

POST TENSIONING FORMAT FOR PSC GIRDER

General information:

Name & Location of Bridge: Construction Of 301.00m Long PSC Girder Bridge Over the River Kartoa at Ch 4500 on Chatra GC-Gilabari Ghat Via Nischintobati Primary School Road, Road ID : 185764034		District: Rangpur	Upazila: Pirganj
Span/Girder Ref: Span-2 , Girder-4	Girder Length (m): 43m	Cable Ref. to be Stressed 01 of 04	
Girder Casting Date: 22-12-2025	Stressing Stage of Cable : 02	Jacking	End 1: L709046
Date of Tensioning: 08-01-2026		end Ref:	End 2: L709047

Design information:

Dia of Strand (mm): 15.24mm	No. of Strand Cable: 19 nos	Anchorage Brand: Decomate	UTS of Strand (N/mm2): 1860	M. of Elasticity, E (MPa): 197000
Area of Strand (mm2): 140	Area of Cable, A (mm2): 2660	Design Jacking Force P: 3750 Kn		
Design Elongation Each end (mm):	Design Elongation for Gripping Length (mm): N/A	Actual Gripping Length (mm): 560	Corrected Elongation for Grip Length δ(mm): 4.00	
Design Cable Slip (mm): 6mm	Design Conc. Strength during Tensioning (N/mm2): 36 MPa	Actual Conc. Strength at the time of Tensioning (N/mm2): MPa		

Stressing & Jack information:

Pump Model No. P1: 710570 P2: 710567	Pressure gauge Model: M1: MPC-237219E M2: MPC-256050C	Tensioning Ram Area (m2): TA1: TA2:	Blocking Ram Area (Cm2): BA1: BA2:
Actual Area of Cable, A1 (mm2) : 2707.50	Modulus of Elasticity, E1(MPA): 200400	Corrected Elongation (mm) for Actual A1 & E1 : $\delta*(A*E/A1*E1):$ 41.04 mm	
Jack Pres. With Jack loss (BAR) Kg/cm2. J1: P/(TA1*efficiency): J2: P/(TA2*efficiency):	Calibrated Jack press.(Kg/cm2) CJ1: 438.61 CJ2: 442.07	Initial Jack Press.(Kg/cm2) ICJ1: 79.24 ICJ2: 87.25	Initial Marking: IRJ1: 42 IRJ2: 45
Actual calculated Elongation for Grip Length, δ1 (mm): 3.86 mm	Gross Slip of Cable (mm): (Final Elong.- Net Elong.)	Net Slip at Jack end after lock-off (mm): (Gross Slip - Calcul. Elong. δ 1 for Grip length)	
Blocking Pressure Kg/Cm2): E1: Auto Block E2: Auto Block	At end 1	At end 2	At end 1
	159-151=8	162-153=9	8-3.86=4.14 5-3.86=1.14

Record of Stressing & Elongation:

Avg. % of Design Load	Actual Applied Pressure		Calculated Gauge Pressure Kg/cm2		Reading for Elongation (mm)		Measured Elongation At both Jacking end (mm)			Corre ction Facto r For ICJ	Final/Total Elongation. (mm)		Avera ge Elong ation At each End.	Remarks (Average Slip at each end)
	Col(1)		Col(2)		Col(3)		Col(4)=(Col 3-IRJ)				Col(6)=(4+5)			
	1	2	1	2	1	2	1	2	Avg.		1	2		
	KN	TON	Kg/cm2	Kg/cm2	-	-	-	-	-		-	-		
20	750	76.48	79.24	87.25	42	45	-	-	-	29.5			146.5	$\frac{4.14+5.14}{2}$ = 4.64 < 6 OK
40	1500	152.96	169.08	175.96	75	77	33	32	32.5					
60	2250	229.44	258.92	264.66	105	108	63	63	63					
80	3000	305.91	348.76	353.37	136	141	94	96	95					
95	3562.5	363.27	416.15	419.90	159	162	117	117	117					
98	3675	374.75	429.62	433.20										
100	3750	382.39	438.61	442.07										
102	3825	390.04	447.59	450.94										
105	3937.5	401.51	461.07	464.25										
Lock -off					151	153								

