

KOMBASA-PIER(F)

No	L(m)	Case 10			Case 11			Case 12			S (t)	N (t)	S (t)	N (t)
		L(m)	M (tm)	S (t)	N (t)	M (tm)	S (t)	N (t)	M (tm)	S (t)				
12-13	0.000	518.176	-1868.185	-8.280	947.763	-1375.514	55.764	471.076	-1364.861	-20.242				
* 1	0.963	-846.580	-961.719	-8.280	-102.769	-806.277	55.764	-528.570	-708.001	-20.242				
* 2	1.925	-1325.437	-29.354	-8.280	-604.889	-237.631	55.764	-886.249	-52.374	-20.242				
* 3	2.888	-893.525	930.848	-8.280	-559.640	331.606	55.764	-563.425	653.425	-20.242				
13-12	3.850	474.088	1916.894	-8.280	32.884	900.252	55.764	396.382	1377.951	-20.242				
13-14	0.000	337.543	-840.596	0.000	189.216	-472.963	0.000	244.596	-609.128	0.000				
14-13	0.800	0.000	-0.169	0.000	0.000	-0.077	0.000	0.000	-0.123	0.000				
2-9	0.000	-31.461	29.827	-1598.611	233.940	-55.739	-1267.479	-69.649	35.855	-1147.310				
* 1	1.750	20.736	29.827	-1635.087	136.397	-55.739	-1293.911	-6.903	35.855	-1173.742				
* 2	3.500	72.932	29.827	-1671.563	38.854	-55.739	-1320.343	55.843	35.855	-1200.174				
* 3	5.250	125.128	29.827	-1708.039	-58.689	-55.739	-1346.775	118.590	35.855	-1226.606				
9-	7.000	177.325	29.827	-1744.515	-156.232	-55.739	-1373.207	181.336	35.855	-1253.038				
3-10	0.000	-226.025	63.988	-2652.063	190.597	-52.343	-2177.415	-185.511	52.575	-1931.863				
* 1	1.750	-114.046	63.988	-2688.539	98.997	-52.343	-2203.847	-93.505	52.575	-1958.295				
* 2	3.500	-2.068	63.988	-2725.015	7.397	-52.343	-2230.279	-1.498	52.575	-1984.727				
* 3	5.250	109.910	63.988	-2761.491	-84.203	-52.343	-2256.711	90.508	52.575	-2011.159				
10-	7.000	221.889	63.988	-2797.967	-175.804	-52.343	-2283.143	182.514	52.575	-2037.591				
4-11	0.000	19.956	-4.459	-2565.195	0.227	-0.051	-2630.068	14.461	-3.231	-1860.887				
* 1	1.750	12.153	-4.459	-2601.671	0.138	-0.051	-2656.500	8.806	-3.231	-1887.319				
* 2	3.500	4.349	-4.459	-2638.147	0.050	-0.051	-2682.932	3.151	-3.231	-1913.751				
* 3	5.250	-3.455	-4.459	-2674.624	-0.039	-0.051	-2709.364	-2.504	-3.231	-1940.183				
11-	7.000	-11.259	-4.459	-2711.100	-0.127	-0.051	-2735.796	-8.159	-3.231	-1966.615				
5-12	0.000	313.193	-81.075	-3710.408	-190.710	52.368	-2177.741	248.677	-64.957	-2698.780				
* 1	1.750	171.312	-81.075	-3746.884	-99.066	52.368	-2204.173	135.002	-64.957	-2725.212				
* 2	3.500	29.431	-81.075	-3783.361	-7.421	52.368	-2230.605	21.327	-64.957	-2751.644				
* 3	5.250	-112.450	-81.075	-3819.837	84.223	52.368	-2257.037	-92.348	-64.957	-2778.076				
12-	7.000	-254.331	-81.075	-3856.313	175.868	52.368	-2283.469	-206.023	-64.957	-2804.508				
6-13	0.000	-78.586	-8.280	-2611.585	-234.017	55.764	-1267.487	-10.095	-20.242	-1881.350				
* 1	1.750	-93.076	-8.280	-2648.062	-136.430	55.764	-1293.919	-45.517	-20.242	-1907.782				
* 2	3.500	-107.566	-8.280	-2684.538	-38.842	55.764	-1320.351	-80.940	-20.242	-1934.214				
* 3	5.250	-122.056	-8.280	-2721.014	58.745	55.764	-1346.783	-116.363	-20.242	-1960.646				
13-	7.000	-136.545	-8.280	-2757.490	156.332	55.764	-1373.215	-151.786	-20.242	-1987.078				

No	Case 13			Case 14			Case 15			
	L(m)	M (tm)	S (t)	N (t)	M (tm)	S (t)	N (t)	M (tm)	S (t)	N (t)
1- 2	0.000	0.000	0.000	-659.096	0.000	0.000	0.000	0.000	0.000	0.000
2- 1	0.800	-41.449	-15.104	-659.096	-6.042	-15.104	0.000	-6.042	-15.104	0.000
2- 3	0.000	299.192	887.313	-549.935	-285.195	1263.090	-69.482	18.394	1142.921	22.111
* 1	0.963	432.102	172.462	-549.935	98.290	388.238	-69.482	286.157	268.070	22.111
* 2	1.925	546.697	154.299	-549.935	463.039	370.076	-69.482	535.304	249.907	22.111
* 3	2.888	-26.982	-560.552	-549.935	-14.305	-504.776	-69.482	-57.763	-624.944	22.111
3- 2	3.850	-617.546	-578.715	-549.935	-508.636	-522.938	-69.482	-667.696	-643.107	22.111
3- 4	0.000	-49.151	961.782	-389.455	-720.199	1644.751	-127.816	-503.150	1279.030	68.596
* 1	0.963	155.474	246.931	-389.455	30.825	769.900	-127.816	-104.315	404.179	68.596
* 2	1.925	341.708	228.768	-389.455	762.733	751.737	-127.816	275.769	386.016	68.596
* 3	2.888	-160.257	-486.083	-389.455	174.895	-619.514	-127.816	-186.225	-488.835	68.596
4- 3	3.850	-679.182	-504.246	-389.455	-429.814	-637.677	-127.816	-665.221	-506.998	68.596
4- 5	0.000	-116.125	963.573	-228.640	-430.041	1990.413	-127.866	-679.682	1351.911	65.465
* 1	0.963	90.224	248.721	-228.640	176.319	619.161	-127.866	-210.663	477.060	65.465
* 2	1.925	278.180	230.559	-228.640	763.216	600.999	-127.866	239.532	458.897	65.465
* 3	2.888	-222.061	-484.293	-228.640	30.217	-770.253	-127.866	-152.278	-415.954	65.465
5- 4	3.850	-739.961	-1199.125	-228.640	-720.359	-1645.085	-127.866	-561.859	-1130.787	65.465
5- 6	0.000	-297.631	410.405	-102.173	-508.683	522.930	-69.508	-789.570	1558.267	6.498
* 1	0.963	46.213	392.223	-102.173	-13.856	504.749	-69.508	70.830	863.686	6.498
* 2	1.925	372.218	374.061	-102.173	462.977	486.586	-69.508	912.200	865.523	6.498
* 3	2.888	10.169	-340.791	-102.173	97.832	-388.265	-69.508	433.938	-505.728	6.498
6- 5	3.850	-369.682	-1055.623	-102.173	-285.272	-1263.098	-69.508	-62.006	-1220.561	6.498
6- 7	0.000	29.366	15.104	0.000	-6.042	15.104	0.000	-6.698	671.504	0.000
7- 6	0.800	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8- 9	0.000	0.000	88.476	711.981	0.000	-0.083	0.000	0.000	-0.179	0.000
9- 8	0.800	169.075	335.657	711.981	189.088	472.804	0.000	133.669	336.593	0.000
9- 10	0.000	629.580	-672.488	592.243	-18.136	-911.118	69.482	264.013	-927.160	-22.111
* 1	0.963	129.774	-363.435	592.243	-621.455	-341.881	69.482	-426.624	-503.939	-22.111
* 2	1.925	-66.317	-42.148	592.243	-676.826	226.765	69.482	-700.259	-61.708	-22.111
* 3	2.888	52.997	292.041	592.243	-184.364	796.002	69.482	-538.716	400.453	-22.111
10- 9	3.850	499.551	638.437	592.243	854.909	1364.648	69.482	76.385	881.583	-22.111
10- 11	0.000	1091.536	-1007.789	421.186	658.140	-908.769	127.816	237.934	-1146.282	-68.696
* 1	0.963	293.041	-648.465	421.186	57.083	-339.532	127.816	-626.219	-645.182	-68.696
* 2	1.925	-153.094	-276.960	421.186	3.971	298.113	127.816	-998.308	-125.152	-68.696
* 3	2.888	-235.699	107.499	421.186	498.695	798.350	127.816	-860.363	414.888	-68.696
11- 10	3.850	57.480	504.112	421.186	1540.227	1366.996	127.816	-193.955	973.817	-68.696
11- 12	0.000	657.143	-1069.434	249.794	1540.100	-1366.821	127.866	-202.113	-990.820	-65.465
* 1	0.963	-176.512	-659.841	249.794	497.938	-797.584	127.866	-879.057	-411.840	-65.465
* 2	1.925	-609.436	-238.119	249.794	4.181	-228.939	127.866	-989.250	185.989	-65.465
* 3	2.888	-630.432	196.610	249.794	57.801	340.298	127.866	-514.178	803.908	-65.465
12- 11	3.850	-227.374	643.441	249.794	658.686	908.944	127.866	563.890	1440.636	-65.465

No	L(m)	Case 13			Case 14			Case 15		
		M (tm)	S (t)	N (t)	M (tm)	S (t)	N (t)	M (tm)	S (t)	N (t)
12-13	0.000	252.584	-1071.817	112.750	855.519	-1364.799	69.508	378.832	-1354.146	-6.498
* 1	0.963	-559.161	-611.954	112.750	-184.695	-795.562	69.508	-610.496	-697.286	-6.498
* 2	1.925	-921.864	-140.014	112.750	-676.507	-226.916	69.508	-957.867	-21.659	-6.498
* 3	2.888	-824.180	344.984	112.750	-620.940	342.321	69.508	-645.261	674.140	-6.498
13-12	3.850	-254.231	842.033	112.750	-13.109	910.967	69.508	345.390	1388.665	-6.498
13-14	0.000	98.955	-334.422	0.000	189.216	-472.963	0.000	244.596	-609.128	0.000
14-13	0.800	0.000	88.480	0.000	0.000	-0.077	0.000	0.000	-0.123	0.000
2-9	0.000	-340.641	109.161	-902.417	279.153	-69.482	-1278.194	-24.436	22.111	-1158.025
* 1	1.750	-147.296	111.805	-928.849	157.559	-69.482	-1304.626	14.259	22.111	-1184.457
* 2	3.500	50.677	114.449	-955.281	35.964	-69.482	-1331.058	52.954	22.111	-1210.889
* 3	5.250	253.278	117.094	-981.713	-85.630	-69.482	-1357.490	91.649	22.111	-1237.321
9-2	7.000	460.505	119.738	-1008.145	-207.224	-69.482	-1383.922	130.344	22.111	-1263.753
3-10	0.000	-568.396	160.480	-1540.497	211.563	-58.333	-2167.639	-164.546	46.585	-1922.137
* 1	1.750	-285.242	163.125	-1566.929	109.480	-58.333	-2194.121	-83.022	46.585	-1948.569
* 2	3.500	2.540	165.769	-1593.361	7.397	-58.333	-2220.553	-1.499	46.585	-1975.001
* 3	5.250	294.949	168.413	-1619.793	-94.686	-58.333	-2246.985	80.025	46.585	-2001.433
10-3	7.000	591.985	171.057	-1646.225	-196.769	-58.333	-2273.417	161.549	46.585	-2027.865
4-11	0.000	-563.058	160.814	-1467.818	0.227	-0.051	-2628.090	14.461	-3.231	-1858.909
* 1	1.750	-279.319	163.459	-1494.250	0.138	-0.051	-2654.522	8.806	-3.231	-1885.341
* 2	3.500	9.048	166.103	-1520.682	0.050	-0.051	-2680.954	3.151	-3.231	-1911.773
* 3	5.250	302.042	168.747	-1547.114	-0.039	-0.051	-2707.386	-2.504	-3.231	-1938.205
11-4	7.000	599.663	171.391	-1573.546	-0.127	-0.051	-2733.818	-8.159	-3.231	-1964.637
5-12	0.000	-442.329	126.467	-1609.530	-211.676	58.358	-2168.016	227.711	-58.967	-2689.054
* 1	1.750	-218.699	129.111	-1635.962	-109.548	58.358	-2194.448	124.519	-58.967	-2715.486
* 2	3.500	9.559	131.755	-1662.394	-7.421	58.358	-2220.880	21.327	-58.967	-2741.918
* 3	5.250	242.445	134.400	-1688.826	94.706	58.358	-2247.312	-81.865	-58.967	-2768.350
12-5	7.000	479.958	137.044	-1715.258	196.833	58.358	-2273.744	-185.058	-58.967	-2794.782
6-13	0.000	-399.047	102.173	-1070.727	-279.230	69.508	-1278.202	55.308	-6.498	-1892.065
* 1	1.750	-217.930	104.818	-1097.159	-157.592	69.508	-1304.634	-66.679	-6.498	-1918.497
* 2	3.500	-32.185	107.462	-1123.591	-35.953	69.508	-1331.066	-78.051	-6.498	-1944.929
* 3	5.250	158.187	110.106	-1150.023	85.686	69.508	-1357.498	-89.422	-6.498	-1971.361
13-6	7.000	353.186	112.750	-1176.455	207.324	69.508	-1383.930	-100.794	-6.498	-1997.793

PICK-UP No. 1 \*

M. M A X I M U M

M. M I N I M U M

No.	L (m)	Case	M (tm)	S (t)	N (t)	Case	M (tm)	S (t)	N (t)
1 - 2	0.000	C-10	0.000	0.000	0.000	C- 8	0.000	0.000	-1087.508
2 - 1	0.800	C-10	-8.337	-20.844	0.000	C- 8	-66.759	-20.844	-1087.508
2 - 3	0.000	C- 8	504.809	1201.384	-907.842	C- 9	-395.829	1743.600	-96.573
* 1	0.963	C- 8	654.464	214.889	-907.842	C- 9	133.895	536.305	-96.573
* 2	1.925	C- 7	800.649	329.899	58.711	C- 9	637.765	511.240	-96.573
* 3	2.888	C- 6	-2.098	-722.318	-92.418	C-10	-80.427	-861.887	29.827
3 - 2	3.850	C- 9	-702.115	-721.119	-96.573	C- 7	-971.473	-945.650	58.711
3 - 4	0.000	C- 8	26.319	1295.206	-647.427	C- 6	-1039.780	2420.472	-183.162
* 1	0.963	C- 8	266.325	308.711	-647.427	C-10	-145.154	557.816	93.814
* 2	1.925	C- 6	1213.677	1144.913	-183.162	C-10	379.410	532.752	93.814
* 3	2.888	C- 6	335.327	-924.642	-183.162	C- 7	-260.521	-709.021	141.083
4 - 3	3.850	C- 6	-566.234	-949.706	-183.162	C- 8	-1012.538	-727.913	-647.427
4 - 5	0.000	C- 8	-83.462	1297.748	-382.076	C- 7	-978.485	1940.138	135.758
* 1	0.963	C- 6	337.467	924.111	-183.238	C- 7	-301.052	689.643	135.758
* 2	1.925	C- 6	1214.406	899.047	-183.238	C-10	329.403	633.238	89.355
* 3	2.888	C- 5	99.288	-1170.508	-183.238	C- 8	-356.530	-700.306	-382.076
5 - 4	3.850	C-10	-776.611	-1560.536	89.355	C- 8	-1113.495	-1686.775	-382.076
5 - 6	0.000	C- 8	-367.396	544.033	-169.032	C- 7	-1172.558	2455.676	32.953
* 1	0.963	C- 7	138.273	1347.825	32.953	C- 9	-19.835	696.018	-96.608
* 2	1.925	C- 7	1422.535	1322.461	32.953	C- 8	490.997	493.869	-169.032
* 3	2.888	C- 7	715.166	-747.094	32.953	C- 8	-41.646	-492.626	-169.032
6 - 5	3.850	C- 7	-16.556	-1733.563	32.953	C- 8	-598.822	-1479.095	-169.032
6 - 7	0.000	C- 8	50.084	20.844	0.000	C- 7	-9.420	1103.904	0.000
7 - 6	0.800	C- 6	0.000	0.000	0.000	C- 8	0.000	0.000	0.000
8 - 9	0.000	C- 6	0.000	-0.125	0.000	C- 8	0.000	145.998	1174.769
9 - 8	0.800	C- 6	275.821	689.677	0.000	C- 7	184.379	464.929	0.000
9 - 10	0.000	C- 8	989.976	-904.748	977.650	C- 9	-27.577	-1257.879	96.573
* 1	0.963	C- 8	310.142	-503.703	977.650	C- 9	-860.673	-472.332	96.573
* 2	1.925	C- 8	26.586	-82.359	977.650	C-10	-969.938	-85.692	-29.827
* 3	2.888	C- 8	158.682	360.159	977.650	C-10	-747.525	552.089	-29.827
10 - 9	3.850	C- 6	1464.634	2038.861	92.418	C-10	100.799	1216.049	-29.827
10 - 11	0.000	C- 8	1688.494	-1439.912	699.783	C-10	322.688	-1581.918	-93.814
* 1	0.963	C- 8	533.235	-955.920	699.783	C-10	-869.891	-890.400	-93.814
* 2	1.925	C- 6	303.597	384.936	183.162	C-10	-1388.421	-172.759	-93.814
* 3	2.888	C- 6	1074.104	1215.285	183.162	C-10	-1193.105	572.496	-93.814
11 - 10	3.850	C- 6	2642.190	2044.771	183.162	C-10	-273.508	1343.818	-93.814
11 - 12	0.000	C- 6	2641.998	-2044.506	183.238	C-10	-284.767	-1367.282	-89.355
* 1	0.963	C- 6	1072.951	-1214.158	183.238	C-10	-1218.902	-568.289	-89.355
* 2	1.925	C- 6	303.914	-384.672	183.238	C-10	-1370.921	256.714	-89.355
* 3	2.888	C- 6	333.288	445.676	183.238	C- 8	-990.661	210.222	416.980
12 - 11	3.850	C- 6	1161.011	1275.162	183.238	C- 8	-487.784	838.713	416.980

PICK-UP No. 1 \*

M. M A X I M U M

M. M I N I M U M

No.	L (m)	Case	M (tm)	S (t)	N (t)	Case	M (tm)	S (t)	N (t)
12 - 13	0.000	C- 6	1465.556	-2039.090	92.457	C- 8	318.510	-1537.990	186.484
* 1	0.963	C- 6	-98.275	-1208.741	92.457	C- 8	-881.322	-888.109	186.484
* 2	1.925	C- 6	-862.101	-379.255	92.457	C- 8	-1385.110	-218.188	186.484
* 3	2.888	C- 6	-827.511	451.093	92.457	C- 8	-1264.003	473.167	186.484
13 - 12	3.850	C- 7	605.196	2068.782	-32.953	C- 8	-468.316	1184.518	186.484
13 - 14	0.000	C- 7	367.391	-914.589	0.000	C- 8	127.083	-461.325	0.000
14 - 13	0.800	C- 6	0.000	-0.116	0.000	C- 7	0.000	-0.192	0.000
2 - 9	0.000	C- 9	387.492	-96.573	-1764.443	C- 8	-571.568	179.666	-1222.228
* 1	1.750	C- 9	218.489	-96.573	-1800.919	C- 8	-253.334	184.029	-1258.704
* 2	3.500	C- 7	81.059	58.711	-1699.254	C- 9	49.486	-96.573	-1837.396
* 3	5.250	C- 8	406.039	192.755	-1331.656	C- 9	-119.517	-96.573	-1873.872
9 - 2	7.000	C- 8	747.178	197.118	-1368.132	C- 9	-288.519	-96.573	-1910.348
3 - 10	0.000	C- 6	330.756	-90.743	-3167.854	C- 8	-921.582	260.415	-2116.940
* 1	1.750	C- 6	171.955	-90.743	-3204.331	C- 8	-462.039	264.778	-2158.417
* 2	3.500	C- 6	13.154	-90.743	-3240.807	C-10	-2.068	63.988	-2725.015
* 3	5.250	C- 8	479.955	273.504	-2226.369	C- 6	-145.647	-90.743	-3277.283
10 - 3	7.000	C- 8	562.404	277.867	-2262.845	C- 6	-304.448	-90.743	-3313.759
4 - 11	0.000	C- 7	23.829	-5.325	-2674.224	C- 8	-929.077	265.351	-2025.661
* 1	1.750	C- 7	14.511	-5.325	-2710.700	C- 8	-460.895	269.714	-2052.137
* 2	3.500	C- 8	14.922	274.077	-2098.613	C- 9	0.069	-0.070	-3699.617
* 3	5.250	C- 8	498.374	278.440	-2135.089	C- 7	-4.126	-5.325	-2783.652
11 - 4	7.000	C- 8	989.462	282.803	-2171.565	C- 7	-13.444	-5.325	-2820.128
5 - 12	0.000	C- 7	394.062	-102.805	-4028.061	C- 8	-746.098	213.044	-2230.799
* 1	1.750	C- 7	214.153	-102.805	-4064.537	C- 8	-369.453	217.407	-2267.275
* 2	3.500	C- 7	34.243	-102.805	-4101.013	C- 6	-13.191	90.782	-3241.300
* 3	5.250	C- 8	406.743	226.133	-2340.227	C- 7	-145.666	-102.805	-4137.489
12 - 5	7.000	C- 8	806.294	230.496	-2376.703	C- 7	-325.575	-102.805	-4173.966
6 - 13	0.000	C- 7	-7.135	-32.953	-2837.466	C- 8	-548.907	169.032	-1499.939
* 1	1.750	C- 7	-64.803	-32.953	-2873.943	C- 8	-349.283	173.395	-1536.415
* 2	3.500	C- 8	-42.024	177.758	-1572.891	C- 7	-122.470	-32.953	-2910.415
* 3	5.250	C- 8	272.870	182.121	-1609.367	C- 7	-180.137	-32.953	-2946.895
13 - 6	7.000	C- 8	595.400	186.484	-1645.843	C- 7	-237.805	-32.953	-2983.371

