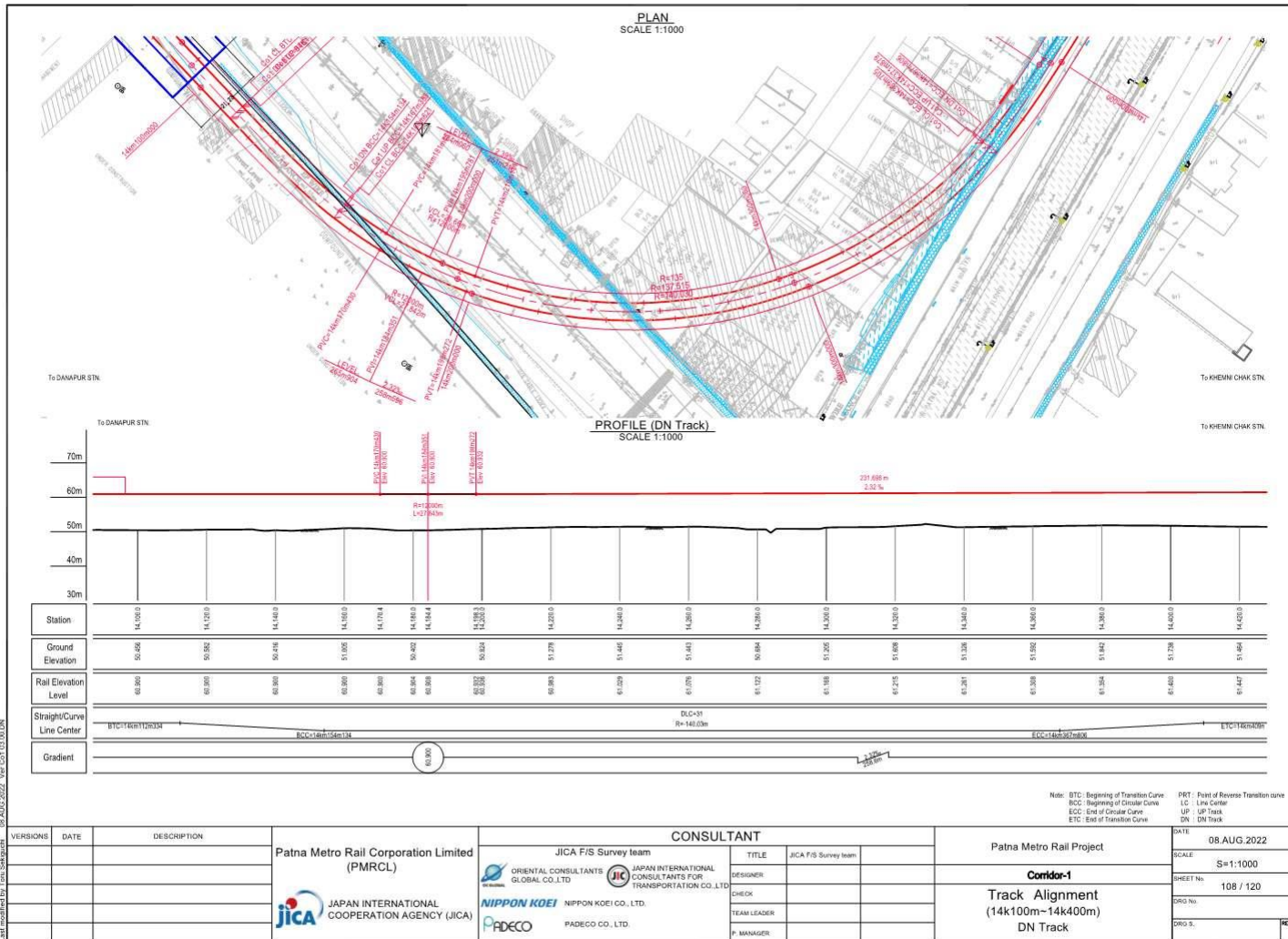
Last modified by: Tomi Saegusa 08.AUG.2022 Ver: 02.00.DN



Last modified by: Tomi Saitoh / 03 AUG 2022 / Ver: 02 / 03.00 DN

Note: BTC: Beginning of Transition Curve  
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 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: DN Track

VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE
			Patna Metro Rail Corporation Limited (PMRCL)		JICA F/S Survey team		08 AUG 2022
			JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		ORIENTAL CONSULTANTS GLOBAL CO.LTD NIPPON KOEI CO., LTD. PADECO CO., LTD.		SCALE S=1:1000
					TITLE JICA F/S Survey team		SHEET No. 107 / 120
					Patna Metro Rail Project		DRG No.
					Corridor-1		DRG S.
					Track Alignment (13k800m~14k100m)		REV
					DN Track		

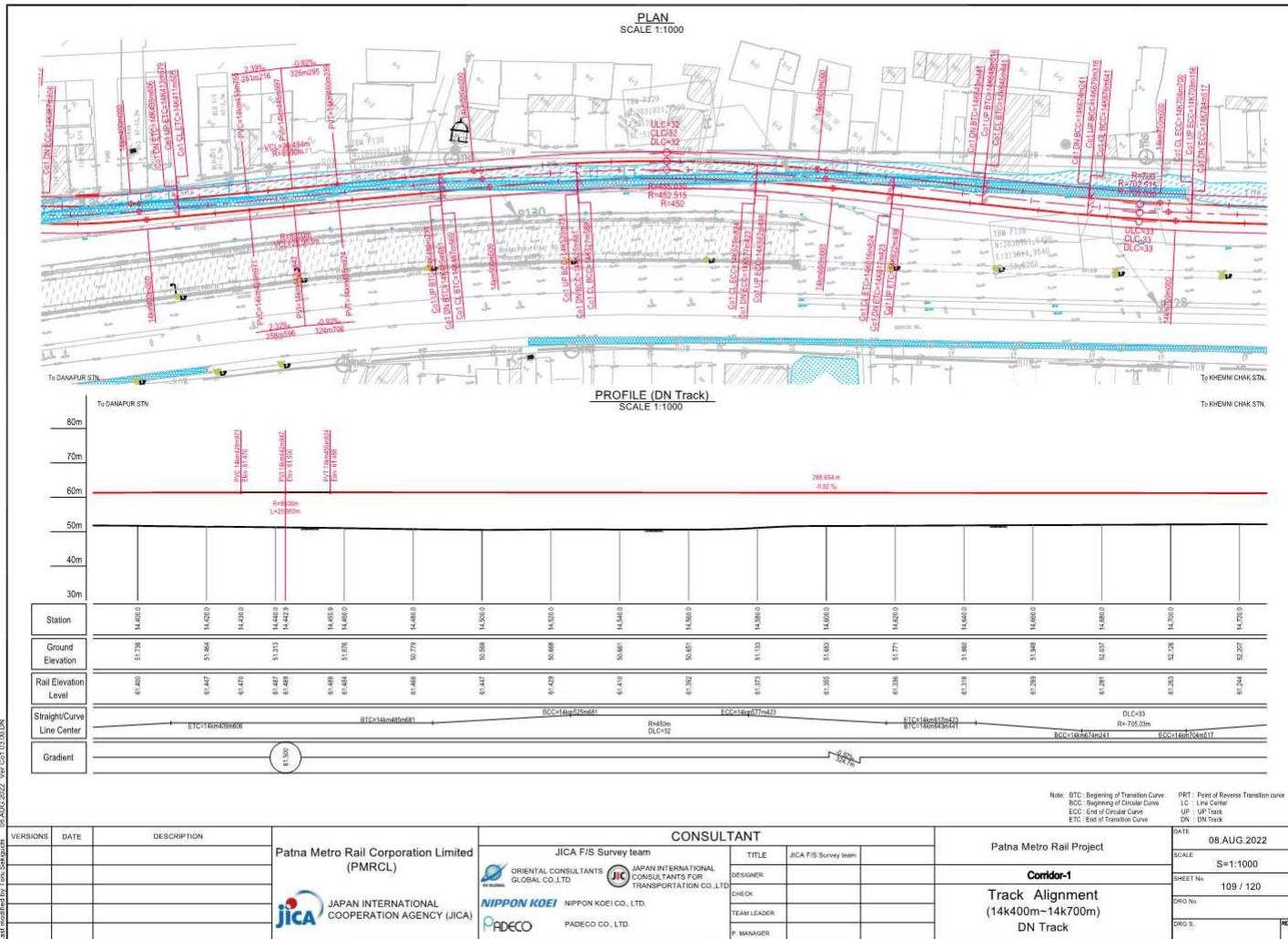


Date modified by: Tomi Saitoh / 08 AUG 2022 / Ver: 02 / 03.00 DN

Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: DN Track

VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE		
			<b>Patna Metro Rail Corporation Limited (PMRCL)</b> JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		<b>JICA F/S Survey team</b> ORIENTAL CONSULTANTS GLOBAL CO. LTD NIPPON KOEI CO., LTD. PAIDECO CO., LTD.		TITLE: JICA F/S Survey team DESIGNER: CHECK: TEAM LEADER: P. MANAGER:	Patna Metro Rail Project <b>Corridor-1</b> Track Alignment (14k100m~14k400m) DN Track	08.AUG.2022 SCALE: S=1:1000 SHEET No: 108 / 120 DRO No: DRO S:

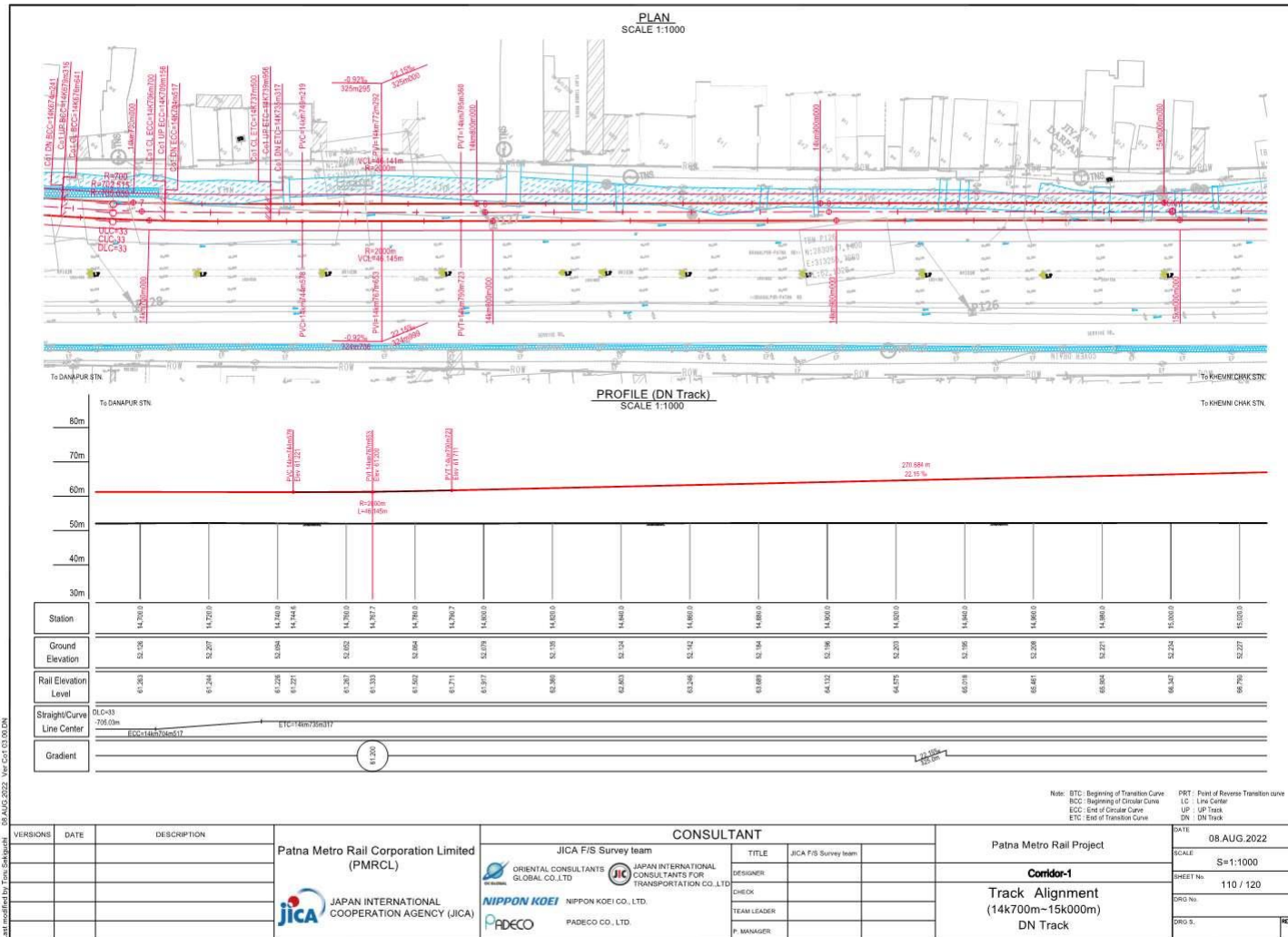




Date modified by: Tomi Saitoh / 08 AUG 2022 / Ver: 02 / 03 / 00

Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 L.C: Line Center  
 UP: UP Track  
 DN: DN Track

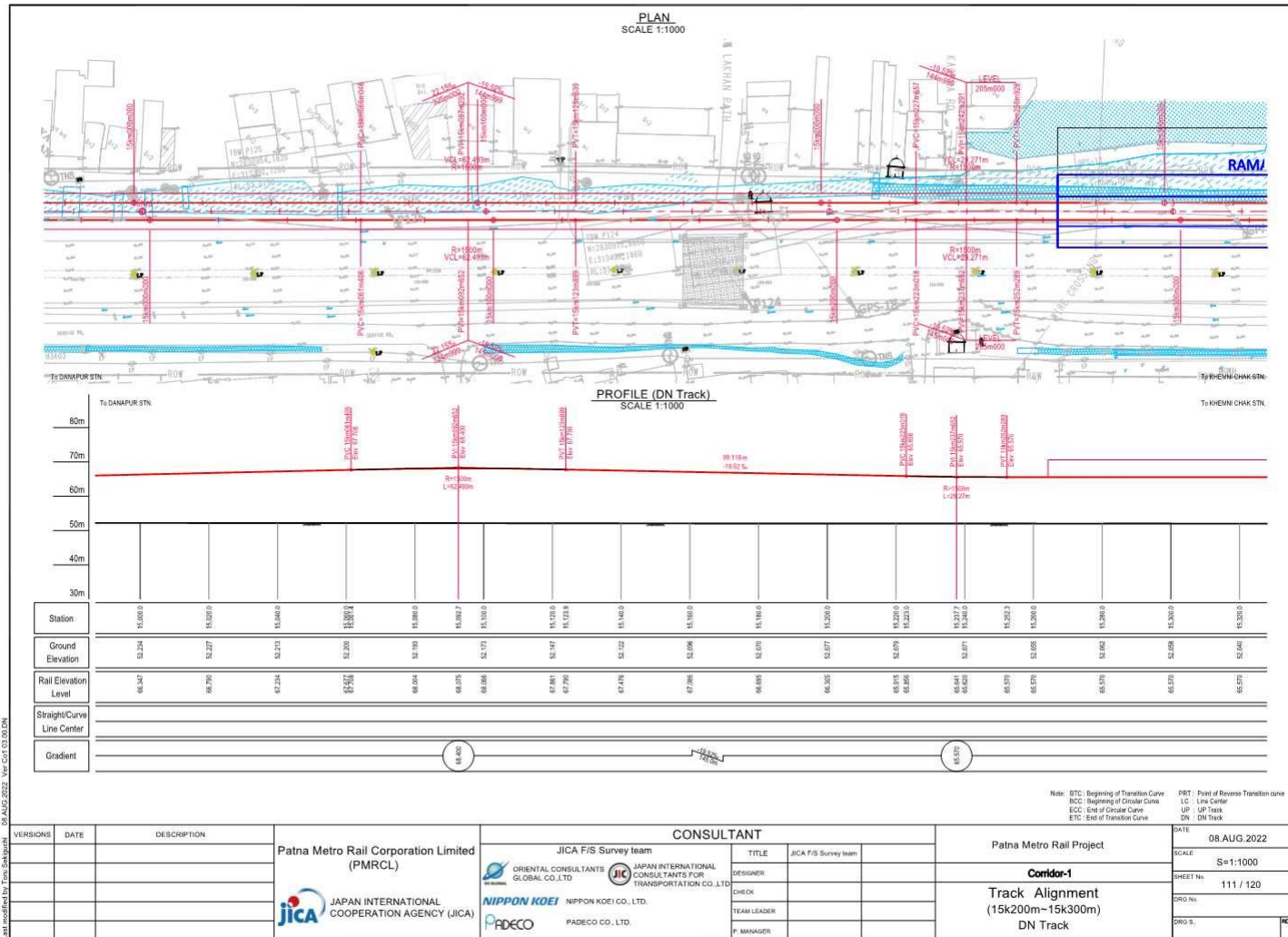
VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE
			<b>Patna Metro Rail Corporation Limited (PMRCL)</b> 		<b>JICA F/S Survey team</b> TITLE: JICA F/S Survey team DESIGNER: CHECK: TEAM LEADER: P. MANAGER:		08.AUG.2022 SCALE: S=1:1000 SHEET No.: 109 / 120 DRO No.: DRO S.:
			<b>Patna Metro Rail Project</b> <b>Corridor-1</b> <b>Track Alignment (14k400m~14k700m)</b> <b>DN Track</b>				REV

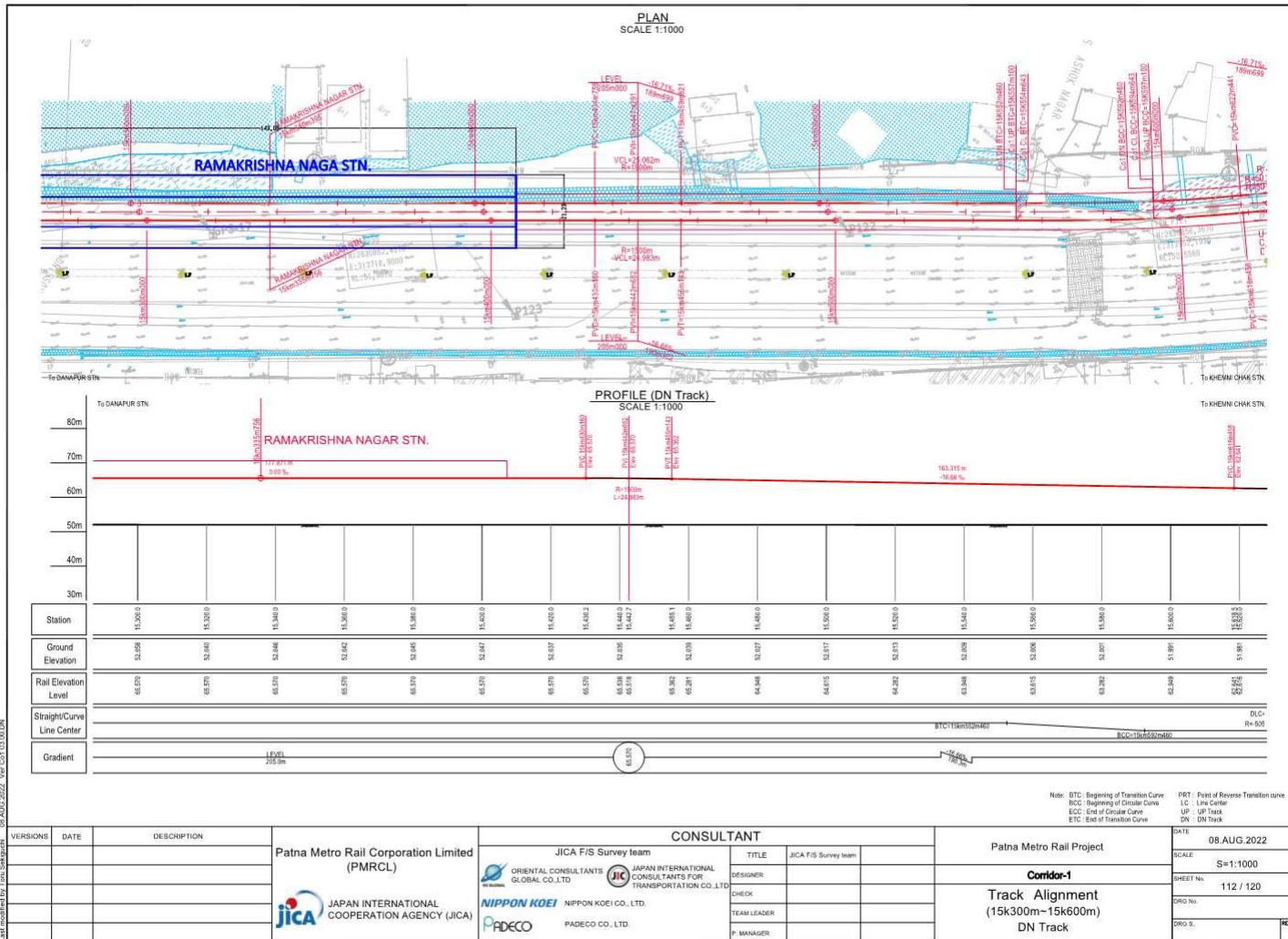


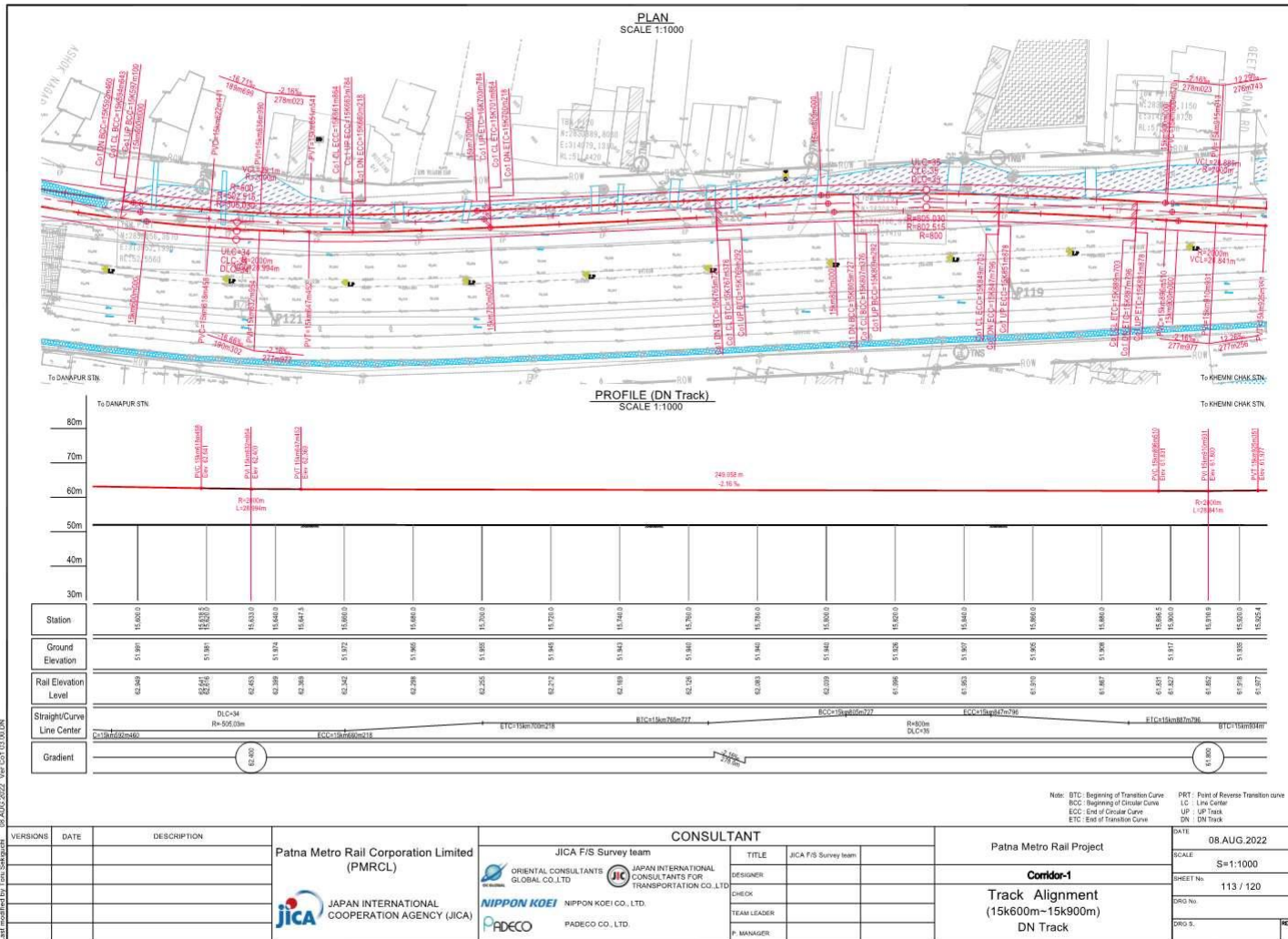
Date modified by: Tom Saitoh / 08 AUG 2022 / Ver: 02 / 03.00 DN

Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition Curve  
 L.C.: Line Center  
 UP: UP Track  
 DN: DN Track

VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE	SCALE		
			Patna Metro Rail Corporation Limited (PMRCL) JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		JICA F/S Survey team ORIENTAL CONSULTANTS GLOBAL CO. LTD NIPPON KOEI CO., LTD. PADECO CO., LTD.		Patna Metro Rail Project Corridor-1 Track Alignment (14k700m~15k000m) DN Track		08.AUG.2022	S=1:1000
							SHEET No. 110 / 120			
							DRO No.			
							DRO S.		REV	



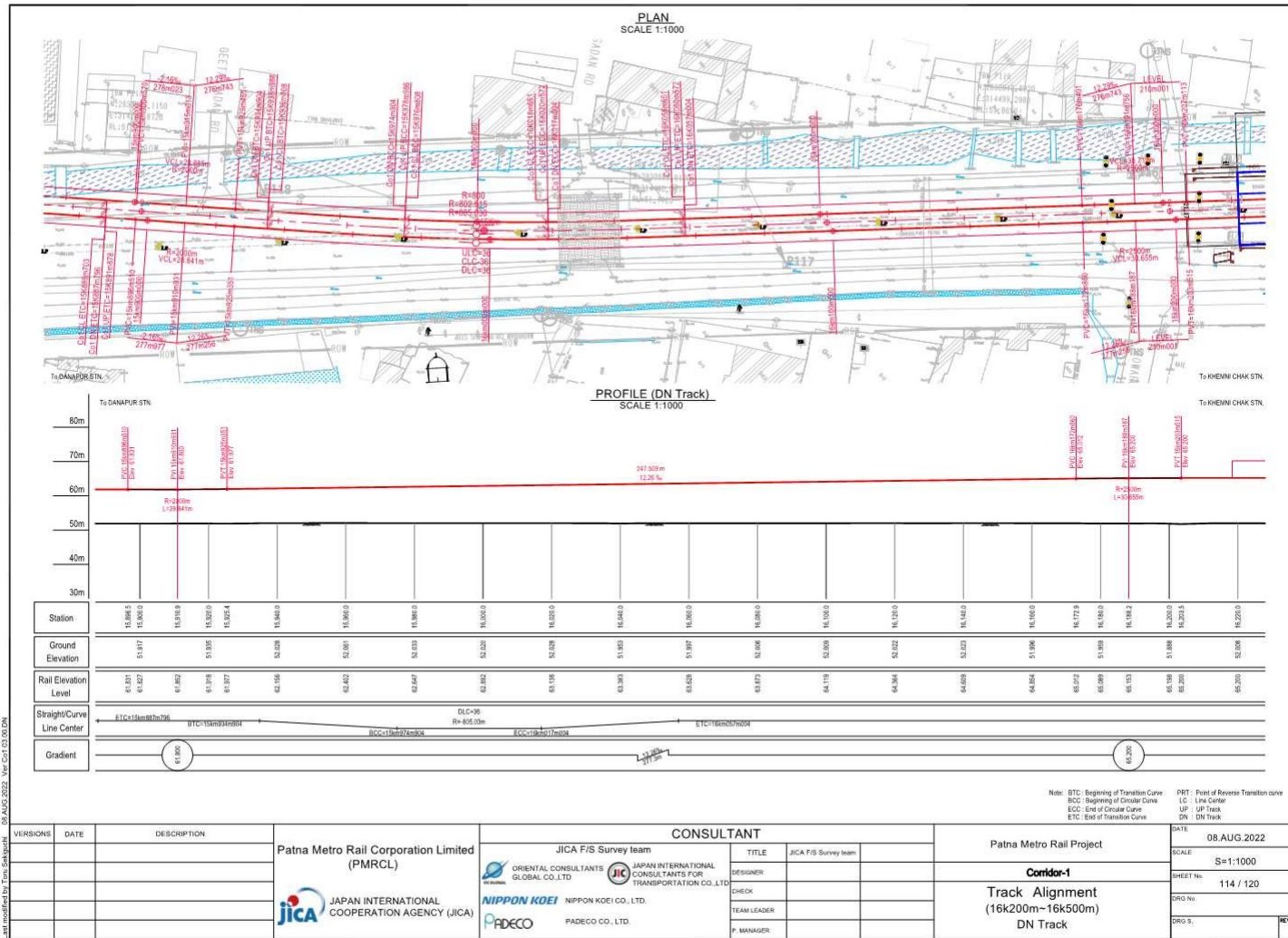




Last modified by: Tomi Saitoh / 08 AUG 2022 / Ver: 02 / 03:00 AM

Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition Curve  
 LC: Line Center  
 UP: UP Track  
 DN: DN Track

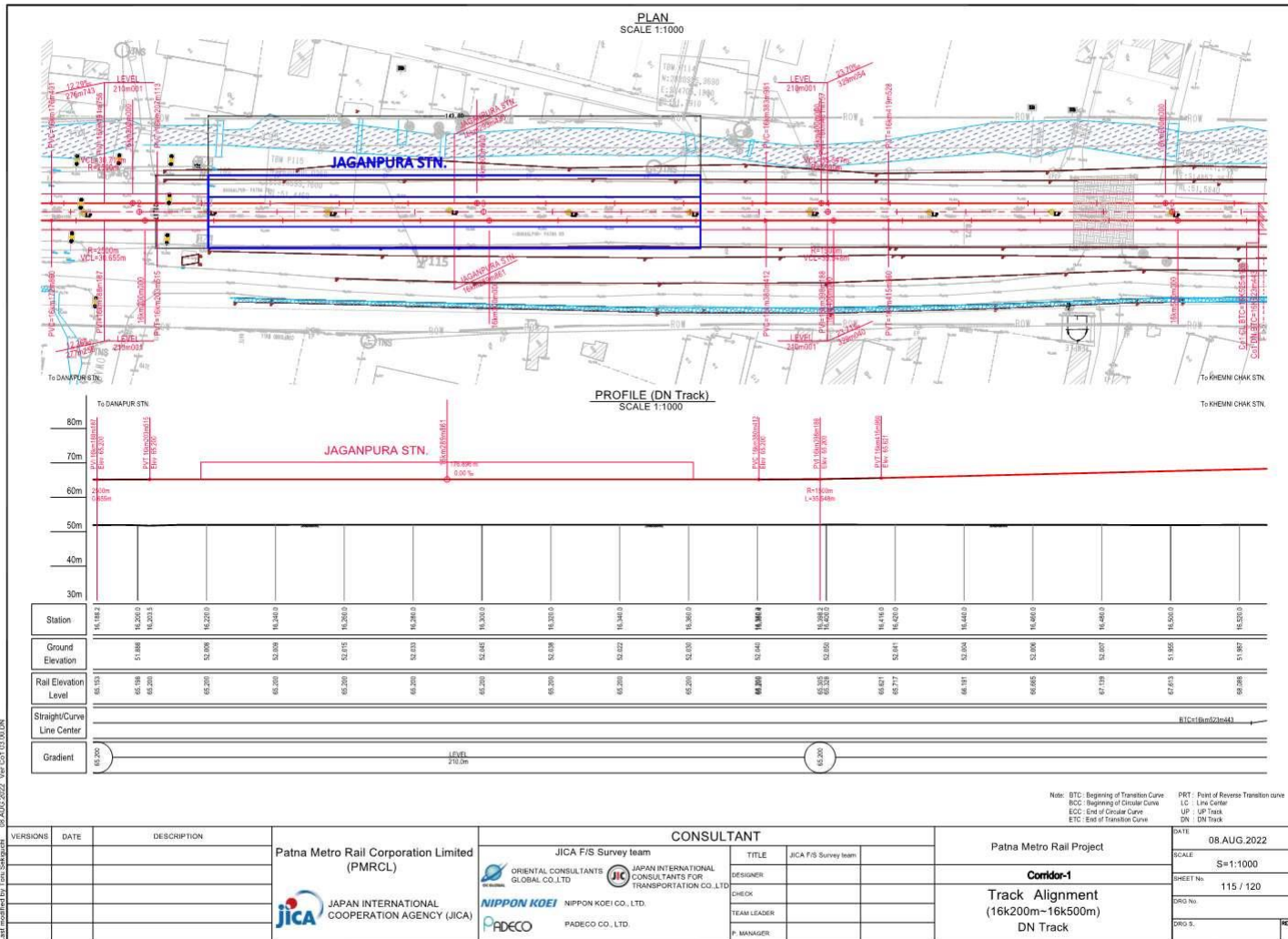
VERSIONS	DATE	DESCRIPTION	CONSULTANT			DATE
			Patna Metro Rail Corporation Limited (PMRCL) JICA F/S Survey team ORIENTAL CONSULTANTS GLOBAL CO.LTD JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO.LTD NIPPON KOEI NIPPON KOEI CO., LTD. PADECO PADECO CO., LTD.			08 AUG 2022
			TITLE: JICA F/S Survey team DESIGNER: CHECK: TEAM LEADER: P. MANAGER:			Patna Metro Rail Project Corridor-1 Track Alignment (15k600m~15k900m) DN Track
						SCALE: S=1:1000
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						DRG S. REV



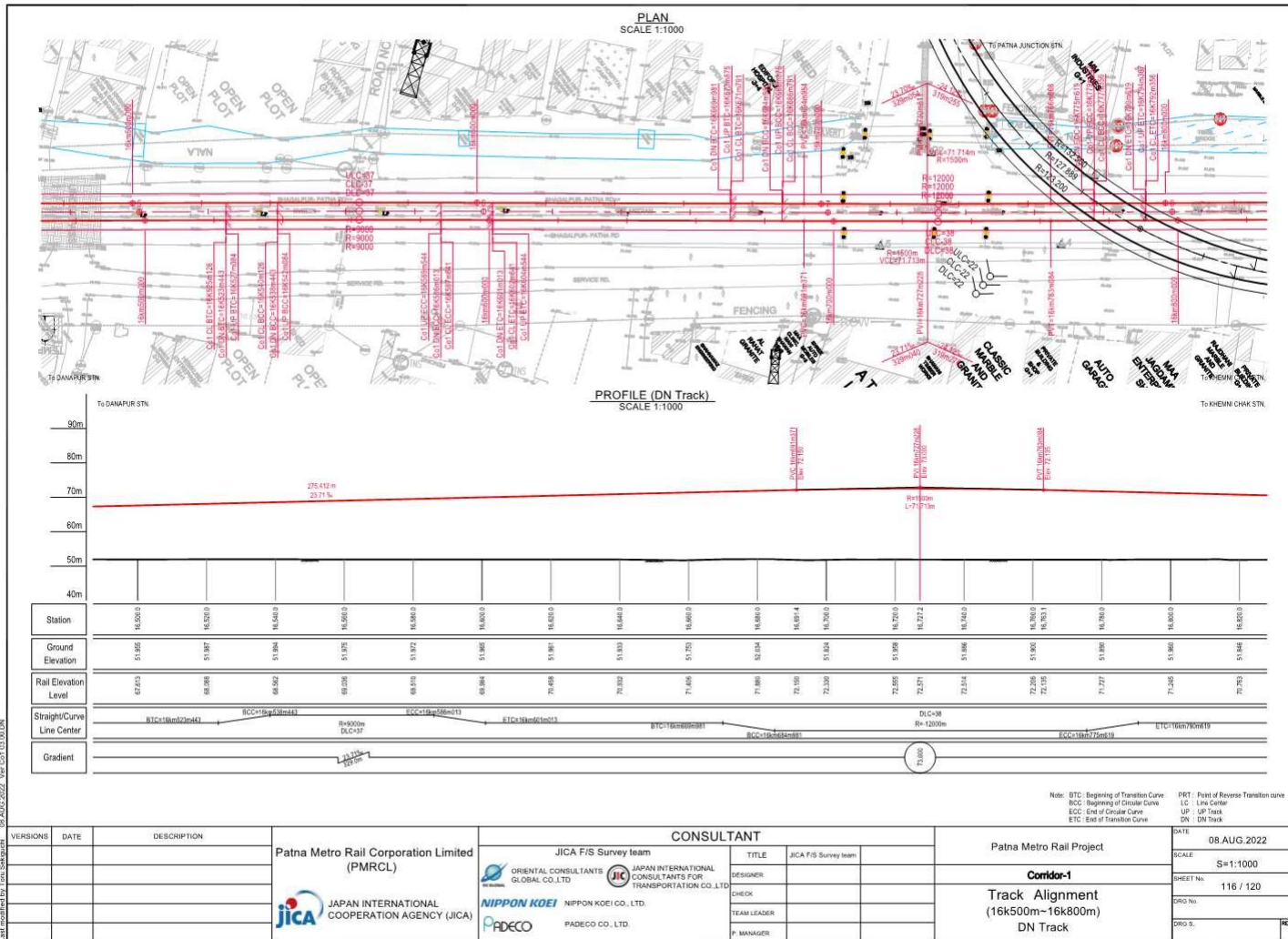
Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: DN Track

VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE
			Patna Metro Rail Corporation Limited (PMRCL)	JICA F/S Survey team	TITLE	08.AUG.2022	
			JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	ORIENTAL CONSULTANTS GLOBAL CO.LTD	JICA F/S Survey team	SCALE	
				JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO.LTD	DESIGNER	S=1:1000	
				NIPPON KOEI CO., LTD.	CHECK	SHEET No.	
				PADECO CO., LTD.	TEAM LEADER	114 / 120	
					P. MANAGER	DRG No.	
						DRG S.	
						REV	

Date modified by: Tomi Saegusa 08.AUG.2022 Ver: 02.00.DM



Date modified by: Tomi Saitoh / 08.AUG.2022 / Ver. 02 / 03.00 DN

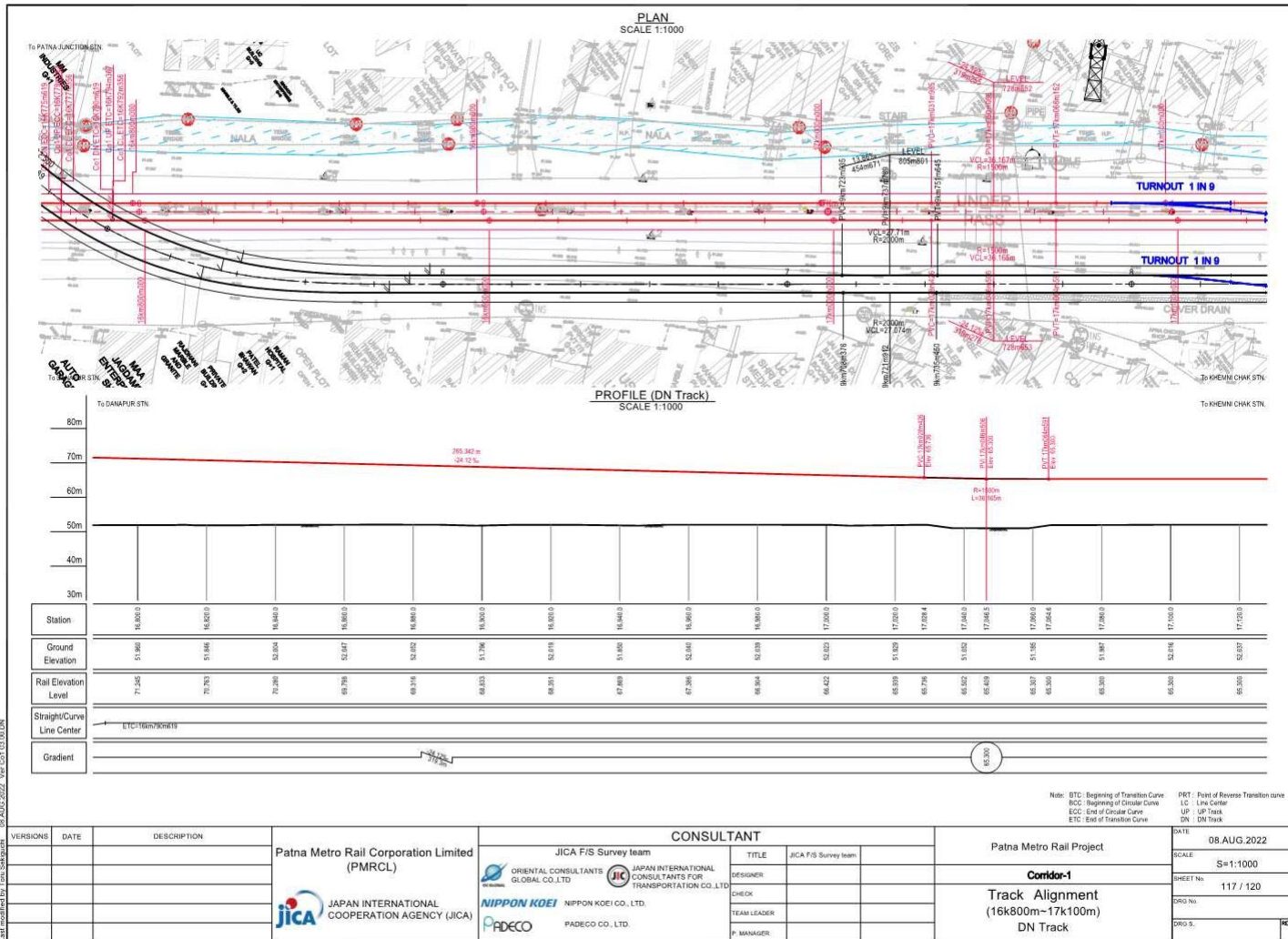


Date modified by: Tomi Saitoh / 03 AUG 2022 / Ver: 02 / 03.00.DWG

Note: BTc: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: DN Track

VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE
			Patna Metro Rail Corporation Limited (PMRCL) JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		JICA F/S Survey team ORIENTAL CONSULTANTS GLOBAL CO. LTD NIPPON KOEI JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO. LTD. NIPPON KOEI CO., LTD. PAIDECO PAIDECO CO., LTD.		08.AUG.2022
			Patna Metro Rail Project Corridor-1 Track Alignment (16k500m~16k800m) DN Track		SCALE: S=1:1000 SHEET No: 116 / 120 DRO No: DRO S:		
						REV	



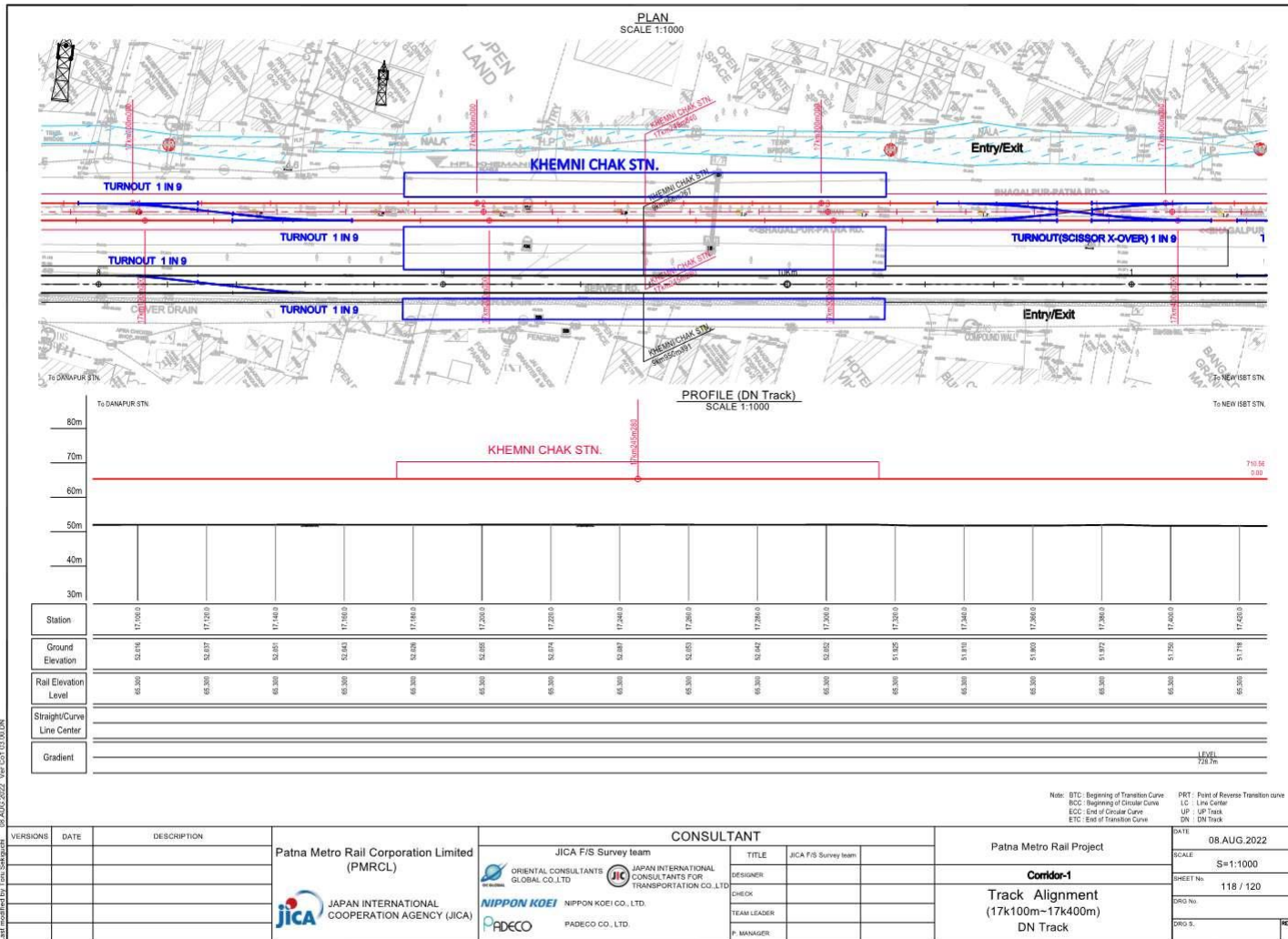


Date modified by: Tomi Saitoh / 09 AUG 2022 / Ver: 02 / 03.00 DN

VERSIONS	DATE	DESCRIPTION

Patna Metro Rail Corporation Limited (PMRCL) JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	JICA F/S Survey team ORIENTAL CONSULTANTS GLOBAL CO. LTD NIPPON KOEI CO., LTD. PADECO CO., LTD.		CONSULTANT TITLE: JICA F/S Survey team DESIGNER: CHECK: TEAM LEADER: P. MANAGER:		Patna Metro Rail Project Corridor-1 Track Alignment (16k800m~17k100m) DN Track
	DATE: 08 AUG 2022 SCALE: S=1:1000 SHEET No.: 117 / 120 DRO No.: DRO S.: REV:				

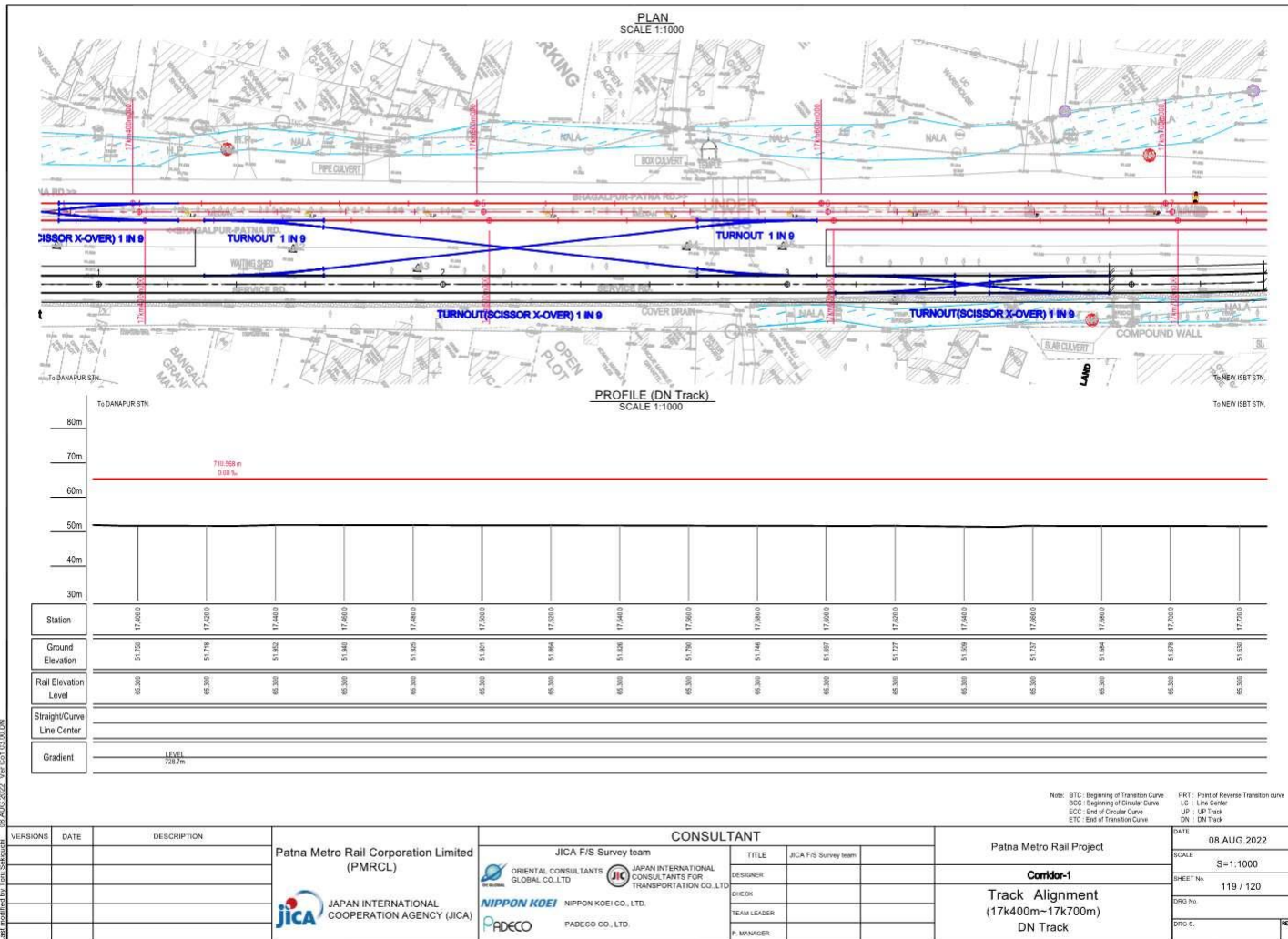
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 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: DN Track



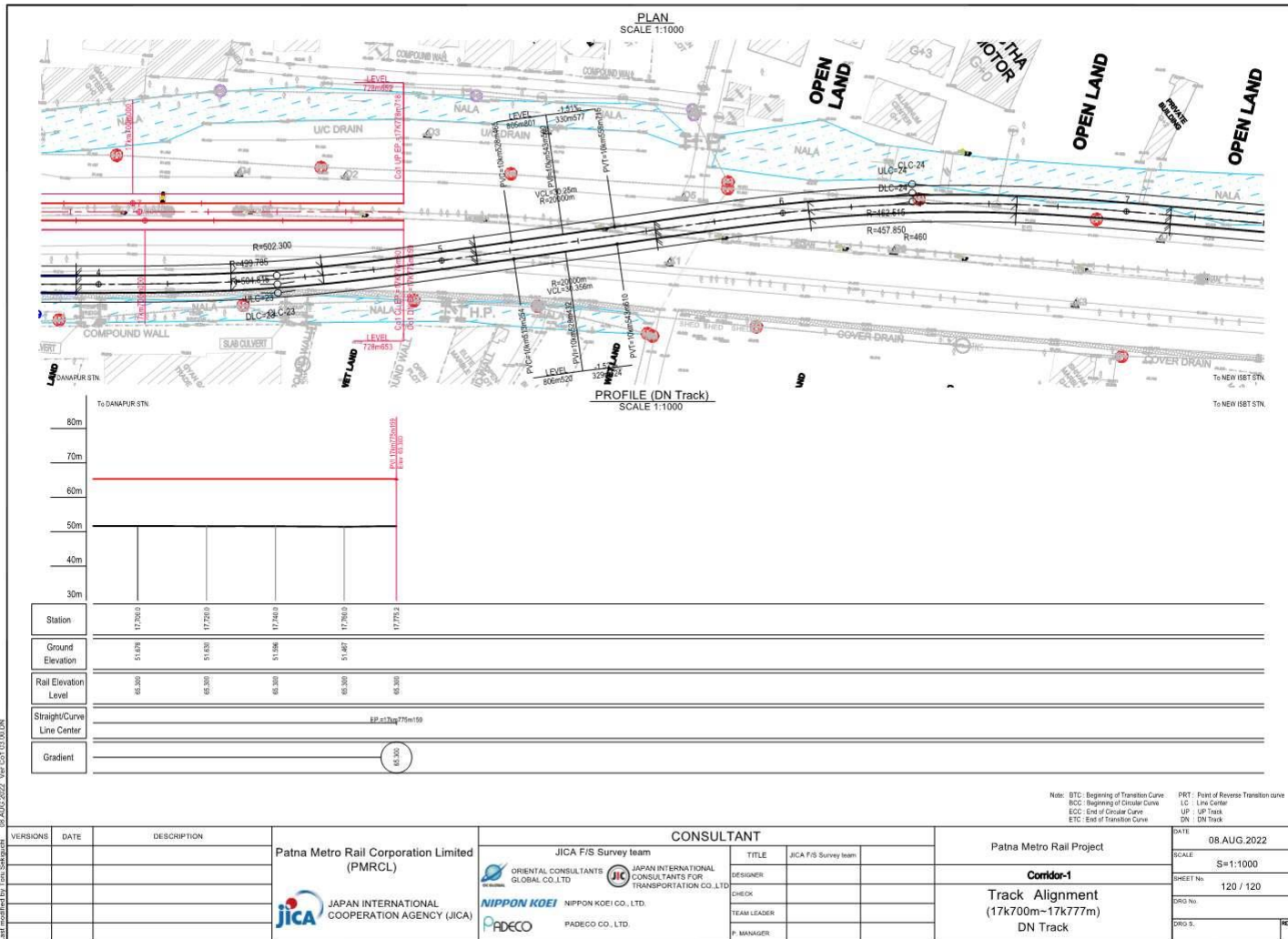
Date modified by: Tomi Saegusa 08 AUG 2022 Ver: 02 (0.00) DN

Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: DN Track

VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE
			Patna Metro Rail Corporation Limited (PMRCL) JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		JICA F/S Survey team ORIENTAL CONSULTANTS GLOBAL CO. LTD JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO. LTD NIPPON KOEI CO., LTD. PADECO CO., LTD.		08 AUG 2022
					TITLE: JICA F/S Survey team DESIGNER: CHECK: TEAM LEADER: P. MANAGER:		SCALE: S=1:1000 SHEET No: 118 / 120 DRO No: DRO S:
					Patna Metro Rail Project Corridor-1 Track Alignment (17k100m~17k400m) DN Track		REV:



Date modified by: Tomi Saegusa 08.AUG.2022 Ver: 02.03.00 DN

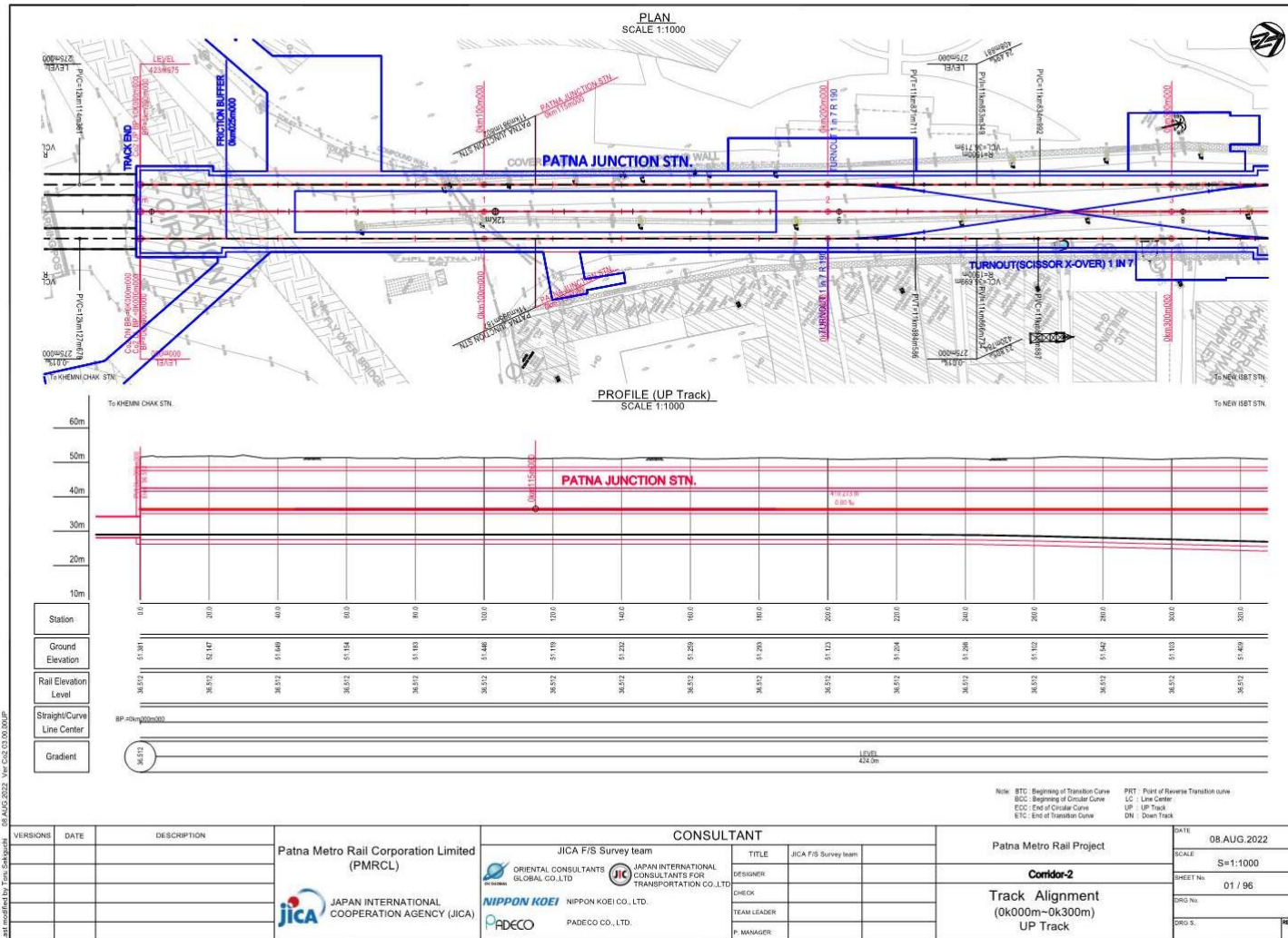


Date modified by: Tomi Saegusa 08 AUG 2022 Ver: 02 (0.00 DN)

Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: DN Track

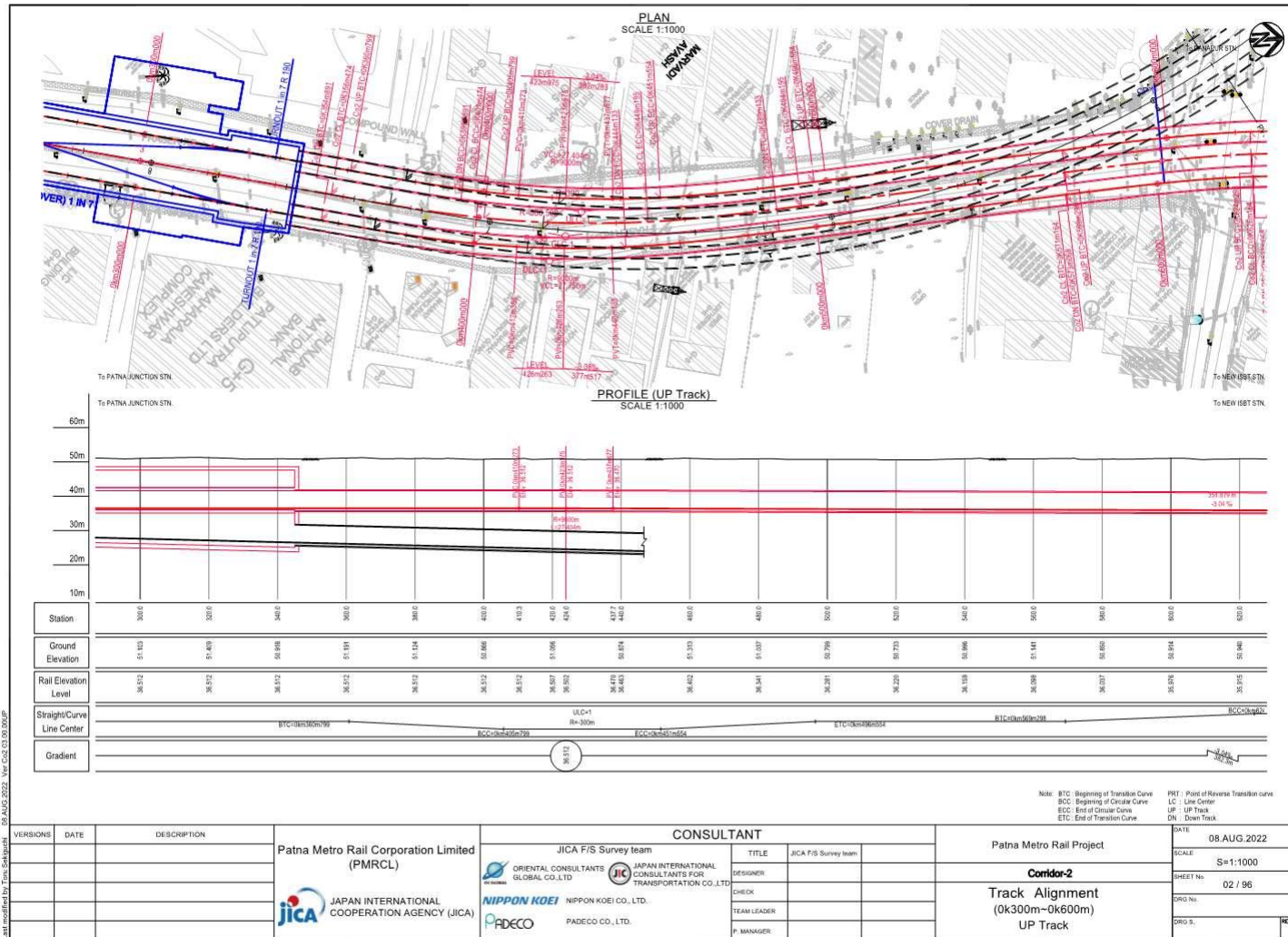
VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE
			Patna Metro Rail Corporation Limited (PMRCL) JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		JICA F/S Survey team ORIENTAL CONSULTANTS GLOBAL CO. LTD JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO. LTD. NIPPON KOEI CO. LTD. PADECO CO. LTD.		08.AUG.2022
					Patna Metro Rail Project Corridor-1 Track Alignment (17k700m~17k777m) DN Track		SCALE: S=1:1000 SHEET No: 120 / 120 DRO No: DRO S:
							REV