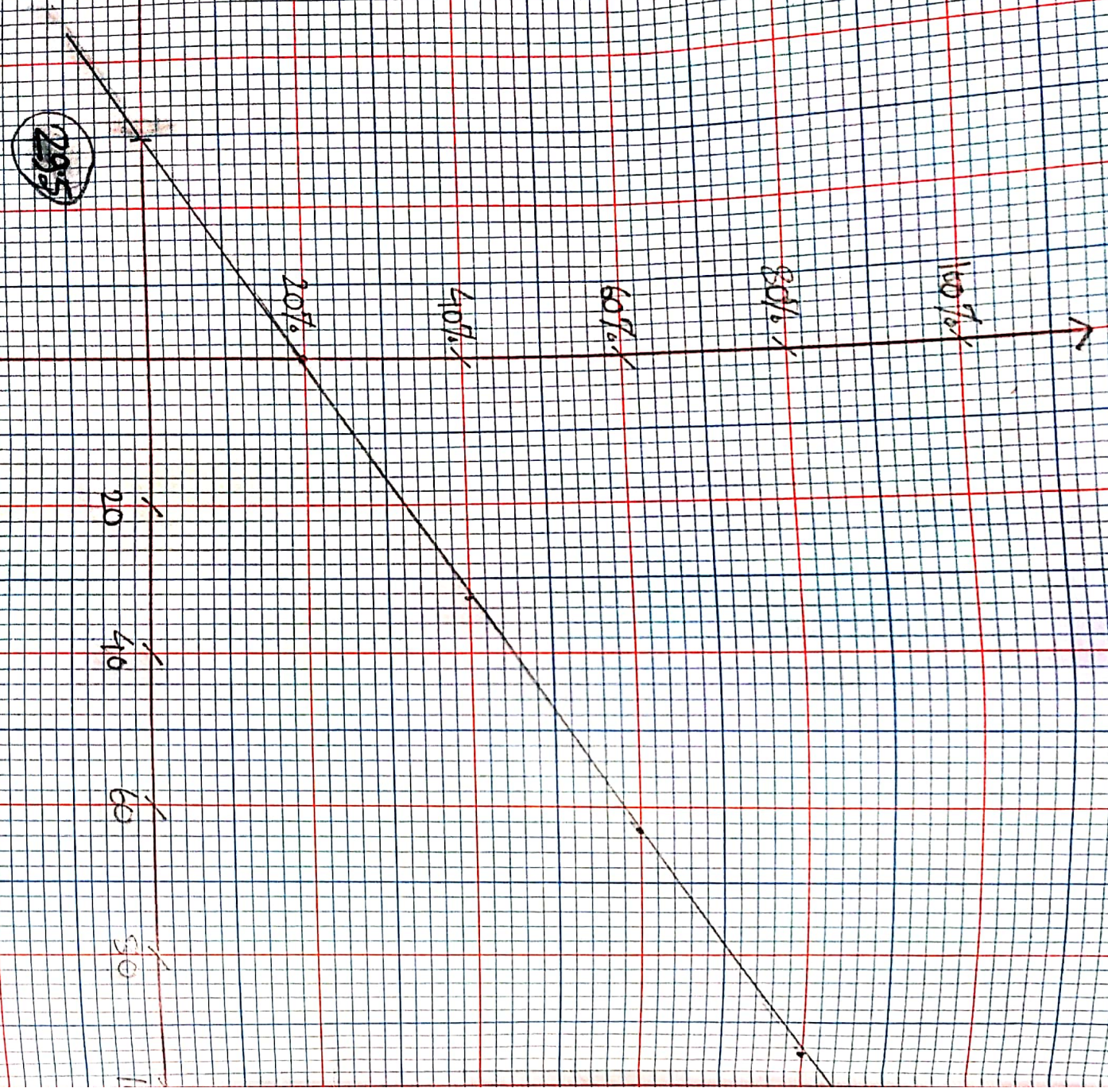
[Signature]
08.01.2026
Client's Representative

[Signature]
08.01.2026
Consultant's Representative

Contractor's Representative

~~Arzoo~~
08/01/2026

~~Arzoo~~
08.01.2026



POST TENSIONING FORMAT FOR PSC GIRDER

General information:

Name & Location of Bridge: Construction Of 301.00m Long PSC Girder Bridge Over the River Kartoa at Ch 4500 on Chatra GC-Gilabari Ghat Via Nischintobati Primary School Road, Road ID : 185764034		District: Rangpur	Upazila: Pirganj
Span/Girder Ref: Span-2 , Girder-4	Girder Length (m): 43m	Cable Ref. to be Stressed 02 of 04	
Girder Casting Date: 22-12-2025	Stressing Stage of Cable : 02	Jacking end Ref:	End 1: L709046
Date of Tensioning: 08-01-2026			End 2: L709047

Design information:

Dia of Strand (mm): 15.24mm	No. of Strand Cable: 19 nos	Anchorage Brand: Decomate	UTS of Strand (N/mm2): 1860	M. of Elasticity, E (MPa): 197000
Area of Strand (mm2): 140	Area of Cable, A (mm2): 2660	Design Jacking Force P: 3750 Kn		
Design Elongation Each end (mm):	Design Elongation for Gripping Length (mm): N/A	Actual Gripping Length (mm): 560	Corrected Elongation for Grip Length δ(mm): 4.00	
Design Cable Slip (mm): 6mm	Design Conc. Strength during Tensioning (N/mm2): 36 MPa	Actual Conc. Strength at the time of Tensioning (N/mm2): MPa		

Stressing & Jack information:

Pump Model No. P1: 710570 P2: 710567	Pressure gauge Model: M1: MPC-237219E M2: MPC-256050C	Tensioning Ram Area (m2): TA1: TA2:	Blocking Ram Area (Cm2): BA1: BA2:
Actual Area of Cable, A1 (mm2): 2707.50	Modulus of Elasticity, E1(MPA): 200400	Corrected Elongation (mm) for Actual A1 & E1: $\delta*(A*E/A1*E1)$: 143.33 mm	
Jack Pres. With Jack loss (BAR) Kg/cm2. J1: P/(TA1*efficiency): J2: P/(TA2*efficiency):	Calibrated Jack press. (Kg/cm2) CJ1: 438.61 CJ2: 442.07	Initial Jack Press. (Kg/cm2) ICJ1: 79.24 ICJ2: 87.25	Initial Marking: IRJ1: 47 IRJ2: 51
Actual calculated Elongation for Grip Length, δ_1 (mm): 3.86 mm	Gross Slip of Cable (mm): (Final Elong. - Net Elong.)		Net Slip at Jack end after lock-off (mm): (Gross Slip - Calcul. Elong. δ_1 for Grip length)
Blocking Pressure Kg/Cm2): E1: Auto Block E2: Auto Block	At end 1	At end 2	At end 1 At end 2
	165-156=9	165-156=9	9-3.86=5.14 9-3.86=5.14

Record of Stressing & Elongation:

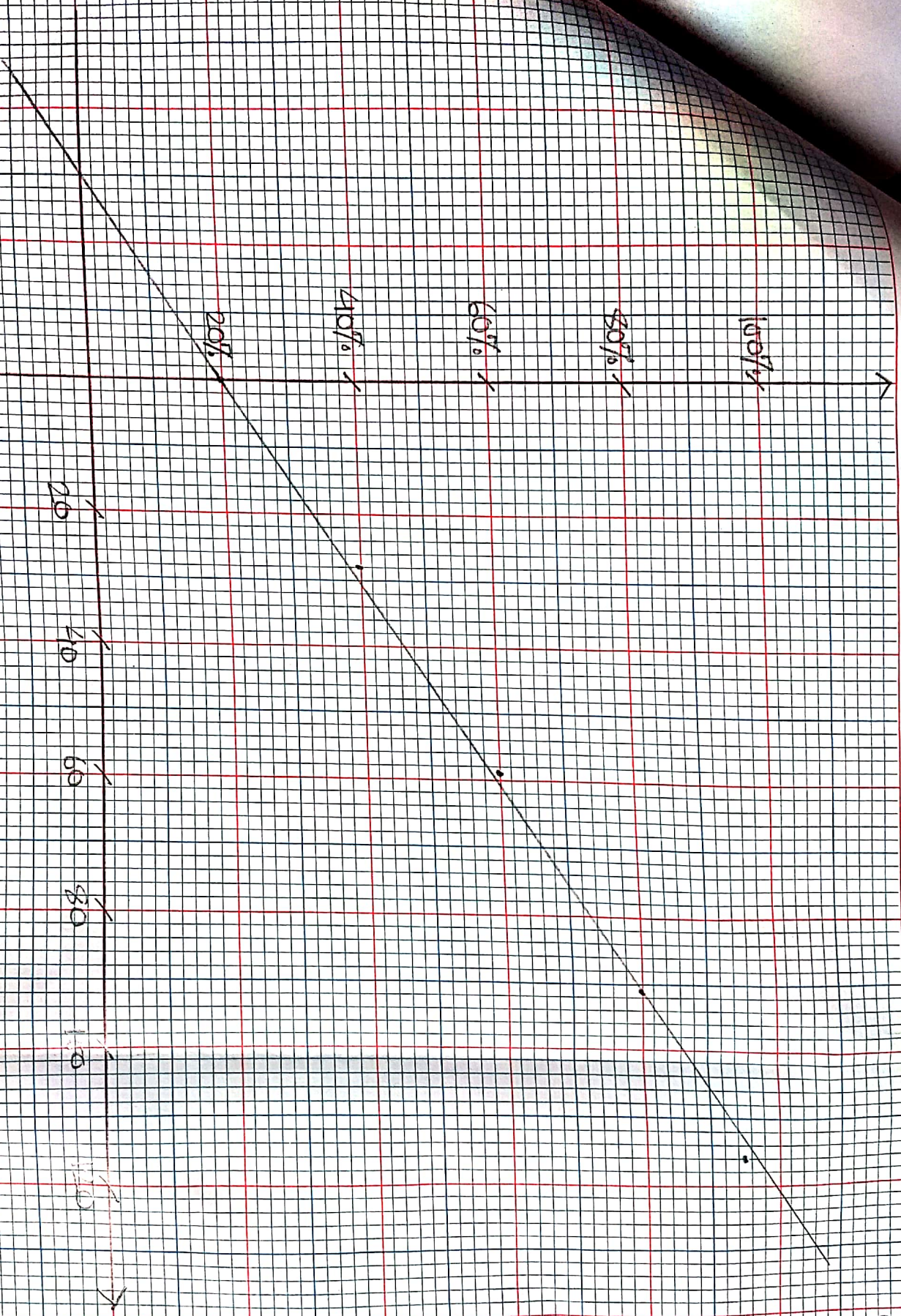
Avg. % of Design Load	Actual Applied Pressure		Calculated Gauge Pressure Kg/cm2		Reading for Elongation (mm)		Measured Elongation At both Jacking end (mm)			Corre ction Facto r For ICJ	Final/Total Elongation. (mm)		Avera ge Elong ation At each End.	Remarks (Average Slip at each end)
	Col(1)		Col(2)		Col(3)		Col(4)=(Col 3-IRJ)				Col(6)=(4+5)			
	1	2			1	2	1	2	Avg.		1	2		
	KN	TON	Kg/cm2	Kg/cm2	-	-	-	-	-		-	-		
20	750	76.48	79.24	87.25	47	51	-	-	-	30			146	5.14+5.14 2 =5.14 <6 OK
40	1500	152.96	169.08	175.96	75	79	28	28	28					
60	2250	229.44	258.92	264.66	107	109	60	58	59					
80	3000	305.91	348.76	353.37	140	140	93	89	91					
95	3562.5	363.27	416.15	419.90	165	165	118	114	116					
98	3675	374.75	429.62	433.20										
100	3750	382.39	438.61	442.07										
102	3825	390.04	447.59	450.94										
105	3937.5	401.51	461.07	464.25										
Lock-off					156	156								

[Signature]
08.01.26
Client's Representative

[Signature] 08.01.2026
Consultant's Representative

Contractor's Representative

~~Handwritten signature~~
8.01.2026



~~Handwritten signature~~
08.01.2026

02.01.24

POST TENSIONING FORMAT FOR PSC GIRDER

General information:

Name & Location of Bridge: Construction Of 301.00m Long PSC Girder Bridge Over the River Kartoa at Ch 4500 on Chatra GC-Gilabari Ghat Via Nischintobati Primary School Road, Road ID : 185764034			District: Rangpur	Upazila: Pirganj
Span/Girder Ref: Span-2, Girder-4	Girder Length (m): 43m		Cable Ref. to be Stressed 03 of 04	
Girder Casting Date: 22-12-2025	Stressing Stage of Cable : 02		Jacking	End 1: L709046
Date of Tensioning: 08-01-2026			end Ref:	End 2: L709047

Design information:

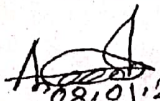
Dia of Strand (mm): 15.24mm	No. of Strand Cable: 19 nos	Anchorage Brand: Decomate	UTS of Strand (N/mm2): 1860	M. of Elasticity, E (MPa): 197000
Area of Strand (mm2): 140	Area of Cable, A (mm2): 2660	Design Jacking Force P: 3750 Kn		
Design Elongation Each end (mm):	Design Elongation for Gripping Length (mm): N/A	Actual Gripping Length (mm): 560	Corrected Elongation for Grip Length δ(mm): 4.00	
Design Cable Slip (mm): 6mm	Design Conc. Strength during Tensioning (N/mm2): 36 MPa	Actual Conc. Strength at the time of Tensioning (N/mm2): _____ MPa		

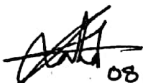
Stressing & Jack information:

Pump Model No. P1: 710570 P2: 710567	Pressure gauge Model: M1: MPC-237219E M2: MPC-256050C	Tensioning Ram Area (m2): TA1: TA2:	Blocking Ram Area (Cm2): BA1: BA2:
Actual Area of Cable, A1 (mm2): 2707.50	Modulus of Elasticity, E1(MPA): 200400	Corrected Elongation (mm) for Actual A1 & E1: $\delta^*(A^*E/A1^*E1):$ 148.76 mm	
Jack Pres. With Jack loss (BAR) Kg/cm2. J1: P/(TA1*efficiency): J2: P/(TA2*efficiency):	Calibrated Jack press.(Kg/cm2) CJ1: 438.61 CJ2: 442.07	Initial Jack Press.(Kg/cm2) ICJ1: 79.24 ICJ2: 87.25	Initial Marking: IRJ1: 46 IRJ2: 48
Actual calculated Elongation for Grip Length, δ_1 (mm): 3.86 mm	Gross Slip of Cable (mm): (Final Elong.- Net Elong.)	Net Slip at Jack end after lock-off (mm): (Gross Slip - Calcul. Elong. δ_1 for Grip length)	
Blocking Pressure Kg/Cm2): E1: Auto Block E2: Auto Block	At end 1	At end 2	At end 1
	163-154=9	167-158=9	9-3.86=5.14 9-3.86=5.14

Record of Stressing & Elongation:

Avg. % of Design Load	Actual Applied Pressure		Calculated Gauge Pressure Kg/cm2		Reading for Elongation (mm)		Measured Elongation At both Jacking end (mm)			Corre ction Factor For ICJ	Final/Total Elongation. (mm)		Avera ge Elong ation At each End.	Remarks (Average Slip at each end)	
	Col(1)		Col(2)		Col(3)		Col(4)=(Col 3-IRJ)				Col (5)	Col(6)=(4+5)			
	1	2			1	2	1	2	Avg.		1	2			
	KN	TON	Kg/cm2	Kg/cm2	-	-	-	-	-		-	-			
20	750	76.48	79.24	87.25	46	48	-	-	-	30.5				5.14+5.14	
40	1500	152.96	169.08	175.96	77	79	31	31	31						2
60	2250	229.44	258.92	264.66	104	110	58	62	60						= 5.14
80	3000	305.91	348.76	353.37	141	145	95	97	96						< 6
95	3562.5	363.27	416.15	419.90	163	167	117	119	118						148.5
98	3675	374.75	429.62	433.20											OK
100	3750	382.39	438.61	442.07											
102	3825	390.04	447.59	450.94											
105	3937.5	401.51	461.07	464.25											
Lock -off					154	158									