PICK-UP No. 1 \*

S. M A X I M U M

S. M I N I M U M

No.	L (m)	Case	M (tm)	S (t)	N (t)	Case	M (tm)	S (t)	N (t)
1 - 2	0.000	C- 8	0.000	0.000	-1087.508	C- 6	0.000	0.000	0.000
2 - 1	0.800	C- 8	-66.759	-20.844	-1087.508	C- 6	-8.337	-20.844	0.000
2 - 3	0.000	C- 6	-384.828	1803.736	-92.418	C- 8	504.809	1201.384	-907.842
* 1	0.963	C- 6	161.250	553.242	-92.418	C- 8	654.464	214.889	-907.842
* 2	1.925	C- 6	681.413	528.177	-92.418	C- 8	778.879	189.825	-907.842
* 3	2.888	C- 9	-20.455	-696.055	-96.573	C- 7	-73.804	-920.596	58.711
3 - 2	3.850	C- 9	-702.115	-721.119	-96.573	C- 7	-971.473	-945.560	58.711
3 - 4	0.000	C- 6	-1039.780	2420.472	-183.162	C- 8	26.319	1295.206	-647.427
* 1	0.963	C- 6	100.214	1169.977	-183.162	C- 8	266.325	308.711	-647.427
* 2	1.925	C- 6	1213.577	<u>1144.913</u>	-183.162	C- 8	480.997	283.647	-647.427
* 3	2.888	C-10	-258.094	-674.543	93.814	C- 6	335.327	-924.542	-183.162
4 - 3	3.850	C-10	-919.061	-699.607	93.814	C- 6	-566.234	-949.705	-183.162
4 - 5	0.000	C- 6	-566.577	2993.566	-183.238	C- 8	-83.462	1297.748	-382.076
* 1	0.963	C- 6	337.467	924.111	-183.238	C- 8	158.992	311.293	-382.076
* 2	1.925	C- 6	1214.406	899.047	-183.238	C- 8	376.109	285.189	-382.076
* 3	2.888	C-10	-211.342	-574.067	89.355	C- 6	99.288	-1170.508	-183.238
5 - 4	3.850	C-10	-776.611	-1560.536	89.355	C- 6	-1040.022	-2420.977	-183.238
5 - 6	0.000	C- 7	-1172.558	2455.676	32.953	C- 8	-367.396	544.023	-169.032
* 1	0.963	C- 7	138.273	1347.525	32.953	C- 8	74.092	518.933	-169.032
* 2	1.925	C- 7	1422.536	<u>1322.461</u>	32.953	C- 8	490.997	493.869	-169.032
* 3	2.888	C- 8	-41.646	-492.626	-169.032	C- 7	715.166	-747.094	32.953
6 - 5	3.850	C- 8	-598.822	-1479.095	-169.032	C- 6	-384.944	-1803.748	-92.457
6 - 7	0.000	C- 7	-9.420	1103.904	0.000	C- 8	50.084	20.844	0.000
7 - 6	0.800	C- 6	0.000	0.000	0.000	C- 8	0.000	0.000	0.000
8 - 9	0.000	C- 8	0.000	145.998	1174.769	C- 7	0.000	-0.283	0.000
9 - 8	0.800	C- 6	275.821	689.677	0.000	C- 8	242.798	463.384	1174.769
9 - 10	0.000	C- 8	989.976	-904.748	977.650	C- 7	470.928	-1307.278	-58.711
* 1	0.963	C- 6	-828.223	-450.460	92.418	C- 7	-506.753	-717.855	-58.711
* 2	1.925	C- 6	-862.583	379.026	92.418	C- 7	-901.247	-96.953	-58.711
* 3	2.888	C- 6	-97.768	<u>1209.373</u>	92.418	C- 8	158.682	360.159	977.650
10 - 9	3.850	C- 6	1464.634	2038.861	92.418	C- 8	726.090	822.933	977.650
10 - 11	0.000	C- 9	902.573	-1254.151	177.372	C- 7	466.845	-1666.793	-141.083
* 1	0.963	C- 6	332.271	-444.550	183.162	C- 8	533.236	-955.920	699.783
* 2	1.925	C- 6	303.597	384.936	183.162	C- 8	-145.498	-451.717	699.783
* 3	2.888	C- 6	1074.104	<u>1215.283</u>	183.162	C- 8	-329.155	73.747	699.783
11 - 10	3.850	C- 6	2642.190	2044.771	183.162	C- 8	2.579	619.380	699.783
11 - 12	0.000	C-10	-284.767	-1367.232	-89.355	C- 6	2641.998	-2044.506	183.238
* 1	0.963	C-10	-1218.902	-568.289	-89.355	C- 6	1072.951	<u>-1214.158</u>	183.238
* 2	1.925	C- 7	-1335.246	299.958	-135.758	C- 8	-898.491	-398.187	416.980
* 3	2.888	C- 7	-610.476	<u>1210.633</u>	-135.758	C- 8	-990.661	210.222	416.980
12 - 11	3.850	C- 7	1004.597	2152.454	-135.758	C- 8	-487.784	838.713	416.980

PICK-UP No. 1 \*

S. M A X I M U M

S. M I N I M U M

No.	L (tm)	Case	M (tm)	S (t)	N (t)	Case	M (tm)	S (t)	N (t)
12 - 13	0.000	C- 8	318.510	-1537.990	186.484	C- 6	1465.555	-2039.090	92.457
* 1	0.953	C- 8	-851.322	-888.109	186.484	C- 6	-98.275	-1208.741	92.457
* 2	1.925	C-10	-1325.437	-29.354	-8.280	C- 6	-862.101	-379.255	92.457
* 3	2.888	C- 7	-867.641	998.594	-32.953	C- 6	-827.511	451.093	92.457
13 - 12	3.850	C- 7	605.196	2058.782	-32.953	C- 8	-468.315	1184.518	186.484
13 - 14	0.000	C- 8	127.083	-461.325	0.000	C- 7	367.391	-914.589	0.000
14 - 13	0.800	C- 8	0.000	146.003	0.000	C- 7	0.000	-0.192	0.000
2 - 9	0.000	C- 8	-571.568	179.666	-1222.228	C- 9	387.492	-96.573	-1764.443
* 1	1.750	C- 8	-253.334	184.029	-1258.704	C- 9	218.489	-96.573	-1800.919
* 2	3.500	C- 8	72.534	188.392	-1295.180	C- 9	49.486	-96.573	-1837.396
* 3	5.250	C- 8	406.039	192.755	-1331.656	C- 9	-119.517	-96.573	-1873.872
9 - 2	7.000	C- 8	747.178	197.118	-1368.132	C- 9	-288.519	-96.573	-1910.348
3 - 10	0.000	C- 8	-921.582	260.415	-2116.940	C- 6	330.756	-90.743	-3167.854
* 1	1.750	C- 8	-462.039	264.778	-2153.417	C- 6	171.955	-90.743	-3204.331
* 2	3.500	C- 8	5.140	269.141	-2189.893	C- 6	13.154	-90.743	-3240.807
* 3	5.250	C- 8	479.955	273.504	-2226.369	C- 6	-145.647	-90.743	-3277.283
10 - 3	7.000	C- 8	962.404	277.867	-2262.845	C- 6	-304.448	-90.743	-3313.759
4 - 11	0.000	C- 8	-929.077	265.351	-2025.661	C- 7	23.829	-5.325	-2674.224
* 1	1.750	C- 8	-460.895	269.714	-2062.137	C- 7	14.511	-5.325	-2710.700
* 2	3.500	C- 8	14.922	274.077	-2098.613	C- 7	5.193	-5.325	-2747.176
* 3	5.250	C- 8	498.374	278.440	-2135.089	C- 7	-4.126	-5.325	-2783.652
11 - 4	7.000	C- 8	989.462	282.803	-2171.565	C- 7	-13.444	-5.325	-2820.128
5 - 12	0.000	C- 8	-746.098	213.044	-2230.799	C- 7	394.062	-102.805	-4028.061
* 1	1.750	C- 8	-369.453	217.407	-2267.275	C- 7	214.153	-102.805	-4064.537
* 2	3.500	C- 8	14.827	221.770	-2303.751	C- 7	34.243	-102.805	-4101.013
* 3	5.250	C- 8	406.743	226.133	-2340.227	C- 7	-145.666	-102.805	-4137.489
12 - 5	7.000	C- 8	806.294	230.496	-2376.703	C- 7	-325.575	-102.805	-4173.966
6 - 13	0.000	C- 8	-648.907	169.032	-1499.939	C- 7	-7.135	-32.953	-2837.466
* 1	1.750	C- 8	-349.283	173.395	-1536.415	C- 7	-64.803	-32.953	-2873.943
* 2	3.500	C- 8	-42.024	177.758	-1572.891	C- 7	-122.470	-32.953	-2910.419
* 3	5.250	C- 8	272.870	182.121	-1609.367	C- 7	-180.137	-32.953	-2946.895
13 - 6	7.000	C- 8	595.400	186.484	-1645.843	C- 7	-237.805	-32.953	-2989.371

PICK-UP No. 1 \*

N. M A X I M U M

N. M I N I M U M

No.	L (m)	Case	M (tm)	S (t)	N (t)	Case	M (tm)	S (t)	N (t)
1 - 2	0.000	C- 9	0.000	0.000	0.000	C- 8	0.000	0.000	-1087.508
2 - 1	0.800	C- 9	-8.337	-20.844	0.000	C- 8	-66.759	-20.844	-1087.508
2 - 3	0.000	C- 7	116.094	1605.458	58.711	C- 8	504.809	1201.384	-907.842
* 1	0.963	C- 7	471.230	354.963	58.711	C- 8	554.464	214.849	-907.842
* 2	1.925	C- 7	800.640	329.899	58.711	C- 8	778.879	189.825	-907.842
* 3	2.888	C- 7	-73.804	-920.596	58.711	C- 8	-46.558	-796.670	-907.842
3 - 2	3.850	C- 7	-971.473	-945.660	58.711	C- 8	-895.263	-821.734	-907.842
3 - 4	0.000	C- 7	-681.650	1817.033	141.083	C- 8	26.319	1295.206	-647.427
* 1	0.963	C- 7	-122.768	566.538	141.083	C- 8	266.325	308.711	-647.427
* 2	1.925	C- 7	410.186	541.474	141.083	C- 8	480.997	283.647	-647.427
* 3	2.888	C- 7	-260.521	-709.021	141.083	C- 8	-254.090	-702.848	-647.427
4 - 3	3.850	C- 7	-954.655	-734.086	141.083	C- 8	-1012.538	-727.913	-647.427
4 - 5	0.000	C- 7	-978.485	1940.138	135.758	C- 8	-83.462	1297.748	-382.076
* 1	0.963	C- 7	-301.052	689.643	135.758	C- 8	158.992	311.253	-382.076
* 2	1.925	C- 7	350.329	664.579	135.758	C- 8	376.109	286.189	-382.076
* 3	2.888	C- 7	-201.828	-585.916	135.758	C- 8	-356.530	-700.306	-382.076
5 - 4	3.850	C- 7	-778.496	-1572.385	135.758	C- 8	-1113.495	-1686.775	-382.076
5 - 6	0.000	C- 7	-1172.558	2455.676	32.953	C- 8	-367.396	544.023	-169.032
* 1	0.963	C- 7	138.273	1347.525	32.953	C- 8	74.092	518.933	-169.032
* 2	1.925	C- 7	1422.536	1322.461	32.953	C- 8	490.997	493.869	-169.032
* 3	2.888	C- 7	715.166	-747.094	32.953	C- 8	-41.646	-492.626	-169.032
6 - 5	3.850	C- 7	-16.556	-1733.563	32.953	C- 8	-598.822	-1479.095	-169.032
6 - 7	0.000	C- 6	-8.337	20.844	0.000	C- 6	-8.337	20.844	0.000
7 - 6	0.800	C- 6	0.000	0.000	0.000	C- 6	0.000	0.000	0.000
8 - 9	0.000	C- 8	0.000	145.998	1174.769	C- 6	0.000	-0.125	0.000
9 - 8	0.800	C- 8	242.798	463.384	1174.769	C- 6	275.821	689.677	0.000
9 - 10	0.000	C- 8	989.976	-904.748	977.650	C- 7	470.928	-1307.278	-58.711
* 1	0.963	C- 8	310.142	-503.703	977.650	C- 7	-506.753	-717.855	-58.711
* 2	1.925	C- 8	26.586	-82.359	977.650	C- 7	-901.247	-96.953	-58.711
* 3	2.888	C- 8	158.682	360.159	977.650	C- 7	-682.449	556.719	-58.711
10 - 9	3.850	C- 8	726.090	822.933	977.650	C- 7	180.069	1241.804	-58.711
10 - 11	0.000	C- 8	1688.494	-1439.912	699.783	C- 7	466.845	-1666.793	-141.083
* 1	0.963	C- 8	533.236	-955.920	699.783	C- 7	-795.177	-948.871	-141.083
* 2	1.925	C- 8	-145.498	-451.717	699.783	C- 7	-1350.163	-199.602	-141.083
* 3	2.888	C- 8	-329.155	73.747	699.783	C- 7	-1168.343	582.572	-141.083
11 - 10	3.850	C- 8	2.579	619.380	699.783	C- 7	-219.209	1396.025	-141.083
11 - 12	0.000	C- 8	992.041	-1552.185	416.980	C- 7	-232.653	-1424.104	-135.758
* 1	0.963	C- 8	-231.399	-985.249	416.980	C- 7	-1199.091	-577.679	-135.758
* 2	1.925	C- 8	-898.491	-398.187	416.980	C- 7	-1335.246	299.958	-135.758
* 3	2.888	C- 8	-990.661	210.222	416.980	C- 7	-610.476	1210.633	-135.758
12 - 11	3.850	C- 8	-487.784	838.713	416.980	C- 7	1004.597	2152.454	-135.758



PICK-UP No. 1 \*

N. M A X I M U M

N. M I N I M U M

No.	L (m)	Case	M (tm)	S (t)	N (t)	Case	M (tm)	S (t)	N (t)
12 - 13	0.000	C- 8	318.510	-1537.990	186.484	C- 7	679.022	-2021.512	-32.953
* 1	0.963	C- 8	-851.322	-888.109	186.484	C- 7	-800.846	-1046.586	-32.953
* 2	1.925	C- 8	-1385.110	-218.188	186.484	C- 7	-1326.345	-40.581	-32.953
* 3	2.888	C- 8	-1264.003	473.167	186.484	C- 7	-867.641	998.594	-32.953
13 - 12	3.850	C- 8	-468.316	1184.518	186.484	C- 7	605.195	2068.782	-32.953
13 - 14	0.000	C- 6	276.013	-689.917	0.000	C- 6	275.013	-689.917	0.000
14 - 13	0.800	C- 6	0.000	-0.116	0.000	C- 6	0.000	-0.116	0.000
2 - 9	0.000	C- 8	-571.568	179.666	-1222.228	C- 6	376.490	-92.418	-1824.580
* 1	1.750	C- 8	-253.334	184.029	-1258.704	C- 6	214.758	-92.418	-1861.056
* 2	3.500	C- 8	72.534	188.392	-1295.180	C- 6	53.026	-92.418	-1897.532
* 3	5.250	C- 8	406.039	192.755	-1331.656	C- 6	-108.707	-92.418	-1934.008
9 - 2	7.000	C- 8	747.178	197.118	-1368.132	C- 6	-270.439	-92.418	-1970.485
3 - 10	0.000	C- 8	-921.582	260.415	-2116.940	C- 6	330.756	-90.743	-3167.854
* 1	1.750	C- 8	-462.039	264.778	-2153.417	C- 6	171.955	-90.743	-3204.331
* 2	3.500	C- 8	5.140	269.141	-2189.893	C- 6	13.154	-90.743	-3240.807
* 3	5.250	C- 8	479.955	273.504	-2226.369	C- 6	-145.647	-90.743	-3277.283
10 - 3	7.000	C- 8	962.404	277.867	-2262.845	C- 6	-304.448	-90.743	-3313.759
4 - 11	0.000	C- 8	-929.077	265.351	-2025.661	C- 6	0.343	-0.076	-3948.372
* 1	1.750	C- 8	-460.895	269.714	-2062.137	C- 6	0.209	-0.076	-3979.849
* 2	3.500	C- 8	14.922	274.077	-2098.613	C- 6	0.075	-0.076	-4016.325
* 3	5.250	C- 8	498.374	278.440	-2135.089	C- 6	-0.058	-0.076	-4052.801
11 - 4	7.000	C- 8	989.462	282.803	-2171.565	C- 6	-0.192	-0.076	-4089.277
5 - 12	0.000	C- 8	-746.098	213.044	-2230.799	C- 7	394.062	-102.805	-4028.061
* 1	1.750	C- 8	-369.453	217.407	-2267.275	C- 7	214.153	-102.805	-4064.537
* 2	3.500	C- 8	14.827	221.770	-2303.751	C- 7	34.243	-102.805	-4101.013
* 3	5.250	C- 8	406.743	226.133	-2340.227	C- 7	-145.666	-102.805	-4137.489
12 - 5	7.000	C- 8	806.294	230.496	-2376.703	C- 7	-325.575	-102.805	-4173.966
6 - 13	0.000	C- 8	-648.907	169.032	-1499.939	C- 7	-7.135	-32.953	-2837.466
* 1	1.750	C- 8	-349.283	173.295	-1536.415	C- 7	-64.803	-32.953	-2873.943
* 2	3.500	C- 8	-42.024	177.758	-1572.891	C- 7	-122.470	-32.953	-2910.419
* 3	5.250	C- 8	272.870	182.121	-1609.367	C- 7	-180.137	-32.953	-2946.895
13 - 6	7.000	C- 8	595.400	186.484	-1645.843	C- 7	-237.805	-32.953	-2983.371

## M. MAXIMUM

## M. MINIMUM

No.	L (m)	Case	M (tm)	S (t)	N (t)	Case	M (tm)	S (t)	N (t)
1 - 2	0.000	C-15	0.000	0.000	0.000	C-13	0.000	0.000	-659.096
2 - 1	0.800	C-15	-6.042	-15.104	0.000	C-13	-41.449	-15.104	-659.096
2 - 3	0.000	C-13	299.192	887.313	-549.935	C-14	-285.195	1263.090	-69.482
* 1	0.963	C-13	432.102	172.462	-549.935	C-14	98.290	388.238	-69.482
* 2	1.925	C-12	559.891	239.192	35.855	C-14	463.039	370.076	-69.482
* 3	2.888	C-11	-0.036	-515.490	-55.739	C-15	-57.763	-624.944	22.111
3 - 2	3.850	C-11	-504.674	-533.653	-55.739	C-15	-667.696	-643.107	22.111
3 - 4	0.000	C-13	-49.151	961.782	-389.455	C-14	-720.199	1644.751	-127.816
* 1	0.963	C-13	155.474	246.931	-389.455	C-15	-104.315	404.179	68.696
* 2	1.925	C-11	785.756	750.748	-108.082	C-15	275.769	386.016	68.696
* 3	2.888	C-11	196.966	-620.503	-108.082	C-15	-186.225	-488.835	68.696
4 - 3	3.850	C-11	-408.695	-638.666	-108.082	C-13	-679.182	-504.246	-389.455
4 - 5	0.000	C-13	-116.125	963.573	-228.640	C-15	-679.682	1351.911	65.465
* 1	0.963	C-11	198.391	620.150	-108.132	C-15	-210.663	477.060	65.465
* 2	1.925	C-11	786.239	601.988	-108.132	C-15	239.532	458.897	65.465
* 3	2.888	C-11	54.193	-769.264	-108.132	C-13	-222.061	-484.293	-228.640
5 - 4	3.850	C-12	-536.931	-1129.798	85.199	C-13	-739.961	-1199.125	-228.640
5 - 6	0.000	C-13	-297.631	410.405	-102.173	C-15	-789.570	1558.267	6.498
* 1	0.963	C-12	85.110	894.400	20.242	C-14	-13.856	504.749	-69.508
* 2	1.925	C-12	936.787	876.238	20.242	C-13	372.218	374.061	-102.173
* 3	2.888	C-12	468.843	-495.014	20.242	C-13	10.169	-340.791	-102.173
6 - 5	3.850	C-12	-16.793	-1209.846	20.242	C-13	-369.682	-1055.623	-102.173
6 - 7	0.000	C-13	29.366	15.104	0.000	C-12	-6.698	671.504	0.000
7 - 6	0.800	C-11	0.000	0.000	0.000	C-13	0.000	0.000	0.000
8 - 9	0.000	C-14	0.000	-0.083	0.000	C-13	0.000	88.475	711.981
9 - 8	0.800	C-11	189.088	472.804	0.000	C-15	133.669	336.593	0.000
9 - 10	0.000	C-13	629.580	-672.488	592.243	C-14	-18.136	-911.118	69.482
* 1	0.963	C-13	129.774	-363.435	592.243	C-14	-621.455	-341.881	69.482
* 2	1.925	C-13	-66.317	-42.148	592.243	C-15	-700.259	-61.708	-22.111
* 3	2.888	C-13	52.997	292.041	592.243	C-15	-538.716	400.453	-22.111
10 - 9	3.850	C-11	947.153	1375.363	55.739	C-15	76.385	881.583	-22.111
10 - 11	0.000	C-13	1091.536	-1007.789	421.186	C-15	237.934	-1146.282	-68.696
* 1	0.963	C-13	293.041	-648.465	421.186	C-15	-626.219	-645.182	-68.696
* 2	1.925	C-11	119.084	230.103	108.082	C-15	-998.308	-125.152	-68.696
* 3	2.888	C-11	614.761	799.340	108.082	C-15	-860.363	414.888	-68.696
11 - 10	3.850	C-11	1657.244	1367.985	108.082	C-15	-193.955	973.817	-68.696
11 - 12	0.000	C-11	1657.117	-1367.810	108.132	C-15	-202.113	-990.820	-65.465
* 1	0.963	C-11	614.003	-798.573	108.132	C-15	-879.057	-411.840	-65.465
* 2	1.925	C-11	119.294	-229.928	108.132	C-15	-989.250	185.989	-65.465
* 3	2.888	C-11	171.962	339.309	108.132	C-13	-630.432	196.610	249.794
12 - 11	3.850	C-11	771.896	907.955	108.132	C-13	-227.374	643.441	249.794