(4) Corridor2 Alignment 03 00 UP



Last modified by: Tm, Saksham 22 AUG 2022, New Corridor 03 00 UP

<b>VERSIONS</b> DATE DESCRIPTION		<b>Patna Metro Rail Corporation Limited (PMRCL)</b> JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	<b>CONSULTANT</b> JICA F/S Survey team ORIENTAL CONSULTANTS GLOBAL CO., LTD. JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO., LTD. NIPPON KOEI CO., LTD. PADECO CO., LTD.		Patna Metro Rail Project <b>Corridor-2</b> Track Alignment (0k000m-0k300m) UP Track	DATE: 08.AUG.2022 SCALE: S=1:1000 SHEET No: 01 / 96 DRG No: DRG S:
DESIGNER: JICA F/S Survey team CHECK: TEAM LEADER: P. MANAGER:	TITLE: JICA F/S Survey team DESIGNER: CHECK: TEAM LEADER: P. MANAGER:		Note: BTC: Beginning of Transition Curve BCC: Beginning of Circular Curve ECC: End of Circular Curve ETC: End of Transition Curve PRT: Point of Reverse Transition curve LC: Line Center UP: UP Track DN: Down Track			

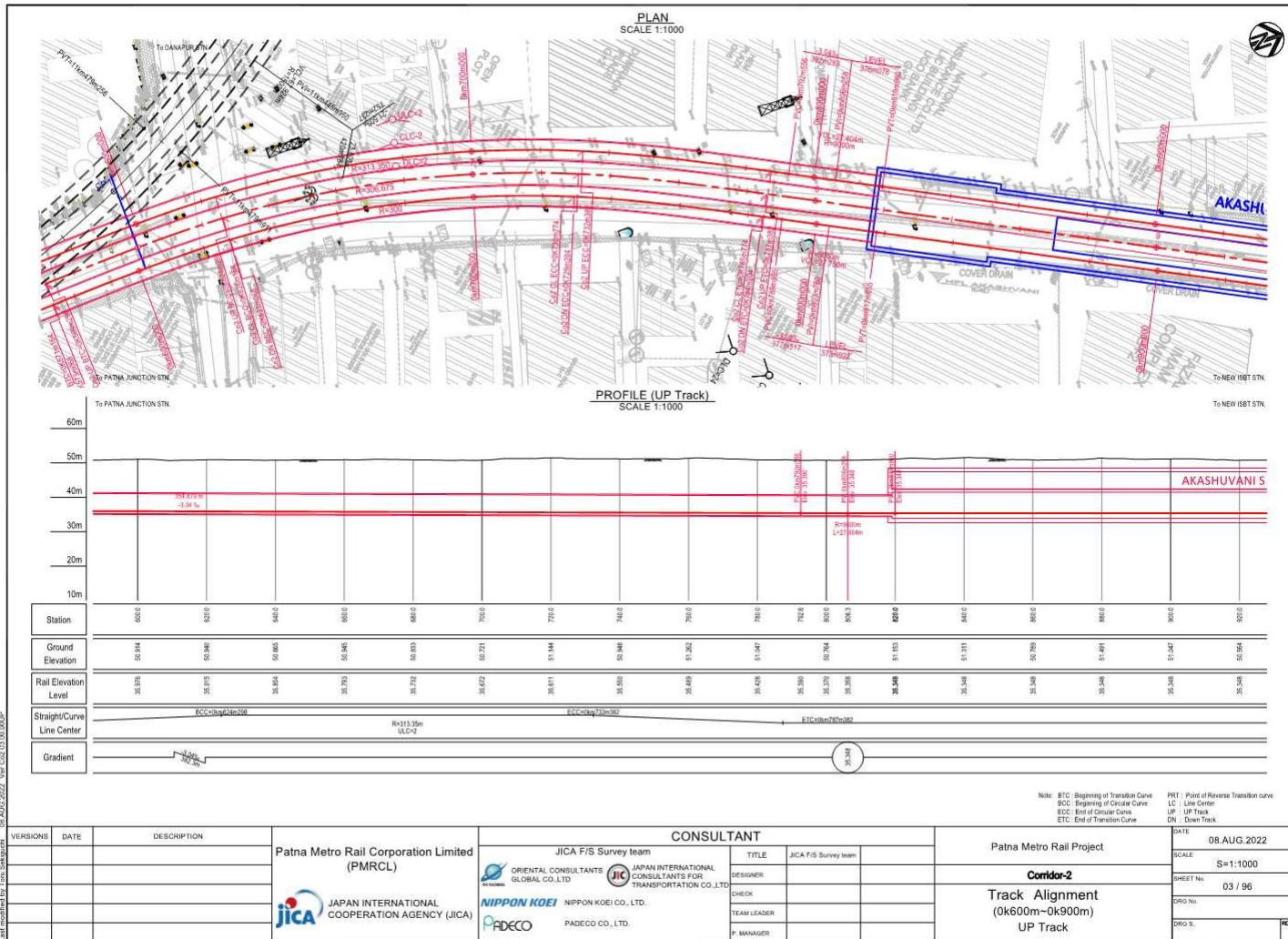


Date modified by: Tomi Saitoh 08 AUG 2022 Ver: 02/20.00.2004

VERSIONS	DATE	DESCRIPTION

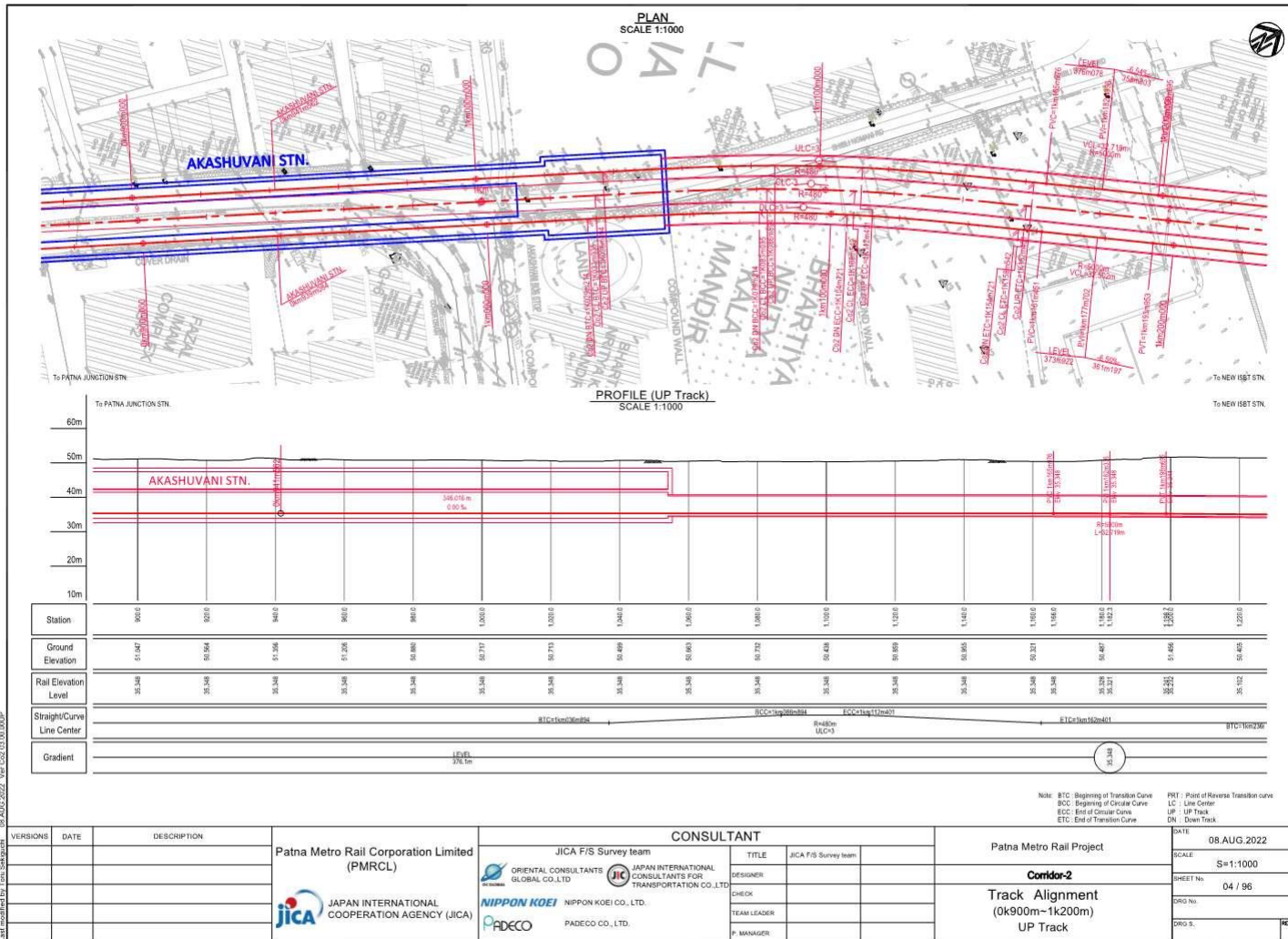
Patna Metro Rail Corporation Limited (PMRCL) JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	CONSULTANT JICA F/S Survey team ORIENTAL CONSULTANTS GLOBAL CO. LTD NIPPON KOEI CO., LTD. PAIDECO CO., LTD.		TITLE: JICA F/S Survey team DESIGNER: CHECK: TEAM LEADER: P. MANAGER:
	Patna Metro Rail Project Corridor-2 Track Alignment (0k300m~0k600m) UP Track		DATE: 08 AUG 2022 SCALE: S=1:1000 SHEET No.: 02 / 96 DRO No.: DRO S.: REV:

Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 LC: Line Center  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 UP: UP Track  
 DN: Down Track



Last modified by: Tomi Saeguchi 08 AUG 2022 Ver: 02.01.00.2004P

VERSIONS	DATE	DESCRIPTION	CONSULTANT			DATE
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			JICA F/S Survey team TITLE: JICA F/S Survey team DESIGNER: JICA F/S Survey team CHECK: JICA F/S Survey team TEAM LEADER: JICA F/S Survey team P. MANAGER: JICA F/S Survey team			Patna Metro Rail Project Corridor-2 Track Alignment (0k600m~0k900m) UP Track
						SCALE: S=1:1000 SHEET No: 03 / 96 DRO No: DRO S:
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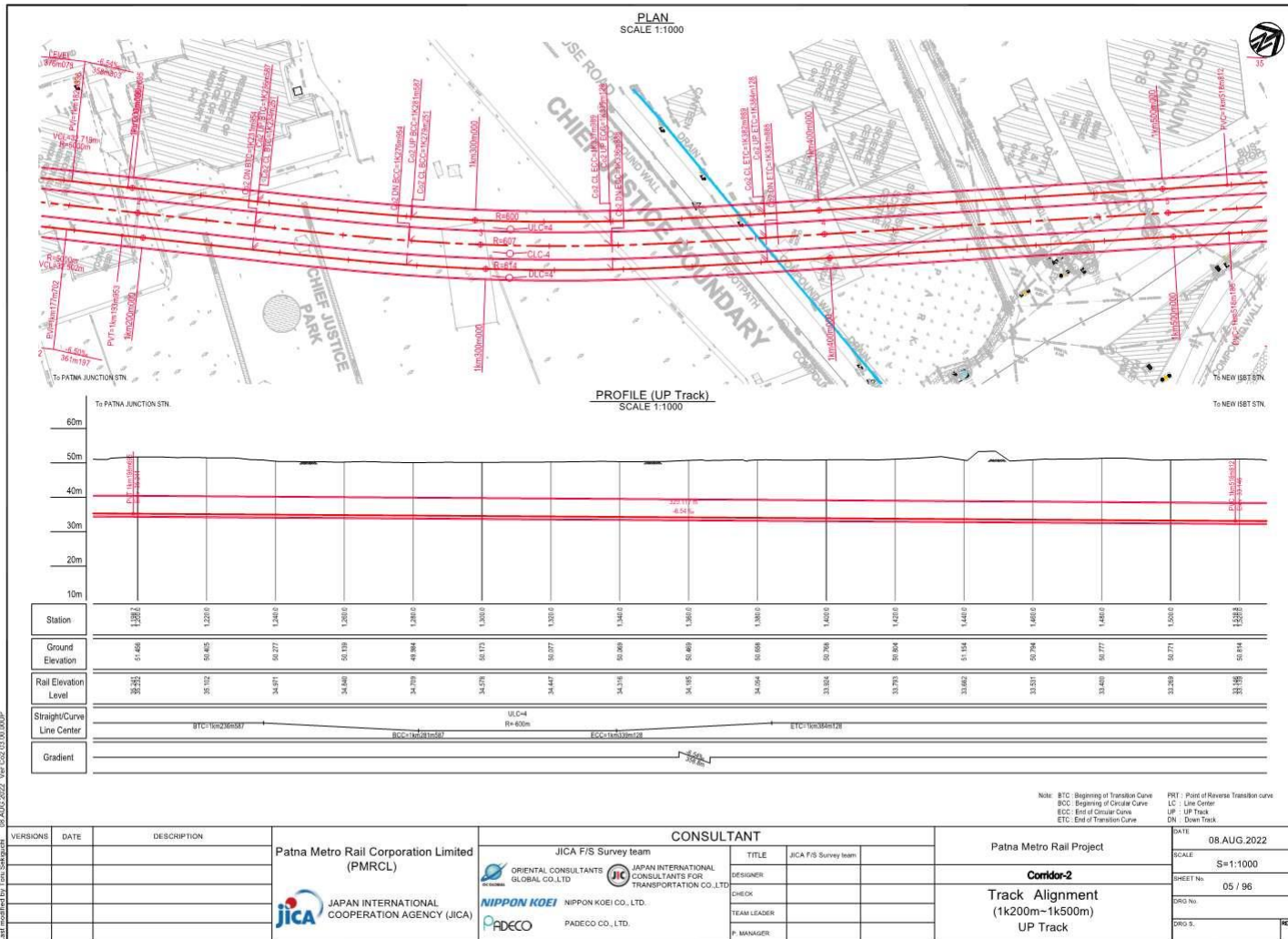


Date modified by: Tomi Saitoh / 03 AUG 2022 / Ver: 02.01.00.2019

VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE	
			<b>Patna Metro Rail Corporation Limited (PMRCL)</b> JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	<b>JICA F/S Survey team</b> ORIENTAL CONSULTANTS GLOBAL CO. LTD NIPPON KOEI CO., LTD. PAIDECO CO., LTD.	<b>JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO. LTD.</b>	TITLE: JICA F/S Survey team DESIGNER: CHECK: TEAM LEADER: P. MANAGER:	Patna Metro Rail Project <b>Corridor-2</b> Track Alignment (0k900m~1k200m) UP Track	08.AUG.2022
								SHEET No: 04 / 96
								DRG No:
								DRG S:
								REV

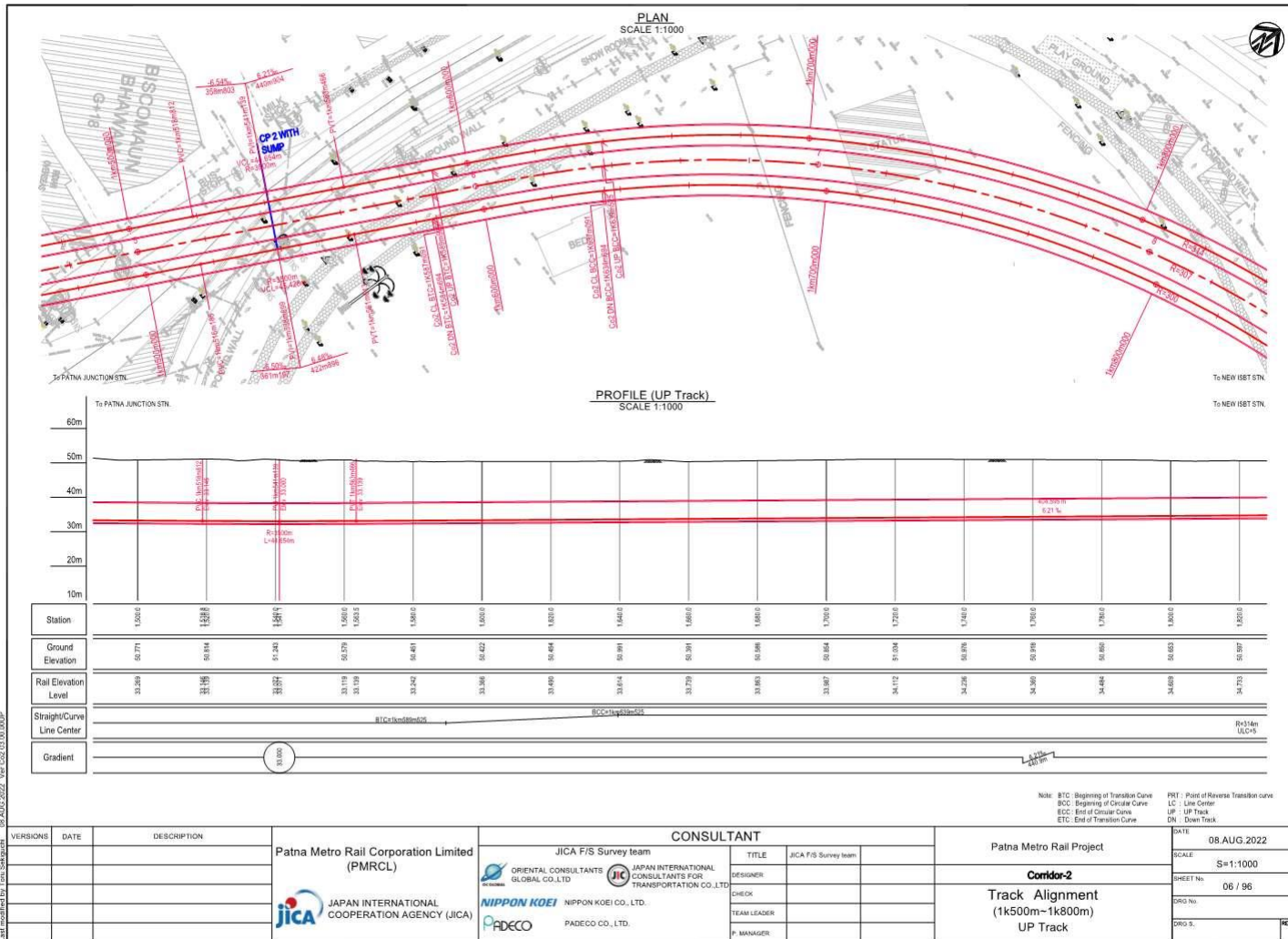
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 BCC: Beginning of Circular Curve  
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 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: Down Track





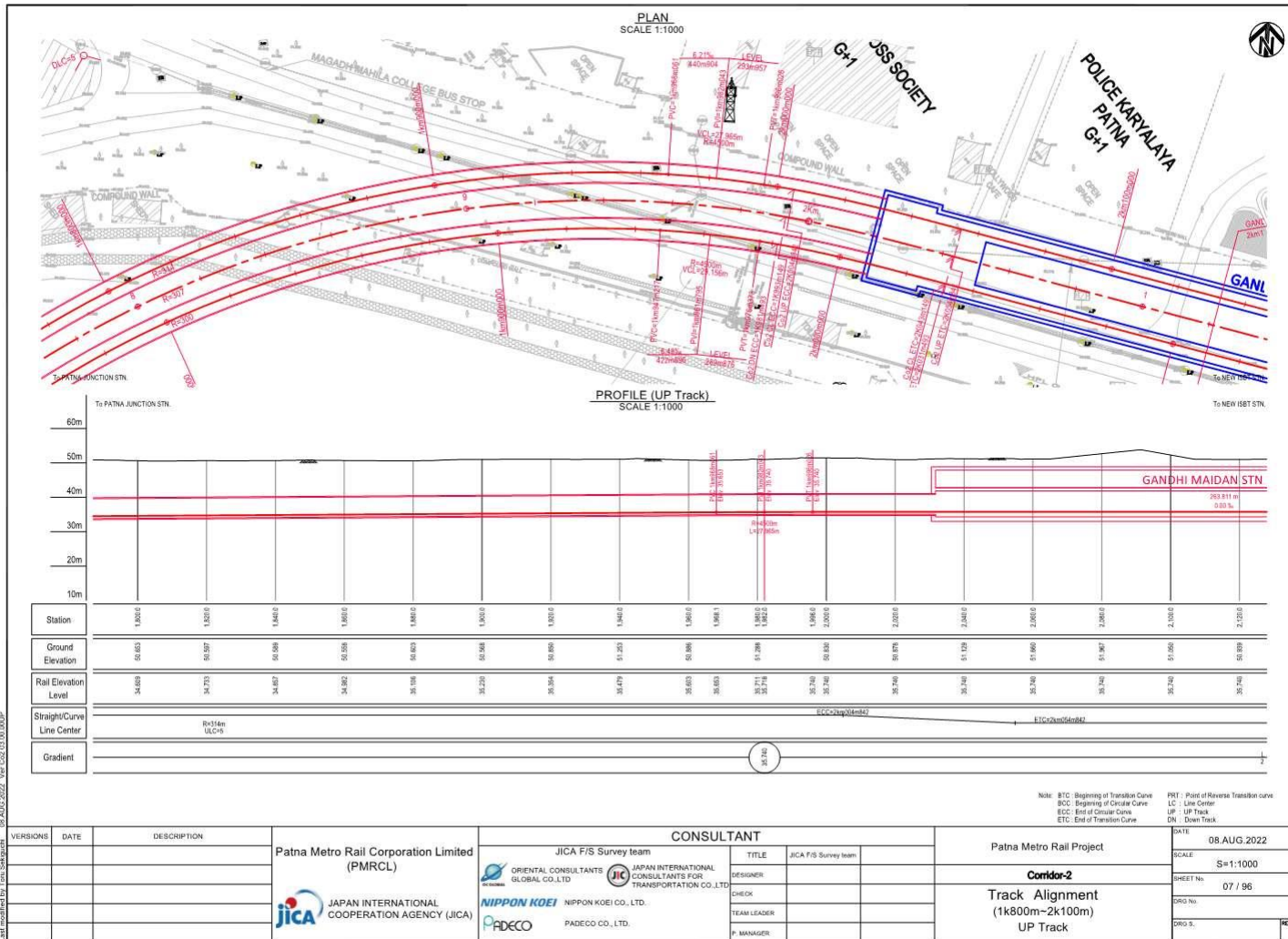
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VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE
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			JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		ORIENTAL CONSULTANTS GLOBAL CO. LTD. / JIC / JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO. LTD. / NIPPON KOEI CO., LTD. / PADECO CO., LTD.		SCALE: S=1:1000
					TITLE: Patna Metro Rail Project		SHEET No: 05 / 96
					Designer: JICA F/S Survey team		DRG No:
					Checker:		DRG S:
					Team Leader:		REV
					P. Manager:		
					Patna Metro Rail Project		
					Corridor-2		
					Track Alignment (1k200m~1k500m)		
					UP Track		



Date modified by: Tomi Saeguchi 08 AUG 2022 Ver: 02.01.00.2019

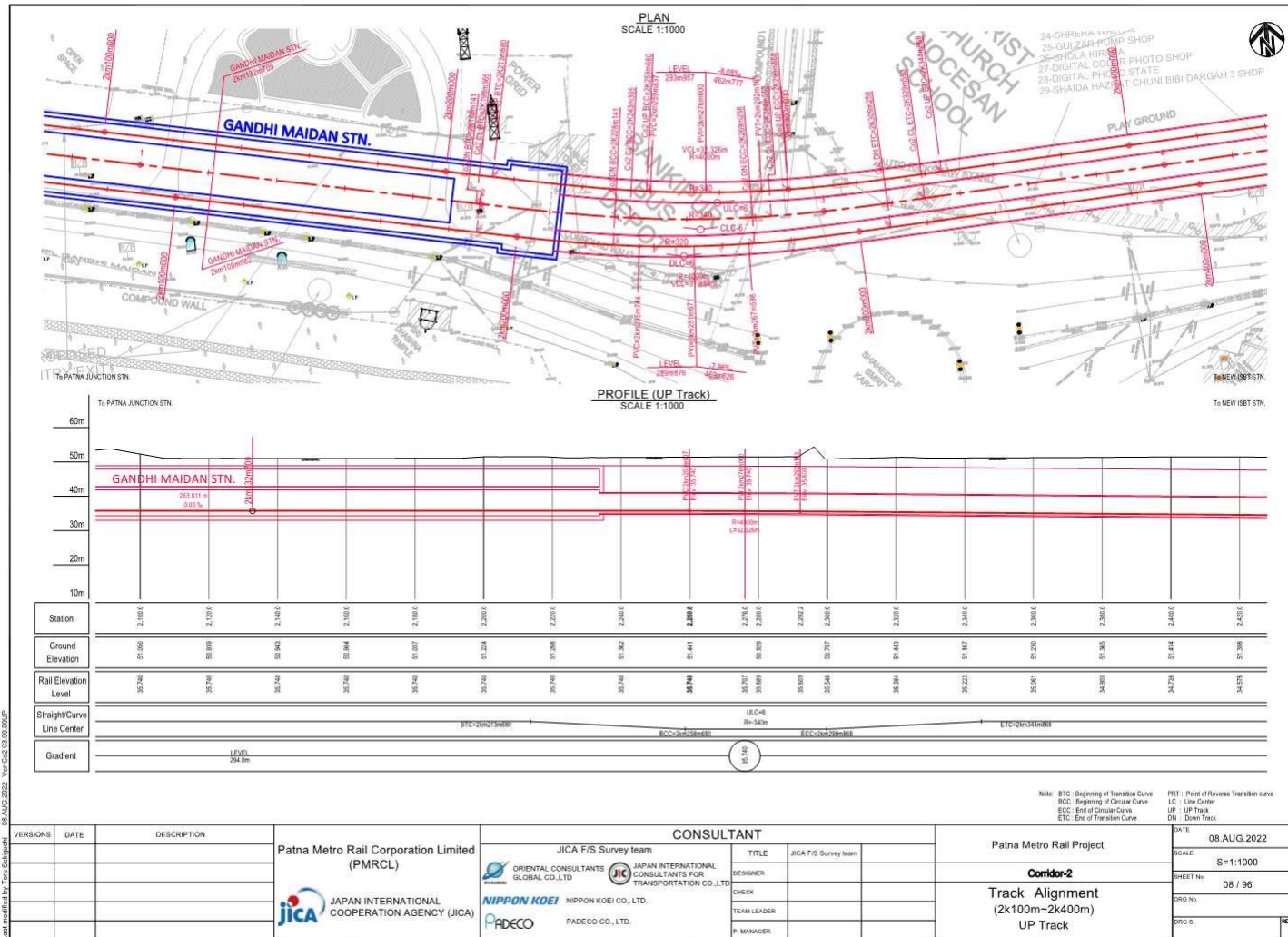
VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE
			<b>Patna Metro Rail Corporation Limited (PMRCL)</b> 		<b>JICA F/S Survey team</b> 		08 AUG 2022
					TITLE: JICA F/S Survey team DESIGNER: CHECK: TEAM LEADER: P. MANAGER:		SCALE: S=1:1000 SHEET No: 06 / 96 DRO No: DRO S:
					Patna Metro Rail Project <b>Corridor-2</b> Track Alignment (1k500m~1k800m) UP Track		REV:



Last modified by: Tomi Saitoh / 03 AUG 2022 / Ver: 02/23.00.2004P

VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE	SCALE	SHEET No.	DRG No.	DRG S.	REV
			Patna Metro Rail Corporation Limited (PMRCL) JICA / JIS Survey team ORIENTAL CONSULTANTS GLOBAL CO.LTD / JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO.LTD. NIPPON KOEI / NIPPON KOEI CO., LTD. PADECO / PADECO CO., LTD.				08.AUG.2022	S=1:1000	07 / 96			
			Patna Metro Rail Project Corridor-2 Track Alignment (1k800m-2k100m) UP Track									

Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: Down Track



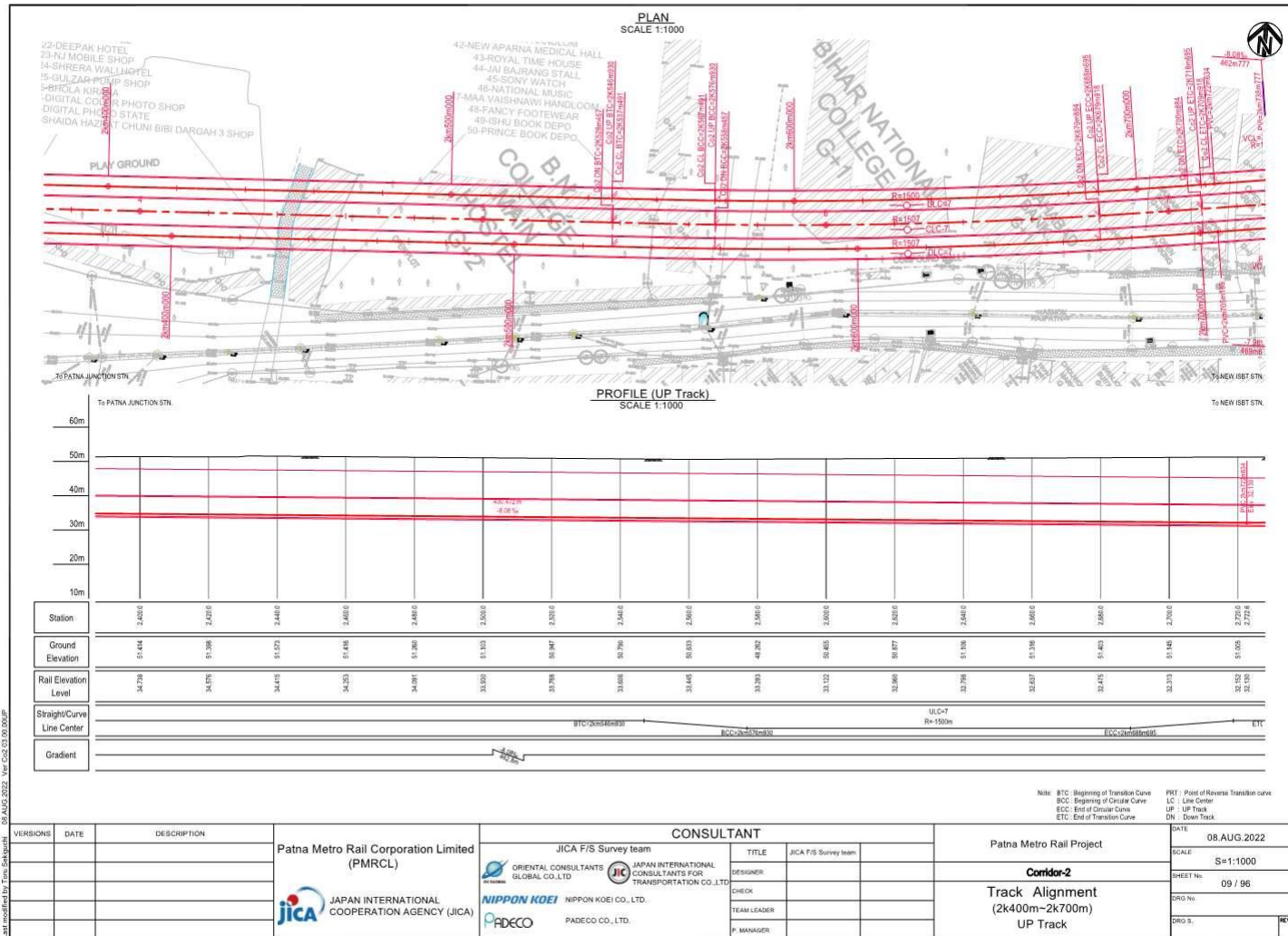
Last modified by: Tomi Saeguchi 09 AUG 2022 10:02:00 AM

VERSIONS	DATE	DESCRIPTION

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	JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO. LTD. NIPPON KOEI CO., LTD. PADECO CO., LTD.		DESIGNER: JICA F/S Survey team CHECK: TEAM LEADER: P. MANAGER:

Patna Metro Rail Project <b>Corridor-2</b> Track Alignment (2k100m-2k400m) UP Track	DATE: 08 AUG 2022 SCALE: S=1:1000 SHEET No: 08 / 96 DRO No: DRO S: REV:
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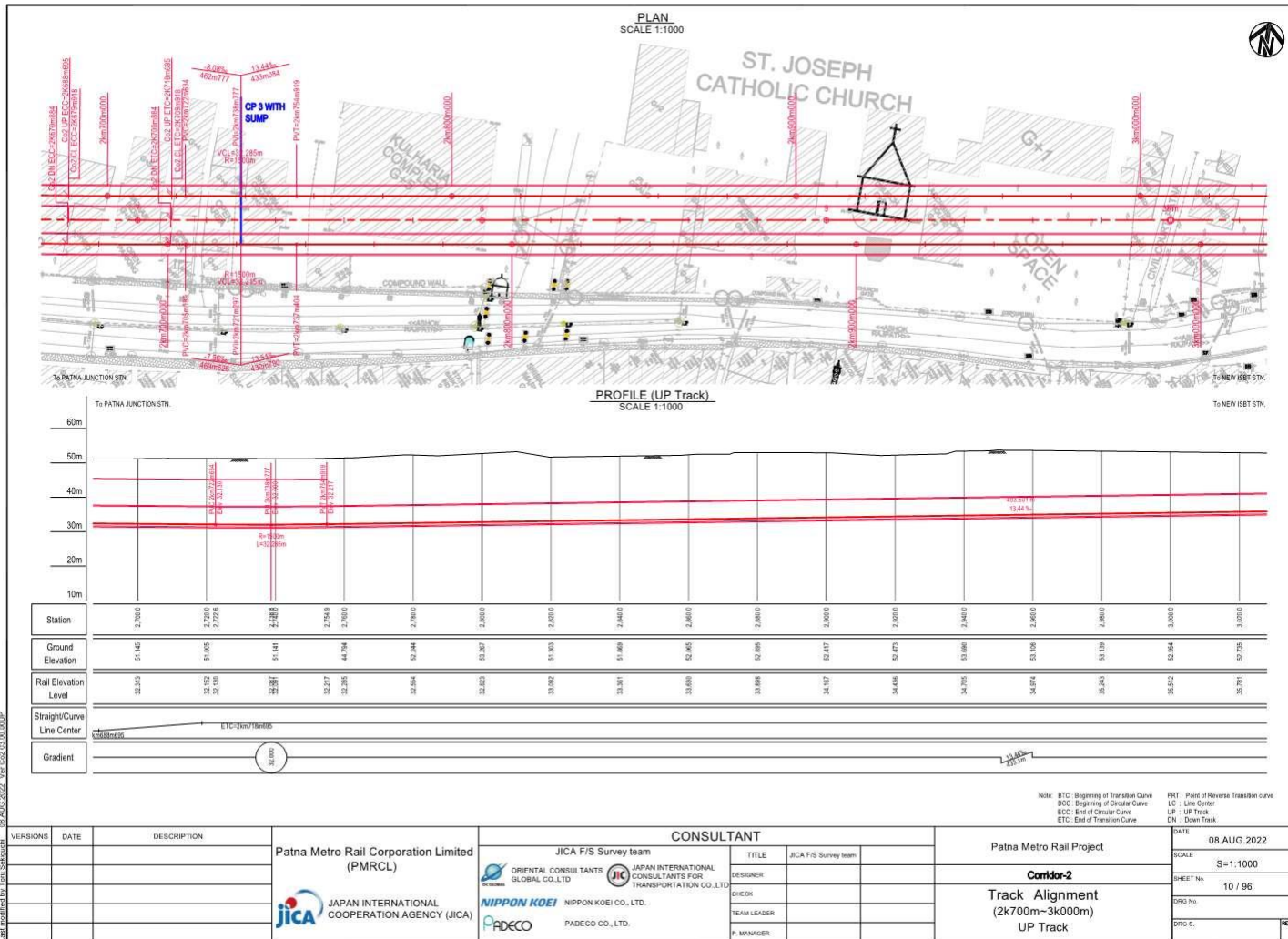
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 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: Down Track



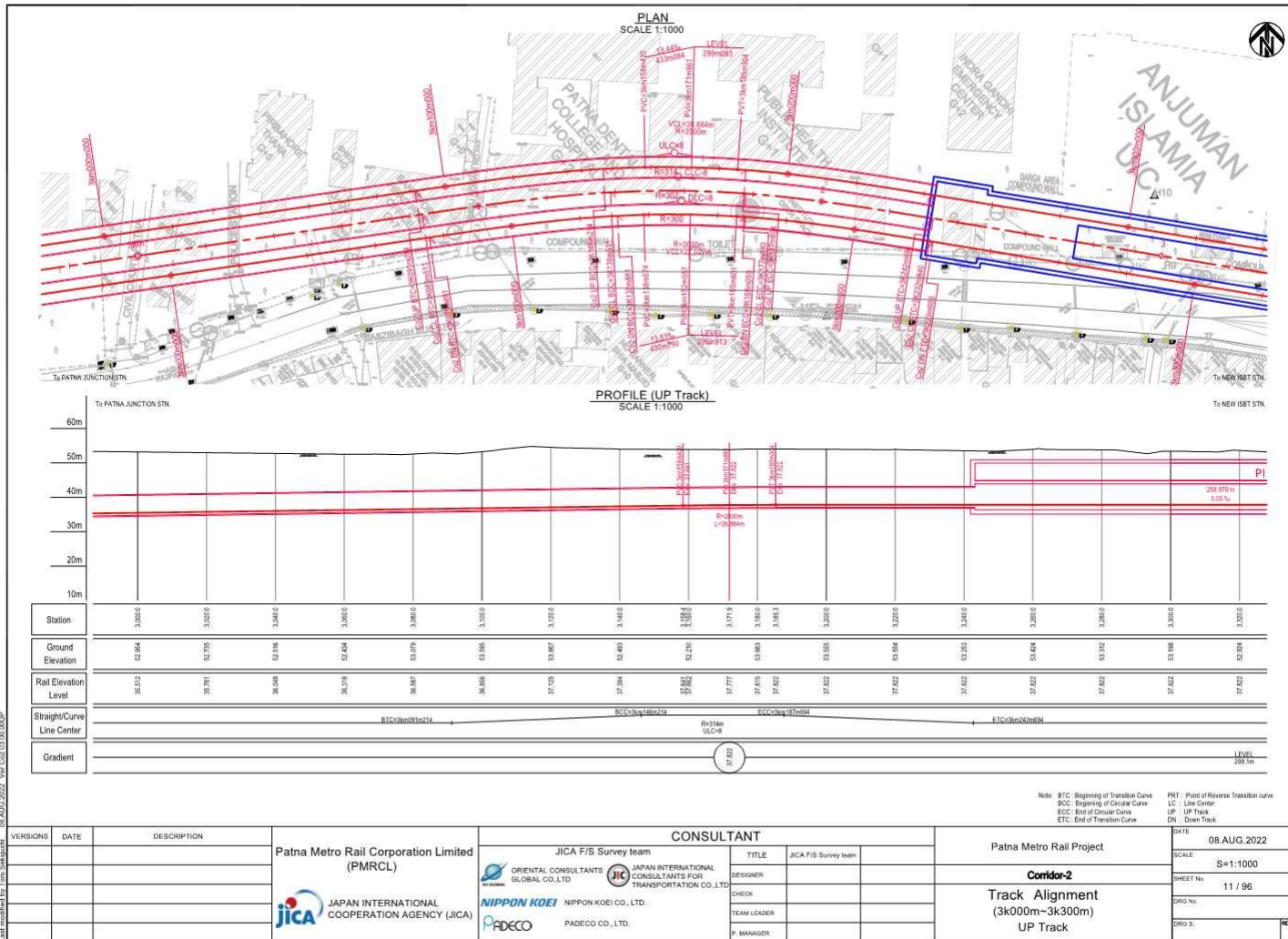
Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: Down Track

Date modified by: Tom Saitoh 09 AUG 2022 Ver: 02.01.00 2004

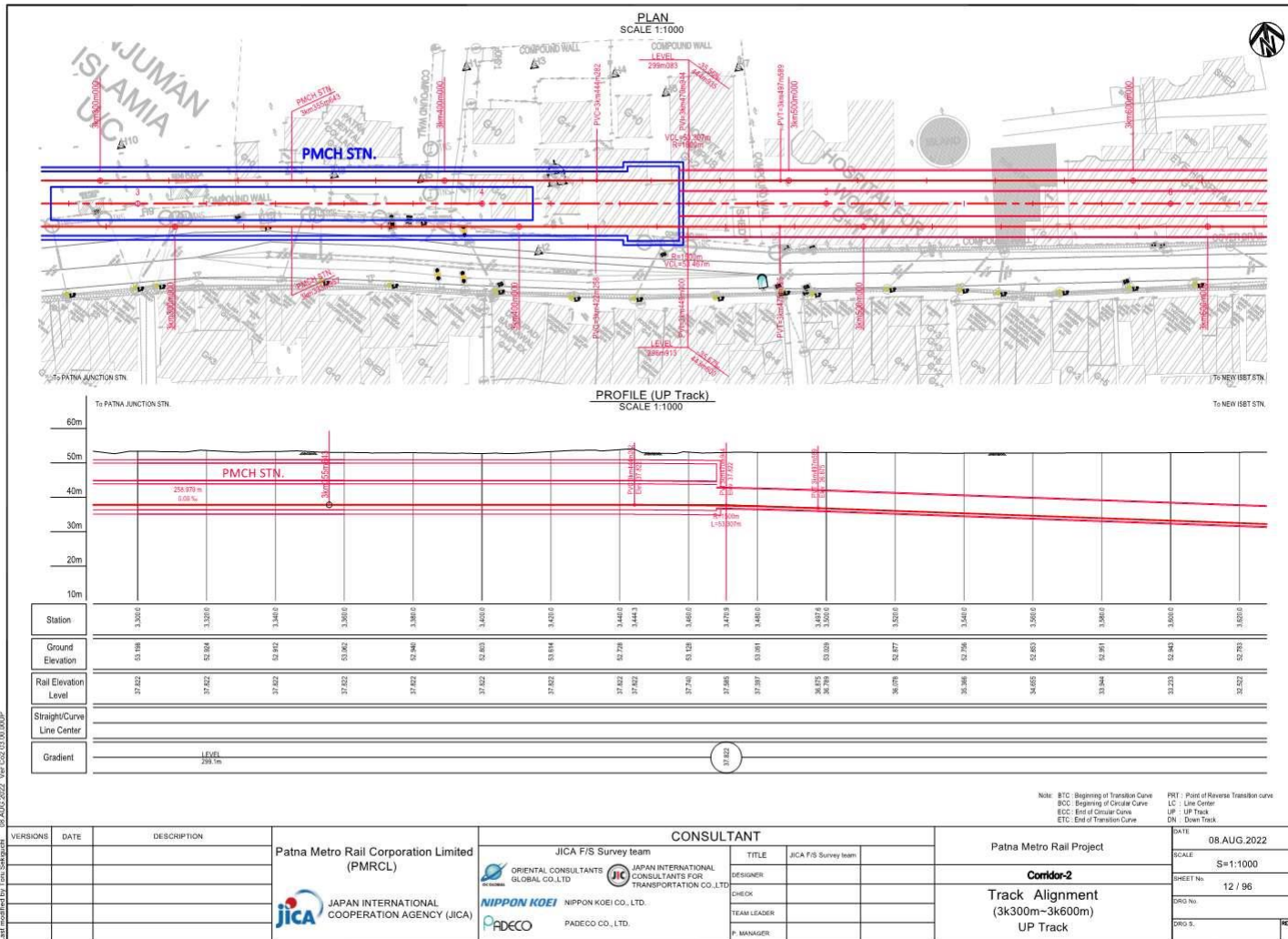
VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE
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			JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		ORIENTAL CONSULTANTS GLOBAL CO.LTD		SCALE: S=1:1000
					JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO.LTD		SHEET No: 09 / 96
					NIPPON KOEI CO., LTD.		DWG No:
					PADECO CO., LTD.		DWG S:
					TITLE: Patna Metro Rail Project		REV
					DESIGNER: JICA F/S Survey team		
					CHECK:		
					TEAM LEADER:		
					P. MANAGER:		
					Patna Metro Rail Project		
					Corridor-2		
					Track Alignment (2k400m-2k700m)		
					UP Track		



Last modified by: Tomi Saegusa 09.AUG.2022 10:02:00 AM

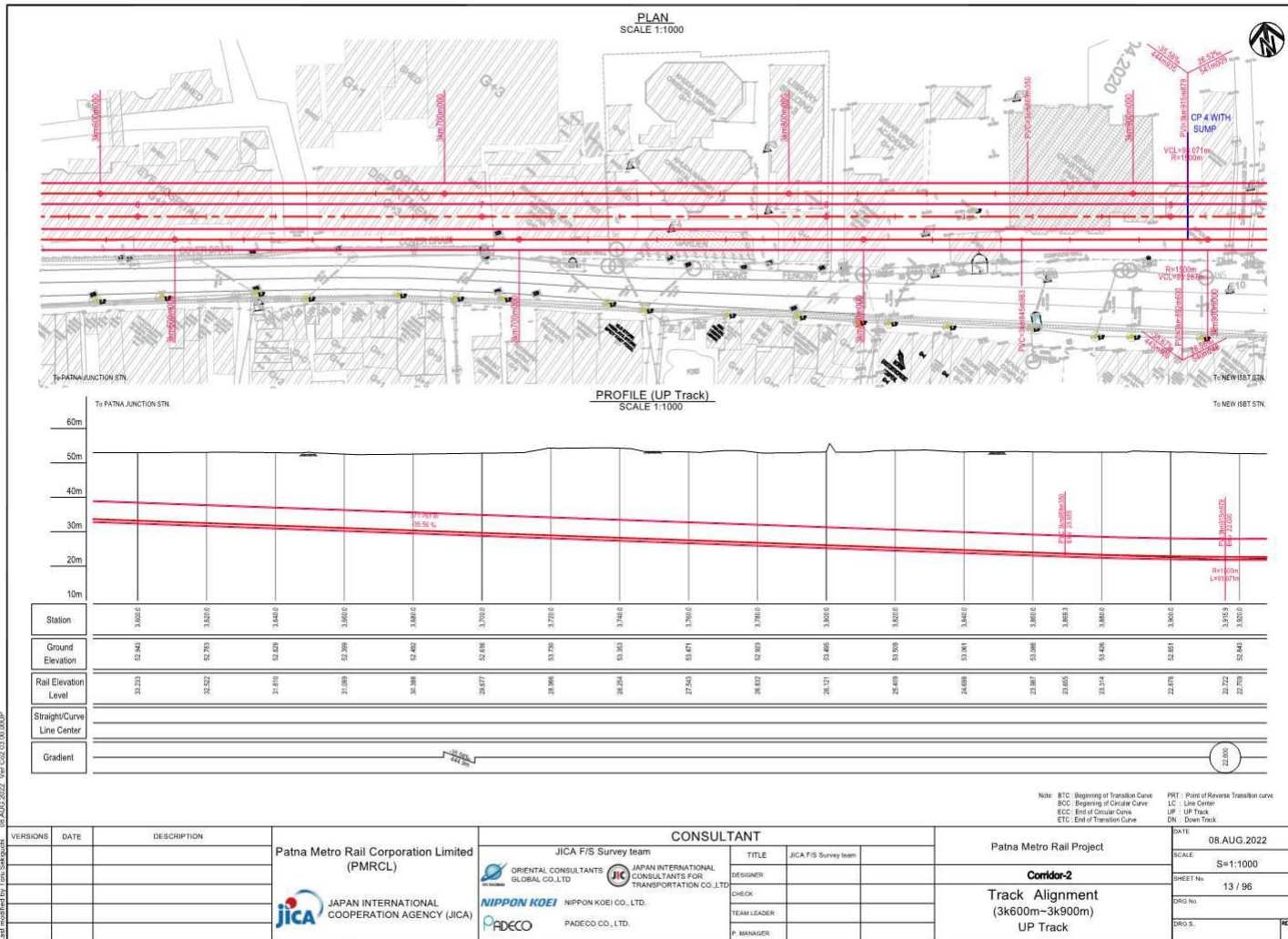


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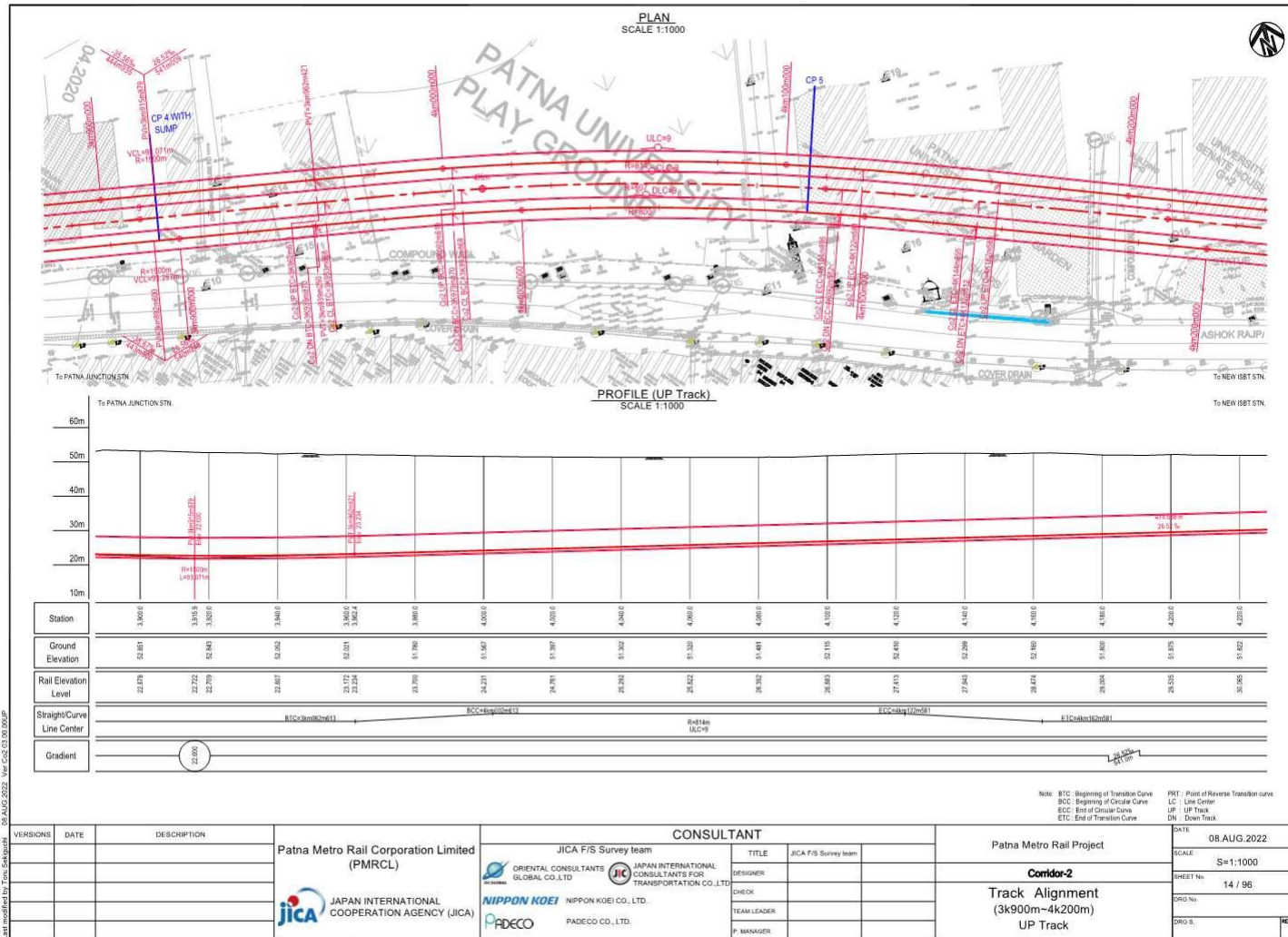
Last modified by: Tomi Saeguchi 09.AUG.2022 Ver: 02.01.00.2018P



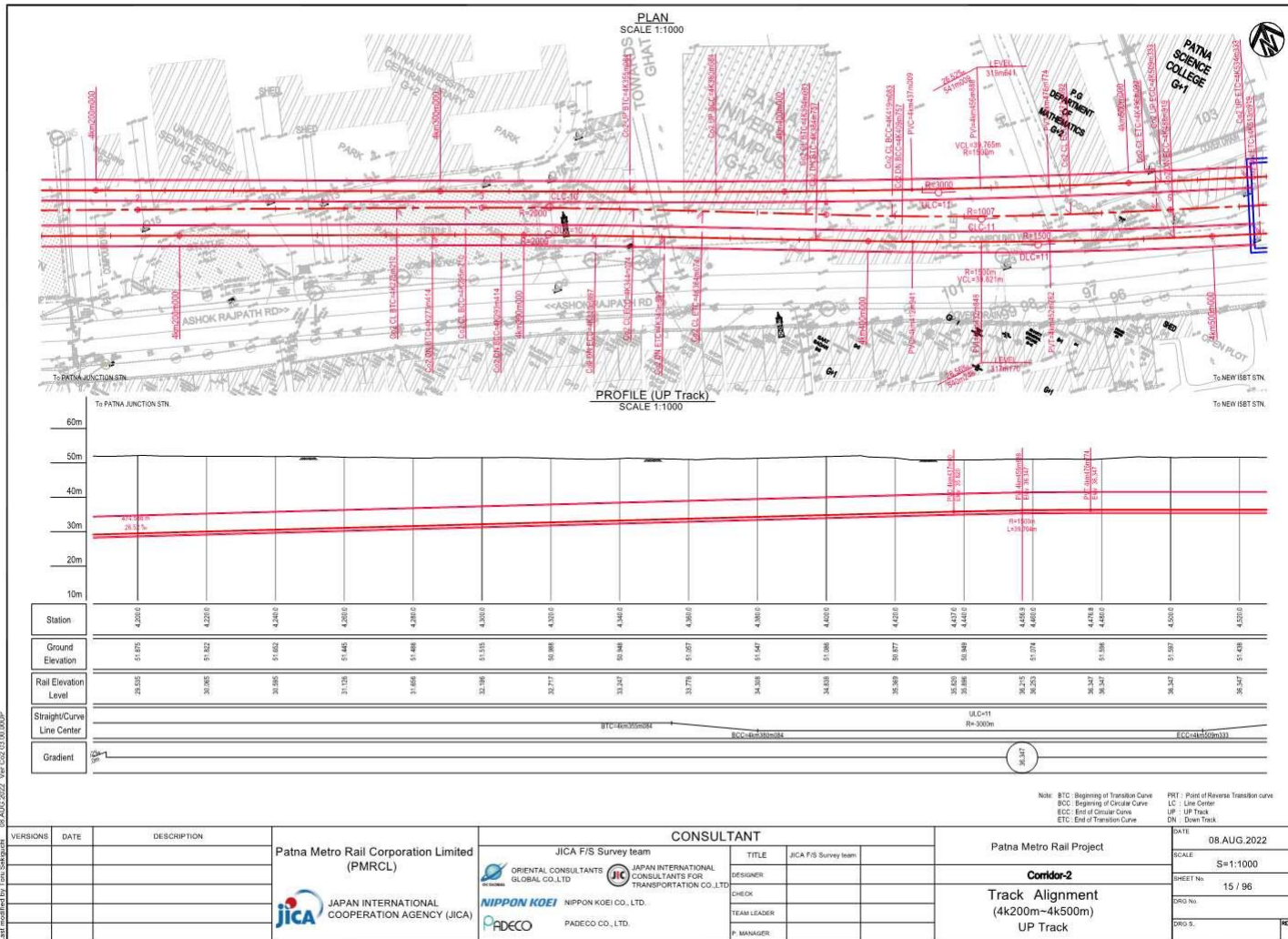


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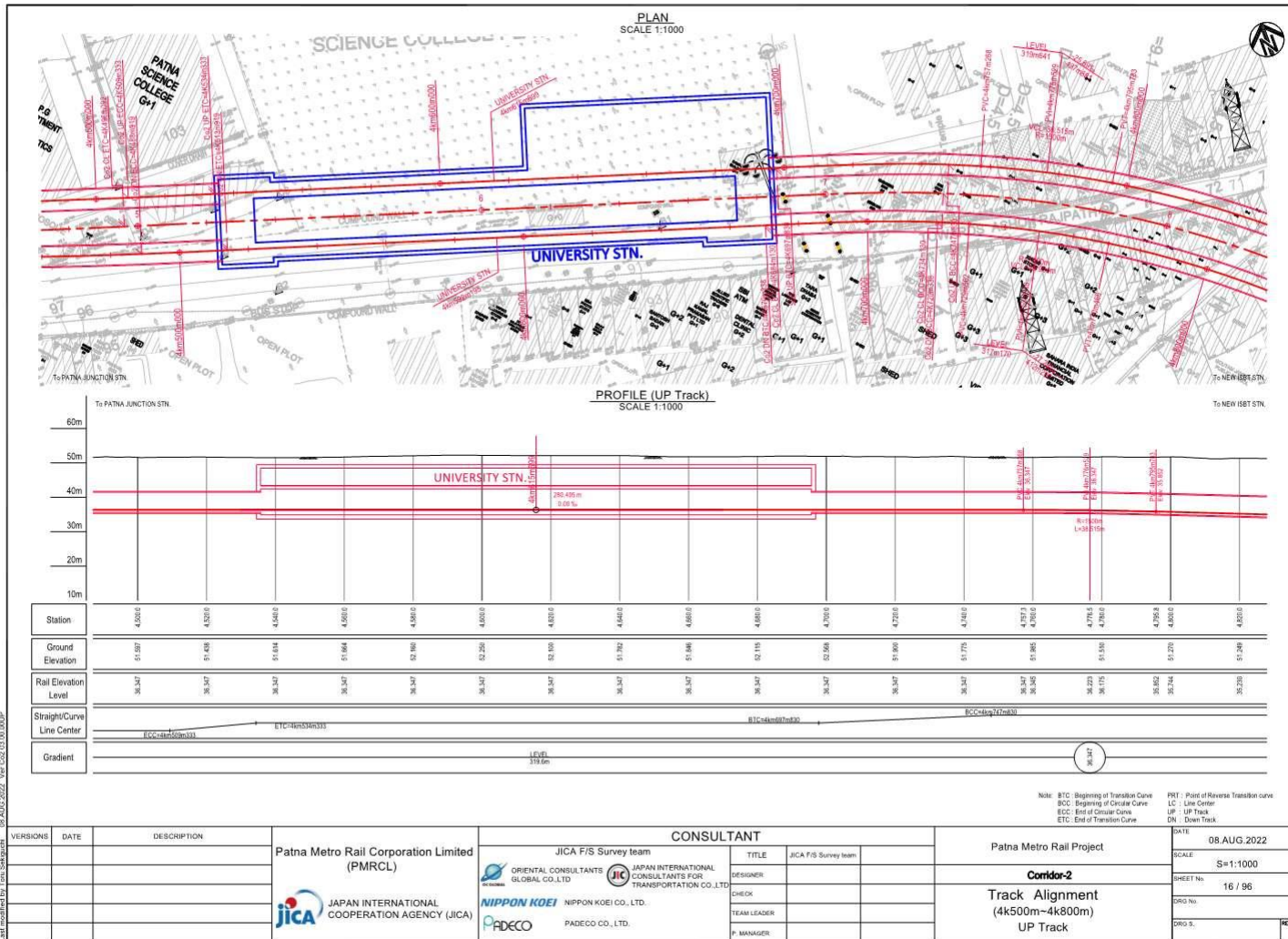
VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE		
			<b>Patna Metro Rail Corporation Limited (PMRCL)</b> JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		<b>JICA F/S Survey team</b> ORIENTAL CONSULTANTS GLOBAL CO. LTD NIPPON KOEI CO., LTD. PAIDECO CO., LTD.		TITLE: JICA F/S Survey team DESIGNER: CHECK: TEAM LEADER: P. MANAGER:	Patna Metro Rail Project <b>Corridor-2</b> Track Alignment (3k600m~3k900m) UP Track	DATE: 08 AUG 2022 SCALE: S=1:1000 SHEET No: 13 / 96 DRO No: DRO S:



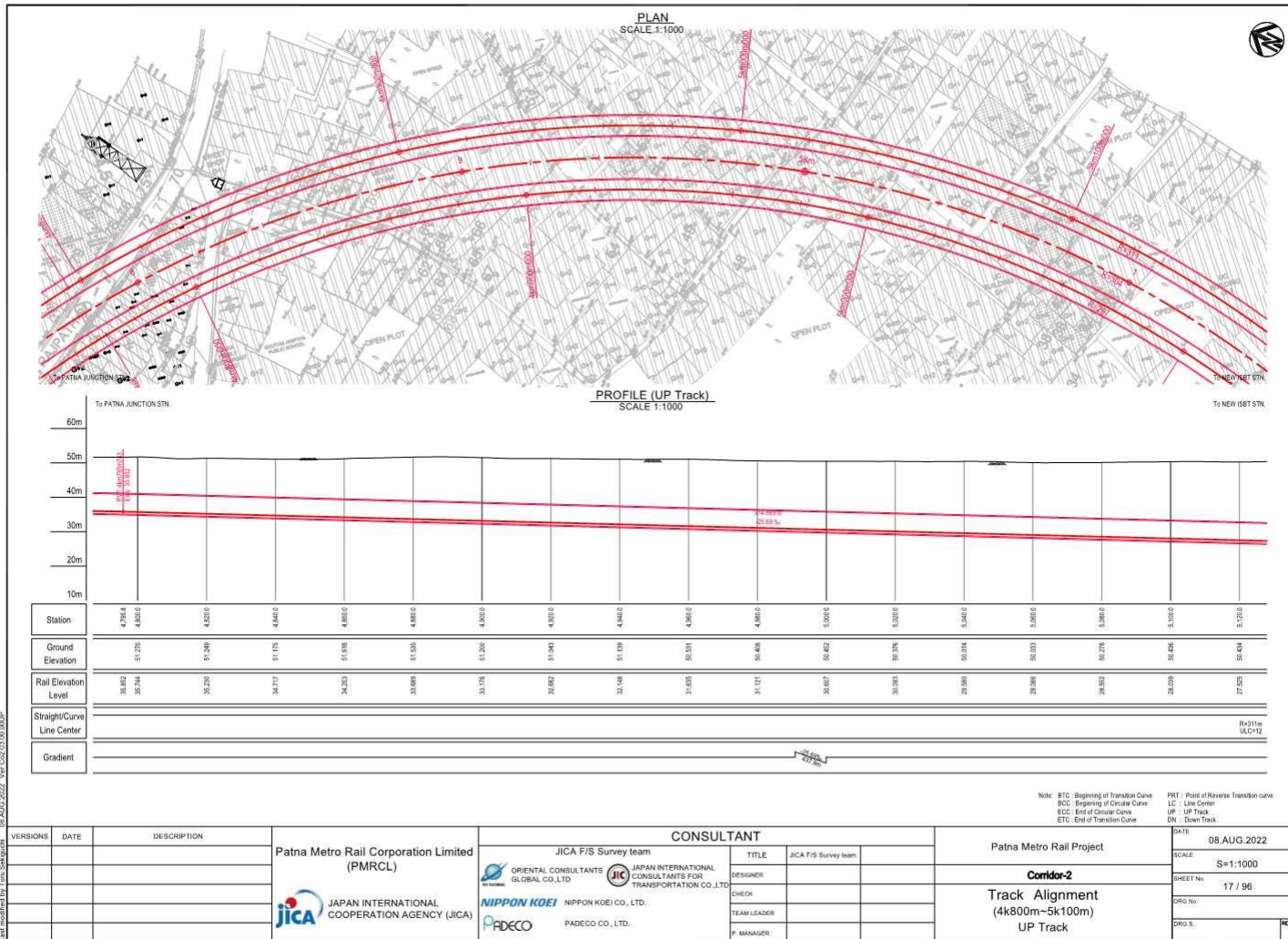
Date modified by: Tomi Saitoh / 03.AUG.2022 / Ver. 02.00.00.2018



