

**SECTIONAL PROPERTIES**  
**OF TYPICAL COLUMNS**

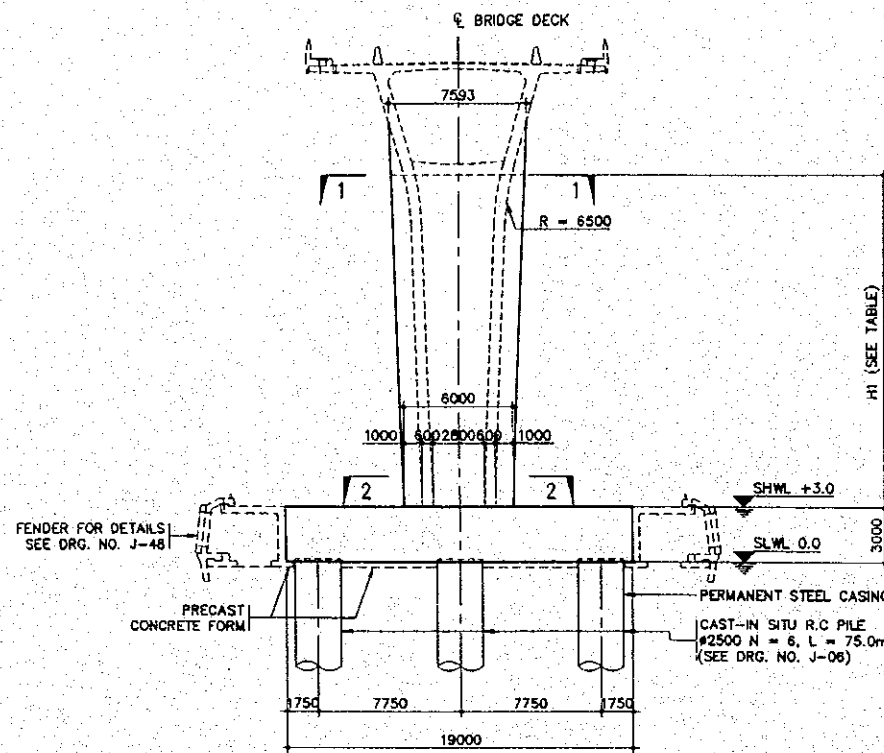
THE STUDY ON CONSTRUCTION OF THE BRIDGE  
OVER THE RIVER RUPSA IN KHULNA (PHASE 2)

GENERAL ARRANGEMENT OF TYPICAL  
PIER & FOUNDATION

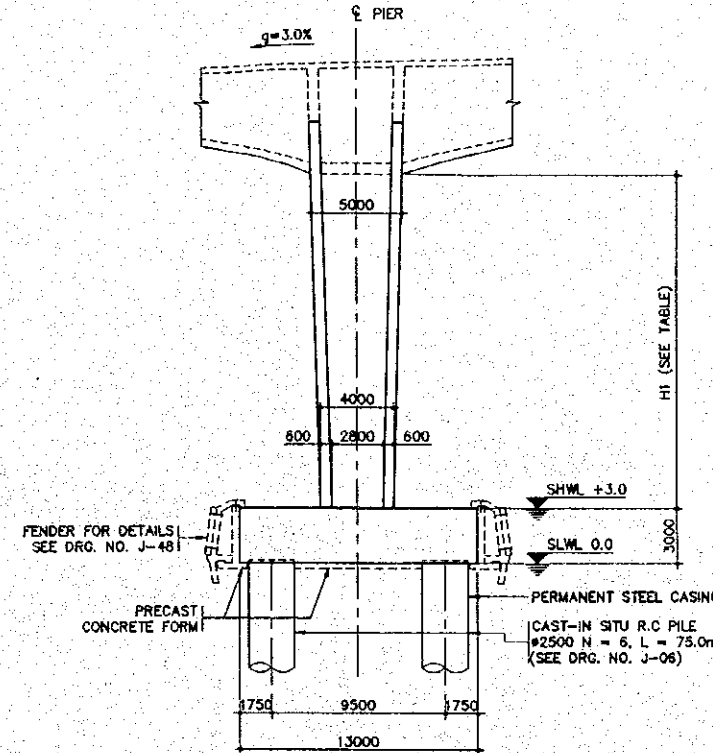
SCALE AS SHOWN SHEET NO. J-04

TABLE OF PIER LEVELS AND HEIGHTS

PIER	MP2	MP3	MP4	MP5	MP6	MP7
H 1 (m)	10.940	13.940	16.940	16.940	13.940	10.940
B1 (m)	0.646	0.671	0.689	0.689	0.671	0.646
B (m)	7291.6	7342.4	7378.6	7378.6	7342.4	7291.6



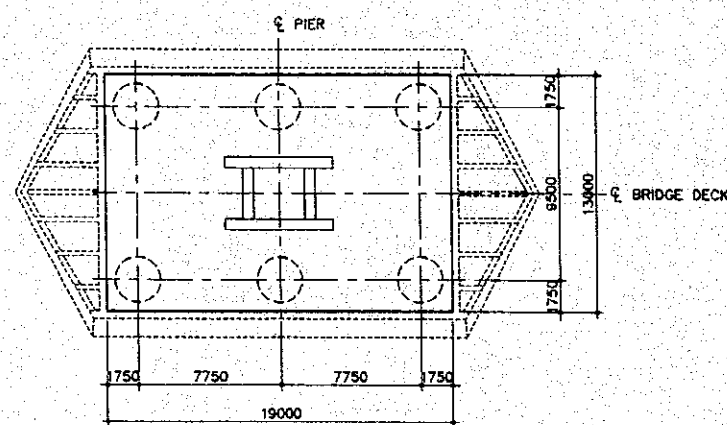
1 ELEVATION ON TYPICAL PIER  
(PIERS MP2 THROUGH MP7)  
SCALE 1:200



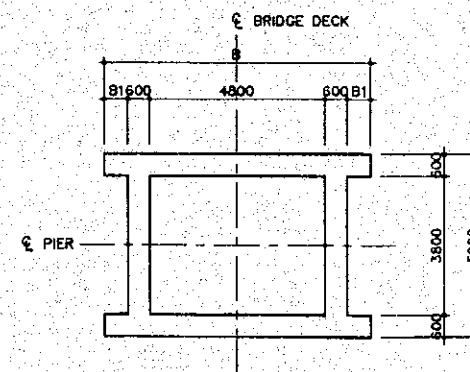
2 SIDE ELEVATION ON TYPICAL PIER  
(PIERS MP2 THROUGH MP7)  
SCALE 1:200

NOTES :

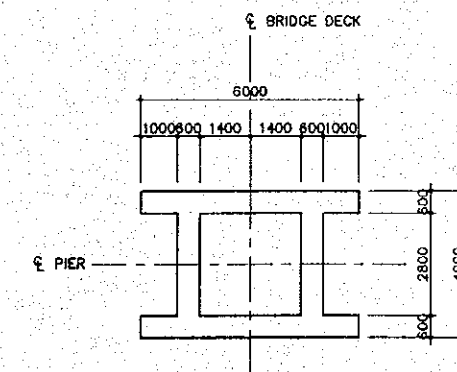
1. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING NO. J-03.
2. CONCRETE GRADES TO BE AS FOLLOW  
PILE CAP CLASS 40/25  
PIER CLASS 40/25
3. FOR RC DETAILS REFER TO DRAWING NO. J-09.



3 PLAN ON PIER CAP  
(PIERS MP2 THROUGH MP7)  
SCALE 1:200



4 SECTION 1-1  
SCALE 1:100

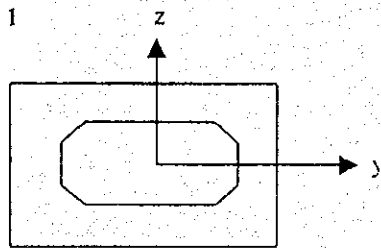


5 SECTION 2-2  
SCALE 1:100

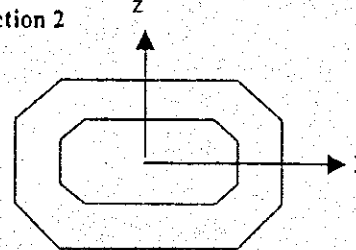
# THE STUDY ON THE CONSTRUCTION OF THE BRIDGE OVER THE RIVER RUPSA IN KHULNA - PHASE 2

Job No. :      Date : 11/10/99      Designed by :      Checked by :

A. Section 1



B. Section 2



A.1 Section 1 Property,  $A_x$ ,  $I_z$

	Type	b	h	$A_x$	$I_o$	d	$Ad^2$	$I_z$
1	R	4.00	6.00	24.00	72.000	0.00	0.000	72.000
2	R	-2.00	4.00	-8.00	-10.667	0.00	0.000	-10.667
3	T	0.50	0.50	0.50	0.007	1.83	1.680	1.687
S u m m a t i o n				16.500				63.020

A.2 Section Property,  $A_x$ ,  $I_y$

	Type	b	h	$A_x$	$I_o$	d	$Ad^2$	$I_y$
1	R	6.00	4.00	24.00	32.000	0.00	0.000	32.000
2	R	4.00	-2.00	-8.00	-2.667	0.00	0.000	-2.667
3	T	0.50	0.50	0.50	0.007	0.83	0.347	0.354
S u m m a t i o n				16.500				29.687

Therefore :       $A_x = 16.500 \text{ m}^2$        $I_y = 29.69 \text{ m}^4$   
                      $I_z = 63.02 \text{ m}^4$                        $I_x = 92.71 \text{ m}^4$

B.1 Section 2 Property,  $A_x$ ,  $I_z$

	Type	b	h	$A_x$	$I_o$	d	$Ad^2$	$I_z$
1	R	4.00	6.00	24.00	72.000	0.00	0.000	72.000
2	R	-2.00	4.00	-8.00	-10.667	0.00	0.000	-10.667
3	T	0.50	0.50	0.50	0.007	1.83	1.680	1.687
4	T	-1.00	1.00	-2.00	-0.111	2.67	-14.226	-14.337
S u m m a t i o n				14.500				48.683

B.2 Section 2 Property,  $A_x$ ,  $I_y$

	Type	b	h	$A_x$	$I_o$	d	$Ad^2$	$I_y$
1	R	6.00	4.00	24.00	32.000	0.00	0.000	32.000
2	R	4.00	-2.00	-8.00	-2.667	0.00	0.000	-2.667
3	T	0.50	0.50	0.50	0.007	0.83	0.347	0.354
4	T	1.00	-1.00	-2.00	-0.111	1.67	-5.558	-5.669
S u m m a t i o n				14.500				24.019

Therefore :       $A_x = 14.500 \text{ m}^2$        $I_y = 24.02 \text{ m}^4$   
                      $I_z = 48.68 \text{ m}^4$                        $I_x = 72.70 \text{ m}^4$

**THE STUDY ON THE CONSTRUCTION OF THE BRIDGE  
OVER THE RIVER RUPSA IN KHULNA - PHASE 2**

Job No.: \_\_\_\_\_ Date: November 27, 1999 Designed by: \_\_\_\_\_ Checked by: \_\_\_\_\_ Authority: afb

**TIME MEASUREMENT FOR SHRINKAGE AND CREEP**

ACTIVITIES	SUPERSTRUCTURE SEGMENTS @ MAIN PIER - MP2																SUPERSTRUCTURE SEGMENTS @											
	CL1	S14	S13	S12	S11	S10	S9	S8	S7	S6	S5	S4	S3	S2	S1	S0	S0	S1	S2	S3	S4	S5	S6	S7	S8	S9	S	
Construction Time	104	10	10	10	10	10	10	10	10	10	10	10	10	32	0	0	166	0	32	10	10	10	10	10	10	10		
Commulative Days	256	152	142	132	122	112	102	92	82	72	62	52	42	32	0	0	166	166	198	208	218	228	238	248	258	268		
Stage 1	t <sub>1</sub>	0	104	114	124	134	144	154	164	174	184	194	204	214	224	256	256											
	t	101	205	215	225	235	245	255	265	275	285	295	305	315	325	357	357											
Stage 2	t <sub>1</sub>	101	205	215	225	235	245	255	265	275	285	295	305	315	325	357	357	191	191	159	149	139	129	119	109	99	89	
	t	271	375	385	395	405	415	425	435	445	455	465	475	485	495	527	527	361	361	329	319	309	299	289	279	269	259	
Stage 3	t <sub>1</sub>	271	375	385	395	405	415	425	435	445	455	465	475	485	495	527	527	361	361	329	319	309	299	289	279	269	259	
	t	321	425	435	445	455	465	475	485	495	505	515	525	535	545	577	577	411	411	379	369	359	349	339	329	319	309	
Stage 4	t <sub>1</sub>	321	425	435	445	455	465	475	485	495	505	515	525	535	545	577	577	411	411	379	369	359	349	339	329	319	309	
	t	9744	9848	9858	9868	9878	9888	9898	9908	9918	9928	9938	9948	9958	9968	10000	10000	9834	9834	9802	9792	9782	9772	9762	9752	9742	9732	

WHERE :

CONSTRUCTION TIME - IS THE AMOUNT OF TIME IN DAYS WHERE AN ACTIVITY CAN BE COMPLETED

COMMULATIVE DAYS - IS THE CUMMULATIVE TIME IN DAYS TO COMPLETE FROM ONE ACTIVITY TO ANOTHER

SCHEDULE - COMPRISES OF COMPLETION OF SERIES OF CONSTRUCTION ACTIVITIES

SCHEDULE 1 - CANTILEVER CONSTRUCTION AT MAIN PIER MP2 AND THE CONSTRUCTION OF CLOSURE AT MAIN SPAN 1

SCHEDULE 2 - CANTILEVER CONSTRUCTION AT MAIN PIER MP3 AND THE CONSTRUCTION OF CLOSURE AT MAIN SPAN 2

SCHEDULE 3 - CANTILEVER CONSTRUCTION AT MAIN PIER MP4 AND THE CONSTRUCTION OF CLOSURE AT MAIN SPAN 3

SCHEDULE 4 - CONSTRUCTION OF CLOSURE AT SPAN 4

# STUDY ON THE CONSTRUCTION OF THE BRIDGE OVER THE RIVER RUPSA IN KHULNA - PHASE 2

ember 27, 1999      Designed by :      Checked by :      Authority :      afb

## TIME MEASUREMENT FOR SHRINKAGE AND CREEP

PIER SEGMENTS @ MAIN PIER - MP2										SUPERSTRUCTURE SEGMENTS @ MAIN PIER - MP3																	SUPERSTRUCTURE						
S9	S8	S7	S6	S5	S4	S3	S2	S1	S0	S0	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14	CL2	S0	S1	S2	S3	S4	S5	S6	
10	10	10	10	10	10	10	32	0	0	166	0	32	10	10	10	10	10	10	10	10	10	10	10	10	39	361	0	32	10	10	10	10	
102	92	82	72	62	52	42	32	0	0	166	166	198	208	218	228	238	248	258	268	278	288	298	308	318	357	361	361	393	403	413	423	433	
154	164	174	184	194	204	214	224	256	256																								
255	265	275	285	295	305	315	325	357	357																								
255	265	275	285	295	305	315	325	357	357	191	191	159	149	139	129	119	109	99	89	79	69	59	49	39	0								
425	435	445	455	465	475	485	495	527	527	361	361	329	319	309	299	289	279	269	259	249	239	229	219	209	170								
425	435	445	455	465	475	485	495	527	527	361	361	329	319	309	299	289	279	269	259	249	239	229	219	209	170	166	166	134	124	114	104	94	
475	485	495	505	515	525	535	545	577	577	411	411	379	369	359	349	339	329	319	309	299	289	279	269	259	220	216	216	184	174	164	154	144	
475	485	495	505	515	525	535	545	577	577	411	411	379	369	359	349	339	329	319	309	299	289	279	269	259	220	216	216	184	174	164	154	144	
9898	9908	9918	9928	9938	9948	9958	9968	10000	10000	9834	9834	9802	9792	9782	9772	9762	9752	9742	9732	9722	9712	9702	9692	9682	9643	9639	9639	9607	9597	9587	9577	9567	

WHERE AN ACTIVITY CAN BE COMPLETED  
DAYS TO COMPLETE FROM ONE ACTIVITY TO ANOTHER  
CONSTRUCTION ACTIVITIES

FOR MP2 AND THE CONSTRUCTION OF CLOSURE AT MAIN SPAN 1  
FOR MP3 AND THE CONSTRUCTION OF CLOSURE AT MAIN SPAN 2  
FOR MP4 AND THE CONSTRUCTION OF CLOSURE AT MAIN SPAN 3

STAGES AT WHICH TIME t IS TAKEN

t<sub>i</sub> = BEGINNING TIME      t = END TIME

STAGE 1 - SCHEDULE 1 TO SCHEDULE 2  
STAGE 2 - STAGE 1 TO SCHEDULE 3  
STAGE 3 - STAGE 2 TO SCHEDULE 4  
STAGE 4 - STAGE 3 TO SERVICE LIFE

S<sub>i</sub> = CONSTRUCTION  
CL<sub>i</sub> = CONSTRUCTION  
MP<sub>i</sub> = MAIN PIER NUMBER

afb

SEGMENTS @ MAIN PIER - MP3									SUPERSTRUCTURE SEGMENTS @ MAIN PIER - MP4																		CLOSURE @ SPAN 4			LIFETIME	
S8	S9	S10	S11	S12	S13	S14	CL2		S0	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14	CL3	CL4						
10	10	10	10	10	10	10	39		361	0	32	10	10	10	10	10	10	10	10	10	10	10	10	10	50			10000			
258	268	278	288	298	308	318	357		361	361	393	403	413	423	433	443	453	463	473	483	493	503	513	527	577			10000			
99	89	79	69	59	49	39	0																								
269	259	249	239	229	219	209	170																								
269	259	249	239	229	219	209	170		166	166	134	124	114	104	94	84	74	64	54	44	34	24	14	0							
319	309	299	289	279	269	259	220		216	216	184	174	164	154	144	134	124	114	104	94	84	74	64	50							
319	309	299	289	279	269	259	220		216	216	184	174	164	154	144	134	124	114	104	94	84	74	64	50	0						
9742	9732	9722	9712	9702	9692	9682	9643		9639	9639	9607	9597	9587	9577	9567	9557	9547	9537	9527	9517	9507	9497	9487	9473	9423						

STAGES AT WHICH TIME t IS TAKEN

t<sub>1</sub> = BEGINNING TIME      t = END TIME

- STAGE 1 - SCHEDULE 1 TO SCHEDULE 2
- STAGE 2 - STAGE 1 TO SCHEDULE 3
- STAGE 3 - STAGE 2 TO SCHEDULE 4
- STAGE 4 - STAGE 3 TO SERVICE LIFE