PICK-UP No. 2 \*

M. M A X I M U M

M. M I N I M U M

No.	L (m)	Case	M (tm)	S (t)	N (t)	Case	M (tm)	S (t)	N (t)
12 - 13	0.000	C-11	947.763	-1375.514	55.764	C-13	252.584	-1071.817	112.750
* 1	0.963	C-11	-102.769	-806.277	55.764	C-15	-610.486	-697.286	-6.498
* 2	1.925	C-11	-604.889	-237.631	55.764	C-15	-957.867	-21.659	-6.498
* 3	2.888	C-11	-559.640	331.606	55.764	C-13	-824.180	344.984	112.750
13 - 12	3.850	C-12	396.382	1377.951	-20.242	C-13	-254.231	842.033	112.750
13 - 14	0.000	C-15	244.596	-609.128	0.000	C-13	98.955	-334.422	0.000
14 - 13	0.800	C-11	0.000	-0.077	0.000	C-15	0.000	-0.123	0.000
2 - 9	0.000	C-14	279.153	-69.482	-1278.194	C-13	-340.641	109.161	-902.417
* 1	1.750	C-14	157.559	-69.482	-1304.626	C-13	-147.296	111.805	-928.849
* 2	3.500	C-12	55.843	35.855	-1200.174	C-14	35.964	-69.482	-1331.058
* 3	5.250	C-13	253.278	117.094	-981.713	C-14	-85.630	-69.482	-1357.490
9 - 2	7.000	C-13	460.505	119.738	-1008.145	C-14	-207.224	-69.482	-1388.922
3 - 10	0.000	C-14	211.563	-58.333	-2167.689	C-13	-568.396	160.480	-1540.497
* 1	1.750	C-14	109.480	-58.333	-2194.121	C-13	-285.242	163.125	-1566.928
* 2	3.500	C-14	7.397	-58.333	-2220.553	C-12	-1.499	52.575	-1984.727
* 3	5.250	C-13	294.949	168.413	-1619.793	C-14	-94.686	-58.333	-2246.985
10 - 3	7.000	C-13	591.985	171.057	-1646.225	C-14	-196.769	-58.333	-2273.417
4 - 11	0.000	C-12	14.461	-3.231	-1860.887	C-13	-563.058	160.814	-1467.818
* 1	1.750	C-12	8.806	-3.231	-1887.319	C-13	-279.319	163.459	-1494.250
* 2	3.500	C-13	9.048	166.103	-1520.682	C-11	0.050	-0.051	-2682.932
* 3	5.250	C-13	302.042	168.747	-1547.114	C-12	-2.504	-3.231	-1940.183
11 - 4	7.000	C-13	599.663	171.391	-1573.546	C-12	-8.159	-3.231	-1966.615
5 - 12	0.000	C-12	248.677	-64.957	-2698.780	C-13	-442.329	126.467	-1609.530
* 1	1.750	C-12	139.002	-64.957	-2726.212	C-13	-218.699	129.111	-1635.962
* 2	3.500	C-12	21.327	-64.957	-2751.644	C-14	-7.421	58.358	-2220.880
* 3	5.250	C-13	242.445	134.400	-1688.826	C-12	-92.348	-64.957	-2778.076
12 - 5	7.000	C-13	479.958	137.044	-1715.258	C-12	-206.023	-64.957	-2804.508
6 - 13	0.000	C-12	-10.095	-20.242	-1881.350	C-13	-399.047	102.173	-1070.727
* 1	1.750	C-12	-45.517	-20.242	-1907.782	C-13	-217.930	104.818	-1097.159
* 2	3.500	C-13	-32.185	107.462	-1123.591	C-12	-80.940	-20.242	-1934.214
* 3	5.250	C-13	158.187	110.106	-1150.023	C-12	-116.363	-20.242	-1960.646
13 - 6	7.000	C-13	353.186	112.750	-1176.455	C-12	-151.786	-20.242	-1987.078

S . M A X I M U M

S . M I N I M U M

No.	L (m)	Case	M (tm)	S (t)	N (t)	Case	M (tm)	S (t)	N (t)
1 - 2	0.000	C-13	0.000	0.000	-659.096	C-11	0.000	0.000	0.000
2 - 1	0.800	C-13	-41.449	-15.104	-659.096	C-11	-6.042	-15.104	0.000
2 - 3	0.000	C-14	-285.195	1253.090	-69.482	C-13	299.192	887.313	-549.935
* 1	0.963	C-14	98.290	388.238	-69.482	C-13	432.102	172.462	-549.935
* 2	1.925	C-14	453.039	370.076	-69.482	C-13	546.697	154.699	-549.935
* 3	2.888	C-14	-14.305	-504.776	-69.482	C-12	-43.494	-635.659	35.855
3 - 2	3.850	C-14	-508.636	-522.938	-69.482	C-12	-663.734	-653.822	35.855
3 - 4	0.000	C-14	-720.199	1644.751	-127.816	C-13	-49.151	961.782	-389.455
* 1	0.963	C-14	30.825	759.900	-127.816	C-13	155.474	246.931	-389.455
* 2	1.925	C-14	762.733	751.737	-127.816	C-13	341.708	228.768	-389.455
* 3	2.888	C-13	-160.257	-486.083	-389.455	C-11	196.956	-620.503	-108.082
4 - 3	3.850	C-13	-679.182	-504.246	-389.455	C-11	-408.695	-638.666	-108.082
4 - 5	0.000	C-11	-408.922	1991.402	-108.132	C-13	-116.125	963.573	-228.640
* 1	0.963	C-11	198.391	620.150	-108.132	C-13	90.224	248.721	-228.640
* 2	1.925	C-11	786.239	601.988	-108.132	C-13	278.130	230.559	-228.640
* 3	2.888	C-12	-128.302	-414.965	85.199	C-14	30.217	-770.253	-127.866
5 - 4	3.850	C-12	-536.931	-1129.798	85.199	C-14	-720.359	-1645.085	-127.866
5 - 6	0.000	C-12	-785.608	1566.982	20.242	C-13	-297.631	410.405	-102.173
* 1	0.963	C-12	85.110	894.400	20.242	C-13	46.213	392.223	-102.173
* 2	1.925	C-12	936.787	876.238	20.242	C-13	372.218	374.061	-102.173
* 3	2.888	C-13	10.169	-340.791	-102.173	C-15	433.938	-505.728	6.498
6 - 5	3.850	C-13	-369.682	-1055.623	-102.173	C-14	-285.272	-1263.098	-69.508
6 - 7	0.000	C-12	-6.698	671.504	0.000	C-13	29.366	15.104	0.000
7 - 6	0.800	C-11	0.000	0.000	0.000	C-13	0.000	0.000	0.000
8 - 9	0.000	C-13	0.000	88.476	711.981	C-15	0.000	-0.179	0.000
9 - 8	0.800	C-11	189.088	472.804	0.000	C-13	169.075	335.657	711.981
9 - 10	0.000	C-13	629.580	-672.488	592.243	C-15	254.013	-927.160	-22.111
* 1	0.963	C-11	-560.144	-331.166	55.739	C-15	-426.624	-503.939	-22.111
* 2	1.925	C-11	-605.208	237.480	55.739	C-15	-700.259	-61.708	-22.111
* 3	2.888	C-11	-102.427	806.717	55.739	C-13	52.997	292.041	592.243
10 - 9	3.850	C-11	947.153	1375.363	55.739	C-13	499.551	638.437	592.243
10 - 11	0.000	C-11	771.349	-907.780	108.082	C-15	237.934	-1146.282	-68.696
* 1	0.963	C-11	171.244	-338.543	108.082	C-13	293.041	-648.465	421.186
* 2	1.925	C-11	119.084	230.103	108.082	C-13	-153.094	-276.960	421.186
* 3	2.888	C-11	614.761	799.340	108.082	C-13	-235.699	107.499	421.186
11 - 10	3.850	C-11	1657.244	1367.985	108.082	C-13	57.480	504.112	421.186
11 - 12	0.000	C-15	-202.113	-990.820	-65.465	C-11	1657.117	-1367.810	108.132
* 1	0.963	C-15	-879.057	-411.840	-65.465	C-11	614.003	-798.573	108.132
* 2	1.925	C-15	-989.250	185.989	-65.465	C-13	-609.436	-238.119	249.794
* 3	2.888	C-15	-514.178	803.908	-65.465	C-13	-630.432	196.610	249.794
12 - 11	3.850	C-15	563.890	1440.636	-65.465	C-13	-227.374	643.441	249.794

PICK-UP No. 2 \*

S. M A X I M U M

S. M I N I M U M

No.	L (m)	Case	M (tm)	S (t)	N (t)	Case	M (tm)	S (t)	N (t)
12 - 13	0.000	C-13	252.584	-1071.817	112.750	C-11	947.763	-1375.514	55.764
* 1	0.963	C-13	-559.161	-611.954	112.750	C-11	-102.769	-806.277	55.764
* 2	1.925	C-15	-957.867	-21.659	-6.498	C-11	-604.889	-237.631	55.764
* 3	2.888	C-15	-645.261	674.140	-6.498	C-11	-559.640	331.606	55.764
13 - 12	3.850	C-15	345.390	1388.665	-6.498	C-13	-254.231	842.033	112.750
13 - 14	0.000	C-13	98.955	-334.422	0.000	C-15	244.596	-609.128	0.000
14 - 13	0.800	C-13	0.000	88.480	0.000	C-15	0.000	-0.123	0.000
2 - 9	0.000	C-13	-340.641	109.151	-902.417	C-14	279.153	-69.482	-1273.194
* 1	1.750	C-13	-147.296	111.805	-928.849	C-14	157.559	-69.482	-1304.626
* 2	3.500	C-13	50.677	114.449	-955.281	C-14	35.964	-69.482	-1331.058
* 3	5.250	C-13	253.278	117.094	-981.713	C-14	-85.630	-69.482	-1357.490
9 - 2	7.000	C-13	460.505	119.738	-1008.145	C-14	-207.224	-69.482	-1383.922
3 - 10	0.000	C-13	-568.396	160.480	-1540.497	C-14	211.563	-58.333	-2167.689
* 1	1.750	C-13	-285.242	163.125	-1566.929	C-14	109.480	-58.333	-2194.121
* 2	3.500	C-13	2.540	165.769	-1593.361	C-14	7.397	-58.333	-2220.553
* 3	5.250	C-13	294.949	168.413	-1619.793	C-14	-94.686	-58.333	-2246.985
10 - 3	7.000	C-13	591.985	171.057	-1646.225	C-14	-196.769	-58.333	-2273.417
4 - 11	0.000	C-13	-563.058	160.814	-1467.818	C-12	14.461	-3.231	-1860.887
* 1	1.750	C-13	-279.319	163.459	-1494.250	C-12	8.806	-3.231	-1887.319
* 2	3.500	C-13	9.048	166.103	-1520.682	C-12	3.151	-3.231	-1913.751
* 3	5.250	C-13	302.042	168.747	-1547.114	C-12	-2.504	-3.231	-1940.183
11 - 4	7.000	C-13	599.663	171.391	-1573.546	C-12	-8.159	-3.231	-1966.615
5 - 12	0.000	C-13	-442.329	126.467	-1609.530	C-12	248.677	-64.957	-2698.780
* 1	1.750	C-13	-218.699	129.111	-1635.962	C-12	135.002	-64.957	-2725.212
* 2	3.500	C-13	9.559	131.755	-1662.394	C-12	21.327	-64.957	-2751.644
* 3	5.250	C-13	242.445	134.400	-1688.826	C-12	-92.348	-64.957	-2778.076
12 - 5	7.000	C-13	479.958	137.044	-1715.258	C-12	-206.023	-64.957	-2804.508
6 - 13	0.000	C-13	-399.047	102.173	-1070.727	C-12	-10.095	-20.242	-1881.350
* 1	1.750	C-13	-217.930	104.818	-1097.159	C-12	-45.517	-20.242	-1907.782
* 2	3.500	C-13	-32.185	107.462	-1123.591	C-12	-80.940	-20.242	-1934.214
* 3	5.250	C-13	158.187	110.106	-1150.023	C-12	-116.363	-20.242	-1960.646
13 - 6	7.000	C-13	353.186	112.750	-1176.455	C-12	-151.786	-20.242	-1987.078

PICK-UP No. 2 \*

N. M A X I M U M

N. M I N I M U M

No.	L (m)	Case	M (tm)	S (t)	N (t)	Case	M (tm)	S (t)	N (t)
1 - 2	0.000	C-14	0.000	0.000	0.000	C-13	0.000	0.000	-659.096
2 - 1	0.800	C-14	-6.042	-15.104	0.000	C-13	-41.449	-15.104	-559.096
2 - 3	0.000	C-12	63.608	1132.206	35.855	C-13	299.192	887.313	-549.935
* 1	0.963	C-12	321.052	257.355	35.855	C-13	432.102	172.462	-549.935
* 2	1.925	C-12	559.391	239.192	35.855	C-13	546.697	154.299	-549.935
* 3	2.888	C-12	-43.494	-635.659	35.855	C-13	-26.982	-560.552	-549.935
3 - 2	3.850	C-12	-663.734	-653.822	35.855	C-13	-617.546	-578.715	-549.935
3 - 4	0.000	C-12	-478.223	1278.041	88.430	C-13	-49.151	961.782	-389.455
* 1	0.963	C-12	-80.340	403.190	88.430	C-13	155.474	246.931	-389.455
* 2	1.925	C-12	298.792	385.027	88.430	C-13	341.708	228.768	-389.455
* 3	2.888	C-12	-164.154	-489.824	88.430	C-13	-160.257	-486.063	-389.455
4 - 3	3.850	C-12	-644.102	-507.987	88.430	C-13	-679.182	-504.246	-389.455
4 - 5	0.000	C-12	-658.563	1352.900	85.199	C-13	-116.125	963.573	-228.640
* 1	0.963	C-12	-188.591	478.049	85.199	C-13	90.224	248.721	-228.640
* 2	1.925	C-12	262.556	459.886	85.199	C-13	278.180	230.559	-228.640
* 3	2.888	C-12	-128.302	-414.965	85.199	C-13	-222.061	-484.293	-228.640
5 - 4	3.850	C-12	-536.931	-1129.798	85.199	C-13	-739.961	-1199.125	-228.640
5 - 6	0.000	C-12	-785.608	1568.982	20.242	C-13	-297.631	410.405	-102.173
* 1	0.963	C-12	85.110	894.400	20.242	C-13	46.213	392.223	-102.173
* 2	1.925	C-12	936.787	876.238	20.242	C-13	372.218	374.061	-102.173
* 3	2.888	C-12	468.843	-495.014	20.242	C-13	10.169	-340.791	-102.173
6 - 5	3.850	C-12	-16.793	-1209.846	20.242	C-13	-369.682	-1055.623	-102.173
6 - 7	0.000	C-11	-6.042	15.104	0.000	C-11	-6.042	15.104	0.000
7 - 6	0.800	C-11	0.000	0.000	0.000	C-11	0.000	0.000	0.000
8 - 9	0.000	C-13	0.000	88.476	711.981	C-11	0.000	-0.083	0.000
9 - 8	0.800	C-13	169.075	335.657	711.981	C-11	189.088	472.804	0.000
9 - 10	0.000	C-13	629.580	-672.488	592.243	C-12	315.005	-916.445	-35.855
* 1	0.963	C-13	129.774	-363.435	592.243	C-12	-365.314	-493.224	-35.855
* 2	1.925	C-13	-66.317	-42.148	592.243	C-12	-628.641	-50.993	-35.855
* 3	2.888	C-13	52.997	292.041	592.243	C-12	-456.780	411.168	-35.855
10 - 9	3.850	C-13	499.551	638.437	592.243	C-12	168.629	892.298	-35.855
10 - 11	0.000	C-13	1091.536	-1007.789	421.186	C-12	351.143	-1145.293	-88.430
* 1	0.963	C-13	293.041	-648.465	421.186	C-12	-512.057	-644.192	-88.430
* 2	1.925	C-13	-153.094	-276.960	421.186	C-12	-883.195	-124.163	-88.430
* 3	2.888	C-13	-235.699	107.499	421.186	C-12	-744.298	415.877	-88.430
11 - 10	3.850	C-13	57.480	504.112	421.186	C-12	-76.937	974.806	-88.430
11 - 12	0.000	C-13	657.143	-1069.434	249.794	C-12	-85.096	-991.809	-85.199
* 1	0.963	C-13	-176.512	-659.841	249.794	C-12	-762.992	-412.829	-85.199
* 2	1.925	C-13	-609.436	-238.119	249.794	C-12	-874.137	185.000	-85.199
* 3	2.888	C-13	-630.432	196.610	249.794	C-12	-400.017	802.919	-85.199
12 - 11	3.850	C-13	-227.374	643.441	249.794	C-12	677.099	1439.647	-85.199

		N. M A X I M U M					N. M I N I M U M				
No.	L (m)	Case	M (tm)	S (t)	N (t)	Case	M (tm)	S (t)	N (t)		
12 - 13	0.000	C-13	252.584	-1071.817	112.750	C-12	471.076	-1364.861	-20.242		
* 1	0.963	C-13	-559.161	-611.954	112.750	C-12	-528.570	-708.001	-20.242		
* 2	1.925	C-13	-921.864	-140.014	112.750	C-12	-886.249	-32.374	-20.242		
* 3	2.888	C-13	-824.180	344.984	112.750	C-12	-583.961	663.425	-20.242		
13 - 12	3.850	C-13	-254.231	842.033	112.750	C-12	396.382	1377.951	-20.242		
13 - 14	0.000	C-11	189.216	-472.963	0.000	C-11	189.216	-472.963	0.000		
14 - 13	0.800	C-11	0.000	-0.077	0.000	C-11	0.000	-0.077	0.000		
2 - 9	0.000	C-13	-340.641	109.161	-902.417	C-14	279.153	-69.482	-1278.194		
* 1	1.750	C-13	-147.296	111.805	-928.849	C-14	157.559	-69.482	-1304.626		
* 2	3.500	C-13	50.677	114.449	-955.281	C-14	35.964	-69.482	-1331.058		
* 3	5.250	C-13	253.278	117.094	-981.715	C-14	-85.630	-69.482	-1357.490		
9 - 2	7.000	C-13	460.505	119.738	-1008.145	C-14	-207.224	-69.482	-1383.922		
3 - 10	0.000	C-13	-568.396	160.480	-1540.497	C-11	190.597	-52.343	-2177.415		
* 1	1.750	C-13	-285.242	163.125	-1566.929	C-11	98.997	-52.343	-2203.847		
* 2	3.500	C-13	2.540	165.769	-1593.361	C-11	7.397	-52.343	-2230.279		
* 3	5.250	C-13	294.949	168.413	-1619.793	C-11	-84.203	-52.343	-2256.711		
10 - 3	7.000	C-13	591.985	171.057	-1646.225	C-11	-175.804	-52.343	-2283.143		
4 - 11	0.000	C-13	-563.058	160.814	-1457.818	C-11	0.227	-0.051	-2630.068		
* 1	1.750	C-13	-279.319	163.459	-1494.250	C-11	0.188	-0.051	-2656.500		
* 2	3.500	C-13	9.048	166.103	-1520.682	C-11	0.050	-0.051	-2682.932		
* 3	5.250	C-13	302.042	168.747	-1547.114	C-11	-0.039	-0.051	-2709.364		
11 - 4	7.000	C-13	599.663	171.391	-1573.546	C-11	-0.127	-0.051	-2735.796		
5 - 12	0.000	C-13	-442.329	126.467	-1609.530	C-12	248.677	-64.957	-2698.780		
* 1	1.750	C-13	-218.699	129.111	-1635.962	C-12	135.002	-64.957	-2725.212		
* 2	3.500	C-13	9.559	131.755	-1662.394	C-12	21.327	-64.957	-2751.644		
* 3	5.250	C-13	242.445	134.400	-1688.826	C-12	-92.348	-64.957	-2778.076		
12 - 5	7.000	C-13	479.958	137.044	-1715.258	C-12	-206.023	-64.957	-2804.508		
6 - 13	0.000	C-13	-399.047	102.173	-1070.727	C-15	55.305	-6.498	-1892.065		
* 1	1.750	C-13	-217.930	104.818	-1097.159	C-15	-66.679	-6.498	-1918.497		
* 2	3.500	C-13	-32.185	107.462	-1123.591	C-15	-78.051	-6.498	-1944.929		
* 3	5.250	C-13	158.187	110.106	-1150.023	C-15	-89.422	-6.498	-1971.361		
13 - 6	7.000	C-13	353.186	112.750	-1176.455	C-15	-100.794	-6.498	-1997.793		

MOMBASA - PIER

Longitudinal direction

Calculation of pillar

action force for bottom of pillar (S.L.S)

load		N <sup>KN</sup>	H <sup>KN</sup>	y <sup>m</sup>	M = H · y <sup>KNm</sup>
State					
Super structure	Rd	6270.0	—	—	—
	R $\emptyset$	2929.2	—	—	—
Braking		—	514.0	7.100	3649.4
Seismic		—	822.0	7.100	5836.2
beam		$23.6 \times 1.00 \times 0.80 \times 17.00 = 321.0$	32.1	6.500	208.7
Pillar		$23.6 \times 0.80^2 \times 6.00 \times 5 = 453.3$	45.4	3.000	136.2
Braking		9973.5	514.0	—	3649.4
Seismic		7044.3	899.5	—	6181.1

action force for bottom of pillar (U.L.S)

load		N <sup>KN</sup>	H <sup>KN</sup>	M <sup>KNm</sup>
State				
Braking		$9973.5 \times 1.2 \times 1.15 = 13763.5$	$514.0 \times 1.25 \times 1.1 = 706.8$	$3649.4 \times 1.25 \times 1.1 = 5018.0$
Seismic		$7044.3 \times 1.2 \times 1.15 = 9721.2$	$899.5 \times 1.5 \times 1.1 = 1484.1$	$6181.1 \times 1.5 \times 1.1 = 10198.8$



Calculation of stress for U.L.S.

for action force of one pillar

$$N = 9721.2/5 = 1944.3 \text{ KN}$$

$$H = 1484.1/5 = 296.9 \text{ KN}$$

$$M = 10198.8/5 = 2039.8 \text{ KNm}$$

Notice , this case is abridge for small action force or near  
than the pillar of Uhulu bridge  
and the Bar arrangement is arrange following below.

$$A_s = A_s' = Y_{32} - 6^{NO} \times 2$$

MOMBASA - PIER

Calculation of stability for Foundation

1) action force for bottom of foundation

(1) Longitudinal direction for S.L.S

load		N <sup>KN</sup>	H <sup>KN</sup>	y <sup>m</sup>	M = H · y <sup>KNm</sup>
State					
Super structure	Rd	6270.0	—	—	—
	R $\phi$	2929.2	—	—	—
Braking		—	514.0	8.100	4163.4
Seismic		—	822.0	8.100	6658.2
beam		$23.6 \times 1.00 \times 0.80$ $\times 17.00 = 321.0$	32.1	7.500	240.8
Pillar		$23.6 \times 0.80^2 \times 6.00$ $\times 5 = 453.3$	45.4	4.000	181.6
footing		$23.6 \times 17.00 \times 4.00$ $\times 1.00 = 1604.8$	160.5	0.500	80.4
surcharge		$18.6 \times 17.00 \times 4.00$ $\times 1.00 = 1264.8$	—	—	—
Braking		12843.1	514.0	—	4163.4
Seismic		9913.9	1060.0	—	7161.0

(2) Longitudinal direction for U.L.S

load	N <sup>KN</sup>	H <sup>KN</sup>	M <sup>KNm</sup>
Braking	$12843.1 \times 1.2$ $\times 1.15 = 17723.5$	$514.0 \times 1.25 \times 1.1$ $= 706.8$	$4163.4 \times 1.25 \times 1.1$ $= 5724.7$
Seismic	$9913.9 \times 1.2$ $\times 1.15 = 13681.2$	$1060.0 \times 1.5 \times 1.1$ $= 1749.0$	$7161.0 \times 1.5 \times 1.1$ $= 11815.7$

2) Stability of Foundation for Longitudinal direction.