Date modified by: Tomi Saegusa 09.AUG.2022 Ver: 02.01.00.2019



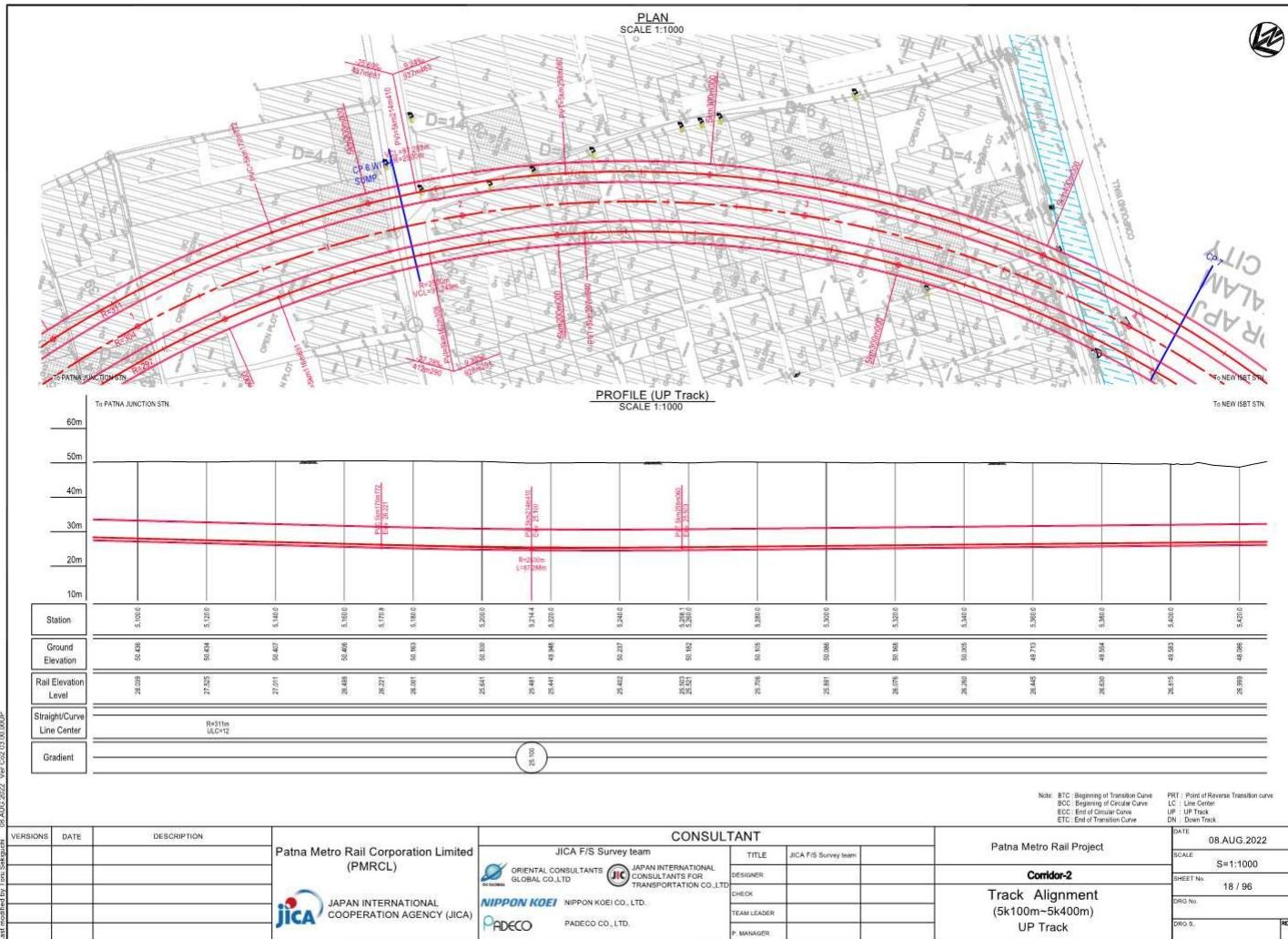
Last modified by: Tomi Saegusa / 09.AUG.2022 / Ver. 02.01.00.2004P



Last modified by: Tomi Saegusa 08 AUG 2022 Ver: 02.01.00.2018P

VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE	SCALE
			<b>Patna Metro Rail Corporation Limited (PMRCL)</b> JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		<b>JICA F/S Survey team</b> ORIENTAL CONSULTANTS GLOBAL CO. LTD JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO. LTD NIPPON KOEI CO., LTD. PAIDECO CO., LTD.		08 AUG 2022	S=1:1000
					TITLE: JICA F/S Survey team DESIGNER: CHECK: TEAM LEADER: P. MANAGER:		Patna Metro Rail Project <b>Corridor-2</b> Track Alignment (4k800m-5k100m) UP Track	
							SHEET No.	17 / 96
							DRG No.	
							DRG S.	REV

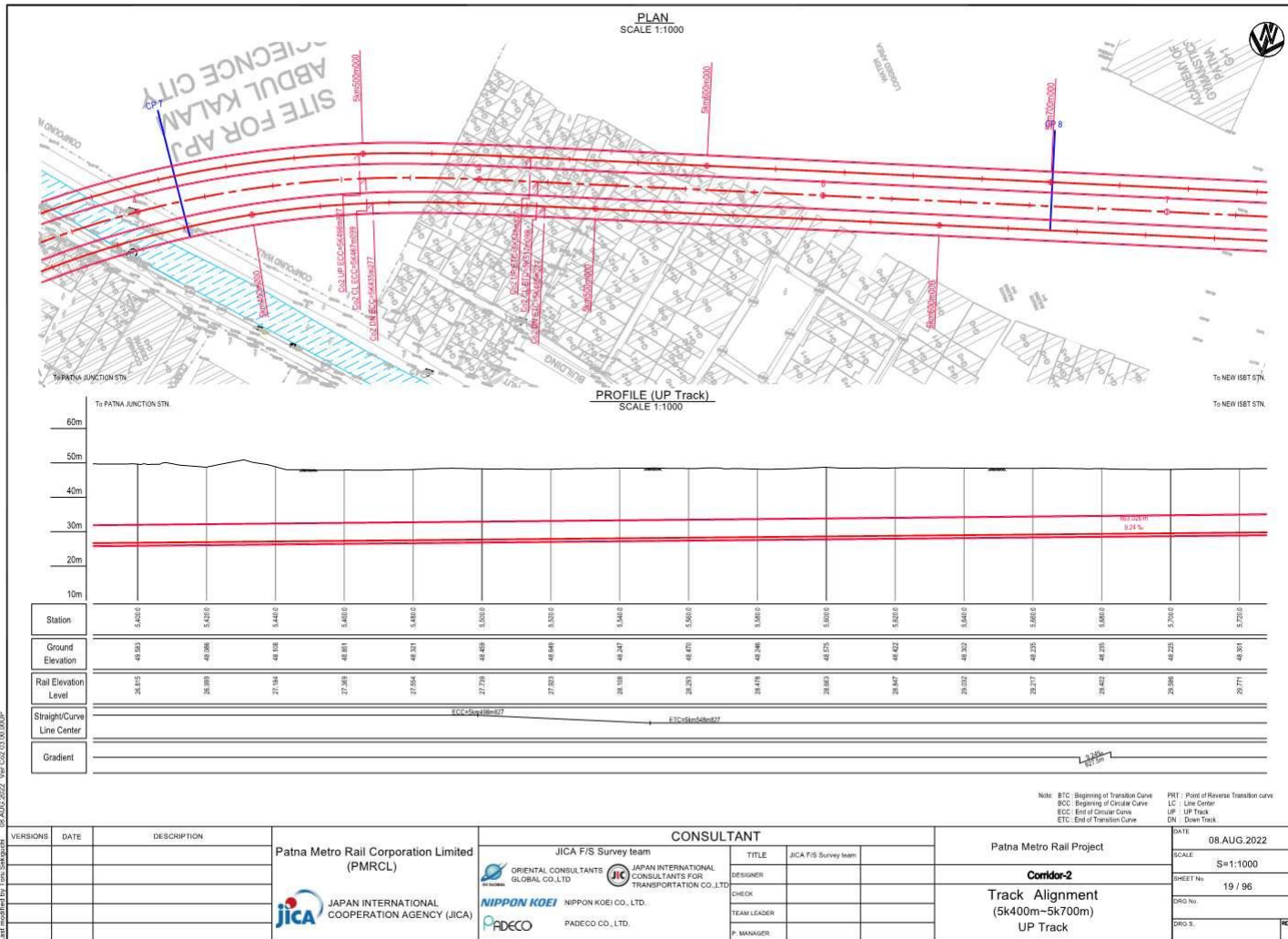
Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: Down Track



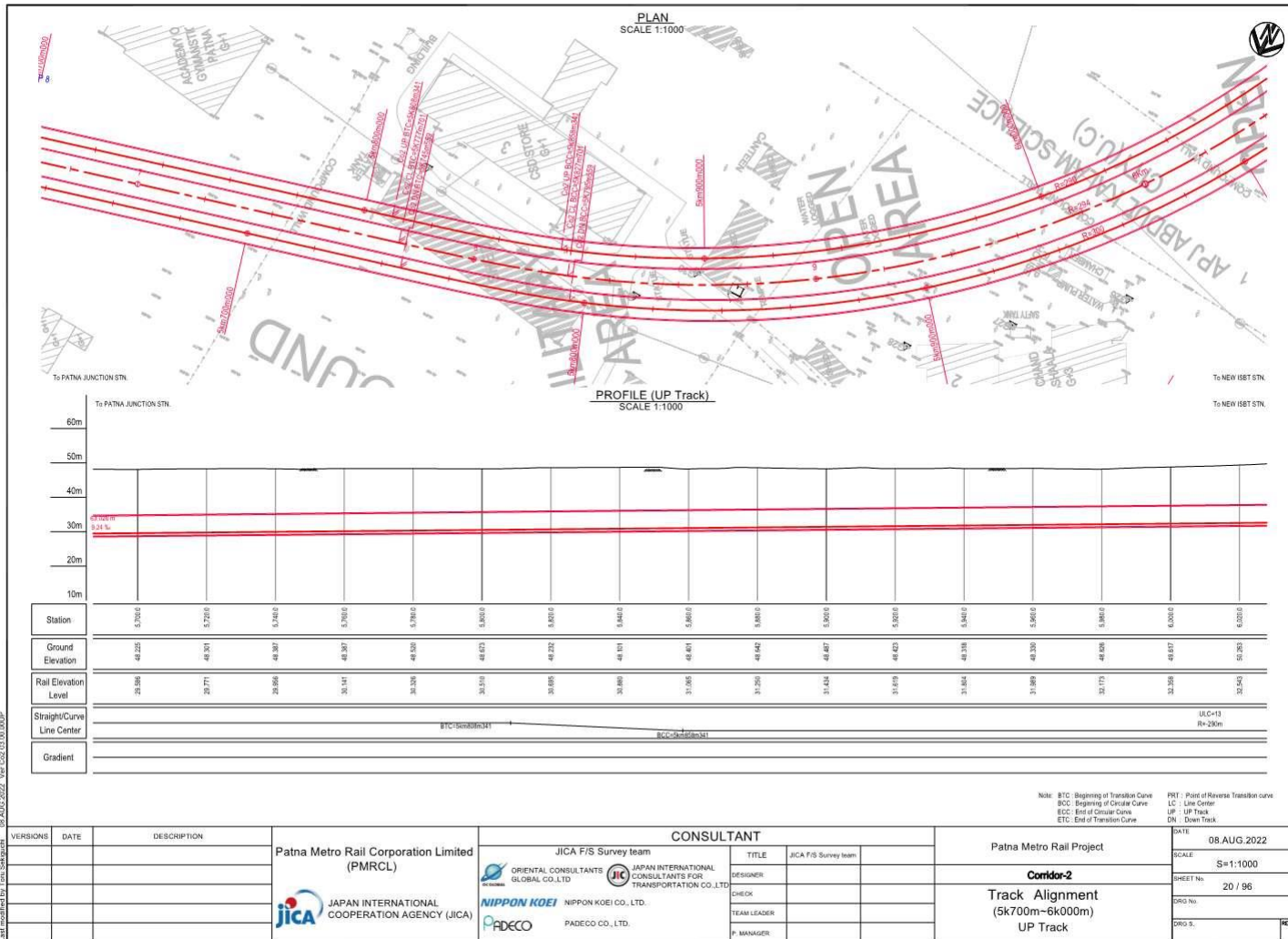
Last modified by: Tomi Saeguchi 08 AUG 2022 Ver: 02.01.00.200.P

VERSIONS	DATE	DESCRIPTION	CONSULTANT		DATE
			Patna Metro Rail Corporation Limited (PMRCL) 		08 AUG 2022
			JICA F/S Survey team TITLE: JICA F/S Survey team		SCALE: S=1:1000
			Patna Metro Rail Project Corridor-2 Track Alignment (5k100m-5k400m) UP Track		SHEET No: 18 / 96
			DESIGNER: JICA F/S Survey team CHECK: [Blank] TEAM LEADER: [Blank] P. MANAGER: [Blank]		DRG No: [Blank]
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Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
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 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: Down Track



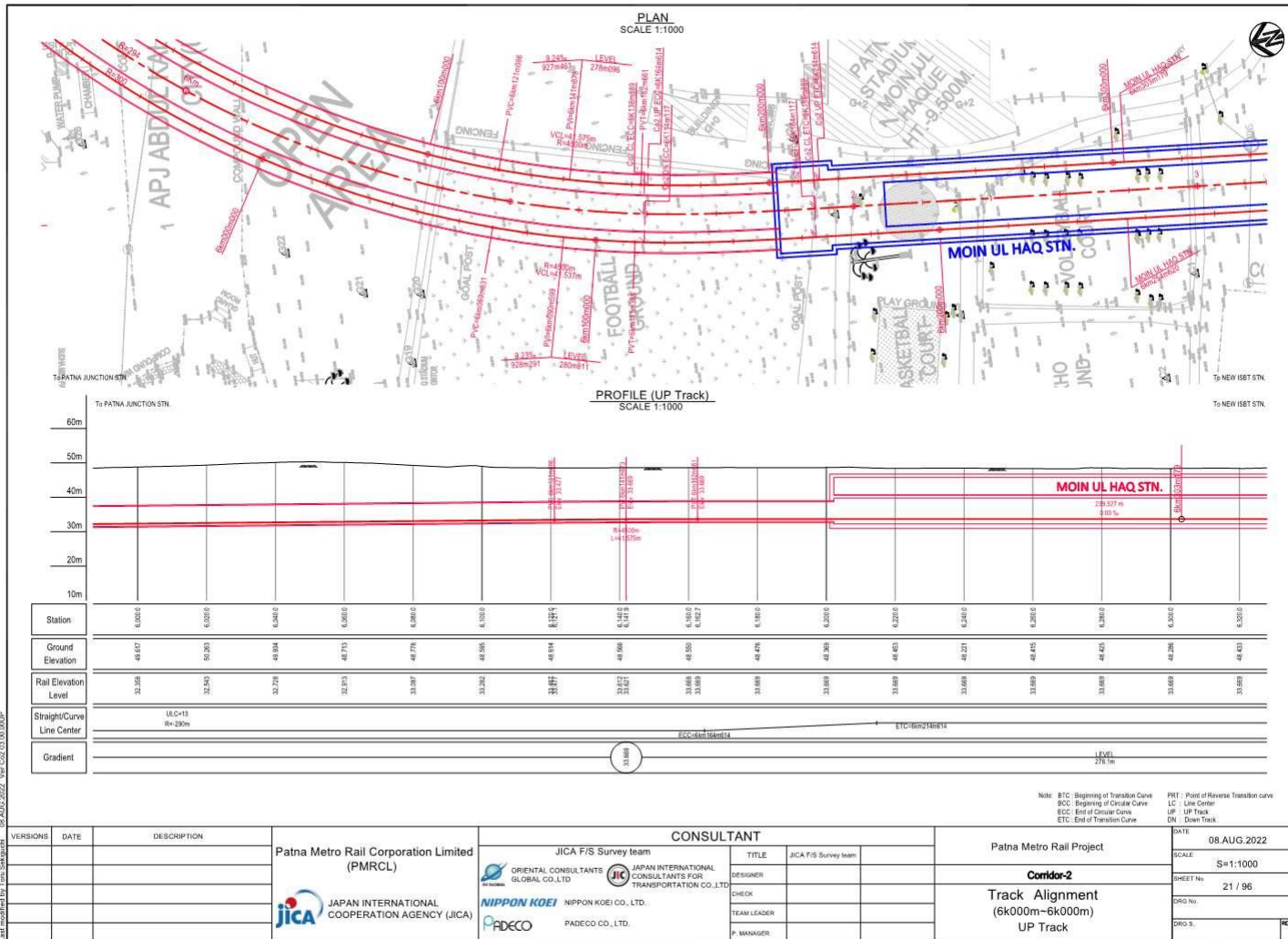
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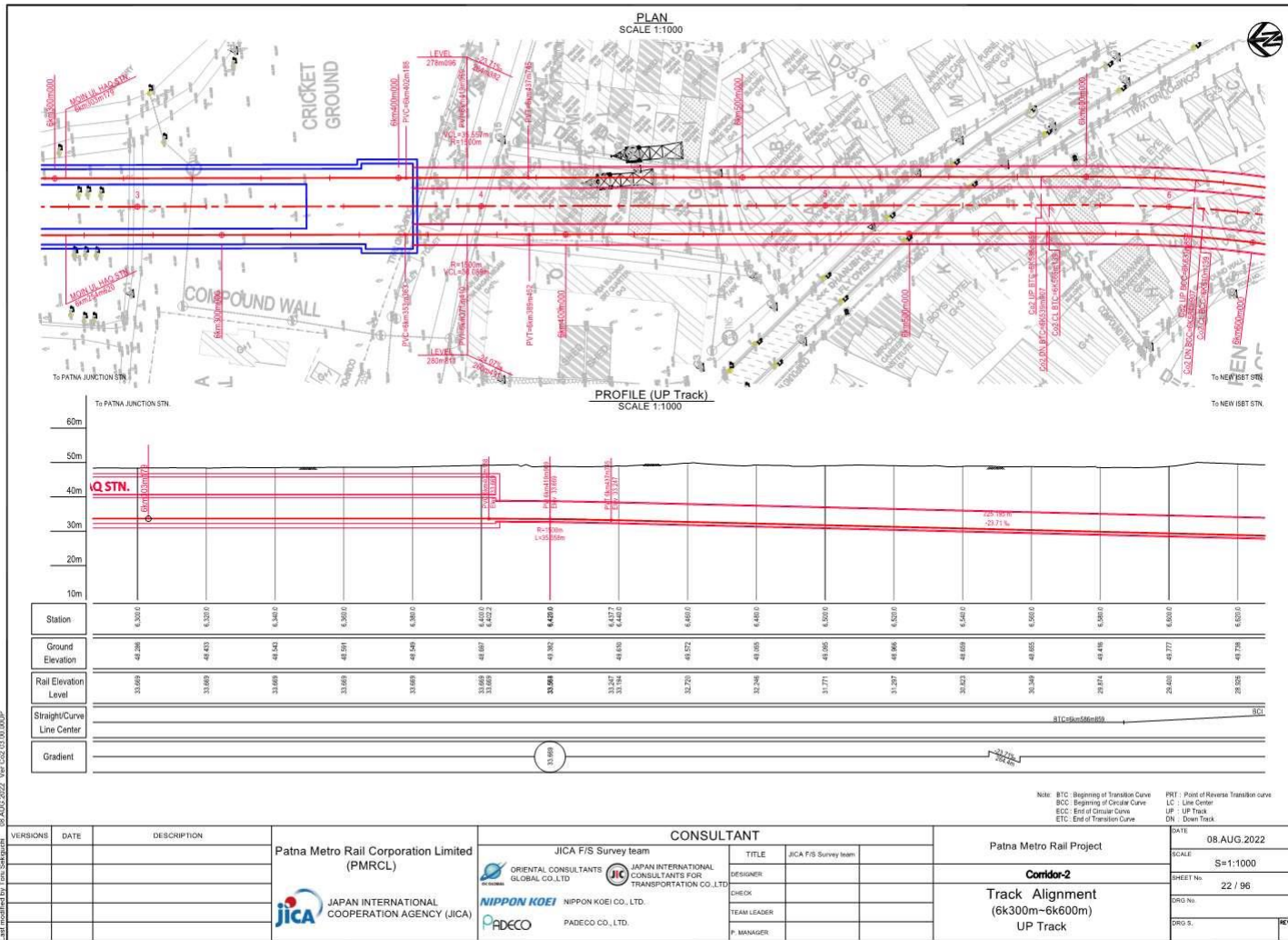
Last modified by: Tomi Saeguchi 08 AUG 2022 Ver: 02.01.00.2004P

VERSIONS	DATE	DESCRIPTION	CONSULTANT		DATE
			Patna Metro Rail Corporation Limited (PMRCL)	JICA F/S Survey team	08 AUG 2022
			JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	ORIENTAL CONSULTANTS GLOBAL CO. LTD. / NIPPON KOEI / PADECO	SCALE: S=1:1000
				JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO. LTD.	SHEET No: 20 / 96
				DESIGNER: JICA F/S Survey team	DRG No:
				CHECK:	DRG S:
				TEAM LEADER:	REV
				P. MANAGER:	
				Patna Metro Rail Project	
				Corridor-2	
				Track Alignment (5k700m-6k000m)	
				UP Track	





Last modified by: Tomi Saeguchi 09.AUG.2022 Ver. 02.03.00 20:49

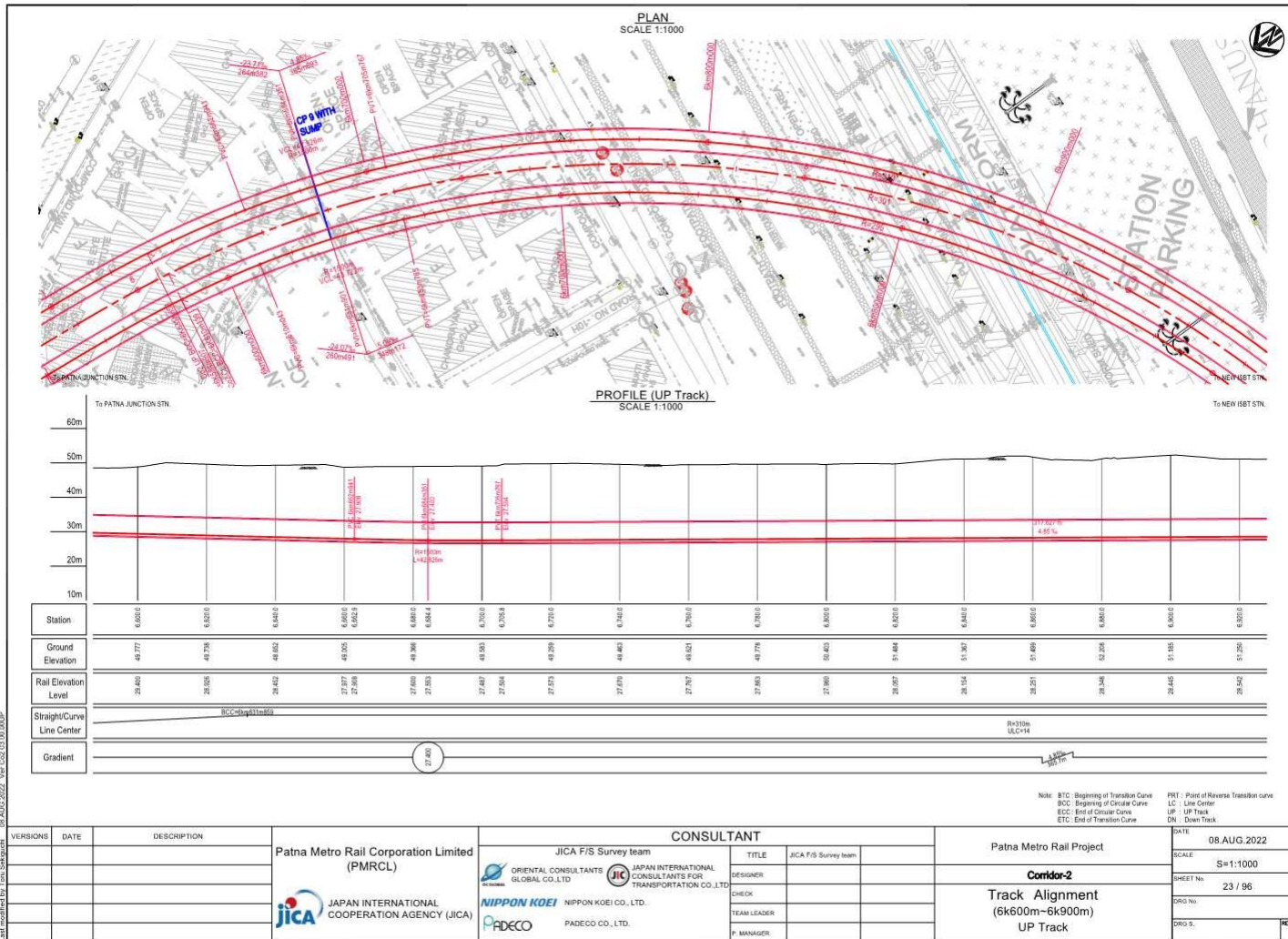


Last modified by: Tomi Saitoh / 09 AUG 2022 / Ver. 02/20/2024

VERSIONS	DATE	DESCRIPTION

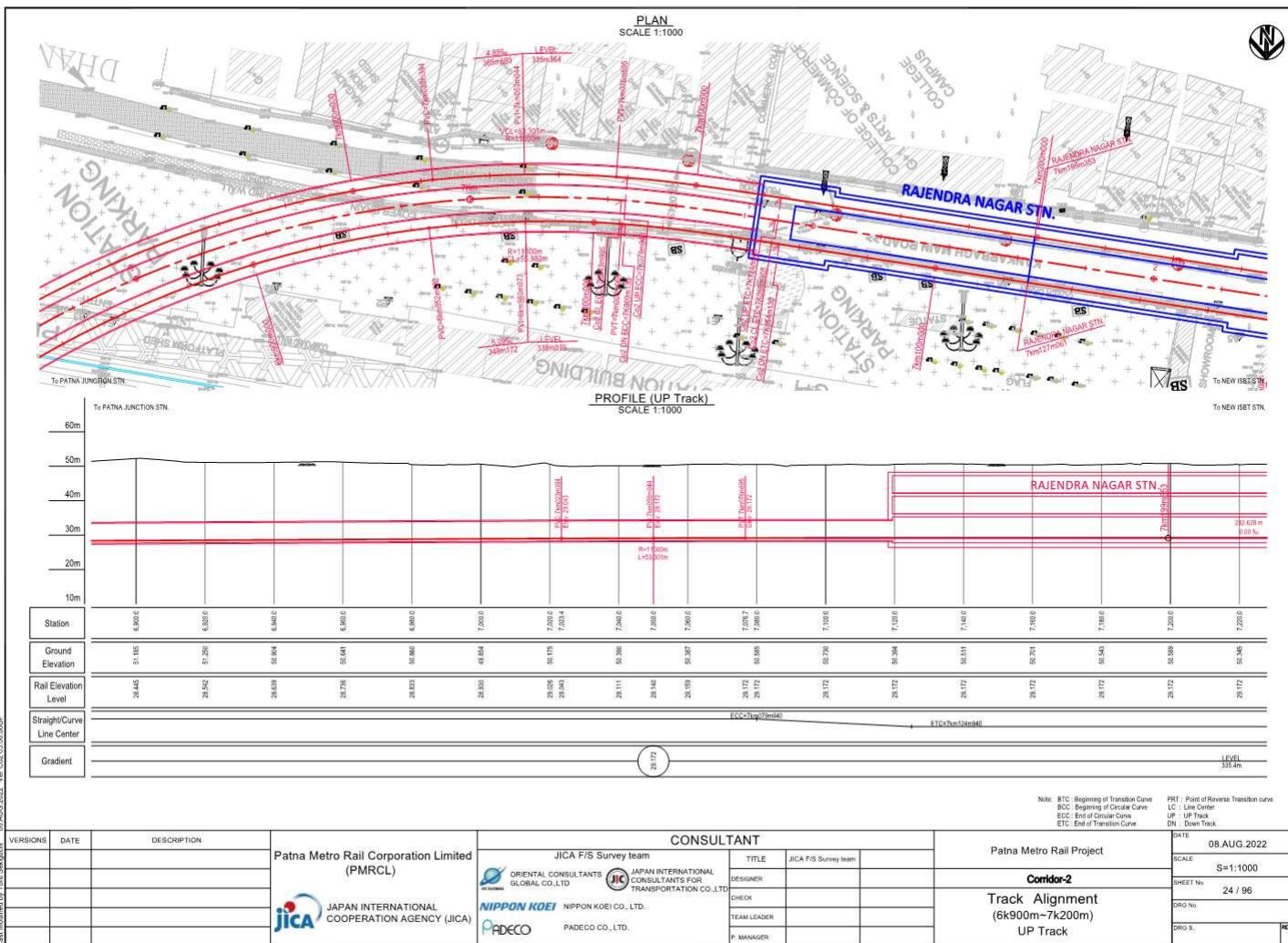
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	Patna Metro Rail Project <b>Corridor-2</b> Track Alignment (6k300m-6k600m) UP Track		DATE: 08 AUG 2022 SCALE: S=1:1000 SHEET No.: 22 / 96 DRO No.: DRO S.: REV:

Note: BTC: Beginning of Transition Curve BCC: Beginning of Circular Curve EEC: End of Circular Curve ETC: End of Transition Curve	PRT: Point of Reverse Transition curve LC: Line Center UP: UP Track DN: Down Track
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Last modified by: Tomi Saeguchi 08 AUG 2022 Ver: 02.01.00.2004P

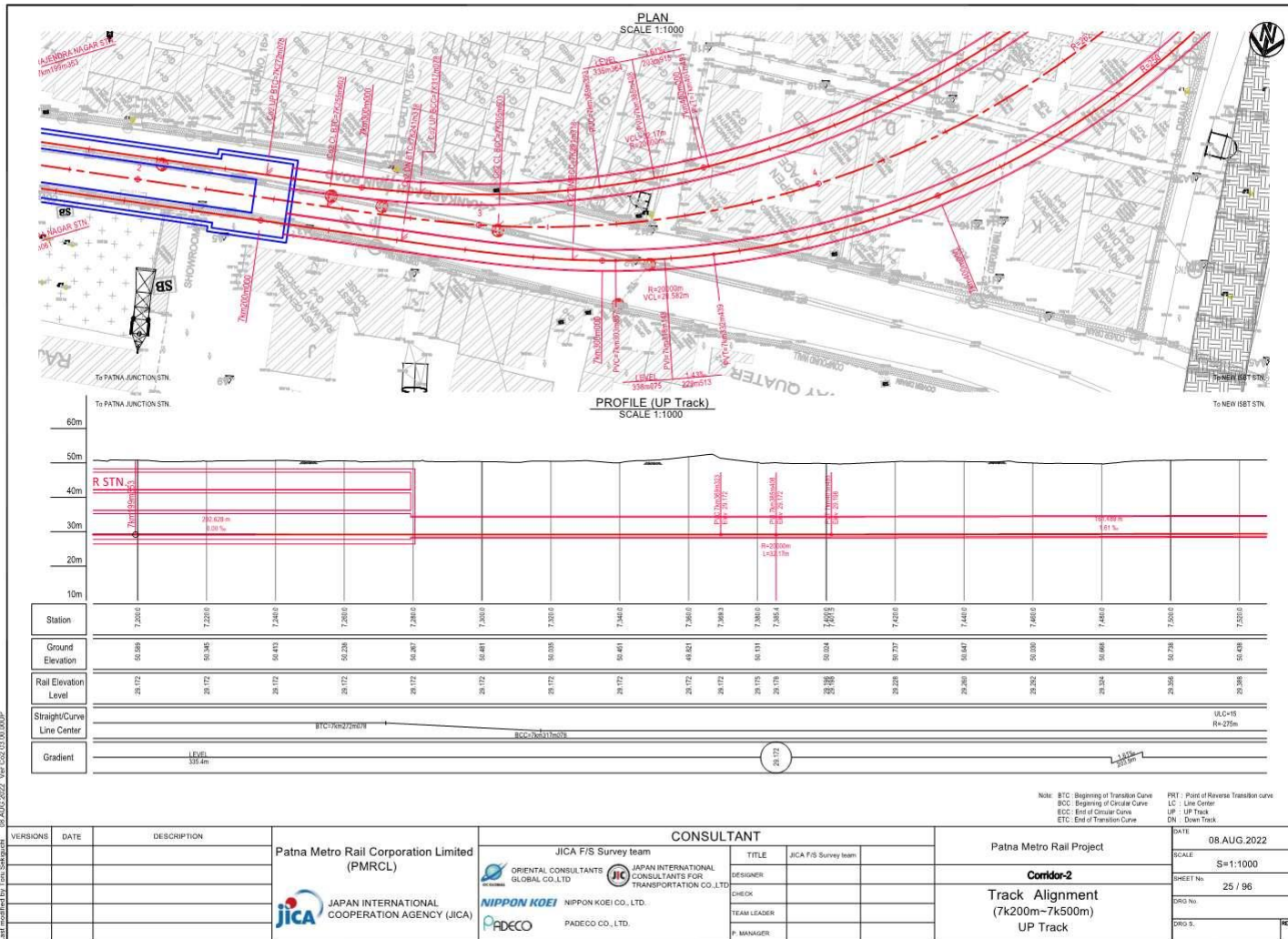
VERSIONS	DATE	DESCRIPTION	CONSULTANT		DATE
			Patna Metro Rail Corporation Limited (PMRCL) 		08 AUG 2022
			JICA F/S Survey team TITLE: JICA F/S Survey team		SCALE: S=1:1000
			DESIGNER: JICA F/S Survey team CHECK: JICA F/S Survey team TEAM LEADER: JICA F/S Survey team P. MANAGER: JICA F/S Survey team		SHEET No: 23 / 96
			Patna Metro Rail Project Corridor-2 Track Alignment (6k600m-6k900m) UP Track		DRO No: DRO S:
					REV



Last modified by: Tomi Saitoh 08 AUG 2022 Ver: 02/20.00.2004P

VERSIONS	DATE	DESCRIPTION	Patna Metro Rail Corporation Limited (PMRCL)  JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	CONSULTANT				Patna Metro Rail Project  <b>Corridor-2</b> Track Alignment (6k900m~7k200m) UP Track	DATE	08 AUG 2022
				ORIENTAL CONSULTANTS GLOBAL CO. LTD. NIPPON KOEI CO., LTD. PAIDECO	JICA F/S Survey team	TITLE	JICA F/S Survey team		SCALE	S=1:1000
				JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) NIPPON KOEI CO., LTD. PAIDECO	JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO. LTD.	DESIGNER	JICA F/S Survey team		SHEET No.	24 / 96
						CHECK			DRG No.	
					TEAM LEADER		DRG S.			
					P. MANAGER		REV			

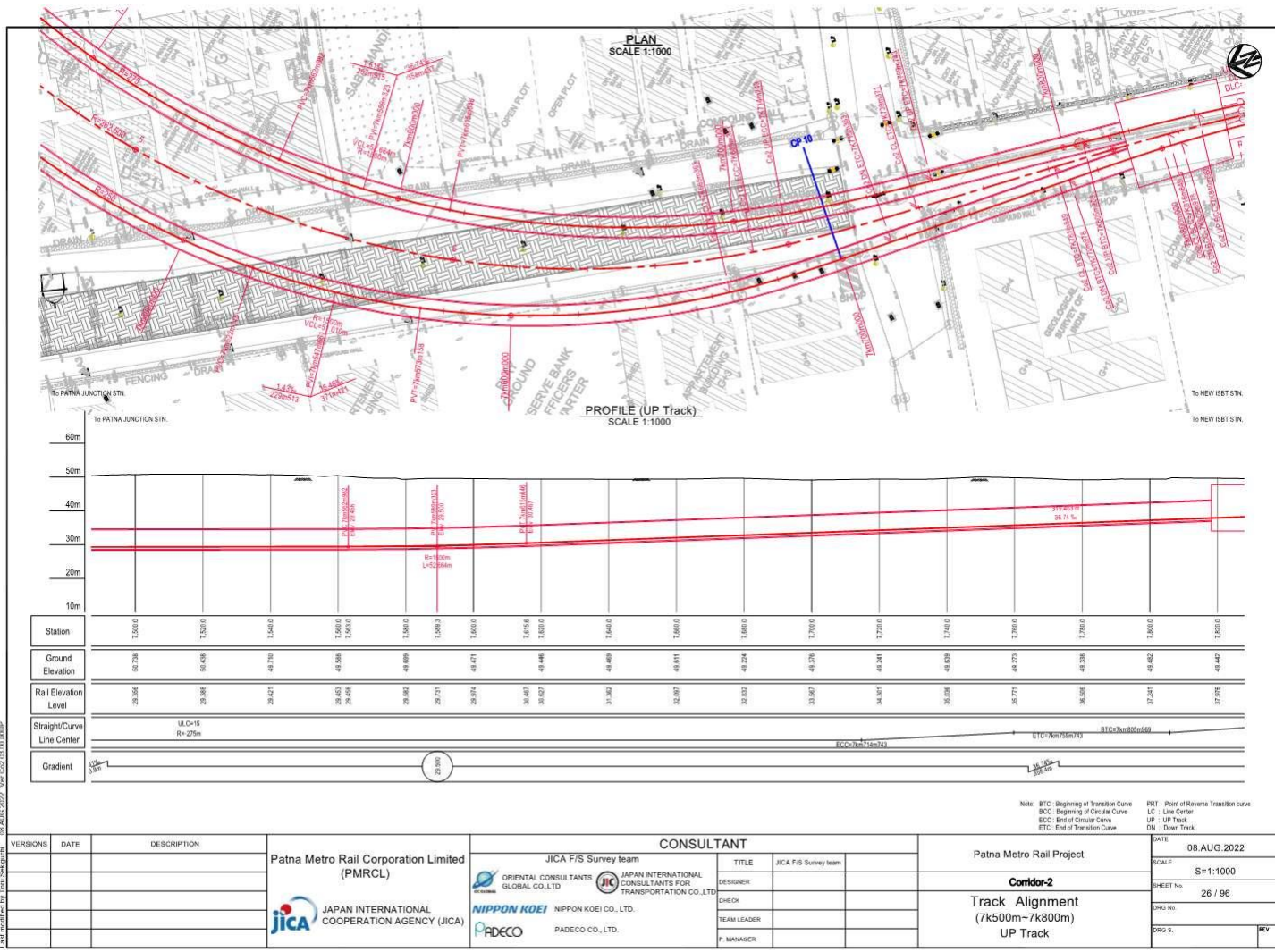
Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve



Date modified by: Tomi Saitoh / 09 AUG 2022 / Ver: 02.01.00.2024

Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: Down Track

VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE		
			Patna Metro Rail Corporation Limited (PMRCL) JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		JICA F/S Survey team ORIENTAL CONSULTANTS GLOBAL CO. LTD NIPPON KOEI CO., LTD. PAIDECO CO., LTD.		TITLE: JICA F/S Survey team DESIGNER: CHECK: TEAM LEADER: P. MANAGER:	Patna Metro Rail Project Corridor-2 Track Alignment (7k200m-7k500m) UP Track	DATE: 08.AUG.2022 SCALE: S=1:1000 SHEET No.: 25 / 96 DRO No.: DRO S.: REV:

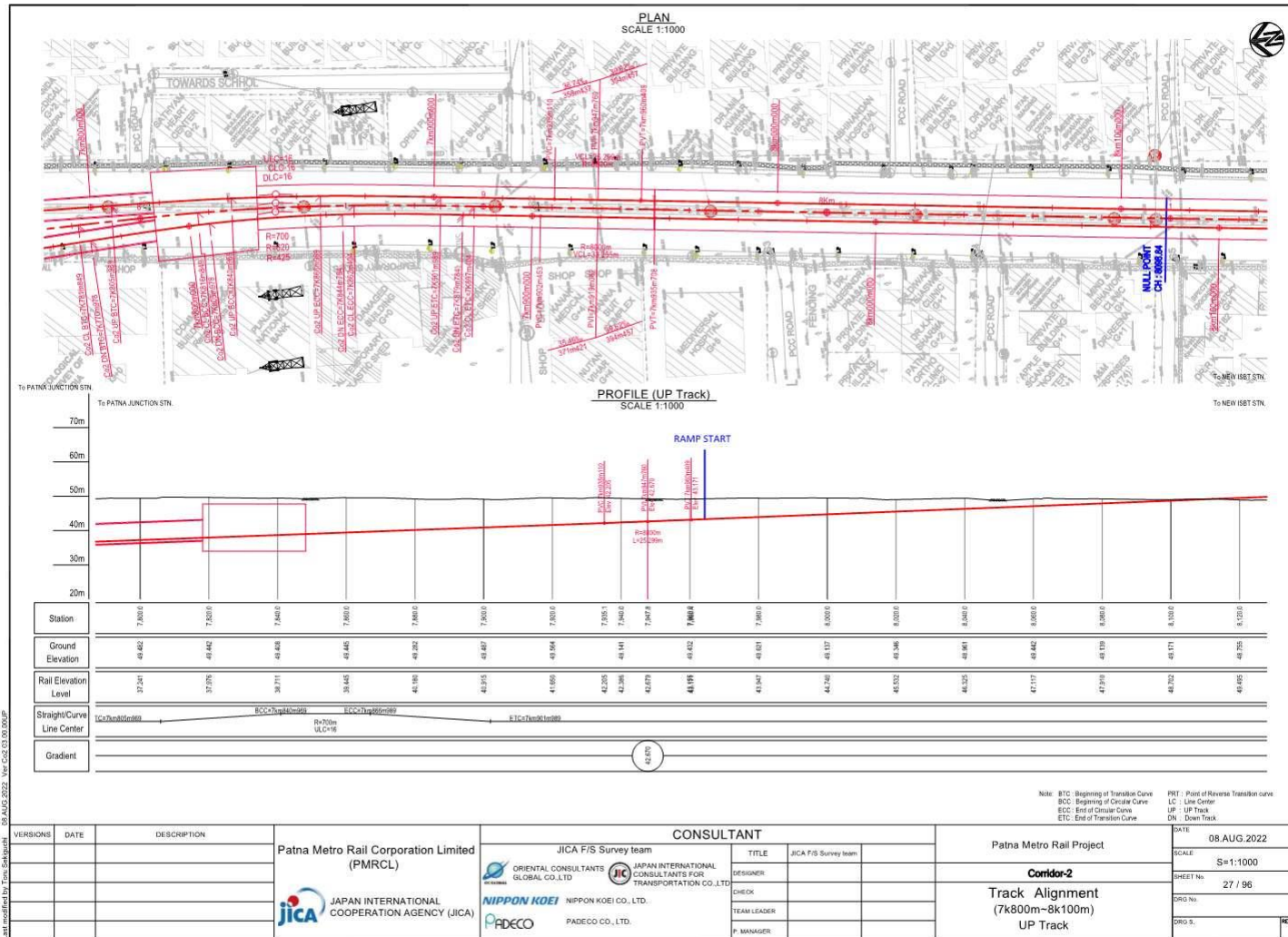


Last modified by: Tomi Saegusa 08 AUG 2022 Ver: 02.00.00.2004P

VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE
			Patna Metro Rail Corporation Limited (PMRCL)	JICA F/S Survey team	TITLE	JICA F/S Survey team	08.AUG.2022
			JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	ORIENTAL CONSULTANTS GLOBAL CO.,LTD	DESIGNER	JICA F/S Survey team	SCALE
				NIPPON KOEI	CHECK		S=1:1000
				PADECO	TEAM LEADER		SHEET No.
					P. MANAGER		26 / 96
							DRG No.
							DRG S.
							REV

Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: Down Track

Patna Metro Rail Project  
**Corridor-2**  
 Track Alignment  
 (7k500m-7k800m)  
 UP Track



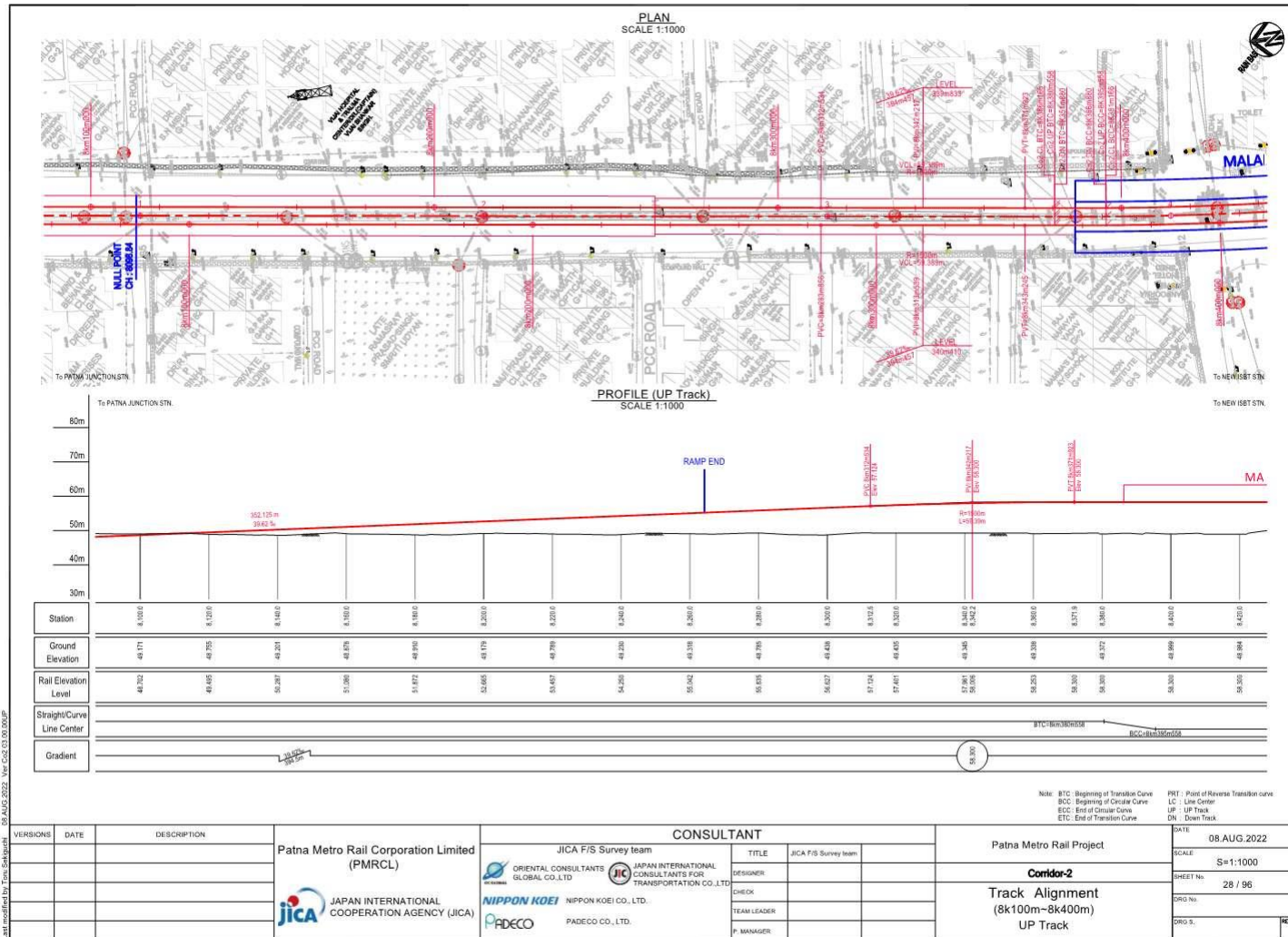
Date modified by: Tom Saitoh 08 AUG 2022 Ver: 02.01.00.2019

VERSIONS	DATE	DESCRIPTION

<b>Patna Metro Rail Corporation Limited (PMRCL)</b> <b>JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)</b>	<b>CONSULTANT</b> JICA F/S Survey team ORIENTAL CONSULTANTS GLOBAL CO. LTD NIPPON KOEI CO., LTD. PAIDECO CO., LTD.		TITLE: JICA F/S Survey team DESIGNER: CHECK: TEAM LEADER: P. MANAGER:
	Patna Metro Rail Project <b>Corridor-2</b> Track Alignment (7k800m-8k100m) UP Track		DATE: 08 AUG 2022 SCALE: S=1:1000 SHEET No: 27 / 96 DRO No: DRO S:

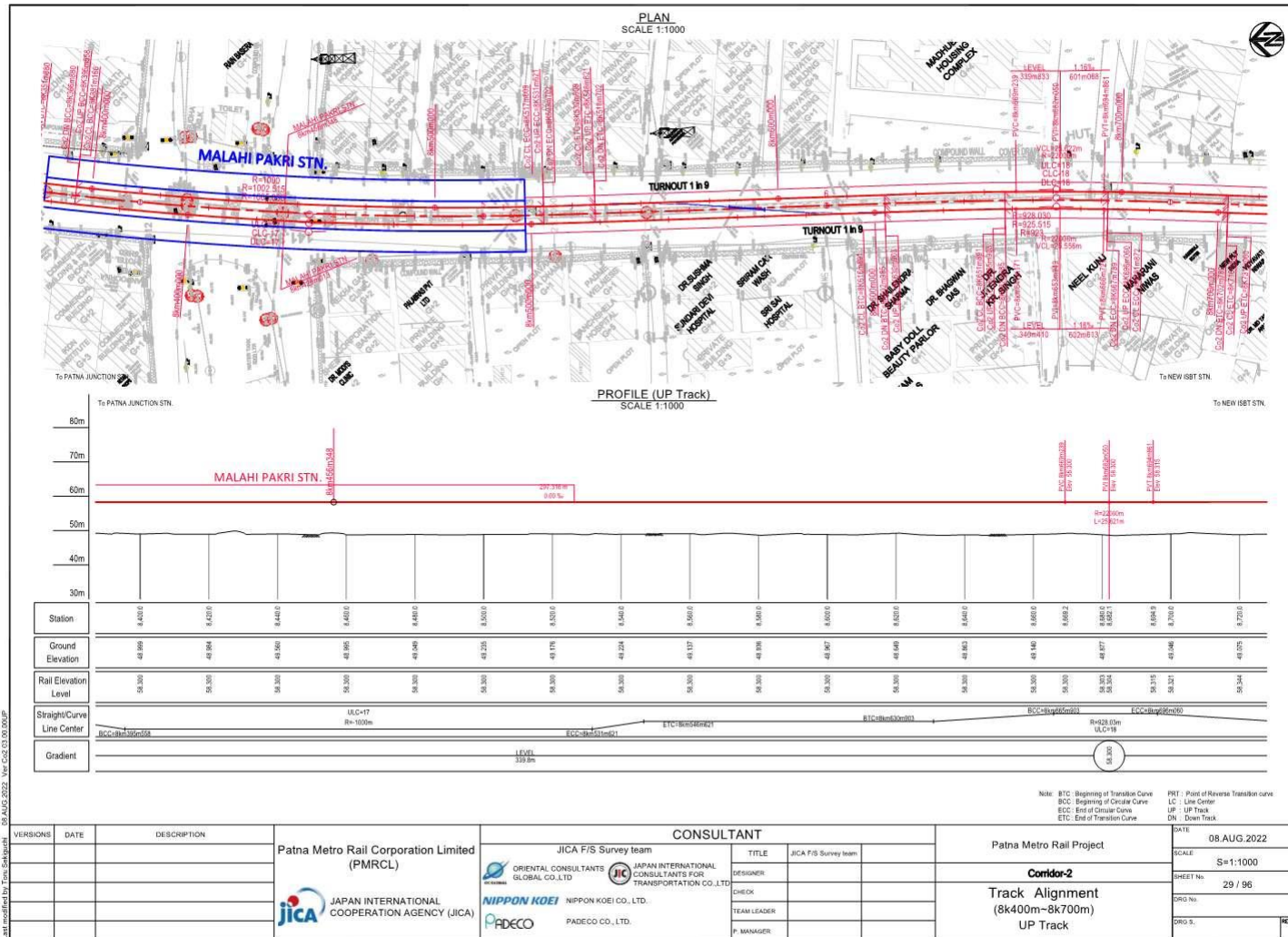
DATE	REV

Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: Down Track



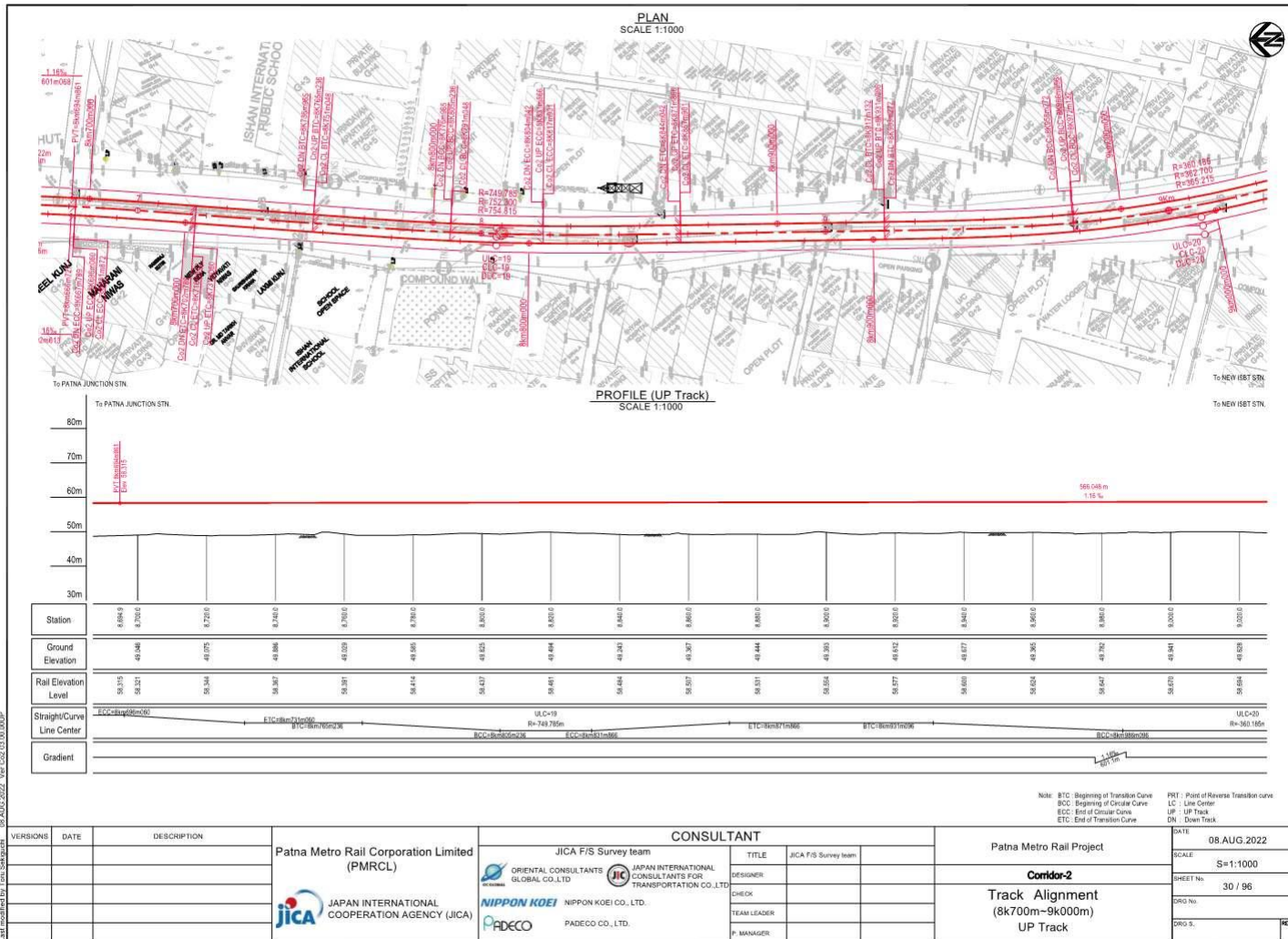
Last modified by: Tomi Saeguchi 09.AUG.2022 Ver: 02.01.00.2019P





Date modified by: Tom Saitoh / 09 AUG 2022 / Ver: 02/23.00.2024

VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE	
			Patna Metro Rail Corporation Limited (PMRCL) JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	ORIENTAL CONSULTANTS GLOBAL CO. LTD NIPPON KOEI CO., LTD. PADECO CO., LTD.	JICA F/S Survey team JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO. LTD.	TITLE: JICA F/S Survey team DESIGNER: CHECK: TEAM LEADER: P. MANAGER:	Patna Metro Rail Project Corridor-2 Track Alignment (8k400m~8k700m) UP Track	08.AUG.2022 SCALE: S=1:1000 SHEET No: 29 / 96 DRO No: DRO S:

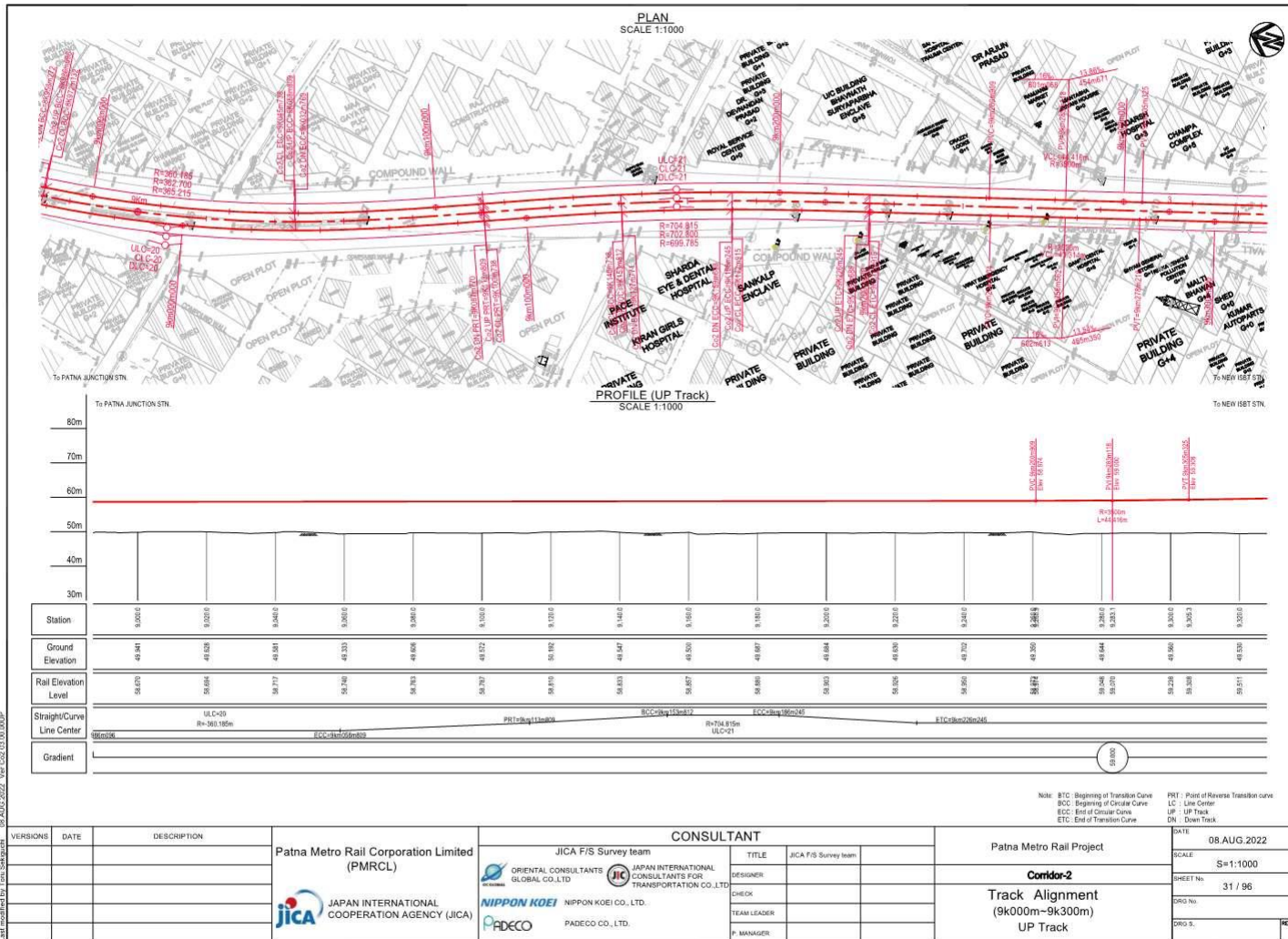


Date modified by: Tom Saitoh 08 AUG 2022 Ver: 02.02.00.2004

VERSIONS	DATE	DESCRIPTION

<b>Patna Metro Rail Corporation Limited (PMRCL)</b> <b>JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)</b>	<b>CONSULTANT</b> JICA F/S Survey team ORIENTAL CONSULTANTS GLOBAL CO. LTD NIPPON KOEI CO., LTD. PAIDECO CO., LTD.		TITLE: JICA F/S Survey team DESIGNER: CHECK: TEAM LEADER: P. MANAGER:
	Patna Metro Rail Project <b>Corridor-2</b> Track Alignment (8k700m-9k000m) UP Track		DATE: 08 AUG 2022 SCALE: S=1:1000 SHEET No: 30 / 96 DRO No: DRO S: REV

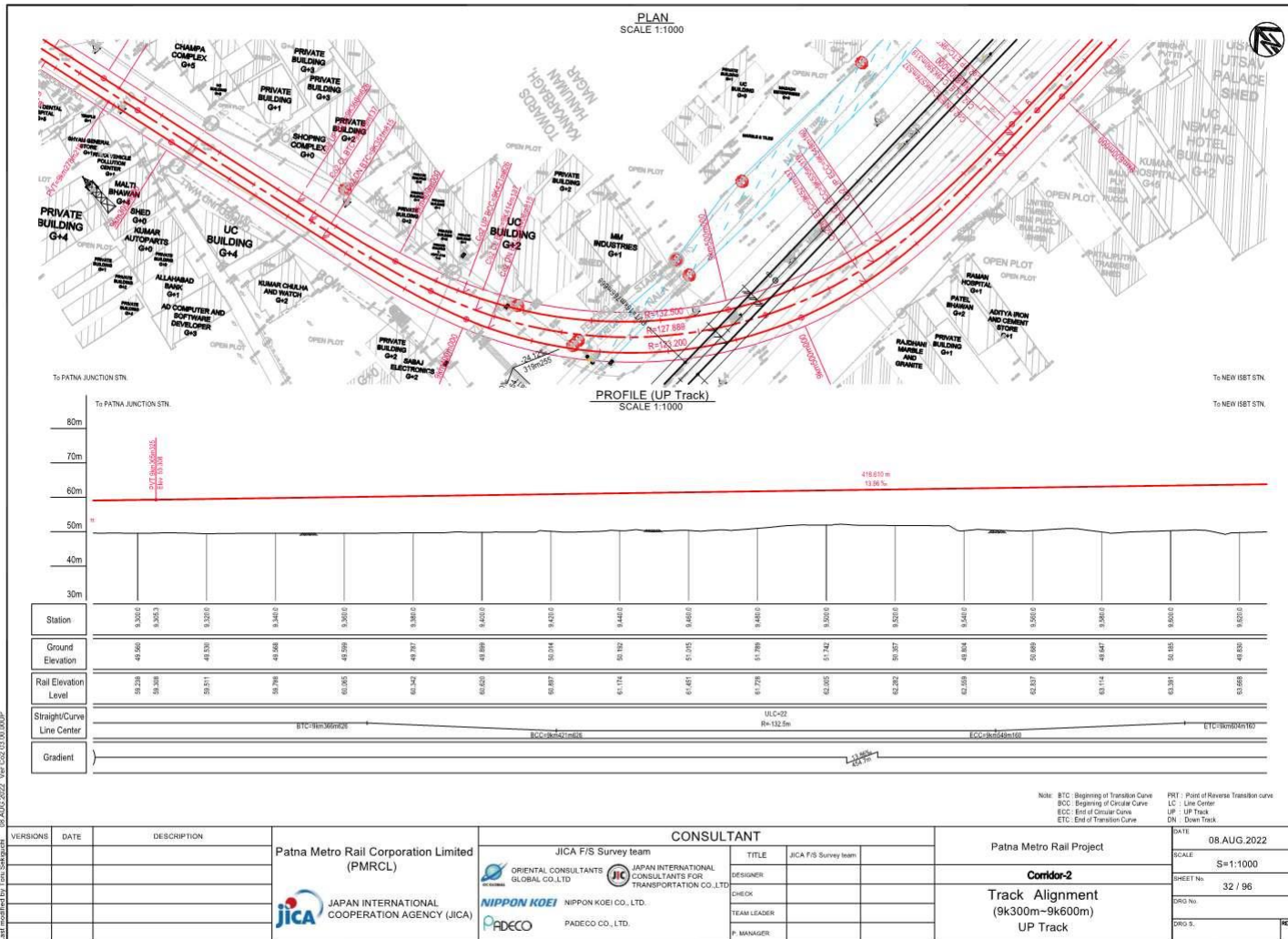
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 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: Down Track