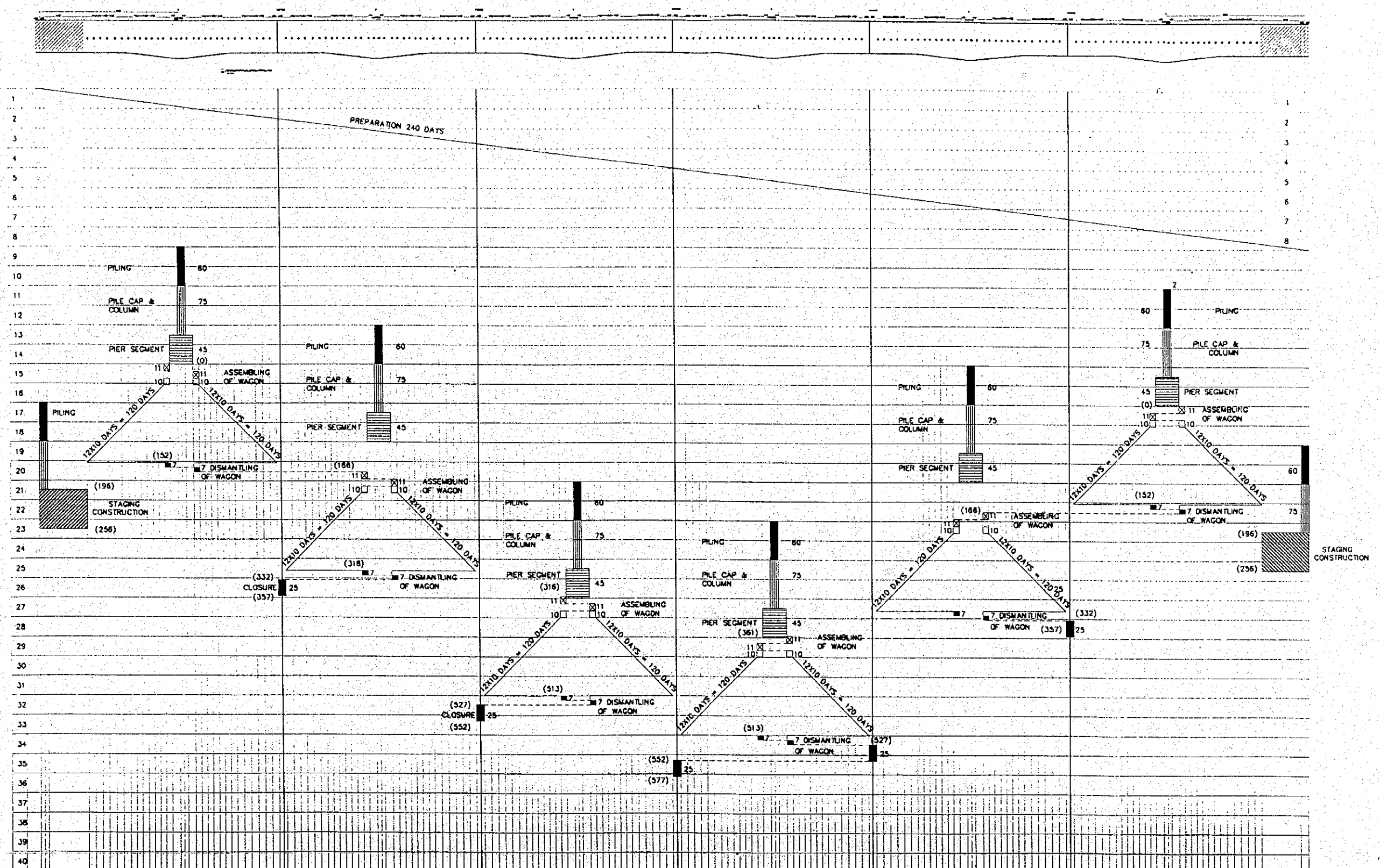
- S<sub>i</sub> = CONSTRUCTION OF CONCRETE SEGMENT S<sub>i</sub>
- CL<sub>i</sub> = CONSTRUCTION OF CLOSURE CL<sub>i</sub>
- MP<sub>i</sub> = MAIN PIER NUMBER



THE STUDY ON CONSTRUCTION OF THE BRIDGE  
OVER THE RIVER OF RUPSA IN KHULNA (PHASE 2)

SHEET  
NO.

SHEET



DATE : 31-10-99  
TIME : 10:00 AM

**SHRINKAGE & CREEP COEFFICIENTS**  
**OF BOX GIRDER SUPERSTRUCTURE**



# THE STUDY ON THE CONSTRUCTION OF THE BRIDGE OVER THE RIVER RUPSA IN KHULNA- PHASE 2

Job No. : \_\_\_\_\_ Date : 11/18/99 Designed by : \_\_\_\_\_ Checked by : \_\_\_\_\_

### A. Computation of Shrinkage Coefficient

$$\epsilon_s(t_0 - t) = \epsilon_{s_0} (k_{s,t} - k_{s,t_0})$$

NODE	Area (m. <sup>2</sup> )	Perimeter (m.)	k <sub>w</sub>	d <sub>w</sub> (cm.)	NODE	Area (m. <sup>2</sup> )	Perimeter (m.)	k <sub>w</sub>	d <sub>w</sub> (cm.)
IS- 0	16.232	63.632	3.700	94.38	IS- 08	11.661	57.413	3.700	75.15
IS- 1	15.605	62.637	3.700	92.18	IS- 09	11.661	57.413	3.700	75.15
IS- 2	15.108	61.891	3.700	90.32	IS- 10	11.661	57.413	3.700	75.15
IS- 3	14.590	61.144	3.700	88.29	IS- 11	11.661	57.413	3.700	75.15
IS- 4	14.048	60.398	3.700	86.06	IS- 12	11.661	57.413	3.700	75.15
IS- 5	13.485	59.652	3.700	83.64	IS- 13	11.661	57.413	3.700	75.15
IS- 6	12.899	58.906	3.700	81.02	IS- 14	11.661	57.413	3.700	75.15
IS- 7	12.291	58.159	3.700	78.19					

Note : For ease and simplicity of calculation, adopt d<sub>w</sub> as the average effective depth of all the segments

$$d_w = 1/n(\sum d_w) = 81 \quad \text{say } 80$$

Table 1 - Shrinkage Parameters in Different Condition

Environment	Humidity	Strain Factor	Base Strain	k <sub>w</sub>
Under Water	100	0.80	1.00E-04	30.00
	95	1.10	0.00E+00	10.00
Damp Atmosphere	90	1.30	-1.00E-04	5.00
	80	1.70	-2.00E-04	2.40
General Atmosphere	70	2.00	-2.50E-04	1.50
	60	2.40	-3.00E-04	1.20
	50	2.70	-3.50E-04	1.00
Dry Atmosphere	40	3.00	-4.00E-04	1.00

Effective thickness:

$$d_w = \frac{2k_w A}{P}$$

- ε<sub>s0</sub> = base shrinkage coefficient
- k<sub>s</sub> = Shrinkage factor relating to time and effect. thickness, d<sub>w</sub>
- d<sub>w</sub> = effective member thickness
- l<sub>w</sub> = coefficient for member thickness

Note : Assume a Damp Atmosphere Environment

### B. Computation Creep Coefficient

$$\psi(t_0 - t) = \psi_{v_0} k_{v,(t-t_0)} + \psi_{f_0} (k_{f,t} - k_{f,t_0})$$

- where :
- ψ<sub>v0</sub> = 0.40 : Fixed delayed elastic strain
  - ψ<sub>f0</sub> = 1.50 : Permanent Strain from Table 1
  - k<sub>v</sub> = : Coef. Of delayed elastic strain from Table 2
  - k<sub>f</sub> = : Coef. Of permanent strain relating to effective member thickness d<sub>w</sub> from Table 2

Then : 
$$\psi(t_0 - t) = 0.40 k_{v,(t-t_0)} + 1.50 (k_{f,t} - k_{f,t_0})$$

# THE STUDY ON THE CONSTRUCTION OF THE BRIDGE OVER THE RIVER RUPSA IN KHULNA- PHASE 2

Job No. :                      Date :            11/18/99            Designed by :                      Checked by :

Figure 1. Coefficient of Delayed Strain

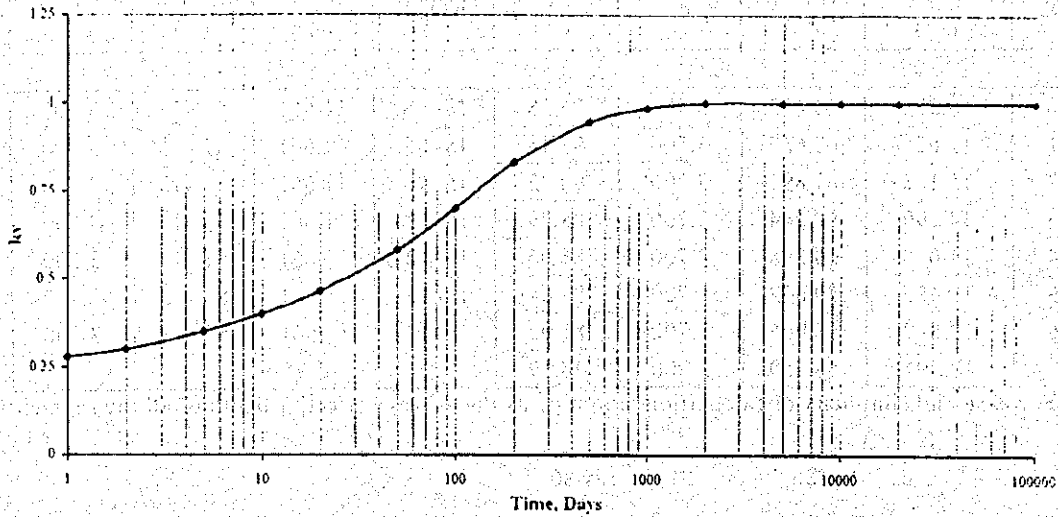
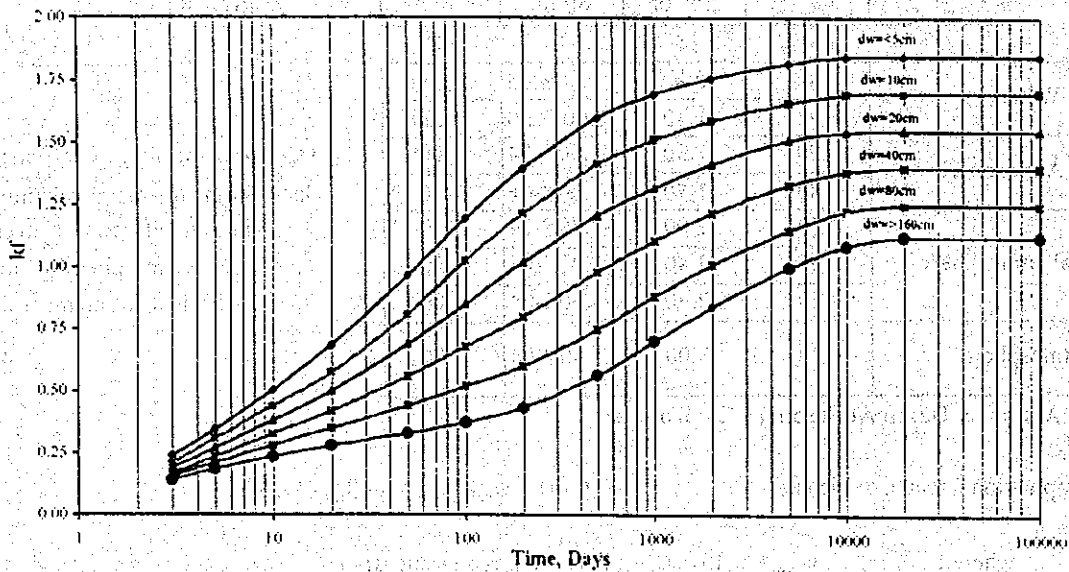


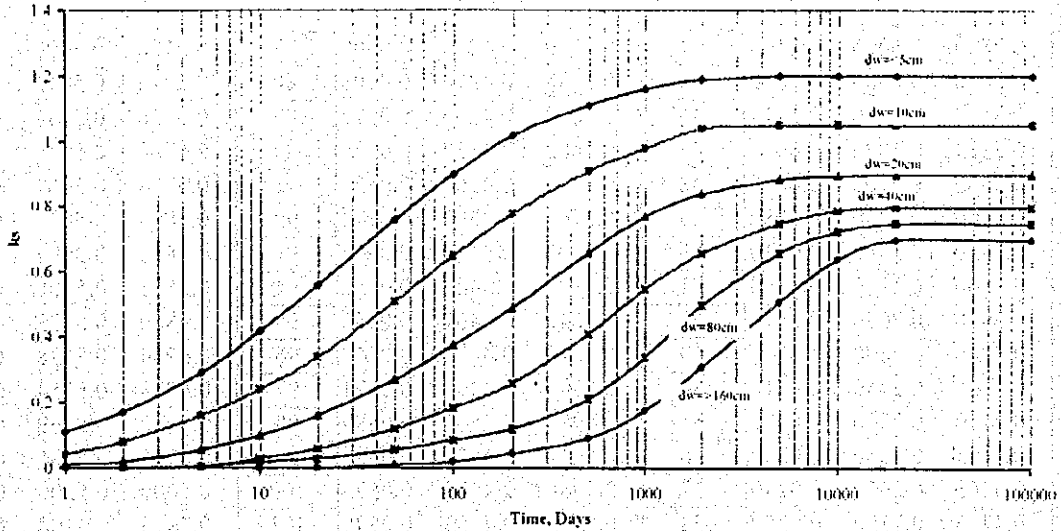
Figure 2. Coef. of Permanent Strain



# THE STUDY ON THE CONSTRUCTION OF THE BRIDGE OVER THE RIVER RUPSA IN KHULNA- PHASE 2.

Job.No. \_\_\_\_\_ Date: 11/18/99. Designed by: \_\_\_\_\_ Checked by: \_\_\_\_\_

Figure 3. Shrinkage Coef. Relating to Time and Effective Thickness,  $d_w$



## THE STUDY ON THE CONSTRUCTION OF THE BRIDGE OVER THE RIVER RUPSA IN KHULNA- PHASE 2

Job No. : \_\_\_\_\_ Date : 11/18/99 Designed by : \_\_\_\_\_ Checked by : \_\_\_\_\_

Table 2 - Values of  $k_v$ ,  $k_f$  and  $k_s$  with age in Days for  $d_w = 80$  cm.

Age	$k_v$	$k_f$	$k_s$	Age	$k_v$	$k_f$	$k_s$	Age	$k_v$	$k_f$	$k_s$
1	0.2800	0.0000	0.0000	44	0.5570	0.4244	0.0500	87	0.6688	0.5000	0.0772
2	0.3000	0.0000	0.0000	45	0.5608	0.4275	0.0508	88	0.6712	0.5015	0.0778
3	0.3167	0.1550	0.0017	46	0.5647	0.4306	0.0517	89	0.6736	0.5031	0.0784
4	0.3333	0.1825	0.0033	47	0.5685	0.4337	0.0525	90	0.6760	0.5046	0.0790
5	0.3500	0.2100	0.0050	48	0.5723	0.4368	0.0533	91	0.6784	0.5061	0.0796
6	0.3600	0.2240	0.0080	49	0.5762	0.4399	0.0542	92	0.6808	0.5077	0.0802
7	0.3700	0.2380	0.0110	50	0.5800	0.4430	0.0550	93	0.6832	0.5092	0.0808
8	0.3800	0.2520	0.0140	51	0.5824	0.4445	0.0556	94	0.6856	0.5108	0.0814
9	0.3900	0.2660	0.0170	52	0.5848	0.4461	0.0562	95	0.6880	0.5123	0.0820
10	0.4000	0.2800	0.0200	53	0.5872	0.4476	0.0568	96	0.6904	0.5138	0.0826
11	0.4065	0.2750	0.0210	54	0.5896	0.4492	0.0574	97	0.6928	0.5154	0.0832
12	0.4130	0.2700	0.0220	55	0.5920	0.4507	0.0580	98	0.6952	0.5169	0.0838
13	0.4195	0.2650	0.0230	56	0.5944	0.4522	0.0586	99	0.6976	0.5185	0.0844
14	0.4260	0.2600	0.0240	57	0.5968	0.4538	0.0592	100	0.7000	0.5200	0.0850
15	0.4325	0.2550	0.0250	58	0.5992	0.4553	0.0598	101	0.7013	0.5208	0.0854
16	0.4390	0.2500	0.0260	59	0.6016	0.4569	0.0604	102	0.7026	0.5217	0.0857
17	0.4455	0.2450	0.0270	60	0.6040	0.4584	0.0610	103	0.7039	0.5225	0.0861
18	0.4520	0.2400	0.0280	61	0.6064	0.4599	0.0616	104	0.7052	0.5233	0.0864
19	0.4585	0.2350	0.0290	62	0.6088	0.4615	0.0622	105	0.7065	0.5242	0.0868
20	0.4650	0.3500	0.0300	63	0.6112	0.4630	0.0628	106	0.7078	0.5250	0.0871
21	0.4688	0.3531	0.0308	64	0.6136	0.4646	0.0634	107	0.7091	0.5258	0.0875
22	0.4727	0.3562	0.0317	65	0.6160	0.4661	0.0640	108	0.7104	0.5266	0.0878
23	0.4765	0.3593	0.0325	66	0.6184	0.4676	0.0646	109	0.7117	0.5275	0.0882
24	0.4803	0.3624	0.0333	67	0.6208	0.4692	0.0652	110	0.7130	0.5283	0.0885
25	0.4842	0.3655	0.0342	68	0.6232	0.4707	0.0658	111	0.7143	0.5291	0.0889
26	0.4880	0.3686	0.0350	69	0.6256	0.4723	0.0664	112	0.7156	0.5300	0.0892
27	0.4918	0.3717	0.0358	70	0.6280	0.4738	0.0670	113	0.7169	0.5308	0.0896
28	0.4957	0.3748	0.0367	71	0.6304	0.4753	0.0676	114	0.7182	0.5316	0.0899
29	0.4995	0.3779	0.0375	72	0.6328	0.4769	0.0682	115	0.7195	0.5325	0.0903
30	0.5033	0.3810	0.0383	73	0.6352	0.4784	0.0688	116	0.7208	0.5333	0.0906
31	0.5072	0.3841	0.0392	74	0.6376	0.4800	0.0694	117	0.7221	0.5341	0.0910
32	0.5110	0.3872	0.0400	75	0.6400	0.4815	0.0700	118	0.7234	0.5349	0.0913
33	0.5148	0.3903	0.0408	76	0.6424	0.4830	0.0706	119	0.7247	0.5358	0.0917
34	0.5187	0.3934	0.0417	77	0.6448	0.4846	0.0712	120	0.7260	0.5366	0.0920
35	0.5225	0.3965	0.0425	78	0.6472	0.4861	0.0718	121	0.7273	0.5374	0.0924
36	0.5263	0.3996	0.0433	79	0.6496	0.4877	0.0724	122	0.7286	0.5383	0.0927
37	0.5302	0.4027	0.0442	80	0.6520	0.4892	0.0730	123	0.7299	0.5391	0.0931
38	0.5340	0.4058	0.0450	81	0.6544	0.4907	0.0736	124	0.7312	0.5399	0.0934
39	0.5378	0.4089	0.0458	82	0.6568	0.4923	0.0742	125	0.7325	0.5408	0.0938
40	0.5417	0.4120	0.0467	83	0.6592	0.4938	0.0748	126	0.7338	0.5416	0.0941
41	0.5455	0.4151	0.0475	84	0.6616	0.4954	0.0754	127	0.7351	0.5424	0.0945
42	0.5493	0.4182	0.0483	85	0.6640	0.4969	0.0760	128	0.7364	0.5432	0.0948
43	0.5532	0.4213	0.0492	86	0.6664	0.4984	0.0766	129	0.7377	0.5441	0.0952

# THE STUDY ON THE CONSTRUCTION OF THE BRIDGE OVER THE RIVER RUPSA IN KHULNA- PHASE 2

Job No. : \_\_\_\_\_ Date : 11/18/99 Designed by : \_\_\_\_\_ Checked by : \_\_\_\_\_

Table 2 - Values of  $k_v$ ,  $k_f$  and  $k_s$  with age in Days for  $d_w = 80$  cm.