(1) For S.L.S

(a) Braking state

$$e = \frac{M}{N} = \frac{4163.4}{12843.1} = 0.325^m < \frac{B}{6} = \frac{4.00}{6} = 0.667^m$$

$$q = \frac{N}{B \cdot L} \left(1 \pm \frac{6e}{B}\right) = \frac{12843.1}{4.00 \times 17.00} = \left(1 \pm \frac{6 \times 0.325}{4.00}\right) = \begin{cases} 281.0 \text{ KN/m}^2 \\ 96.8 \text{ KN/m}^2 \end{cases} < q_a = 350 \text{ KN/m}^2$$

$$F_s = \frac{N \cdot \mu}{H} = \frac{12843.1 \times 0.50}{514.0} = 12.5 > 1.5 \quad \text{OK}$$

(b) Seismic state

$$e = \frac{M}{N} = \frac{7161.0}{9913.9} = 0.723^{cm} > \frac{B}{6} = 0.667^m$$

$$\chi = \frac{B}{2} - e = \frac{4.00}{2} - 0.723 = 1.277^m$$

$$q_{max} = \frac{2 \cdot N}{3 \cdot \chi \cdot L} = \frac{2 \times 9913.9}{3 \times 1.277 \times 17.00} = 304.5 \text{ KN/m}^2 < q_a = 350 \text{ KN/m}^2$$

$$F_s = \frac{N \cdot \mu}{H} = \frac{9913.9 \times 0.50}{1060.0} = 4.6 > 1.5 \quad \text{OK}$$

(2) For U.L.S

a) Braking state

$$e = \frac{M}{N} = \frac{5724.7}{17723.5} = 0.323^m < \frac{B}{6} = 0.667^m$$

$$q = \frac{N}{B \cdot L} \left(1 \pm \frac{6e}{B}\right) = \frac{17723.5}{4.00 \times 17.00} = \left(1 \pm \frac{6 \times 0.323}{4.00}\right) = \begin{cases} 387.0 \text{ KN/m}^2 \\ 134.4 \text{ KN/m}^2 \end{cases} < q_a = 525.0 \text{ KN/m}^2$$

$$F_s = \frac{N \cdot \mu}{H} = \frac{17723.5 \times 0.50}{706.8} = 12.5 > 1.1$$

b) Seismic state

$$e = \frac{M}{N} = \frac{11815.7}{13681.2} = 0.864^{cm} > \frac{B}{6} = 0.667^m$$

$$\chi = \frac{B}{2} - e = \frac{4.00}{2} - 0.864 = 1.136^m$$

$$q_{max} = \frac{2 \cdot N}{3 \cdot \chi \cdot L} = \frac{2 \times 13681.2}{3 \times 1.136 \times 17.00} = 472.3 \text{ KN/m}^2 < q_a = 525.0 \text{ KN/m}^2$$

$$F_s = \frac{N \cdot \mu}{H} = \frac{13681.2 \times 0.50}{1749.0} = 3.9 > 1.1 \quad \text{OK}$$

Notice : this case is follow the footing of the pillar of Uhuru bridge.

$A_s = Y_{20} - 150^{ctc}$

MOMBASA - PIER

Crossing direction

1) Calculation for Beam

a) middle span ... U.L.S

$$\begin{aligned} \text{Mu.max} &= 1422.6 \text{ KNm} \\ \text{Su.max} &= 1322.5 \text{ KN} \end{aligned} \quad \text{from out-put of Computer}$$

$$\text{section} \quad b = 80 \text{ cm} \quad h = 100 \quad d = 86.5 \quad d' = 13.5$$

$$A_s = Y_{25} - 6^{\text{NO}} \times 2 = 4.909 \times 12^{\text{NO}} = 58.90 \text{ cm}^2$$

$$P = \frac{A_s}{b d} \times 100 = \frac{58.90}{80 \times 86.5} \times 100 = 0.851 \%$$

$$x = \frac{0.87 f_y \cdot A_s}{0.40 f_{cu} \cdot b} = \frac{0.87 \times 41000 \times 58.90}{0.40 \times 2500 \times 80} = 26.4 \text{ cm}$$

$$Z = d - \frac{x}{2} = 86.5 - \frac{26.4}{2} = 73.3 \text{ cm} < 0.95d = 0.95 \times 86.5 = 82.2 \text{ cm} \quad \text{OK}$$

$$\begin{aligned} M_{RS} = 0.87 f_y A_s \cdot Z &= 0.87 \times 41000 \times 58.90 \times 73.3 \times 10^{-5} \\ &= 1540.0 \text{ KNm} > \text{Mu} = 1422.6 \text{ KNm} \end{aligned}$$

$$\begin{aligned} M_{RC} = 0.40 f_{cu} b x \cdot Z &= 0.40 \times 2500 \times 80 \times 26.4 \times 73.3 \times 10^{-5} \\ &= 1548.1 \text{ KNm} > \text{Mu} = 1422.6 \text{ KNm} \quad \text{OK} \end{aligned}$$

$$V_c = \frac{S_u}{b d} = \frac{1322.5 \times 10^3}{80 \times 86.5} = 191.1 \text{ N/cm}^2$$

$$V_{ca} = 50.0 + 15.0 \left( \frac{0.851 - 0.50}{0.500} \right) = 60.6 \text{ N/cm}^2$$

shering bar

$$\begin{aligned} A_{sv} &= \frac{b (V_c - V_{ca}) \cdot S_v}{0.87 f_{yv}} \\ &= \frac{80 (191.1 - 60.6) \times 15.0}{0.87 \times 41000} \doteq 4.0 \text{ cm}^2 \\ &\doteq A_{su} = Y_{16} - 2^{\text{NO}} = 4.0 \text{ cm}^2 \quad \text{OK} \end{aligned}$$

b) middle fulcrum

$$\text{Mu.mix} = -1172.6 \text{ KNm} < \text{Mu.max} = 1422.6 \text{ KNm}$$

Notice : this case is abridge.

MOMBASA - PIER

Crossing direction

2) Calculation for Pillar - U.L.S.

$$\left. \begin{array}{l} \text{Mu. max} = 989.5 \text{ KNm} \quad N = 2171.5 \text{ KN} \\ \text{Su. max} = 282.8 \text{ KN} \end{array} \right\} \dots \text{ from output of Computer}$$

section       $b = 80 \text{ cm}$      $h = 80$        $d = 72.5$        $d' = 7.5$

$$A_s = A_s' = Y_{32} - 10^{N0} = 8.042 \times 10^{N0} = 80.42 \text{ cm}^2$$

$$M_a = M + N \left( d - \frac{h}{2} \right) = 989.5 + 2171.5 \left( 72.5 - \frac{80}{2} \right) \times 10^{-2} = 1695.3 \text{ KN}\cdot\text{m}$$

$$\chi = \frac{(0.87 - 0.72) f_y \cdot A_s}{0.40 f_{cu} \cdot b} = \frac{(0.87 - 0.72) \times 41000 \times 80.42}{0.40 \times 2500 \times 80} = 7.2 \text{ cm}$$

$$Z = d - \frac{\chi}{2} = 72.5 - \frac{7.2}{2} = 68.9 \text{ cm} \leq 0.95d = 0.95 \times 72.5 = 68.9 \text{ cm} \quad \text{OK}$$

$$\begin{aligned} M_{RS} &= 0.87 f_y A_s Z = 0.87 \times 41000 \times 80.42 \times 68.9 \times 10^{-5} \\ &= 1976.4 \text{ KNm} > M_a = 1695.3 \text{ KNm} \end{aligned}$$

$$\begin{aligned} M_{RC} &= \{ 0.72 f_y A_s' (d - d') + 0.40 f_{cu} b \chi Z \} \\ &= (0.72 \times 41000 \times 80.42 \times 65.0 \\ &\quad + 0.40 \times 2500 \times 80 \times 7.2 \times 68.9) \times 10^{-5} = 1940.0 \text{ KNm} > M_a \quad \text{OK} \end{aligned}$$

$$A_{sn} = A_{sn}' = A_s - \frac{N}{0.87 f_y} = 80.42 - \frac{2171.5 \times 10^3}{0.87 \times 41000} = 19.6 \text{ cm}^2$$

$$< A_{su} = A_{su}' = Y_{32} - 6^{N0} = 8.042 \times 6^{N0} = 48.25 \text{ cm}^2$$

$$P = \frac{A_{su}}{bd} \times 100 = \frac{48.25}{80 \times 72.5} \times 100 = 0.832 \%$$

$$V_c = \frac{N}{bd} = \frac{282.8 \times 10^3}{80 \times 72.5} = 48.8 \text{ N/cm}^2$$

$$< V_{ca} = 50.0 + 15.0 \left( \frac{0.832 - 0.50}{0.50} \right) = 60.0 \text{ N/cm}^2 \quad \text{OK}$$

3) Calculation for footing -U.L.S.

a) middle fulcrum

$$\left. \begin{array}{l} \text{Mu.max} = 2643.0^{\text{KNm}} \\ \text{Su.max} = 1215.3^{\text{KN}} \end{array} \right\} \dots \text{ from output of Computer}$$

$$\begin{array}{l} \text{section} \quad b=80+2 \times 91.5=263.0^{\text{cm}} \\ \quad \quad \quad h=100^{\text{cm}} \quad d=91.5 \quad d'=8.5 \end{array}$$

$$A_s = Y_{25} - 150^{\text{ctc}} (19^{\text{No}}) = 4.909 \times 18^{\text{No}} = 88.36^{\text{cm}^2}$$

$$P = \frac{88.36}{263.0 \times 91.5} \times 100 = 0.367\%$$

$$x = \frac{0.87 \times 41000 \times 88.36}{0.40 \times 2500 \times 263.0} = 12.0^{\text{cm}}$$

$$Z = 91.5 - \frac{12.0}{2} = 85.5^{\text{cm}} < 0.95 \times 91.5 = 87.0^{\text{cm}}$$

$$\begin{aligned} M_{RS} &= 0.87 \times 41000 \times 88.36 \times 85.5 \times 10^{-5} \\ &= 2694.8^{\text{KNm}} > \text{Mu} = 2643.0^{\text{KNm}} \end{aligned}$$

$$\begin{aligned} M_{RC} &= 0.40 \times 2500 \times 263.0 \times 12.0 \times 85.5 \times 10^{-5} \\ &= 2698.4^{\text{KNm}} > \text{Mu} = 2643.0^{\text{KNm}} \text{ OK} \end{aligned}$$

$$V_c = \frac{1215.3 \times 10^3}{263.0 \times 91.5} = 50.5^{\text{N/cm}^2}$$

$$< V_{ca} = \left\{ 35.0 + 15.0 \left( \frac{0.367 - 0.25}{0.25} \right) \right\} \times 2 = 84.0^{\text{N/cm}^2} \text{ OK}$$

b) middle span

$$\text{Mu.min} = -1385.2^{\text{KNm}} \dots \text{ from output of Computer}$$

$$\begin{array}{l} \text{section} \quad b=80+94.5=174.5^{\text{cm}} \\ \quad \quad \quad h=100^{\text{cm}} \quad d=94.5 \quad d'=5.5 \end{array}$$

$$A_s = Y_{25} - 150^{\text{ctc}} (12^{\text{No}}) = 4.909 \times 12^{\text{No}} = 58.91^{\text{cm}^2}$$

$$x = \frac{0.87 \times 41000 \times 58.91}{0.40 \times 2500 \times 174.5} = 12.2^{\text{cm}}$$

$$Z = 94.5 - \frac{12.2}{2} = 88.5^{\text{cm}} < 0.95 \times 94.5 = 89.8^{\text{cm}} \text{ OK}$$

$$\begin{aligned} M_{RS} &= 0.87 \times 41000 \times 58.91 \times 88.5 \times 10^{-5} \\ &= 1859.6^{\text{KNm}} > \text{Mu} = 1385.2^{\text{KNm}} \end{aligned}$$

$$\begin{aligned} M_{RC} &= 0.40 \times 2500 \times 174.5 \times 12.2 \times 88.5 \times 10^{-5} \\ &= 1884.0^{\text{KNm}} > \text{Mu} = 1385.2^{\text{KNm}} \text{ OK} \end{aligned}$$

c) middle span ... S.L.S (for check)

$$M_{s,max} = 936.8 \text{ kNm}$$

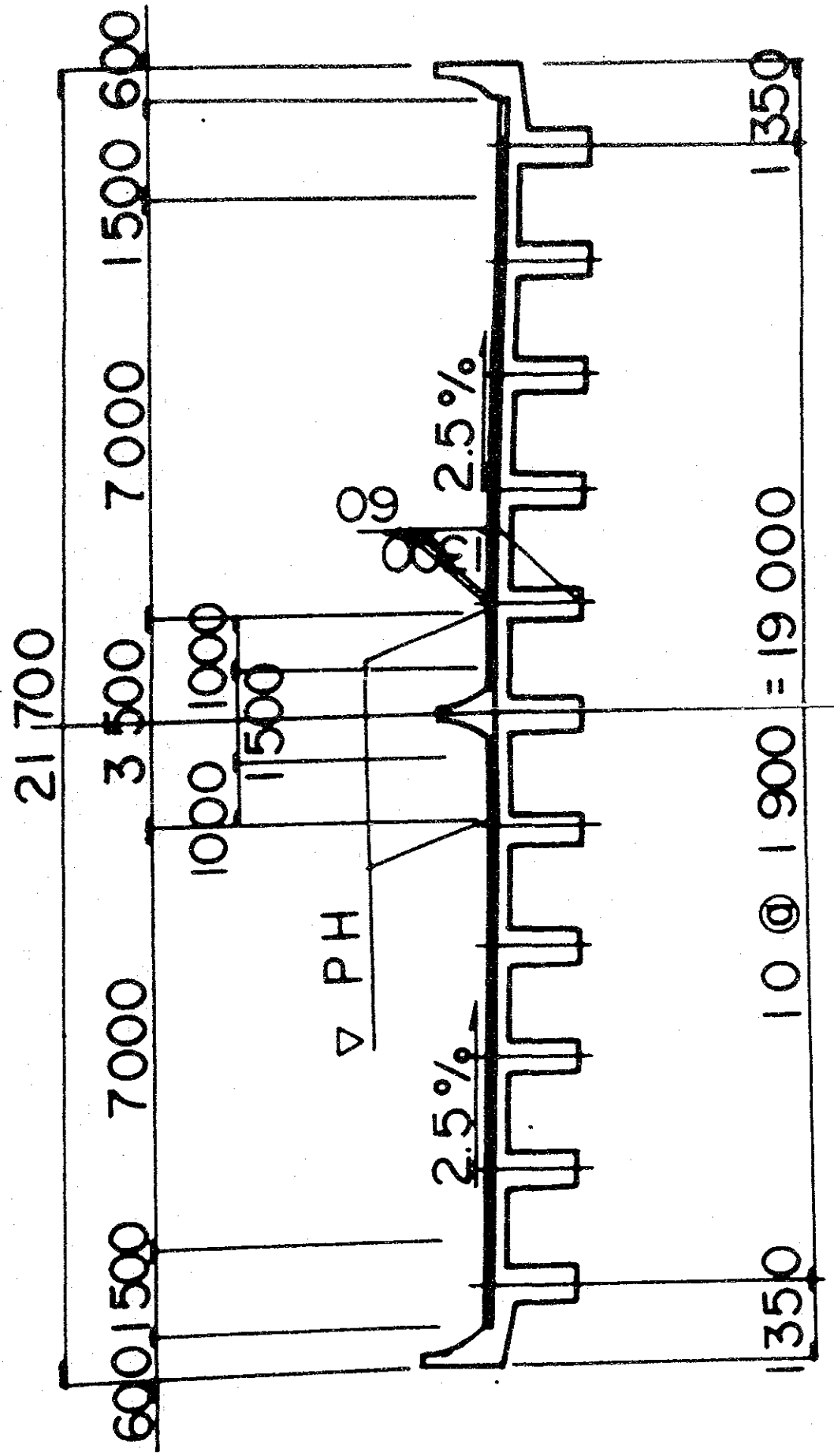
$$x = \frac{0.80 f_y \cdot A_s}{\frac{1}{2} \times 0.5 f_{cub}} = \frac{0.80 \times 41000 \times 58.90}{\frac{1}{2} \times 0.50 \times 2500 \times 80} = 38.7 \text{ cm}$$

$$Z = d - \frac{x}{3} = 86.5 - \frac{38.7}{3} = 73.6 \text{ cm} < 0.95 \times 86.5 = 82.2 \text{ cm}$$

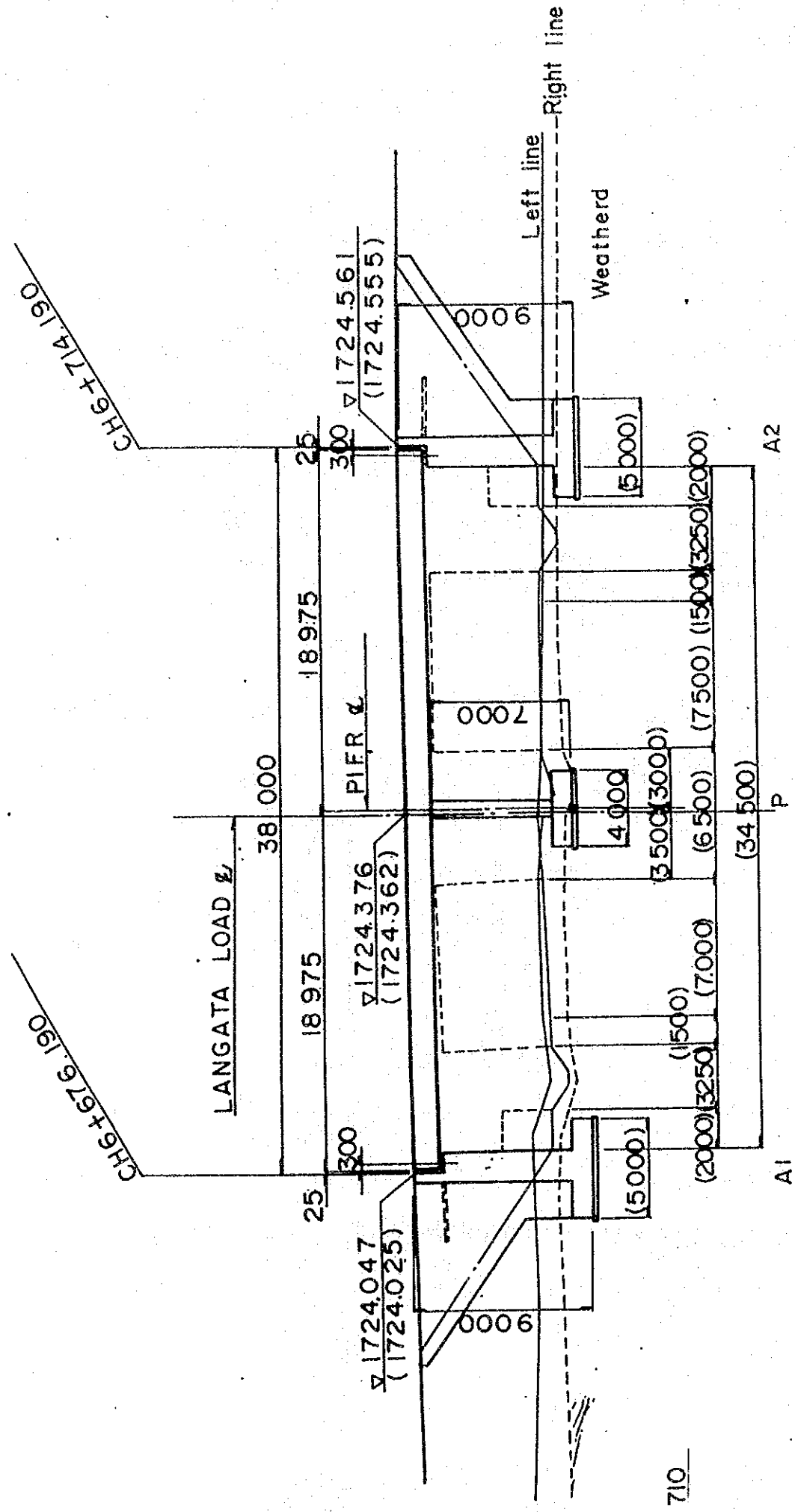
$$M_{RS} = 0.80 f_y A_s Z = 0.80 \times 41000 \times 58.90 \times 73.6 \times 10^{-5} \\ = 1421.9 \text{ kNm} > M_s = 936.8 \text{ kNm}$$

$$M_{RC} = \frac{1}{2} \times 0.50 f_{cub} x Z = \frac{1}{2} \times 0.50 \times 2500 \times 80 \times 38.7 \times 73.6 \times 10^{-5} \\ = 1424.1 \text{ kNm} > M_u = 936.8 \text{ kNm OK}$$

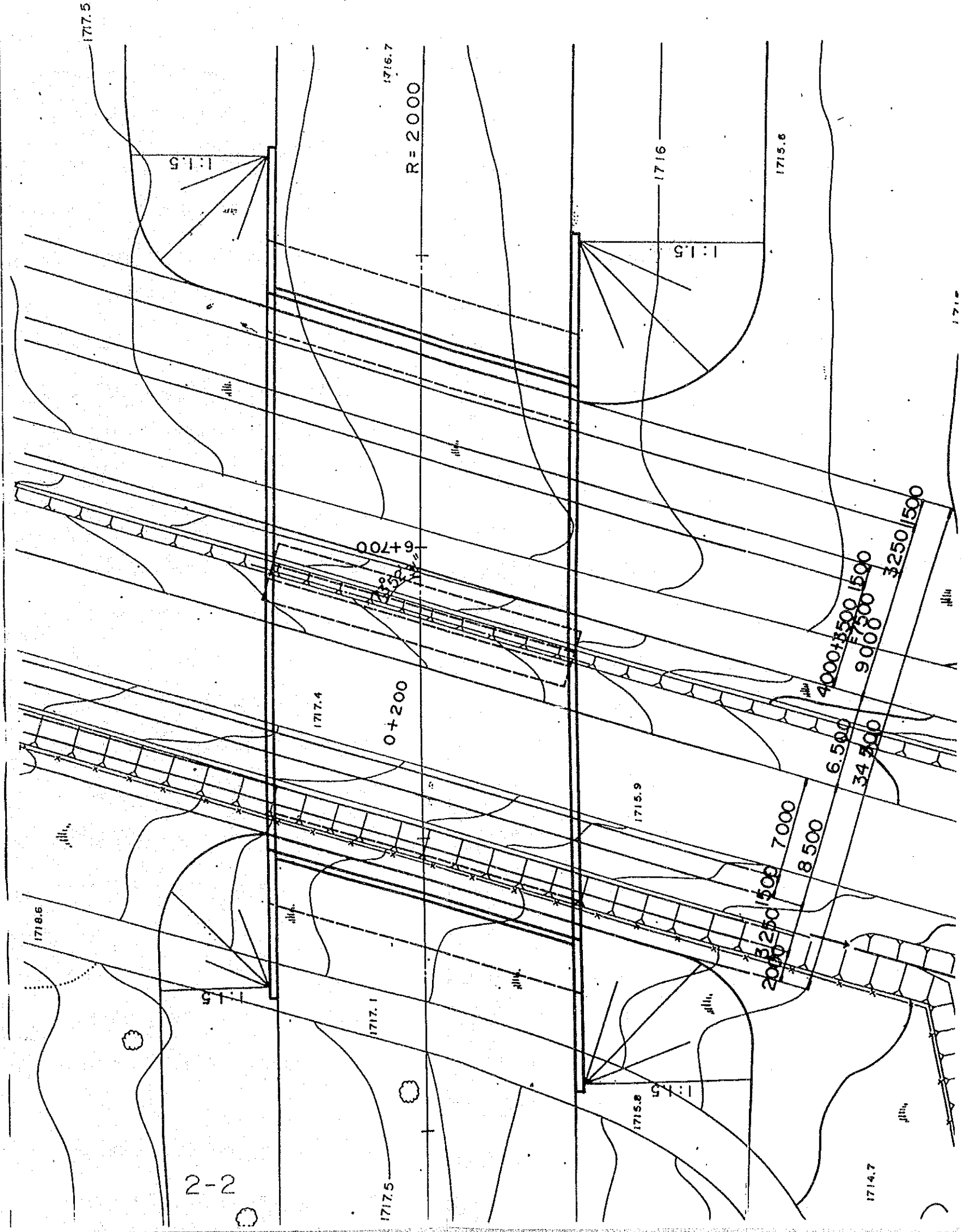
# UHURU MONUMENT JU. BRIDGE





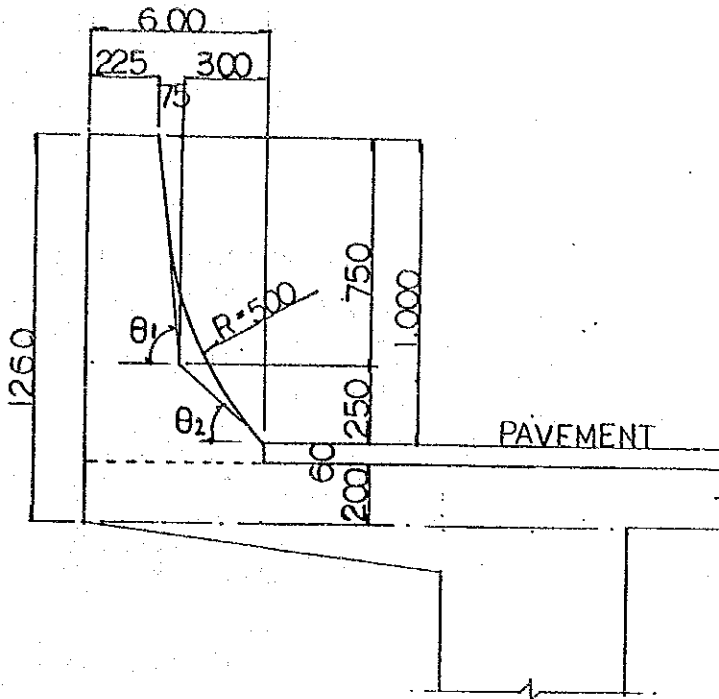


PROFILE SCALE 1:300



# SHAPE OF PARAPET OF MAIN ROAD

## 1) FOR VERGE



Section arer.