Date modified by: Tomi Saeguchi 08 AUG 2022 Ver: 02/20.00.2004P

Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: Down Track

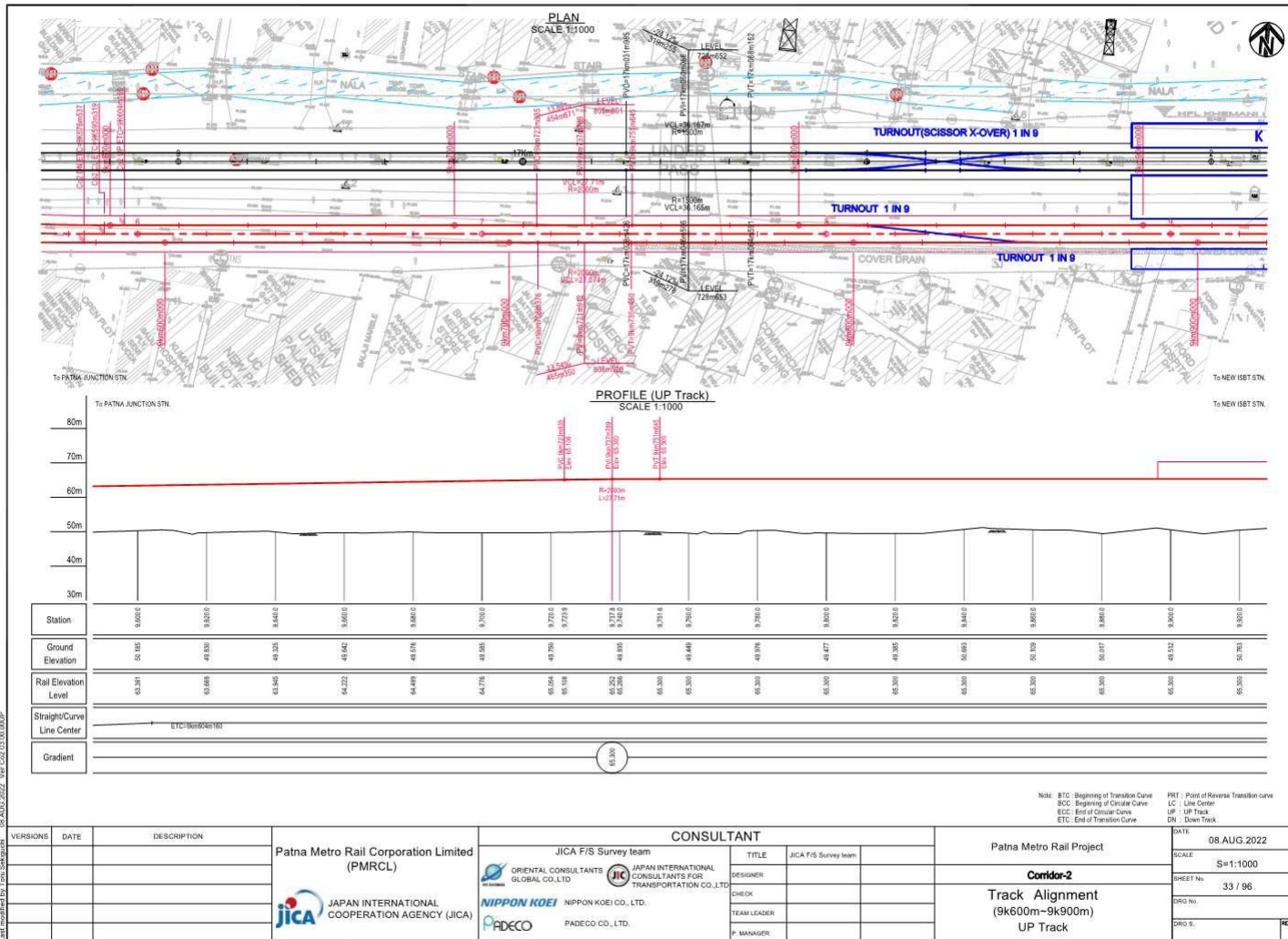
VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE
			<b>Patna Metro Rail Corporation Limited (PMRCL)</b> 		<b>Patna Metro Rail Project</b> <b>Corridor-2</b> <b>Track Alignment (9k000m-9k300m)</b> <b>UP Track</b>		08.AUG.2022
					TITLE: JICA F/S Survey team DESIGNER: CHECK: TEAM LEADER: P. MANAGER:		SCALE: S=1:1000 SHEET No: 31 / 96 DRO No: DRO S:
							REV



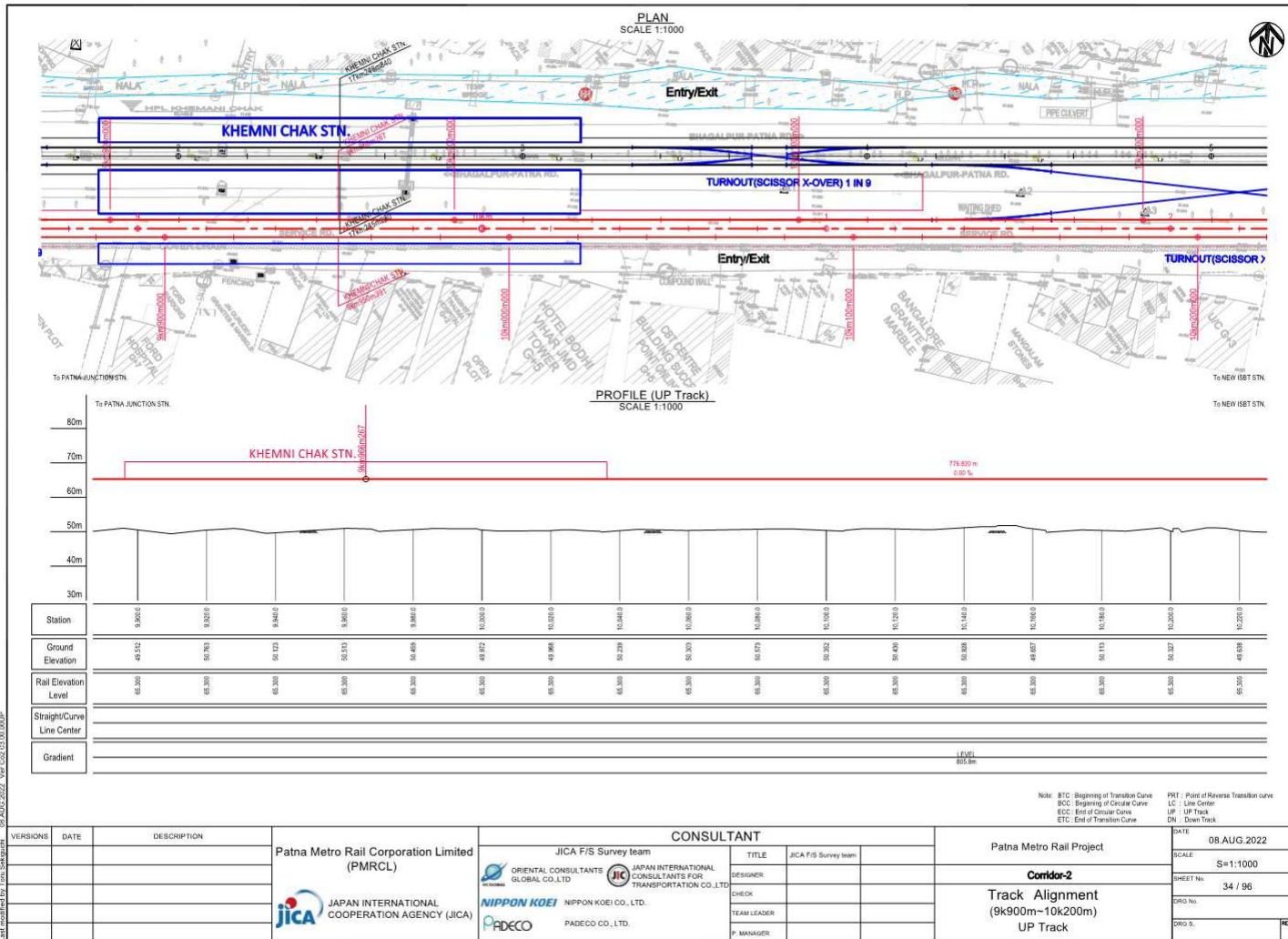
Date modified by: Tom Saitoh 08 AUG 2022 Ver: 02.00.00.2004

VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE
			Patna Metro Rail Corporation Limited (PMRCL)		JICA F/S Survey team		08.AUG.2022
			JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		TITLE: JICA F/S Survey team		SCALE: S=1:1000
			ORIENTAL CONSULTANTS GLOBAL CO.LTD		DESIGNER: JICA F/S Survey team		SHEET No: 32 / 96
			NIPPON KOEI CO., LTD.		CHECKER:		DRG No:
			PADECO CO., LTD.		TEAM LEADER:		DRG S:
					P. MANAGER:		REV:
						Patna Metro Rail Project	
						Corridor-2	
						Track Alignment (9k300m-9k600m)	
						UP Track	

Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: Down Track



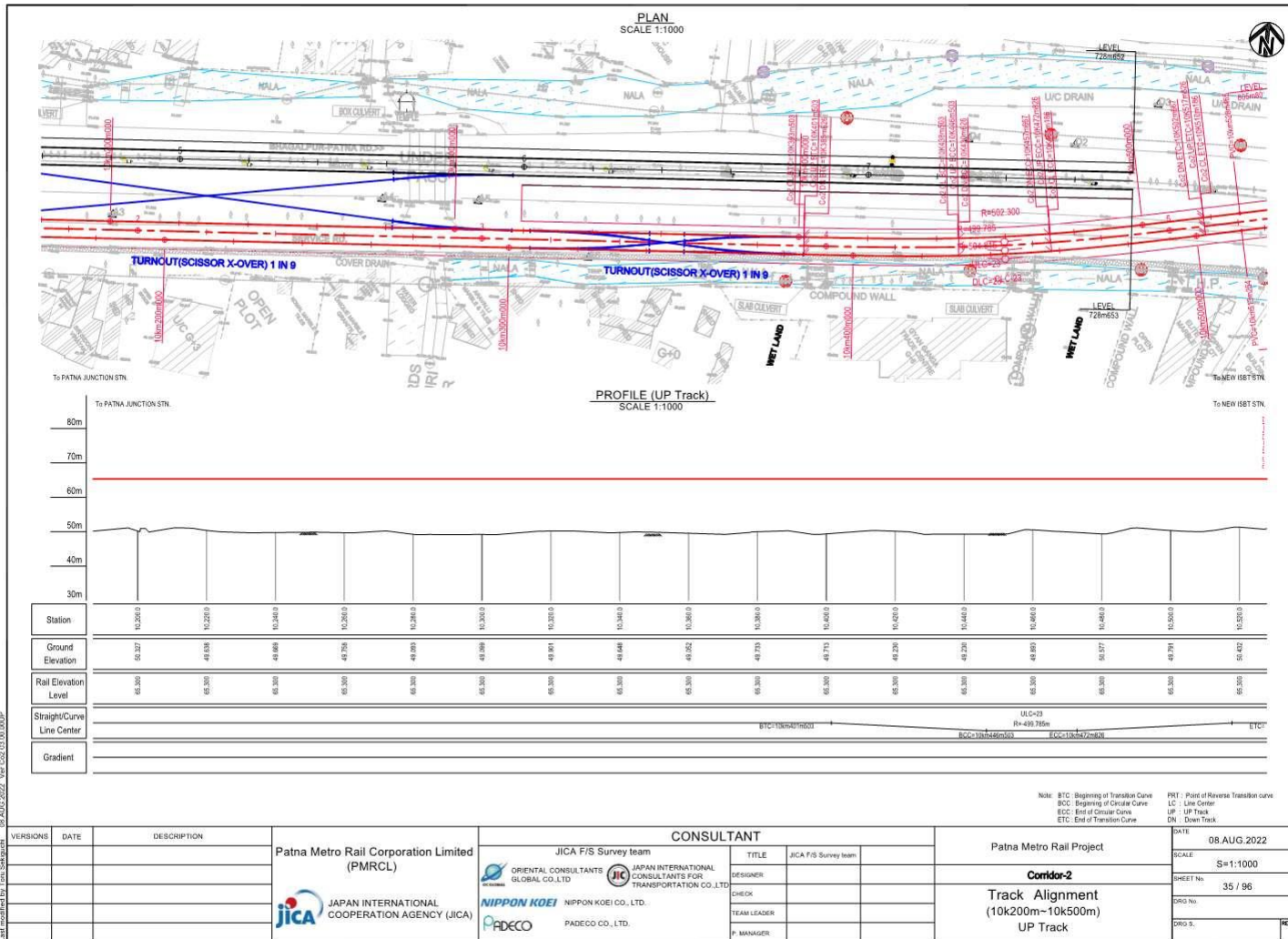
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Last modified by: Tomi Saeguchi 08 AUG 2022 Ver: 02.01.00.2018P

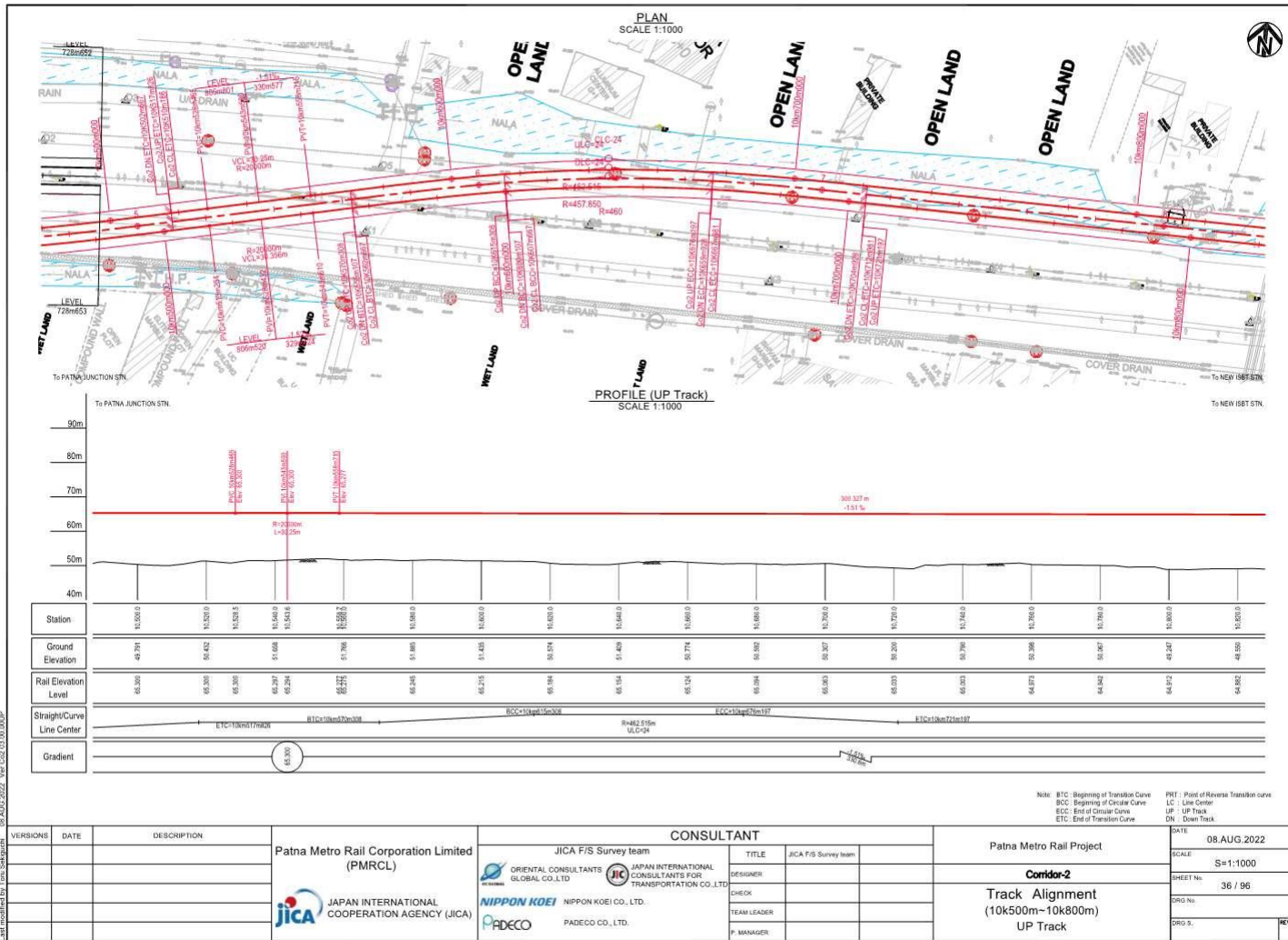
VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE		
			<b>Patna Metro Rail Corporation Limited (PMRCL)</b> JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	<b>JICA F/S Survey team</b> ORIENTAL CONSULTANTS GLOBAL CO. LTD.		NIPPON KOEI CO., LTD. PAIDECO CO., LTD.	TITLE: JICA F/S Survey team DESIGNER: CHECK: TEAM LEADER: P. MANAGER:	Patna Metro Rail Project <b>Corridor-2</b> Track Alignment (9k900m~10k200m) UP Track	08.AUG.2022
				JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO. LTD.					SCALE: S=1:1000 SHEET No: 34 / 96 DRO No: DRO S:

Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 LC: Line Center  
 ETC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LFC: Line Center  
 LFC: Line Center  
 UP: UP Track  
 DN: Down Track



Date modified by: Tomi Saeguchi 09 AUG 2022 Ver: 02.01.00.2004P

VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE	SCALE	SHEET No.	DRG No.	DRG S.	REV
			Patna Metro Rail Corporation Limited (PMRCL) JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	JICA F/S Survey team ORIENTAL CONSULTANTS GLOBAL CO. LTD NIPPON KOEI CO., LTD. PAIDECO CO., LTD.	JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO., LTD.	TITLE: JICA F/S Survey team DESIGNER: CHECK: TEAM LEADER: P. MANAGER:	Patna Metro Rail Project <b>Corridor-2</b> Track Alignment (10k200m~10k500m) UP Track	08 AUG. 2022	S=1:1000	35 / 96		

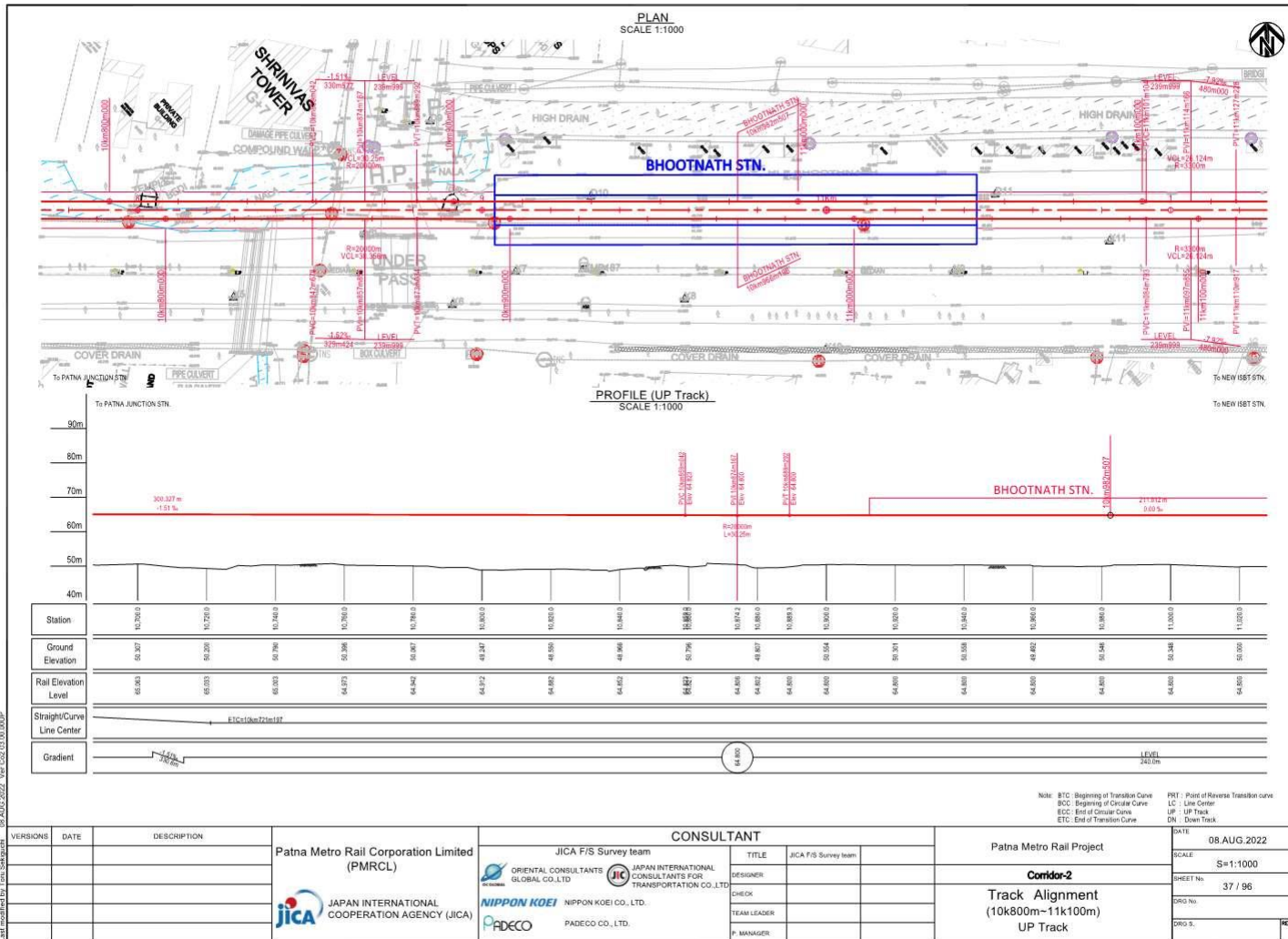


Date modified by: Tomi Saitoh / 08 AUG 2022 / Ver: 02 / 03 / 00 / 2018

Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: Down Track

VERSIONS	DATE	DESCRIPTION	CONSULTANT				Patna Metro Rail Project		DATE
			Patna Metro Rail Corporation Limited (PMRCL)		JICA F/S Survey team		08.AUG.2022		
			JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		ORIENTAL CONSULTANTS GLOBAL CO.,LTD.		SCALE: S=1:1000		
					NIPPON KOEI CO., LTD.		SHEET No: 36 / 96		
					PADECO CO., LTD.		DRO No:		
							DRO S:		
							REV		





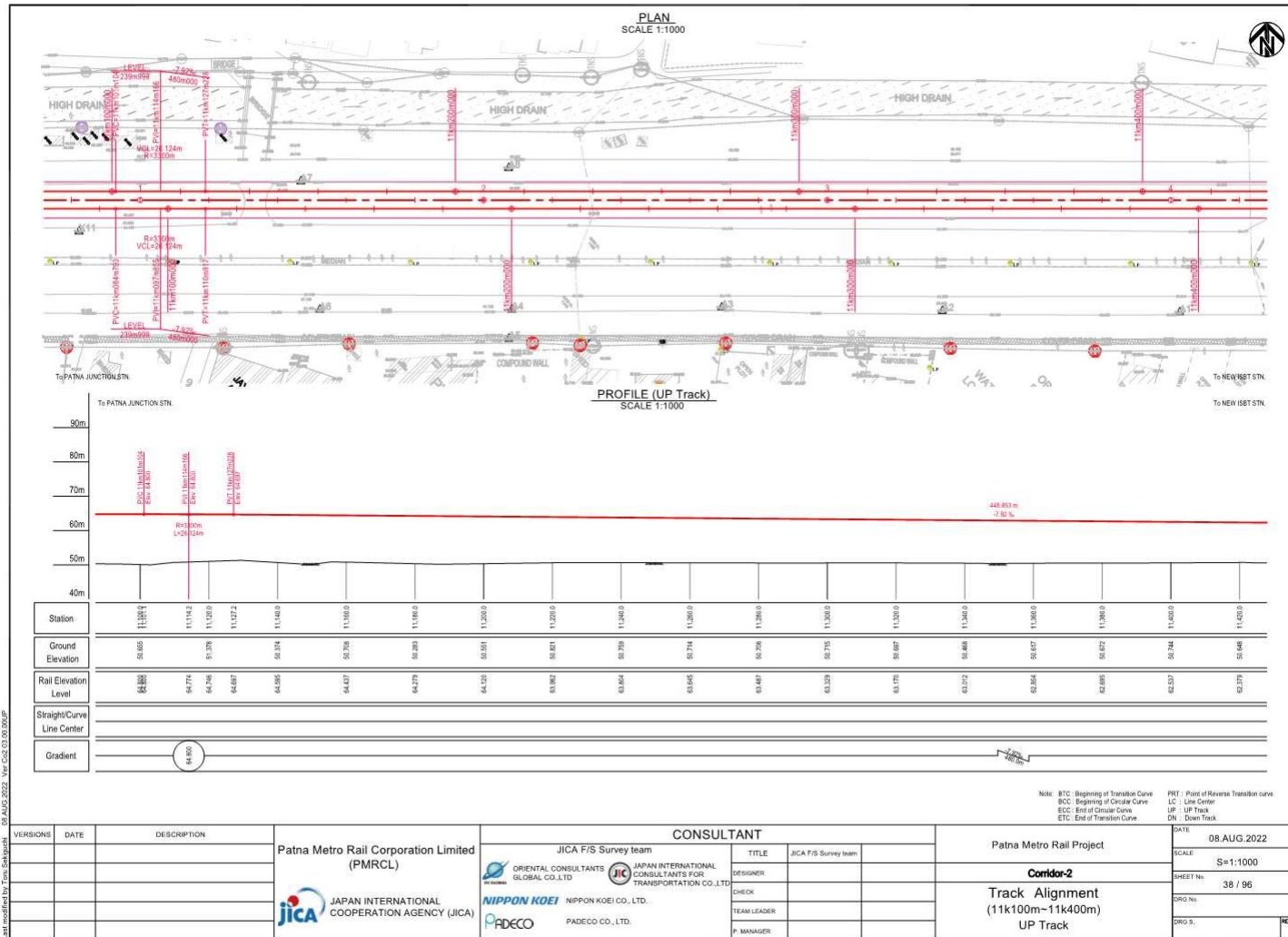
Last modified by: Tom Saitoh / 09 AUG 2022 / Ver: 02/01/2019

VERSIONS	DATE	DESCRIPTION

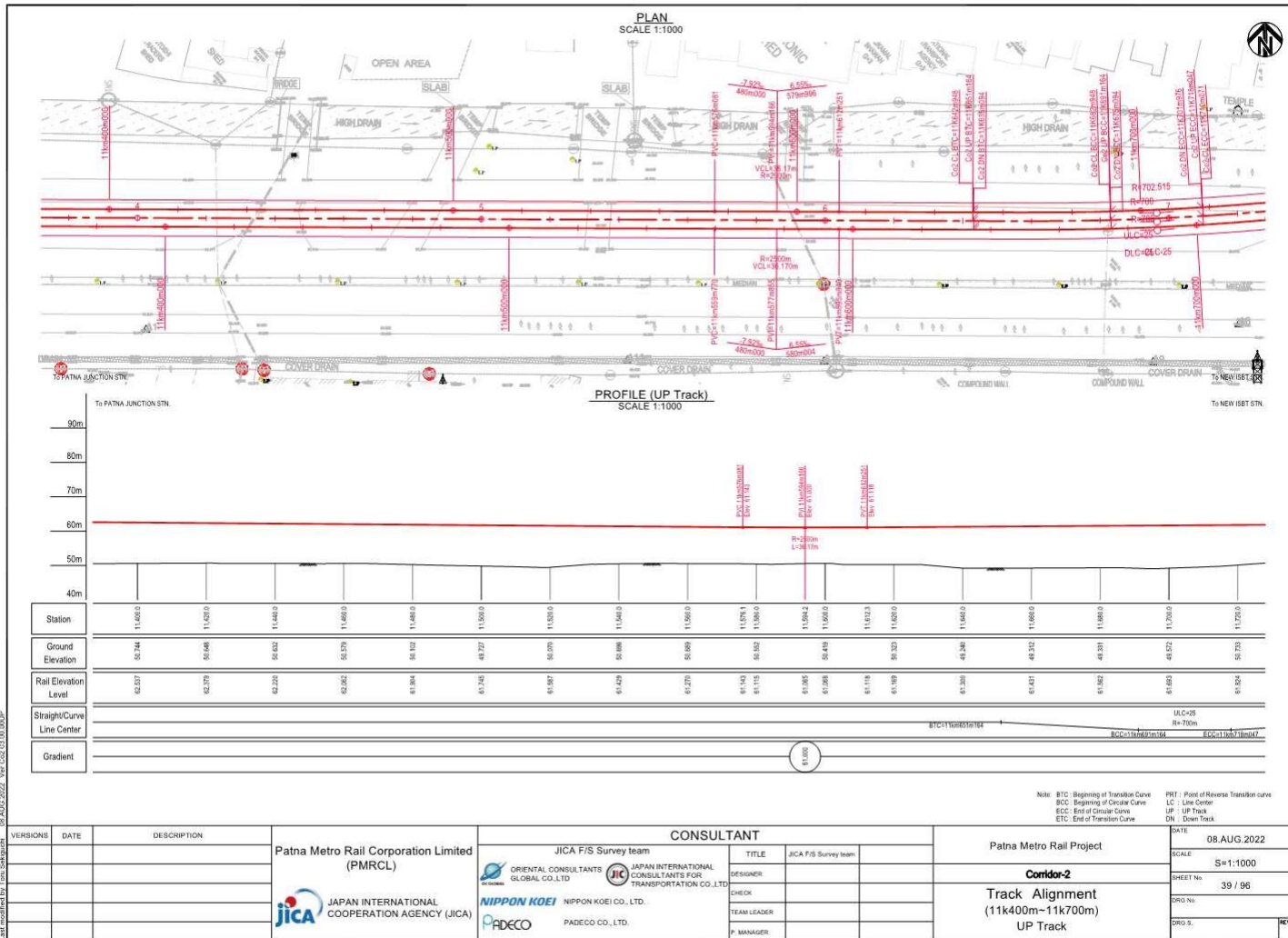
Patna Metro Rail Corporation Limited (PMRCL) JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	CONSULTANT JICA F/S Survey team ORIENTAL CONSULTANTS GLOBAL CO. LTD JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO. LTD. NIPPON KOEI CO., LTD. PAIDECO CO., LTD.	
	TITLE: JICA F/S Survey team DESIGNER: CHECK: TEAM LEADER: P. MANAGER:	Patna Metro Rail Project Corridor-2 Track Alignment (10k800m~11k100m) UP Track

DATE	08 AUG 2022
SCALE	S=1:1000
SHEET No.	37 / 96
DRG No.	
DRG S.	
REV	

Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: Down Track



Last modified by: Tomo Saitoh / 03.AUG.2022 / Ver. 02.01.00.2019P



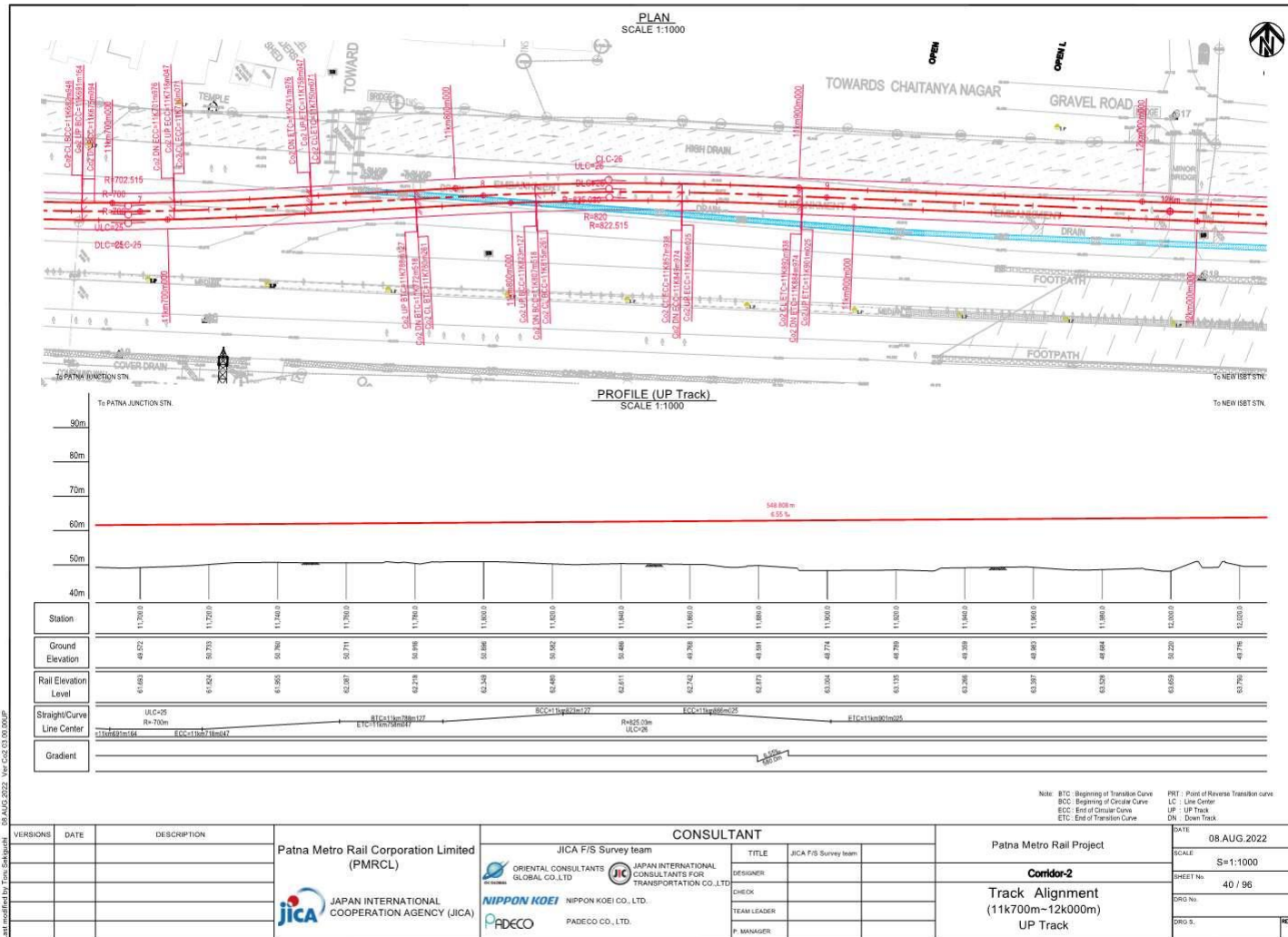
Date modified by: Tom Saitoh 08 AUG 2022 Ver: 02.01.00.2018

VERSIONS	DATE	DESCRIPTION

<b>Patna Metro Rail Corporation Limited (PMRCL)</b> JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	<b>CONSULTANT</b> JICA F/S Survey team ORIENTAL CONSULTANTS GLOBAL CO.LTD JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO.LTD NIPPON KOEI CO., LTD. PADECO CO., LTD.	
	TITLE: JICA F/S Survey team DESIGNER: CHECK: TEAM LEADER: P. MANAGER:	Patna Metro Rail Project <b>Corridor-2</b> Track Alignment (11k400m~11k700m) UP Track

DATE	08.AUG.2022
SCALE	S=1:1000
SHEET No.	39 / 96
DRG No.	
DRG S.	
REV	

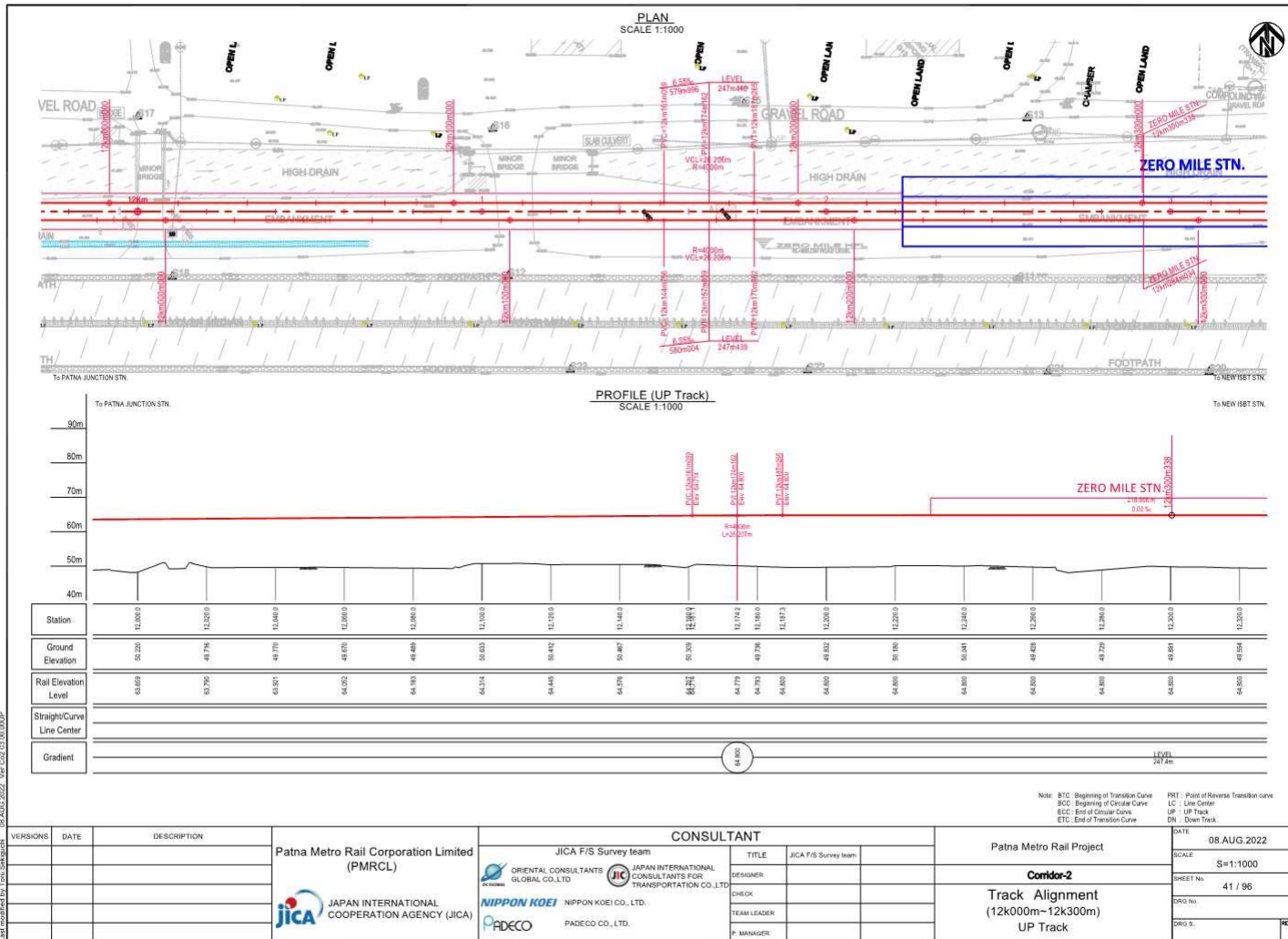
Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: Down Track



Last modified by: Tom Saitoh / 09 AUG 2022 / Ver: 02.01.00.2019

Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: Down Track

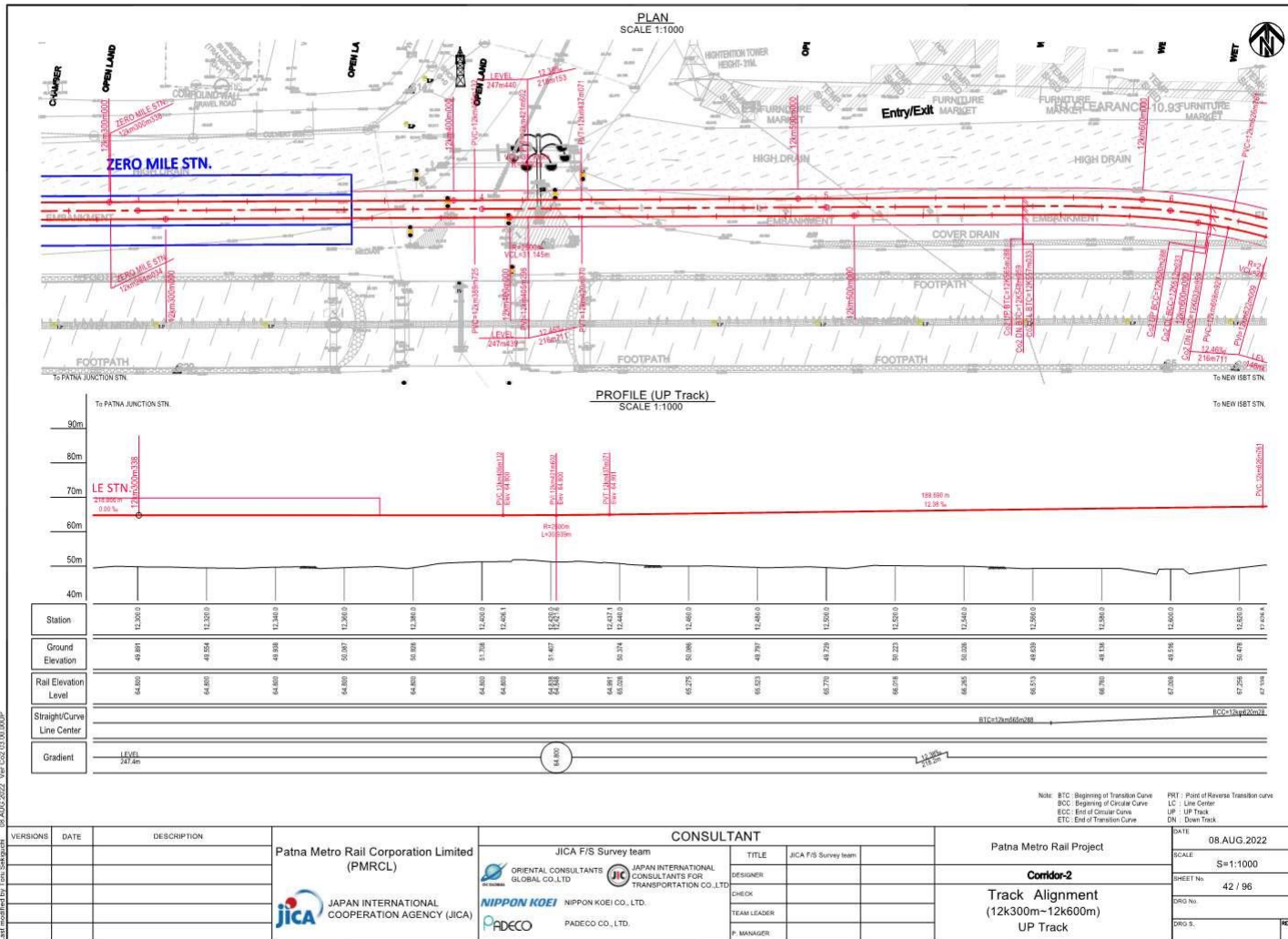
VERSIONS	DATE	DESCRIPTION	CONSULTANT			DATE
			Patna Metro Rail Corporation Limited (PMRCL) 			08.AUG.2022
			JICA F/S Survey team TITLE: JICA F/S Survey team			SCALE: S=1:1000
			DESIGNER: JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO., LTD. CHECK: NIPPON KOEI CO., LTD. TEAM LEADER: PAIDECO CO., LTD. P. MANAGER:			SHEET No: 40 / 96
			Patna Metro Rail Project Corridor-2 Track Alignment (11k700m~12k000m) UP Track			DRG No:
						DRG S:
						REV



Date modified by: Tom Saitoh 08 AUG 2022 Ver: 02.01.00.2018P

Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 EC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: Down Track

VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE
			Patna Metro Rail Corporation Limited (PMRCL)		JICA F/S Survey team		08 AUG 2022
			JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		ORIENTAL CONSULTANTS GLOBAL CO. LTD. / NIPPON KOEI CO., LTD. / PADECO CO., LTD.		SCALE: S=1:1000
					TITLE: JICA F/S Survey team		SHEET No: 41 / 96
					DESIGNER: JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO. LTD.		DRG No:
					CHECK: NIPPON KOEI CO., LTD.		DRG S:
					TEAM LEADER: PADECO CO., LTD.		REV
					P. MANAGER:		
					Patna Metro Rail Project		
					Corridor-2		
					Track Alignment (12k000m~12k300m)		
					UP Track		



Last modified by: Tomi Saeguchi 09 AUG 2022 10:00:00 AM

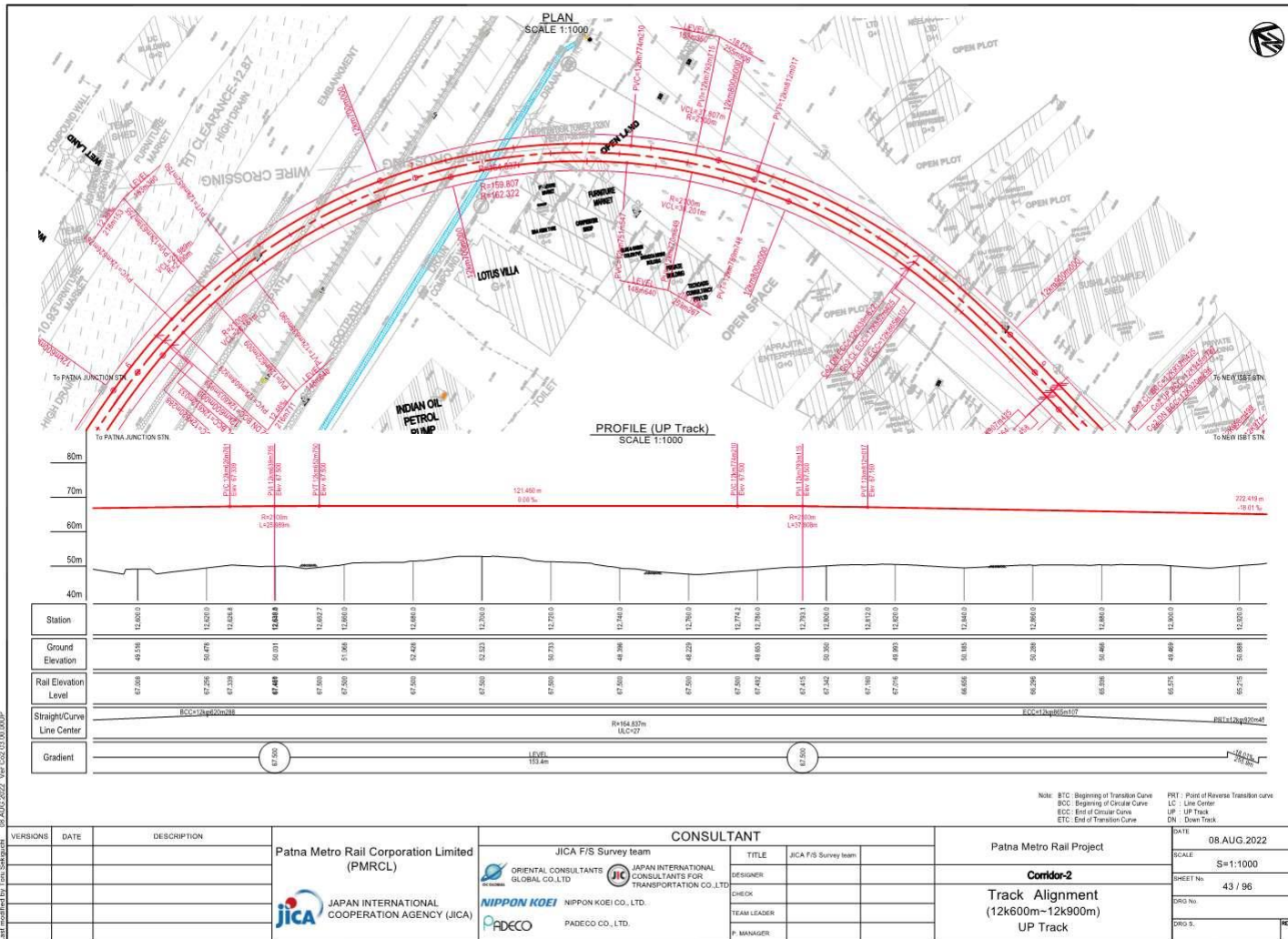
VERSIONS	DATE	DESCRIPTION

Patna Metro Rail Corporation Limited (PMRCL) JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	CONSULTANT JICA F/S Survey team ORIENTAL CONSULTANTS GLOBAL CO. LTD NIPPON KOEI CO., LTD. PAIDECO CO., LTD.		TITLE: JICA F/S Survey team
	JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO. LTD.		DESIGNER: JICA F/S Survey team CHECK: TEAM LEADER: P. MANAGER:

Patna Metro Rail Project <b>Corridor-2</b> Track Alignment (12k300m~12k600m) UP Track
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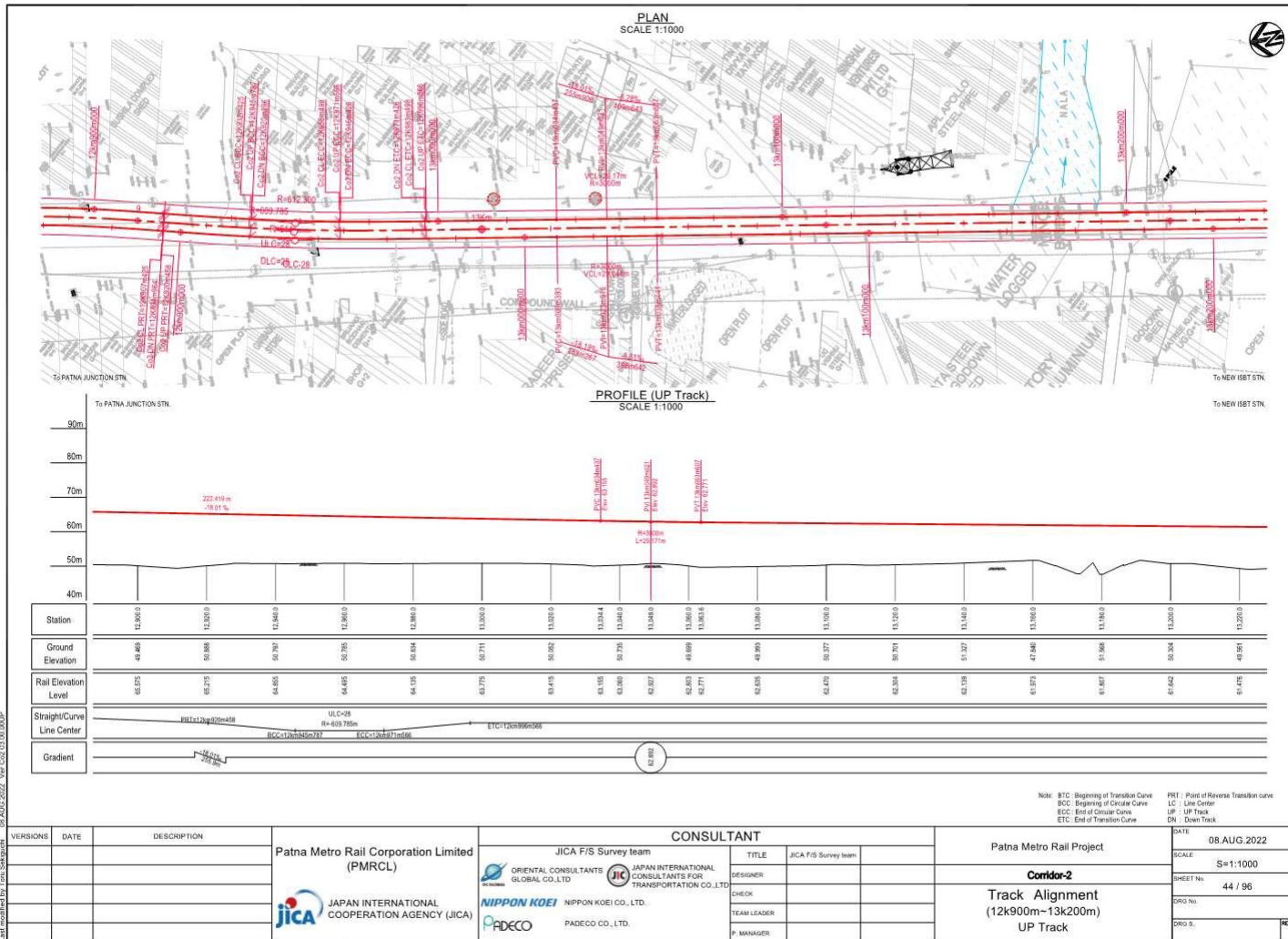
DATE	08 AUG 2022
SCALE	S=1:1000
SHEET No.	42 / 96
DRG No.	
DRG S.	REV

Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 EC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: Down Track



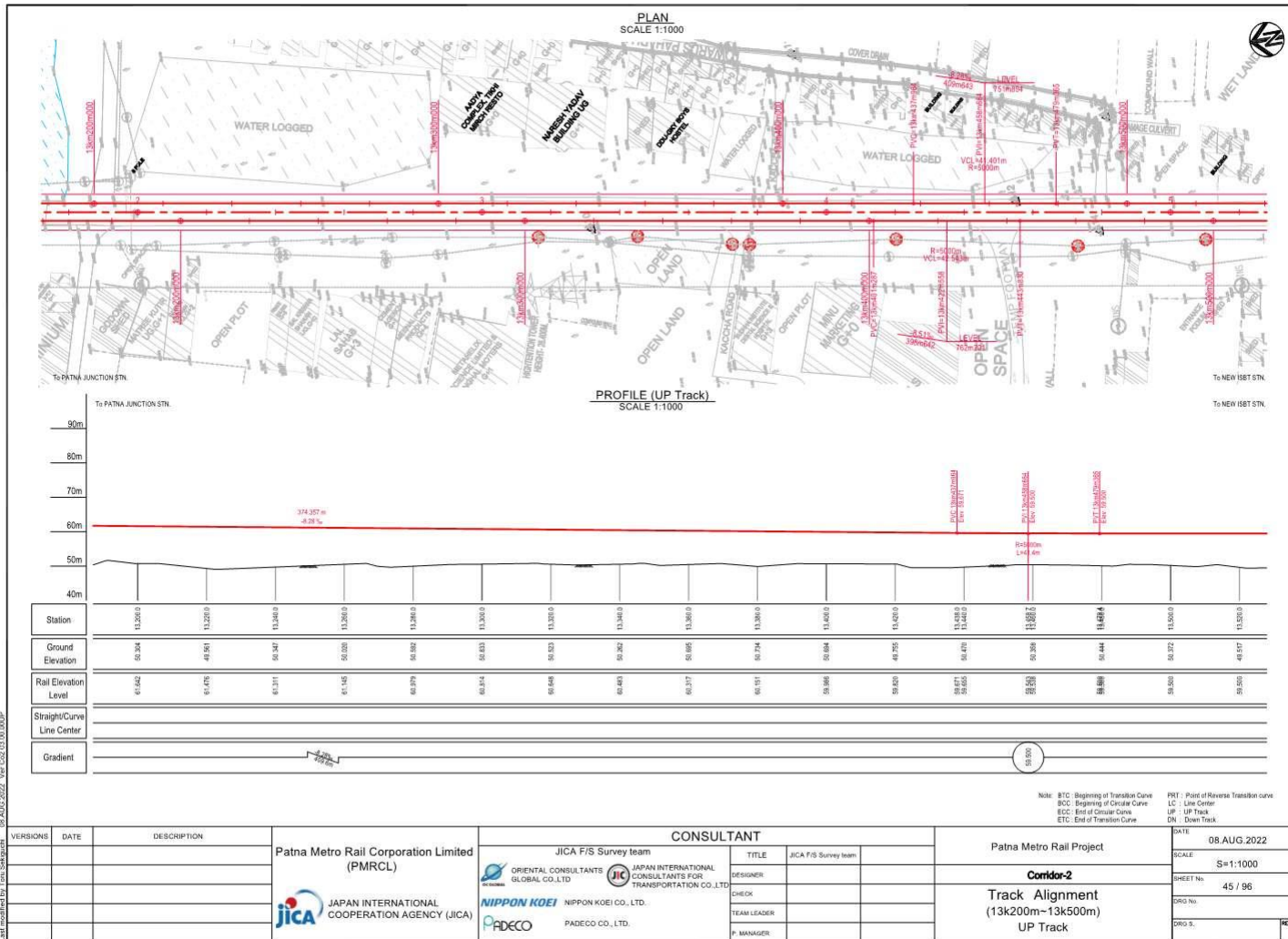
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VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE		
			<b>Patna Metro Rail Corporation Limited (PMRCL)</b> JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		<b>JICA F/S Survey team</b> ORIENTAL CONSULTANTS GLOBAL CO. LTD NIPPON KOEI CO., LTD. PAIDECO CO., LTD.		<b>Patna Metro Rail Project</b> <b>Corridor-2</b> <b>Track Alignment (12k600m~12k900m)</b> <b>UP Track</b>		08.AUG.2022
							SCALE		
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							SHEET No.		
							43 / 96		
							DRG No.		
							DRG S.		
							REV		



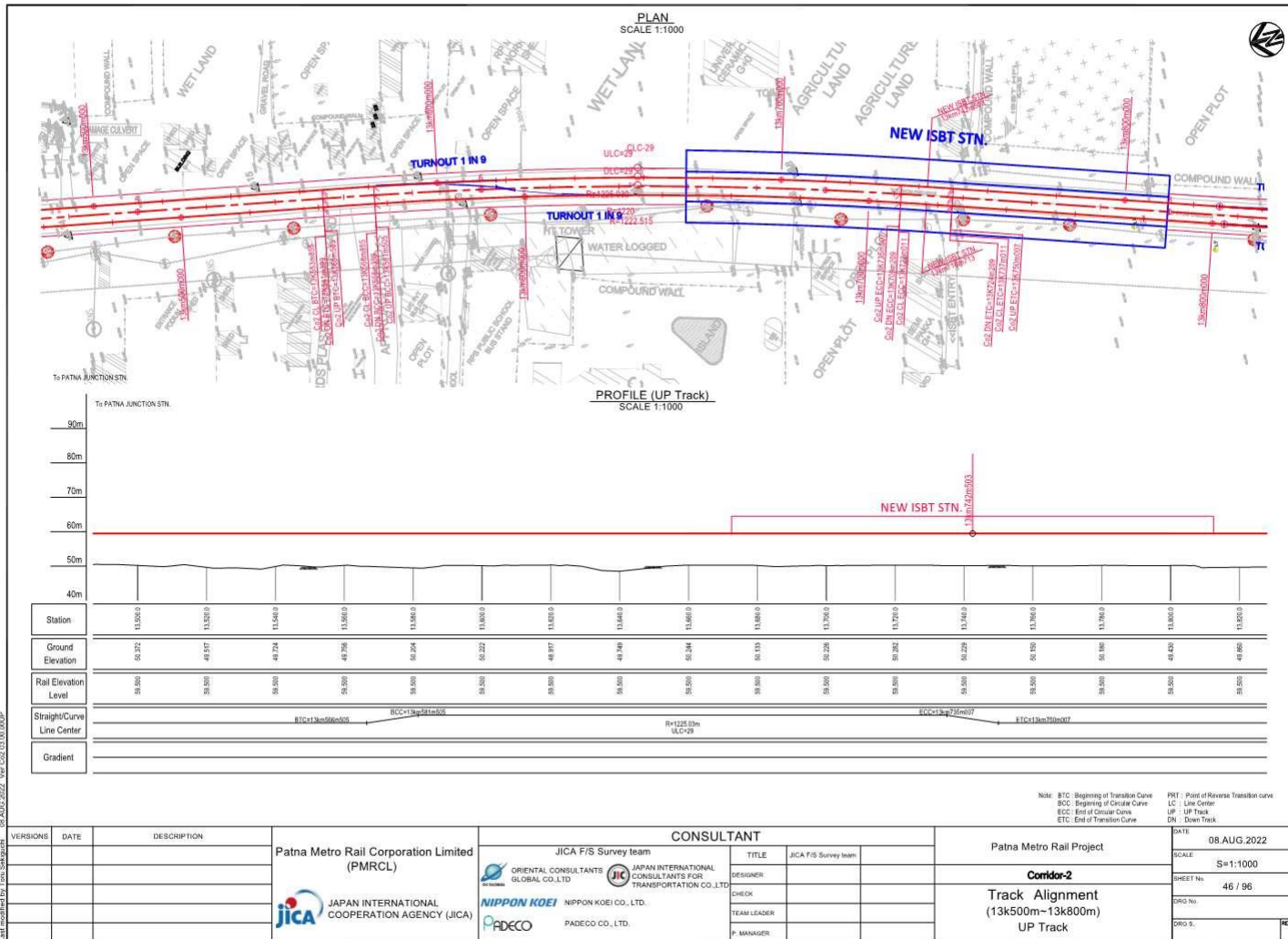
Date modified by: Tomi Saitoh / 08.AUG.2022 / Ver. 02/01/00 20:48





Last modified by: Tomi Saeguchi 09 AUG 2022 Ver: 02.01.00.2019

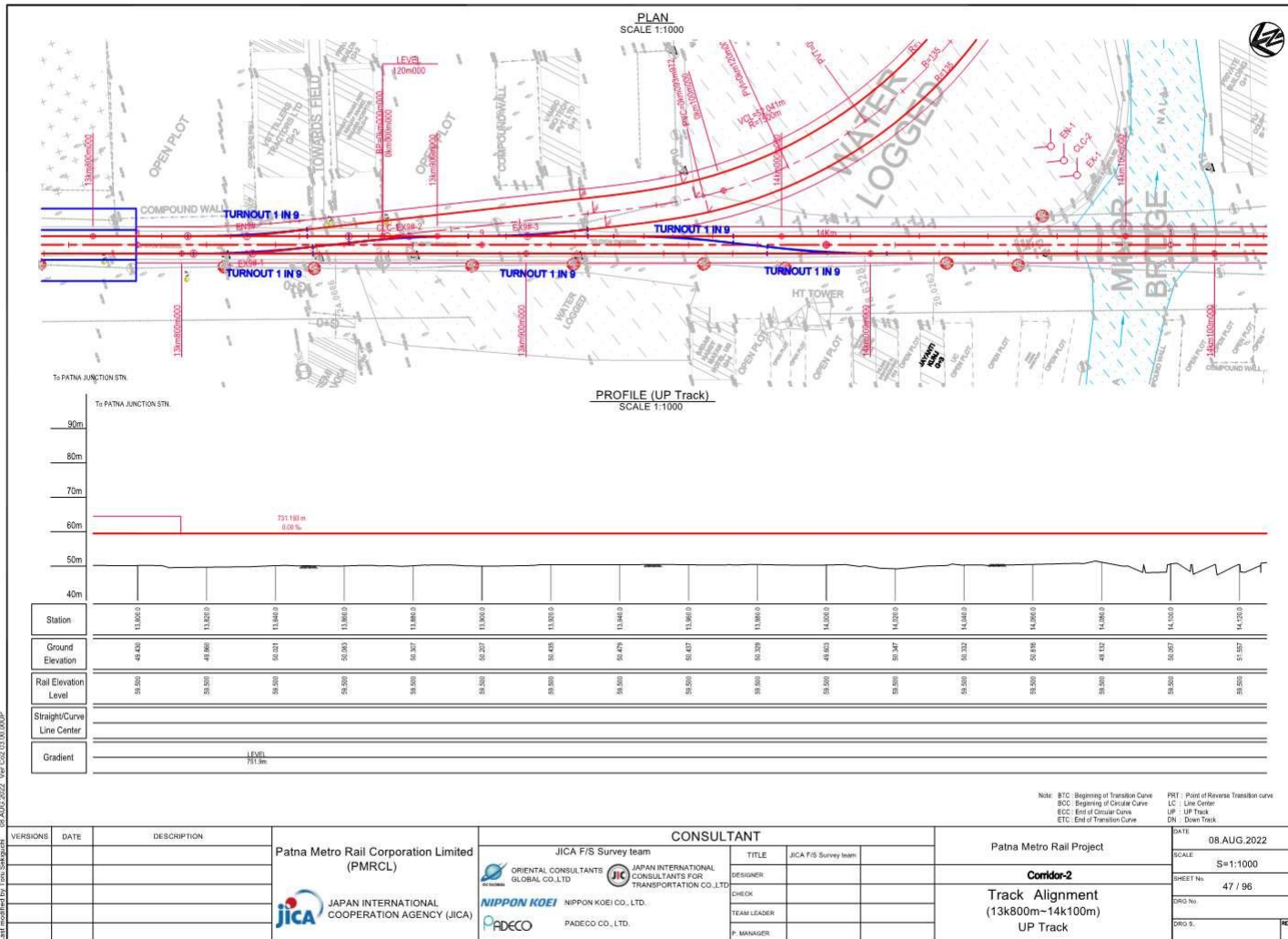
VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE	
			<b>Patna Metro Rail Corporation Limited (PMRCL)</b> JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		<b>JICA F/S Survey team</b> ORIENTAL CONSULTANTS GLOBAL CO. LTD NIPPON KOEI CO. LTD. PAIDECO CO., LTD.		08 AUG 2022 SCALE: S=1:1000 SHEET No: 45 / 96 DRO No: DRO S:	
			JICA F/S Survey team		Patna Metro Rail Project <b>Corridor-2</b> Track Alignment (13k200m~13k500m) UP Track		REV	