Age	$k_v$	$k_f$	$k_s$	Age	$k_v$	$k_f$	$k_s$	Age	$k_v$	$k_f$	$k_s$
130	0.7390	0.5449	0.0955	173	0.7949	0.5806	0.1106	216	0.8361	0.6108	0.1248
131	0.7403	0.5457	0.0959	174	0.7962	0.5814	0.1109	217	0.8365	0.6113	0.1251
132	0.7416	0.5466	0.0962	175	0.7975	0.5823	0.1113	218	0.8369	0.6118	0.1254
133	0.7429	0.5474	0.0966	176	0.7988	0.5831	0.1116	219	0.8373	0.6123	0.1257
134	0.7442	0.5482	0.0969	177	0.8001	0.5839	0.1120	220	0.8377	0.6128	0.1260
135	0.7455	0.5491	0.0973	178	0.8014	0.5847	0.1123	221	0.8381	0.6133	0.1263
136	0.7468	0.5499	0.0976	179	0.8027	0.5856	0.1127	222	0.8384	0.6138	0.1266
137	0.7481	0.5507	0.0980	180	0.8040	0.5864	0.1130	223	0.8388	0.6143	0.1269
138	0.7494	0.5515	0.0983	181	0.8053	0.5872	0.1134	224	0.8392	0.6148	0.1272
139	0.7507	0.5524	0.0987	182	0.8066	0.5881	0.1137	225	0.8396	0.6153	0.1275
140	0.7520	0.5532	0.0990	183	0.8079	0.5889	0.1141	226	0.8400	0.6157	0.1278
141	0.7533	0.5540	0.0994	184	0.8092	0.5897	0.1144	227	0.8404	0.6162	0.1281
142	0.7546	0.5549	0.0997	185	0.8105	0.5906	0.1148	228	0.8407	0.6167	0.1284
143	0.7559	0.5557	0.1001	186	0.8118	0.5914	0.1151	229	0.8411	0.6172	0.1287
144	0.7572	0.5565	0.1004	187	0.8131	0.5922	0.1155	230	0.8415	0.6177	0.1290
145	0.7585	0.5574	0.1008	188	0.8144	0.5930	0.1158	231	0.8419	0.6182	0.1293
146	0.7598	0.5582	0.1011	189	0.8157	0.5939	0.1162	232	0.8423	0.6187	0.1296
147	0.7611	0.5590	0.1015	190	0.8170	0.5947	0.1165	233	0.8427	0.6192	0.1299
148	0.7624	0.5598	0.1018	191	0.8183	0.5955	0.1169	234	0.8430	0.6197	0.1302
149	0.7637	0.5607	0.1022	192	0.8196	0.5964	0.1172	235	0.8434	0.6202	0.1305
150	0.7650	0.5615	0.1025	193	0.8209	0.5972	0.1176	236	0.8438	0.6206	0.1308
151	0.7663	0.5623	0.1029	194	0.8222	0.5980	0.1179	237	0.8442	0.6211	0.1311
152	0.7676	0.5632	0.1032	195	0.8235	0.5989	0.1183	238	0.8446	0.6216	0.1314
153	0.7689	0.5640	0.1036	196	0.8248	0.5997	0.1186	239	0.8450	0.6221	0.1317
154	0.7702	0.5648	0.1039	197	0.8261	0.6005	0.1190	240	0.8453	0.6226	0.1320
155	0.7715	0.5657	0.1043	198	0.8274	0.6013	0.1193	241	0.8457	0.6231	0.1323
156	0.7728	0.5665	0.1046	199	0.8287	0.6022	0.1197	242	0.8461	0.6236	0.1326
157	0.7741	0.5673	0.1050	200	0.8300	0.6030	0.1200	243	0.8465	0.6241	0.1329
158	0.7754	0.5681	0.1053	201	0.8304	0.6035	0.1203	244	0.8469	0.6246	0.1332
159	0.7767	0.5690	0.1057	202	0.8308	0.6040	0.1206	245	0.8473	0.6251	0.1335
160	0.7780	0.5698	0.1060	203	0.8312	0.6045	0.1209	246	0.8476	0.6255	0.1338
161	0.7793	0.5706	0.1064	204	0.8315	0.6050	0.1212	247	0.8480	0.6260	0.1341
162	0.7806	0.5715	0.1067	205	0.8319	0.6055	0.1215	248	0.8484	0.6265	0.1344
163	0.7819	0.5723	0.1071	206	0.8323	0.6059	0.1218	249	0.8488	0.6270	0.1347
164	0.7832	0.5731	0.1074	207	0.8327	0.6064	0.1221	250	0.8492	0.6275	0.1350
165	0.7845	0.5740	0.1078	208	0.8331	0.6069	0.1224	251	0.8496	0.6280	0.1353
166	0.7858	0.5748	0.1081	209	0.8335	0.6074	0.1227	252	0.8499	0.6285	0.1356
167	0.7871	0.5756	0.1085	210	0.8338	0.6079	0.1230	253	0.8503	0.6290	0.1359
168	0.7884	0.5764	0.1088	211	0.8342	0.6084	0.1233	254	0.8507	0.6295	0.1362
169	0.7897	0.5773	0.1092	212	0.8346	0.6089	0.1236	255	0.8511	0.6300	0.1365
170	0.7910	0.5781	0.1095	213	0.8350	0.6094	0.1239	256	0.8515	0.6304	0.1368
171	0.7923	0.5789	0.1099	214	0.8354	0.6099	0.1242	257	0.8519	0.6309	0.1371
172	0.7936	0.5798	0.1102	215	0.8358	0.6104	0.1245	258	0.8522	0.6314	0.1374

## THE STUDY ON THE CONSTRUCTION OF THE BRIDGE OVER THE RIVER RUPSA IN KHULNA- PHASE 2

Job No. : \_\_\_\_\_ Date : 11/18/99 Designed by : \_\_\_\_\_ Checked by : \_\_\_\_\_

Table 2 - Values of  $k_v$ ,  $k_f$  and  $k_s$  with age in Days for  $d_w = 80$  cm.

Age	$k_v$	$k_f$	$k_s$	Age	$k_v$	$k_f$	$k_s$	Age	$k_v$	$k_f$	$k_s$
259	0.8526	0.6319	0.1377	302	0.8691	0.6530	0.1506	345	0.8856	0.6741	0.1635
260	0.8530	0.6324	0.1380	303	0.8695	0.6535	0.1509	346	0.8860	0.6745	0.1638
261	0.8534	0.6329	0.1383	304	0.8699	0.6540	0.1512	347	0.8864	0.6750	0.1641
262	0.8538	0.6334	0.1386	305	0.8703	0.6545	0.1515	348	0.8867	0.6755	0.1644
263	0.8542	0.6339	0.1389	306	0.8706	0.6549	0.1518	349	0.8871	0.6760	0.1647
264	0.8545	0.6344	0.1392	307	0.8710	0.6554	0.1521	350	0.8875	0.6765	0.1650
265	0.8549	0.6349	0.1395	308	0.8714	0.6559	0.1524	351	0.8879	0.6770	0.1653
266	0.8553	0.6353	0.1398	309	0.8718	0.6564	0.1527	352	0.8883	0.6775	0.1656
267	0.8557	0.6358	0.1401	310	0.8722	0.6569	0.1530	353	0.8887	0.6780	0.1659
268	0.8561	0.6363	0.1404	311	0.8726	0.6574	0.1533	354	0.8890	0.6785	0.1662
269	0.8565	0.6368	0.1407	312	0.8729	0.6579	0.1536	355	0.8894	0.6790	0.1665
270	0.8568	0.6373	0.1410	313	0.8733	0.6584	0.1539	356	0.8898	0.6794	0.1668
271	0.8572	0.6378	0.1413	314	0.8737	0.6589	0.1542	357	0.8902	0.6799	0.1671
272	0.8576	0.6383	0.1416	315	0.8741	0.6594	0.1545	358	0.8906	0.6804	0.1674
273	0.8580	0.6388	0.1419	316	0.8745	0.6598	0.1548	359	0.8910	0.6809	0.1677
274	0.8584	0.6393	0.1422	317	0.8749	0.6603	0.1551	360	0.8913	0.6814	0.1680
275	0.8588	0.6398	0.1425	318	0.8752	0.6608	0.1554	361	0.8917	0.6819	0.1683
276	0.8591	0.6402	0.1428	319	0.8756	0.6613	0.1557	362	0.8921	0.6824	0.1686
277	0.8595	0.6407	0.1431	320	0.8760	0.6618	0.1560	363	0.8925	0.6829	0.1689
278	0.8599	0.6412	0.1434	321	0.8764	0.6623	0.1563	364	0.8929	0.6834	0.1692
279	0.8603	0.6417	0.1437	322	0.8768	0.6628	0.1566	365	0.8933	0.6839	0.1695
280	0.8607	0.6422	0.1440	323	0.8772	0.6633	0.1569	366	0.8936	0.6843	0.1698
281	0.8611	0.6427	0.1443	324	0.8775	0.6638	0.1572	367	0.8940	0.6848	0.1701
282	0.8614	0.6432	0.1446	325	0.8779	0.6643	0.1575	368	0.8944	0.6853	0.1704
283	0.8618	0.6437	0.1449	326	0.8783	0.6647	0.1578	369	0.8948	0.6858	0.1707
284	0.8622	0.6442	0.1452	327	0.8787	0.6652	0.1581	370	0.8952	0.6863	0.1710
285	0.8626	0.6447	0.1455	328	0.8791	0.6657	0.1584	371	0.8956	0.6868	0.1713
286	0.8630	0.6451	0.1458	329	0.8795	0.6662	0.1587	372	0.8959	0.6873	0.1716
287	0.8634	0.6456	0.1461	330	0.8798	0.6667	0.1590	373	0.8963	0.6878	0.1719
288	0.8637	0.6461	0.1464	331	0.8802	0.6672	0.1593	374	0.8967	0.6883	0.1722
289	0.8641	0.6466	0.1467	332	0.8806	0.6677	0.1596	375	0.8971	0.6888	0.1725
290	0.8645	0.6471	0.1470	333	0.8810	0.6682	0.1599	376	0.8975	0.6892	0.1728
291	0.8649	0.6476	0.1473	334	0.8814	0.6687	0.1602	377	0.8979	0.6897	0.1731
292	0.8653	0.6481	0.1476	335	0.8818	0.6692	0.1605	378	0.8982	0.6902	0.1734
293	0.8657	0.6486	0.1479	336	0.8821	0.6696	0.1608	379	0.8986	0.6907	0.1737
294	0.8660	0.6491	0.1482	337	0.8825	0.6701	0.1611	380	0.8990	0.6912	0.1740
295	0.8664	0.6496	0.1485	338	0.8829	0.6706	0.1614	381	0.8994	0.6917	0.1743
296	0.8668	0.6500	0.1488	339	0.8833	0.6711	0.1617	382	0.8998	0.6922	0.1746
297	0.8672	0.6505	0.1491	340	0.8837	0.6716	0.1620	383	0.9002	0.6927	0.1749
298	0.8676	0.6510	0.1494	341	0.8841	0.6721	0.1623	384	0.9005	0.6932	0.1752
299	0.8680	0.6515	0.1497	342	0.8844	0.6726	0.1626	385	0.9009	0.6937	0.1755
300	0.8683	0.6520	0.1500	343	0.8848	0.6731	0.1629	386	0.9013	0.6941	0.1758
301	0.8687	0.6525	0.1503	344	0.8852	0.6736	0.1632	387	0.9017	0.6946	0.1761

# THE STUDY ON THE CONSTRUCTION OF THE BRIDGE OVER THE RIVER RUPSA IN KHULNA- PHASE 2

Job No. : \_\_\_\_\_ Date : 11/18/99 Designed by : \_\_\_\_\_ Checked by : \_\_\_\_\_

Table 2 - Values of  $k_v$ ,  $k_f$  and  $k_s$  with age in Days for  $d_w = 80$  cm.

Age	$k_v$	$k_f$	$k_s$	Age	$k_v$	$k_f$	$k_s$	Age	$k_v$	$k_f$	$k_s$
388	0.9021	0.6951	0.1764	431	0.9186	0.7162	0.1893	474	0.9350	0.7373	0.2022
389	0.9025	0.6956	0.1767	432	0.9189	0.7167	0.1896	475	0.9354	0.7378	0.2025
390	0.9028	0.6961	0.1770	433	0.9193	0.7172	0.1899	476	0.9358	0.7382	0.2028
391	0.9032	0.6966	0.1773	434	0.9197	0.7177	0.1902	477	0.9362	0.7387	0.2031
392	0.9036	0.6971	0.1776	435	0.9201	0.7182	0.1905	478	0.9366	0.7392	0.2034
393	0.9040	0.6976	0.1779	436	0.9205	0.7186	0.1908	479	0.9370	0.7397	0.2037
394	0.9044	0.6981	0.1782	437	0.9209	0.7191	0.1911	480	0.9373	0.7402	0.2040
395	0.9048	0.6986	0.1785	438	0.9212	0.7196	0.1914	481	0.9377	0.7407	0.2043
396	0.9051	0.6990	0.1788	439	0.9216	0.7201	0.1917	482	0.9381	0.7412	0.2046
397	0.9055	0.6995	0.1791	440	0.9220	0.7206	0.1920	483	0.9385	0.7417	0.2049
398	0.9059	0.7000	0.1794	441	0.9224	0.7211	0.1923	484	0.9389	0.7422	0.2052
399	0.9063	0.7005	0.1797	442	0.9228	0.7216	0.1926	485	0.9393	0.7427	0.2055
400	0.9067	0.7010	0.1800	443	0.9232	0.7221	0.1929	486	0.9396	0.7431	0.2058
401	0.9071	0.7015	0.1803	444	0.9235	0.7226	0.1932	487	0.9400	0.7436	0.2061
402	0.9074	0.7020	0.1806	445	0.9239	0.7231	0.1935	488	0.9404	0.7441	0.2064
403	0.9078	0.7025	0.1809	446	0.9243	0.7235	0.1938	489	0.9408	0.7446	0.2067
404	0.9082	0.7030	0.1812	447	0.9247	0.7240	0.1941	490	0.9412	0.7451	0.2070
405	0.9086	0.7035	0.1815	448	0.9251	0.7245	0.1944	491	0.9416	0.7456	0.2073
406	0.9090	0.7039	0.1818	449	0.9255	0.7250	0.1947	492	0.9419	0.7461	0.2076
407	0.9094	0.7044	0.1821	450	0.9258	0.7255	0.1950	493	0.9423	0.7466	0.2079
408	0.9097	0.7049	0.1824	451	0.9262	0.7260	0.1953	494	0.9427	0.7471	0.2082
409	0.9101	0.7054	0.1827	452	0.9266	0.7265	0.1956	495	0.9431	0.7476	0.2085
410	0.9105	0.7059	0.1830	453	0.9270	0.7270	0.1959	496	0.9435	0.7480	0.2088
411	0.9109	0.7064	0.1833	454	0.9274	0.7275	0.1962	497	0.9439	0.7485	0.2091
412	0.9113	0.7069	0.1836	455	0.9278	0.7280	0.1965	498	0.9442	0.7490	0.2094
413	0.9117	0.7074	0.1839	456	0.9281	0.7284	0.1968	499	0.9446	0.7495	0.2097
414	0.9120	0.7079	0.1842	457	0.9285	0.7289	0.1971	500	0.9450	0.7500	0.2100
415	0.9124	0.7084	0.1845	458	0.9289	0.7294	0.1974	501	0.9451	0.7503	0.2103
416	0.9128	0.7088	0.1848	459	0.9293	0.7299	0.1977	502	0.9452	0.7505	0.2105
417	0.9132	0.7093	0.1851	460	0.9297	0.7304	0.1980	503	0.9452	0.7508	0.2108
418	0.9136	0.7098	0.1854	461	0.9301	0.7309	0.1983	504	0.9453	0.7511	0.2110
419	0.9140	0.7103	0.1857	462	0.9304	0.7314	0.1986	505	0.9454	0.7513	0.2113
420	0.9143	0.7108	0.1860	463	0.9308	0.7319	0.1989	506	0.9455	0.7516	0.2116
421	0.9147	0.7113	0.1863	464	0.9312	0.7324	0.1992	507	0.9456	0.7519	0.2118
422	0.9151	0.7118	0.1866	465	0.9316	0.7329	0.1995	508	0.9456	0.7521	0.2121
423	0.9155	0.7123	0.1869	466	0.9320	0.7333	0.1998	509	0.9457	0.7524	0.2123
424	0.9159	0.7128	0.1872	467	0.9324	0.7338	0.2001	510	0.9458	0.7527	0.2126
425	0.9163	0.7133	0.1875	468	0.9327	0.7343	0.2004	511	0.9459	0.7529	0.2129
426	0.9166	0.7137	0.1878	469	0.9331	0.7348	0.2007	512	0.9460	0.7532	0.2131
427	0.9170	0.7142	0.1881	470	0.9335	0.7353	0.2010	513	0.9460	0.7535	0.2134
428	0.9174	0.7147	0.1884	471	0.9339	0.7358	0.2013	514	0.9461	0.7538	0.2136
429	0.9178	0.7152	0.1887	472	0.9343	0.7363	0.2016	515	0.9462	0.7540	0.2139
430	0.9182	0.7157	0.1890	473	0.9347	0.7368	0.2019	516	0.9463	0.7543	0.2142



## THE STUDY ON THE CONSTRUCTION OF THE BRIDGE OVER THE RIVER RUPSA IN KHULNA- PHASE 2

Job No. : \_\_\_\_\_ Date : 11/18/99 Designed by : \_\_\_\_\_ Checked by : \_\_\_\_\_

Table 2 - Values of  $k_v$ ,  $k_r$  and  $k_s$  with age in Days for  $d_w = 80$  cm.