08.01.26
Client's Representative


08.01.2026
Consultant's Representative

Contractor's Representative

08.01.2025

08.01.2025

30.5

1

Elevation (mm) ↓

20
40
60
80
100
120

20%

40%

60%

80%

100%

03 of 04

POST TENSIONING FORMAT FOR PSC GIRDER

General information:

Name & Location of Bridge: Construction Of 301.00m Long PSC Girder Bridge Over the River Kartoa at Ch 4500 on Chatra GC-Gilabari Ghat Via Nischintobati Primary School Road, Road ID : 185764034		District: Rangpur	Upazila: Pirganj
Span/Girder Ref: Span-2 , Girder-4	Girder Length (m): 43m	Cable Ref. to be Stressed 04 of 04	
Girder Casting Date: 22-12-2025	Stressing Stage of Cable : 02	Jacking end Ref:	End 1: L709046
Date of Tensioning: 08-01-2026			End 2: L709047

Design information:

Dia of Strand (mm): 15.24mm	No. of Strand Cable: 19 nos	Anchorage Brand: Decomate	UTS of Strand (N/mm2): 1860	M. of Elasticity, E (MPa): 197000
Area of Strand (mm2): 140	Area of Cable, A (mm2): 2660	Design Jacking Force P: 3750 Kn		
Design Elongation Each end (mm):	Design Elongation for Gripping Length (mm): N/A	Actual Gripping Length (mm): 560	Corrected Elongation for Grip Length δ(mm): 4.00	
Design Cable Slip (mm): 6mm	Design Conc. Strength during Tensioning (N/mm2): 36 MPa	Actual Conc. Strength at the time of Tensioning (N/mm2): MPa		

Stressing & Jack information:

Pump Model No. P1: 710570 P2: 710567	Pressure gauge Model: M1: MPC-237219E M2: MPC-256050C	Tensioning Ram Area (m2): TA1: TA2:	Blocking Ram Area (Cm2): BA1: BA2:
Actual Area of Cable, A1 (mm2): 2707.50	Modulus of Elasticity, E1(MPA): 200400	Corrected Elongation (mm) for Actual A1 & E1 : $\delta * (A * E / A1 * E1)$: 148.76 mm	
Jack Pres. With Jack loss (BAR) Kg/cm2. J1: P/(TA1*efficiency): J2: P/(TA2*efficiency):	Calibrated Jack press. (Kg/cm2) CJ1: 438.61 CJ2: 442.07	Initial Jack Press. (Kg/cm2) ICJ1: 79.24 ICJ2: 87.25	Initial Marking: IRJ1: 37 IRJ2: 40
Actual calculated Elongation for Grip Length, $\delta 1$ (mm): 3.86 mm	Gross Slip of Cable (mm): (Final Elong.- Net Elong.)		Net Slip at Jack end after lock-off (mm): (Gross Slip - Calcul. Elong. $\delta 1$ for Grip length)
Blocking Pressure Kg/Cm2): E1: Auto Block E2: Auto Block	At end 1	At end 2	At end 1 At end 2
	155-147=8	159-150=9	8-3.86=4.14 9-3.86=5.14

Record of Stressing & Elongation:

Avg. % of Design Load	Actual Applied Pressure		Calculated Gauge Pressure Kg/cm2		Reading for Elongation (mm)		Measured Elongation At both Jacking end (mm)			Corre ction Facto r For ICJ	Final/Total Elongation. (mm)		Avera ge Elong ation At each End.	Remarks (Average Slip at each end)
	Col(1)		Col(2)		Col(3)		Col(4)=(Col 3-IRJ)				Col(6)=(4+5)			
	1	2			1	2	1	2	Avg.		1	2		
	KN	TON	Kg/cm2	Kg/cm2	-	-	-	-	-		-	-		
20	750	76.48	79.24	87.25	37	40	-	-	-					4.14+5.14
40	1500	152.96	169.08	175.96	68	70	31	30	30.5					2
60	2250	229.44	258.92	264.66	97	98	60	58	59					= 4.64
80	3000	305.91	348.76	353.37	126	129	89	89	89					2.6
95	3562.5	363.27	416.15	419.90	150	155	113	115	114	29.5				148
98	3675	374.75	429.62	433.20	155	159	118	119	118.5					OK
100	3750	382.39	438.61	442.07										
102	3825	390.04	447.59	450.94										
105	3937.5	401.51	461.07	464.25										
Lock -off					147	150								