Date modified by: Tomi Saitoh 08 AUG 2022 Ver: 02.01.00.2018

VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE
			Patna Metro Rail Corporation Limited (PMRCL)		JICA F/S Survey team		08.AUG.2022
			JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		ORIENTAL CONSULTANTS GLOBAL CO.LTD		SCALE: S=1:1000
					JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO.LTD		SHEET No: 46 / 96
					NIPPON KOEI CO., LTD.		DRG No:
					PADECO CO., LTD.		DRG S:
					TITLE: JICA F/S Survey team		REV
					DESIGNER:		
					CHECK:		
					TEAM LEADER:		
					P. MANAGER:		
					Patna Metro Rail Project		
					Corridor-2		
					Track Alignment (13k500m~13k800m)		
					UP Track		

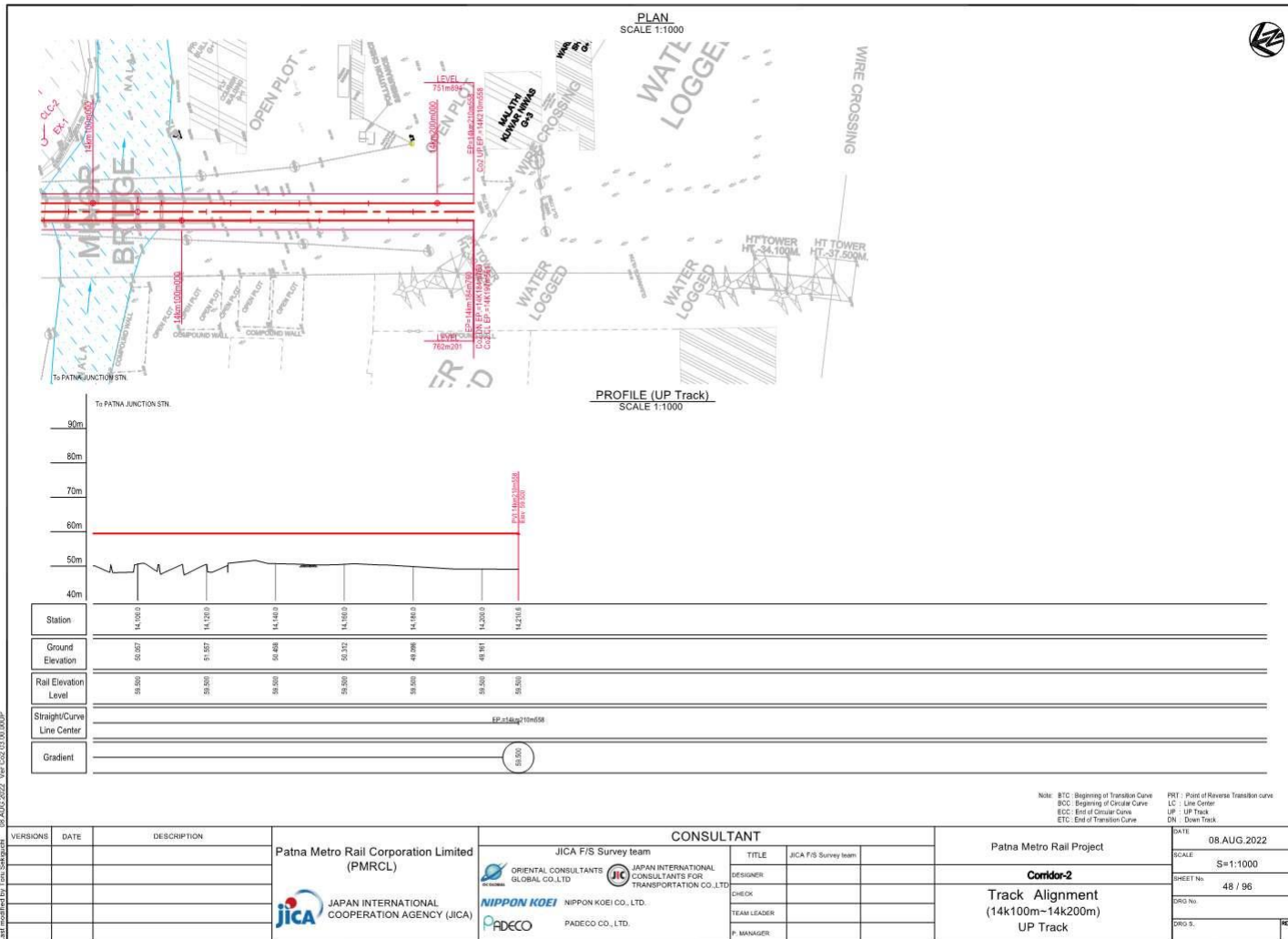
Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: Down Track



Last modified by: Tomi Saeguchi 08 AUG 2022 Ver: 02.01.00.2018P

Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: Down Track

VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE
			Patna Metro Rail Corporation Limited (PMRCL) JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		JICA F/S Survey team ORIENTAL CONSULTANTS GLOBAL CO. LTD NIPPON KOEI CO., LTD. PAIDECO CO., LTD.		08 AUG 2022
					TITLE: JICA F/S Survey team DESIGNER: CHECK: TEAM LEADER: P. MANAGER:		SCALE: S=1:1000 SHEET No: 47 / 96 DRO No: DRO S:
					Patna Metro Rail Project <b>Corridor-2</b> Track Alignment (13k800m~14k100m) UP Track		REV:

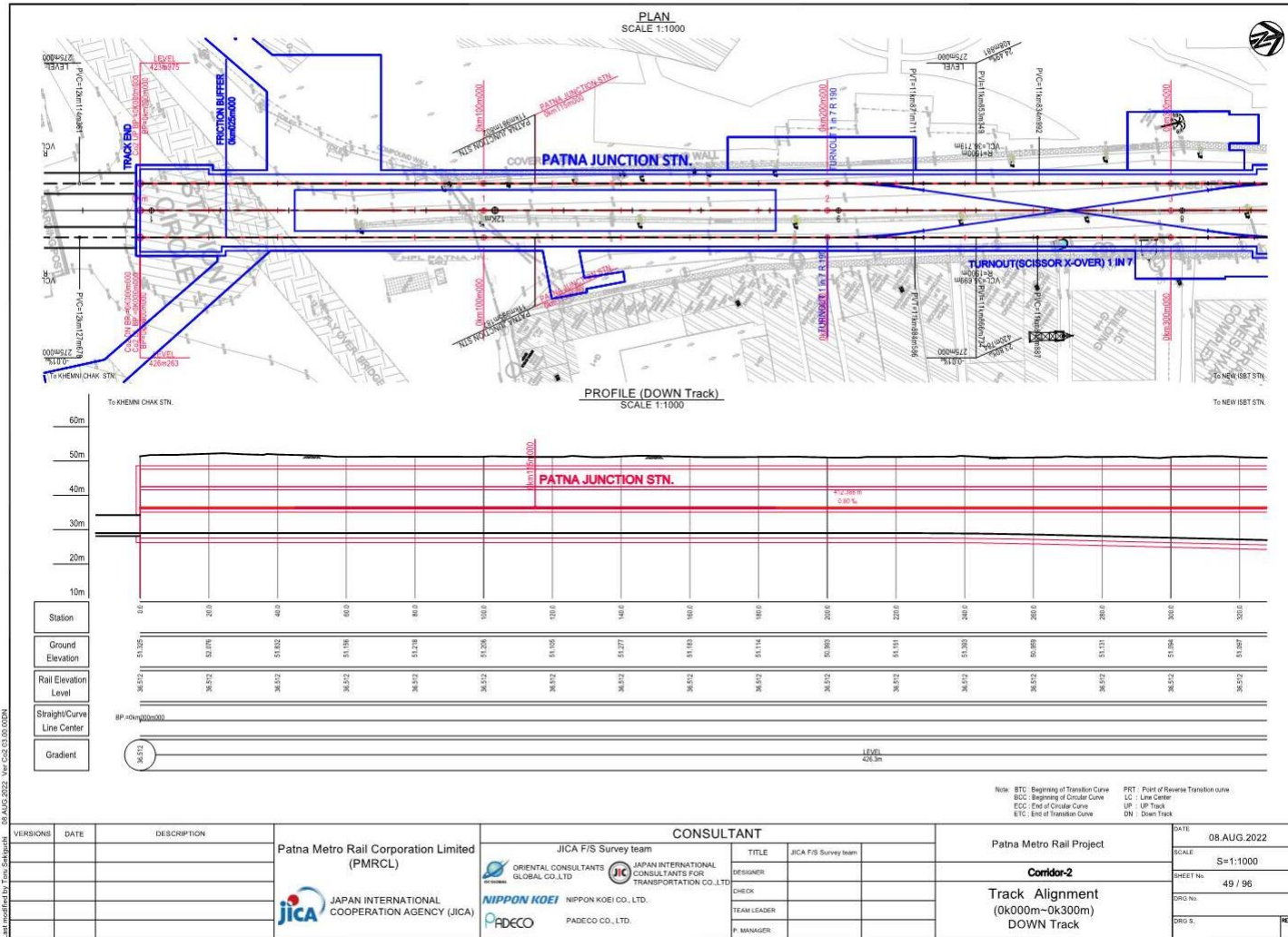


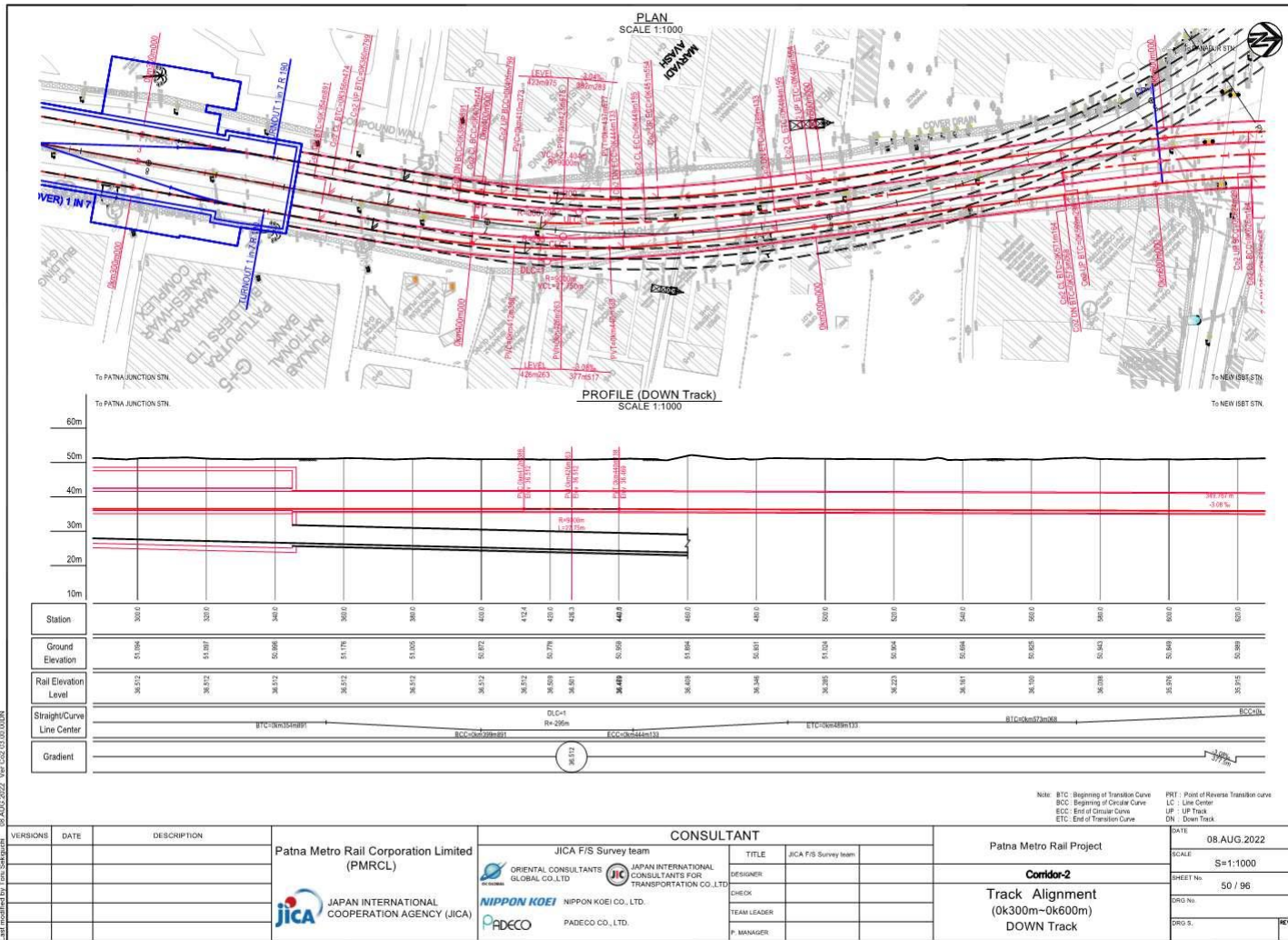
Last modified by: Tomi Saeguchi 08 AUG 2022 Ver: 02.01.00.201P

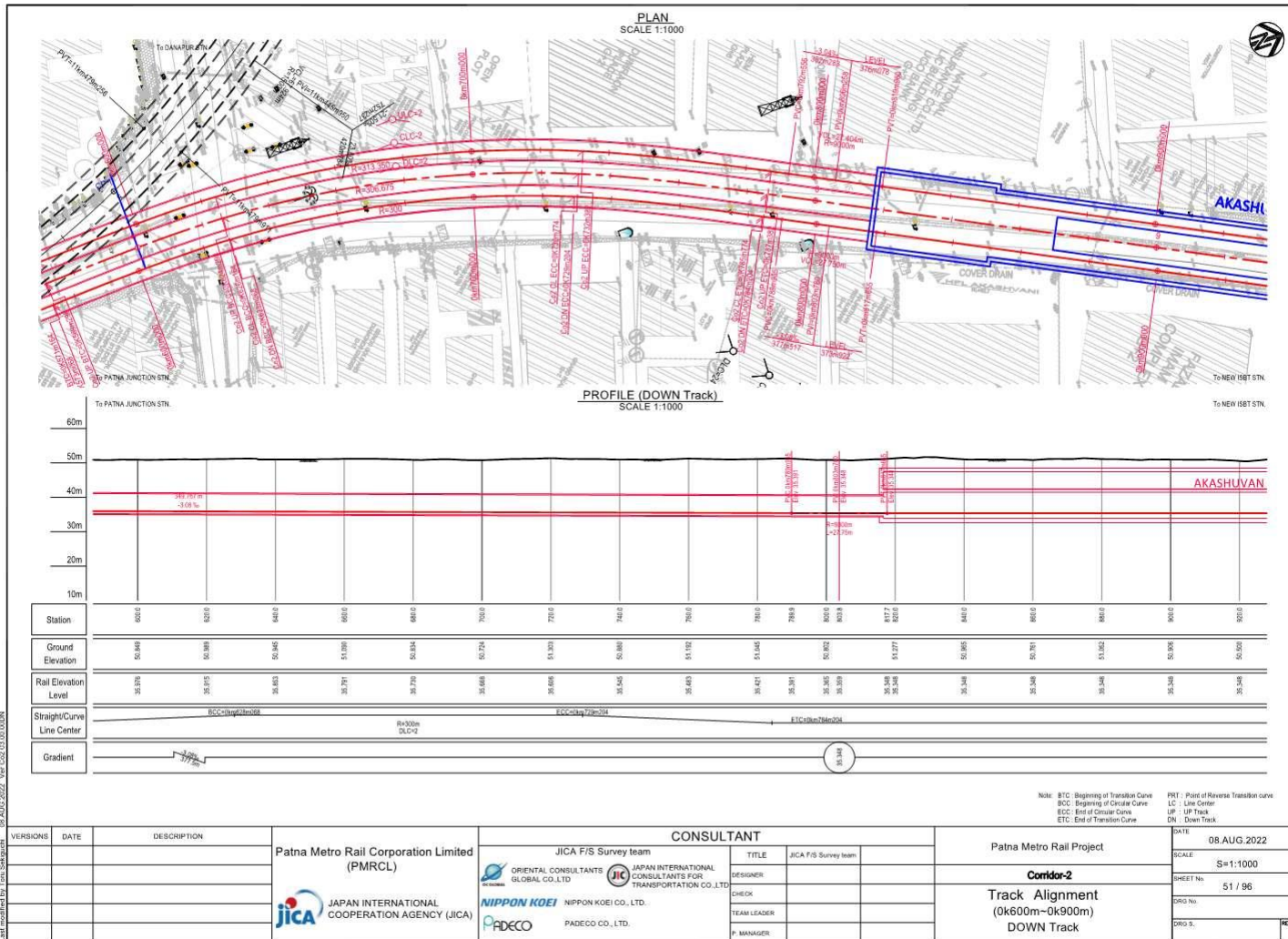
VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE	SCALE	SHEET No.	DRG No.	DRG S.	REV
			Patna Metro Rail Corporation Limited (PMRCL)	JICA F/S Survey team	TITLE	JICA F/S Survey team	08 AUG 2022	S=1:1000	48 / 96			
			JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	ORIENTAL CONSULTANTS GLOBAL CO.,LTD.	DESIGNER	JICA F/S Survey team	Patna Metro Rail Project					
				JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO.,LTD.	CHECK		Corridor-2					
				NIPPON KOEI CO., LTD.	TEAM LEADER		Track Alignment (14k100m~14k200m)					
				PADECO CO.,LTD.	P. MANAGER		UP Track					

Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: Down Track

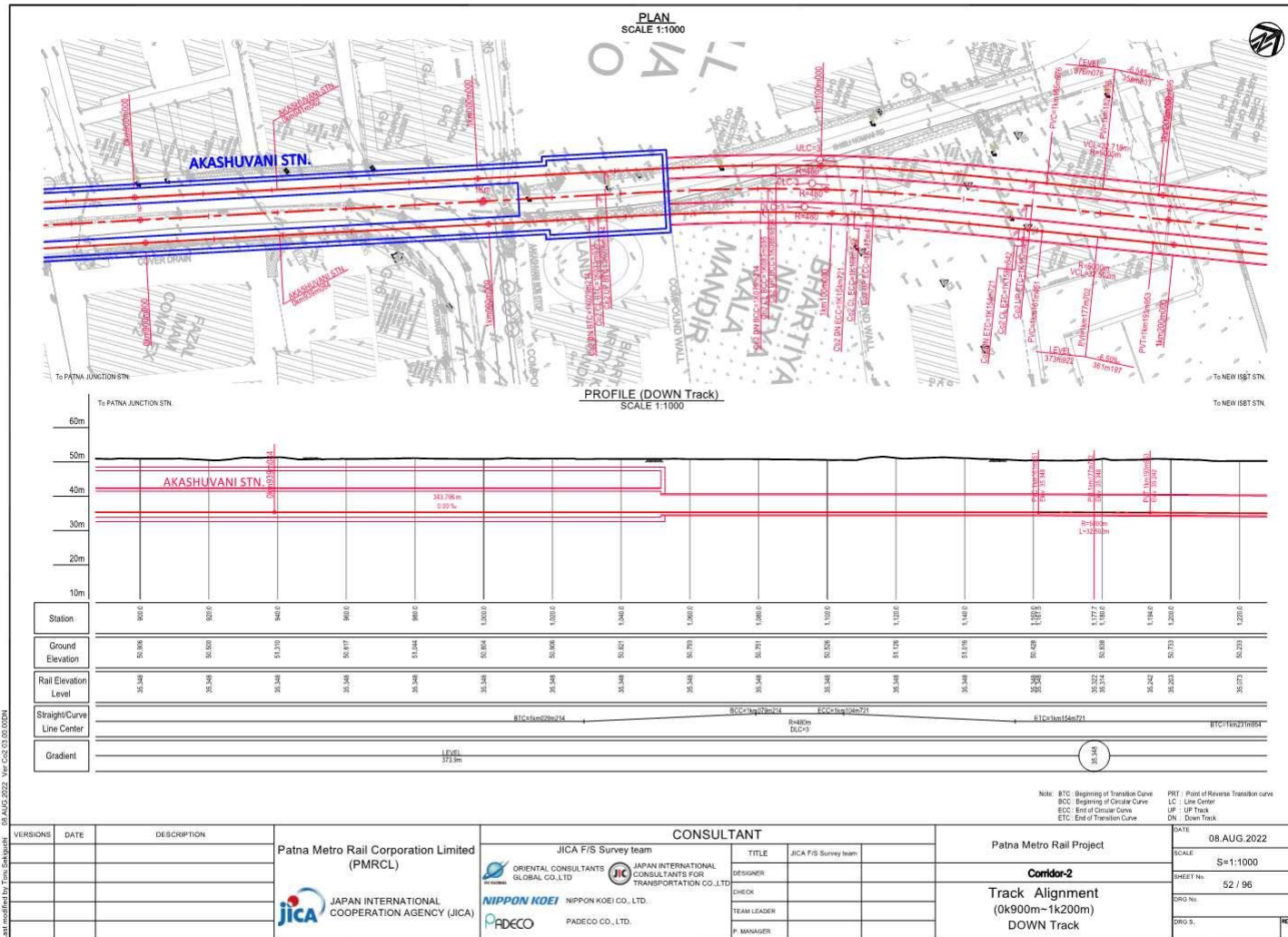
(5) Corridor2 Alignment 03 00 DN



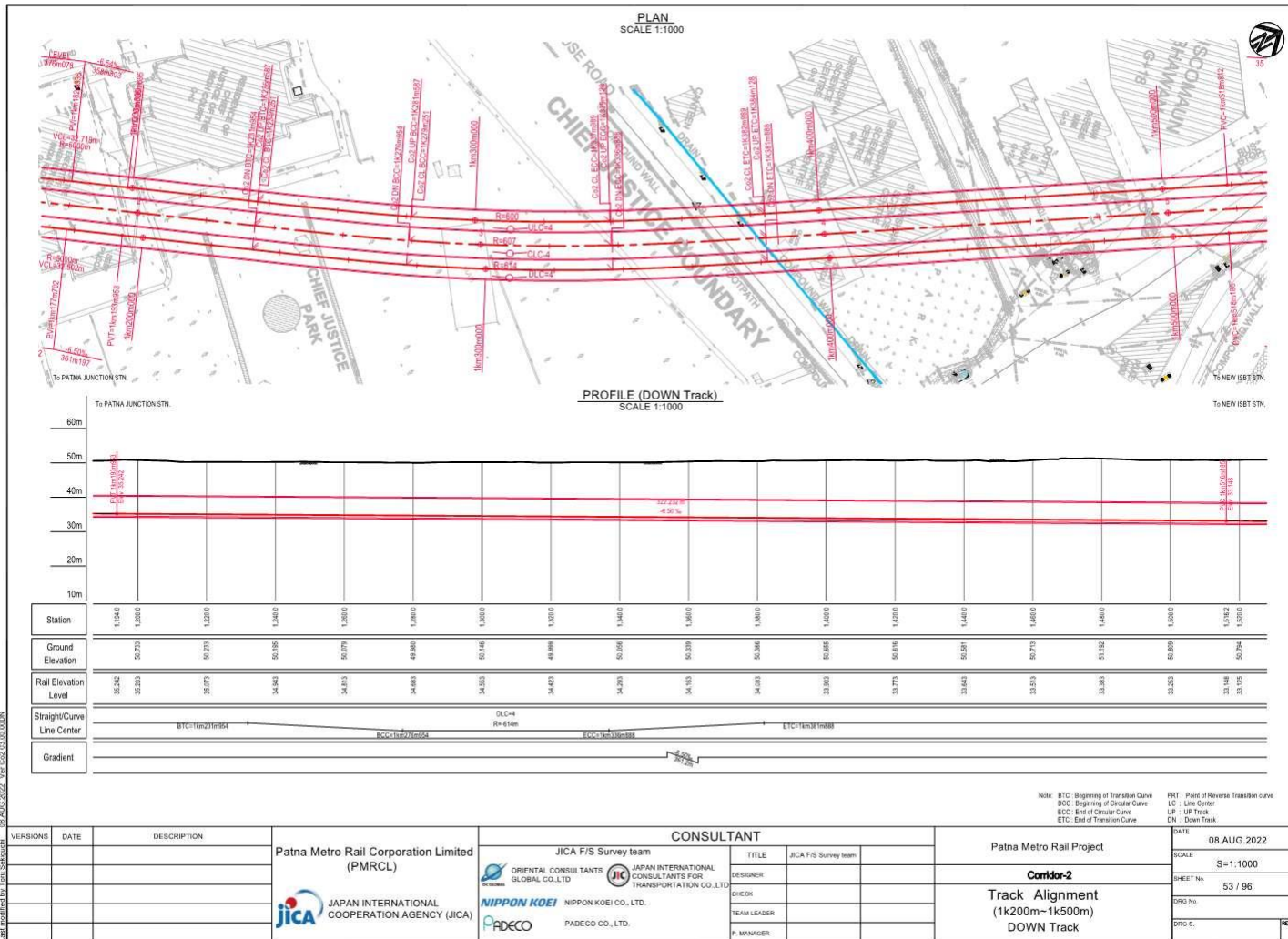




Last modified by: Tomi Saegusa 08.AUG.2022 Ver: 02.00.00.000

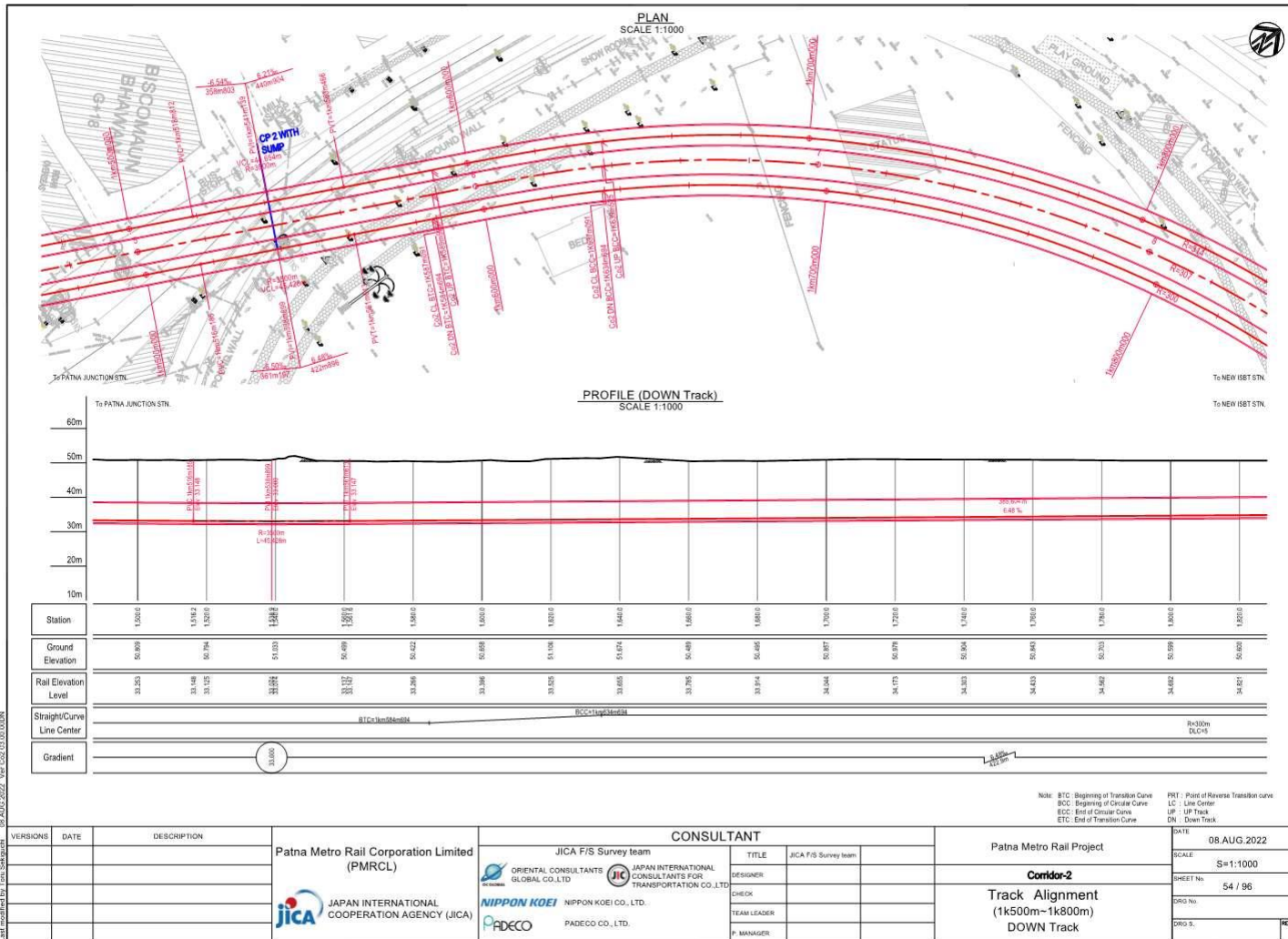






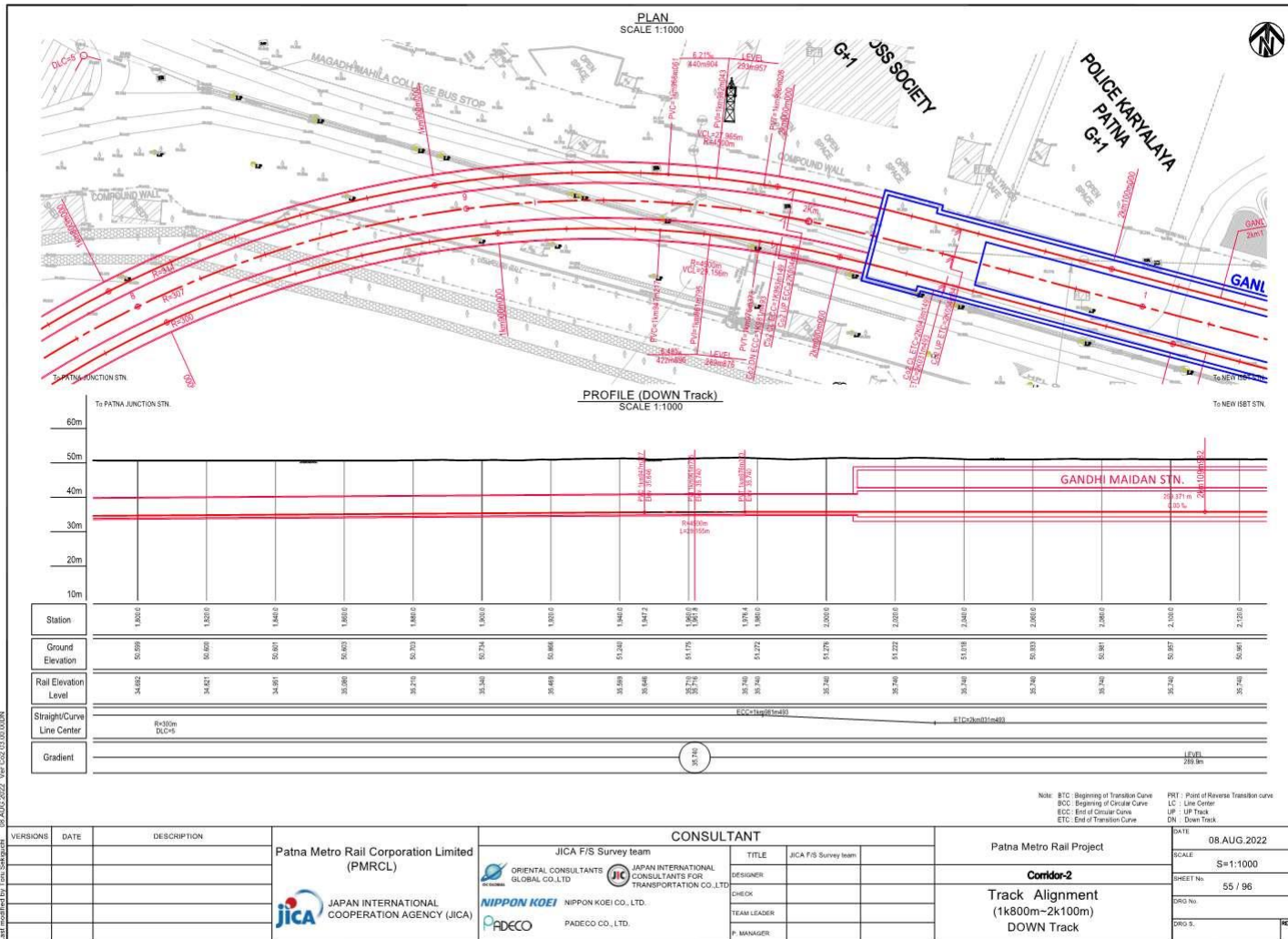
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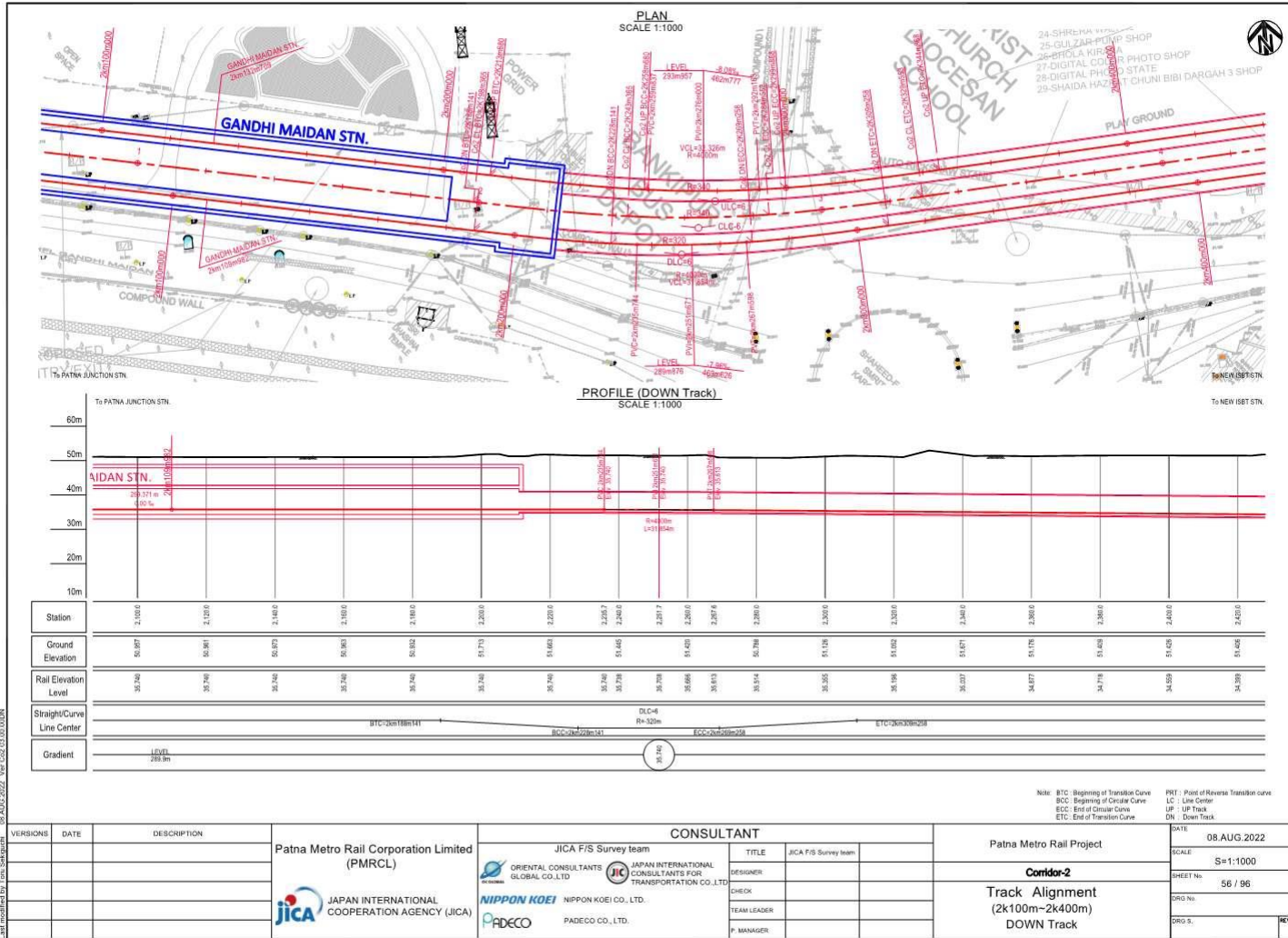
VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE		
			<b>Patna Metro Rail Corporation Limited (PMRCL)</b> JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		<b>JICA F/S Survey team</b> ORIENTAL CONSULTANTS GLOBAL CO. LTD NIPPON KOEI CO., LTD. PAIDECO CO., LTD.		<b>Patna Metro Rail Project</b> <b>Corridor-2</b> <b>Track Alignment (1k200m~1k500m)</b> <b>DOWN Track</b>		08.AUG.2022
					TITLE: JICA F/S Survey team DESIGNER: CHECK: TEAM LEADER: P. MANAGER:		SCALE: S=1:1000 SHEET No: 53 / 96 DRO No: DRO S:		
							Note: BTC: Beginning of Transition Curve BCC: Beginning of Circular Curve ECC: End of Circular Curve ETC: End of Transition Curve PRT: Point of Reverse Transition curve LC: Line Center UP: UP Track DN: Down Track		REV



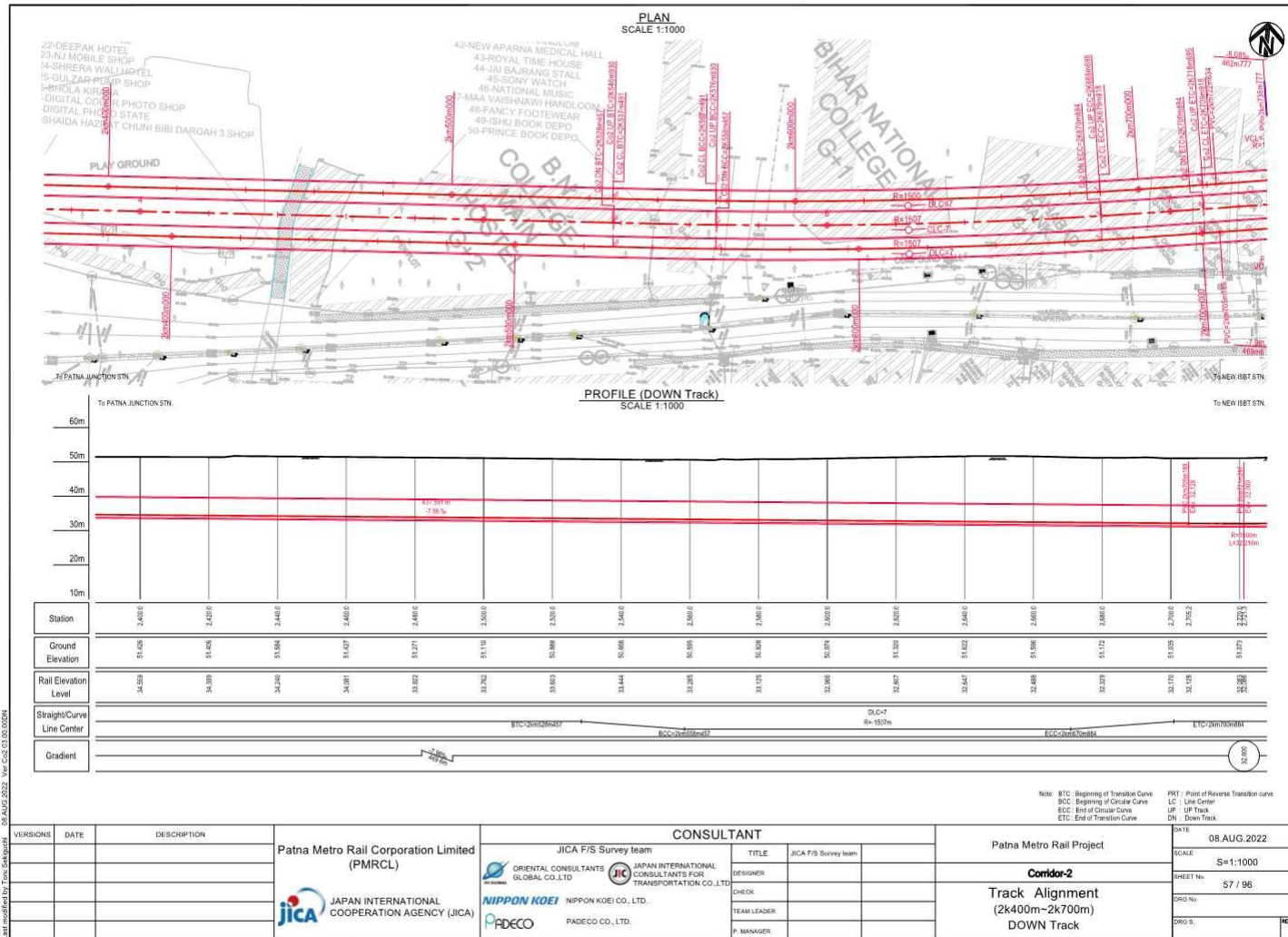
Last modified by: Tomi Saeguchi 08 AUG 2022 Ver: 02.00.00.000

VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE
			<b>Patna Metro Rail Corporation Limited (PMRCL)</b> JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		<b>JICA F/S Survey team</b> ORIENTAL CONSULTANTS GLOBAL CO. LTD NIPPON KOEI CO. LTD. PAIDECO CO., LTD.		08 AUG 2022
					TITLE: JICA F/S Survey team DESIGNER: CHECK: TEAM LEADER: P. MANAGER:		SCALE: S=1:1000 SHEET No: 54 / 96 DRO No: DRO S:
					Patna Metro Rail Project <b>Corridor-2</b> Track Alignment (1k500m~1k800m) DOWN Track		Note: BTC: Beginning of Transition Curve BCC: Beginning of Circular Curve ECC: End of Circular Curve ETC: End of Transition Curve PRT: Point of Reverse Transition curve LC: Line Center UP: UP Track DN: Down Track





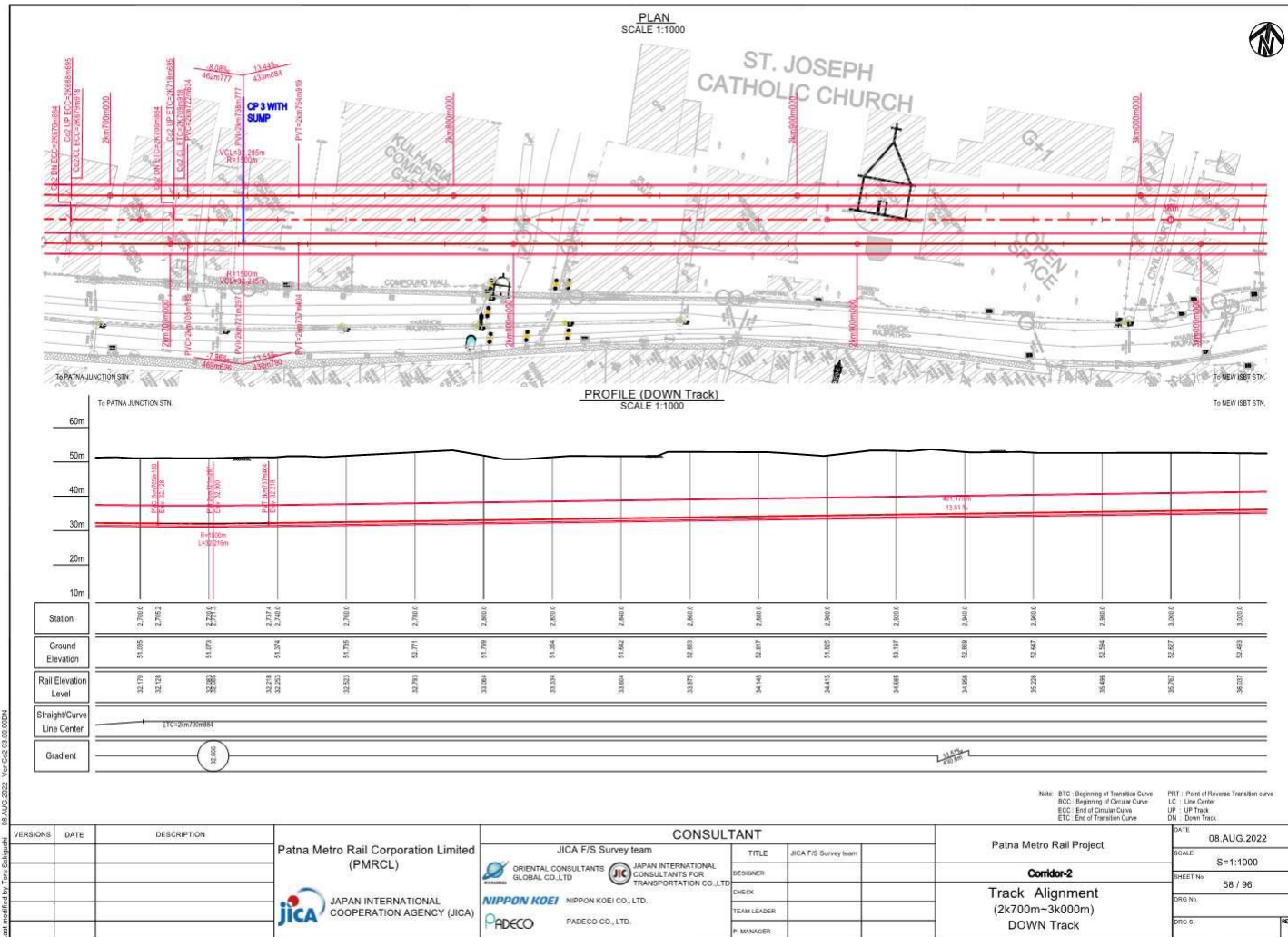
Last modified by: Tomi Saeguchi / 09.AUG.2022 / Ver: 02.00.00.000N



Date modified by: Tomi Saitoh / 03 AUG 2022 / Ver: 02/03/00/000N

Note: B.T.C.: Beginning of Transition Curve  
 B.C.: Beginning of Circular Curve  
 E.C.: End of Circular Curve  
 E.T.C.: End of Transition Curve  
 P.T.: Point of Reverse Transition curve  
 L.C.: Line Center  
 U.P.: UP Track  
 D.N.: Down Track

VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE
			Patna Metro Rail Corporation Limited (PMRCL) JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		JICA F/S Survey team ORIENTAL CONSULTANTS GLOBAL CO. LTD NIPPON KOEI CO., LTD. PAIDECO CO., LTD.		08 AUG 2022
					TITLE: JICA F/S Survey team DESIGNER: CHECK: TEAM LEADER: P. MANAGER:		SCALE: S=1:1000 SHEET No: 57 / 96 DRO No: DRO S:
					Patna Metro Rail Project <b>Corridor-2</b> Track Alignment (2k400m-2k700m) DOWN Track		REV:



Last modified by: Tomi Saegusa / 09 AUG 2022 / Ver: 02.00.00.000N

VERSIONS	DATE	DESCRIPTION

Patna Metro Rail Corporation Limited (PMRCL)

**CONSULTANT**

JICA F/S Survey team

ORIENTAL CONSULTANTS GLOBAL CO. LTD. | JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO. LTD. | NIPPON KOEI | NIPPOON KOEI CO., LTD. | PADECO | PADECO CO., LTD.

TITLE	JICA F/S Survey team
DESIGNER	
CHECK	
TEAM LEADER	
P. MANAGER	

Patna Metro Rail Project

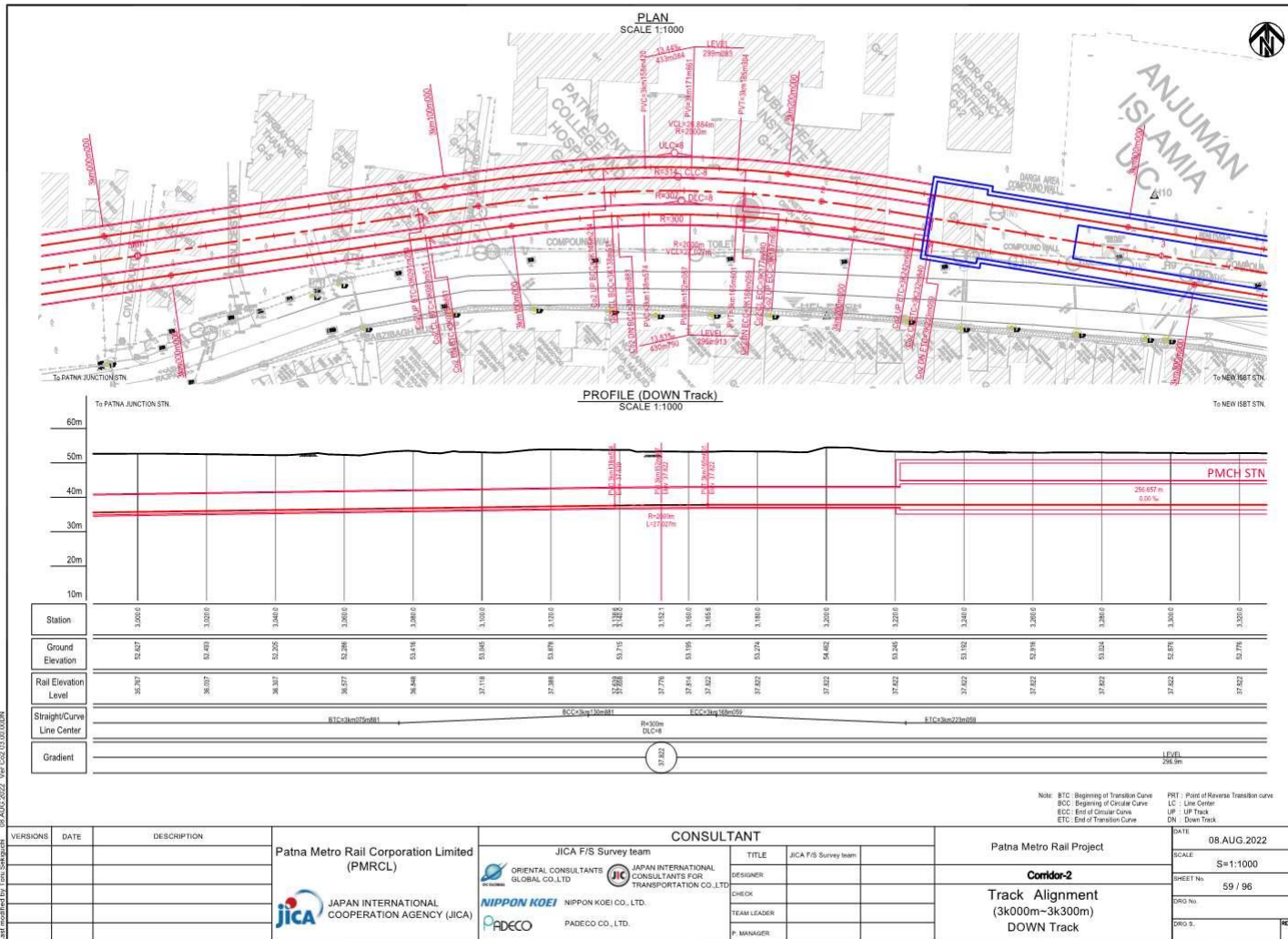
**Corridor-2**

Track Alignment (2k700m~3k000m)

DOWN Track

DATE	08.AUG.2022
SCALE	S=1:1000
SHEET No.	58 / 96
DRG No.	
DRG S.	
REV	

Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: Down Track

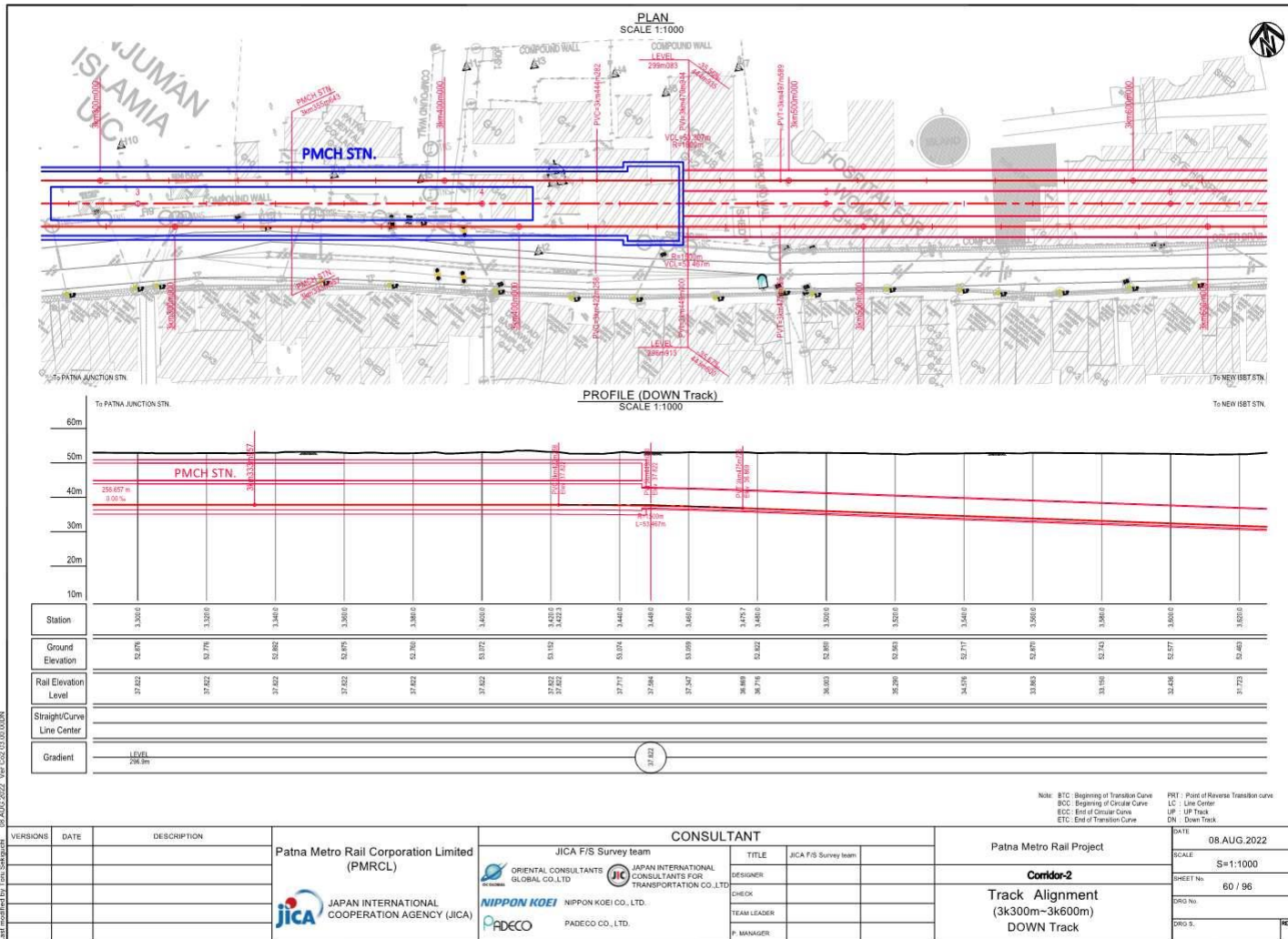


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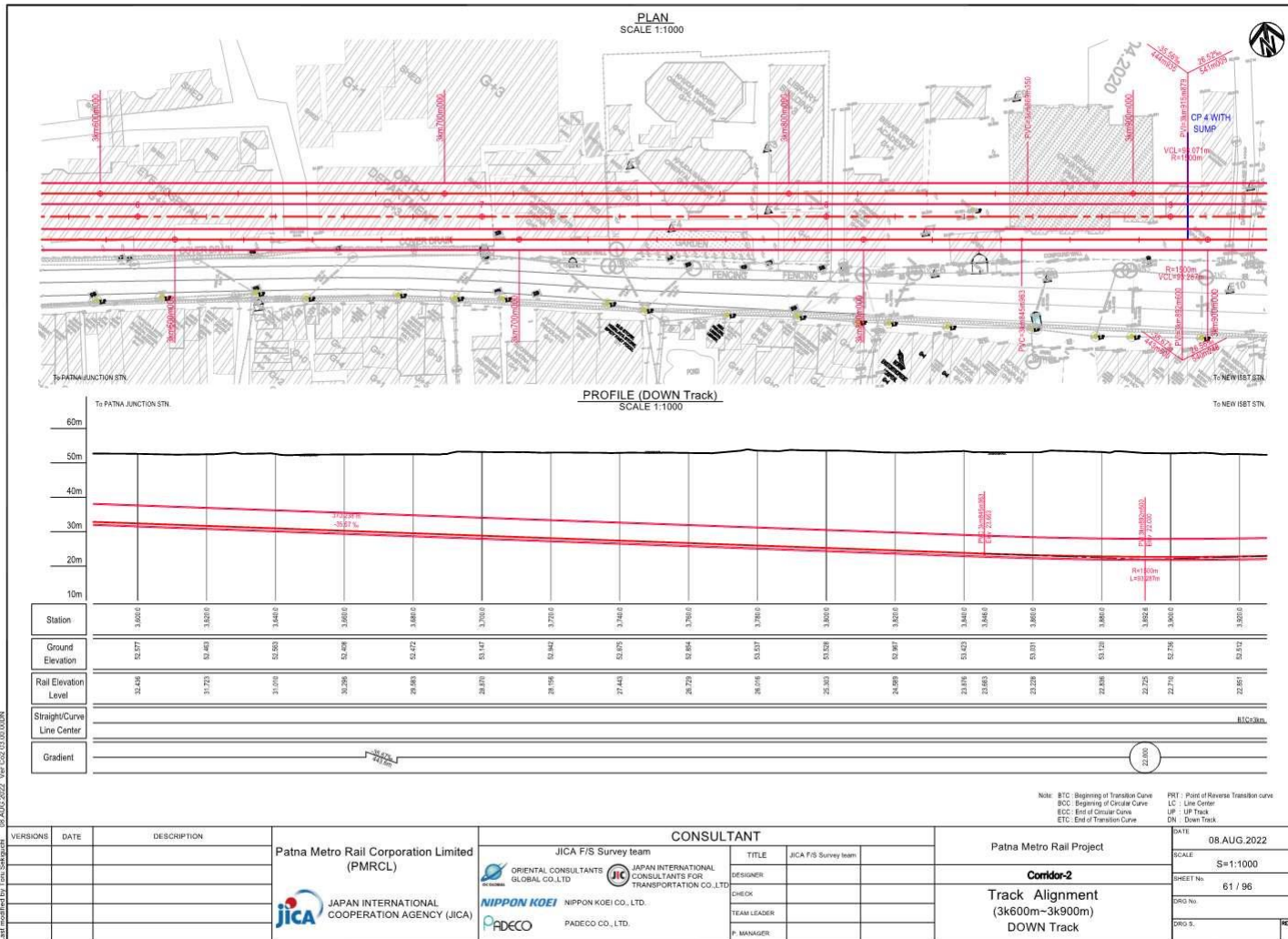
Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: Down Track

VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE
			Patna Metro Rail Corporation Limited (PMRCL)	JICA F/S Survey team	TITLE: JICA F/S Survey team	08 AUG 2022	
			JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	ORIENTAL CONSULTANTS GLOBAL CO. LTD.	DESIGNER: JICA F/S Survey team	SCALE: S=1:1000	
				NIPPON KOEI CO., LTD.	CHECK: JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO. LTD.	SHEET No: 59 / 96	
				PADECO CO., LTD.	TEAM LEADER: NIPPON KOEI CO., LTD.	DRG No:	
					P. MANAGER: PADECO CO., LTD.	DRG S:	
						REV	

Patna Metro Rail Project  
**Corridor-2**  
 Track Alignment  
 (3k000m~3k300m)  
 DOWN Track



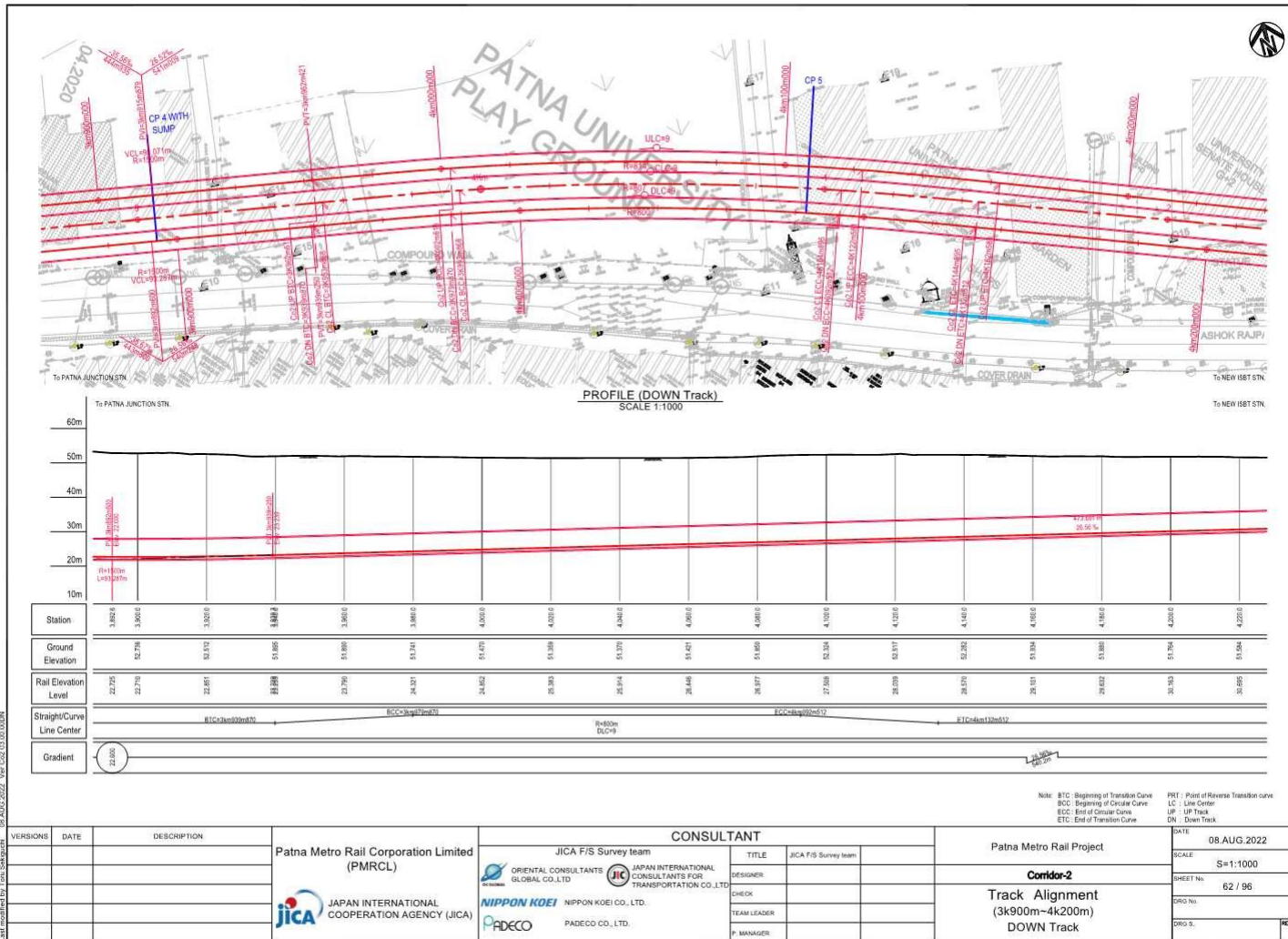




Last modified by: Tomi Saeguchi 08 AUG 2022 Ver: 02.01.00.000N

VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE		
			<b>Patna Metro Rail Corporation Limited (PMRCL)</b> JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		<b>JICA F/S Survey team</b> ORIENTAL CONSULTANTS GLOBAL CO. LTD. JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO. LTD. NIPPON KOEI CO., LTD. PADECO CO., LTD.		TITLE: JICA F/S Survey team DESIGNER: CHECK: TEAM LEADER: P. MANAGER:	Patna Metro Rail Project <b>Corridor-2</b> Track Alignment (3k600m~3k900m) DOWN Track	DATE: 08 AUG 2022 SCALE: S=1:1000 SHEET No: 61 / 96 DRO No: DRO S: REV

Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: Down Track



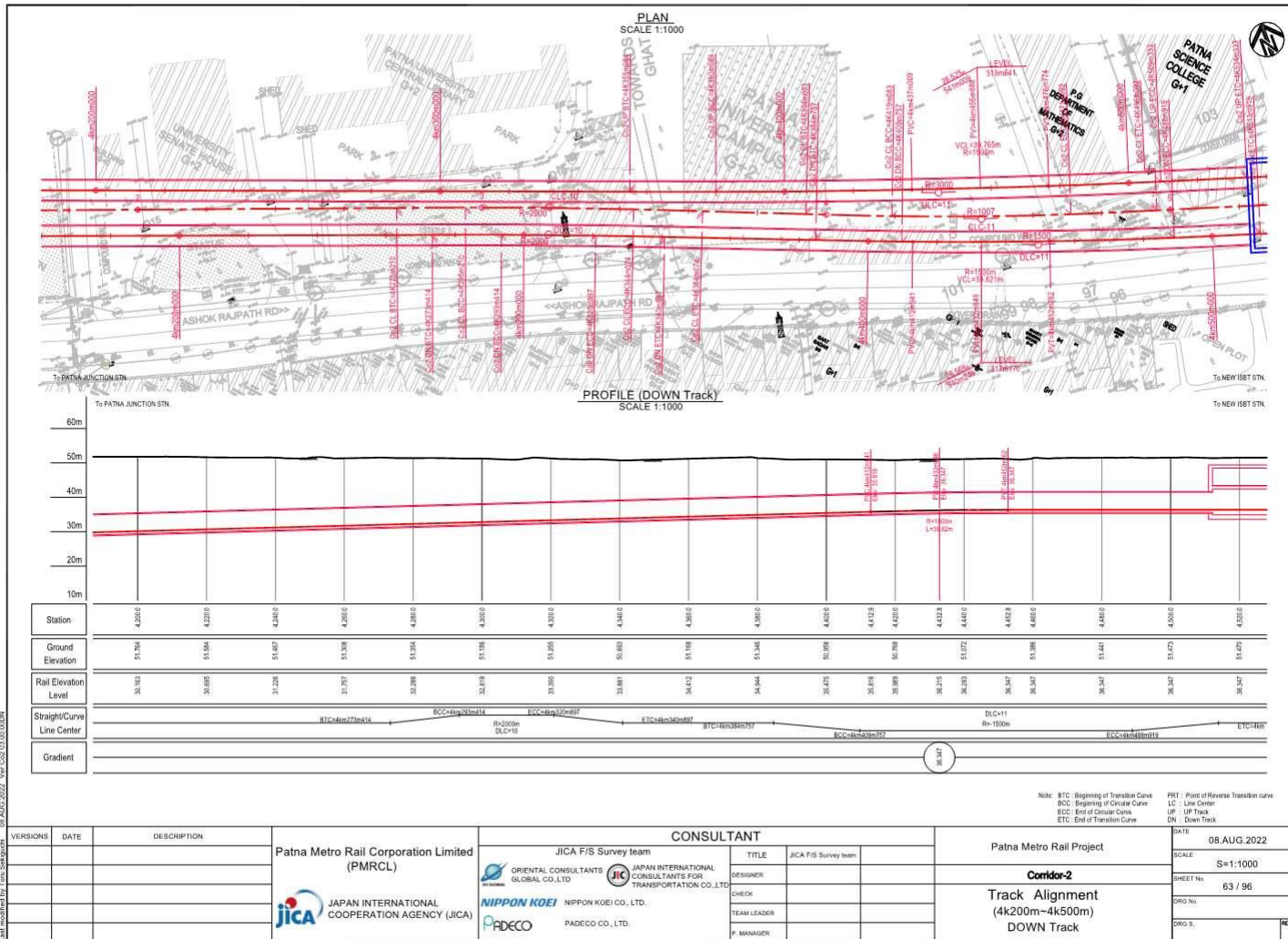
Last modified by: Tomi Saeguchi 09 AUG 2022 10:02:00 AM

VERSIONS	DATE	DESCRIPTION

Patna Metro Rail Corporation Limited (PMRCL) JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	JICA F/S Survey team ORIENTAL CONSULTANTS GLOBAL CO. LTD JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO. LTD NIPPON KOEI CO., LTD. PAIDECO CO., LTD.		TITLE: JICA F/S Survey team DESIGNER: CHECK: TEAM LEADER: P. MANAGER:
	Patna Metro Rail Project <b>Corridor-2</b> Track Alignment (3k900m~4k200m) DOWN Track		DATE: 08 AUG 2022 SCALE: S=1:1000 SHEET No: 62 / 96 DRO No: DRO S:

REVISIONS	DATE	DESCRIPTION	REV

Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: Down Track

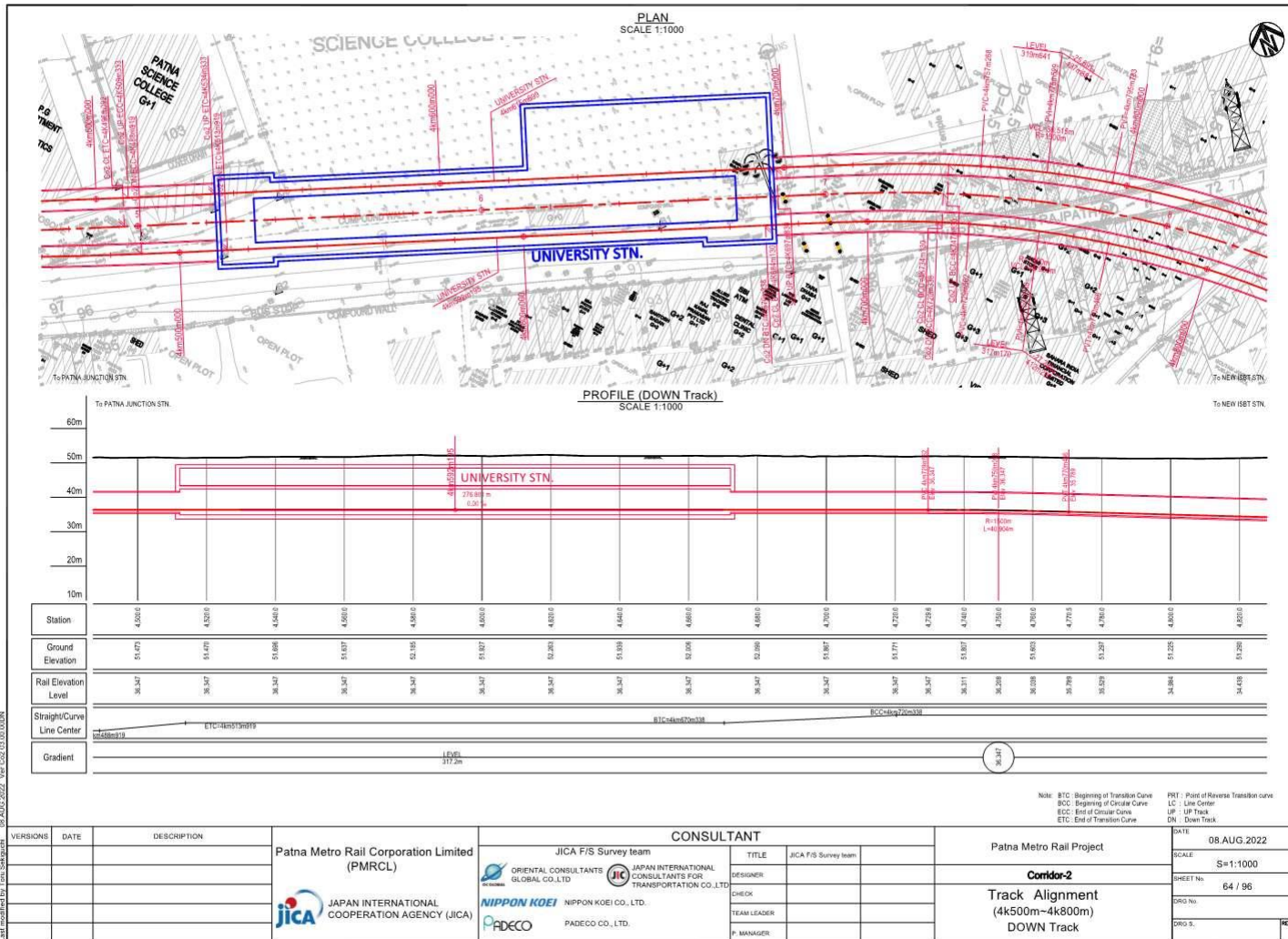


Last modified by: Tom Saitoh / 09 AUG 2022 / Ver: 02.01.00.000N

VERSIONS	DATE	DESCRIPTION

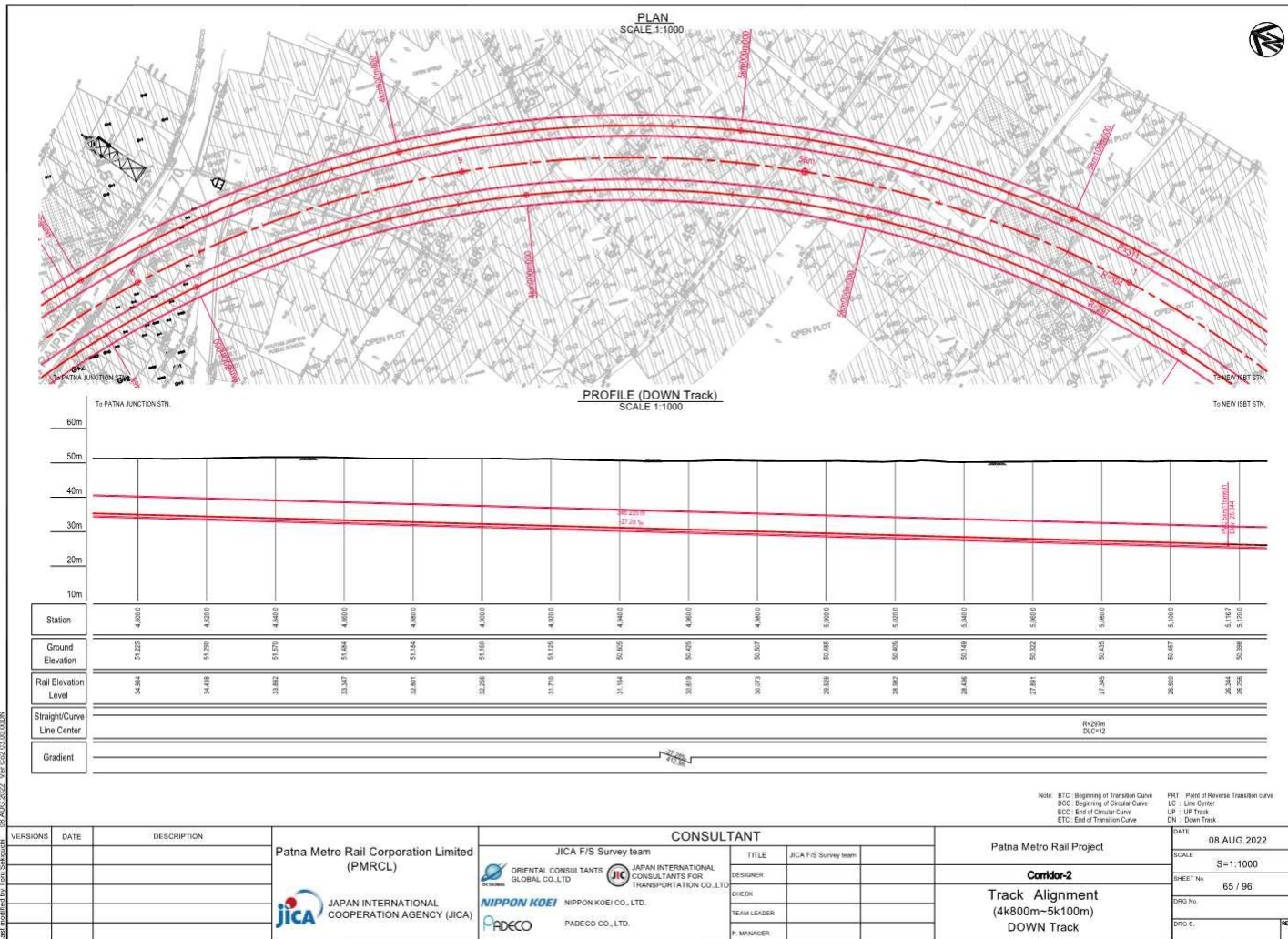
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Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: Down Track

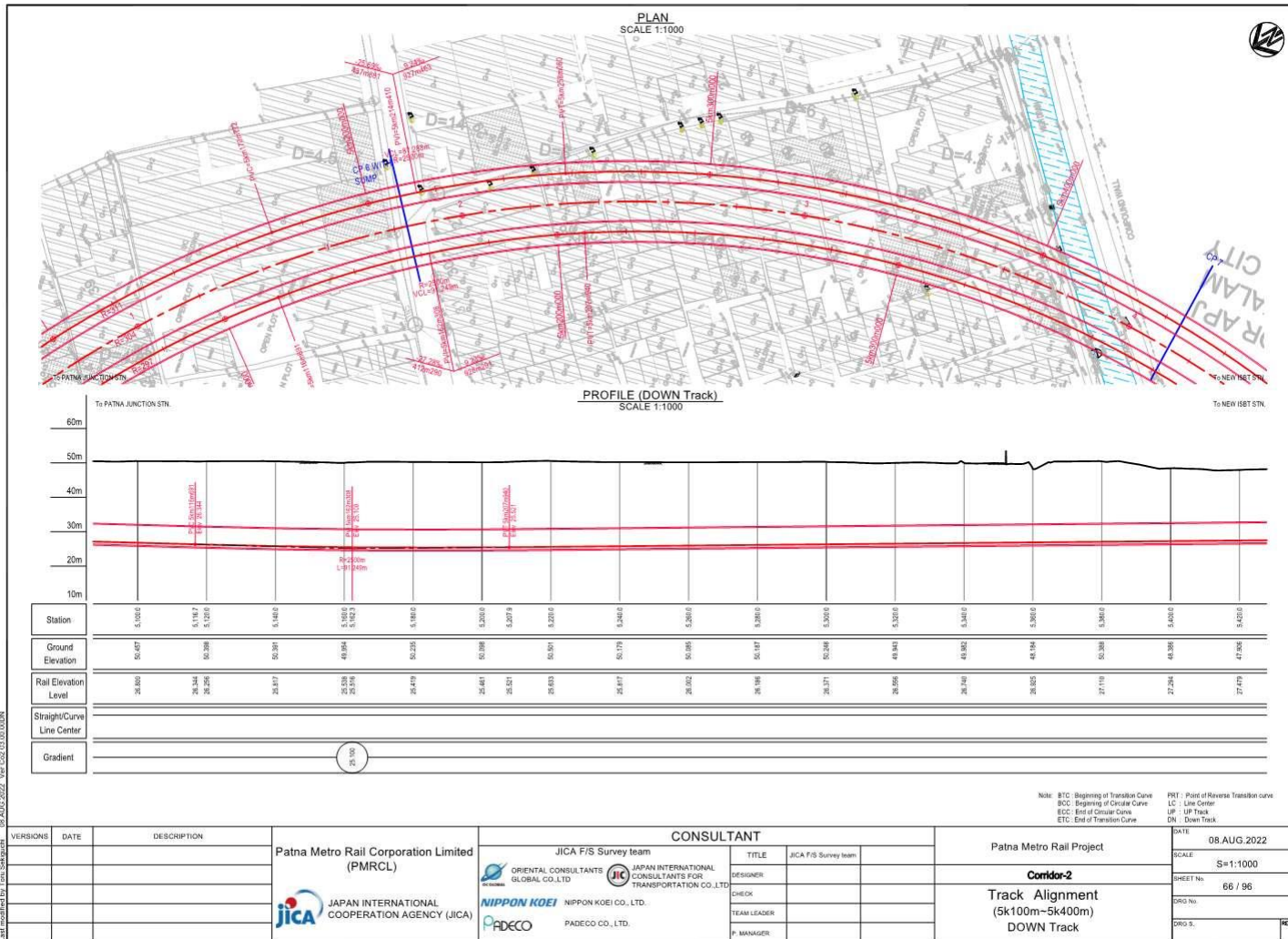


Date modified by: Tomi Saitoh / 09 AUG 2022 / Ver: 02.00.00.000

VERSIONS	DATE	DESCRIPTION	CONSULTANT		DATE
			Patna Metro Rail Corporation Limited (PMRCL)	JICA F/S Survey team	08 AUG 2022
			JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	ORIENTAL CONSULTANTS GLOBAL CO.,LTD. / JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO.,LTD. / NIPPON KOEI / PADECO CO.,LTD.	S=1:1000
				TITLE: JICA F/S Survey team	SHEET No: 64 / 96
				DESIGNER: JICA F/S Survey team	DRG No:
				CHECK:	DRG S:
				TEAM LEADER:	REV
				P. MANAGER:	
				Patna Metro Rail Project	
				Corridor-2	
				Track Alignment (4k500m~4k800m)	
				DOWN Track	

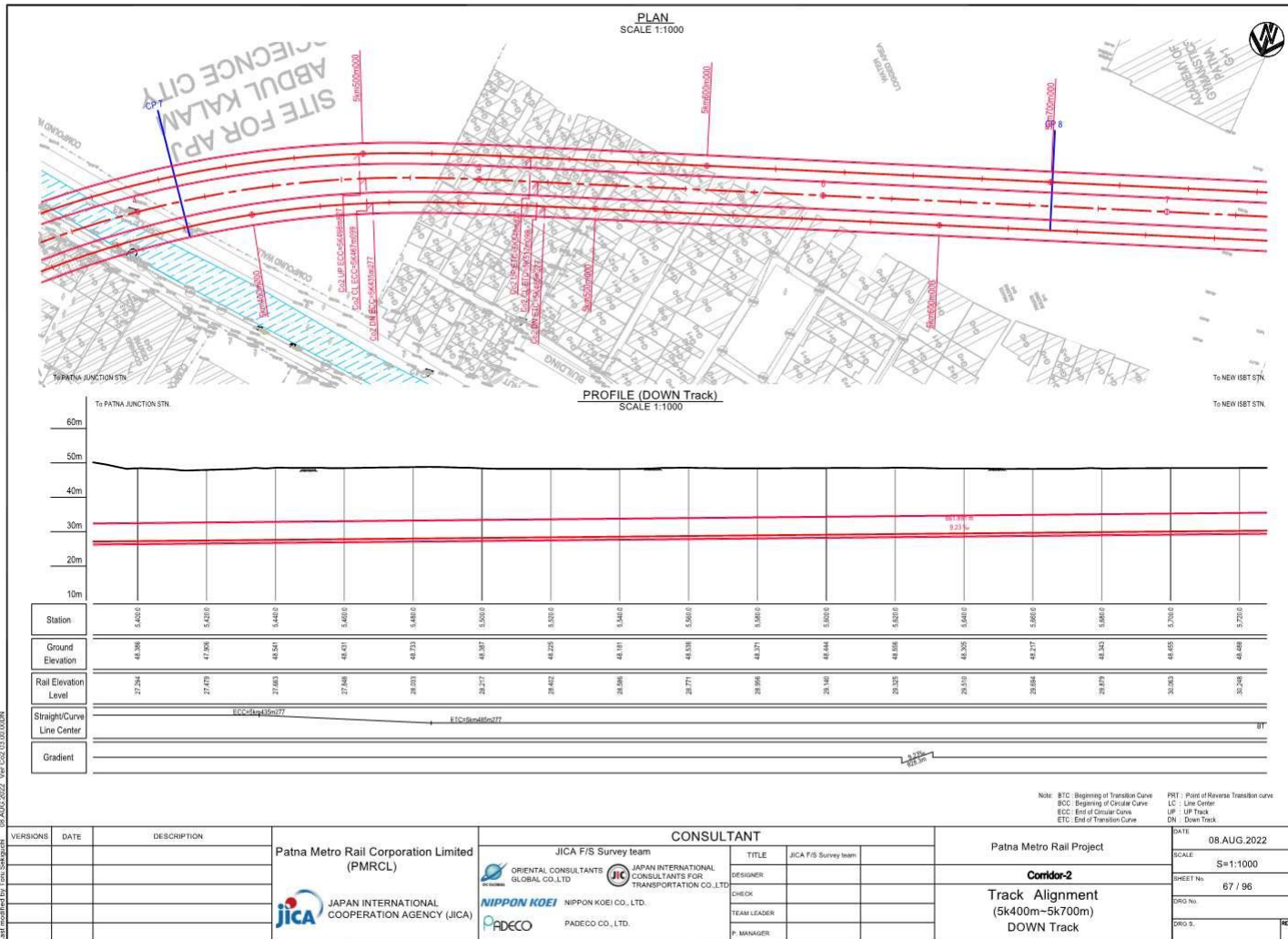


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Last modified by: Tomi Saitoh / 08 AUG 2022 / Ver: 02.01.00.000N

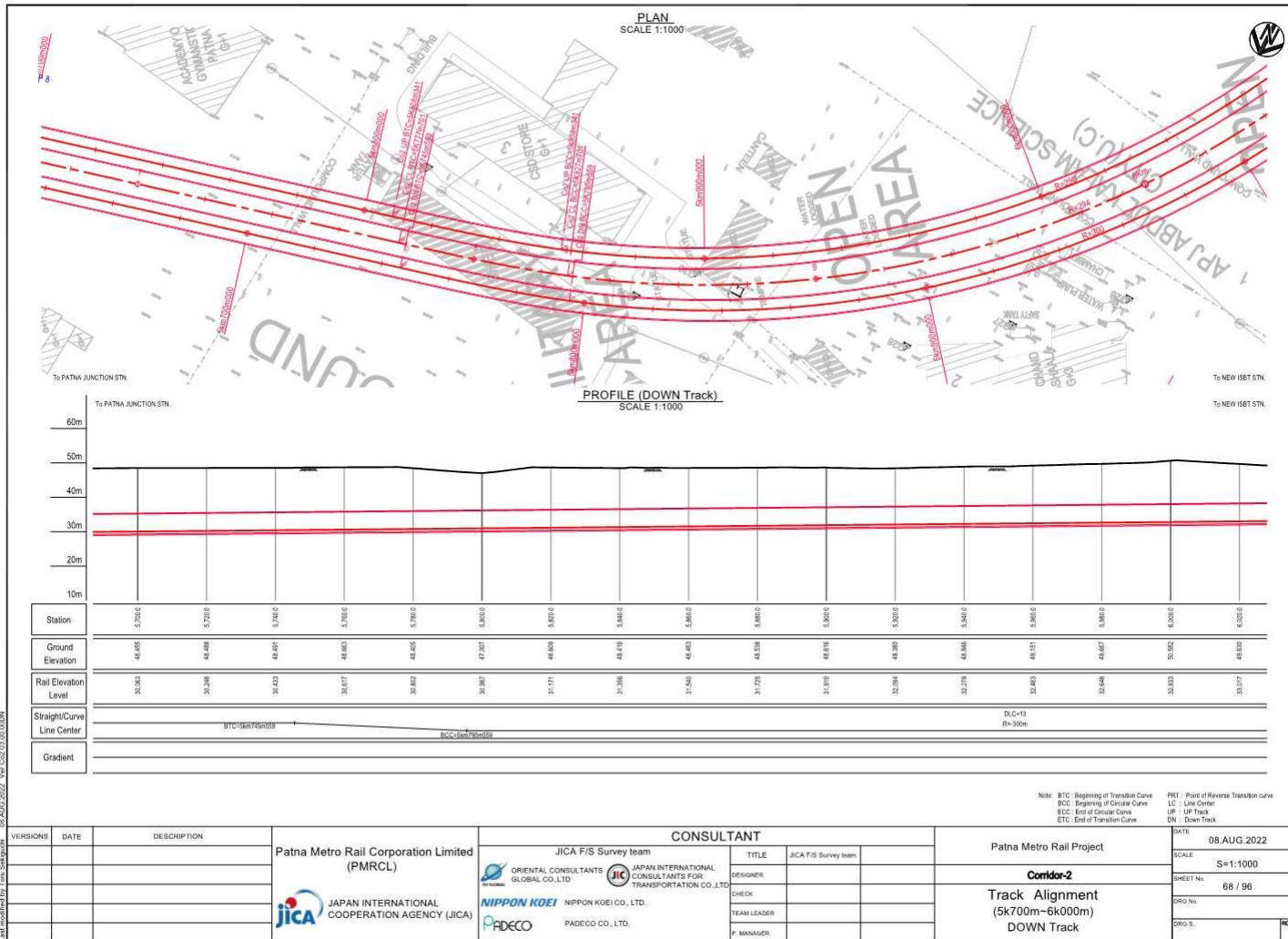
VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE
			Patna Metro Rail Corporation Limited (PMRCL) JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		JICA F/S Survey team ORIENTAL CONSULTANTS GLOBAL CO. LTD NIPPON KOEI CO., LTD. PAIDECO CO., LTD.		08 AUG 2022
					TITLE: JICA F/S Survey team DESIGNER: CHECK: TEAM LEADER: P. MANAGER:		SCALE: S=1:1000 SHEET No: 66 / 96 DRO No: DRO S:
					Patna Metro Rail Project Corridor-2 Track Alignment (5k100m-5k400m) DOWN Track		REV:



Last modified by: Tomi Saegusa 08 AUG 2022 10:02:00 AM

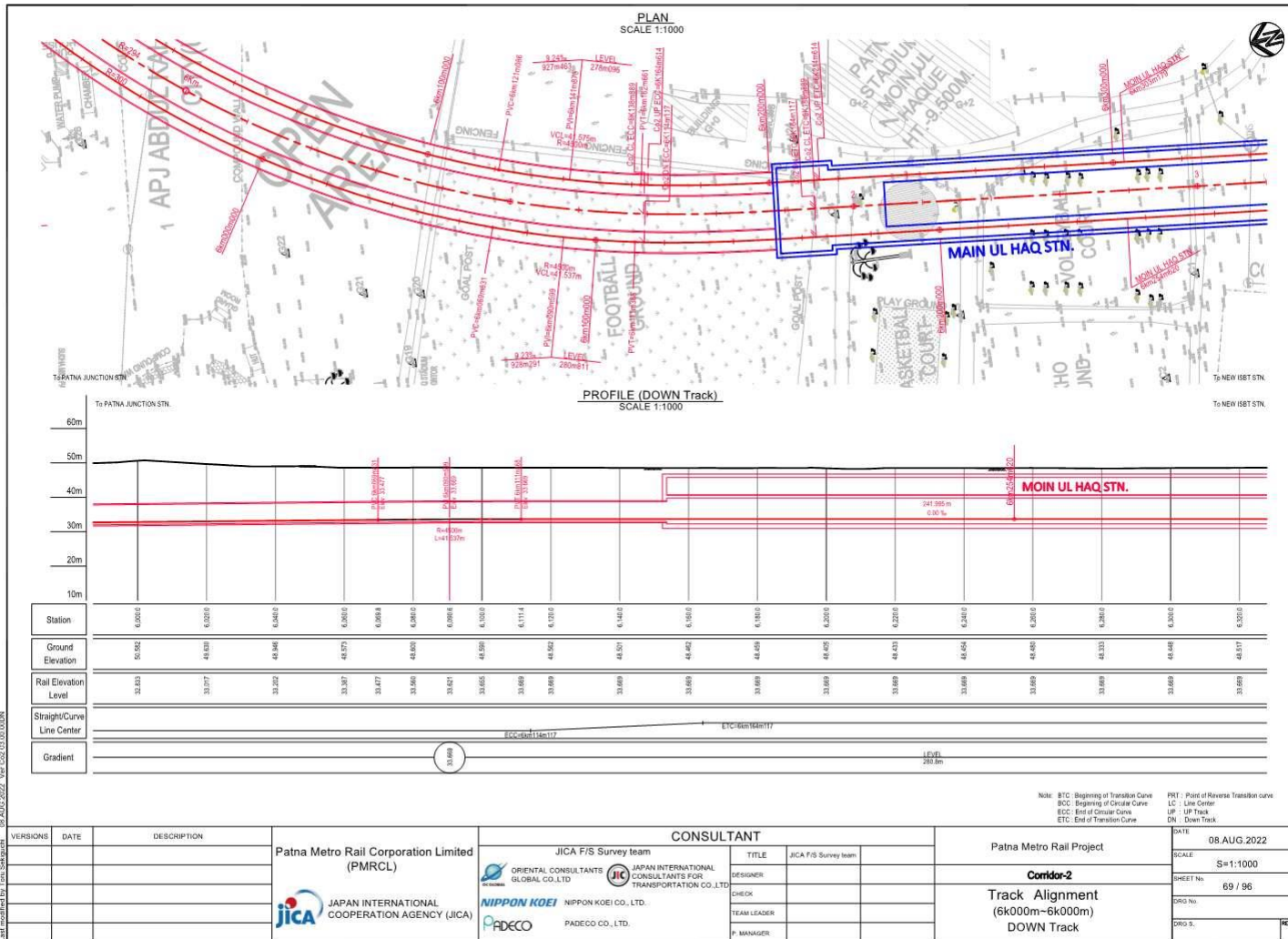
VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE
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			Patna Metro Rail Project <b>Corridor-2</b> Track Alignment (5k400m-5k700m) DOWN Track				REV

Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: Down Track



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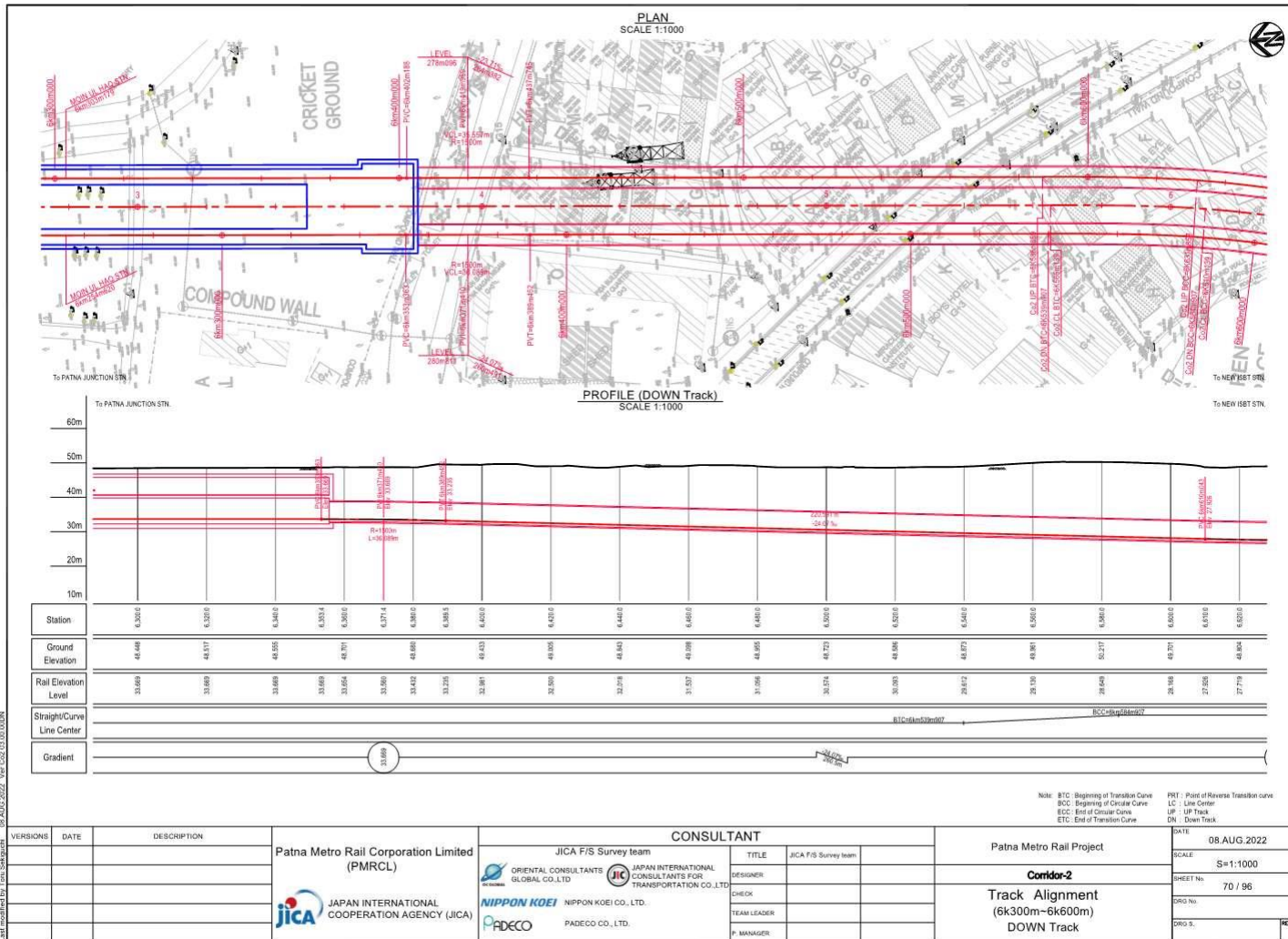




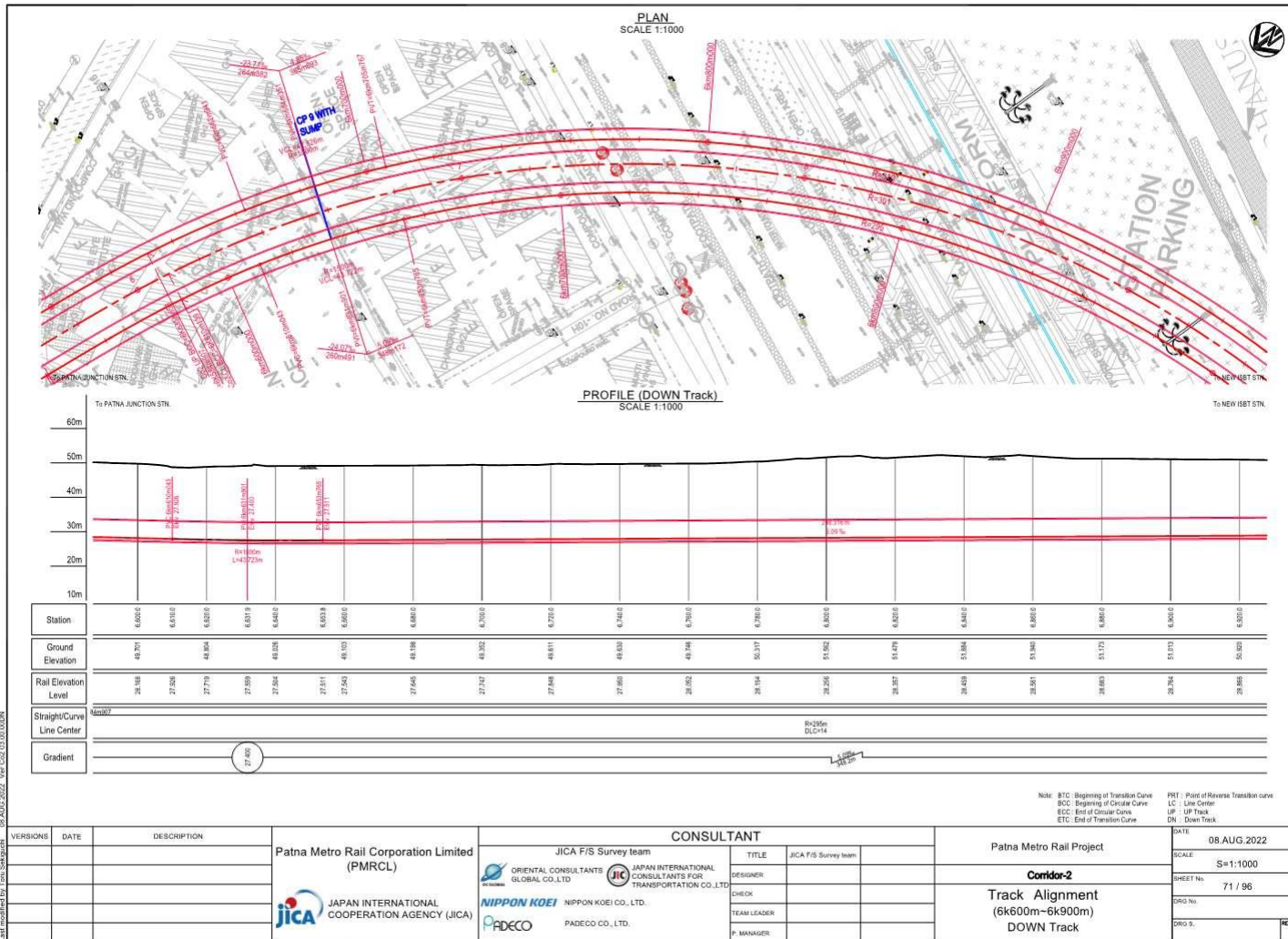
Last modified by: Tom Saeguchi 09 AUG 2022 10:02:00 AM

Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: Down Track

VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE		
			Patna Metro Rail Corporation Limited (PMRCL) JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		JICA F/S Survey team ORIENTAL CONSULTANTS GLOBAL CO. LTD NIPPON KOEI CO., LTD. PAIDECO CO., LTD.		Patna Metro Rail Project Corridor-2 Track Alignment (6k000m-6k000m) DOWN Track		08.AUG.2022
					TITLE: JICA F/S Survey team DESIGNER: CHECK: TEAM LEADER: P. MANAGER:		SCALE: S=1:1000 SHEET No: 69 / 96 DRO No: DRO S:		REV



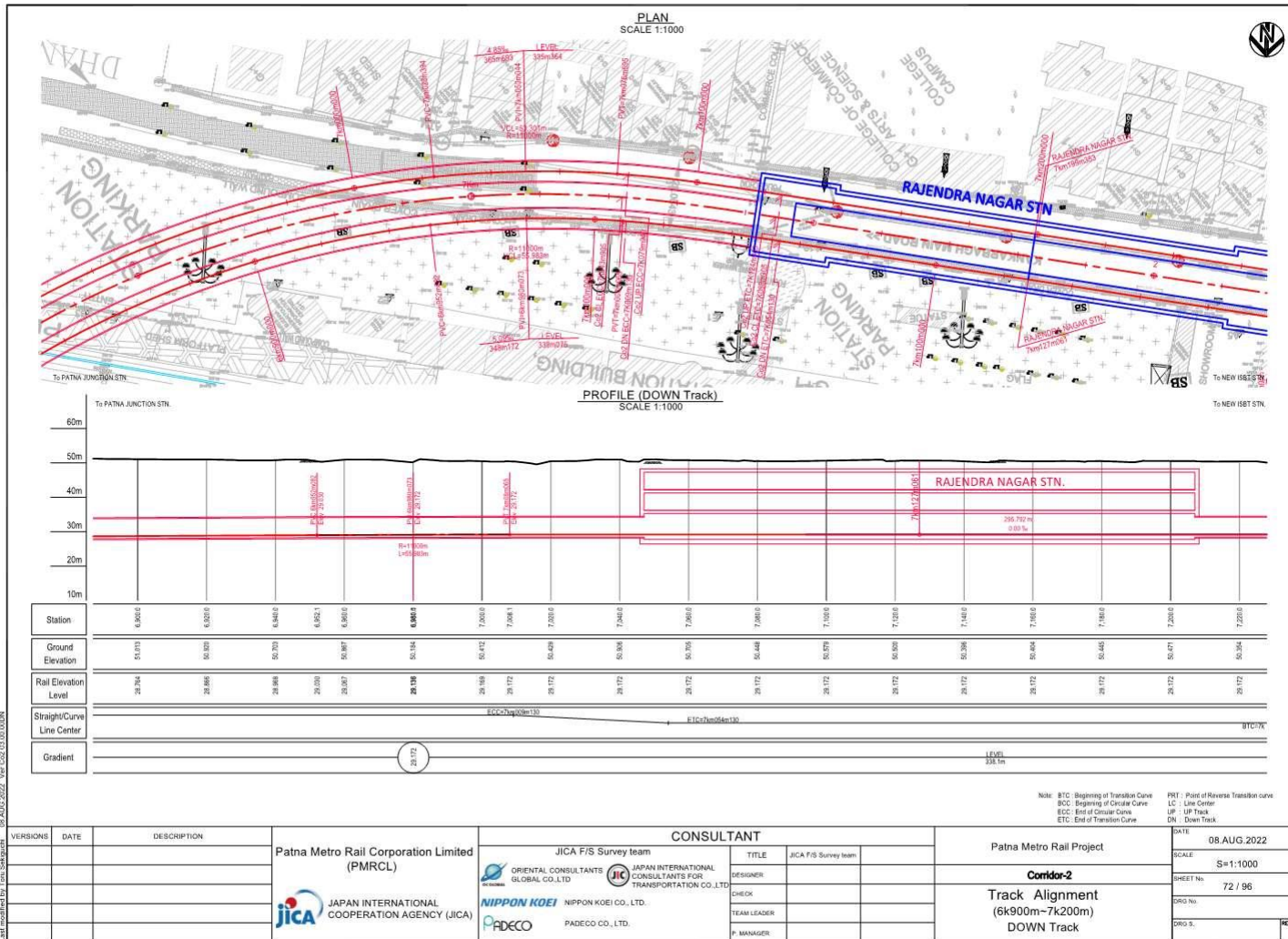
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Last modified by: Tomi Saitoh / 08 AUG 2022 / Ver: 02.00.00.000

Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: Down Track

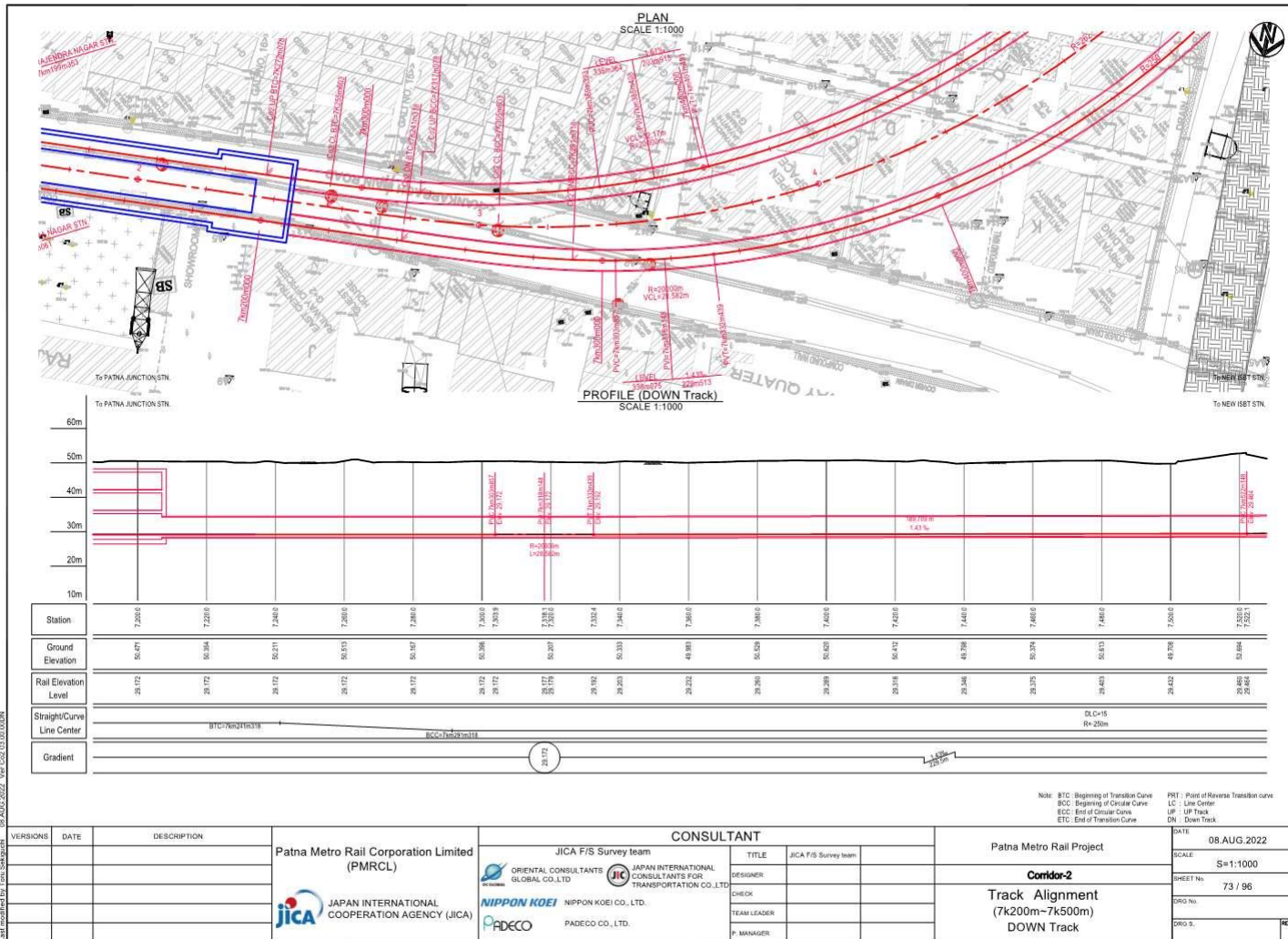
VERSIONS	DATE	DESCRIPTION	CONSULTANT		DATE
			Patna Metro Rail Corporation Limited (PMRCL) 		08 AUG 2022
			JICA F/S Survey team TITLE: JICA F/S Survey team		SCALE: S=1:1000
			DESIGNER: JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO. LTD. CHECK: NIPPON KOEI CO., LTD. TEAM LEADER: NIPPON KOEI CO., LTD. P. MANAGER: PAIDECO CO., LTD.		SHEET No: 71 / 96
			Patna Metro Rail Project Corridor-2 Track Alignment (6k600m-6k900m) DOWN Track		DRG No:
					DRG S:
					REV



Last modified by: Tomi Saeguchi 08 AUG 2022 Ver: 02.00.00.000

VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE		
			<b>Patna Metro Rail Corporation Limited (PMRCL)</b> JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		<b>JICA F/S Survey team</b> ORIENTAL CONSULTANTS GLOBAL CO. LTD NIPPON KOEI CO., LTD. PAIDECO CO., LTD.		TITLE: JICA F/S Survey team DESIGNER: CHECK: TEAM LEADER: P. MANAGER:	Patna Metro Rail Project <b>Corridor-2</b> Track Alignment (6k900m-7k200m) DOWN Track	DATE: 08 AUG 2022 SCALE: S=1:1000 SHEET No: 72 / 96 DRO No: DRO S:

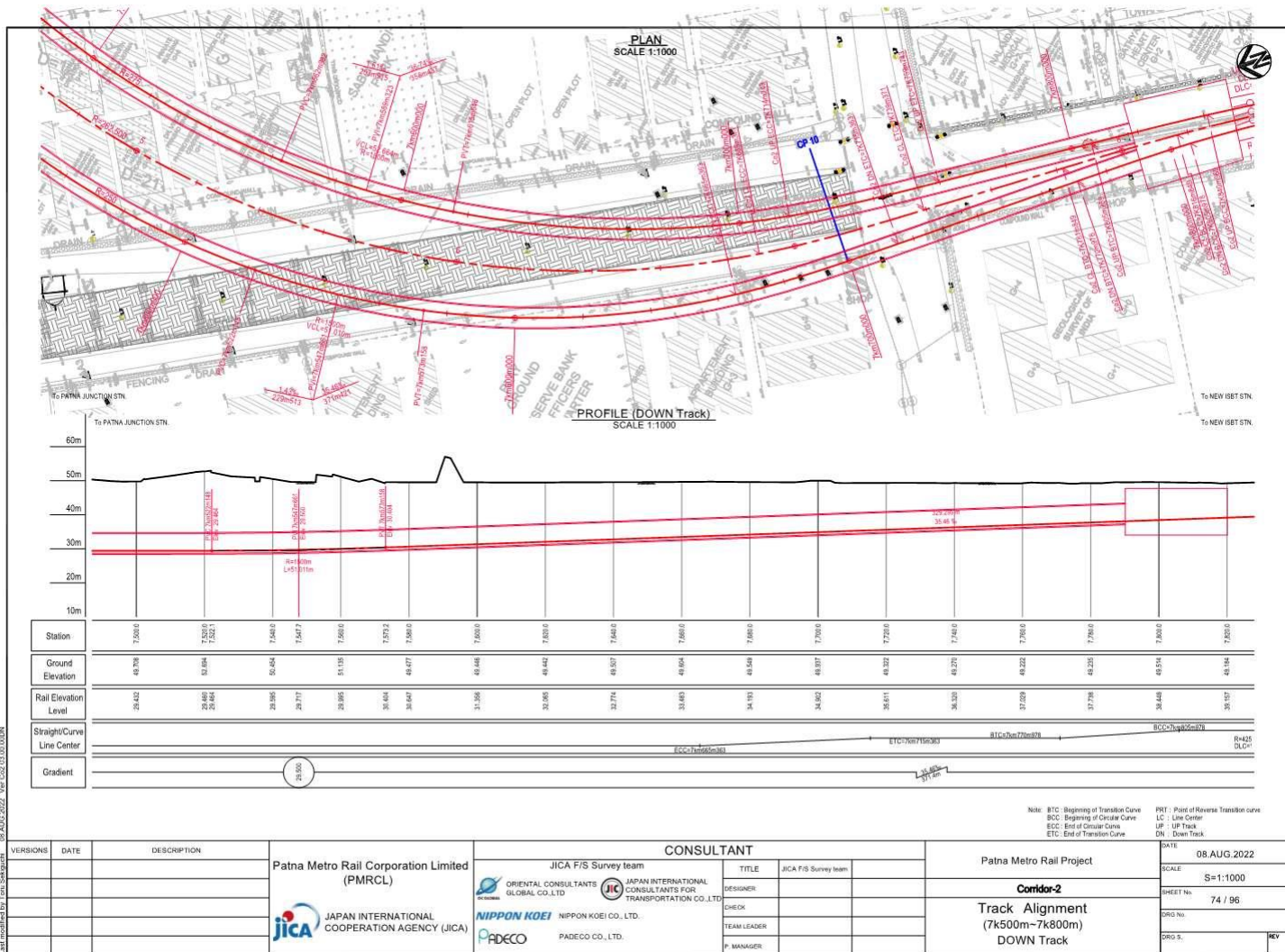
Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 EEC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: Down Track



Last modified by: Tomi Saeguchi 08 AUG 2022 Ver: 02.00.00.000

Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: Down Track

VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE		
			Patna Metro Rail Corporation Limited (PMRCL) JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		JICA F/S Survey team ORIENTAL CONSULTANTS GLOBAL CO. LTD NIPPON KOEI CO. LTD. PAIDECO CO., LTD.		TITLE: JICA F/S Survey team DESIGNER: CHECK: TEAM LEADER: P. MANAGER:	Patna Metro Rail Project Corridor-2 Track Alignment (7k200m-7k500m) DOWN Track	DATE: 08 AUG 2022 SCALE: S=1:1000 SHEET No: 73 / 96 DRO No: DRO S:

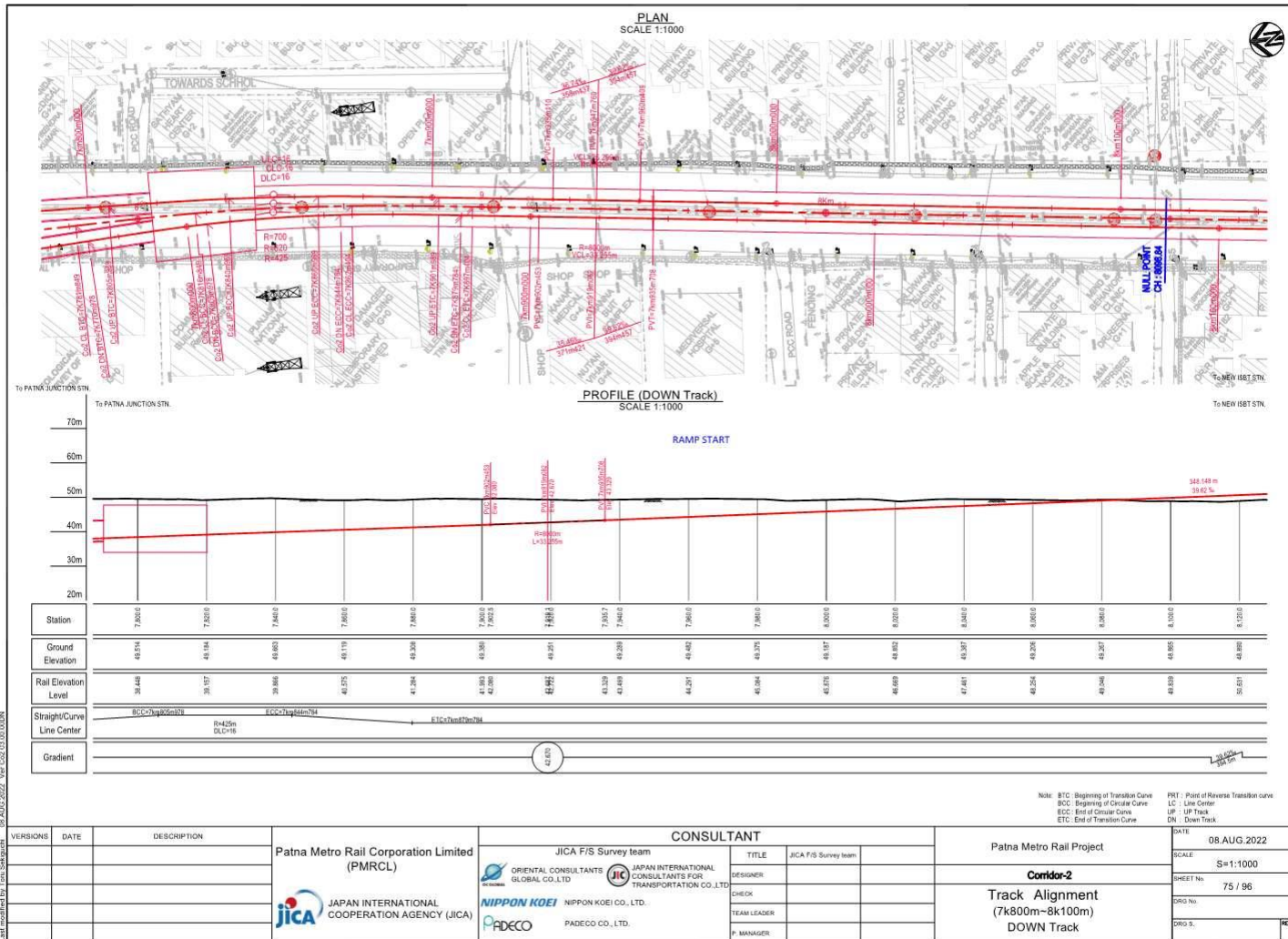


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VERSIONS	DATE	DESCRIPTION

<b>Patna Metro Rail Corporation Limited (PMRCL)</b> JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	<b>CONSULTANT</b> JICA F/S Survey team ORIENTAL CONSULTANTS GLOBAL CO.,LTD.   JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO.,LTD.   NIPPON KOEI   NIPPON KOEI CO., LTD.   PADECO   PADECO CO.,LTD.		TITLE: JICA F/S Survey team DESIGNER: CHECK: TEAM LEADER: P. MANAGER:	Patna Metro Rail Project <b>Corridor-2</b> Track Alignment (7k500m-7k800m) DOWN Track	DATE: 08.AUG.2022 SCALE: S=1:1000 SHEET No.: 74 / 96 DRO No.: DRO S.: REV:
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Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 LC: Line Center  
 ETC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LCP: Line Center  
 DN: Down Track

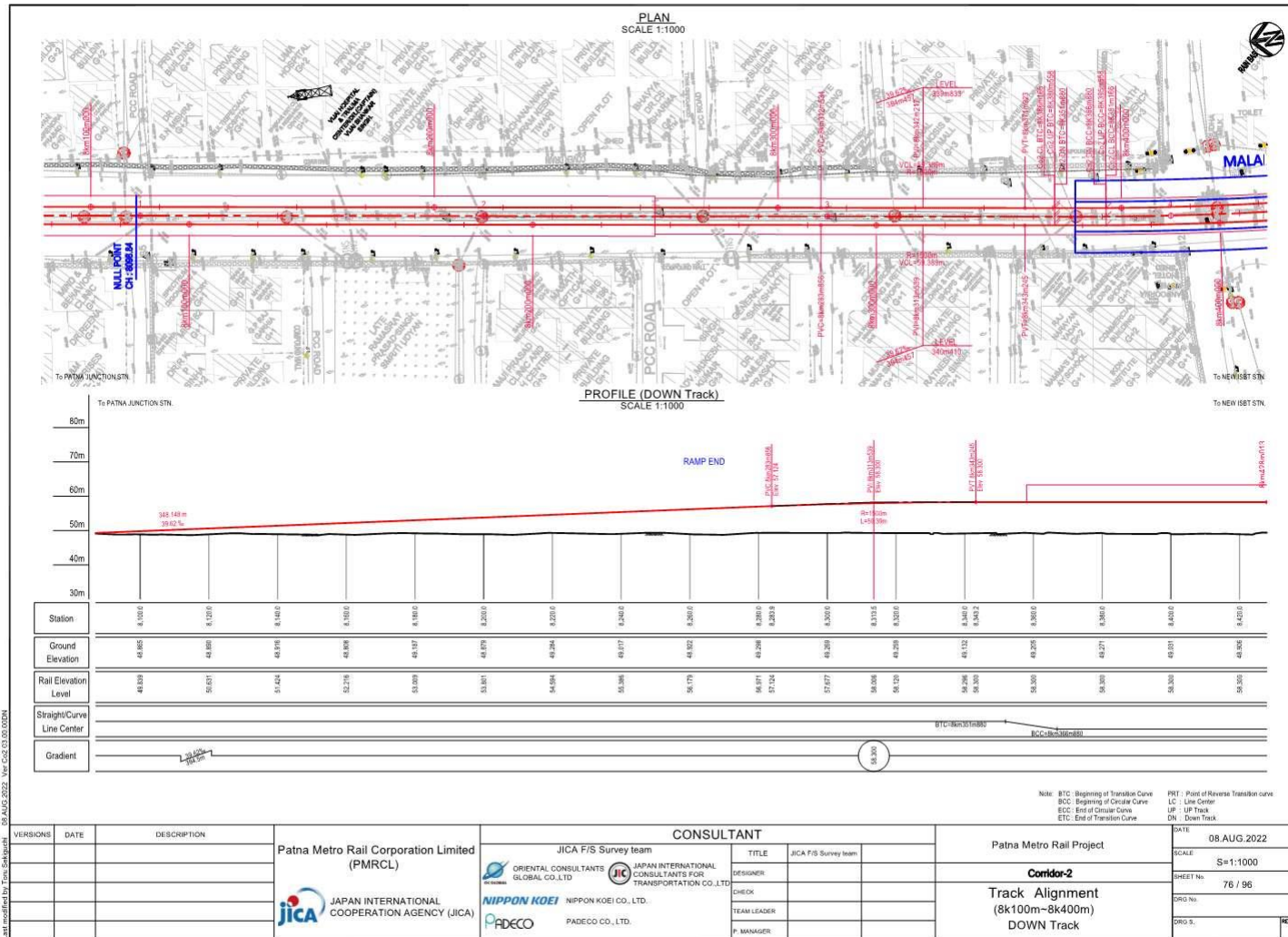


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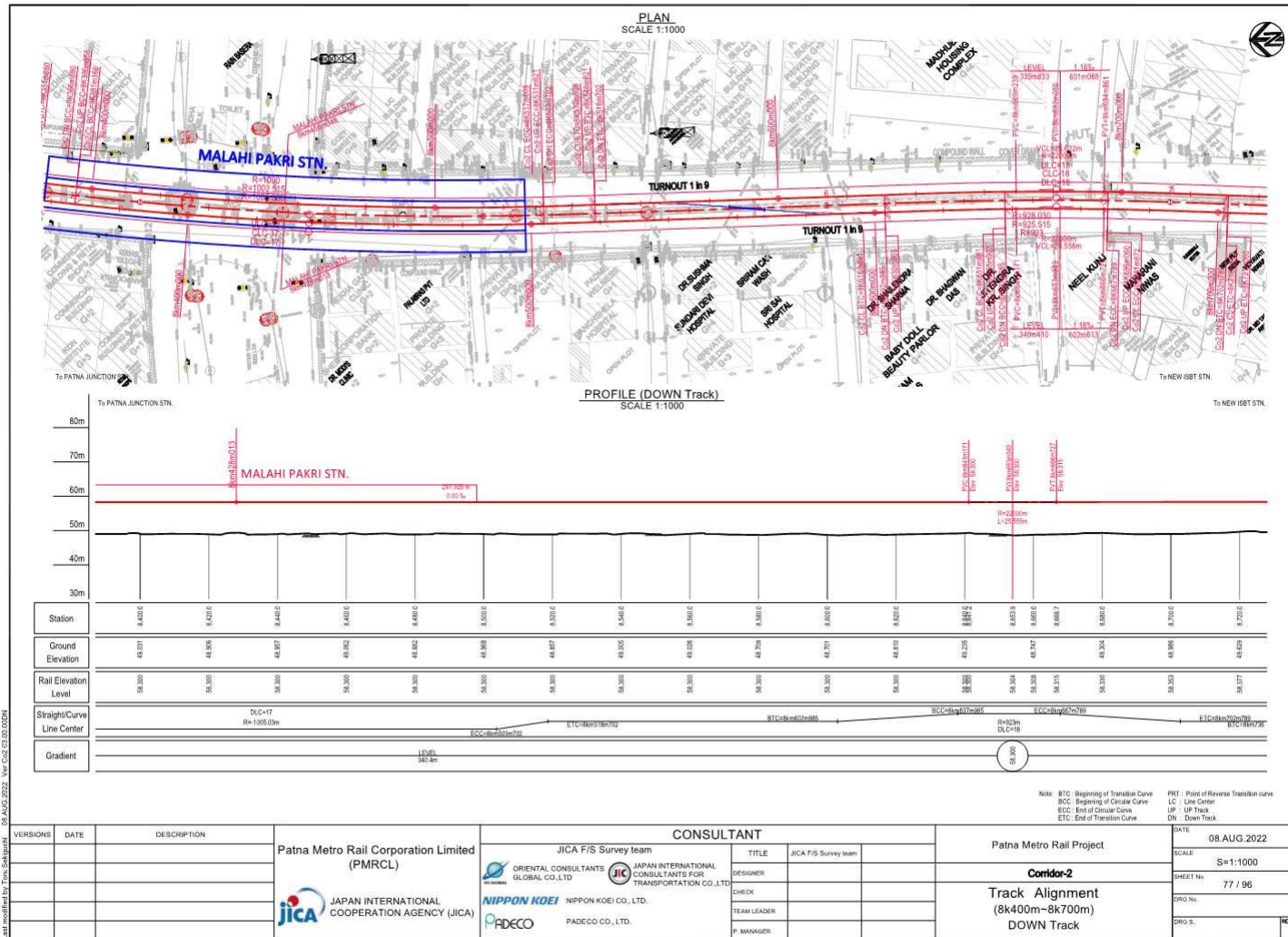
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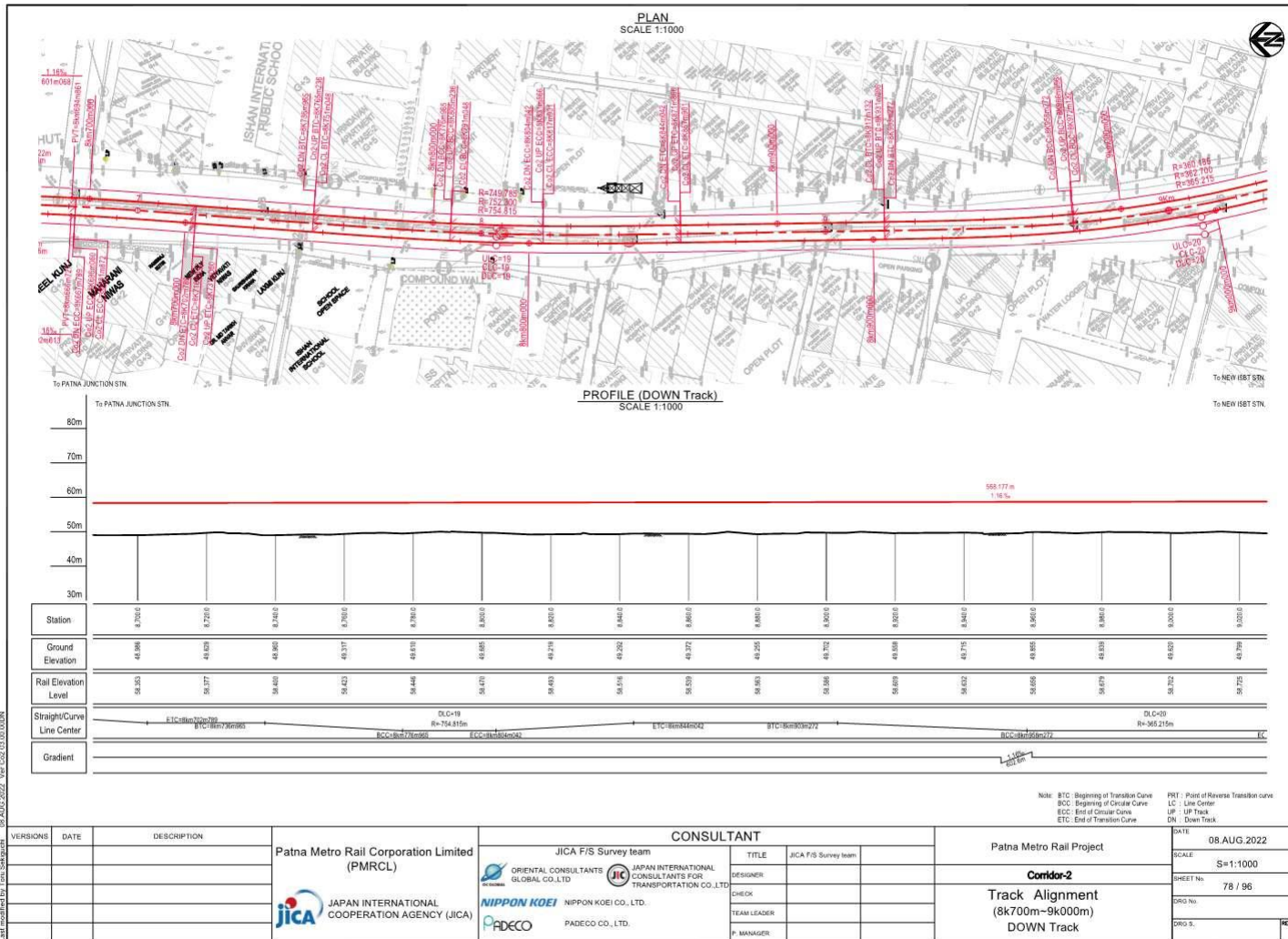
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	Patna Metro Rail Project Corridor-2 Track Alignment (7k800m-8k100m) DOWN Track		DATE: 08 AUG 2022 SCALE: S=1:1000 SHEET No: 75 / 96 DRO No: DRO S:

Note: BTC: Beginning of Transition Curve BCC: Beginning of Circular Curve ECC: End of Circular Curve ETC: End of Transition Curve	PRT: Point of Reverse Transition curve LC: Line Center UP: UP Track DN: Down Track
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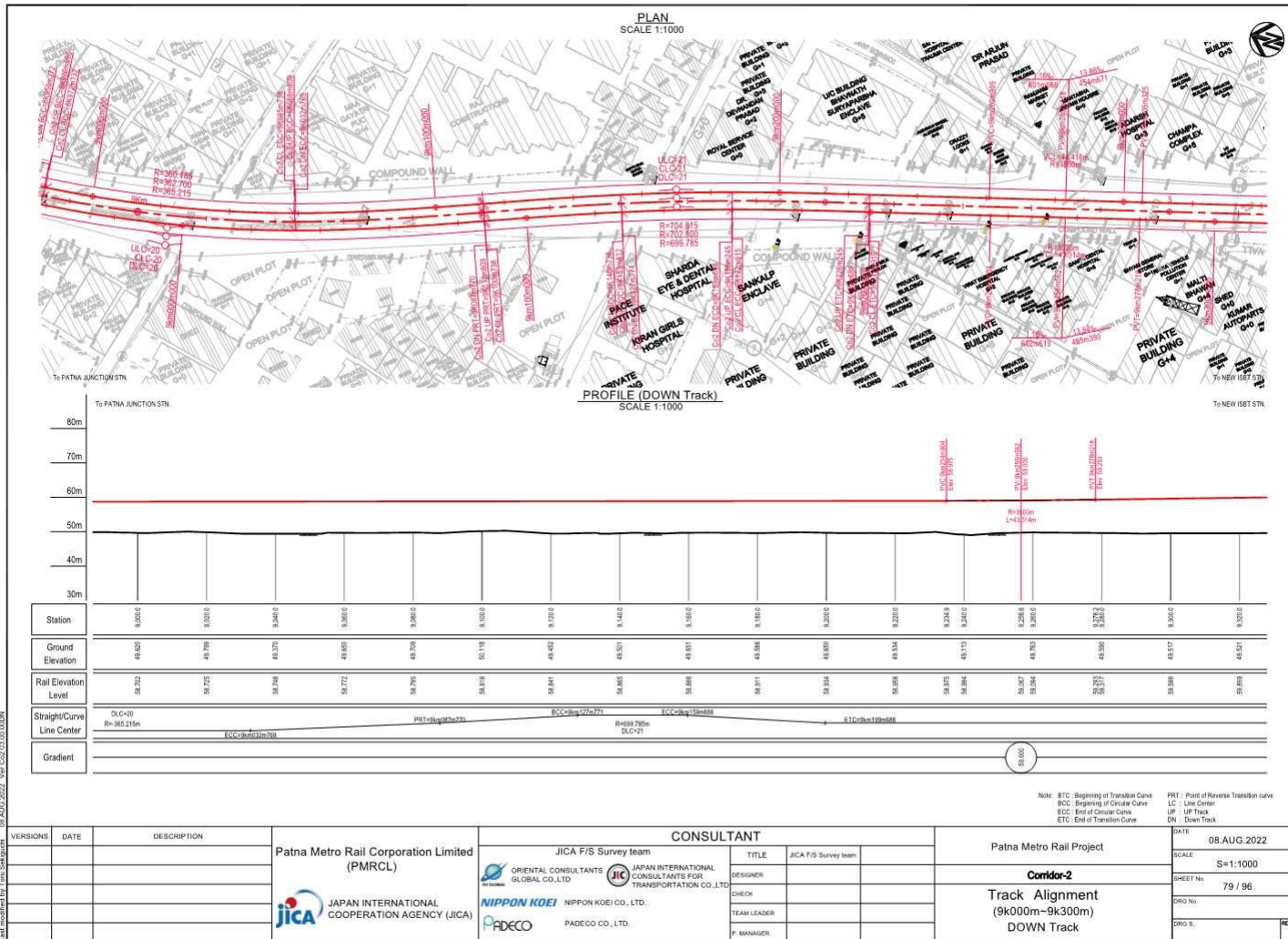




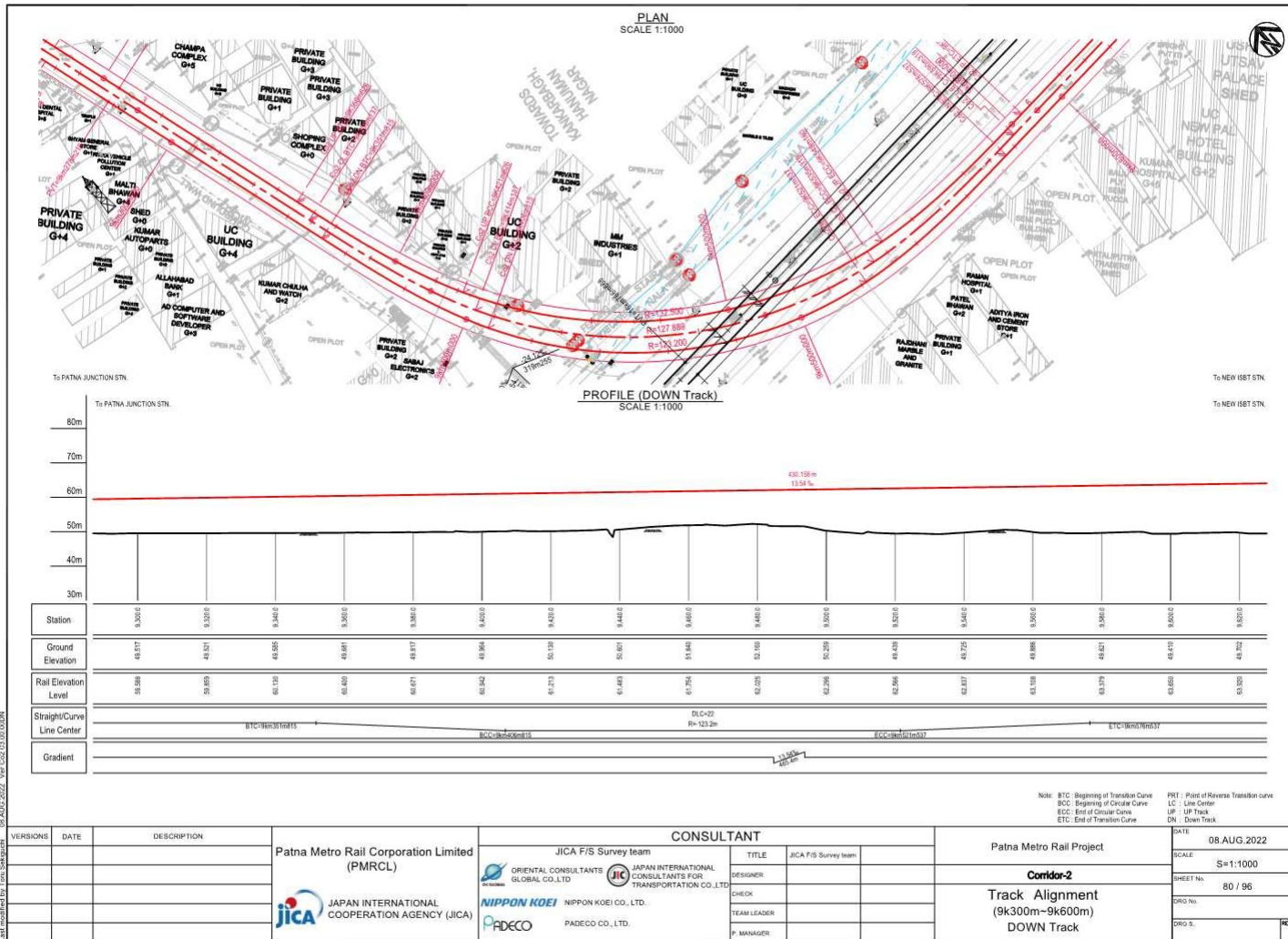




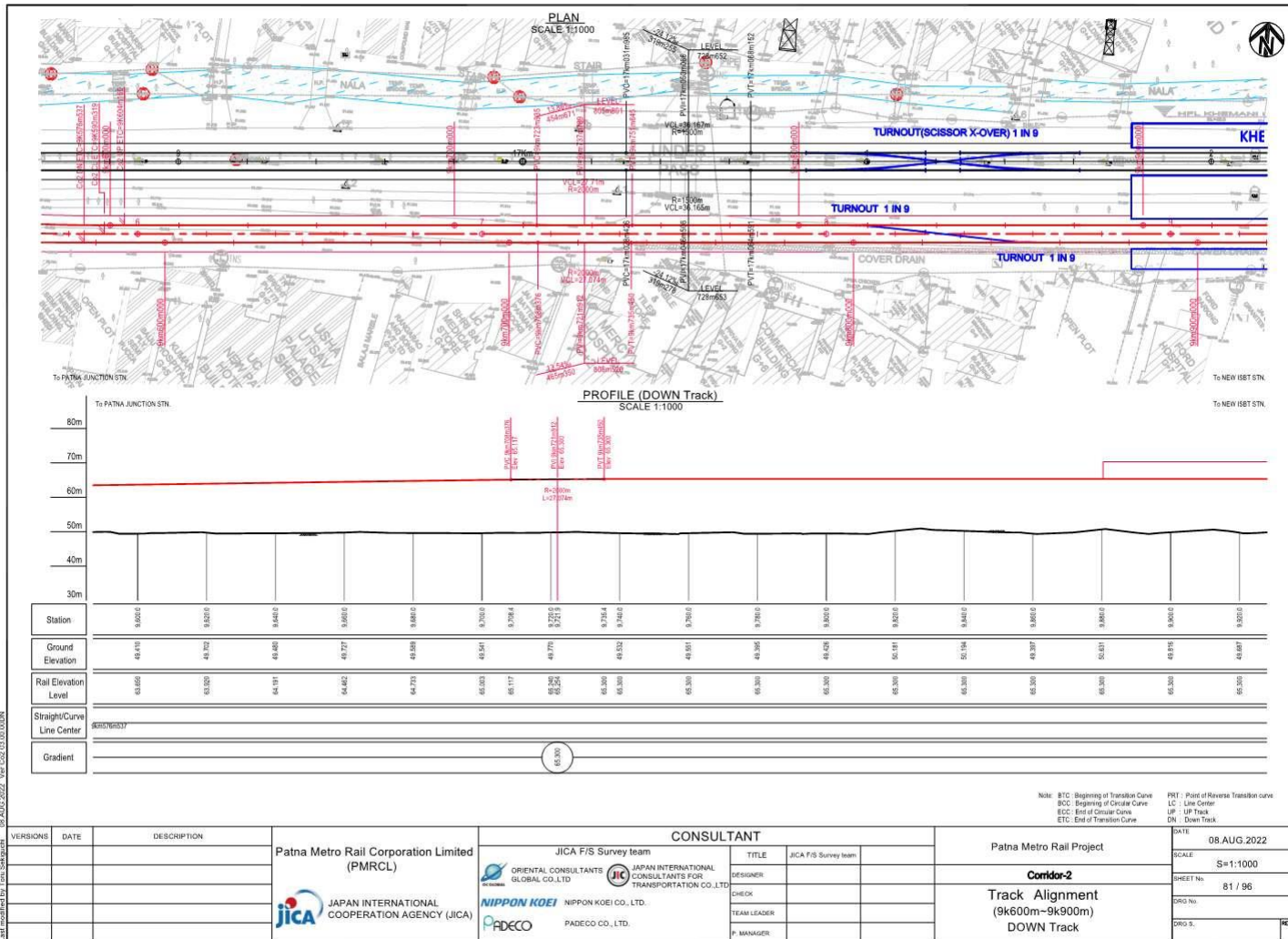
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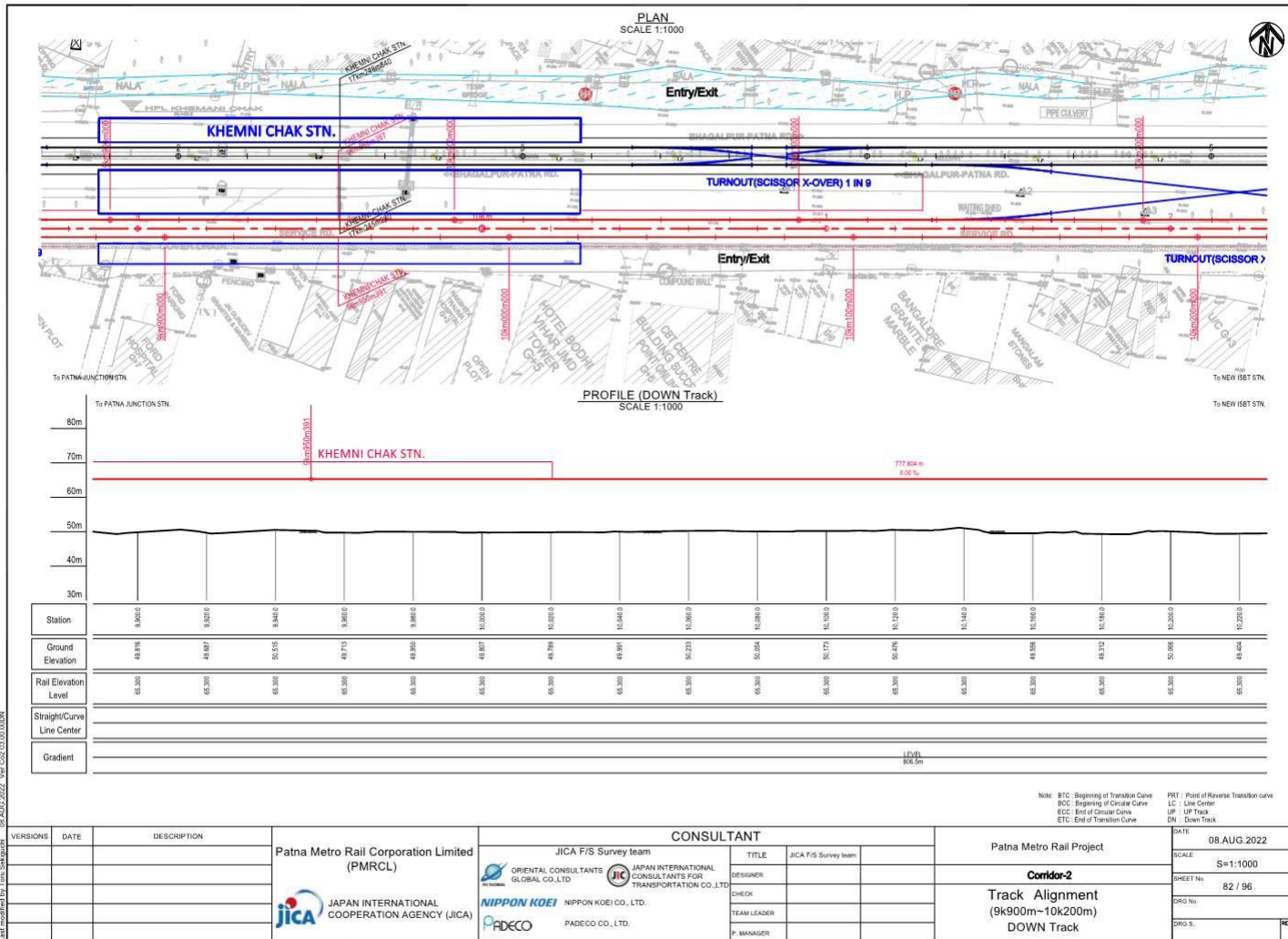
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Date modified by: Tomi Saitoh 08.AUG.2022 Ver: 02.01.00.0000



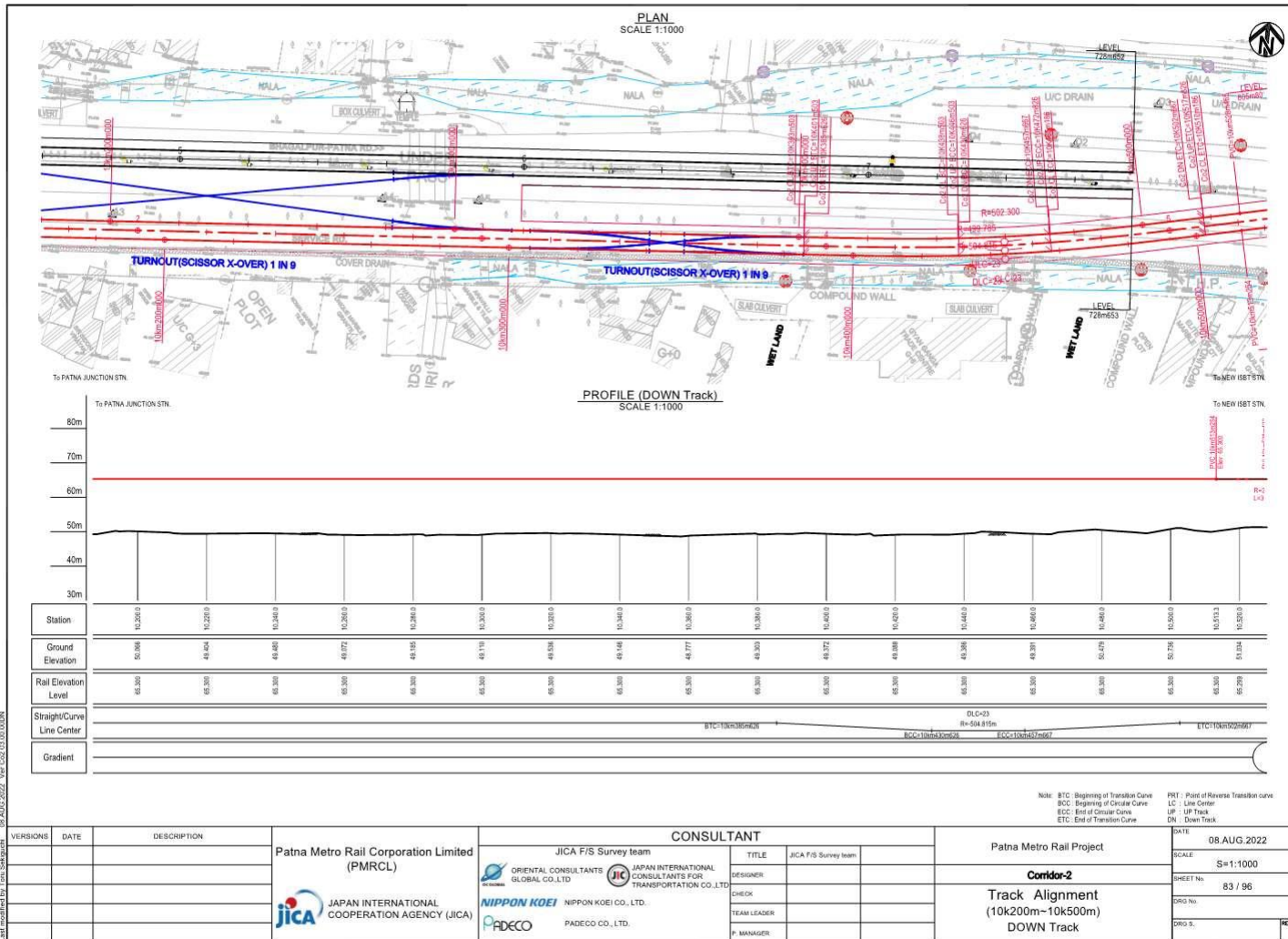
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Last modified by: Tomi Saeguchi 08 AUG 2022 Ver: 02.01.00.0004

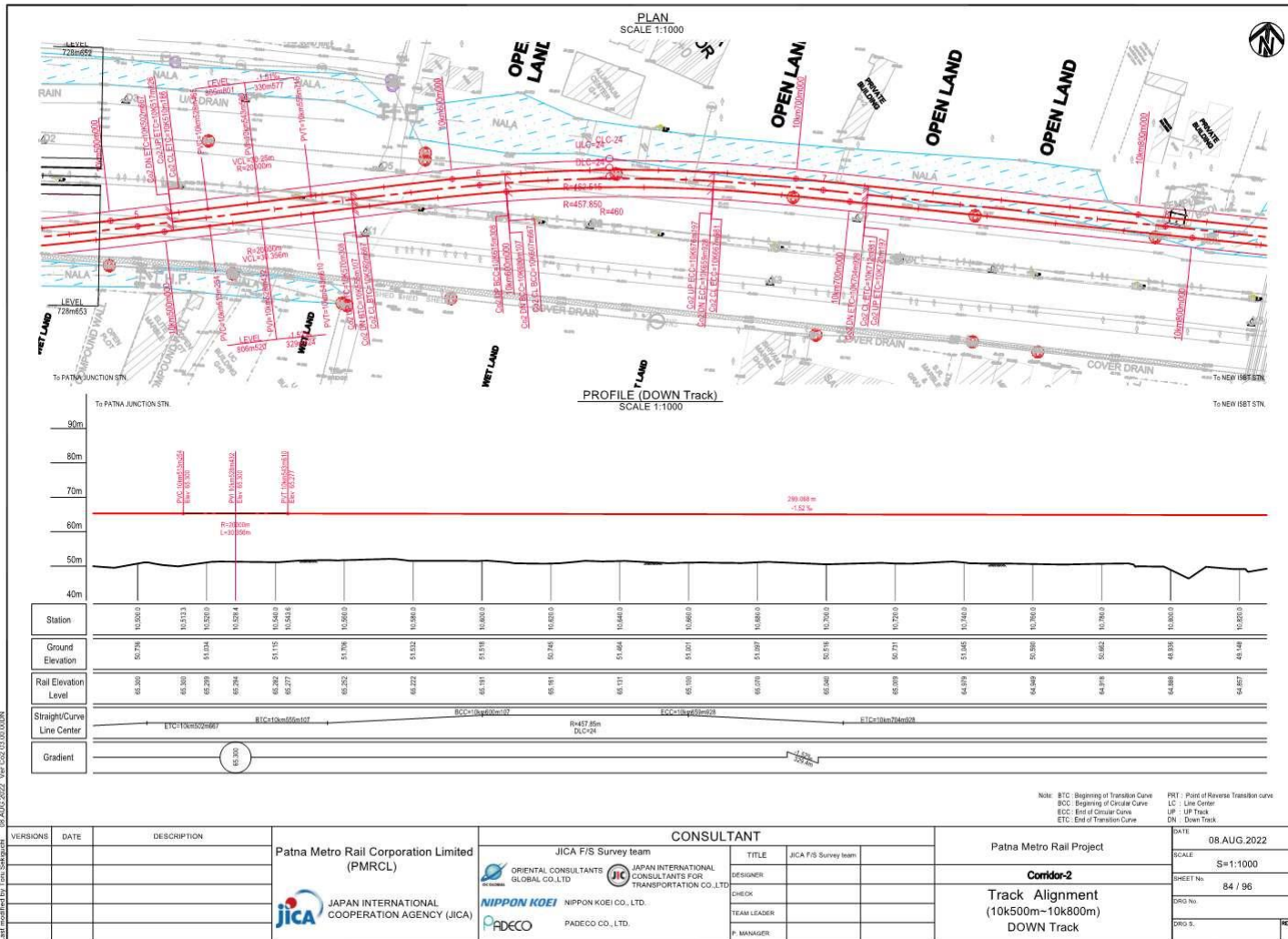
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Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
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 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: Down Track



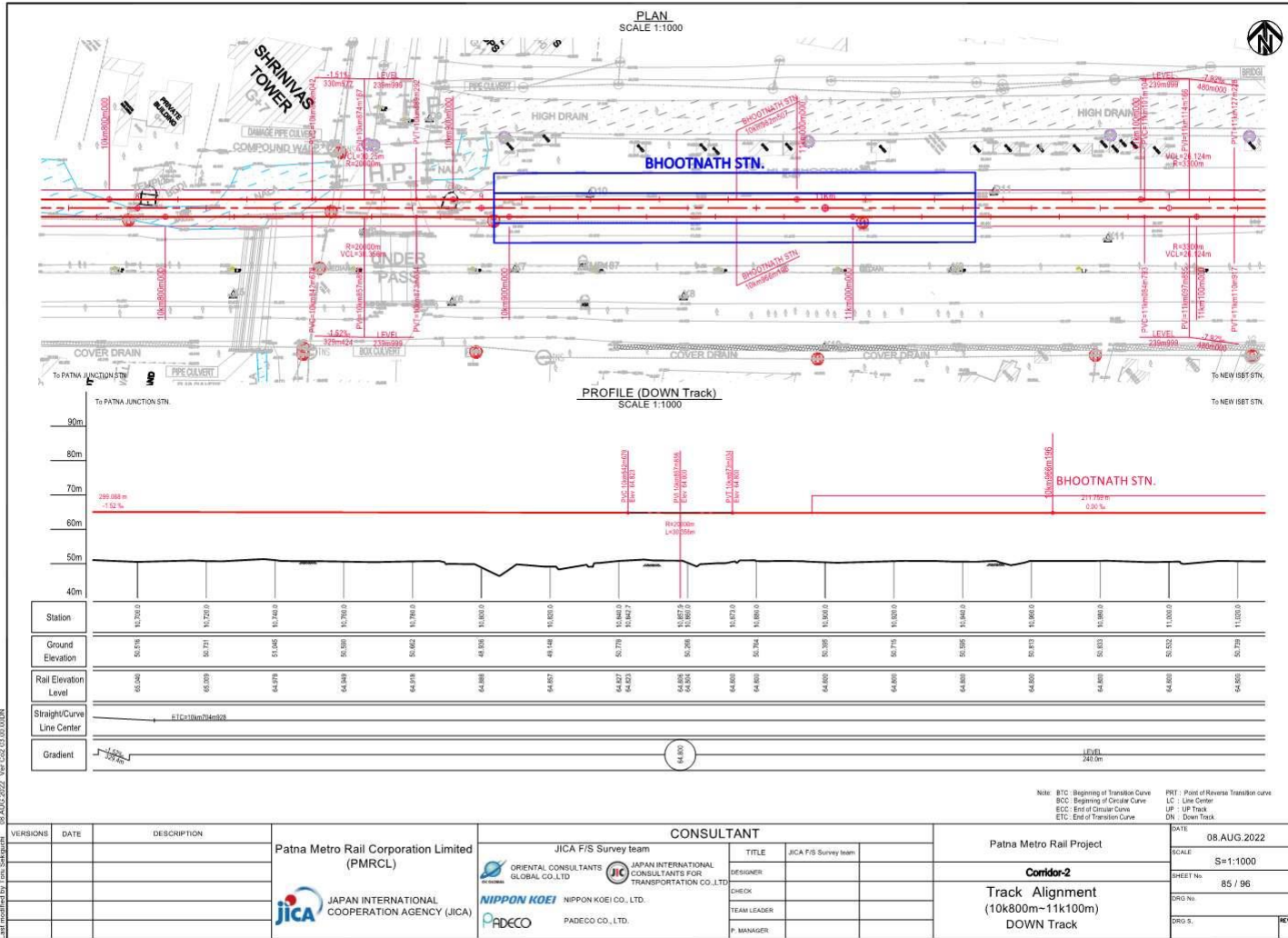
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Date modified by: Tomi Saitoh 08.AUG.2022 Ver: 02.01.00.000N

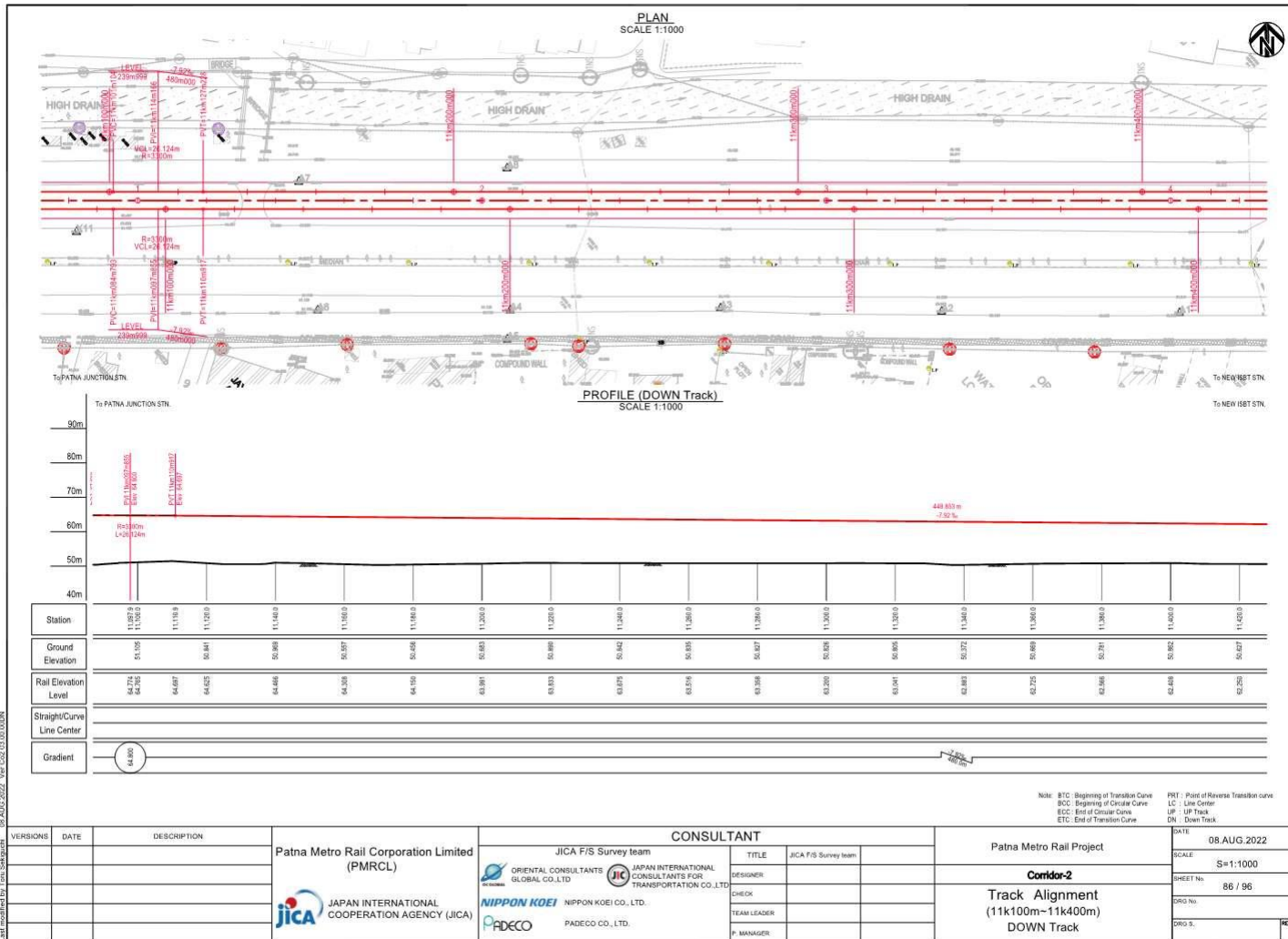




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			JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		ORIENTAL CONSULTANTS GLOBAL CO.LTD		SCALE: S=1:1000
					JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO.LTD		SHEET No: 85 / 96
					NIPPON KOEI CO., LTD.		DRG No:
					PADECO CO., LTD.		DRG S:
					TITLE: JICA F/S Survey team		REV
					DESIGNER:		
					CHECK:		
					TEAM LEADER:		
					P. MANAGER:		
					Patna Metro Rail Project		
					Corridor-2		
					Track Alignment (10k800m~11k100m)		
					DOWN Track		

Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: Down Track

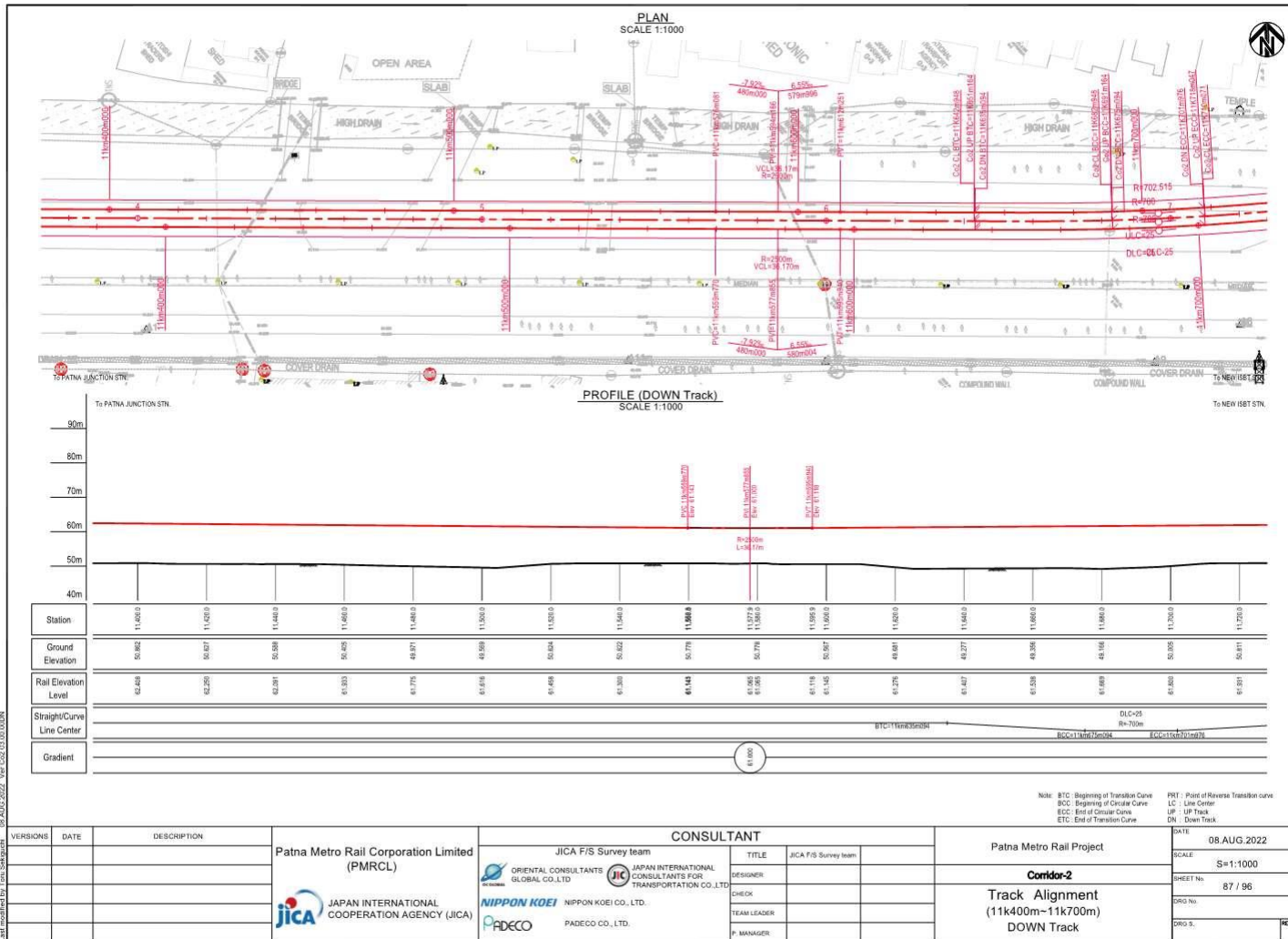


Last modified by: Tomi Saegusa 08 AUG 2022 Ver: 02.01.00.000N

VERSIONS	DATE	DESCRIPTION

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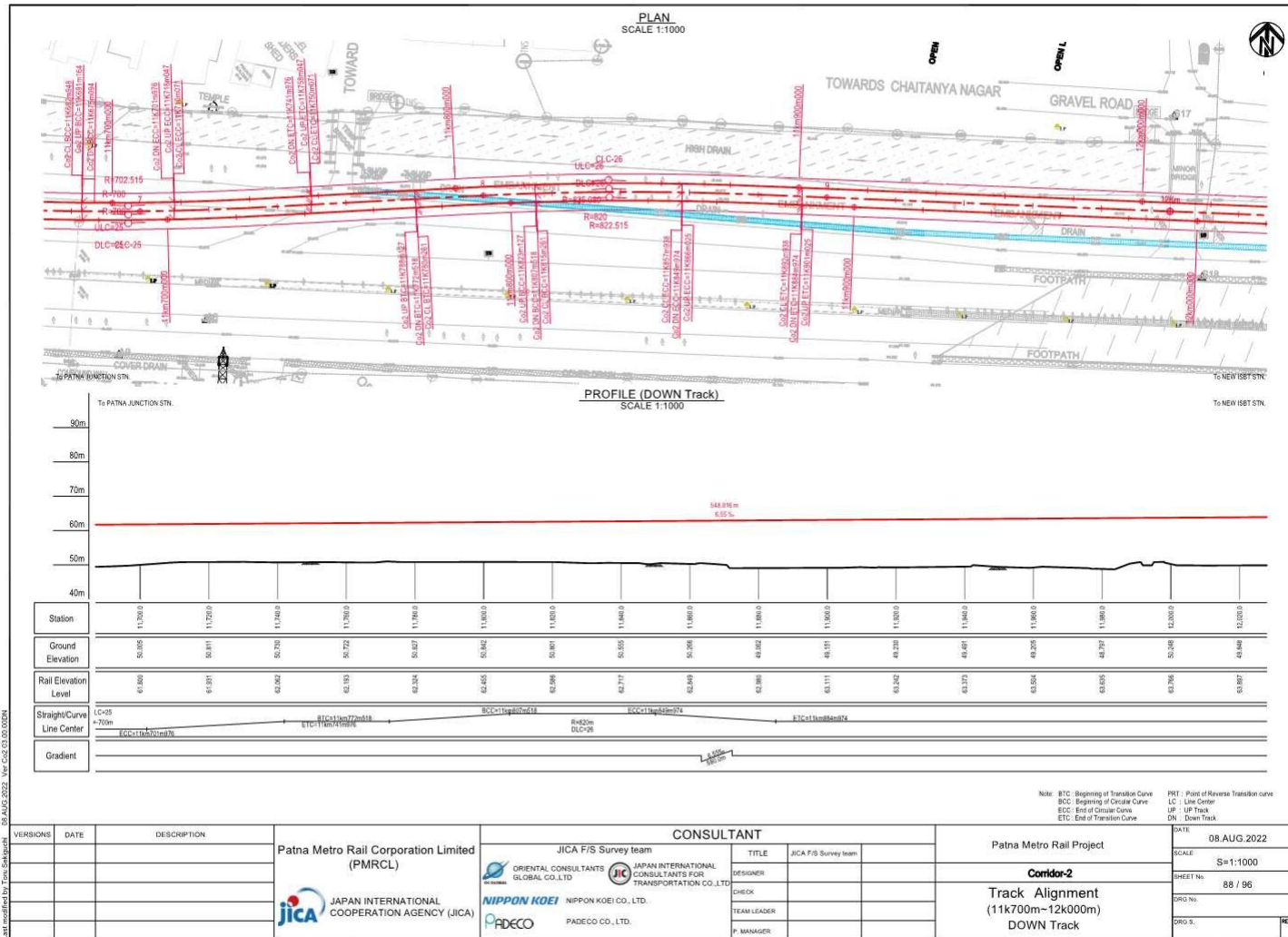
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 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: Down Track



Date modified by: Tomi Saegusa 08 AUG 2022 Ver: 02.00.000N

VERSIONS	DATE	DESCRIPTION	CONSULTANT				Patna Metro Rail Project		DATE	08 AUG 2022
			<b>Patna Metro Rail Corporation Limited (PMRCL)</b> JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		<b>JICA F/S Survey team</b> ORIENTAL CONSULTANTS GLOBAL CO. LTD NIPPON KOEI CO., LTD. PAIDECO CO., LTD.		<b>Corridor-2</b> <b>Track Alignment</b> (11k400m~11k700m) <b>DOWN Track</b>		SCALE	S=1:1000
					TITLE: JICA F/S Survey team DESIGNER: CHECK: TEAM LEADER: P. MANAGER:				SHEET No.	87 / 96
									DRG No.	
									DRG S.	REV

Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 UP: UP Track  
 DN: Down Track

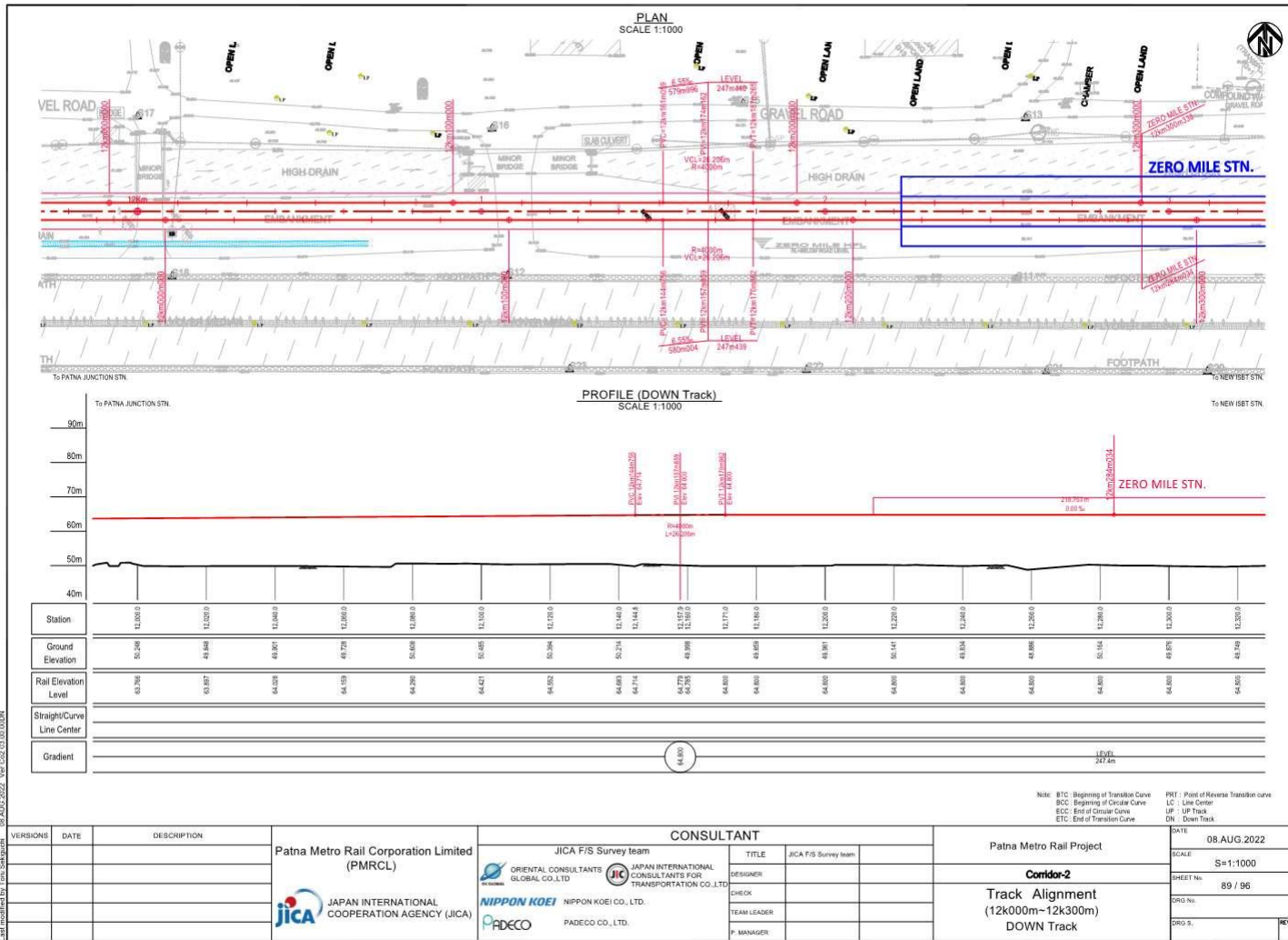


Last modified by: Tom Saeguchi 09 AUG 2012 10:02:00 AM

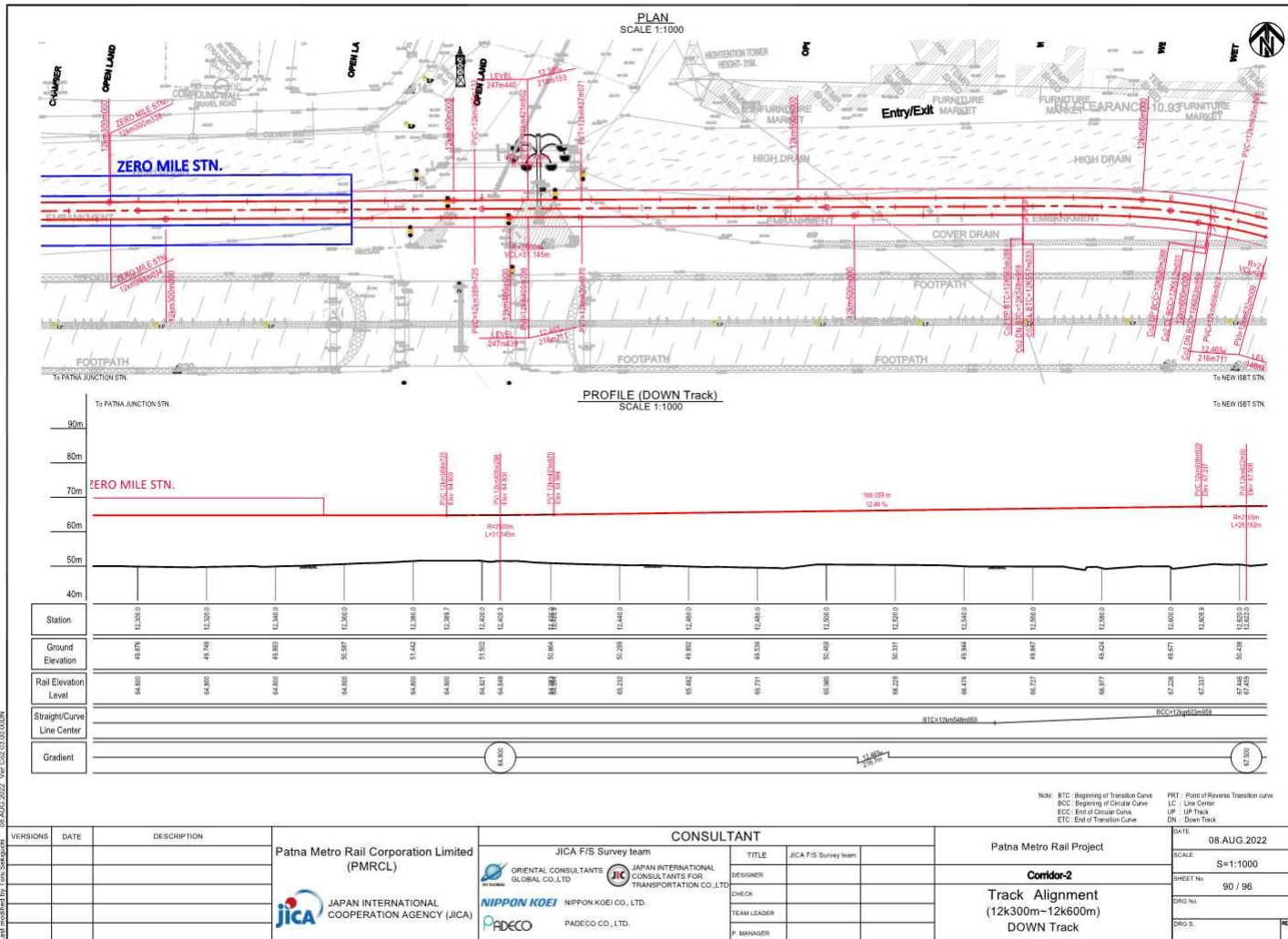
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	Patna Metro Rail Project Corridor-2 Track Alignment (11k700m~12k000m) DOWN Track		DATE: 08.AUG.2022 SCALE: S=1:1000 SHEET No: 88 / 96 DRO No: DRO S:	

Note: BTC: Beginning of Transition Curve BCC: Beginning of Circular Curve ECC: End of Circular Curve ETC: End of Transition Curve	PRT: Point of Reverse Transition curve LC: Line Center UP: UP Track DN: Down Track
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Date modified by: Tomi Saeguchi 08.AUG.2022 Ver. 02.01.00.000N



Date modified by: Tom Saitoh 08 AUG 2022 Ver: 02.01.00.000N

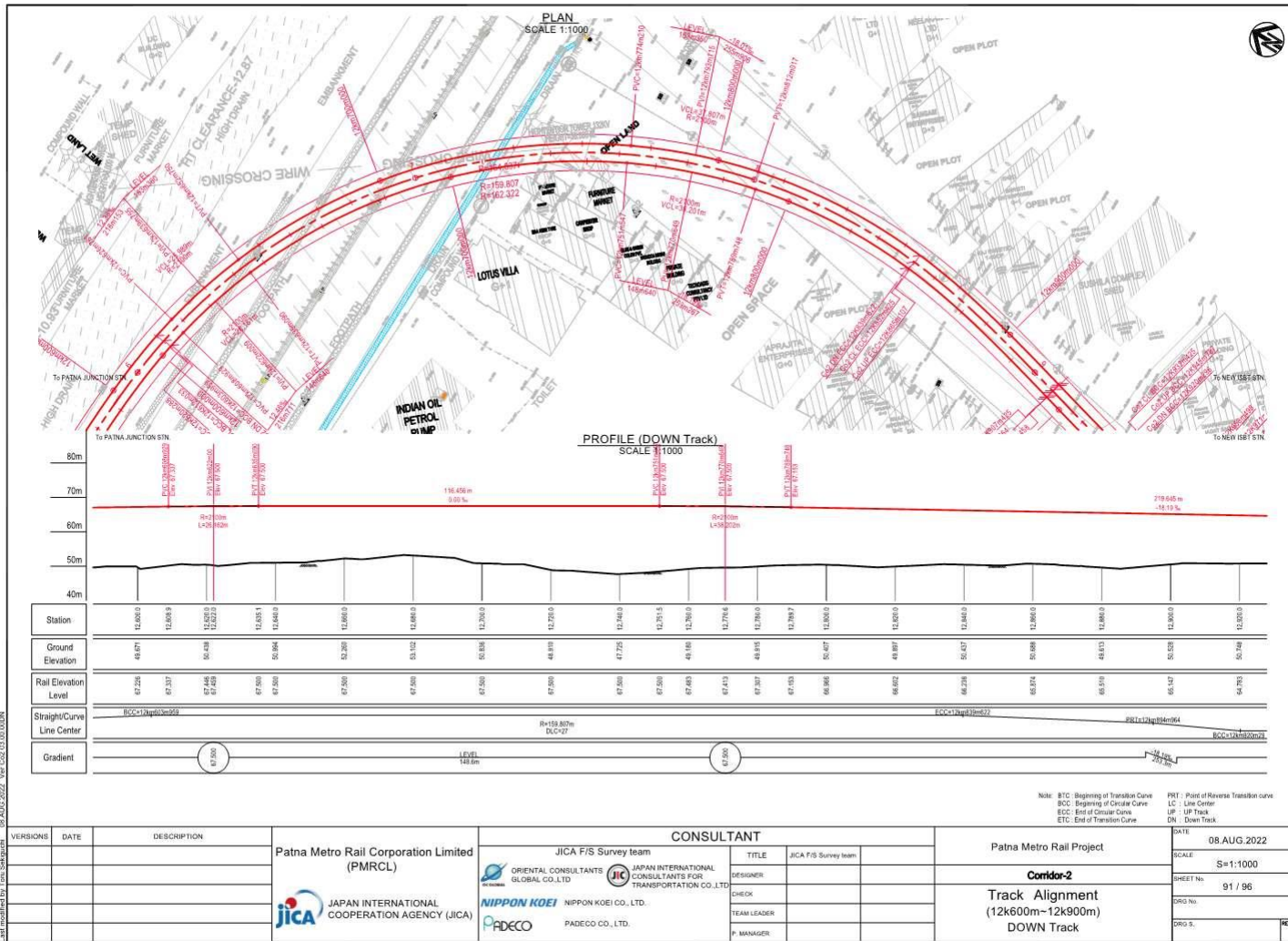
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	JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO. LTD.		