Age	$k_v$	$k_r$	$k_s$	Age	$k_v$	$k_r$	$k_s$	Age	$k_v$	$k_r$	$k_s$
517	0.9464	0.7546	0.2144	560	0.9498	0.7661	0.2256	603	0.9532	0.7776	0.2368
518	0.9464	0.7548	0.2147	561	0.9499	0.7663	0.2259	604	0.9533	0.7779	0.2370
519	0.9465	0.7551	0.2149	562	0.9500	0.7666	0.2261	605	0.9534	0.7781	0.2373
520	0.9466	0.7554	0.2152	563	0.9500	0.7669	0.2264	606	0.9535	0.7784	0.2376
521	0.9467	0.7556	0.2155	564	0.9501	0.7672	0.2266	607	0.9536	0.7787	0.2378
522	0.9468	0.7559	0.2157	565	0.9502	0.7674	0.2269	608	0.9536	0.7789	0.2381
523	0.9468	0.7562	0.2160	566	0.9503	0.7677	0.2272	609	0.9537	0.7792	0.2383
524	0.9469	0.7564	0.2162	567	0.9504	0.7680	0.2274	610	0.9538	0.7795	0.2386
525	0.9470	0.7567	0.2165	568	0.9504	0.7682	0.2277	611	0.9539	0.7797	0.2389
526	0.9471	0.7570	0.2168	569	0.9505	0.7685	0.2279	612	0.9540	0.7800	0.2391
527	0.9472	0.7572	0.2170	570	0.9506	0.7688	0.2282	613	0.9540	0.7803	0.2394
528	0.9472	0.7575	0.2173	571	0.9507	0.7690	0.2285	614	0.9541	0.7806	0.2396
529	0.9473	0.7578	0.2175	572	0.9508	0.7693	0.2287	615	0.9542	0.7808	0.2399
530	0.9474	0.7580	0.2178	573	0.9508	0.7696	0.2290	616	0.9543	0.7811	0.2402
531	0.9475	0.7583	0.2181	574	0.9509	0.7698	0.2292	617	0.9544	0.7814	0.2404
532	0.9476	0.7586	0.2183	575	0.9510	0.7701	0.2295	618	0.9544	0.7816	0.2407
533	0.9476	0.7588	0.2186	576	0.9511	0.7704	0.2298	619	0.9545	0.7819	0.2409
534	0.9477	0.7591	0.2188	577	0.9512	0.7706	0.2300	620	0.9546	0.7822	0.2412
535	0.9478	0.7594	0.2191	578	0.9512	0.7709	0.2303	621	0.9547	0.7824	0.2415
536	0.9479	0.7596	0.2194	579	0.9513	0.7712	0.2305	622	0.9548	0.7827	0.2417
537	0.9480	0.7599	0.2196	580	0.9514	0.7714	0.2308	623	0.9548	0.7830	0.2420
538	0.9480	0.7602	0.2199	581	0.9515	0.7717	0.2311	624	0.9549	0.7832	0.2422
539	0.9481	0.7605	0.2201	582	0.9516	0.7720	0.2313	625	0.9550	0.7835	0.2425
540	0.9482	0.7607	0.2204	583	0.9516	0.7722	0.2316	626	0.9551	0.7838	0.2428
541	0.9483	0.7610	0.2207	584	0.9517	0.7725	0.2318	627	0.9552	0.7840	0.2430
542	0.9484	0.7613	0.2209	585	0.9518	0.7728	0.2321	628	0.9552	0.7843	0.2433
543	0.9484	0.7615	0.2212	586	0.9519	0.7730	0.2324	629	0.9553	0.7846	0.2435
544	0.9485	0.7618	0.2214	587	0.9520	0.7733	0.2326	630	0.9554	0.7848	0.2438
545	0.9486	0.7621	0.2217	588	0.9520	0.7736	0.2329	631	0.9555	0.7851	0.2441
546	0.9487	0.7623	0.2220	589	0.9521	0.7739	0.2331	632	0.9556	0.7854	0.2443
547	0.9488	0.7626	0.2222	590	0.9522	0.7741	0.2334	633	0.9556	0.7856	0.2446
548	0.9488	0.7629	0.2225	591	0.9523	0.7744	0.2337	634	0.9557	0.7859	0.2448
549	0.9489	0.7631	0.2227	592	0.9524	0.7747	0.2339	635	0.9558	0.7862	0.2451
550	0.9490	0.7634	0.2230	593	0.9524	0.7749	0.2342	636	0.9559	0.7864	0.2454
551	0.9491	0.7637	0.2233	594	0.9525	0.7752	0.2344	637	0.9560	0.7867	0.2456
552	0.9492	0.7639	0.2235	595	0.9526	0.7755	0.2347	638	0.9560	0.7870	0.2459
553	0.9492	0.7642	0.2238	596	0.9527	0.7757	0.2350	639	0.9561	0.7873	0.2461
554	0.9493	0.7645	0.2240	597	0.9528	0.7760	0.2352	640	0.9562	0.7875	0.2464
555	0.9494	0.7647	0.2243	598	0.9528	0.7763	0.2355	641	0.9563	0.7878	0.2467
556	0.9495	0.7650	0.2246	599	0.9529	0.7765	0.2357	642	0.9564	0.7881	0.2469
557	0.9496	0.7653	0.2248	600	0.9530	0.7768	0.2360	643	0.9564	0.7883	0.2472
558	0.9496	0.7655	0.2251	601	0.9531	0.7771	0.2363	644	0.9565	0.7886	0.2474
559	0.9497	0.7658	0.2253	602	0.9532	0.7773	0.2365	645	0.9566	0.7889	0.2477

## THE STUDY ON THE CONSTRUCTION OF THE BRIDGE OVER THE RIVER RUPSA IN KHULNA- PHASE 2

Job No. :                      Date :            11/18/99            Designed by :                      Checked by :

Table 2 - Values of  $k_v$ ,  $k_f$  and  $k_s$  with age in Days for  $d_w = 80$  cm.

Age	$k_v$	$k_f$	$k_s$	Age	$k_v$	$k_f$	$k_s$	Age	$k_v$	$k_f$	$k_s$
646	0.9567	0.7891	0.2480	689	0.9601	0.8007	0.2591	732	0.9636	0.8122	0.2703
647	0.9568	0.7894	0.2482	690	0.9602	0.8009	0.2594	733	0.9636	0.8124	0.2706
648	0.9568	0.7897	0.2485	691	0.9603	0.8012	0.2597	734	0.9637	0.8127	0.2708
649	0.9569	0.7899	0.2487	692	0.9604	0.8015	0.2599	735	0.9638	0.8130	0.2711
650	0.9570	0.7902	0.2490	693	0.9604	0.8017	0.2602	736	0.9639	0.8132	0.2714
651	0.9571	0.7905	0.2493	694	0.9605	0.8020	0.2604	737	0.9640	0.8135	0.2716
652	0.9572	0.7907	0.2495	695	0.9606	0.8023	0.2607	738	0.9640	0.8138	0.2719
653	0.9572	0.7910	0.2498	696	0.9607	0.8025	0.2610	739	0.9641	0.8141	0.2721
654	0.9573	0.7913	0.2500	697	0.9608	0.8028	0.2612	740	0.9642	0.8143	0.2724
655	0.9574	0.7915	0.2503	698	0.9608	0.8031	0.2615	741	0.9643	0.8146	0.2727
656	0.9575	0.7918	0.2506	699	0.9609	0.8033	0.2617	742	0.9644	0.8149	0.2729
657	0.9576	0.7921	0.2508	700	0.9610	0.8036	0.2620	743	0.9644	0.8151	0.2732
658	0.9576	0.7923	0.2511	701	0.9611	0.8039	0.2623	744	0.9645	0.8154	0.2734
659	0.9577	0.7926	0.2513	702	0.9612	0.8041	0.2625	745	0.9646	0.8157	0.2737
660	0.9578	0.7929	0.2516	703	0.9612	0.8044	0.2628	746	0.9647	0.8159	0.2740
661	0.9579	0.7931	0.2519	704	0.9613	0.8047	0.2630	747	0.9648	0.8162	0.2742
662	0.9580	0.7934	0.2521	705	0.9614	0.8049	0.2633	748	0.9648	0.8165	0.2745
663	0.9580	0.7937	0.2524	706	0.9615	0.8052	0.2636	749	0.9649	0.8167	0.2747
664	0.9581	0.7940	0.2526	707	0.9616	0.8055	0.2638	750	0.9650	0.8170	0.2750
665	0.9582	0.7942	0.2529	708	0.9616	0.8057	0.2641	751	0.9651	0.8173	0.2753
666	0.9583	0.7945	0.2532	709	0.9617	0.8060	0.2643	752	0.9652	0.8175	0.2755
667	0.9584	0.7948	0.2534	710	0.9618	0.8063	0.2646	753	0.9652	0.8178	0.2758
668	0.9584	0.7950	0.2537	711	0.9619	0.8065	0.2649	754	0.9653	0.8181	0.2760
669	0.9585	0.7953	0.2539	712	0.9620	0.8068	0.2651	755	0.9654	0.8183	0.2763
670	0.9586	0.7956	0.2542	713	0.9620	0.8071	0.2654	756	0.9655	0.8186	0.2766
671	0.9587	0.7958	0.2545	714	0.9621	0.8074	0.2656	757	0.9656	0.8189	0.2768
672	0.9588	0.7961	0.2547	715	0.9622	0.8076	0.2659	758	0.9656	0.8191	0.2771
673	0.9588	0.7964	0.2550	716	0.9623	0.8079	0.2662	759	0.9657	0.8194	0.2773
674	0.9589	0.7966	0.2552	717	0.9624	0.8082	0.2664	760	0.9658	0.8197	0.2776
675	0.9590	0.7969	0.2555	718	0.9624	0.8084	0.2667	761	0.9659	0.8199	0.2779
676	0.9591	0.7972	0.2558	719	0.9625	0.8087	0.2669	762	0.9660	0.8202	0.2781
677	0.9592	0.7974	0.2560	720	0.9626	0.8090	0.2672	763	0.9660	0.8205	0.2784
678	0.9592	0.7977	0.2563	721	0.9627	0.8092	0.2675	764	0.9661	0.8208	0.2786
679	0.9593	0.7980	0.2565	722	0.9628	0.8095	0.2677	765	0.9662	0.8210	0.2789
680	0.9594	0.7982	0.2568	723	0.9628	0.8098	0.2680	766	0.9663	0.8213	0.2792
681	0.9595	0.7985	0.2571	724	0.9629	0.8100	0.2682	767	0.9664	0.8216	0.2794
682	0.9596	0.7988	0.2573	725	0.9630	0.8103	0.2685	768	0.9664	0.8218	0.2797
683	0.9596	0.7990	0.2576	726	0.9631	0.8106	0.2688	769	0.9665	0.8221	0.2799
684	0.9597	0.7993	0.2578	727	0.9632	0.8108	0.2690	770	0.9666	0.8224	0.2802
685	0.9598	0.7996	0.2581	728	0.9632	0.8111	0.2693	771	0.9667	0.8226	0.2805
686	0.9599	0.7998	0.2584	729	0.9633	0.8114	0.2695	772	0.9668	0.8229	0.2807
687	0.9600	0.8001	0.2586	730	0.9634	0.8116	0.2698	773	0.9668	0.8232	0.2810
688	0.9600	0.8004	0.2589	731	0.9635	0.8119	0.2701	774	0.9669	0.8234	0.2812

## THE STUDY ON THE CONSTRUCTION OF THE BRIDGE OVER THE RIVER RUPSA IN KHULNA- PHASE 2

Job No. : \_\_\_\_\_ Date : 11/18/99 Designed by : \_\_\_\_\_ Checked by : \_\_\_\_\_

Table 2 - Values of  $k_v$ ,  $k_s$  and  $k_r$  with age in Days for  $d_w = 80$  cm.

Age	$k_v$	$k_r$	$k_s$	Age	$k_v$	$k_r$	$k_s$	Age	$k_v$	$k_r$	$k_s$
775	0.9670	0.8237	0.2815	818	0.9704	0.8352	0.2927	861	0.9739	0.8467	0.3039
776	0.9671	0.8240	0.2818	819	0.9705	0.8355	0.2929	862	0.9740	0.8470	0.3041
777	0.9672	0.8242	0.2820	820	0.9706	0.8358	0.2932	863	0.9740	0.8473	0.3044
778	0.9672	0.8245	0.2823	821	0.9707	0.8360	0.2935	864	0.9741	0.8476	0.3046
779	0.9673	0.8248	0.2825	822	0.9708	0.8363	0.2937	865	0.9742	0.8478	0.3049
780	0.9674	0.8250	0.2828	823	0.9708	0.8366	0.2940	866	0.9743	0.8481	0.3052
781	0.9675	0.8253	0.2831	824	0.9709	0.8368	0.2942	867	0.9744	0.8484	0.3054
782	0.9676	0.8256	0.2833	825	0.9710	0.8371	0.2945	868	0.9744	0.8486	0.3057
783	0.9676	0.8258	0.2836	826	0.9711	0.8374	0.2948	869	0.9745	0.8489	0.3059
784	0.9677	0.8261	0.2838	827	0.9712	0.8376	0.2950	870	0.9746	0.8492	0.3062
785	0.9678	0.8264	0.2841	828	0.9712	0.8379	0.2953	871	0.9747	0.8494	0.3065
786	0.9679	0.8266	0.2844	829	0.9713	0.8382	0.2955	872	0.9748	0.8497	0.3067
787	0.9680	0.8269	0.2846	830	0.9714	0.8384	0.2958	873	0.9748	0.8500	0.3070
788	0.9680	0.8272	0.2849	831	0.9715	0.8387	0.2961	874	0.9749	0.8502	0.3072
789	0.9681	0.8275	0.2851	832	0.9716	0.8390	0.2963	875	0.9750	0.8505	0.3075
790	0.9682	0.8277	0.2854	833	0.9716	0.8392	0.2966	876	0.9751	0.8508	0.3078
791	0.9683	0.8280	0.2857	834	0.9717	0.8395	0.2968	877	0.9752	0.8510	0.3080
792	0.9684	0.8283	0.2859	835	0.9718	0.8398	0.2971	878	0.9752	0.8513	0.3083
793	0.9684	0.8285	0.2862	836	0.9719	0.8400	0.2974	879	0.9753	0.8516	0.3085
794	0.9685	0.8288	0.2864	837	0.9720	0.8403	0.2976	880	0.9754	0.8518	0.3088
795	0.9686	0.8291	0.2867	838	0.9720	0.8406	0.2979	881	0.9755	0.8521	0.3091
796	0.9687	0.8293	0.2870	839	0.9721	0.8409	0.2981	882	0.9756	0.8524	0.3093
797	0.9688	0.8296	0.2872	840	0.9722	0.8411	0.2984	883	0.9756	0.8526	0.3096
798	0.9688	0.8299	0.2875	841	0.9723	0.8414	0.2987	884	0.9757	0.8529	0.3098
799	0.9689	0.8301	0.2877	842	0.9724	0.8417	0.2989	885	0.9758	0.8532	0.3101
800	0.9690	0.8304	0.2880	843	0.9724	0.8419	0.2992	886	0.9759	0.8534	0.3104
801	0.9691	0.8307	0.2883	844	0.9725	0.8422	0.2994	887	0.9760	0.8537	0.3106
802	0.9692	0.8309	0.2885	845	0.9726	0.8425	0.2997	888	0.9760	0.8540	0.3109
803	0.9692	0.8312	0.2888	846	0.9727	0.8427	0.3000	889	0.9761	0.8543	0.3111
804	0.9693	0.8315	0.2890	847	0.9728	0.8430	0.3002	890	0.9762	0.8545	0.3114
805	0.9694	0.8317	0.2893	848	0.9728	0.8433	0.3005	891	0.9763	0.8548	0.3117
806	0.9695	0.8320	0.2896	849	0.9729	0.8435	0.3007	892	0.9764	0.8551	0.3119
807	0.9696	0.8323	0.2898	850	0.9730	0.8438	0.3010	893	0.9764	0.8553	0.3122
808	0.9696	0.8325	0.2901	851	0.9731	0.8441	0.3013	894	0.9765	0.8556	0.3124
809	0.9697	0.8328	0.2903	852	0.9732	0.8443	0.3015	895	0.9766	0.8559	0.3127
810	0.9698	0.8331	0.2906	853	0.9732	0.8446	0.3018	896	0.9767	0.8561	0.3130
811	0.9699	0.8333	0.2909	854	0.9733	0.8449	0.3020	897	0.9768	0.8564	0.3132
812	0.9700	0.8336	0.2911	855	0.9734	0.8451	0.3023	898	0.9768	0.8567	0.3135
813	0.9700	0.8339	0.2914	856	0.9735	0.8454	0.3026	899	0.9769	0.8569	0.3137
814	0.9701	0.8342	0.2916	857	0.9736	0.8457	0.3028	900	0.9770	0.8572	0.3140
815	0.9702	0.8344	0.2919	858	0.9736	0.8459	0.3031	901	0.9771	0.8575	0.3143
816	0.9703	0.8347	0.2922	859	0.9737	0.8462	0.3033	902	0.9772	0.8577	0.3145
817	0.9704	0.8350	0.2924	860	0.9738	0.8465	0.3036	903	0.9772	0.8580	0.3148

# THE STUDY ON THE CONSTRUCTION OF THE BRIDGE OVER THE RIVER RUPSA IN KHULNA- PHASE 2

Job No. : \_\_\_\_\_ Date : 11/18/99 Designed by : \_\_\_\_\_ Checked by : \_\_\_\_\_

Table 2 - Values of  $k_v$ ,  $k_f$  and  $k_s$  with age in Days for  $d_w = 80$  cm.