$$A = 0.60 \times 1.06 - \frac{1}{2} \times 0.075 \times 0.75 - \frac{0.75 + 1.00}{2} \times 0.30 + 0.006 = 0.352 \text{ m}^2$$

$$\theta_1 = \tan^{-1} \frac{0.750}{0.075} = 84^\circ 17' 22''$$

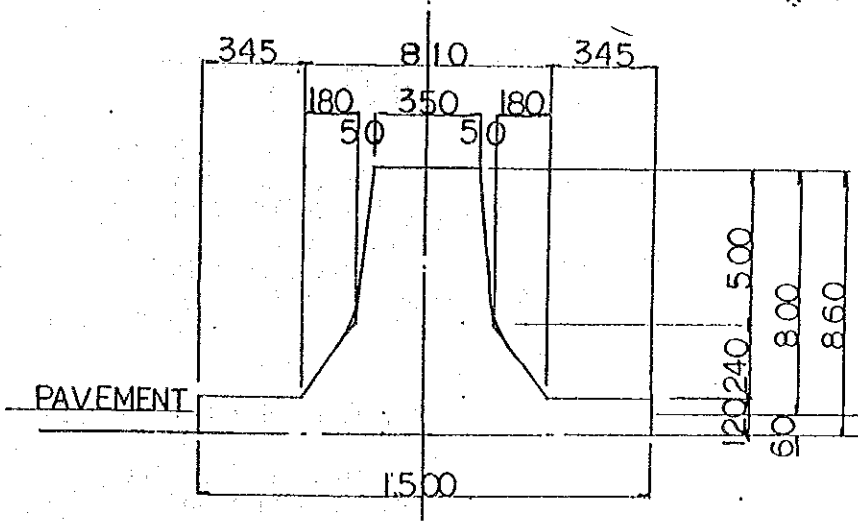
$$\theta_2 = \tan^{-1} \frac{0.250}{0.300} = 39^\circ 48' 20''$$

$$\theta = 44^\circ 29'$$

$$TL = R \cdot \tan \frac{\theta}{2} = 0.205 \text{ m}$$

## 2) FOR CENTRAL RESERVE.

$$* A = 0.205 \times 0.50 - \pi \times 0.50^2 \times \frac{44^\circ 29'}{360} = 0.006 \text{ m}^2$$



Section arer

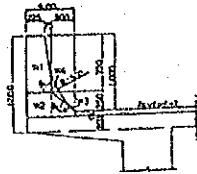
$$A = \frac{0.35 + 0.45}{2} \times 0.50 + \frac{0.45 + 0.81}{2} \times 0.24 + 1.50 \times 0.12 = 0.532 \text{ m}^2$$

## 2. LOAD

### 2.1 DEAD LOAD

Note Input data : unit=P', W' t, t/m  
unit=P, W KN=P', W' \*9.8m/s<sup>2</sup>

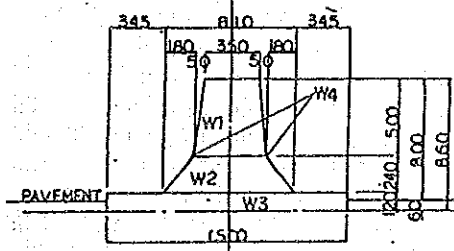
#### 1) Parapet for verge



$$\begin{aligned} W1' &= 1/2 * (0.225 + 0.30) * 0.75 * 2.4 = 0.473 \text{ t/m} \\ W2' &= 0.3 * 0.31 * 2.4 = 0.223 \\ W3' &= 1/2 * (0.06 + 0.31) * 0.30 * 2.4 = 0.133 \\ W4' &= 0.006 * 2.4 = 0.014 \\ \Sigma W' &= 0.843 \text{ t/m} \end{aligned}$$

$$W = 0.843 * 9.8 = 8.26 \text{ KN/m}$$

#### 2) Parapet for central reserve



$$\begin{aligned} W1' &= 1/2 * (0.350 + 0.45) * 0.50 * 2.4 = 0.480 \text{ t/m} \\ W2' &= 1/2 * (0.45 + 0.81) * 0.24 * 2.4 = 0.363 \\ W3' &= 1.5 * 0.12 * 2.4 = 0.432 \\ W4' &= 0.0007 * 2 * 2.4 = 0.003 \\ \Sigma W' &= 1.278 \text{ t/m} \end{aligned}$$

$$W = 1.278 * 9.8 = 12.52 \text{ KN/m}$$

#### 3) Pavment

$$W = 0.06 * 2.3 * 9.8 = 1.35 \text{ KN/m}^2 \quad W' = 0.06 * 2.3 = 0.138 \text{ t/m}^2$$

#### 4) Main girder

end girder

$$\begin{aligned} W1' &= 2.3 * 0.20 * 2.4 = 1.104 \text{ t/m} \\ W2' &= 1/2 * 1.05 * 0.15 * 2.4 = 0.189 \\ W3' &= 0.6 * 1.10 * 2.4 = 1.584 \\ \Sigma W' &= 2.877 \text{ t/m} \end{aligned}$$

$$W = 2.877 * 9.8 = 28.19 \text{ KN/m}$$

$$\text{Middle girder } W = (1.9 * 0.2 + 1.1 * 0.6) * 2.4 * 9.8 = 24.46 \text{ KN/m}$$

$$\ast W' = 24.46 / 9.8 = 2.496 \text{ t/m}$$

#### 6) Cross girder

End cross girder and supporting girder

$$P1 = 0.6 * 0.95 * 1.325 * 2.4 * 9.8 = 17.76 \text{ KN}$$

$$\ast W' = 17.76 / 9.8 = 1.813 \text{ t}$$

$$P2 = 0.35 * 0.95 * 1.325 * 2.4 * 9.8 = 10.36 \text{ KN}$$

$$\ast W' = 10.36 / 9.8 = 1.057 \text{ t}$$

## 2.2 LIVE LOAD

#### 1) H A 1 (center of span)

$$\text{KEL main } P1 = 38.10 \text{ KN/m} \quad \text{sub } P2 = 12.70 \text{ KN/m}$$

$$\ast P1' = 38.10 / 9.8 = 3.887 \text{ t/m} \quad P2' = 12.70 / 9.8 = 1.296 \text{ t/m}$$

$$\text{UDL main } W1 = 9.52 \text{ KN/m}^2 \quad \text{sub } W2 = 3.17 \text{ KN/m}^2$$

$$\ast W1' = 9.52 / 9.8 = 0.972 \text{ t/m}^2 \quad W2' = 3.17 / 9.8 = 0.324 \text{ t/m}^2$$

#### 2) H A 2 (middle supprting point)

$$\text{KEL main } P1 = 38.10 \text{ KN/m} \quad \text{sub } P2 = 12.70 \text{ KN/m}$$

$$\ast P1' = 38.10 / 9.8 = 3.887 \text{ t/m} \quad P2' = 12.70 / 9.8 = 1.296 \text{ t/m}$$

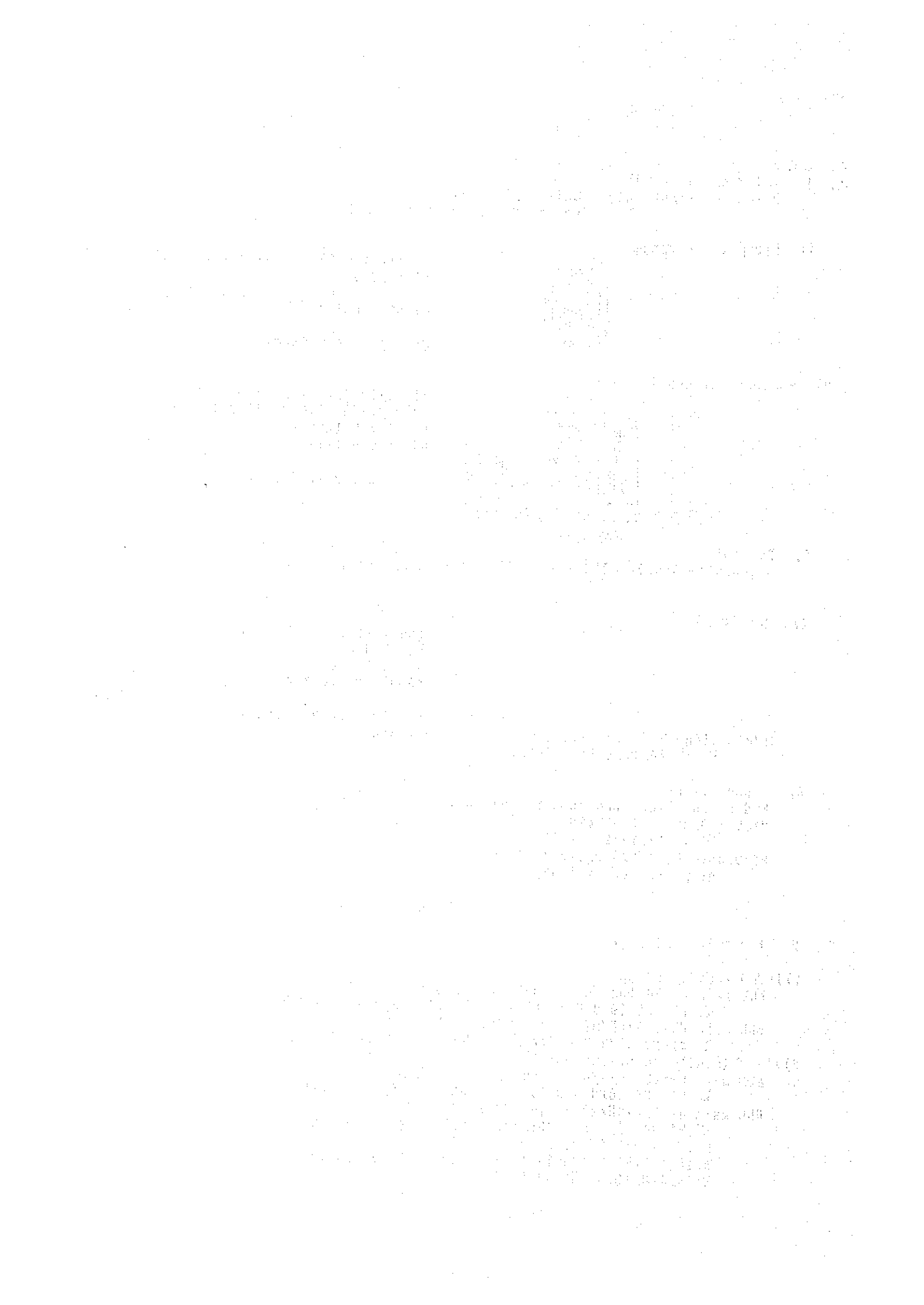
$$\text{UDL main } W1 = 8.51 \text{ KN/m}^2 \quad \text{sub } W2 = 2.84 \text{ KN/m}^2$$

$$\ast W1' = 8.51 / 9.8 = 0.868 \text{ t/m}^2 \quad W2' = 2.84 / 9.8 = 0.289 \text{ t/m}^2$$

$$L = 18.975 + 18.975 = 37.95 \text{ m}$$

$$W = 151 * (1/L)^{0.475} = 151 * (1/37.95)^{0.475} = 26.8 \text{ KN/m}$$

$$W = 26.8 / 3.15 = 8.51 \text{ KN/m}^2$$



3) H B 1 (center of span)

HB P0=75KN      \* P0' =75/9.8=7.653t/m  
KEL main P1=38.1KN/m      sub P2=12.70KN/m  
    \* P1' =38.10/9.8=3.887t/m      P2' =12.70/9.8=1.296t/m  
UDL main W1=10KN/m<sup>2</sup>      sub W2=3.33KN/m<sup>2</sup>  
    \* W1' =10/9.8=1.02t/m<sup>2</sup>      W2' =3.33/9.8=0.340t/m<sup>2</sup>

3) H B 2 (middle supporting point)

HB P0=75KN      \* P0' =75/9.8=7.653t/m  
KEL main P1=38.1KN/m      sub P2=12.70KN/m  
    \* P1' =38.10/9.8=3.887t/m      P2' =12.70/9.8=1.296t/m  
UDL main W1=8.51KN/m<sup>2</sup>      sub W2=2.84KN/m<sup>2</sup>  
    \* W1' =8.51/9.8=0.868t/m<sup>2</sup>      W2' =2.84/9.8=0.289t/m<sup>2</sup>

2. 3 COMBINATION OF LOADS

1) Base Loads

- ① Dead loads1 (deck loads)
- ② Dead loads2 (own weight)
- ③ HA1E (HA1 for side spans)
- ④ HA2
- ⑤ HB (cosentration loads span L=6m )
- ⑥ HB (cosentration loads span L=11m )
- ⑦ HB (cosentration loads span L=16m )
- ⑧ HB (cosentration loads span L=21m )
- ⑨ HB (cosentration loads span L=26m )
- ⑩ HB1 (HB1 distributed loads for side spans)
- ⑪ HB2 (HB1 distributed loads )

2) Combination Loads

- ⑫ HB1 ⑤+⑩
- ⑬ HB1 ⑥+⑩
- ⑭ HB1 ⑦+⑩
- ⑮ HB1 ⑧+⑩
- ⑯ HB1 ⑨+⑩
- ⑰ HB2 ⑤+⑪
- ⑱ HB2 ⑥+⑪
- ⑲ HB2 ⑦+⑪
- ⑳ HB2 ⑧+⑪
- ㉑ HB2 ⑨+⑪

3) Pick up Cases

- (1) ⑫, ⑬, ⑭, ⑮, ⑯
- (2) ⑰, ⑱, ⑲, ㉑, 21
- (3) ③, (1)
- (4) ④, (2)

### 3. EFFECTIVE WIDTH AND MODULAS

#### 3.1 EFFECTIVE WIDTH

##### 2) Main girder

$$b_e = b_w + l/5$$

$b_e$  : effective width for flanges

$l$  : length of moment zero

$$0.7 * L_s \text{ or } 0.85 * L_s'$$

$L_s$  : spans for connection girders of middle spans

$L_s'$  : spans for connection girders of end spans

end spans

$$b_e = 0.60 + 0.85 * 18.925 / 5 = 3.817 \text{ m} > b = 1.90 \text{ m} (2.30 \text{ m})$$

##### 2) Cross girder

end cross girder

$$\lambda_1 = l/8 + b_s = 18.925 * 0.8 / 8 + 0 = 1.893 \text{ m}$$

supporting cross girder

$$\lambda_2 = l/8 + b_s = (18.925 * 2) * 0.2 / 8 + 0 = 0.946 \text{ m}$$

middle cross girder

$$\lambda_3 = (n-1) * (l_b + l_w) / 6 + b_s = (11-1) / 6 * (1.9 + 0.60) + 0 = 4.167 \text{ m}$$

3. 2 MODULAS  
UHURU

Main girder

	B	H	A	Y	A*Y	A*y <sup>2</sup>	Ic
End girder ①	230	20	4600	10	46000	460000	153333
middle gir ①'	190	20	3800	10	38000	380000	126667
②	60	110	6600	75	495000	37125000	6655000
End girder Σ			11200		541000	37585000	6808333
middle gir Σ			10400		533000	37505000	6781667

$$IY = \Sigma I_c + \Sigma A * Y^2 - \Sigma A * (\Sigma A * Y / \Sigma A)^2$$

$$= 18261101 = 0.183$$

$$IY = \Sigma I_c + \Sigma A * Y^2 - \Sigma A * (\Sigma A * Y / \Sigma A)^2$$

$$= 16970417 = 0.170$$

Cross girder

	B	H	A	Y	A*Y	A*Y <sup>2</sup>	Ic
End cross ①	249.3	20	4986	10	49860	498600	166200
Sopprting ①'	249.2	20	4984	10	49840	498400	166133
②	60	95	5700	67.5	384750	25970625	4286875
End cross Σ			10686		434610	26469225	4453075
Sopprting Σ			10684		434590	26469025	4453008

$$IY = \Sigma I_c + \Sigma A * Y^2 - \Sigma A * (\Sigma A * Y / \Sigma A)^2$$

$$= 13246289 = 0.132$$

$$IY = \Sigma I_c + \Sigma A * Y^2 - \Sigma A * (\Sigma A * Y / \Sigma A)^2$$

$$= 13244341 = 0.132$$

Cross girder

	B	H	A	Y	A*Y	A*Y <sup>2</sup>	Ic
Middle cro ①	868.4	20	17368	10	173680	1736800	578933
②	35	95	3325	67.5	224438	15149531	2500677
Middle cro Σ			20693		398118	16886331	3079610

$$IY = \Sigma I_c + \Sigma A * Y^2 - \Sigma A * (\Sigma A * Y / \Sigma A)^2$$

$$= 12306465 = 0.123$$

CONTROL DATA LOADPIC POINTCUT LINER EDIT MEMBER DEFLECTION MOMENT SHEAR REACTION

STRUCTURE SIZE AND CONSTANTS

NUMBER OF JOINTS 99  
NUMBER OF MEMBERS 140  
NUMBER OF MAIN GIRDERS 11  
NUMBER OF CROSS BEAMS 9  
NUMBER OF LOAD POINTS 99  
YOUNG'S MODULUS 2.80DE+06  
SHEAR MODULUS 1.217E+06

ALL UNITS ARE METER AND TON

2  
1  
00



JOINT DATA

JOINT DATA

NO.	X (M)	Y (M)	SUPPORT	ELASTIC SUPPORT K2 (T/M)	COORDINATE	X (M)	Y (M)	SUPPORT	ELASTIC SUPPORT K2 (T/M)	COORDINATE	X (M)	Y (M)	SUPPORT	ELASTIC SUPPORT K2 (T/M)
1	3.1034	9.5274	FZ			18.4504	-1.8098	FZ			18.4504	-1.8098	FZ	
2	2.5328	7.6229	1			17.9010	-3.7101	1			17.9010	-3.7101	1	
3	2.0022	5.7182	1			17.3516	-5.6104	1			17.3516	-5.6104	1	
4	1.4515	3.8134	1			16.8022	-7.5110	1			16.8022	-7.5110	1	
5	0.9008	1.9084	1			16.2527	-9.4116	1			16.2527	-9.4116	1	
6	0.3500	0.0033	1			26.4063	9.5766	1			26.4063	9.5766	1	
7	-0.2008	-1.9020	1			25.8576	7.6785	1			25.8576	7.6785	1	
8	-0.7517	-3.8075	1			25.3088	5.7803	1			25.3088	5.7803	1	
9	-1.3026	-5.7131	1			24.7600	3.8820	1			24.7600	3.8820	1	
10	-1.8536	-7.6189	1			24.2111	1.9835	1			24.2111	1.9835	1	
11	-2.4046	-9.5248	1			23.6622	0.0848	1			23.6622	0.0848	1	
12	7.7639	9.5588	1			23.1133	-1.8140	1			23.1133	-1.8140	1	
13	7.2136	7.6557	1			22.5643	-3.7129	1			22.5643	-3.7129	1	
14	6.6634	5.7523	1			22.0152	-5.6120	1			22.0152	-5.6120	1	
15	6.1131	3.8488	1			21.4662	-7.5113	1			21.4662	-7.5113	1	
16	5.5627	1.9452	1			20.9170	-9.4107	1			20.9170	-9.4107	1	
17	5.0123	0.0413	1			31.0670	9.5540	1			31.0670	9.5540	1	
18	4.4619	-1.8626	1			30.5186	7.6572	1			30.5186	7.6572	1	
19	3.9114	-3.7668	1			29.9702	5.7602	1			29.9702	5.7602	1	
20	3.3609	-5.6711	1			29.4217	3.8631	1			29.4217	3.8631	1	
21	2.8103	-7.5755	1			28.8732	1.9659	1			28.8732	1.9659	1	
22	2.2596	-9.4801	1			28.3247	0.0685	1			28.3247	0.0685	1	
23	12.4244	9.5795	1			27.7761	-1.8290	1			27.7761	-1.8290	1	
24	11.8746	7.6776	1			27.2275	-3.7267	1			27.2275	-3.7267	1	
25	11.3247	5.7756	1			26.6788	-5.6245	1			26.6788	-5.6245	1	
26	10.7747	3.8734	1			26.1301	-7.5225	1			26.1301	-7.5225	1	
27	10.2248	1.9710	1			25.5813	-9.4206	1			25.5813	-9.4206	1	
28	9.6747	0.0685	1			35.7276	9.5206	1			35.7276	9.5206	1	
29	9.1247	-1.8342	1			35.1796	7.6250	1			35.1796	7.6250	1	
30	8.5746	-3.7370	1			34.6315	5.7293	1			34.6315	5.7293	1	
31	8.0244	-5.6400	1			34.0834	3.8335	1			34.0834	3.8335	1	
32	7.4742	-7.5431	1			33.5353	1.9375	1			33.5353	1.9375	1	
33	6.9240	-9.4464	1			32.9871	0.0413	1			32.9871	0.0413	1	
34	17.0850	9.5893	1			32.4389	-1.8549	1			32.4389	-1.8549	1	
35	16.5355	7.6887	1			31.8906	-3.7514	1			31.8906	-3.7514	1	
36	15.9860	5.7880	1			31.3423	-5.6479	1			31.3423	-5.6479	1	
37	15.4365	3.8871	1			30.7940	-7.5447	1			30.7940	-7.5447	1	
38	14.8869	1.9860	1			30.2456	-9.4415	1			30.2456	-9.4415	1	
39	14.3372	0.0848	1			40.5681	9.4764	1			40.5681	9.4764	1	
40	13.7875	-1.8165	1			39.8405	7.5821	1			39.8405	7.5821	1	
41	13.2376	-3.7181	1			39.2928	5.6876	1			39.2928	5.6876	1	
42	12.6880	-5.6197	1			38.7450	3.7930	1			38.7450	3.7930	1	
43	12.1382	-7.5216	1			38.1973	1.8982	1			38.1973	1.8982	1	
44	11.5883	-9.4235	1			37.6494	0.0033	1			37.6494	0.0033	1	
45	21.7456	9.5884	1			37.1016	-1.8917	1			37.1016	-1.8917	1	
46	21.1965	7.6890	1			36.5537	-3.7869	1			36.5537	-3.7869	1	
47	20.6474	5.7896	1			36.0057	-5.6823	1			36.0057	-5.6823	1	
48	20.0982	3.8899	1			35.4576	-7.5777	1			35.4576	-7.5777	1	
49	19.5490	1.9892	1			34.9097	-9.4733	1			34.9097	-9.4733	1	
50	18.9997	0.0902	1					1					1	