Patna Metro Rail Project <b>Corridor-2</b> Track Alignment (12k300m~12k600m) DOWN Track
--

DATE	08 AUG 2022
SCALE	S=1:1000
SHEET No.	90 / 96
DRG No.	
DRG S.	
REV	

Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
 PRT: Point of Reverse Transition curve  
 LC: Line Center  
 LUP: LUP Track  
 DN: Down Track

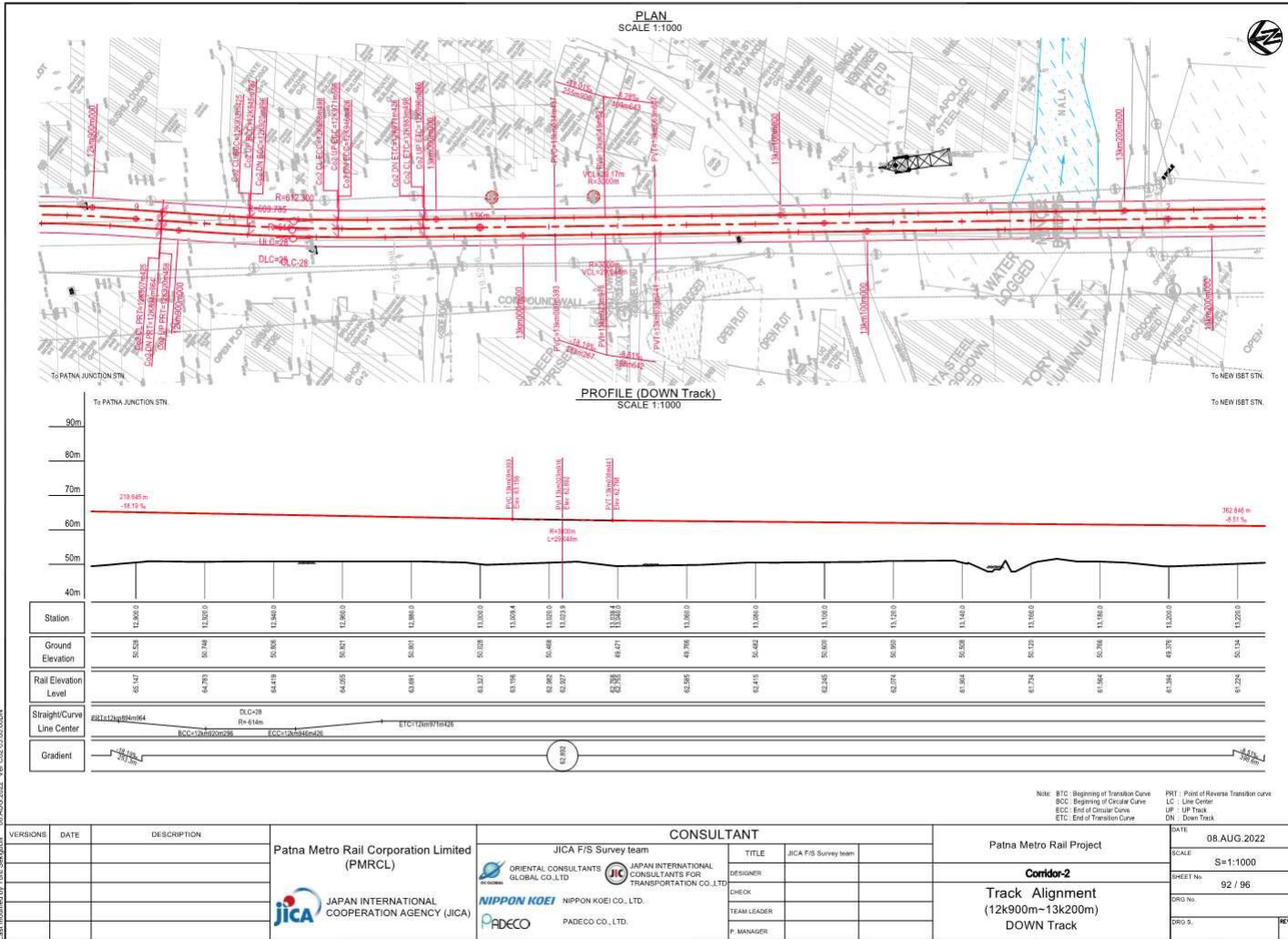


Date modified by: Tom Satohara 09 AUG 2022 Ver: 02.00.00.0004

Note: BTC: Beginning of Transition Curve  
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 PRT: Point of Reverse Transition curve  
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 UP: UP Track  
 DN: Down Track

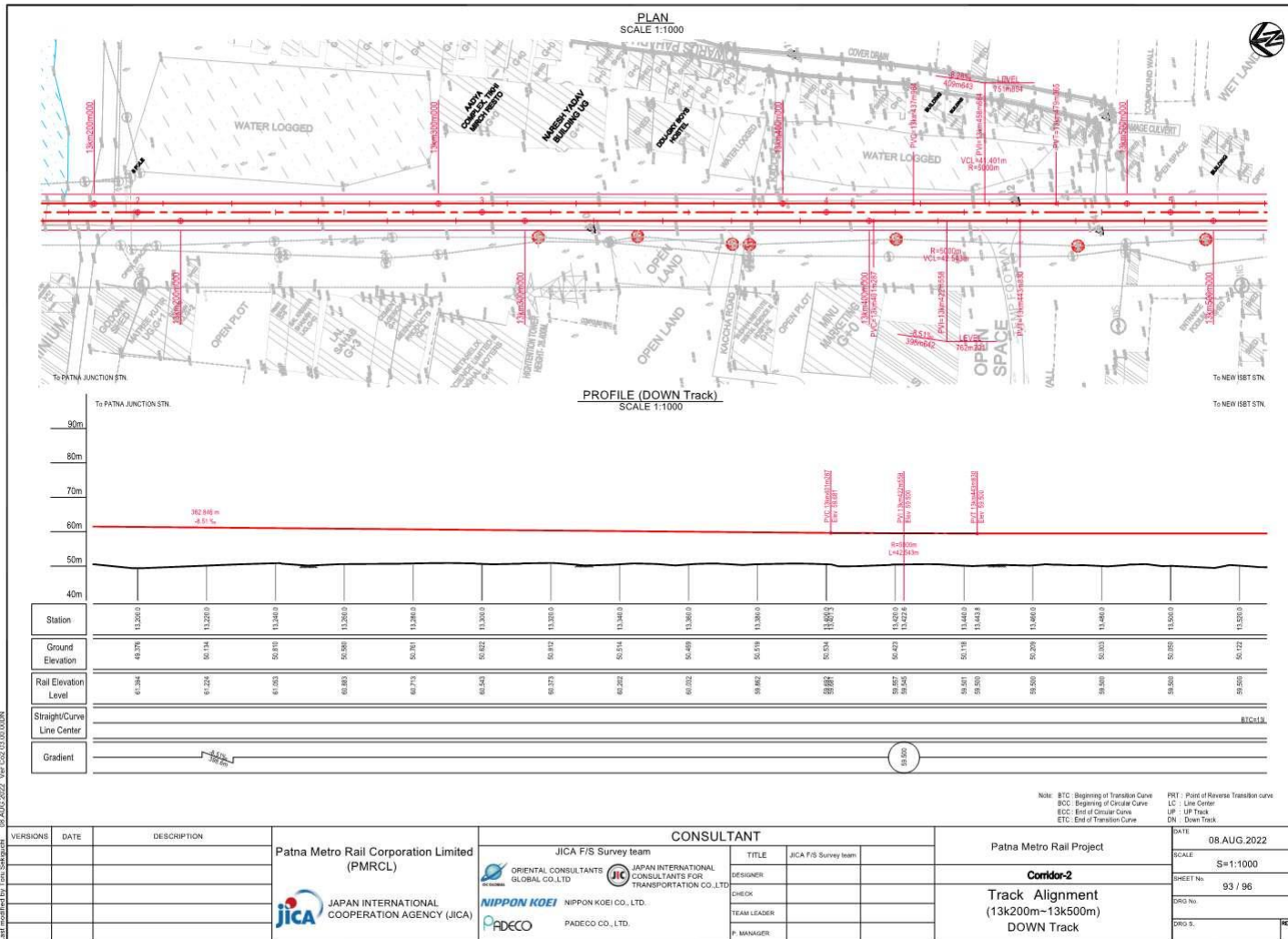
VERSIONS	DATE	DESCRIPTION

Patna Metro Rail Corporation Limited (PMRCL) JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	CONSULTANT JICA F/S Survey team ORIENTAL CONSULTANTS GLOBAL CO. LTD. JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO. LTD. NIPPON KOEI CO., LTD. PAIDECO CO., LTD.		TITLE: JICA F/S Survey team
	Patna Metro Rail Project Corridor-2 Track Alignment (12k600m~12k900m) DOWN Track		DATE: 08 AUG 2022 SCALE: S=1:1000 SHEET No: 91 / 96 DRG No: DRG S: REV



Date modified by: Tomi Saitoh / 08.AUG.2022 / Ver. 02.01.00.000N

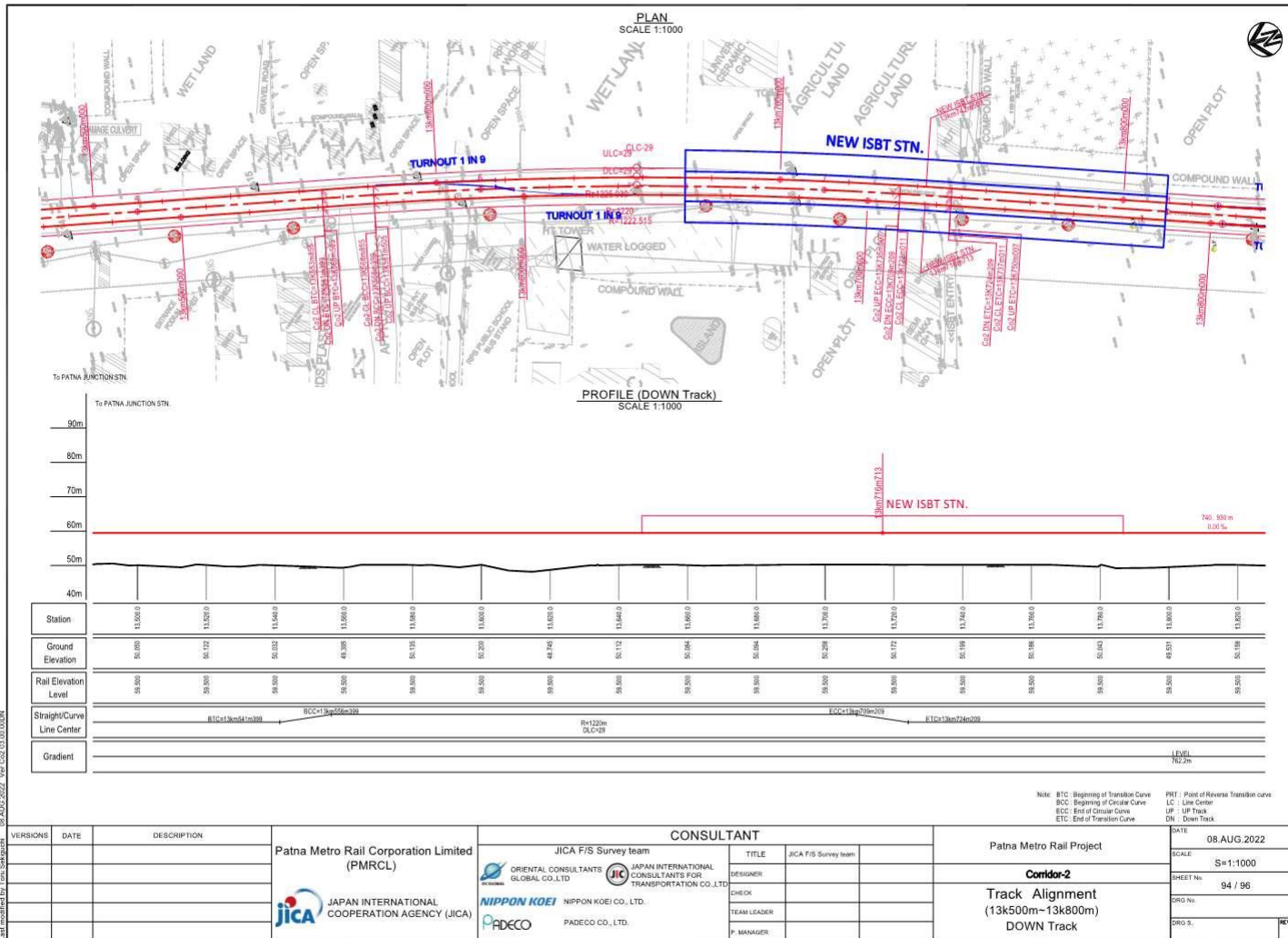




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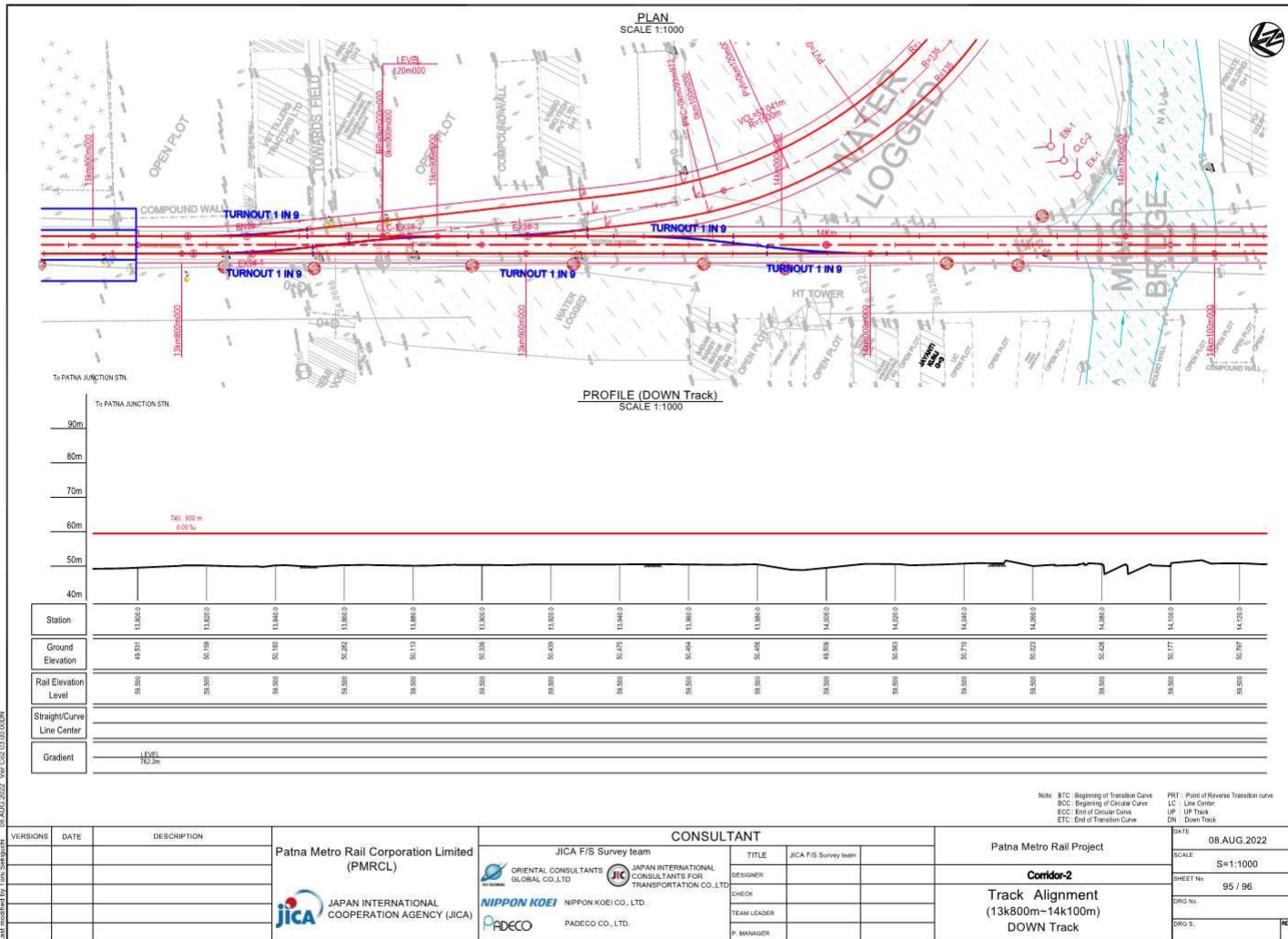
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					TITLE: JICA F/S Survey team DESIGNER: CHECK: TEAM LEADER: P. MANAGER:		SCALE: S=1:1000 SHEET No: 93 / 96 DRO No: DRO S:		REV

Note: BTc: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve  
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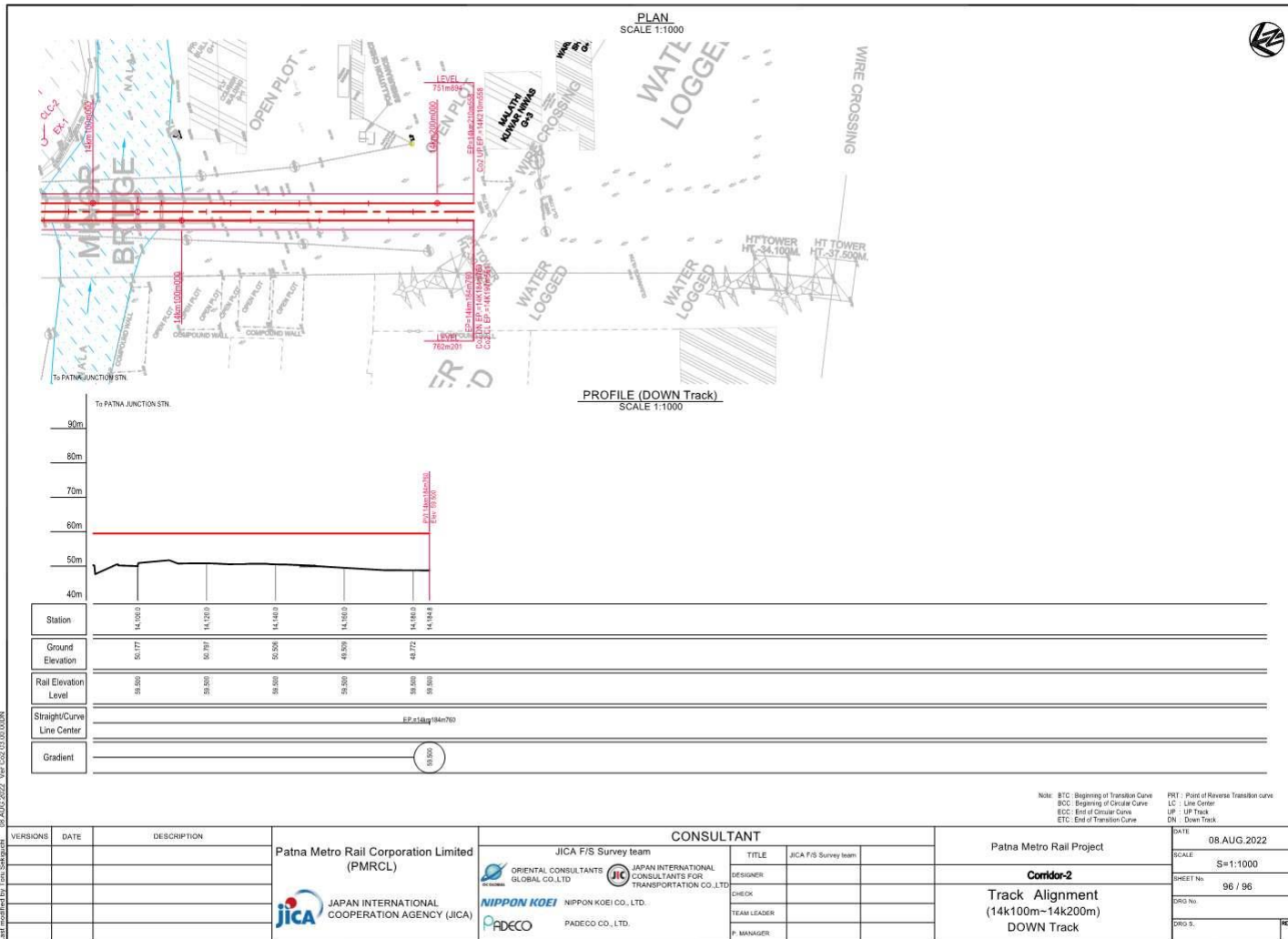
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								DRG No:
								DRG S:
								REV



Last modified by: Tomi Saeguchi 08 AUG 2022 Ver: 02.00.000N

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			Patna Metro Rail Corporation Limited (PMRCL) JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	JICA F/S Survey team ORIENTAL CONSULTANTS GLOBAL CO. LTD JAPAN INTERNATIONAL CONSULTANTS FOR TRANSPORTATION CO. LTD. NIPPON KOEI CO., LTD. PADECO CO., LTD.		TITLE: JICA F/S Survey team DESIGNER: CHECK: TEAM LEADER: P. MANAGER:	Patna Metro Rail Project <b>Corridor-2</b> Track Alignment (13k800m~14k100m) DOWN Track	08.AUG.2022	S=1:1000	95 / 96		

Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
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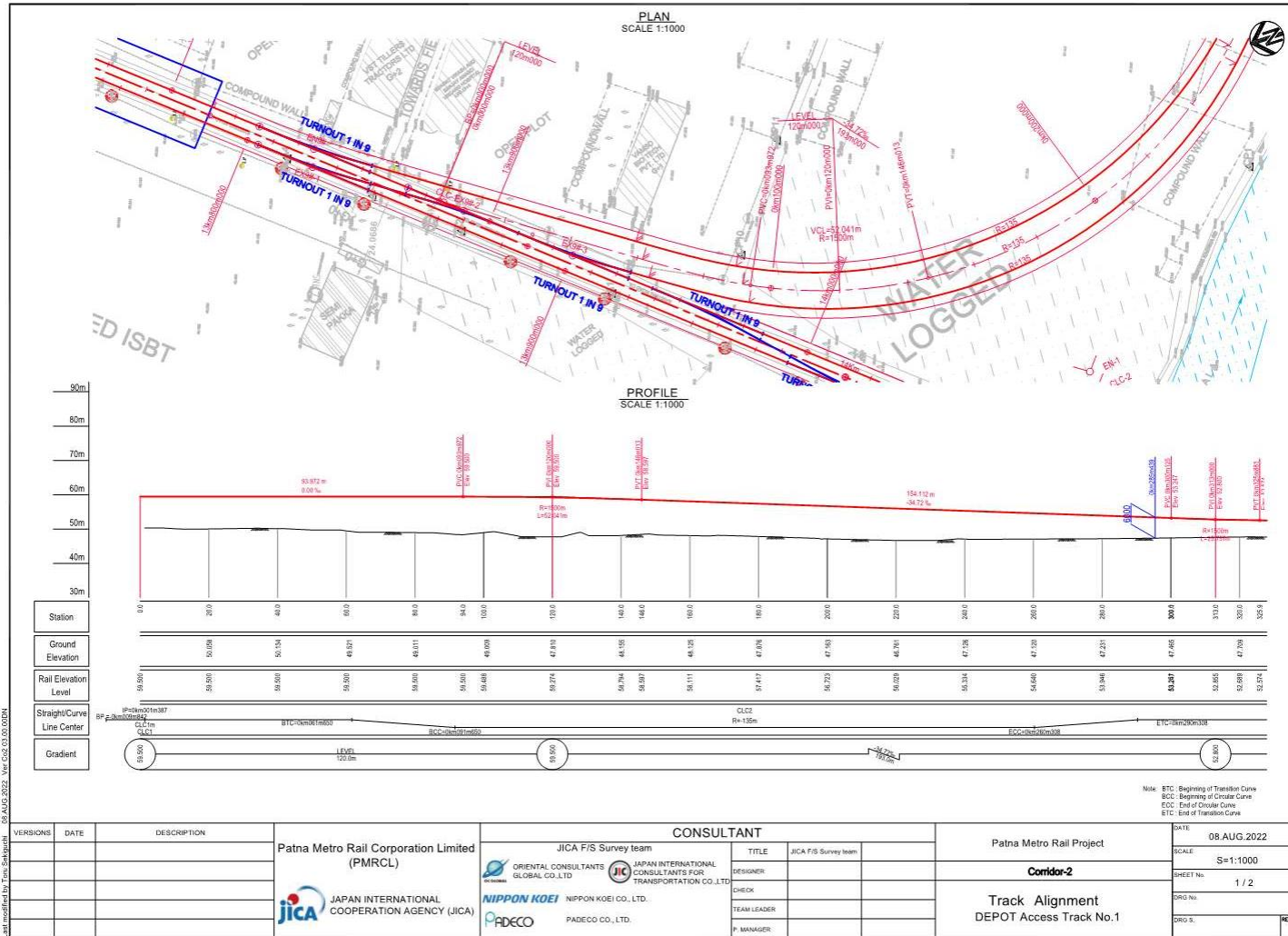


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				NIPPON KOEI CO., LTD. PAIDECO CO., LTD.	TITLE: JICA F/S Survey team DESIGNER: CHECK: TEAM LEADER: P. MANAGER:	Patna Metro Rail Project <b>Corridor-2</b> Track Alignment (14k100m~14k200m) DOWN Track						

Note: BTC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
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 UP: UP Track  
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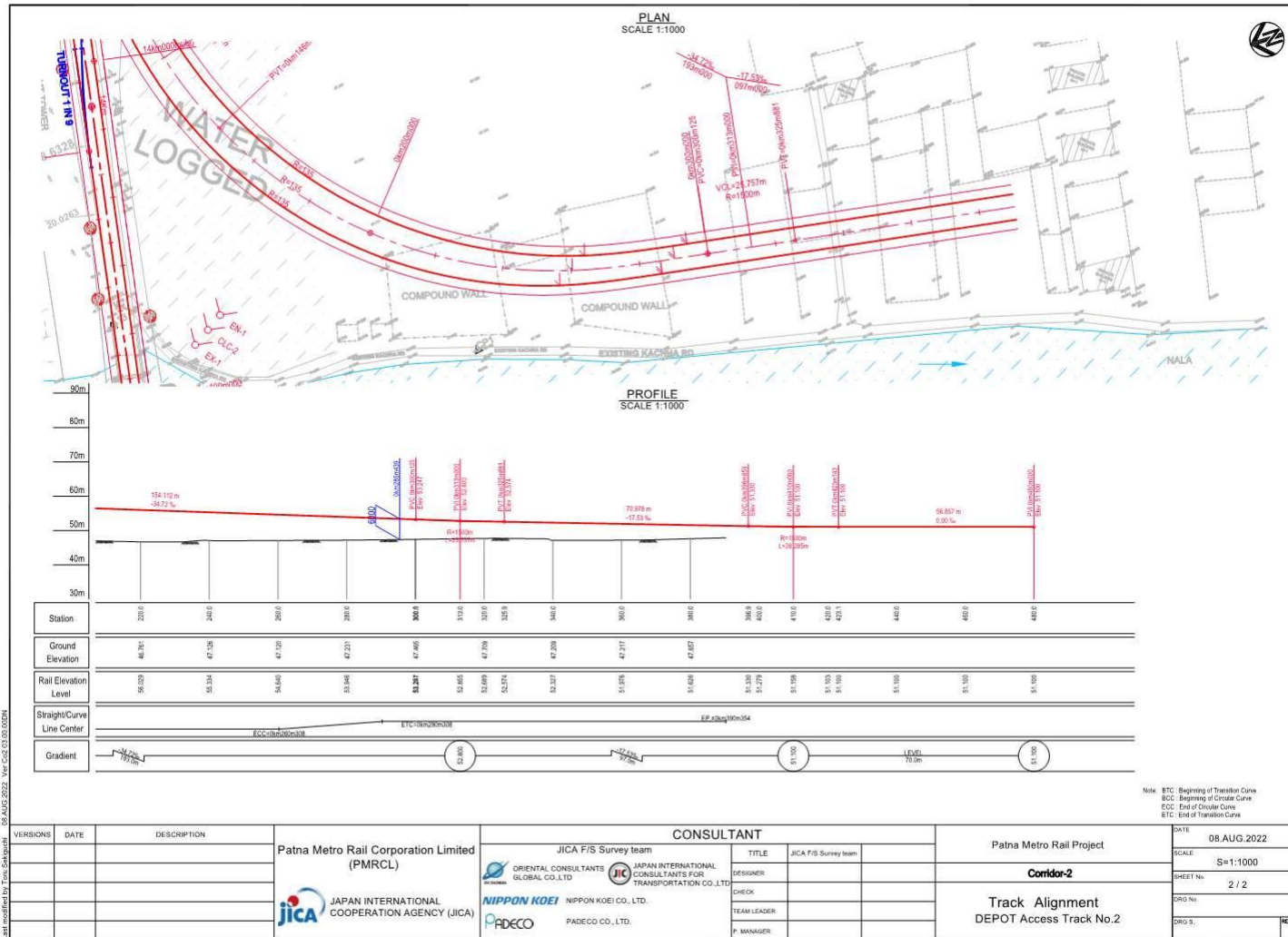
(6) Corridor2 Alignment 03 00 DEPOT Access



Last modified by: Tm. Subashini 08 AUG 2022 Ver: 02 of 02.00EN

Note: ETC: Beginning of Transition Curve  
 BCC: Beginning of Circular Curve  
 ECC: End of Circular Curve  
 ETC: End of Transition Curve

VERSIONS	DATE	DESCRIPTION	CONSULTANT		Patna Metro Rail Project		DATE
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							DWG No.
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							REV

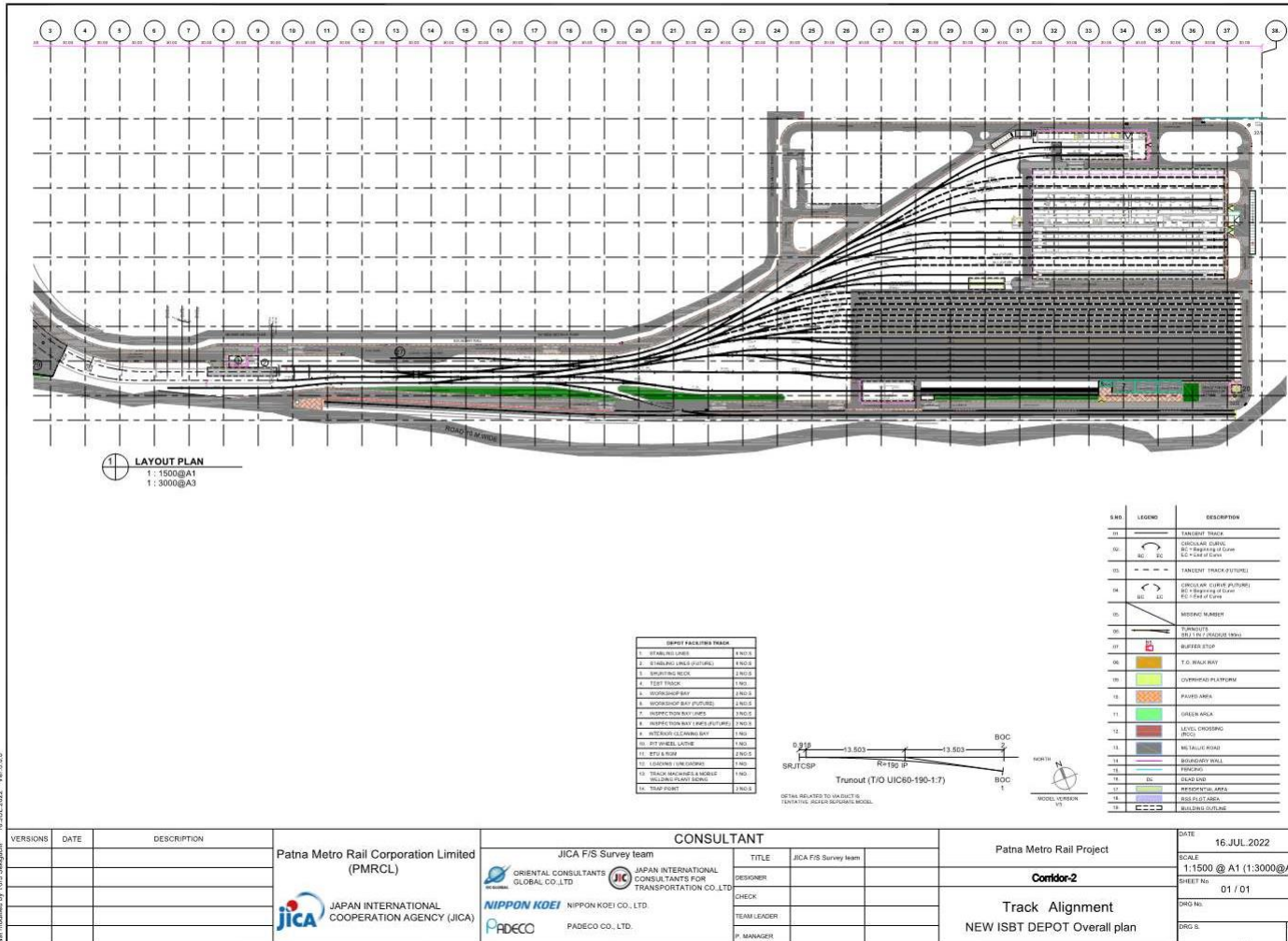


Last modified by: Tomi Saeguchi 09 AUG 2022 Ver: 02.00.00.00

Note: BTC: Beginning of Transition Curve  
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 ETC: End of Transition Curve

VERSIONS	DATE	DESCRIPTION	CONSULTANT		Patna Metro Rail Project		DATE
			Patna Metro Rail Corporation Limited (PMRCL) JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		JICA F/S Survey team ORIENTAL CONSULTANTS GLOBAL CO. LTD NIPPON KOEI CO., LTD. PAIDECO CO., LTD.		08.AUG.2022
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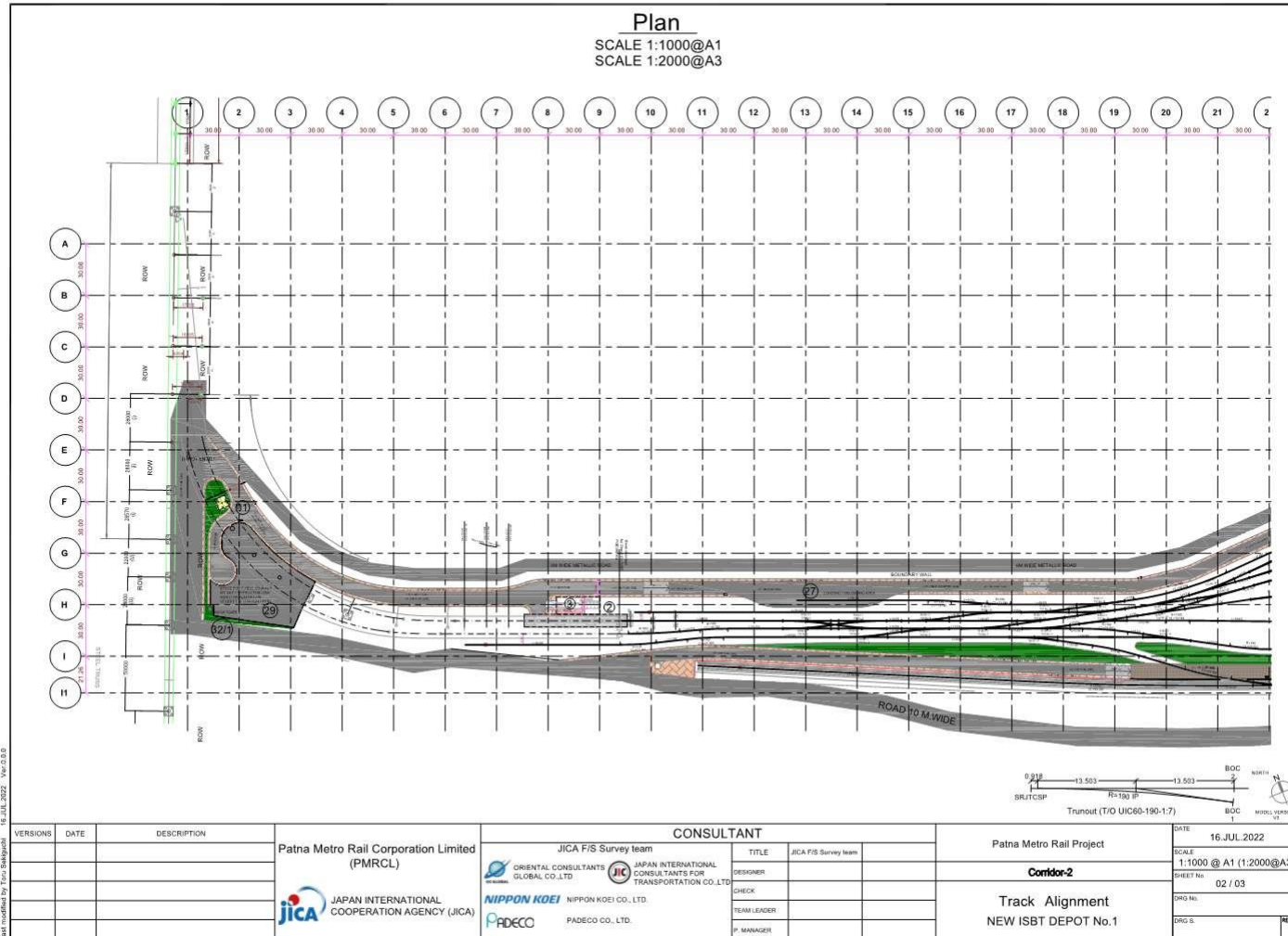
(7) Depot Improved Alignment



Issued on: 16 Jul 2022  
 Prepared by: JICA/Survey/Team/1

VERSIONS	DATE	DESCRIPTION	CONSULTANT				DATE
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							SHEET No 01 / 01
							DRG No NEW ISBT DEPOT Overall plan
							DRG L REV

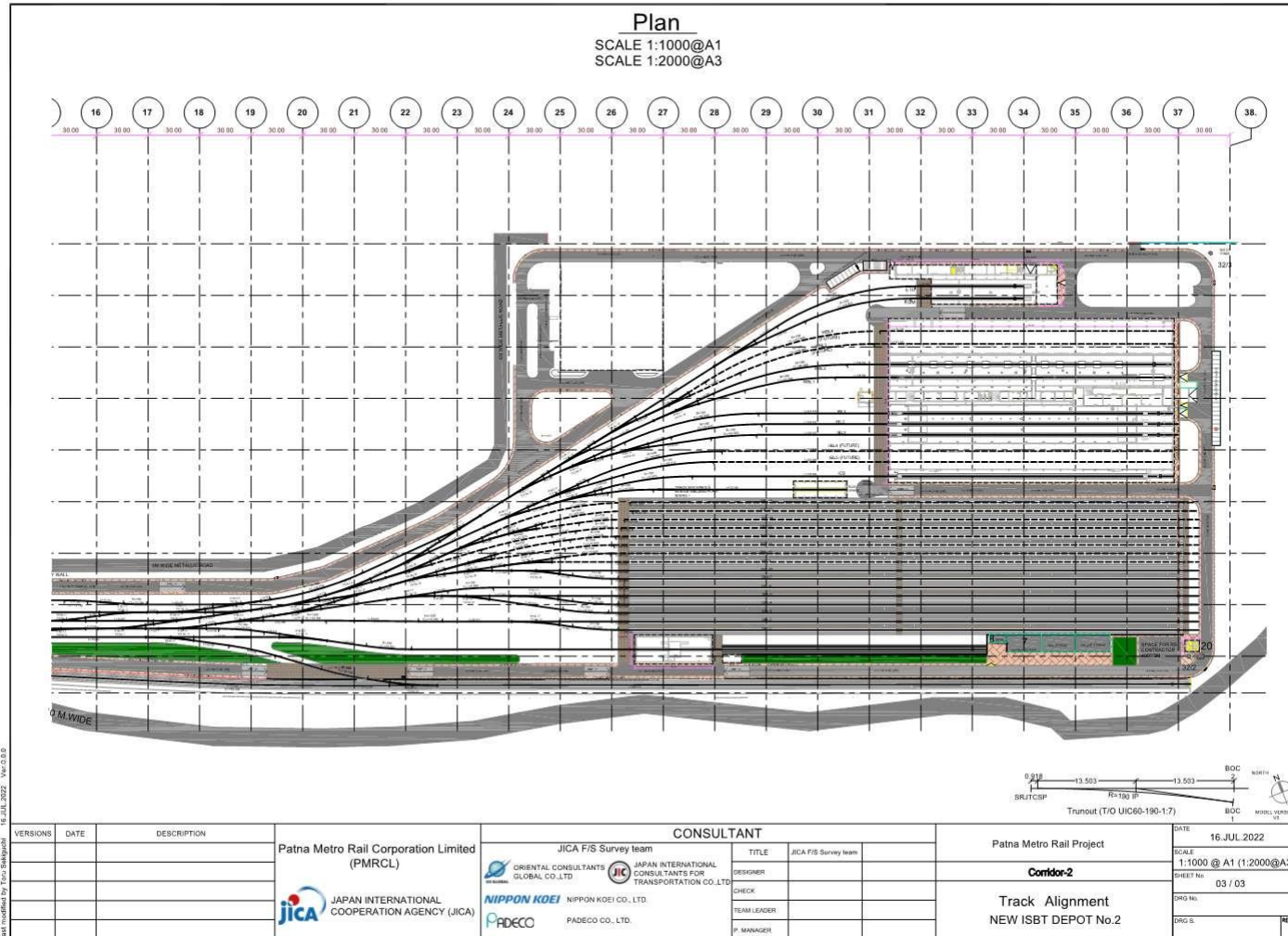
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Last modified by: Taro Saitoh/16 Jul 2022 Ver: 2.0.0

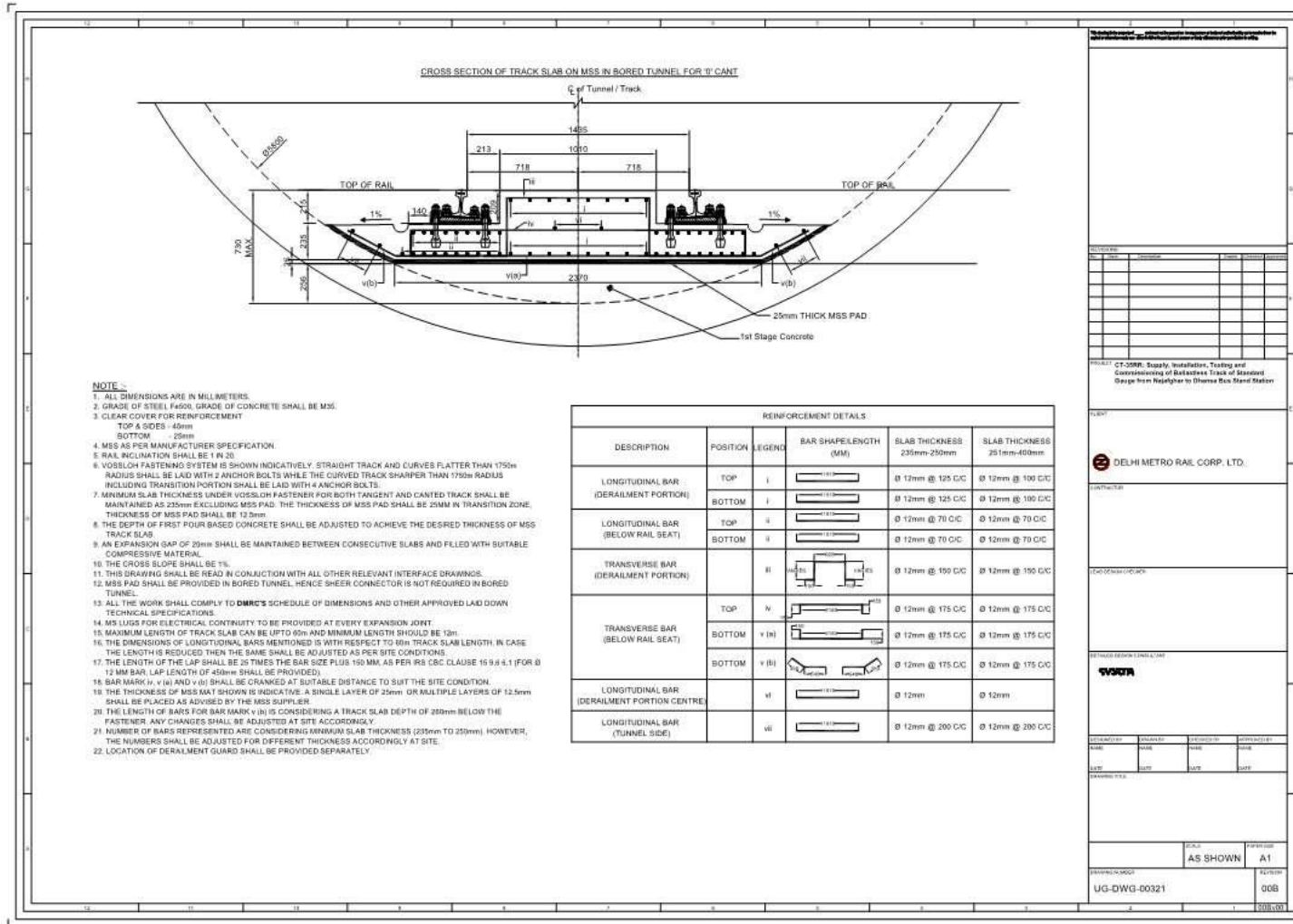


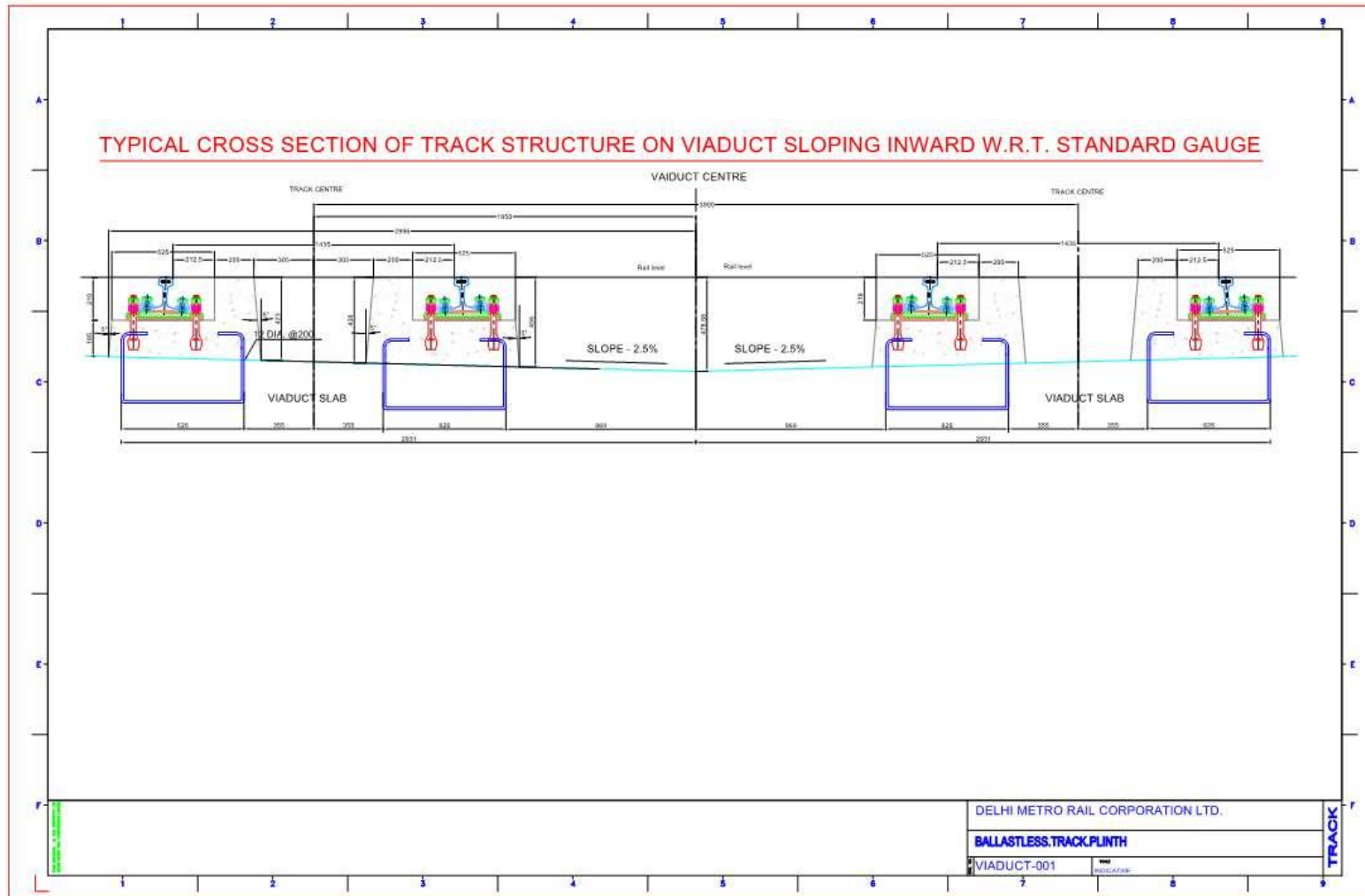
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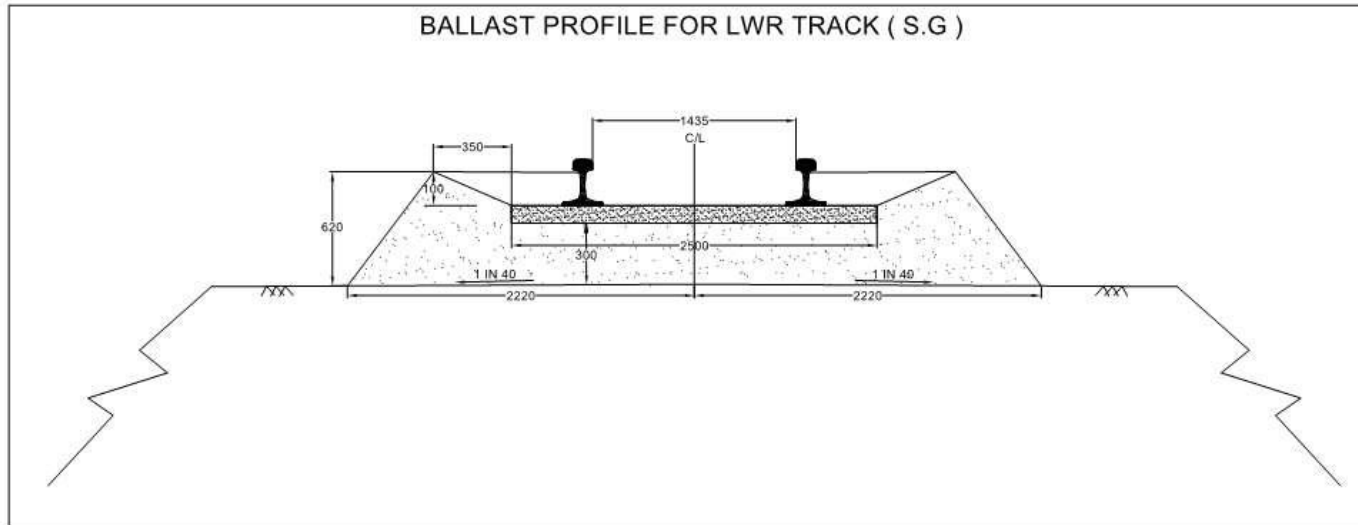


Last modified by: Taro Saitohashi    16 JUL 2022    Ver: 2.0.0

# Attachment 6. Track Tunnel





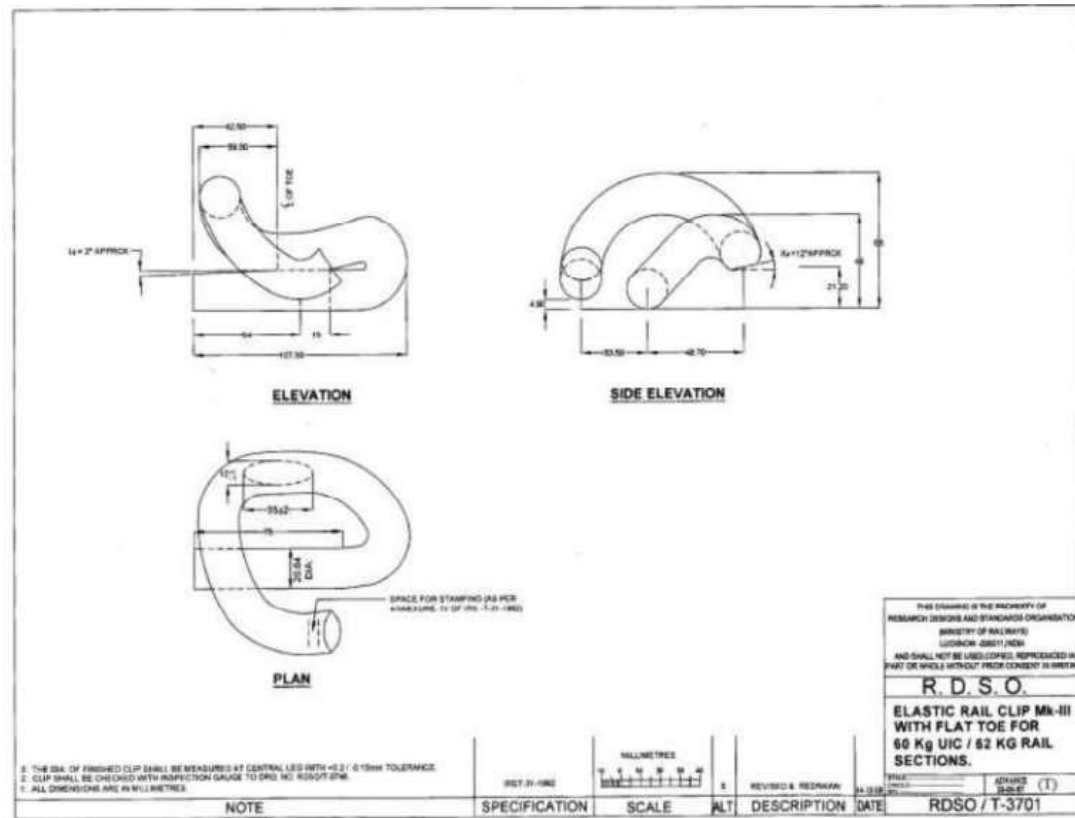


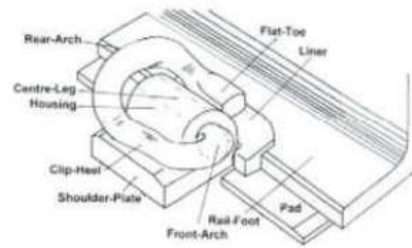
**GENERAL NOTES:**  
 1. ALL DIMENSIONS ARE IN MILLIMETERS.  
 2. ALL DIMENSIONS AND TOLERANCES ARE AS SHOWN.  
 3. ANY DISCREPANCIES MUST BE REPORTED TO THE OFFICE OF THE  
 CONSULTANT ENGINEER IMMEDIATELY UPON DISCOVERY.  
 4. THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT  
 SPECIFICATIONS, STANDARDS, DRAWINGS & PRELIMINARY  
 REPORTS AND TECHNICAL MEMORANDUMS.

DRAWN BY: [Name]  
 CHECKED BY: [Name]  
 DATE: [Date]

This drawing shall not be either loaned, copied or otherwise reproduced in whole or in part for any purpose without the prior written permission of DMRC.	
DELHI METRO RAIL CORPORATION LTD.	
<b>BALLASTED TRACK</b>	
<b>BALLAST PROFILE</b>	DATE: [Date]

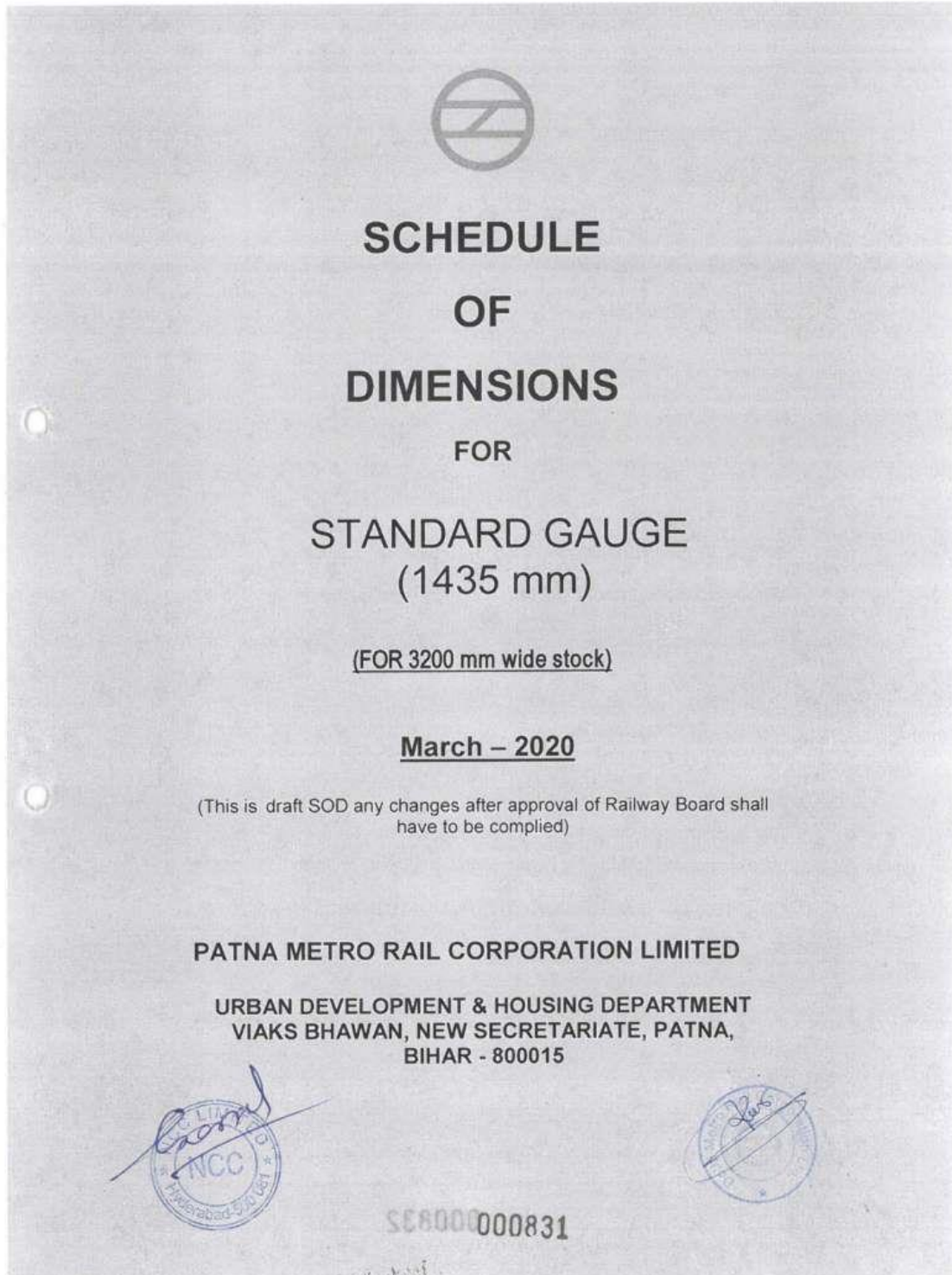
TRACK





**Attachment 7. Outline Design Specifications For PHASE-IV  
(REVISION-1)(N/A)**

**Attachment 8. Schedule of Dimensions for Standard Gauge  
(1435mm) (For 3200 mm wide stock)**





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**APPENDIX**

APPENDIX NO.	DESCRIPTION	PAGE NO.
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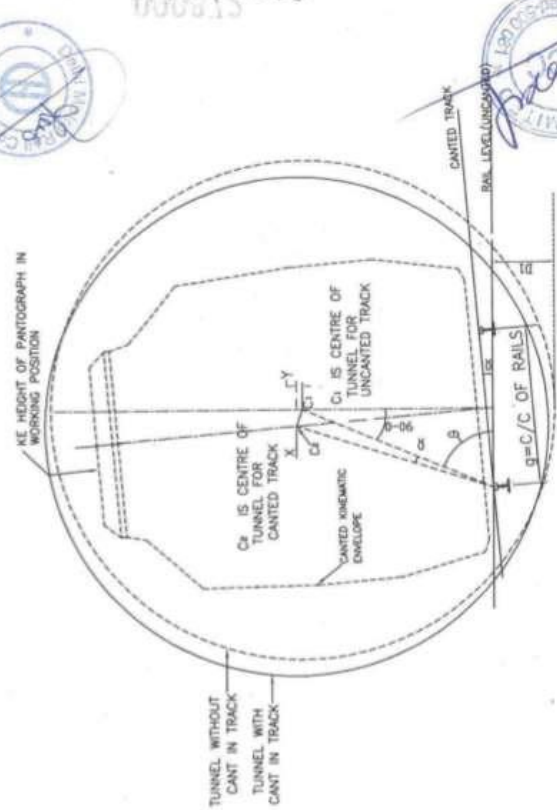


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- NOTES:
1. THE CIRCULAR TUNNEL IS ROTATED ABOUT CENTRE OF TOP OF INNER RAIL(GRADE RAIL) FOR CANT.
  2. FOR VALUES OF SHIFT 'X' AND 'Y' FOR VARIOUS VALUES OF CANT REFER TO APPENDIX-4
  3. REFERENCE PARA 1.7.1(B)-b & 1.7.2(B)-b



$$\tan \theta = (r - D_1) / (g/2)$$

$$\theta = \tan^{-1} [(r - D_1) / (g/2)]$$

$$\sin \alpha = \text{cant} / g$$

$$\alpha = \sin^{-1} (\text{cant} / g)$$

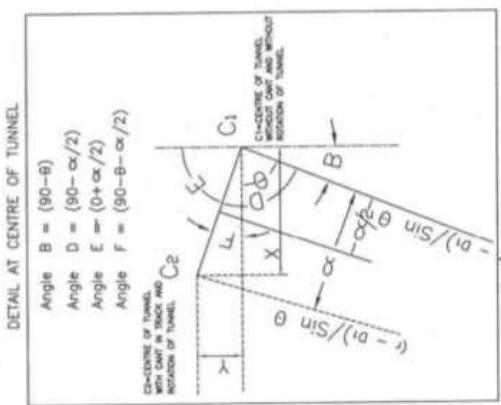
$$\text{Chord } C_1, C_2 = 2 \times [(r - D_1) / \sin \theta] \times (\sin \alpha / 2)$$

$$X = C_1 \times \cos (90 - \theta - \alpha / 2)$$

$$Y = 2 \times [(r - D_1) / \sin \theta] \times (\sin \alpha / 2) \times \cos (90 - \theta - \alpha / 2)$$

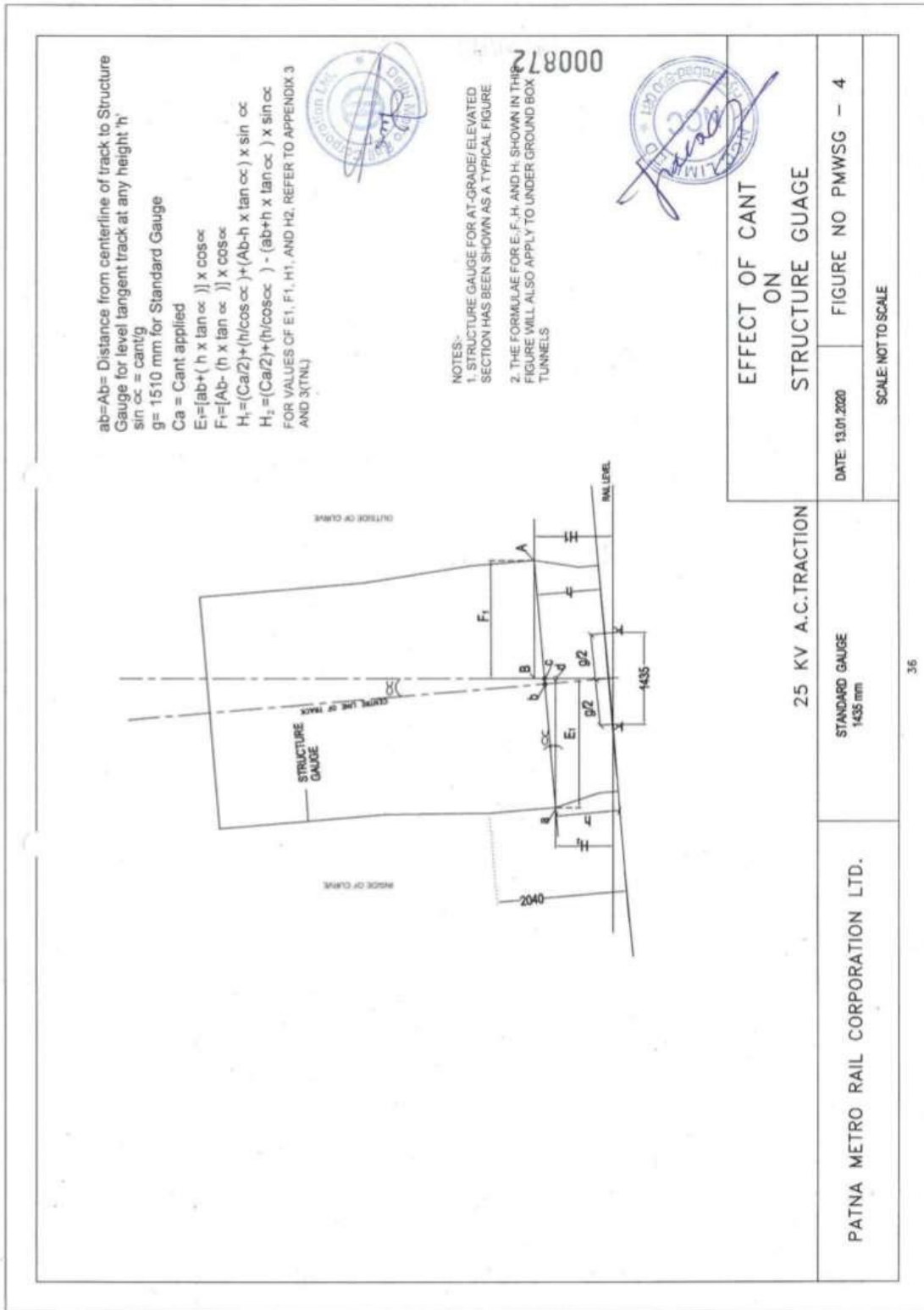
$$Y = 2 \times [(r - D_1) / \sin \theta] \times (\sin \alpha / 2) \times \sin (90 - \theta - \alpha / 2)$$

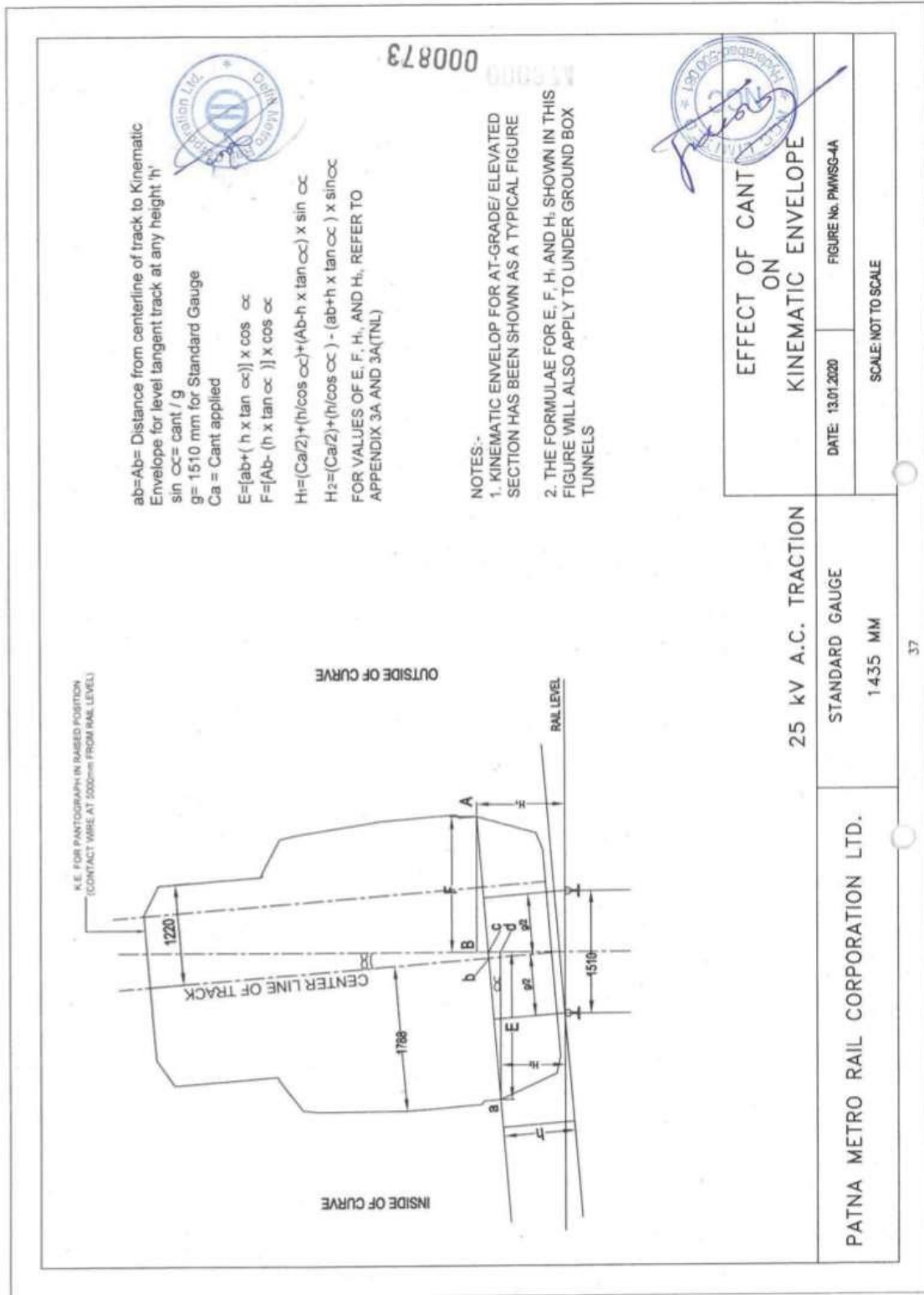
Where 'r' is internal radius of tunnel,  
 D1 = depth from Rail level to invert of tunnel  
 g = distance between centres of rails  
 = 1510 mm for STANDARD GAUGE with 60 Kg (UIC) rails



SHIFT OF THE CENTRE OF CIRCULAR TUNNEL DUE TO ROTATION OF TUNNEL FOR CANT	
DATE: 13.01.2020	FIGURE No. PMWSG-3
25 kV A.C. TRACTION	STANDARD GAUGE 1435 mm
SCALE: NOT TO SCALE	

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ab=Ab= Distance from centerline of track to Kinematic Envelope for level tangent track at any height 'h'

$\sin \alpha = \text{cant} / g$

g= 1510 mm for Standard Gauge

Ca = Cant applied

$E = [ab + (h \times \tan \alpha)] \times \cos \alpha$

$F = [Ab - (h \times \tan \alpha)] \times \cos \alpha$

$H_1 = (Ca/2) + (h/\cos \alpha) + (Ab - h \times \tan \alpha) \times \sin \alpha$

$H_2 = (Ca/2) + (h/\cos \alpha) - (ab + h \times \tan \alpha) \times \sin \alpha$

FOR VALUES OF E, F, H<sub>1</sub>, AND H<sub>2</sub>, REFER TO APPENDIX 3A AND 3A(TNL)

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NOTES:-

1. KINEMATIC ENVELOPE FOR AT-GRADE/ ELEVATED SECTION HAS BEEN SHOWN AS A TYPICAL FIGURE
2. THE FORMULAE FOR E, F, H<sub>1</sub>, AND H<sub>2</sub> SHOWN IN THIS FIGURE WILL ALSO APPLY TO UNDER GROUND BOX TUNNELS



EFFECT OF CANT ON KINEMATIC ENVELOPE

DATE: 13.01.2020

FIGURE No. PMMSG-4A

SCALE: NOT TO SCALE

25 KV A.C. TRACTION

STANDARD GAUGE

1435 MM

PATNA METRO RAIL CORPORATION LTD.