Age	$k_v$	$k_f$	$k_s$	Age	$k_v$	$k_f$	$k_s$	Age	$k_v$	$k_f$	$k_s$
904	0.9773	0.8583	0.3150	947	0.9808	0.8698	0.3262	990	0.9842	0.8813	0.3374
905	0.9774	0.8585	0.3153	948	0.9808	0.8701	0.3265	991	0.9843	0.8816	0.3377
906	0.9775	0.8588	0.3156	949	0.9809	0.8703	0.3267	992	0.9844	0.8819	0.3379
907	0.9776	0.8591	0.3158	950	0.9810	0.8706	0.3270	993	0.9844	0.8821	0.3382
908	0.9776	0.8593	0.3161	951	0.9811	0.8709	0.3273	994	0.9845	0.8824	0.3384
909	0.9777	0.8596	0.3163	952	0.9812	0.8711	0.3275	995	0.9846	0.8827	0.3387
910	0.9778	0.8599	0.3166	953	0.9812	0.8714	0.3278	996	0.9847	0.8829	0.3390
911	0.9779	0.8601	0.3169	954	0.9813	0.8717	0.3280	997	0.9848	0.8832	0.3392
912	0.9780	0.8604	0.3171	955	0.9814	0.8719	0.3283	998	0.9848	0.8835	0.3395
913	0.9780	0.8607	0.3174	956	0.9815	0.8722	0.3286	999	0.9849	0.8837	0.3397
914	0.9781	0.8610	0.3176	957	0.9816	0.8725	0.3288	1000	0.9850	0.8840	0.3400
915	0.9782	0.8612	0.3179	958	0.9816	0.8727	0.3291	2000	1.0000	1.0100	0.5000
916	0.9783	0.8615	0.3182	959	0.9817	0.8730	0.3293	3000	1.0000	1.0560	0.5533
917	0.9784	0.8618	0.3184	960	0.9818	0.8733	0.3296	4000	1.0000	1.1020	0.6067
918	0.9784	0.8620	0.3187	961	0.9819	0.8735	0.3299	5000	1.0000	1.1480	0.6600
919	0.9785	0.8623	0.3189	962	0.9820	0.8738	0.3301	6000	1.0000	1.1634	0.6730
920	0.9786	0.8626	0.3192	963	0.9820	0.8741	0.3304	7000	1.0000	1.1788	0.6860
921	0.9787	0.8628	0.3195	964	0.9821	0.8744	0.3306	8000	1.0000	1.1942	0.6990
922	0.9788	0.8631	0.3197	965	0.9822	0.8746	0.3309	9000	1.0000	1.2096	0.7120
923	0.9788	0.8634	0.3200	966	0.9823	0.8749	0.3312	9001	1.0000	1.2096	0.7120
924	0.9789	0.8636	0.3202	967	0.9824	0.8752	0.3314	9002	1.0000	1.2096	0.7120
925	0.9790	0.8639	0.3205	968	0.9824	0.8754	0.3317	9003	1.0000	1.2096	0.7120
926	0.9791	0.8642	0.3208	969	0.9825	0.8757	0.3319	9004	1.0000	1.2097	0.7121
927	0.9792	0.8644	0.3210	970	0.9826	0.8760	0.3322	9005	1.0000	1.2097	0.7121
928	0.9792	0.8647	0.3213	971	0.9827	0.8762	0.3325	9006	1.0000	1.2097	0.7121
929	0.9793	0.8650	0.3215	972	0.9828	0.8765	0.3327	9007	1.0000	1.2097	0.7121
930	0.9794	0.8652	0.3218	973	0.9828	0.8768	0.3330	9008	1.0000	1.2097	0.7121
931	0.9795	0.8655	0.3221	974	0.9829	0.8770	0.3332	9009	1.0000	1.2097	0.7121
932	0.9796	0.8658	0.3223	975	0.9830	0.8773	0.3335	9010	1.0000	1.2098	0.7121
933	0.9796	0.8660	0.3226	976	0.9831	0.8776	0.3338	9011	1.0000	1.2098	0.7121
934	0.9797	0.8663	0.3228	977	0.9832	0.8778	0.3340	9012	1.0000	1.2098	0.7122
935	0.9798	0.8666	0.3231	978	0.9832	0.8781	0.3343	9013	1.0000	1.2098	0.7122
936	0.9799	0.8668	0.3234	979	0.9833	0.8784	0.3345	9014	1.0000	1.2098	0.7122
937	0.9800	0.8671	0.3236	980	0.9834	0.8786	0.3348	9015	1.0000	1.2098	0.7122
938	0.9800	0.8674	0.3239	981	0.9835	0.8789	0.3351	9016	1.0000	1.2098	0.7122
939	0.9801	0.8677	0.3241	982	0.9836	0.8792	0.3353	9017	1.0000	1.2099	0.7122
940	0.9802	0.8679	0.3244	983	0.9836	0.8794	0.3356	9018	1.0000	1.2099	0.7122
941	0.9803	0.8682	0.3247	984	0.9837	0.8797	0.3358	9019	1.0000	1.2099	0.7122
942	0.9804	0.8685	0.3249	985	0.9838	0.8800	0.3361	9020	1.0000	1.2099	0.7123
943	0.9804	0.8687	0.3252	986	0.9839	0.8802	0.3364	9021	1.0000	1.2099	0.7123
944	0.9805	0.8690	0.3254	987	0.9840	0.8805	0.3366	9022	1.0000	1.2099	0.7123
945	0.9806	0.8693	0.3257	988	0.9840	0.8808	0.3369	9023	1.0000	1.2100	0.7123
946	0.9807	0.8695	0.3260	989	0.9841	0.8811	0.3371	9024	1.0000	1.2100	0.7123

## THE STUDY ON THE CONSTRUCTION OF THE BRIDGE OVER THE RIVER RUPSA IN KHULNA- PHASE 2

Job No. :                      Date :                      11/18/99                      Designed by :                      Checked by :

Table 2 - Values of  $k_v$ ,  $k_r$  and  $k_s$  with age in Days for  $d_w = 80$  cm.

Age	$k_v$	$k_r$	$k_s$	Age	$k_v$	$k_r$	$k_s$	Age	$k_v$	$k_r$	$k_s$
9025	1.0000	1.2100	0.7123	9068	1.0000	1.2106	0.7129	9111	1.0000	1.2113	0.7134
9026	1.0000	1.2100	0.7123	9069	1.0000	1.2107	0.7129	9112	1.0000	1.2113	0.7135
9027	1.0000	1.2100	0.7124	9070	1.0000	1.2107	0.7129	9113	1.0000	1.2113	0.7135
9028	1.0000	1.2100	0.7124	9071	1.0000	1.2107	0.7129	9114	1.0000	1.2114	0.7135
9029	1.0000	1.2100	0.7124	9072	1.0000	1.2107	0.7129	9115	1.0000	1.2114	0.7135
9030	1.0000	1.2101	0.7124	9073	1.0000	1.2107	0.7129	9116	1.0000	1.2114	0.7135
9031	1.0000	1.2101	0.7124	9074	1.0000	1.2107	0.7130	9117	1.0000	1.2114	0.7135
9032	1.0000	1.2101	0.7124	9075	1.0000	1.2108	0.7130	9118	1.0000	1.2114	0.7135
9033	1.0000	1.2101	0.7124	9076	1.0000	1.2108	0.7130	9119	1.0000	1.2114	0.7135
9034	1.0000	1.2101	0.7124	9077	1.0000	1.2108	0.7130	9120	1.0000	1.2114	0.7136
9035	1.0000	1.2101	0.7125	9078	1.0000	1.2108	0.7130	9121	1.0000	1.2115	0.7136
9036	1.0000	1.2102	0.7125	9079	1.0000	1.2108	0.7130	9122	1.0000	1.2115	0.7136
9037	1.0000	1.2102	0.7125	9080	1.0000	1.2108	0.7130	9123	1.0000	1.2115	0.7136
9038	1.0000	1.2102	0.7125	9081	1.0000	1.2108	0.7131	9124	1.0000	1.2115	0.7136
9039	1.0000	1.2102	0.7125	9082	1.0000	1.2109	0.7131	9125	1.0000	1.2115	0.7136
9040	1.0000	1.2102	0.7125	9083	1.0000	1.2109	0.7131	9126	1.0000	1.2115	0.7136
9041	1.0000	1.2102	0.7125	9084	1.0000	1.2109	0.7131	9127	1.0000	1.2116	0.7137
9042	1.0000	1.2102	0.7125	9085	1.0000	1.2109	0.7131	9128	1.0000	1.2116	0.7137
9043	1.0000	1.2103	0.7126	9086	1.0000	1.2109	0.7131	9129	1.0000	1.2116	0.7137
9044	1.0000	1.2103	0.7126	9087	1.0000	1.2109	0.7131	9130	1.0000	1.2116	0.7137
9045	1.0000	1.2103	0.7126	9088	1.0000	1.2110	0.7131	9131	1.0000	1.2116	0.7137
9046	1.0000	1.2103	0.7126	9089	1.0000	1.2110	0.7132	9132	1.0000	1.2116	0.7137
9047	1.0000	1.2103	0.7126	9090	1.0000	1.2110	0.7132	9133	1.0000	1.2116	0.7137
9048	1.0000	1.2103	0.7126	9091	1.0000	1.2110	0.7132	9134	1.0000	1.2117	0.7137
9049	1.0000	1.2104	0.7126	9092	1.0000	1.2110	0.7132	9135	1.0000	1.2117	0.7138
9050	1.0000	1.2104	0.7127	9093	1.0000	1.2110	0.7132	9136	1.0000	1.2117	0.7138
9051	1.0000	1.2104	0.7127	9094	1.0000	1.2110	0.7132	9137	1.0000	1.2117	0.7138
9052	1.0000	1.2104	0.7127	9095	1.0000	1.2111	0.7132	9138	1.0000	1.2117	0.7138
9053	1.0000	1.2104	0.7127	9096	1.0000	1.2111	0.7132	9139	1.0000	1.2117	0.7138
9054	1.0000	1.2104	0.7127	9097	1.0000	1.2111	0.7133	9140	1.0000	1.2118	0.7138
9055	1.0000	1.2104	0.7127	9098	1.0000	1.2111	0.7133	9141	1.0000	1.2118	0.7138
9056	1.0000	1.2105	0.7127	9099	1.0000	1.2111	0.7133	9142	1.0000	1.2118	0.7138
9057	1.0000	1.2105	0.7127	9100	1.0000	1.2111	0.7133	9143	1.0000	1.2118	0.7139
9058	1.0000	1.2105	0.7128	9101	1.0000	1.2112	0.7133	9144	1.0000	1.2118	0.7139
9059	1.0000	1.2105	0.7128	9102	1.0000	1.2112	0.7133	9145	1.0000	1.2118	0.7139
9060	1.0000	1.2105	0.7128	9103	1.0000	1.2112	0.7133	9146	1.0000	1.2118	0.7139
9061	1.0000	1.2105	0.7128	9104	1.0000	1.2112	0.7134	9147	1.0000	1.2119	0.7139
9062	1.0000	1.2106	0.7128	9105	1.0000	1.2112	0.7134	9148	1.0000	1.2119	0.7139
9063	1.0000	1.2106	0.7128	9106	1.0000	1.2112	0.7134	9149	1.0000	1.2119	0.7139
9064	1.0000	1.2106	0.7128	9107	1.0000	1.2112	0.7134	9150	1.0000	1.2119	0.7140
9065	1.0000	1.2106	0.7128	9108	1.0000	1.2113	0.7134	9151	1.0000	1.2119	0.7140
9066	1.0000	1.2106	0.7129	9109	1.0000	1.2113	0.7134	9152	1.0000	1.2119	0.7140
9067	1.0000	1.2106	0.7129	9110	1.0000	1.2113	0.7134	9153	1.0000	1.2120	0.7140

# THE STUDY ON THE CONSTRUCTION OF THE BRIDGE OVER THE RIVER RUPSA IN KHULNA- PHASE 2

Job No. : \_\_\_\_\_ Date : 11/18/99 Designed by : \_\_\_\_\_ Checked by : \_\_\_\_\_

Table 2 - Values of  $k_v$ ,  $k_f$  and  $k_s$  with age in Days for  $d_w = 80$  cm.

Age	$k_v$	$k_f$	$k_s$	Age	$k_v$	$k_f$	$k_s$	Age	$k_v$	$k_f$	$k_s$
9154	1.0000	1.2120	0.7140	9197	1.0000	1.2126	0.7146	9240	1.0000	1.2133	0.7151
9155	1.0000	1.2120	0.7140	9198	1.0000	1.2126	0.7146	9241	1.0000	1.2133	0.7151
9156	1.0000	1.2120	0.7140	9199	1.0000	1.2127	0.7146	9242	1.0000	1.2133	0.7151
9157	1.0000	1.2120	0.7140	9200	1.0000	1.2127	0.7146	9243	1.0000	1.2133	0.7152
9158	1.0000	1.2120	0.7141	9201	1.0000	1.2127	0.7146	9244	1.0000	1.2134	0.7152
9159	1.0000	1.2120	0.7141	9202	1.0000	1.2127	0.7146	9245	1.0000	1.2134	0.7152
9160	1.0000	1.2121	0.7141	9203	1.0000	1.2127	0.7146	9246	1.0000	1.2134	0.7152
9161	1.0000	1.2121	0.7141	9204	1.0000	1.2127	0.7147	9247	1.0000	1.2134	0.7152
9162	1.0000	1.2121	0.7141	9205	1.0000	1.2128	0.7147	9248	1.0000	1.2134	0.7152
9163	1.0000	1.2121	0.7141	9206	1.0000	1.2128	0.7147	9249	1.0000	1.2134	0.7152
9164	1.0000	1.2121	0.7141	9207	1.0000	1.2128	0.7147	9250	1.0000	1.2135	0.7153
9165	1.0000	1.2121	0.7141	9208	1.0000	1.2128	0.7147	9251	1.0000	1.2135	0.7153
9166	1.0000	1.2122	0.7142	9209	1.0000	1.2128	0.7147	9252	1.0000	1.2135	0.7153
9167	1.0000	1.2122	0.7142	9210	1.0000	1.2128	0.7147	9253	1.0000	1.2135	0.7153
9168	1.0000	1.2122	0.7142	9211	1.0000	1.2128	0.7147	9254	1.0000	1.2135	0.7153
9169	1.0000	1.2122	0.7142	9212	1.0000	1.2129	0.7148	9255	1.0000	1.2135	0.7153
9170	1.0000	1.2122	0.7142	9213	1.0000	1.2129	0.7148	9256	1.0000	1.2135	0.7153
9171	1.0000	1.2122	0.7142	9214	1.0000	1.2129	0.7148	9257	1.0000	1.2136	0.7153
9172	1.0000	1.2122	0.7142	9215	1.0000	1.2129	0.7148	9258	1.0000	1.2136	0.7154
9173	1.0000	1.2123	0.7142	9216	1.0000	1.2129	0.7148	9259	1.0000	1.2136	0.7154
9174	1.0000	1.2123	0.7143	9217	1.0000	1.2129	0.7148	9260	1.0000	1.2136	0.7154
9175	1.0000	1.2123	0.7143	9218	1.0000	1.2130	0.7148	9261	1.0000	1.2136	0.7154
9176	1.0000	1.2123	0.7143	9219	1.0000	1.2130	0.7148	9262	1.0000	1.2136	0.7154
9177	1.0000	1.2123	0.7143	9220	1.0000	1.2130	0.7149	9263	1.0000	1.2137	0.7154
9178	1.0000	1.2123	0.7143	9221	1.0000	1.2130	0.7149	9264	1.0000	1.2137	0.7154
9179	1.0000	1.2124	0.7143	9222	1.0000	1.2130	0.7149	9265	1.0000	1.2137	0.7154
9180	1.0000	1.2124	0.7143	9223	1.0000	1.2130	0.7149	9266	1.0000	1.2137	0.7155
9181	1.0000	1.2124	0.7144	9224	1.0000	1.2130	0.7149	9267	1.0000	1.2137	0.7155
9182	1.0000	1.2124	0.7144	9225	1.0000	1.2131	0.7149	9268	1.0000	1.2137	0.7155
9183	1.0000	1.2124	0.7144	9226	1.0000	1.2131	0.7149	9269	1.0000	1.2137	0.7155
9184	1.0000	1.2124	0.7144	9227	1.0000	1.2131	0.7150	9270	1.0000	1.2138	0.7155
9185	1.0000	1.2124	0.7144	9228	1.0000	1.2131	0.7150	9271	1.0000	1.2138	0.7155
9186	1.0000	1.2125	0.7144	9229	1.0000	1.2131	0.7150	9272	1.0000	1.2138	0.7155
9187	1.0000	1.2125	0.7144	9230	1.0000	1.2131	0.7150	9273	1.0000	1.2138	0.7155
9188	1.0000	1.2125	0.7144	9231	1.0000	1.2132	0.7150	9274	1.0000	1.2138	0.7156
9189	1.0000	1.2125	0.7145	9232	1.0000	1.2132	0.7150	9275	1.0000	1.2138	0.7156
9190	1.0000	1.2125	0.7145	9233	1.0000	1.2132	0.7150	9276	1.0000	1.2139	0.7156
9191	1.0000	1.2125	0.7145	9234	1.0000	1.2132	0.7150	9277	1.0000	1.2139	0.7156
9192	1.0000	1.2126	0.7145	9235	1.0000	1.2132	0.7151	9278	1.0000	1.2139	0.7156
9193	1.0000	1.2126	0.7145	9236	1.0000	1.2132	0.7151	9279	1.0000	1.2139	0.7156
9194	1.0000	1.2126	0.7145	9237	1.0000	1.2132	0.7151	9280	1.0000	1.2139	0.7156
9195	1.0000	1.2126	0.7145	9238	1.0000	1.2133	0.7151	9281	1.0000	1.2139	0.7157
9196	1.0000	1.2126	0.7145	9239	1.0000	1.2133	0.7151	9282	1.0000	1.2139	0.7157



## THE STUDY ON THE CONSTRUCTION OF THE BRIDGE OVER THE RIVER RUPSA IN KHULNA- PHASE 2

Job No. :                      Date :            11/18/99            Designed by :                      Checked by :

Table 2 - Values of  $k_v$ ,  $k_r$  and  $k_s$  with age in Days for  $d_w = 80$  cm.