2  
1  
9

\*\* UHUKU BRIDGE \*\*

\*\* UHUKU BRIDGE \*\*

SECTION NO.	L (M)	IY (M <sup>4</sup> )	J (M <sup>4</sup> )	SECTION NO.	L (M)	IY (M <sup>4</sup> )	J (M <sup>4</sup> )
GIRDER NO. 1	37.285*	0.16300000	0.00000000	GIRDER NO. 6	37.300*	0.17000000	0.00000000
INPUT LENGTH	37.285	GIRDER LENGTH	37.285	INPUT LENGTH	37.300	GIRDER LENGTH	37.300
		SPAN LENGTH ( 1 )	18.642			SPAN LENGTH ( 1 )	18.650
		SPAN LENGTH ( 2 )	18.643			SPAN LENGTH ( 2 )	18.650

GIRDER NO. 2	37.288*	0.17000000	0.00000000	GIRDER NO. 7	37.303*	0.17000000	0.00000000
INPUT LENGTH	37.288	GIRDER LENGTH	37.288	INPUT LENGTH	37.303	GIRDER LENGTH	37.303
		SPAN LENGTH ( 1 )	18.644			SPAN LENGTH ( 1 )	18.651
		SPAN LENGTH ( 2 )	18.644			SPAN LENGTH ( 2 )	18.651

GIRDER NO. 3	37.291*	0.17000000	0.00000000	GIRDER NO. 8	37.306*	0.17000000	0.00000000
INPUT LENGTH	37.291	GIRDER LENGTH	37.291	INPUT LENGTH	37.306	GIRDER LENGTH	37.306
		SPAN LENGTH ( 1 )	18.645			SPAN LENGTH ( 1 )	18.653
		SPAN LENGTH ( 2 )	18.646			SPAN LENGTH ( 2 )	18.653

GIRDER NO. 4	37.294*	0.17000000	0.00000000	GIRDER NO. 9	37.309*	0.17000000	0.00000000
INPUT LENGTH	37.294	GIRDER LENGTH	37.294	INPUT LENGTH	37.309	GIRDER LENGTH	37.309
		SPAN LENGTH ( 1 )	18.647			SPAN LENGTH ( 1 )	18.655
		SPAN LENGTH ( 2 )	18.647			SPAN LENGTH ( 2 )	18.654

GIRDER NO. 5	37.297*	0.17000000	0.00000000	GIRDER NO. 10	37.312*	0.17000000	0.00000000
INPUT LENGTH	37.297	GIRDER LENGTH	37.297	INPUT LENGTH	37.312	GIRDER LENGTH	37.312
		SPAN LENGTH ( 1 )	18.648			SPAN LENGTH ( 1 )	18.656
		SPAN LENGTH ( 2 )	18.649			SPAN LENGTH ( 2 )	18.656

SECTION NO. L (M) IY (M\*\*4) J (M\*\*4)

GIRDER NO. 11	1	37.315*	0.16300000	0.00000000
INPUT LENGTH		37.315	GIRDER LENGTH	37.315
			SPAN LENGTH ( 1 )	18.658
			SPAN LENGTH ( 2 )	18.657

CROSS BEAM DATA

	IY (M**4)	J (M**4)	IY (M**4)	J (M**4)
SB	0.13300000	0.00000000	0.13300000	0.00000000
PB	0.13300000	0.00000000	0.00000000	0.00000000
CB	0.12300000	0.00000000	0.00000000	0.00000000

\*\* UNURU BRIDGE \*\*

MEMBER DATA

J (M\*4) AS (M\*2) R (M)

J (M\*4)

IY (M\*4)

L (M)

A B

NO

J (M\*4)

IY (M\*4)

L (M)

A B

NO

J (M\*4)

1	12	4.660	0.18300000	29	40	4.6628	0.17000000		
2	23	4.6605	0.18300000	51	40	4.6629	0.17000000		
3	34	4.6606	0.18300000	53	62	4.6629	0.17000000		
4	45	4.6606	0.18300000	54	73	4.6628	0.17000000		
5	56	4.6607	0.18300000	55	84	4.6629	0.17000000		
6	67	4.6608	0.18300000	84	95	4.6628	0.17000000		
7	78	4.6607	0.18300000	8	19	4.6633	0.17000000		
8	89	4.6607	0.18300000	19	30	4.6633	0.17000000		
9	13	4.6609	0.17000000	30	41	4.6632	0.17000000		
10	24	4.6611	0.17000000	41	52	4.6632	0.17000000		
11	35	4.6609	0.17000000	52	63	4.6633	0.17000000		
12	46	4.6610	0.17000000	63	74	4.6632	0.17000000		
13	57	4.6611	0.17000000	74	85	4.6632	0.17000000		
14	68	4.6610	0.17000000	85	96	4.6632	0.17000000		
15	79	4.6611	0.17000000	9	20	4.6637	0.17000000		
16	90	4.6611	0.17000000	20	31	4.6636	0.17000000		
17	3	4.6613	0.17000000	31	42	4.6636	0.17000000		
18	14	4.6614	0.17000000	42	53	4.6636	0.17000000		
19	25	4.6615	0.17000000	53	64	4.6636	0.17000000		
20	36	4.6614	0.17000000	64	75	4.6636	0.17000000		
21	47	4.6614	0.17000000	75	86	4.6636	0.17000000		
22	58	4.6614	0.17000000	86	97	4.6635	0.17000000		
23	69	4.6614	0.17000000	10	21	4.6641	0.17000000		
24	80	4.6615	0.17000000	21	32	4.6640	0.17000000		
25	4	4.6617	0.17000000	32	43	4.6640	0.17000000		
26	15	4.6617	0.17000000	43	54	4.6640	0.17000000		
27	26	4.6618	0.17000000	54	65	4.6640	0.17000000		
28	37	4.6617	0.17000000	65	76	4.6639	0.17000000		
29	48	4.6618	0.17000000	76	87	4.6640	0.17000000		
30	59	4.6617	0.17000000	87	98	4.6639	0.17000000		
31	70	4.6618	0.17000000	11	22	4.6644	0.18300000		
32	81	4.6618	0.17000000	22	33	4.6645	0.18300000		
33	5	4.6620	0.17000000	33	44	4.6644	0.18300000		
34	16	4.6622	0.17000000	44	55	4.6644	0.18300000		
35	27	4.6621	0.17000000	55	66	4.6643	0.18300000		
36	38	4.6621	0.17000000	66	77	4.6643	0.18300000		
37	49	4.6621	0.17000000	77	88	4.6643	0.18300000		
38	60	4.6621	0.17000000	88	99	4.6642	0.18300000		
39	71	4.6622	0.17000000	1	2	1.9825	0.13300000		
40	82	4.6622	0.17000000	2	3	1.9827	0.13300000		
41	6	4.6625	0.17000000	3	4	1.9828	0.13300000		
42	17	4.6625	0.17000000	4	5	1.9830	0.13300000		
43	28	4.6625	0.17000000	5	6	1.9831	0.13300000		
44	39	4.6625	0.17000000	6	7	1.9833	0.13300000		
45	50	4.6625	0.17000000	7	8	1.9835	0.13300000		
46	61	4.6625	0.17000000	8	9	1.9836	0.13300000		
47	72	4.6625	0.17000000	9	10	1.9839	0.13300000		
48	83	4.6625	0.17000000	10	11	1.9839	0.13300000		
49	7	4.6629	0.17000000	23	24	1.9798	0.12300000		
50	18	4.6629	0.17000000	24	25	1.9799	0.12300000		





\*\* REMARKS \*\*

D-Z(MR) : DEFLECTION

\* POINT  
 I  
 I  
 I  
 I  
 V

MEMBER

I \*\*\*\*\* J

M-X(T,M) : TORSIONAL MOMENT

I-J <-----> J-I

M-Y(T,M) : BENDING MOMENT

I-J <-----> J-I

Q-Z(T) : SHEARING FORCE

I-J <-----> J-I

RE-PZ(T) : REACTION

A  
 I  
 I  
 I  
 I

\* POINT

\* INPUT DATA \* ALL UNITS ARE METER AND TON.

NO. OF POINTS 99  
 NO. OF LOAD POINTS 99  
 NO. OF MAIN GIRDER 11  
 NO. OF PANNEL POINT 9  
 SKEW ANGLE  
 MATERIAL PC

LOAD POINT DIAGRAM

	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11
( 1 )	1	2	3	4	5	6	7	8	9	10	11
( 2 )	12	13	14	15	16	17	18	19	20	21	22
( 3 )	23	24	25	26	27	28	29	30	31	32	33
( 4 )	34	35	36	37	38	39	40	41	42	43	44
( 5 )	45	46	47	48	49	50	51	52	53	54	55
( 6 )	56	57	58	59	60	61	62	63	64	65	66
( 7 )	67	68	69	70	71	72	73	74	75	76	77
( 8 )	78	79	80	81	82	83	84	85	86	87	88
( 9 )	89	90	91	92	93	94	95	96	97	98	99

\*\* UHUKU BRIDGE \*\*

JIP-GRIDD PAGE 2

\* LOAD

SPAN LENGTH (M) \*\*\* 1-SPAN \*\*\* 2-SPAN \*\*\*  
 IMPACT (M) \*\*\*\*\* 5\*\*\*\*\* 9  
 0.000 0.000 0.000

\* COORDINATE OF ROADWAY EDGE & DISTANCE FROM OUTSIDE GIRDER

	* LEFT SIDE *		* RIGHT SIDE *		* SEPARATOR *		* SKEW ANGLE *	
	X (M)	Y (M)	X (M)	Y (M)	X (M)	Y (M)	W (T/M)	
1	3.3207	10.2791	0.7825	-2.6221	0.7832	0.0033	0.000	73-24-28
2	7.9810	10.3101	0.7850	-2.0423	0.7827	0.0413	0.000	73-32-29
3	12.6416	10.3302	0.7814	0.7068	0.7821	0.0685	0.000	73-40-29
4	17.3019	10.3595	0.7809	11.3713	0.7816	0.0848	0.000	73-48-30
5	21.9624	10.3331	0.7804	16.0358	0.7811	0.0902	0.000	73-56-31
6	26.6229	10.3258	0.7799	20.7003	0.7805	0.0848	0.000	74-04-31
7	31.2834	10.3027	0.7793	25.3647	0.7800	0.0685	0.000	74-12-32
8	35.9439	10.2868	0.7788	30.0291	0.7795	0.0413	0.000	74-20-32
9	40.6043	10.2242	0.7784	34.6934	0.7789	0.0033	0.000	74-20-32



\* LINE DATA

* NO. FROM	1 * DISTANCE (M)	* NO. FROM	2 * DISTANCE (M)	* NO. FROM	3 * DISTANCE (M)	* NO. FROM	4 * DISTANCE (M)
1	G1	-1.252	G1	-0.783	G5	1.200	
2	G1	-1.251	G1	-0.782	G5	1.199	
3	G1	-1.250	G1	-0.782	G5	1.198	
4	G1	-1.250	G1	-0.781	G5	1.197	
5	G1	-1.249	G1	-0.780	G5	1.197	
6	G1	-1.248	G1	-0.780	G5	1.196	
7	G1	-1.247	G1	-0.779	G5	1.195	
8	G1	-1.246	G1	-0.779	G5	1.194	
9	G1	-1.246	G1	-0.779	G5	1.194	

* NO. FROM	5 * DISTANCE (M)	* NO. FROM	6 * DISTANCE (M)	* NO. FROM	7 * DISTANCE (M)	* NO. FROM	8 * DISTANCE (M)	
1	G7	-1.200	G1	0.783	G1	-0.522	G1	0.522
2	G7	-1.199	G1	0.782	G1	-0.521	G1	0.521
3	G7	-1.198	G1	0.782	G1	-0.521	G1	0.521
4	G7	-1.197	G1	0.781	G1	-0.521	G1	0.521
5	G7	-1.197	G1	0.780	G1	-0.520	G1	0.520
6	G7	-1.196	G1	0.780	G1	-0.520	G1	0.520
7	G7	-1.195	G1	0.779	G1	-0.520	G1	0.520
8	G7	-1.194	G1	0.779	G1	-0.519	G1	0.519
9	G7	-1.194	G1	0.779	G1	-0.519	G1	0.519

* NO. FROM	9 * DISTANCE (M)	* NO. FROM	10 * DISTANCE (M)	* NO. FROM	11 * DISTANCE (M)	* NO. FROM	12 * DISTANCE (M)	
1	G2	-0.417	G2	0.626	G3	-1.096	G4	-0.157
2	G2	-0.417	G2	0.626	G3	-1.095	G4	-0.156
3	G2	-0.417	G2	0.625	G3	-1.094	G4	-0.156
4	G2	-0.417	G2	0.625	G3	-1.093	G4	-0.156
5	G2	-0.416	G2	0.624	G3	-1.093	G4	-0.156
6	G2	-0.416	G2	0.624	G3	-1.092	G4	-0.156
7	G2	-0.416	G2	0.624	G3	-1.091	G4	-0.156
8	G2	-0.415	G2	0.623	G3	-1.090	G4	-0.156
9	G2	-0.415	G2	0.623	G3	-1.090	G4	-0.156

* NO. FROM	13 * DISTANCE (M)	* NO. FROM	14 * DISTANCE (M)	
1	G6	-0.783	G6	0.783
2	G6	-0.782	G6	0.782
3	G6	-0.782	G6	0.782

2  
1  
6

\*\*\_UHURU\_BRIDGE \*\*

\* LINE DATA \*

4	66	-0.781	66	0.781
5	66	-0.780	66	0.780
6	66	-0.780	66	0.780
7	66	-0.779	66	0.779
8	66	-0.779	66	0.779
9	66	-0.779	66	0.779

\* LOAD DATA

\* POINT LOAD (T)

* LOAD NAME	OUT NO.	PLACE	WEIGHT	KVAL OF SHEAR
DEAD	2	G1 C1	0.907	1.000

* LOAD NAME	OUT NO.	PLACE	WEIGHT	KVAL OF SHEAR
DEAD	2	G1 C5	0.907	1.000

* LOAD NAME	OUT NO.	PLACE	WEIGHT	KVAL OF SHEAR
DEAD	2	G1 C9	0.907	1.000

* LOAD NAME	OUT NO.	PLACE	WEIGHT	KVAL OF SHEAR
DEAD	2	G2 C1	1.813	1.000

* LOAD NAME	OUT NO.	PLACE	WEIGHT	KVAL OF SHEAR
DEAD	2	G2 C5	1.813	1.000

* LOAD NAME	OUT NO.	PLACE	WEIGHT	KVAL OF SHEAR
DEAD	2	G2 C9	1.813	1.000

* LOAD NAME	OUT NO.	PLACE	WEIGHT	KVAL OF SHEAR
DEAD	2	G3 C1	1.813	1.000

* LOAD NAME	OUT NO.	PLACE	WEIGHT	KVAL OF SHEAR
DEAD	2	G3 C5	1.813	1.000

* LOAD NAME	OUT NO.	PLACE	WEIGHT	KVAL OF SHEAR
DEAD	2	G3 C9	1.813	1.000

* LOAD NAME	OUT NO.	PLACE	WEIGHT	KVAL OF SHEAR
DEAD	2	G4 C1	1.813	1.000

2  
1  
00

\* LOAD NAME ---  
DEAD      2   G4      C5      1.813      1.000

OUT NO.      2   G4      C5      1.813      1.000  
KVAL OF SHEAR

\* LOAD NAME ---  
DEAD      2   G4      C9      1.813      1.000

OUT NO.      2   G4      C9      1.813      1.000  
KVAL OF SHEAR

\* LOAD NAME ---  
DEAD      2   G5      C1      1.813      1.000

OUT NO.      2   G5      C1      1.813      1.000  
KVAL OF SHEAR

\* LOAD NAME ---  
DEAD      2   G5      C5      1.813      1.000

OUT NO.      2   G5      C5      1.813      1.000  
KVAL OF SHEAR

\* LOAD NAME ---  
DEAD      2   G6      C1      1.813      1.000

OUT NO.      2   G6      C1      1.813      1.000  
KVAL OF SHEAR

\*\* UHURU BRIDGE \*\*

\* LOAD DATA

\* POINT LOAD (T)

OUT NO. -- PLACE --- WEIGHT KVAL OF SHEAR  
 DEAD 2 G6 C5 1.813 1.000

OUT NO. -- PLACE --- WEIGHT KVAL OF SHEAR  
 DEAD 2 G6 C9 1.813 1.000

OUT NO. -- PLACE --- WEIGHT KVAL OF SHEAR  
 DEAD 2 G7 C1 1.813 1.000

OUT NO. -- PLACE --- WEIGHT KVAL OF SHEAR  
 DEAD 2 G7 C5 1.813 1.000

OUT NO. -- PLACE --- WEIGHT KVAL OF SHEAR  
 DEAD 2 G7 C9 1.813 1.000

OUT NO. -- PLACE --- WEIGHT KVAL OF SHEAR  
 DEAD 2 G8 C1 1.813 1.000

OUT NO. -- PLACE --- WEIGHT KVAL OF SHEAR  
 DEAD 2 G8 C5 1.813 1.000

OUT NO. -- PLACE --- WEIGHT KVAL OF SHEAR  
 DEAD 2 G8 C9 1.813 1.000

OUT NO. -- PLACE --- WEIGHT KVAL OF SHEAR  
 DEAD 2 G9 C1 1.813 1.000

OUT NO. -- PLACE --- WEIGHT KVAL OF SHEAR

6-1

* LOAD NAME ---	OUT NO.	PLACE ---	WEIGHT	KVAL OF SHEAR
DEAD	2	G9	1,813	1,000

DEAD	2	G10	1,813	1,000
------	---	-----	-------	-------

DEAD	2	G10	1,813	1,000
------	---	-----	-------	-------

DEAD	2	G10	1,813	1,000
------	---	-----	-------	-------

DEAD	2	G11	0,907	1,000
------	---	-----	-------	-------

DEAD	2	G11	0,907	1,000
------	---	-----	-------	-------

DEAD	2	G11	0,907	1,000
------	---	-----	-------	-------

21

\*\* UHURU BRIDGE \*\*

\* LOAD DATA

\* POINT LOAD (T)

OUT NO. -- PLACE --- WEIGHT KVAL OF SHEAR  
 DEAD 2 G1 C3 0.529 1.000

OUT NO. -- PLACE --- WEIGHT KVAL OF SHEAR  
 DEAD 2 G1 C7 0.529 1.000

OUT NO. -- PLACE --- WEIGHT KVAL OF SHEAR  
 DEAD 2 G2 C3 1.057 1.000

OUT NO. -- PLACE --- WEIGHT KVAL OF SHEAR  
 DEAD 2 G2 C7 1.057 1.000

OUT NO. -- PLACE --- WEIGHT KVAL OF SHEAR  
 DEAD 2 G5 C3 1.057 1.000

OUT NO. -- PLACE --- WEIGHT KVAL OF SHEAR  
 DEAD 2 G3 C7 1.057 1.000

OUT NO. -- PLACE --- WEIGHT KVAL OF SHEAR  
 DEAD 2 G4 C3 1.057 1.000

OUT NO. -- PLACE --- WEIGHT KVAL OF SHEAR  
 DEAD 2 G4 C7 1.057 1.000

OUT NO. -- PLACE --- WEIGHT KVAL OF SHEAR  
 DEAD 2 G5 C3 1.057 1.000

OUT NO. -- PLACE --- WEIGHT KVAL OF SHEAR  
 DEAD 2 G5 C7 1.057 1.000

2  
1  
2  
2

\* LOAD NAME ---  
 OUT NO. -- PLACE --- WEIGHT KVAL OF SHEAR  
 DEAD 2 66 C3 1.057 1.000

\* LOAD NAME ---  
 OUT NO. -- PLACE --- WEIGHT KVAL OF SHEAR  
 DEAD 2 66 C7 1.057 1.000

\* LOAD NAME ---  
 OUT NO. -- PLACE --- WEIGHT KVAL OF SHEAR  
 DEAD 2 67 C3 1.057 1.000

\* LOAD NAME ---  
 OUT NO. -- PLACE --- WEIGHT KVAL OF SHEAR  
 DEAD 2 67 C7 1.057 1.000

\* LOAD NAME ---  
 OUT NO. -- PLACE --- WEIGHT KVAL OF SHEAR  
 DEAD 2 68 C3 1.057 1.000

\* LOAD NAME ---  
 OUT NO. -- PLACE --- WEIGHT KVAL OF SHEAR  
 DEAD 2 68 C7 1.057 1.000

\* LOAD NAME ---  
 OUT NO. -- PLACE --- WEIGHT KVAL OF SHEAR  
 DEAD 2 69 C3 1.057 1.000



\*\* UHURU BRIDGE \*\*

\* LOAD DATA

\* POINT LOAD (T)

LOAD NAME	OUT NO.	PLACE	WEIGHT	KVAL OF SHEAR
DEAD	2	G9 C7	1.057	1.000

LOAD NAME	OUT NO.	PLACE	WEIGHT	KVAL OF SHEAR
DEAD	2	G10 C3	1.057	1.000

LOAD NAME	OUT NO.	PLACE	WEIGHT	KVAL OF SHEAR
DEAD	2	G10 C7	1.057	1.000

LOAD NAME	OUT NO.	PLACE	WEIGHT	KVAL OF SHEAR
DEAD	2	G11 C3	0.529	1.000

LOAD NAME	OUT NO.	PLACE	WEIGHT	KVAL OF SHEAR
DEAD	2	G11 C7	0.529	1.000

\*\* UHUKU BRIDGE \*\*

\* LOAD DATA

\* LINE LOAD ON DIRECTION OF GIRDER (T/M)