[Signature]
08.01.2026
Client's Representative

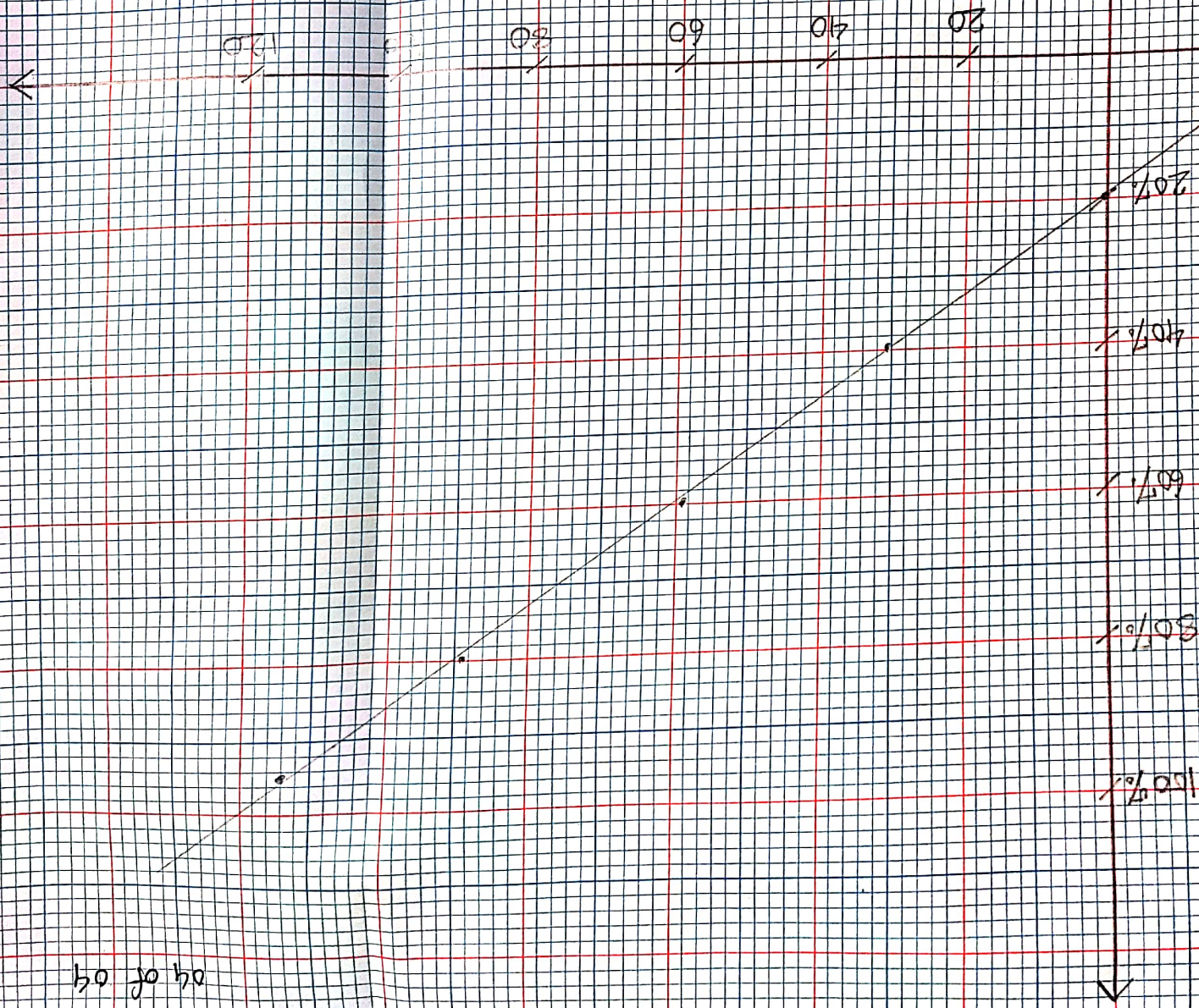
[Signature] 08.01.2026
Consultant's Representative

Contractor's Representative

~~08.01.2026~~

~~08.01.2026~~

1
29.5



ho jo ho