Age	$k_v$	$k_r$	$k_s$	Age	$k_v$	$k_r$	$k_s$	Age	$k_v$	$k_r$	$k_s$
9283	1.0000	1.2140	0.7157	9326	1.0000	1.2146	0.7162	9369	1.0000	1.2153	0.7168
9284	1.0000	1.2140	0.7157	9327	1.0000	1.2146	0.7163	9370	1.0000	1.2153	0.7168
9285	1.0000	1.2140	0.7157	9328	1.0000	1.2147	0.7163	9371	1.0000	1.2153	0.7168
9286	1.0000	1.2140	0.7157	9329	1.0000	1.2147	0.7163	9372	1.0000	1.2153	0.7168
9287	1.0000	1.2140	0.7157	9330	1.0000	1.2147	0.7163	9373	1.0000	1.2153	0.7168
9288	1.0000	1.2140	0.7157	9331	1.0000	1.2147	0.7163	9374	1.0000	1.2154	0.7169
9289	1.0000	1.2141	0.7158	9332	1.0000	1.2147	0.7163	9375	1.0000	1.2154	0.7169
9290	1.0000	1.2141	0.7158	9333	1.0000	1.2147	0.7163	9376	1.0000	1.2154	0.7169
9291	1.0000	1.2141	0.7158	9334	1.0000	1.2147	0.7163	9377	1.0000	1.2154	0.7169
9292	1.0000	1.2141	0.7158	9335	1.0000	1.2148	0.7164	9378	1.0000	1.2154	0.7169
9293	1.0000	1.2141	0.7158	9336	1.0000	1.2148	0.7164	9379	1.0000	1.2154	0.7169
9294	1.0000	1.2141	0.7158	9337	1.0000	1.2148	0.7164	9380	1.0000	1.2155	0.7169
9295	1.0000	1.2141	0.7158	9338	1.0000	1.2148	0.7164	9381	1.0000	1.2155	0.7170
9296	1.0000	1.2142	0.7158	9339	1.0000	1.2148	0.7164	9382	1.0000	1.2155	0.7170
9297	1.0000	1.2142	0.7159	9340	1.0000	1.2148	0.7164	9383	1.0000	1.2155	0.7170
9298	1.0000	1.2142	0.7159	9341	1.0000	1.2149	0.7164	9384	1.0000	1.2155	0.7170
9299	1.0000	1.2142	0.7159	9342	1.0000	1.2149	0.7164	9385	1.0000	1.2155	0.7170
9300	1.0000	1.2142	0.7159	9343	1.0000	1.2149	0.7165	9386	1.0000	1.2155	0.7170
9301	1.0000	1.2142	0.7159	9344	1.0000	1.2149	0.7165	9387	1.0000	1.2156	0.7170
9302	1.0000	1.2143	0.7159	9345	1.0000	1.2149	0.7165	9388	1.0000	1.2156	0.7170
9303	1.0000	1.2143	0.7159	9346	1.0000	1.2149	0.7165	9389	1.0000	1.2156	0.7171
9304	1.0000	1.2143	0.7160	9347	1.0000	1.2149	0.7165	9390	1.0000	1.2156	0.7171
9305	1.0000	1.2143	0.7160	9348	1.0000	1.2150	0.7165	9391	1.0000	1.2156	0.7171
9306	1.0000	1.2143	0.7160	9349	1.0000	1.2150	0.7165	9392	1.0000	1.2156	0.7171
9307	1.0000	1.2143	0.7160	9350	1.0000	1.2150	0.7166	9393	1.0000	1.2157	0.7171
9308	1.0000	1.2143	0.7160	9351	1.0000	1.2150	0.7166	9394	1.0000	1.2157	0.7171
9309	1.0000	1.2144	0.7160	9352	1.0000	1.2150	0.7166	9395	1.0000	1.2157	0.7171
9310	1.0000	1.2144	0.7160	9353	1.0000	1.2150	0.7166	9396	1.0000	1.2157	0.7171
9311	1.0000	1.2144	0.7160	9354	1.0000	1.2151	0.7166	9397	1.0000	1.2157	0.7172
9312	1.0000	1.2144	0.7161	9355	1.0000	1.2151	0.7166	9398	1.0000	1.2157	0.7172
9313	1.0000	1.2144	0.7161	9356	1.0000	1.2151	0.7166	9399	1.0000	1.2157	0.7172
9314	1.0000	1.2144	0.7161	9357	1.0000	1.2151	0.7166	9400	1.0000	1.2158	0.7172
9315	1.0000	1.2145	0.7161	9358	1.0000	1.2151	0.7167	9401	1.0000	1.2158	0.7172
9316	1.0000	1.2145	0.7161	9359	1.0000	1.2151	0.7167	9402	1.0000	1.2158	0.7172
9317	1.0000	1.2145	0.7161	9360	1.0000	1.2151	0.7167	9403	1.0000	1.2158	0.7172
9318	1.0000	1.2145	0.7161	9361	1.0000	1.2152	0.7167	9404	1.0000	1.2158	0.7173
9319	1.0000	1.2145	0.7161	9362	1.0000	1.2152	0.7167	9405	1.0000	1.2158	0.7173
9320	1.0000	1.2145	0.7162	9363	1.0000	1.2152	0.7167	9406	1.0000	1.2159	0.7173
9321	1.0000	1.2145	0.7162	9364	1.0000	1.2152	0.7167	9407	1.0000	1.2159	0.7173
9322	1.0000	1.2146	0.7162	9365	1.0000	1.2152	0.7167	9408	1.0000	1.2159	0.7173
9323	1.0000	1.2146	0.7162	9366	1.0000	1.2152	0.7168	9409	1.0000	1.2159	0.7173
9324	1.0000	1.2146	0.7162	9367	1.0000	1.2153	0.7168	9410	1.0000	1.2159	0.7173
9325	1.0000	1.2146	0.7162	9368	1.0000	1.2153	0.7168	9411	1.0000	1.2159	0.7173



# THE STUDY ON THE CONSTRUCTION OF THE BRIDGE OVER THE RIVER RUPSA IN KHULNA- PHASE 2

Job No. : \_\_\_\_\_ Date : 11/18/99 Designed by : \_\_\_\_\_ Checked by : \_\_\_\_\_

Table 2 - Values of  $k_v$ ,  $k_f$  and  $k_s$  with age in Days for  $d_w = 80$  cm.

Age	$k_v$	$k_f$	$k_s$	Age	$k_v$	$k_f$	$k_s$	Age	$k_v$	$k_f$	$k_s$
9412	1.0000	1.2159	0.7174	9455	1.0000	1.2166	0.7179	9498	1.0000	1.2173	0.7185
9413	1.0000	1.2160	0.7174	9456	1.0000	1.2166	0.7179	9499	1.0000	1.2173	0.7185
9414	1.0000	1.2160	0.7174	9457	1.0000	1.2166	0.7179	9500	1.0000	1.2173	0.7185
9415	1.0000	1.2160	0.7174	9458	1.0000	1.2167	0.7180	9501	1.0000	1.2173	0.7185
9416	1.0000	1.2160	0.7174	9459	1.0000	1.2167	0.7180	9502	1.0000	1.2173	0.7185
9417	1.0000	1.2160	0.7174	9460	1.0000	1.2167	0.7180	9503	1.0000	1.2173	0.7185
9418	1.0000	1.2160	0.7174	9461	1.0000	1.2167	0.7180	9504	1.0000	1.2174	0.7186
9419	1.0000	1.2161	0.7174	9462	1.0000	1.2167	0.7180	9505	1.0000	1.2174	0.7186
9420	1.0000	1.2161	0.7175	9463	1.0000	1.2167	0.7180	9506	1.0000	1.2174	0.7186
9421	1.0000	1.2161	0.7175	9464	1.0000	1.2167	0.7180	9507	1.0000	1.2174	0.7186
9422	1.0000	1.2161	0.7175	9465	1.0000	1.2168	0.7180	9508	1.0000	1.2174	0.7186
9423	1.0000	1.2161	0.7175	9466	1.0000	1.2168	0.7181	9509	1.0000	1.2174	0.7186
9424	1.0000	1.2161	0.7175	9467	1.0000	1.2168	0.7181	9510	1.0000	1.2175	0.7186
9425	1.0000	1.2161	0.7175	9468	1.0000	1.2168	0.7181	9511	1.0000	1.2175	0.7186
9426	1.0000	1.2162	0.7175	9469	1.0000	1.2168	0.7181	9512	1.0000	1.2175	0.7187
9427	1.0000	1.2162	0.7176	9470	1.0000	1.2168	0.7181	9513	1.0000	1.2175	0.7187
9428	1.0000	1.2162	0.7176	9471	1.0000	1.2169	0.7181	9514	1.0000	1.2175	0.7187
9429	1.0000	1.2162	0.7176	9472	1.0000	1.2169	0.7181	9515	1.0000	1.2175	0.7187
9430	1.0000	1.2162	0.7176	9473	1.0000	1.2169	0.7181	9516	1.0000	1.2175	0.7187
9431	1.0000	1.2162	0.7176	9474	1.0000	1.2169	0.7182	9517	1.0000	1.2176	0.7187
9432	1.0000	1.2163	0.7176	9475	1.0000	1.2169	0.7182	9518	1.0000	1.2176	0.7187
9433	1.0000	1.2163	0.7176	9476	1.0000	1.2169	0.7182	9519	1.0000	1.2176	0.7187
9434	1.0000	1.2163	0.7176	9477	1.0000	1.2169	0.7182	9520	1.0000	1.2176	0.7188
9435	1.0000	1.2163	0.7177	9478	1.0000	1.2170	0.7182	9521	1.0000	1.2176	0.7188
9436	1.0000	1.2163	0.7177	9479	1.0000	1.2170	0.7182	9522	1.0000	1.2176	0.7188
9437	1.0000	1.2163	0.7177	9480	1.0000	1.2170	0.7182	9523	1.0000	1.2177	0.7188
9438	1.0000	1.2163	0.7177	9481	1.0000	1.2170	0.7183	9524	1.0000	1.2177	0.7188
9439	1.0000	1.2164	0.7177	9482	1.0000	1.2170	0.7183	9525	1.0000	1.2177	0.7188
9440	1.0000	1.2164	0.7177	9483	1.0000	1.2170	0.7183	9526	1.0000	1.2177	0.7188
9441	1.0000	1.2164	0.7177	9484	1.0000	1.2171	0.7183	9527	1.0000	1.2177	0.7189
9442	1.0000	1.2164	0.7177	9485	1.0000	1.2171	0.7183	9528	1.0000	1.2177	0.7189
9443	1.0000	1.2164	0.7178	9486	1.0000	1.2171	0.7183	9529	1.0000	1.2177	0.7189
9444	1.0000	1.2164	0.7178	9487	1.0000	1.2171	0.7183	9530	1.0000	1.2178	0.7189
9445	1.0000	1.2165	0.7178	9488	1.0000	1.2171	0.7183	9531	1.0000	1.2178	0.7189
9446	1.0000	1.2165	0.7178	9489	1.0000	1.2171	0.7184	9532	1.0000	1.2178	0.7189
9447	1.0000	1.2165	0.7178	9490	1.0000	1.2171	0.7184	9533	1.0000	1.2178	0.7189
9448	1.0000	1.2165	0.7178	9491	1.0000	1.2172	0.7184	9534	1.0000	1.2178	0.7189
9449	1.0000	1.2165	0.7178	9492	1.0000	1.2172	0.7184	9535	1.0000	1.2178	0.7190
9450	1.0000	1.2165	0.7179	9493	1.0000	1.2172	0.7184	9536	1.0000	1.2179	0.7190
9451	1.0000	1.2165	0.7179	9494	1.0000	1.2172	0.7184	9537	1.0000	1.2179	0.7190
9452	1.0000	1.2166	0.7179	9495	1.0000	1.2172	0.7184	9538	1.0000	1.2179	0.7190
9453	1.0000	1.2166	0.7179	9496	1.0000	1.2172	0.7184	9539	1.0000	1.2179	0.7190
9454	1.0000	1.2166	0.7179	9497	1.0000	1.2173	0.7185	9540	1.0000	1.2179	0.7190

## THE STUDY ON THE CONSTRUCTION OF THE BRIDGE OVER THE RIVER RUPSA IN KHULNA- PHASE 2

Job No. : \_\_\_\_\_ Date : 11/18/99 Designed by : \_\_\_\_\_ Checked by : \_\_\_\_\_

Table 2 - Values of  $k_v$ ,  $k_f$  and  $k_s$  with age in Days for  $d_w = 80$  cm.

Age	$k_v$	$k_f$	$k_s$	Age	$k_v$	$k_f$	$k_s$	Age	$k_v$	$k_f$	$k_s$
9541	1.0000	1.2179	0.7190	9584	1.0000	1.2186	0.7196	9627	1.0000	1.2193	0.7202
9542	1.0000	1.2179	0.7190	9585	1.0000	1.2186	0.7196	9628	1.0000	1.2193	0.7202
9543	1.0000	1.2180	0.7191	9586	1.0000	1.2186	0.7196	9629	1.0000	1.2193	0.7202
9544	1.0000	1.2180	0.7191	9587	1.0000	1.2186	0.7196	9630	1.0000	1.2193	0.7202
9545	1.0000	1.2180	0.7191	9588	1.0000	1.2187	0.7196	9631	1.0000	1.2193	0.7202
9546	1.0000	1.2180	0.7191	9589	1.0000	1.2187	0.7197	9632	1.0000	1.2193	0.7202
9547	1.0000	1.2180	0.7191	9590	1.0000	1.2187	0.7197	9633	1.0000	1.2193	0.7202
9548	1.0000	1.2180	0.7191	9591	1.0000	1.2187	0.7197	9634	1.0000	1.2194	0.7202
9549	1.0000	1.2181	0.7191	9592	1.0000	1.2187	0.7197	9635	1.0000	1.2194	0.7203
9550	1.0000	1.2181	0.7192	9593	1.0000	1.2187	0.7197	9636	1.0000	1.2194	0.7203
9551	1.0000	1.2181	0.7192	9594	1.0000	1.2187	0.7197	9637	1.0000	1.2194	0.7203
9552	1.0000	1.2181	0.7192	9595	1.0000	1.2188	0.7197	9638	1.0000	1.2194	0.7203
9553	1.0000	1.2181	0.7192	9596	1.0000	1.2188	0.7197	9639	1.0000	1.2194	0.7203
9554	1.0000	1.2181	0.7192	9597	1.0000	1.2188	0.7198	9640	1.0000	1.2195	0.7203
9555	1.0000	1.2181	0.7192	9598	1.0000	1.2188	0.7198	9641	1.0000	1.2195	0.7203
9556	1.0000	1.2182	0.7192	9599	1.0000	1.2188	0.7198	9642	1.0000	1.2195	0.7203
9557	1.0000	1.2182	0.7192	9600	1.0000	1.2188	0.7198	9643	1.0000	1.2195	0.7204
9558	1.0000	1.2182	0.7193	9601	1.0000	1.2189	0.7198	9644	1.0000	1.2195	0.7204
9559	1.0000	1.2182	0.7193	9602	1.0000	1.2189	0.7198	9645	1.0000	1.2195	0.7204
9560	1.0000	1.2182	0.7193	9603	1.0000	1.2189	0.7198	9646	1.0000	1.2195	0.7204
9561	1.0000	1.2182	0.7193	9604	1.0000	1.2189	0.7199	9647	1.0000	1.2196	0.7204
9562	1.0000	1.2183	0.7193	9605	1.0000	1.2189	0.7199	9648	1.0000	1.2196	0.7204
9563	1.0000	1.2183	0.7193	9606	1.0000	1.2189	0.7199	9649	1.0000	1.2196	0.7204
9564	1.0000	1.2183	0.7193	9607	1.0000	1.2189	0.7199	9650	1.0000	1.2196	0.7205
9565	1.0000	1.2183	0.7193	9608	1.0000	1.2190	0.7199	9651	1.0000	1.2196	0.7205
9566	1.0000	1.2183	0.7194	9609	1.0000	1.2190	0.7199	9652	1.0000	1.2196	0.7205
9567	1.0000	1.2183	0.7194	9610	1.0000	1.2190	0.7199	9653	1.0000	1.2197	0.7205
9568	1.0000	1.2183	0.7194	9611	1.0000	1.2190	0.7199	9654	1.0000	1.2197	0.7205
9569	1.0000	1.2184	0.7194	9612	1.0000	1.2190	0.7200	9655	1.0000	1.2197	0.7205
9570	1.0000	1.2184	0.7194	9613	1.0000	1.2190	0.7200	9656	1.0000	1.2197	0.7205
9571	1.0000	1.2184	0.7194	9614	1.0000	1.2191	0.7200	9657	1.0000	1.2197	0.7205
9572	1.0000	1.2184	0.7194	9615	1.0000	1.2191	0.7200	9658	1.0000	1.2197	0.7206
9573	1.0000	1.2184	0.7194	9616	1.0000	1.2191	0.7200	9659	1.0000	1.2197	0.7206
9574	1.0000	1.2184	0.7195	9617	1.0000	1.2191	0.7200	9660	1.0000	1.2198	0.7206
9575	1.0000	1.2185	0.7195	9618	1.0000	1.2191	0.7200	9661	1.0000	1.2198	0.7206
9576	1.0000	1.2185	0.7195	9619	1.0000	1.2191	0.7200	9662	1.0000	1.2198	0.7206
9577	1.0000	1.2185	0.7195	9620	1.0000	1.2191	0.7201	9663	1.0000	1.2198	0.7206
9578	1.0000	1.2185	0.7195	9621	1.0000	1.2192	0.7201	9664	1.0000	1.2198	0.7206
9579	1.0000	1.2185	0.7195	9622	1.0000	1.2192	0.7201	9665	1.0000	1.2198	0.7206
9580	1.0000	1.2185	0.7195	9623	1.0000	1.2192	0.7201	9666	1.0000	1.2199	0.7207
9581	1.0000	1.2185	0.7196	9624	1.0000	1.2192	0.7201	9667	1.0000	1.2199	0.7207
9582	1.0000	1.2186	0.7196	9625	1.0000	1.2192	0.7201	9668	1.0000	1.2199	0.7207
9583	1.0000	1.2186	0.7196	9626	1.0000	1.2192	0.7201	9669	1.0000	1.2199	0.7207

# THE STUDY ON THE CONSTRUCTION OF THE BRIDGE OVER THE RIVER RUPSA IN KHULNA- PHASE 2

Job No. : \_\_\_\_\_ Date : 11/18/99 Designed by : \_\_\_\_\_ Checked by : \_\_\_\_\_

Table 2 - Values of  $k_v$ ,  $k_r$  and  $k_s$  with age in Days for  $d_w = 80$  cm.