* LOAD NAME	OUT NO.	KVAL OF SHEAR	* LOAD NAME	OUT NO.	KVAL OF SHEAR
DEAD	1	1,000	DEAD	1	1,000
	L1			L2	
1 (-)			1 (-)		
(R)	0.843		(R)	0.843	
2 (L)	0.843		2 (L)	0.843	
(R)	0.843		(R)	0.843	
3 (L)	0.843		3 (L)	0.843	
(R)	0.843		(R)	0.843	
4 (L)	0.843		4 (L)	0.843	
(R)	0.843		(R)	0.843	
5 (L)	0.843		5 (L)	0.843	
(R)	0.843		(R)	0.843	
6 (L)	0.843		6 (L)	0.843	
(R)	0.843		(R)	0.843	
7 (L)	0.843		7 (L)	0.843	
(R)	0.843		(R)	0.843	
8 (L)	0.843		8 (L)	0.843	
(R)	0.843		(R)	0.843	
9 (L)	0.843		9 (L)	0.843	
(-)			(-)		

* LOAD NAME	OUT NO.	KVAL OF SHEAR	* LOAD NAME	OUT NO.	KVAL OF SHEAR
DEAD	1	1,000	DEAD	2	1,000
	G0			G1	
1 (-)			1 (-)		
(R)	1.278		(R)	2.877	
2 (L)	1.278		2 (L)	2.877	
(R)	1.278		(R)	2.877	
3 (L)	1.278		3 (L)	2.877	
(R)	1.278		(R)	2.877	
4 (L)	1.278		4 (L)	2.877	
(R)	1.278		(R)	2.877	
5 (L)	1.278		5 (L)	2.877	
(R)	1.278		(R)	2.877	
6 (L)	1.278		6 (L)	2.877	
(R)	1.278		(R)	2.877	
7 (L)	1.278		7 (L)	2.877	
(R)	1.278		(R)	2.877	
8 (L)	1.278		8 (L)	2.877	
(R)	1.278		(R)	2.877	
9 (L)	1.278		9 (L)	2.877	
(-)			(-)		

\* LOAD DATA

\* LINE LOAD ON DIRECTION OF GIRDER (T/M)

* LOAD NAME	DEAD	2	1,000	OUT NO.	KVAL OF SHEAR	* LOAD NAME	DEAD	2	1,000	OUT NO.	KVAL OF SHEAR
1 (-)						1 (-)					
(R)						(R)					
2 (L)						2 (L)					
(R)						(R)					
3 (L)						3 (L)					
(R)						(R)					
4 (L)						4 (L)					
(R)						(R)					
5 (L)						5 (L)					
(R)						(R)					
6 (L)						6 (L)					
(R)						(R)					
7 (L)						7 (L)					
(R)						(R)					
8 (L)						8 (L)					
(R)						(R)					
9 (L)						9 (L)					
(-)						(-)					

2-26

* LOAD NAME	DEAD	2	1,000	OUT NO.	KVAL OF SHEAR	* LOAD NAME	DEAD	2	1,000	OUT NO.	KVAL OF SHEAR
1 (-)						1 (-)					
(R)						(R)					
2 (L)						2 (L)					
(R)						(R)					
3 (L)						3 (L)					
(R)						(R)					
4 (L)						4 (L)					
(R)						(R)					
5 (L)						5 (L)					
(R)						(R)					
6 (L)						6 (L)					
(R)						(R)					
7 (L)						7 (L)					
(R)						(R)					
8 (L)						8 (L)					
(R)						(R)					
9 (L)						9 (L)					
(-)						(-)					

\* LOAD DATA

\* LINE LOAD ON DIRECTION OF GIRDER (T/M)

* LOAD NAME	DEAD	2	1,000	OUT NO.	KVAL OF SHEAR	* LOAD NAME	DEAD	2	1,000	OUT NO.	KVAL OF SHEAR
1 (-)						1 (-)					
(R)						(R)					
2 (L)						2 (L)					
(R)						(R)					
3 (L)						3 (L)					
(R)						(R)					
4 (L)						4 (L)					
(R)						(R)					
5 (L)						5 (L)					
(R)						(R)					
6 (L)						6 (L)					
(R)						(R)					
7 (L)						7 (L)					
(R)						(R)					
8 (L)						8 (L)					
(R)						(R)					
9 (L)						9 (L)					
(R)						(R)					

66

67

2 - 27

* LOAD NAME	DEAD	2	1,000	OUT NO.	KVAL OF SHEAR	* LOAD NAME	DEAD	2	1,000	OUT NO.	KVAL OF SHEAR
1 (-)						1 (-)					
(R)						(R)					
2 (L)						2 (L)					
(R)						(R)					
3 (L)						3 (L)					
(R)						(R)					
4 (L)						4 (L)					
(R)						(R)					
5 (L)						5 (L)					
(R)						(R)					
6 (L)						6 (L)					
(R)						(R)					
7 (L)						7 (L)					
(R)						(R)					
8 (L)						8 (L)					
(R)						(R)					
9 (L)						9 (L)					
(R)						(R)					

68

69

\* LOAD DATA

\* LINE LOAD ON DIRECTION OF GIRDER (T/M)

* LOAD NAME	OUT NO.	KVAL OF SHEAR	* LOAD NAME	DEAD	OUT NO.	KVAL OF SHEAR
1(-)	2,496	1,000	1(-)	2,496	2,877	1,000
(R)	2,496	1,000	(R)	2,496	2,877	1,000
2(L)	2,496	1,000	2(L)	2,496	2,877	1,000
(R)	2,496	1,000	(R)	2,496	2,877	1,000
3(L)	2,496	1,000	3(L)	2,496	2,877	1,000
(R)	2,496	1,000	(R)	2,496	2,877	1,000
4(L)	2,496	1,000	4(L)	2,496	2,877	1,000
(R)	2,496	1,000	(R)	2,496	2,877	1,000
5(L)	2,496	1,000	5(L)	2,496	2,877	1,000
(R)	2,496	1,000	(R)	2,496	2,877	1,000
6(L)	2,496	1,000	6(L)	2,496	2,877	1,000
(R)	2,496	1,000	(R)	2,496	2,877	1,000
7(L)	2,496	1,000	7(L)	2,496	2,877	1,000
(R)	2,496	1,000	(R)	2,496	2,877	1,000
8(L)	2,496	1,000	8(L)	2,496	2,877	1,000
(R)	2,496	1,000	(R)	2,496	2,877	1,000
9(L)	2,496	1,000	9(L)	2,496	2,877	1,000
(-)			(-)			

\*\* UBURU BRIDGE \*\*

\* LOAD DATA

\* LINE LOAD ON CROSS BEAM (T/M)

* LOAD NAME	OUT NO.	PLACE	WEIGHT	WIDTH OF MAIN LOAD
HA1	3	L3 L6 C1 - C5	3.887	6.300

* LOAD NAME	OUT NO.	PLACE	WEIGHT	WIDTH OF MAIN LOAD
HA2	4	L3 L6 C1 - C9	3.887	6.300

* LOAD NAME	OUT NO.	PLACE	WEIGHT	KVAL OF SHEAR
HB1	10	L11 L12 C3	3.887	1.000

* LOAD NAME	OUT NO.	PLACE	WEIGHT	KVAL OF SHEAR
HB1	10	L12 L13 C3	1.296	1.000

* LOAD NAME	OUT NO.	PLACE	WEIGHT	KVAL OF SHEAR
HB1	10	L14 L6 C3	1.296	1.000

* LOAD NAME	OUT NO.	PLACE	WEIGHT	KVAL OF SHEAR
HB2	11	L11 L12 C3	3.887	1.000

* LOAD NAME	OUT NO.	PLACE	WEIGHT	KVAL OF SHEAR
HB2	11	L12 L13 C3	1.296	1.000

* LOAD NAME	OUT NO.	PLACE	WEIGHT	KVAL OF SHEAR
HB2	11	L14 L6 C3	1.296	1.000

20

\* LOAD DATA

\* UNIF LOAD (T/M\*2)

* LOAD NAME	DEAD	LIVE	HAZ	OUT NO.	KVAL OF SHEAR	* LOAD NAME	DEAD	LIVE	HAZ	OUT NO.	KVAL OF SHEAR
1(-)						1(-)					
(R)						(R)					
2(L)						2(L)					
(R)						(R)					
3(L)						3(L)					
(R)						(R)					
4(L)						4(L)					
(R)						(R)					
5(L)						5(L)					
(R)						(R)					
6(L)						6(L)					
(R)						(R)					
7(L)						7(L)					
(R)						(R)					
8(L)						8(L)					
(R)						(R)					
9(L)						9(L)					
(-)						(-)					

2

1

30

* LOAD NAME	DEAD	LIVE	HAZ	OUT NO.	KVAL OF SHEAR	* LOAD NAME	DEAD	LIVE	HAZ	OUT NO.	KVAL OF SHEAR
1(-)						1(-)					
(R)						(R)					
2(L)						2(L)					
(R)						(R)					
3(L)						3(L)					
(R)						(R)					
4(L)						4(L)					
(R)						(R)					
5(L)						5(L)					
(R)						(R)					
6(L)						6(L)					
(R)						(R)					
7(L)						7(L)					
(R)						(R)					
8(L)						8(L)					
(R)						(R)					
9(L)						9(L)					
(-)						(-)					

\*\* UNHURU BRIDGE \*\*

\* LOAD DATA

\* UNJF LOAD (T/M\*2)

* LOAD NAME ---	OUT NO.	KVAL OF SHEAR	* LOAD NAME ---	DEAD	10	HBT	DEAD	10	OUT NO.	KVAL OF SHEAR
HBT		1.000								1.000
	L11	L12							L11	L12
1(-)			1(-)							
(R)	1.020	1.020	(R)	0.340	0.340				0.340	0.340
2(L)	1.020	1.020	2(L)	0.340	0.340				0.340	0.340
(R)	1.020	1.020	(R)	0.340	0.340				0.340	0.340
3(L)	1.020	1.020	3(L)	0.340	0.340				0.340	0.340
(R)	1.020	1.020	(R)	0.340	0.340				0.340	0.340
4(L)	1.020	1.020	4(L)	0.340	0.340				0.340	0.340
(R)	1.020	1.020	(R)	0.340	0.340				0.340	0.340
5(L)	1.020	1.020	5(L)	0.340	0.340				0.340	0.340
(R)			(R)							
6(L)			6(L)							
(R)			(R)							
7(L)			7(L)							
(R)			(R)							
8(L)			8(L)							
(R)			(R)							
9(L)			9(L)							
(-)			(-)							

* LOAD NAME ---	OUT NO.	KVAL OF SHEAR	* LOAD NAME ---	DEAD	10	HBT	DEAD	11	OUT NO.	KVAL OF SHEAR
HBT		1.000								1.000
	L14	L6							L11	L12
1(-)			1(-)							
(R)	0.340	0.340	(R)	0.868	0.868				0.868	0.868
2(L)	0.340	0.340	2(L)	0.868	0.868				0.868	0.868
(R)	0.340	0.340	(R)	0.868	0.868				0.868	0.868
3(L)	0.340	0.340	3(L)	0.868	0.868				0.868	0.868
(R)	0.340	0.340	(R)	0.868	0.868				0.868	0.868
4(L)	0.340	0.340	4(L)	0.868	0.868				0.868	0.868
(R)	0.340	0.340	(R)	0.868	0.868				0.868	0.868
5(L)	0.340	0.340	5(L)	0.868	0.868				0.868	0.868
(R)			(R)	0.868	0.868				0.868	0.868
6(L)			6(L)	0.868	0.868				0.868	0.868
(R)			(R)	0.868	0.868				0.868	0.868
7(L)			7(L)	0.868	0.868				0.868	0.868
(R)			(R)	0.868	0.868				0.868	0.868
8(L)			8(L)	0.868	0.868				0.868	0.868
(R)			(R)	0.868	0.868				0.868	0.868
9(L)			9(L)	0.868	0.868				0.868	0.868
(-)			(-)							

2 - 31



\*\* UNURU BRIDGE \*\*

\* LOAD DATA

\* UNIF LOAD (T/M\*2)

* LOAD NAME	DEAD	OUT NO.	KVAL OF SHEAR	* LOAD NAME	DEAD	OUT NO.	KVAL OF SHEAR
HB2	11	11	1.000	HB2	11	11	1.000
		L12	L13		L14	L6	
1(-)	0.289	0.289	0.289	1(-)	0.289	0.289	0.289
(R)	0.289	0.289	0.289	(R)	0.289	0.289	0.289
2(L)	0.289	0.289	0.289	2(L)	0.289	0.289	0.289
(R)	0.289	0.289	0.289	(R)	0.289	0.289	0.289
3(L)	0.289	0.289	0.289	3(L)	0.289	0.289	0.289
(R)	0.289	0.289	0.289	(R)	0.289	0.289	0.289
4(L)	0.289	0.289	0.289	4(L)	0.289	0.289	0.289
(R)	0.289	0.289	0.289	(R)	0.289	0.289	0.289
5(L)	0.289	0.289	0.289	5(L)	0.289	0.289	0.289
(R)	0.289	0.289	0.289	(R)	0.289	0.289	0.289
6(L)	0.289	0.289	0.289	6(L)	0.289	0.289	0.289
(R)	0.289	0.289	0.289	(R)	0.289	0.289	0.289
7(L)	0.289	0.289	0.289	7(L)	0.289	0.289	0.289
(R)	0.289	0.289	0.289	(R)	0.289	0.289	0.289
8(L)	0.289	0.289	0.289	8(L)	0.289	0.289	0.289
(R)	0.289	0.289	0.289	(R)	0.289	0.289	0.289
9(L)	0.289	0.289	0.289	9(L)	0.289	0.289	0.289
(-)				(-)			

\*\* UHURU BRIDGE \*\*

\* LOAD DATA

\* IRASK LOAD

* LOAD NAME	OUT NO.	PLACE	DIRECTION
(L= 6) LIVE	5	L7 C1 - C9	LEFT TO RIGHT
JIKU	NO. 1	NO. 2 NO. 3	NO. 4
UNIT	1- 1	1- 2 1- 3	1- 4
WEIGHT (T)	7.653	7.653 7.653	7.653
WIDTH (M)	1.800	6.000	1.800

DIRECT LOAD MAXOPT=1

* LOAD NAME	OUT NO.	PLACE	DIRECTION
(L= 6) LIVE	5	L8 C1 - C9	LEFT TO RIGHT
JIKU	NO. 1	NO. 2 NO. 3	NO. 4
UNIT	1- 1	1- 2 1- 3	1- 4
WEIGHT (T)	7.653	7.653 7.653	7.653
WIDTH (M)	1.800	6.000	1.800

DIRECT LOAD MAXOPT=1

* LOAD NAME	OUT NO.	PLACE	DIRECTION
(L= 6) LIVE	5	L9 C1 - C9	LEFT TO RIGHT
JIKU	NO. 1	NO. 2 NO. 3	NO. 4
UNIT	1- 1	1- 2 1- 3	1- 4
WEIGHT (T)	7.653	7.653 7.653	7.653
WIDTH (M)	1.800	6.000	1.800

DIRECT LOAD MAXOPT=1

* LOAD NAME	OUT NO.	PLACE	DIRECTION
(L= 6) LIVE	5	L10 C1 - C9	LEFT TO RIGHT

DIRECT LOAD MAXOPT=1

2  
3  
3

\* LOAD DATA

\* TRACK LOAD

JIKU	NO. 1	NO. 2	NO. 3	NO. 4
UNIT	1- 1	1- 2	1- 3	1- 4
WEIGHT (T)	7.653	7.653	7.653	7.653
WIDTH (M)	1.800	6.000	1.800	

\* LOAD NAME --- PLACE --- DIRECTION

(L=11) LIVE 6 L7 C1 - C9 LEFT TO RIGHT DIRECT LOAD MAXOPT=1

JIKU	NO. 1	NO. 2	NO. 3	NO. 4
UNIT	1- 1	1- 2	1- 3	1- 4
WEIGHT (T)	7.653	7.653	7.653	7.653
WIDTH (M)	1.800	11.000	1.800	

\* LOAD NAME --- PLACE --- DIRECTION

(L=11) LIVE 6 L8 C1 - C9 LEFT TO RIGHT DIRECT LOAD MAXOPT=1

JIKU	NO. 1	NO. 2	NO. 3	NO. 4
UNIT	1- 1	1- 2	1- 3	1- 4
WEIGHT (T)	7.653	7.653	7.653	7.653
WIDTH (M)	1.800	11.000	1.800	

\* LOAD NAME --- PLACE --- DIRECTION

(L=11) LIVE 6 L9 C1 - C9 LEFT TO RIGHT DIRECT LOAD MAXOPT=1

JIKU	NO. 1	NO. 2	NO. 3	NO. 4
UNIT	1- 1	1- 2	1- 3	1- 4
WEIGHT (T)	7.653	7.653	7.653	7.653
WIDTH (M)	1.800	11.000	1.800	

\* LOAD NAME --- PLACE --- DIRECTION

(L=11) LIVE 6 L10 C1 - C9 LEFT TO RIGHT DIRECT LOAD MAXOPT=1

\*\* UHUKU BRIDGE \*\*

\* LOAD DATA

\* TRUCK LOAD

JIKU NO. 1 NO. 2 NO. 3 NO. 4  
 UNIT 1-1 1-2 1-3 1-4  
 WEIGHT (T) 7.653 7.653 7.653 7.653  
 WIDTH (M) 1.800 11.000 1.800

\* LOAD NAME --- OUT NO. --- PLACE --- DIRECTION

(L=16) LIVE 7 L7 C1 - C9 LEFT TO RIGHT DIRECT LOAD MAXOPT=1

JIKU NO. 1 NO. 2 NO. 3 NO. 4  
 UNIT 1-1 1-2 1-3 1-4

WEIGHT (T) 7.653 7.653 7.653 7.653  
 WIDTH (M) 1.800 16.000 1.800

\* LOAD NAME --- OUT NO. --- PLACE --- DIRECTION

(L=16) LIVE 7 L8 C1 - C9 LEFT TO RIGHT DIRECT LOAD MAXOPT=1

JIKU NO. 1 NO. 2 NO. 3 NO. 4  
 UNIT 1-1 1-2 1-3 1-4

WEIGHT (T) 7.653 7.653 7.653 7.653  
 WIDTH (M) 1.800 16.000 1.800

\* LOAD NAME --- OUT NO. --- PLACE --- DIRECTION

(L=16) LIVE 7 L9 C1 - C9 LEFT TO RIGHT DIRECT LOAD MAXOPT=1

JIKU NO. 1 NO. 2 NO. 3 NO. 4  
 UNIT 1-1 1-2 1-3 1-4

WEIGHT (T) 7.653 7.653 7.653 7.653  
 WIDTH (M) 1.800 16.000 1.800

\* LOAD NAME --- OUT NO. --- PLACE --- DIRECTION

(L=16) LIVE 7 LTD C1 - C9 LEFT TO RIGHT DIRECT LOAD MAXOPT=1

\* LOAD DATA

\* TRACK LOAD

JIKU NO. 1 NO. 2 NO. 3 NO. 4  
 UNIT 1-1 1-2 1-3 1-4  
 WEIGHT (T) 7.653 7.653 7.653 7.653  
 WIDTH (M) 1.800 16.000 1.800

\* LOAD NAME --- PLACE --- DIRECTION  
 OUT NO. ---

(L=21) LIVE 8 L7 C1 - C9 LEFT TO RIGHT DIRECT LOAD MAXOPT=1

JIKU NO. 1 NO. 2 NO. 3 NO. 4  
 UNIT 1-1 1-2 1-3 1-4

WEIGHT (T) 7.653 7.653 7.653 7.653  
 WIDTH (M) 1.800 21.000 1.800

\* LOAD NAME --- PLACE --- DIRECTION  
 OUT NO. ---

(L=21) LIVE 8 L8 C1 - C9 LEFT TO RIGHT DIRECT LOAD MAXOPT=1

JIKU NO. 1 NO. 2 NO. 3 NO. 4  
 UNIT 1-1 1-2 1-3 1-4

WEIGHT (T) 7.653 7.653 7.653 7.653  
 WIDTH (M) 1.800 21.000 1.800

\* LOAD NAME --- PLACE --- DIRECTION  
 OUT NO. ---

(L=21) LIVE 8 L9 C1 - C9 LEFT TO RIGHT DIRECT LOAD MAXOPT=1

JIKU NO. 1 NO. 2 NO. 3 NO. 4  
 UNIT 1-1 1-2 1-3 1-4

WEIGHT (T) 7.653 7.653 7.653 7.653  
 WIDTH (M) 1.800 21.000 1.800

\* LOAD NAME --- PLACE --- DIRECTION  
 OUT NO. ---

(L=21) LIVE 8 L10 C1 - C9 LEFT TO RIGHT DIRECT LOAD MAXOPT=1

\* LOAD DATA

\* TRACK LOAD

JIKU NO. 1 NO. 2 NO. 3 NO. 4  
 UNIT 1- 1 1- 2 1- 3 1- 4  
 WEIGHT (T) 7.653 7.653 7.653 7.653  
 WIDTH (M) 1.800 21.800 1.800

\* LOAD NAME --- PLACE --- DIRECTION

(L=26) LIVE 9 L7 C1 - C9 LEFT TO RIGHT DIRECT LOAD MAXOPT=1  
 JIKU NO. 1 NO. 2 NO. 3 NO. 4  
 UNIT 1- 1 1- 2 1- 3 1- 4  
 WEIGHT (T) 7.653 7.653 7.653 7.653  
 WIDTH (M) 1.800 26.000 1.800

2  
1  
37

OUT

\* LOAD NAME --- PLACE --- DIRECTION

(L=26) LIVE 9 L8 C1 - C9 LEFT TO RIGHT DIRECT LOAD MAXOPT=1  
 JIKU NO. 1 NO. 2 NO. 3 NO. 4  
 UNIT 1- 1 1- 2 1- 3 1- 4  
 WEIGHT (T) 7.653 7.653 7.653 7.653  
 WIDTH (M) 1.800 26.000 1.800

OUT

\* LOAD NAME --- PLACE --- DIRECTION

(L=26) LIVE 9 L9 C1 - C9 LEFT TO RIGHT DIRECT LOAD MAXOPT=1  
 JIKU NO. 1 NO. 2 NO. 3 NO. 4  
 UNIT 1- 1 1- 2 1- 3 1- 4  
 WEIGHT (T) 7.653 7.653 7.653 7.653  
 WIDTH (M) 1.800 26.000 1.800

LOAD DATA

\* TRACK LOAD

\* LOAD NAME --- OUT. NO. --- PLACE --- DIRECTION

(L=26) LIVE 9 L10 C1 - C9 LEFT TO RIGHT DIRECT LOAD MAXOPT=1

JIKU NO. 1 NO. 2 NO. 3 NO. 4

UNIT 1- 1 1- 2 1- 3 1- 4

WEIGHT (T) 7.653 7.653 7.653 7.653

WIDTH (M) 1.800 26.000 1.800

COMPOUND LOAD CASE = 10

LOAD NAME NS FC ( 2 C1 FC1) CONTROL BIT ( G: GRIDD, F: FRAMEZ, P: PICKUP TABLE FOR FRAMEZ )