Age	$k_v$	$k_r$	$k_s$	Age	$k_v$	$k_r$	$k_s$	Age	$k_v$	$k_r$	$k_s$
9670	1.0000	1.2199	0.7207	9713	1.0000	1.2206	0.7213	9756	1.0000	1.2212	0.7218
9671	1.0000	1.2199	0.7207	9714	1.0000	1.2206	0.7213	9757	1.0000	1.2213	0.7218
9672	1.0000	1.2199	0.7207	9715	1.0000	1.2206	0.7213	9758	1.0000	1.2213	0.7219
9673	1.0000	1.2200	0.7207	9716	1.0000	1.2206	0.7213	9759	1.0000	1.2213	0.7219
9674	1.0000	1.2200	0.7208	9717	1.0000	1.2206	0.7213	9760	1.0000	1.2213	0.7219
9675	1.0000	1.2200	0.7208	9718	1.0000	1.2207	0.7213	9761	1.0000	1.2213	0.7219
9676	1.0000	1.2200	0.7208	9719	1.0000	1.2207	0.7213	9762	1.0000	1.2213	0.7219
9677	1.0000	1.2200	0.7208	9720	1.0000	1.2207	0.7214	9763	1.0000	1.2214	0.7219
9678	1.0000	1.2200	0.7208	9721	1.0000	1.2207	0.7214	9764	1.0000	1.2214	0.7219
9679	1.0000	1.2201	0.7208	9722	1.0000	1.2207	0.7214	9765	1.0000	1.2214	0.7219
9680	1.0000	1.2201	0.7208	9723	1.0000	1.2207	0.7214	9766	1.0000	1.2214	0.7220
9681	1.0000	1.2201	0.7209	9724	1.0000	1.2207	0.7214	9767	1.0000	1.2214	0.7220
9682	1.0000	1.2201	0.7209	9725	1.0000	1.2208	0.7214	9768	1.0000	1.2214	0.7220
9683	1.0000	1.2201	0.7209	9726	1.0000	1.2208	0.7214	9769	1.0000	1.2214	0.7220
9684	1.0000	1.2201	0.7209	9727	1.0000	1.2208	0.7215	9770	1.0000	1.2215	0.7220
9685	1.0000	1.2201	0.7209	9728	1.0000	1.2208	0.7215	9771	1.0000	1.2215	0.7220
9686	1.0000	1.2202	0.7209	9729	1.0000	1.2208	0.7215	9772	1.0000	1.2215	0.7220
9687	1.0000	1.2202	0.7209	9730	1.0000	1.2208	0.7215	9773	1.0000	1.2215	0.7220
9688	1.0000	1.2202	0.7209	9731	1.0000	1.2209	0.7215	9774	1.0000	1.2215	0.7221
9689	1.0000	1.2202	0.7210	9732	1.0000	1.2209	0.7215	9775	1.0000	1.2215	0.7221
9690	1.0000	1.2202	0.7210	9733	1.0000	1.2209	0.7215	9776	1.0000	1.2216	0.7221
9691	1.0000	1.2202	0.7210	9734	1.0000	1.2209	0.7215	9777	1.0000	1.2216	0.7221
9692	1.0000	1.2203	0.7210	9735	1.0000	1.2209	0.7216	9778	1.0000	1.2216	0.7221
9693	1.0000	1.2203	0.7210	9736	1.0000	1.2209	0.7216	9779	1.0000	1.2216	0.7221
9694	1.0000	1.2203	0.7210	9737	1.0000	1.2209	0.7216	9780	1.0000	1.2216	0.7221
9695	1.0000	1.2203	0.7210	9738	1.0000	1.2210	0.7216	9781	1.0000	1.2216	0.7222
9696	1.0000	1.2203	0.7210	9739	1.0000	1.2210	0.7216	9782	1.0000	1.2216	0.7222
9697	1.0000	1.2203	0.7211	9740	1.0000	1.2210	0.7216	9783	1.0000	1.2217	0.7222
9698	1.0000	1.2203	0.7211	9741	1.0000	1.2210	0.7216	9784	1.0000	1.2217	0.7222
9699	1.0000	1.2204	0.7211	9742	1.0000	1.2210	0.7216	9785	1.0000	1.2217	0.7222
9700	1.0000	1.2204	0.7211	9743	1.0000	1.2210	0.7217	9786	1.0000	1.2217	0.7222
9701	1.0000	1.2204	0.7211	9744	1.0000	1.2211	0.7217	9787	1.0000	1.2217	0.7222
9702	1.0000	1.2204	0.7211	9745	1.0000	1.2211	0.7217	9788	1.0000	1.2217	0.7222
9703	1.0000	1.2204	0.7211	9746	1.0000	1.2211	0.7217	9789	1.0000	1.2218	0.7223
9704	1.0000	1.2204	0.7212	9747	1.0000	1.2211	0.7217	9790	1.0000	1.2218	0.7223
9705	1.0000	1.2205	0.7212	9748	1.0000	1.2211	0.7217	9791	1.0000	1.2218	0.7223
9706	1.0000	1.2205	0.7212	9749	1.0000	1.2211	0.7217	9792	1.0000	1.2218	0.7223
9707	1.0000	1.2205	0.7212	9750	1.0000	1.2212	0.7218	9793	1.0000	1.2218	0.7223
9708	1.0000	1.2205	0.7212	9751	1.0000	1.2212	0.7218	9794	1.0000	1.2218	0.7223
9709	1.0000	1.2205	0.7212	9752	1.0000	1.2212	0.7218	9795	1.0000	1.2218	0.7223
9710	1.0000	1.2205	0.7212	9753	1.0000	1.2212	0.7218	9796	1.0000	1.2219	0.7223
9711	1.0000	1.2205	0.7212	9754	1.0000	1.2212	0.7218	9797	1.0000	1.2219	0.7224
9712	1.0000	1.2206	0.7213	9755	1.0000	1.2212	0.7218	9798	1.0000	1.2219	0.7224

# THE STUDY ON THE CONSTRUCTION OF THE BRIDGE OVER THE RIVER RUPSA IN KHULNA- PHASE 2

Job No. : \_\_\_\_\_ Date : 11/18/99 Designed by : \_\_\_\_\_ Checked by : \_\_\_\_\_

Table 2 - Values of  $k_v$ ,  $k_f$  and  $k_s$  with age in Days for  $d_w = 80$  cm.

Age	$k_v$	$k_f$	$k_s$	Age	$k_v$	$k_f$	$k_s$	Age	$k_v$	$k_f$	$k_s$
9799	1.0000	1.2219	0.7224	9842	1.0000	1.2226	0.7229	9885	1.0000	1.2232	0.7235
9800	1.0000	1.2219	0.7224	9843	1.0000	1.2226	0.7230	9886	1.0000	1.2232	0.7235
9801	1.0000	1.2219	0.7224	9844	1.0000	1.2226	0.7230	9887	1.0000	1.2233	0.7235
9802	1.0000	1.2220	0.7224	9845	1.0000	1.2226	0.7230	9888	1.0000	1.2233	0.7235
9803	1.0000	1.2220	0.7224	9846	1.0000	1.2226	0.7230	9889	1.0000	1.2233	0.7236
9804	1.0000	1.2220	0.7225	9847	1.0000	1.2226	0.7230	9890	1.0000	1.2233	0.7236
9805	1.0000	1.2220	0.7225	9848	1.0000	1.2227	0.7230	9891	1.0000	1.2233	0.7236
9806	1.0000	1.2220	0.7225	9849	1.0000	1.2227	0.7230	9892	1.0000	1.2233	0.7236
9807	1.0000	1.2220	0.7225	9850	1.0000	1.2227	0.7231	9893	1.0000	1.2234	0.7236
9808	1.0000	1.2220	0.7225	9851	1.0000	1.2227	0.7231	9894	1.0000	1.2234	0.7236
9809	1.0000	1.2221	0.7225	9852	1.0000	1.2227	0.7231	9895	1.0000	1.2234	0.7236
9810	1.0000	1.2221	0.7225	9853	1.0000	1.2227	0.7231	9896	1.0000	1.2234	0.7236
9811	1.0000	1.2221	0.7225	9854	1.0000	1.2228	0.7231	9897	1.0000	1.2234	0.7237
9812	1.0000	1.2221	0.7226	9855	1.0000	1.2228	0.7231	9898	1.0000	1.2234	0.7237
9813	1.0000	1.2221	0.7226	9856	1.0000	1.2228	0.7231	9899	1.0000	1.2234	0.7237
9814	1.0000	1.2221	0.7226	9857	1.0000	1.2228	0.7231	9900	1.0000	1.2235	0.7237
9815	1.0000	1.2222	0.7226	9858	1.0000	1.2228	0.7232	9901	1.0000	1.2235	0.7237
9816	1.0000	1.2222	0.7226	9859	1.0000	1.2228	0.7232	9902	1.0000	1.2235	0.7237
9817	1.0000	1.2222	0.7226	9860	1.0000	1.2228	0.7232	9903	1.0000	1.2235	0.7237
9818	1.0000	1.2222	0.7226	9861	1.0000	1.2229	0.7232	9904	1.0000	1.2235	0.7238
9819	1.0000	1.2222	0.7226	9862	1.0000	1.2229	0.7232	9905	1.0000	1.2235	0.7238
9820	1.0000	1.2222	0.7227	9863	1.0000	1.2229	0.7232	9906	1.0000	1.2236	0.7238
9821	1.0000	1.2222	0.7227	9864	1.0000	1.2229	0.7232	9907	1.0000	1.2236	0.7238
9822	1.0000	1.2223	0.7227	9865	1.0000	1.2229	0.7232	9908	1.0000	1.2236	0.7238
9823	1.0000	1.2223	0.7227	9866	1.0000	1.2229	0.7233	9909	1.0000	1.2236	0.7238
9824	1.0000	1.2223	0.7227	9867	1.0000	1.2230	0.7233	9910	1.0000	1.2236	0.7238
9825	1.0000	1.2223	0.7227	9868	1.0000	1.2230	0.7233	9911	1.0000	1.2236	0.7238
9826	1.0000	1.2223	0.7227	9869	1.0000	1.2230	0.7233	9912	1.0000	1.2236	0.7239
9827	1.0000	1.2223	0.7228	9870	1.0000	1.2230	0.7233	9913	1.0000	1.2237	0.7239
9828	1.0000	1.2224	0.7228	9871	1.0000	1.2230	0.7233	9914	1.0000	1.2237	0.7239
9829	1.0000	1.2224	0.7228	9872	1.0000	1.2230	0.7233	9915	1.0000	1.2237	0.7239
9830	1.0000	1.2224	0.7228	9873	1.0000	1.2230	0.7233	9916	1.0000	1.2237	0.7239
9831	1.0000	1.2224	0.7228	9874	1.0000	1.2231	0.7234	9917	1.0000	1.2237	0.7239
9832	1.0000	1.2224	0.7228	9875	1.0000	1.2231	0.7234	9918	1.0000	1.2237	0.7239
9833	1.0000	1.2224	0.7228	9876	1.0000	1.2231	0.7234	9919	1.0000	1.2238	0.7239
9834	1.0000	1.2224	0.7228	9877	1.0000	1.2231	0.7234	9920	1.0000	1.2238	0.7240
9835	1.0000	1.2225	0.7229	9878	1.0000	1.2231	0.7234	9921	1.0000	1.2238	0.7240
9836	1.0000	1.2225	0.7229	9879	1.0000	1.2231	0.7234	9922	1.0000	1.2238	0.7240
9837	1.0000	1.2225	0.7229	9880	1.0000	1.2232	0.7234	9923	1.0000	1.2238	0.7240
9838	1.0000	1.2225	0.7229	9881	1.0000	1.2232	0.7235	9924	1.0000	1.2238	0.7240
9839	1.0000	1.2225	0.7229	9882	1.0000	1.2232	0.7235	9925	1.0000	1.2238	0.7240
9840	1.0000	1.2225	0.7229	9883	1.0000	1.2232	0.7235	9926	1.0000	1.2239	0.7240
9841	1.0000	1.2226	0.7229	9884	1.0000	1.2232	0.7235	9927	1.0000	1.2239	0.7241

# THE STUDY ON THE CONSTRUCTION OF THE BRIDGE OVER THE RIVER RUPSA IN KHULNA- PHASE 2

Job No. : \_\_\_\_\_ Date : 11/18/99 Designed by : \_\_\_\_\_ Checked by : \_\_\_\_\_

Table 2 - Values of  $k_v$ ,  $k_r$  and  $k_s$  with age in Days for  $d_w = 80$  cm.

Age	$k_v$	$k_r$	$k_s$	Age	$k_v$	$k_r$	$k_s$	Age	$k_v$	$k_r$	$k_s$
9928	1.0000	1.2239	0.7241	9953	1.0000	1.2243	0.7244	9978	1.0000	1.2247	0.7247
9929	1.0000	1.2239	0.7241	9954	1.0000	1.2243	0.7244	9979	1.0000	1.2247	0.7247
9930	1.0000	1.2239	0.7241	9955	1.0000	1.2243	0.7244	9980	1.0000	1.2247	0.7247
9931	1.0000	1.2239	0.7241	9956	1.0000	1.2243	0.7244	9981	1.0000	1.2247	0.7248
9932	1.0000	1.2240	0.7241	9957	1.0000	1.2243	0.7244	9982	1.0000	1.2247	0.7248
9933	1.0000	1.2240	0.7241	9958	1.0000	1.2244	0.7245	9983	1.0000	1.2247	0.7248
9934	1.0000	1.2240	0.7241	9959	1.0000	1.2244	0.7245	9984	1.0000	1.2248	0.7248
9935	1.0000	1.2240	0.7242	9960	1.0000	1.2244	0.7245	9985	1.0000	1.2248	0.7248
9936	1.0000	1.2240	0.7242	9961	1.0000	1.2244	0.7245	9986	1.0000	1.2248	0.7248
9937	1.0000	1.2240	0.7242	9962	1.0000	1.2244	0.7245	9987	1.0000	1.2248	0.7248
9938	1.0000	1.2240	0.7242	9963	1.0000	1.2244	0.7245	9988	1.0000	1.2248	0.7248
9939	1.0000	1.2241	0.7242	9964	1.0000	1.2244	0.7245	9989	1.0000	1.2248	0.7249
9940	1.0000	1.2241	0.7242	9965	1.0000	1.2245	0.7245	9990	1.0000	1.2248	0.7249
9941	1.0000	1.2241	0.7242	9966	1.0000	1.2245	0.7246	9991	1.0000	1.2249	0.7249
9942	1.0000	1.2241	0.7242	9967	1.0000	1.2245	0.7246	9992	1.0000	1.2249	0.7249
9943	1.0000	1.2241	0.7243	9968	1.0000	1.2245	0.7246	9993	1.0000	1.2249	0.7249
9944	1.0000	1.2241	0.7243	9969	1.0000	1.2245	0.7246	9994	1.0000	1.2249	0.7249
9945	1.0000	1.2242	0.7243	9970	1.0000	1.2245	0.7246	9995	1.0000	1.2249	0.7249
9946	1.0000	1.2242	0.7243	9971	1.0000	1.2246	0.7246	9996	1.0000	1.2249	0.7249
9947	1.0000	1.2242	0.7243	9972	1.0000	1.2246	0.7246	9997	1.0000	1.2250	0.7250
9948	1.0000	1.2242	0.7243	9973	1.0000	1.2246	0.7246	9998	1.0000	1.2250	0.7250
9949	1.0000	1.2242	0.7243	9974	1.0000	1.2246	0.7247	9999	1.0000	1.2250	0.7250
9950	1.0000	1.2242	0.7244	9975	1.0000	1.2246	0.7247	10000	1.0000	1.2250	0.7250
9951	1.0000	1.2242	0.7244	9976	1.0000	1.2246	0.7247	20000	1.0000	1.2500	0.7500
9952	1.0000	1.2243	0.7244	9977	1.0000	1.2246	0.7247	>20000	1.0000	1.2500	0.7500

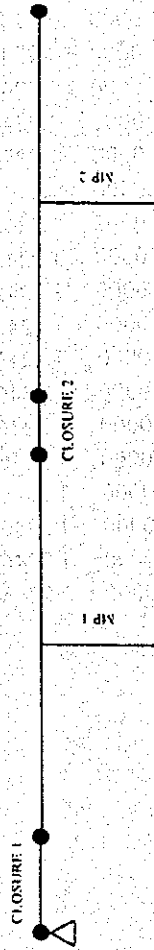
# THE STUDY ON THE CONSTRUCTION OF THE BRIDGE OVER THE RIVER RUPSA IN KHULNA - PHASE 2

Job No.:	Designed by:	Checked by:	Authority:
			afb

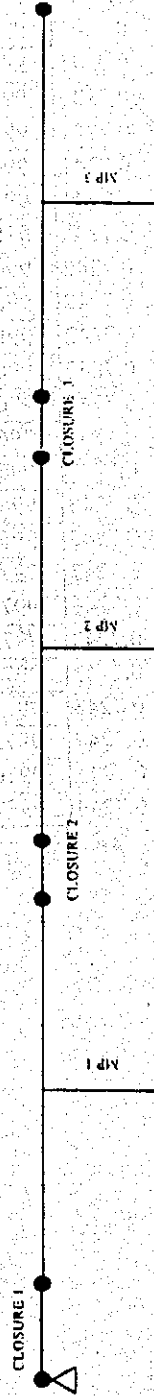
**STAGES WHERE  $t_0$  and  $t$  ARE COMPUTED**



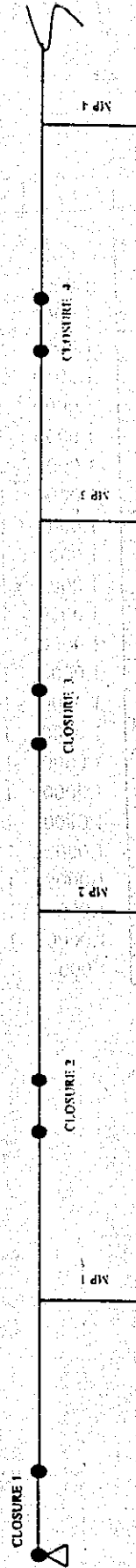
Schedule 1 - Cantilever Construction at Main Pier MP2 + Closure Span 1



Stage 1 - Connecting Schedule 1 to the Cantilever construction at Main Pier MP3 + Closure Span 2



Stage 2 - Connecting Stage 1 to the Cantilever construction at Main Pier MP4 + Closure Span 3



Stage 3 - Connecting Stage 2 to the other half of the Bridge with Closure Span 4

Stage 4 - Stage 3 to Service Life



## THE STUDY ON THE CONSTRUCTION OF THE BRIDGE OVER THE RIVER RUPSA IN KHULNA - PHASE 2

Job No.: \_\_\_\_\_ Date: 24-Nov-99 Designed by: \_\_\_\_\_ Checked by: \_\_\_\_\_ Authority: afb

### COMPUTATION OF SHRINKAGE AND CREEP COEFFICIENTS

STAGE 1	SUPERSTRUCTURE SEGMENTS @ MAIN PIER - MP2															
	CL1	S14	S13	S12	S11	S10	S9	S8	S7	S6	S5	S4	S3	S2	S1	S0
Beginning Time, $t_0$	0	104	114	124	134	144	154	164	174	184	194	204	214	224	256	256
End Time, $t$	101	205	215	225	235	245	255	265	275	285	295	305	315	325	357	357
Differential Time, $(t-t_0)$	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101	101
Humidity	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85

#### Shrinkage Coefficient, $\epsilon_s$

Base Coefficient, $\epsilon_{s0}$	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150
Shrinkage Factor, $k_{s,t_0}$	0.000000	0.086400	0.089900	0.093400	0.096900	0.100400	0.103900	0.107400	0.110900	0.114400	0.117900	0.121200	0.124200	0.127200	0.136800	0.136800
Shrinkage Factor, $k_{s,t}$	0.085350	0.121500	0.124500	0.127500	0.130500	0.133500	0.136500	0.139500	0.142500	0.145500	0.148500	0.151500	0.154500	0.157500	0.167100	0.167100
Shrinkage Coefficient, $\epsilon_{s,(t-t_0)}$	0.000013	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005

#### Creep Coefficient, $\psi$

Creep Factor, $k_{\psi,(t-t_0)}$	0.701300	0.701300	0.701300	0.701300	0.701300	0.701300	0.701300	0.701300	0.701300	0.701300	0.701300	0.701300	0.701300	0.701300	0.701300	0.701300
Creep Factor, $k_{\psi,t_0}$	0.000000	0.523320	0.531620	0.539920	0.548220	0.556520	0.564820	0.573120	0.581420	0.589720	0.598020	0.604960	0.609860	0.614760	0.630440	0.630440
Creep factor, $k_{\psi,t}$	0.520830	0.605450	0.610350	0.615250	0.620150	0.625050	0.629950	0.634850	0.639750	0.644650	0.649550	0.654450	0.659350	0.664250	0.679930	0.679930
Creep Coefficient, $\psi_{(t-t_0)}$	1.061765	0.403715	0.398615	0.393515	0.388415	0.383315	0.378215	0.373115	0.368015	0.362915	0.357815	0.354755	0.354755	0.354755	0.354755	0.354755

STAGE 2	SUPERSTRUCTURE SEGMENTS @ MAIN PIER - MP2															
	CL1	S14	S13	S12	S11	S10	S9	S8	S7	S6	S5	S4	S3	S2	S1	S0
Beginning Time, $t_0$	101	205	215	225	235	245	255	265	275	285	295	305	315	325	357	357
End Time, $t$	271	375	385	395	405	415	425	435	445	455	465	475	485	495	527	527
Differential Time, $(t-t_0)$	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170
Humidity	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85

#### Shrinkage Coefficient, $\epsilon_s$

Base Coefficient, $\epsilon_{s0}$	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150
Shrinkage Factor, $k_{s,t_0}$	0.085350	0.121500	0.124500	0.127500	0.130500	0.133500	0.136500	0.139500	0.142500	0.145500	0.148500	0.151500	0.154500	0.157500	0.167100	0.167100
Shrinkage Factor, $k_{s,t}$	0.141300	0.172500	0.175500	0.178500	0.181500	0.184500	0.187500	0.190500	0.193500	0.196500	0.199500	0.202500	0.205500	0.208500	0.217020	0.217020
Shrinkage Coefficient, $\epsilon_{s,(t-t_0)}$	0.000008	0.000008	0.000008	0.000008	0.000008	0.000008	0.000008	0.000008	0.000008	0.000008	0.000008	0.000008	0.000008	0.000008	0.000007	0.000007

#### Creep Coefficient, $\psi$

Creep Factor, $k_{\psi,(t-t_0)}$	0.791000	0.791000	0.791000	0.791000	0.791000	0.791000	0.791000	0.791000	0.791000	0.791000	0.791000	0.791000	0.791000	0.791000	0.791000	0.791000
Creep Factor, $k_{\psi,t_0}$	0.520830	0.605450	0.610350	0.615250	0.620150	0.625050	0.629950	0.634850	0.639750	0.644650	0.649550	0.654450	0.659350	0.664250	0.679930	0.679930
Creep factor, $k_{\psi,t}$	0.637790	0.688750	0.693650	0.698550	0.703450	0.708350	0.713250	0.718150	0.723050	0.727950	0.732850	0.737750	0.742650	0.747550	0.757236	0.757236
Creep Coefficient, $\psi_{(t-t_0)}$	0.491840	0.441350	0.441350	0.441350	0.441350	0.441350	0.441350	0.441350	0.441350	0.441350	0.441350	0.441350	0.441350	0.441350	0.432359	0.432359



Authority:	afb
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S3	S2	S1	S0
214	224	256	256
315	325	357	357
101	101	101	101
85	85	85	85

0.000150	0.000150	0.000150	0.000150
0.124200	0.127200	0.136800	0.136800
0.154500	0.157500	0.167100	0.167100
0.000005	0.000005	0.000005	0.000005

0.701300	0.701300	0.701300	0.701300
0.609860	0.614760	0.630440	0.630440
0.659350	0.664250	0.679930	0.679930
0.354755	0.354755	0.354755	0.354755

S3	S2	S1	S0
315	325	357	357
485	495	527	527
170	170	170	170
85	85	85	85

0.000150	0.000150	0.000150	0.000150
0.154500	0.157500	0.167100	0.167100
0.205500	0.208500	0.217020	0.217020
0.000008	0.000008	0.000007	0.000007

0.791000	0.791000	0.791000	0.791000
0.659350	0.664250	0.679930	0.679930
0.742650	0.747550	0.757236	0.757236
0.441350	0.441350	0.432359	0.432359

**SUPERSTRUCTURE SEGMENTS @ MAIN PIER - MP3**

S0	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14	CL2
191	191	159	149	139	129	119	109	99	89	79	69	59	49	39	0
361	361	329	319	309	299	289	279	269	259	249	239	229	219	209	170
170	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170
85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85

0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150
0.116850	0.116850	0.105650	0.102150	0.098650	0.095150	0.091650	0.088150	0.084400	0.078400	0.072400	0.066400	0.060400	0.054167	0.045833	0.000000
0.168300	0.168300	0.158700	0.155700	0.152700	0.149700	0.146700	0.143700	0.140700	0.137700	0.134700	0.131700	0.128700	0.125700	0.122700	0.109500
0.000008	0.000008	0.000008	0.000008	0.000008	0.000008	0.000008	0.000008	0.000008	0.000009	0.000009	0.000010	0.000010	0.000011	0.000012	0.000016

0.791000	0.791000	0.791000	0.791000	0.791000	0.791000	0.791000	0.791000	0.791000	0.791000	0.791000	0.791000	0.791000	0.791000	0.791000	0.791000
0.595530	0.595530	0.568970	0.560670	0.552370	0.544070	0.535770	0.527470	0.518460	0.503060	0.487660	0.472260	0.456860	0.439900	0.408900	0.000000
0.681890	0.681890	0.666210	0.661310	0.656410	0.651510	0.646610	0.641710	0.636810	0.631910	0.627010	0.622110	0.617210	0.612310	0.607410	0.578100
0.445940	0.445940	0.462260	0.467360	0.472460	0.477560	0.482660	0.487760	0.493925	0.509675	0.525425	0.541175	0.556925	0.575015	0.614165	1.183550

**THE STUDY ON THE CONSTRUCTION OF THE BRIDGE  
OVER THE RIVER RUPSA IN KHULNA - PHASE 2**

Job No.: \_\_\_\_\_ Date: 24-Nov-99 Designed by: \_\_\_\_\_ Checked by: \_\_\_\_\_ Authority: \_\_\_\_\_ afb

**COMPUTATION OF SHRINKAGE AND CREEP COEFFICIENTS**

STAGE 3	SUPERSTRUCTURE SEGMENTS @ MAIN PIER - MP2																S0	S1
	CL1	S14	S13	S12	S11	S10	S9	S8	S7	S6	S5	S4	S3	S2	S1	S0		
Beginning Time, $t_0$	271	375	385	395	405	415	425	435	445	455	465	475	485	495	527	527	361	361
End Time, $t$	321	425	435	445	455	465	475	485	495	505	515	525	535	545	577	577	411	411
Differential Time, $(t-t_0)$	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Humidity	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85

**Shrinkage Coefficient,  $\epsilon_s$**

Base Coefficient, $\epsilon_{s0}$	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150
Shrinkage Factor, $k_{s,t_0}$	0.141300	0.172500	0.175500	0.178500	0.181500	0.184500	0.187500	0.190500	0.193500	0.196500	0.199500	0.202500	0.205500	0.208500	0.217020	0.217020	0.168300	0.168300
Shrinkage Factor, $k_{s,t}$	0.156300	0.187500	0.190500	0.193500	0.196500	0.199500	0.202500	0.205500	0.208500	0.211300	0.213900	0.216500	0.219100	0.221700	0.230020	0.230020	0.183300	0.183300
Shrinkage Coefficient, $\epsilon_{s,(t-t_0)}$	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002

**Creep Coefficient,  $\psi$**

Creep Factor, $k_{\psi,(t-t_0)}$	0.580000	0.580000	0.580000	0.580000	0.580000	0.580000	0.580000	0.580000	0.580000	0.580000	0.580000	0.580000	0.580000	0.580000	0.580000	0.580000	0.580000	0.580000
Creep Factor, $k_{\psi,t_0}$	0.637790	0.688750	0.693650	0.698550	0.703450	0.708350	0.713250	0.718150	0.723050	0.727950	0.732850	0.737750	0.742650	0.747550	0.757236	0.757236	0.681890	0.681890
Creep factor, $k_{\psi,t}$	0.662290	0.713250	0.718150	0.723050	0.727950	0.732850	0.737750	0.742650	0.747550	0.751340	0.754020	0.756700	0.759380	0.762060	0.770636	0.770636	0.706390	0.706390
Creep Coefficient, $\psi_{(t-t_0)}$	0.268750	0.268750	0.268750	0.268750	0.268750	0.268750	0.268750	0.268750	0.268750	0.267085	0.263755	0.260425	0.257095	0.253765	0.252100	0.252100	0.268750	0.268750

STAGE 4	SUPERSTRUCTURE SEGMENTS @ MAIN PIER - MP2																S0	S1
	CL1	S14	S13	S12	S11	S10	S9	S8	S7	S6	S5	S4	S3	S2	S1	S0		
Beginning Time, $t_0$	321	425	435	445	455	465	475	485	495	505	515	525	535	545	577	577	411	411
End Time, $t$	9744	9848	9858	9868	9878	9888	9898	9908	9918	9928	9938	9948	9958	9968	10000	10000	9834	9834
Differential Time, $(t-t_0)$	9423	9423	9423	9423	9423	9423	9423	9423	9423	9423	9423	9423	9423	9423	9423	9423	9423	9423
Humidity	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85

**Shrinkage Coefficient,  $\epsilon_s$**

Base Coefficient, $\epsilon_{s0}$	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150
Shrinkage Factor, $k_{s,t_0}$	0.156300	0.187500	0.190500	0.193500	0.196500	0.199500	0.202500	0.205500	0.208500	0.211300	0.213900	0.216500	0.219100	0.221700	0.230020	0.230020	0.183300	0.183300
Shrinkage Factor, $k_{s,t}$	0.721672	0.723024	0.723154	0.723284	0.723414	0.723544	0.723674	0.723804	0.723934	0.724064	0.724194	0.724324	0.724454	0.724584	0.725000	0.725000	0.722842	0.722842
Shrinkage Coefficient, $\epsilon_{s,(t-t_0)}$	0.000085	0.000080	0.000080	0.000079	0.000079	0.000079	0.000078	0.000078	0.000077	0.000077	0.000077	0.000076	0.000076	0.000075	0.000074	0.000074	0.000081	0.000081

**Creep Coefficient,  $\psi$**

Creep Factor, $k_{\psi,(t-t_0)}$	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
Creep Factor, $k_{\psi,t_0}$	0.662290	0.713250	0.718150	0.723050	0.727950	0.732850	0.737750	0.742650	0.747550	0.751340	0.754020	0.756700	0.759380	0.762060	0.770636	0.770636	0.706390	0.706390
Creep factor, $k_{\psi,t}$	1.221058	1.222659	1.222813	1.222967	1.223121	1.223275	1.223429	1.223583	1.223737	1.223891	1.224045	1.224199	1.224353	1.224507	1.225000	1.225000	1.222444	1.222444
Creep Coefficient, $\psi_{(t-t_0)}$	1.238151	1.164114	1.156995	1.149876	1.142757	1.135638	1.128519	1.121400	1.114281	1.108827	1.105038	1.101249	1.097460	1.093671	1.081546	1.081546	1.174080	1.174080

afb

		SUPERSTRUCTURE SEGMENTS @ MAIN PIER - MP3																				
S1	S0	S0	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14	CL2	S0	S1	S2	S3	
5	527	527	361	361	329	319	309	299	289	279	269	259	249	239	229	219	209	170	166	166	134	12
5	577	577	411	411	379	369	359	349	339	329	319	309	299	289	279	269	259	220	216	216	184	17
50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	5
5	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	8
50	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150
00	0.217020	0.217020	0.168300	0.168300	0.158700	0.155700	0.152700	0.149700	0.146700	0.143700	0.140700	0.137700	0.134700	0.131700	0.128700	0.125700	0.122700	0.109500	0.108100	0.108100	0.096900	0.093400
00	0.230020	0.230020	0.183300	0.183300	0.173700	0.170700	0.167700	0.164700	0.161700	0.158700	0.155700	0.152700	0.149700	0.146700	0.143700	0.140700	0.137700	0.126000	0.124800	0.124800	0.114400	0.110900
02	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002	0.000002
00	0.580000	0.580000	0.580000	0.580000	0.580000	0.580000	0.580000	0.580000	0.580000	0.580000	0.580000	0.580000	0.580000	0.580000	0.580000	0.580000	0.580000	0.580000	0.580000	0.580000	0.580000	0.580000
50	0.757236	0.757236	0.681890	0.681890	0.666210	0.661310	0.656410	0.651510	0.646610	0.641710	0.636810	0.631910	0.627010	0.622110	0.617210	0.612310	0.607410	0.578100	0.574780	0.574780	0.548220	0.539920
60	0.770636	0.770636	0.706390	0.706390	0.690710	0.685810	0.680910	0.676010	0.671110	0.666210	0.661310	0.656410	0.651510	0.646610	0.641710	0.636810	0.631910	0.612800	0.610840	0.610840	0.589720	0.581420
65	0.252100	0.252100	0.268750	0.268750	0.268750	0.268750	0.268750	0.268750	0.268750	0.268750	0.268750	0.268750	0.268750	0.268750	0.268750	0.268750	0.268750	0.284050	0.286090	0.286090	0.294250	0.294250
		SUPERSTRUCTURE SEGMENTS @ MAIN PIER - MP3																				
S1	S0	S0	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14	CL2	S0	S1	S2	S3	
45	577	577	411	411	379	369	359	349	339	329	319	309	299	289	279	269	259	220	216	216	184	17
68	10000	10000	9834	9834	9802	9792	9782	9772	9762	9752	9742	9732	9722	9712	9702	9692	9682	9643	9639	9639	9607	955
23	9423	9423	9423	9423	9423	9423	9423	9423	9423	9423	9423	9423	9423	9423	9423	9423	9423	9423	9423	9423	9423	9423
85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	8
50	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150
00	0.230020	0.230020	0.183300	0.183300	0.173700	0.170700	0.167700	0.164700	0.161700	0.158700	0.155700	0.152700	0.149700	0.146700	0.143700	0.140700	0.137700	0.126000	0.124800	0.124800	0.114400	0.110900
84	0.725000	0.725000	0.722842	0.722842	0.722426	0.722296	0.722166	0.722036	0.721906	0.721776	0.721646	0.721516	0.721386	0.721256	0.721126	0.720996	0.720866	0.720359	0.720307	0.720307	0.719891	0.71976
075	0.000074	0.000074	0.000081	0.000081	0.000082	0.000083	0.000083	0.000084	0.000084	0.000084	0.000085	0.000085	0.000086	0.000086	0.000087	0.000087	0.000087	0.000089	0.000089	0.000089	0.000091	0.000091
000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
060	0.770636	0.770636	0.706390	0.706390	0.690710	0.685810	0.680910	0.676010	0.671110	0.666210	0.661310	0.656410	0.651510	0.646610	0.641710	0.636810	0.631910	0.612800	0.610840	0.610840	0.589720	0.581420
507	1.225000	1.225000	1.222444	1.222444	1.221951	1.221797	1.221643	1.221489	1.221335	1.221181	1.221027	1.220873	1.220719	1.220565	1.220411	1.220257	1.220103	1.219502	1.219441	1.219441	1.218948	1.21879
671	1.081546	1.081546	1.174080	1.174080	1.196861	1.203980	1.211099	1.218218	1.225337	1.232456	1.239575	1.246694	1.253813	1.260932	1.268051	1.275170	1.282289	1.310053	1.312901	1.312901	1.343842	1.35600



				SUPERSTRUCTURE SEGMENTS @ MAIN PIER - MP4														
	S14	CL2	S0	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14	CL3
19	209	170	166	166	134	124	114	104	94	84	74	64	54	44	34	24	14	0
59	259	220	216	216	184	174	164	154	144	134	124	114	104	94	84	74	64	50
50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85

50	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150
00	0.122700	0.109500	0.108100	0.108100	0.096900	0.093400	0.089900	0.086400	0.081400	0.075400	0.069400	0.063400	0.057400	0.050000	0.041667	0.033333	0.024000	0.000000
00	0.137700	0.126000	0.124800	0.124800	0.114400	0.110900	0.107400	0.103900	0.100400	0.096900	0.093400	0.089900	0.086400	0.081400	0.075400	0.069400	0.063400	0.055000
02	0.000002	0.000002	0.000003	0.000003	0.000003	0.000003	0.000003	0.000003	0.000003	0.000003	0.000004	0.000004	0.000004	0.000005	0.000005	0.000005	0.000006	0.000008
00	0.580000	0.580000	0.580000	0.580000	0.580000	0.580000	0.580000	0.580000	0.580000	0.580000	0.580000	0.580000	0.580000	0.580000	0.580000	0.580000	0.580000	0.580000
10	0.607410	0.578100	0.574780	0.574780	0.548220	0.539920	0.531620	0.523320	0.510760	0.495360	0.479960	0.464560	0.449160	0.424400	0.393400	0.362400	0.308000	0.000000
10	0.631910	0.612800	0.610840	0.610840	0.589720	0.581420	0.573120	0.564820	0.556520	0.548220	0.539920	0.531620	0.523320	0.510760	0.495360	0.479960	0.464560	0.443000
50	0.268750	0.284050	0.286090	0.286090	0.294250	0.294250	0.294250	0.294250	0.300640	0.311290	0.321940	0.332590	0.343240	0.361540	0.384940	0.408340	0.466840	0.896500

				SUPERSTRUCTURE SEGMENTS @ MAIN PIER - MP4														CLOSURE @ SPAN 4	
	S14	CL2	S0	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14	CL3	CL4
69	259	220	216	216	184	174	164	154	144	134	124	114	104	94	84	74	64	50	0
92	9682	9643	9639	9639	9607	9597	9587	9577	9567	9557	9547	9537	9527	9517	9507	9497	9487	9473	9423
23	9423	9423	9423	9423	9423	9423	9423	9423	9423	9423	9423	9423	9423	9423	9423	9423	9423	9423	9423
85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85
50	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150	0.000150
00	0.137700	0.126000	0.124800	0.124800	0.114400	0.110900	0.107400	0.103900	0.100400	0.096900	0.093400	0.089900	0.086400	0.081400	0.075400	0.069400	0.063400	0.055000	0.000000
96	0.720866	0.720359	0.720307	0.720307	0.719891	0.719761	0.719631	0.719501	0.719371	0.719241	0.719111	0.718981	0.718851	0.718721	0.718591	0.718461	0.718331	0.718149	0.717499
87	0.000087	0.000089	0.000089	0.000089	0.000091	0.000091	0.000092	0.000092	0.000093	0.000093	0.000094	0.000094	0.000095	0.000096	0.000096	0.000097	0.000098	0.000099	0.000108
00	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
10	0.631910	0.612800	0.610840	0.610840	0.589720	0.581420	0.573120	0.564820	0.556520	0.548220	0.539920	0.531620	0.523320	0.510760	0.495360	0.479960	0.464560	0.443000	0.000000
57	1.220103	1.219502	1.219441	1.219441	1.218948	1.218794	1.218640	1.218486	1.218332	1.218178	1.218024	1.217870	1.217716	1.217562	1.217408	1.217254	1.217100	1.216884	1.216114
70	1.282289	1.310053	1.312901	1.312901	1.343842	1.356061	1.368280	1.380499	1.392718	1.404937	1.417156	1.429375	1.441594	1.460203	1.483072	1.505941	1.528810	1.560826	2.224171