12	I(L=6) + HB1	2	1.0000	G	5	1.0000	G	10	1.0000
13	I(L=11) + HB1	2	1.0000	G	6	1.0000	G	10	1.0000
14	I(L=16) + HB1	2	1.0000	G	7	1.0000	G	10	1.0000
15	I(L=21) + HB1	2	1.0000	G	8	1.0000	G	10	1.0000
16	I(L=26) + HB1	2	1.0000	G	9	1.0000	G	10	1.0000
17	I(L=6) + HB2	2	1.0000	G	5	1.0000	G	11	1.0000
18	I(L=11) + HB2	2	1.0000	G	6	1.0000	G	11	1.0000
19	I(L=16) + HB2	2	1.0000	G	7	1.0000	G	11	1.0000
20	I(L=21) + HB2	2	1.0000	G	8	1.0000	G	11	1.0000
21	I(L=26) + HB2	2	1.0000	G	9	1.0000	G	11	1.0000



PICKUP TABLE CASE # 4

PICKUP TABLE NO. 1

12 13 14 15 16

PICKUP TABLE NO. 2

17 18 19 20 21

PICKUP TABLE NO. 3

3 12 13 14 15 16

PICKUP TABLE NO. 4

4 17 18 19 20 21

NO.	LOAD NAME	D-Z (MM) 1	D-Z (MM) 2	D-Z (MM) 3	D-Z (MM) 4	D-Z (MM) 5	D-Z (MM) 6	D-Z (MM) 7
1		0.000	0.000	0.000	0.000	0.000	0.000	0.000
2		0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	HA1	(+)	0.000	0.000	0.000	0.000	0.000	0.000
4	HA2	(+)	0.000	0.000	0.000	0.000	0.000	0.000
5	(L=6)	(+)	0.000	0.000	0.000	0.000	0.000	0.000
6	(L=11)	(+)	0.000	0.000	0.000	0.000	0.000	0.000
7	(L=16)	(+)	0.000	0.000	0.000	0.000	0.000	0.000
8	(L=21)	(+)	0.000	0.000	0.000	0.000	0.000	0.000
9	(L=26)	(+)	0.000	0.000	0.000	0.000	0.000	0.000
10	HB1	(+)	0.000	0.000	0.000	0.000	0.000	0.000
11	HB2	(+)	0.000	0.000	0.000	0.000	0.000	0.000
12	T(L=6) + HB1	(+)	0.000	0.000	0.000	0.000	0.000	0.000
13	T(L=11) + HB1	(+)	0.000	0.000	0.000	0.000	0.000	0.000
14	T(L=16) + HB1	(+)	0.000	0.000	0.000	0.000	0.000	0.000
15	T(L=21) + HB1	(+)	0.000	0.000	0.000	0.000	0.000	0.000
16	T(L=26) + HB1	(+)	0.000	0.000	0.000	0.000	0.000	0.000
17	T(L=6) + HB2	(+)	0.000	0.000	0.000	0.000	0.000	0.000
18	T(L=11) + HB2	(+)	0.000	0.000	0.000	0.000	0.000	0.000
19	T(L=16) + HB2	(+)	0.000	0.000	0.000	0.000	0.000	0.000
20	T(L=21) + HB2	(+)	0.000	0.000	0.000	0.000	0.000	0.000
21	T(L=26) + HB2	(+)	0.000	0.000	0.000	0.000	0.000	0.000

NO.	LOAD NAME	D-Z (MM) 8	D-Z (MM) 9	D-Z (MM) 10	D-Z (MM) 11	D-Z (MM) 12	D-Z (MM) 13	D-Z (MM) 14
1		0.000	0.000	0.000	0.000	1.554	0.823	0.691
2		0.000	0.000	0.000	0.000	4.689	4.560	4.493
3	HA1	0.000	0.000	0.000	0.000	7.077	6.207	5.539
4	HA2	0.000	0.000	0.000	0.000	-0.689	-0.345	-0.260
5	(L=6)	0.000	0.000	0.000	0.000	6.758	5.858	5.199
6	(L=11)	0.000	0.000	0.000	0.000	-2.870	-2.293	-1.955
7	(L=16)	0.000	0.000	0.000	0.000	9.946	7.143	4.223
8	(L=21)	0.000	0.000	0.000	0.000	-3.227	-2.494	-1.822
9	(L=26)	0.000	0.000	0.000	0.000	6.778	5.034	2.712
10	HB1	0.000	0.000	0.000	0.000	-2.089	-1.613	-1.163
11	HB2	0.000	0.000	0.000	0.000	6.643	4.913	2.683
12	T(L=6) + HB1	0.000	0.000	0.000	0.000	-1.941	-1.527	-1.089
13	T(L=11) + HB1	0.000	0.000	0.000	0.000	6.643	4.913	2.683
14	T(L=16) + HB1	0.000	0.000	0.000	0.000	-1.941	-1.527	-1.089
15	T(L=21) + HB1	0.000	0.000	0.000	0.000	1.510	2.166	2.867
16	T(L=26) + HB1	0.000	0.000	0.000	0.000	0.843	1.380	1.975
17	T(L=6) + HB2	0.000	0.000	0.000	0.000	11.457	9.310	7.090
18	T(L=11) + HB2	0.000	0.000	0.000	0.000	-1.717	-0.328	1.044
19	T(L=16) + HB2	0.000	0.000	0.000	0.000	8.288	7.200	5.578
20	T(L=21) + HB2	0.000	0.000	0.000	0.000	-0.579	0.533	1.704
21	T(L=26) + HB2	0.000	0.000	0.000	0.000	8.154	7.080	5.549
		0.000	0.000	0.000	0.000	-0.430	0.639	1.778
		0.000	0.000	0.000	0.000	8.154	7.080	5.549
		0.000	0.000	0.000	0.000	-0.430	0.639	1.778
		0.000	0.000	0.000	0.000	10.790	8.524	6.198
		0.000	0.000	0.000	0.000	-2.384	-1.114	0.153
		0.000	0.000	0.000	0.000	7.621	6.414	4.687
		0.000	0.000	0.000	0.000	-1.246	-0.233	0.812
		0.000	0.000	0.000	0.000	7.487	6.294	4.658
		0.000	0.000	0.000	0.000	-1.097	-0.147	0.886
		0.000	0.000	0.000	0.000	7.487	6.294	4.658
		0.000	0.000	0.000	0.000	-1.097	-0.147	0.886
		0.000	0.000	0.000	0.000	7.487	6.294	4.658
		0.000	0.000	0.000	0.000	-1.097	-0.147	0.886

NO.	LOAD NAME	D-Z (MM) 15	D-Z (MM) 16	D-Z (MM) 17	D-Z (MM) 18	D-Z (MM) 19	D-Z (MM) 20	D-Z (MM) 21
1		0.613	0.632	0.868	0.633	0.619	0.699	0.833
2		4.463	4.483	4.449	4.492	4.497	4.532	4.605
3	HA1 (+)	5.318	5.382	5.371	5.389	5.356	5.581	6.254
4	HA2 (-)	-0.233	-0.195	-0.202	-0.197	-0.206	-0.235	-0.345
5	(L=6) (+)	4.970	4.998	4.962	5.005	5.006	5.238	5.902
6	(L=11) (+)	-1.731	-1.690	-1.686	-1.690	-1.741	-1.961	-2.297
7	(L=16) (-)	2.218	0.939	0.364	0.201	0.195	0.254	0.283
8	(L=21) (+)	-1.185	-0.653	-0.440	-0.432	-0.431	-0.430	-0.373
9	(L=26) (-)	1.367	0.577	0.231	0.133	0.125	0.157	0.172
10	HB1 (+)	-0.755	-0.411	-0.282	-0.273	-0.268	-0.263	-0.226
11	HB2 (-)	1.365	0.581	0.231	0.128	0.118	0.150	0.167
12	T(L=6) + HB1 (+)	-0.710	-0.408	-0.298	-0.281	-0.273	-0.263	-0.226
13	T(L=11) + HB1 (-)	1.365	0.581	0.231	0.128	0.118	0.150	0.167
14	T(L=16) + HB1 (+)	-0.710	-0.408	-0.298	-0.281	-0.273	-0.263	-0.226
15	T(L=21) + HB1 (-)	1.365	0.581	0.231	0.128	0.118	0.150	0.167
16	T(L=26) + HB1 (+)	-0.710	-0.408	-0.298	-0.281	-0.273	-0.263	-0.226
17	T(L=6) + HB2 (-)	2.942	2.774	2.519	2.442	2.340	2.264	2.198
18	T(L=11) + HB2 (+)	2.003	1.824	1.596	1.545	1.481	1.441	1.410
19	T(L=16) + HB2 (-)	5.150	3.714	2.882	2.642	2.535	2.517	2.481
20	T(L=21) + HB2 (+)	1.757	2.122	2.078	2.010	1.908	1.834	1.825
21	T(L=26) + HB2 (-)	4.308	3.352	2.749	2.574	2.465	2.420	2.370
22	T(L=6) + HB1 (+)	2.187	2.265	2.236	2.169	2.072	2.000	1.972
23	T(L=11) + HB1 (-)	4.307	3.355	2.750	2.570	2.458	2.414	2.366
24	T(L=16) + HB1 (+)	2.231	2.314	2.327	2.162	2.068	2.000	1.973
25	T(L=21) + HB1 (-)	4.307	3.355	2.750	2.570	2.458	2.414	2.366
26	T(L=26) + HB1 (+)	2.231	2.314	2.327	2.162	2.068	2.000	1.973
27	T(L=6) + HB2 (-)	4.221	2.764	1.960	1.746	1.676	1.695	1.693
28	T(L=11) + HB2 (+)	0.817	1.172	1.156	1.113	1.049	1.012	1.037
29	T(L=16) + HB2 (-)	3.569	2.702	1.826	1.678	1.606	1.598	1.582
30	T(L=21) + HB2 (+)	1.247	1.413	1.314	1.272	1.213	1.178	1.184
31	T(L=26) + HB2 (-)	3.568	2.405	1.827	1.673	1.599	1.592	1.577
32	T(L=6) + HB1 (+)	1.292	1.424	1.304	1.266	1.209	1.178	1.184
33	T(L=11) + HB1 (-)	3.568	2.405	1.827	1.673	1.599	1.592	1.577
34	T(L=16) + HB1 (+)	1.292	1.424	1.297	1.264	1.208	1.178	1.184
35	T(L=21) + HB1 (-)	3.568	2.405	1.827	1.673	1.599	1.592	1.577
36	T(L=26) + HB1 (+)	1.292	1.422	1.317	1.274	1.209	1.178	1.184

NO.	LOAD NAME	D-Z (MM) 22	D-Z (MM) 23	D-Z (MM) 24	D-Z (MM) 25	D-Z (MM) 26	D-Z (MM) 27	D-Z (MM) 28
1		1.585	1.309	0.913	0.670	0.588	0.608	0.639
2		4.776	4.321	4.255	4.204	4.173	4.159	4.158
3	HA1	7.168	8.072	6.993	6.028	5.735	5.762	5.796
4	HA2	-0.687	-0.837	-0.427	-0.319	-0.284	-0.230	-0.232
5	(L=6)	6.841	7.761	6.628	5.677	5.375	5.358	5.354
6	(L=11)	-2.871	-3.377	-2.877	-2.877	-2.575	-2.529	-2.533
7	(L=16)	0.294	10.824	7.786	4.992	2.738	1.159	0.473
8	(L=21)	-0.295	-4.994	-3.786	-2.648	-1.658	-0.872	-0.554
9	(L=26)	0.179	6.698	4.809	3.073	1.678	0.715	0.297
10	HB1	-0.179	-3.259	-2.475	-1.674	-1.031	-0.535	-0.352
11	HB2	0.176	6.698	4.809	3.073	1.676	0.716	0.295
12	T(L=6) + HB1	-0.177	-3.015	-2.249	-1.562	-0.977	-0.522	-0.361
13	T(L=11) + HB1	0.176	6.698	4.809	3.073	1.676	0.716	0.295
14	T(L=16) + HB1	-0.177	-3.015	-2.249	-1.562	-0.977	-0.522	-0.361
15	T(L=21) + HB1	0.176	6.698	4.809	3.073	1.676	0.716	0.295
16	T(L=26) + HB1	-0.177	-3.015	-2.249	-1.562	-0.977	-0.522	-0.361
17	T(L=6) + HB2	2.155	1.845	2.566	3.118	3.321	3.225	3.016
18	T(L=11) + HB2	1.400	0.942	1.477	1.880	2.007	1.906	1.733
19	T(L=16) + HB2	2.449	12.670	10.351	8.110	6.059	4.354	3.489
20	T(L=21) + HB2	1.860	-1.221	-1.221	0.470	1.663	2.323	2.462
21	T(L=26) + HB2	2.334	8.544	7.375	6.191	4.999	3.940	3.313
22		1.976	-1.413	0.091	1.445	2.290	2.689	2.664
23		2.331	8.544	7.375	6.191	4.997	3.941	3.311
24		1.979	-1.169	0.316	1.556	2.344	2.703	2.655
25		2.331	8.544	7.375	6.191	4.997	3.941	3.311
26		1.979	-1.169	0.316	1.556	2.344	2.694	2.651
27		1.694	11.766	9.263	6.872	4.745	2.699	2.671
28		1.105	-4.052	-2.309	-0.768	0.349	1.034	2.207
29		1.578	7.641	6.286	4.953	3.685	2.621	1.179
30		1.221	-2.316	-0.998	0.207	0.976	1.370	2.030
31		1.576	7.641	6.286	4.953	3.683	2.622	1.382
32		1.223	-2.072	-0.772	0.318	1.030	1.384	2.029
33		1.576	7.641	6.286	4.953	3.683	2.622	1.372
34		1.223	-2.072	-0.772	0.318	1.030	1.375	2.029
35		1.576	7.641	6.286	4.953	3.683	2.622	1.369
36		1.223	-2.072	-0.772	0.318	1.030	2.622	2.029
37		1.223	-2.072	-0.772	0.318	1.030	1.380	1.388

NO.	LOAD NAME	D-Z (MM) 29	D-Z (MM) 30	D-Z (MM) 31	D-Z (MM) 32	D-Z (MM) 33	D-Z (MM) 34	D-Z (MM) 35
1		0.609	0.592	0.676	0.921	1.320	0.595	0.335
2		4.168	4.191	4.229	4.286	4.356	1.826	1.793
3	HA1 (+)	5.773	5.756	6.055	7.019	8.092	5.642	4.889
4	HA2 (+)	-0.232	-0.235	-0.320	-0.425	-0.527	-0.577	-0.303
5	(L=6) (+)	5.369	5.395	5.702	6.651	7.775	5.483	4.660
6	(L=11) (+)	-2.534	-2.586	-2.887	-3.383	-4.142	-3.998	-3.319
7	(L=16) (+)	0.283	0.279	0.348	0.375	0.376	7.854	5.667
8	(L=21) (+)	-0.524	-0.526	-0.531	-0.468	-0.377	-5.279	-3.879
9	(L=26) (+)	0.182	0.173	0.214	0.228	0.228	5.158	3.855
10	HB1 (-)	-0.328	-0.324	-0.324	-0.283	-0.228	-3.460	-2.540
11	HB2 (-)	0.173	0.165	0.206	0.222	0.225	4.919	3.735
12	T(L=6) + HB1 (+)	-0.335	-0.327	-0.324	-0.282	-0.225	-3.278	-2.433
13	T(L=11) + HB1 (+)	0.173	0.165	0.206	0.222	0.225	4.919	3.735
14	T(L=16) + HB1 (+)	-0.337	-0.329	-0.324	-0.282	-0.225	-3.278	-2.433
15	T(L=21) + HB1 (+)	0.327	0.327	0.324	0.282	0.225	4.919	3.735
16	T(L=26) + HB1 (+)	-0.327	-0.327	-0.324	-0.282	-0.225	-3.278	-2.433
17	T(L=6) + HB2 (+)	2.839	2.714	2.620	2.540	2.464	1.290	1.763
18	T(L=11) + HB2 (+)	1.606	1.531	1.487	1.454	1.424	0.508	0.772
19	T(L=16) + HB2 (+)	3.122	2.992	2.968	2.914	2.840	9.143	7.431
20	T(L=21) + HB2 (+)	2.315	2.188	2.088	2.072	2.088	-3.989	-2.116
21	T(L=26) + HB2 (+)	3.021	2.866	2.834	2.767	2.692	6.448	5.619
22	T(L=6) + HB1 (+)	2.511	2.390	2.296	2.256	2.236	-2.170	-0.777
23	T(L=11) + HB1 (+)	3.012	2.879	2.826	2.761	2.689	6.209	5.499
24	T(L=16) + HB1 (+)	2.504	2.386	2.296	2.257	2.239	-1.989	-0.669
25	T(L=21) + HB1 (+)	3.012	2.879	2.826	2.761	2.689	6.209	5.499
26	T(L=26) + HB1 (+)	2.502	2.384	2.296	2.257	2.239	-1.989	-0.669
27	T(L=6) + HB2 (+)	3.012	2.875	2.826	2.761	2.689	6.209	5.499
28	T(L=11) + HB2 (+)	1.889	1.810	1.835	1.829	1.800	8.362	6.439
29	T(L=16) + HB2 (+)	1.082	1.006	0.955	0.986	1.048	-4.771	-3.107
30	T(L=21) + HB2 (+)	1.788	1.704	1.701	1.682	1.652	5.666	4.627
31	T(L=26) + HB2 (+)	1.277	1.207	1.163	1.170	1.196	-2.952	-1.768
32	T(L=6) + HB1 (+)	1.779	1.696	1.693	1.676	1.649	5.427	4.507
33	T(L=11) + HB1 (+)	1.271	1.204	1.163	1.171	1.199	-2.770	-1.661
34	T(L=16) + HB1 (+)	1.779	1.696	1.693	1.676	1.649	5.427	4.507
35	T(L=21) + HB1 (+)	1.269	1.202	1.163	1.171	1.199	-2.770	-1.661
36	T(L=26) + HB1 (+)	1.779	1.696	1.693	1.676	1.649	5.427	4.507
37	T(L=6) + HB2 (+)	1.279	1.204	1.163	1.171	1.199	-2.770	-1.661

NO.	LOAD NAME	D-Z (MM) 36	D-Z (MM) 37	D-Z (MM) 38	0-Z (MM) 39	D-Z (MM) 40	D-Z (MM) 41	D-Z (MM) 42
1		0.275	0.244	0.249	0.331	0.250	0.245	0.278
2		1.780	1.770	1.756	1.763	1.759	1.773	1.791
3	HAT1 (+)	4.339	4.129	4.120	4.155	4.145	4.141	4.378
4	HAT2 (-)	-0.222	-0.193	-0.146	-0.136	-0.148	-0.194	-0.224
5	(L=6) (+)	4.104	3.889	3.867	3.856	3.872	3.901	4.141
6	(L=11) (-)	-2.887	-2.670	-2.631	-2.631	-2.641	-2.680	-2.913
7	(L=16) (+)	3.501	1.918	0.839	0.375	0.263	0.261	0.307
8	(L=21) (-)	-2.543	-1.500	-0.731	-0.407	-0.356	-0.359	-0.378
9	(L=26) (+)	2.178	0.510	0.510	0.229	0.160	0.160	0.187
10	HBT1 (+)	1.586	-0.912	-0.445	-0.252	-0.218	-0.218	-0.228
11	HBT2 (-)	2.130	1.158	0.508	0.225	0.156	0.155	0.182
12	T(L=6) + HBT1 (+)	-1.520	-0.887	-0.435	-0.255	-0.220	-0.218	-0.228
13	T(L=11) + HBT1 (+)	2.130	1.158	0.508	0.225	0.156	0.155	0.182
14	T(L=16) + HBT1 (+)	-1.520	-0.887	-0.435	-0.255	-0.220	-0.218	-0.228
15	T(L=21) + HBT1 (+)	2.260	2.345	2.222	2.068	1.991	1.848	1.621
16	T(L=26) + HBT1 (+)	1.036	1.074	0.996	0.903	0.858	0.825	0.801
17	T(L=6) + HBT2 (-)	5.762	4.262	3.061	2.443	2.254	2.174	2.156
18	T(L=11) + HBT2 (-)	-0.283	0.845	1.491	1.660	1.634	1.554	1.471
19	T(L=16) + HBT2 (-)	4.439	3.506	2.732	2.297	2.151	2.073	2.035
20	T(L=21) + HBT2 (-)	0.674	1.433	1.777	1.815	1.772	1.695	1.620
21	T(L=26) + HBT2 (-)	4.390	3.503	2.730	2.292	2.146	2.068	2.030
22	T(L=6) + HBT1 (+)	0.740	1.457	1.787	1.813	1.770	1.695	1.621
23	T(L=11) + HBT1 (+)	4.390	3.503	2.730	2.292	2.146	2.068	2.030
24	T(L=16) + HBT1 (+)	0.740	1.457	1.787	1.813	1.770	1.695	1.621
25	T(L=21) + HBT1 (+)	4.390	3.503	2.730	2.292	2.146	2.068	2.030
26	T(L=26) + HBT1 (+)	0.740	1.457	1.787	1.813	1.770	1.695	1.621
27	T(L=6) + HBT2 (-)	4.538	2.991	1.835	1.278	1.121	1.086	1.108
28	T(L=11) + HBT2 (-)	-1.507	-0.426	0.265	0.496	0.502	0.465	0.425
29	T(L=16) + HBT2 (-)	3.215	2.235	1.506	1.132	1.018	0.984	0.988
30	T(L=21) + HBT2 (-)	-0.550	0.162	0.551	0.651	0.640	0.607	0.573
31	T(L=26) + HBT2 (-)	3.167	2.232	1.504	1.128	1.014	0.980	0.983
32	T(L=6) + HBT1 (+)	-0.484	0.187	0.561	0.648	0.638	0.607	0.573
33	T(L=11) + HBT1 (+)	3.167	2.232	1.504	1.128	1.014	0.980	0.983
34	T(L=16) + HBT1 (+)	-0.484	0.187	0.561	0.647	0.637	0.606	0.573
35	T(L=21) + HBT1 (+)	3.167	2.232	1.504	1.128	1.014	0.980	0.983
36	T(L=26) + HBT1 (+)	-0.484	0.187	0.561	0.655	0.641	0.607	0.573

NO.	LOAD NAME	D-Z(MM) 43	D-Z(MM) 44	D-Z(MM) 45	D-Z(MM) 46	D-Z(MM) 47	D-Z(MM) 48	D-Z(MM) 49
1		0.360	0.598	0.000	0.000	0.000	0.000	0.000
2		1.806	1.830	0.000	0.000	0.000	0.000	0.000
3	H A1	4.913	5.665	0.000	0.000	0.000	0.000	0.000
		-0.503	-0.572	0.000	0.000	0.000	0.000	0.000
4	H A2	4.682	5.503	0.000	0.000	0.000	0.000	0.000
		-3.335	-4.019	0.000	0.000	0.000	0.000	0.000
5	(L=6)	0.310	0.295	0.000	0.000	0.000	0.000	0.000
		-0.345	-0.294	0.000	0.000	0.000	0.000	0.000
6	(L=11)	0.188	0.178	0.000	0.000	0.000	0.000	0.000
		-0.208	-0.178	0.000	0.000	0.000	0.000	0.000
7	(L=16)	0.184	0.176	0.000	0.000	0.000	0.000	0.000
		-0.207	-0.175	0.000	0.000	0.000	0.000	0.000
8	(L=21)	0.184	0.176	0.000	0.000	0.000	0.000	0.000
		-0.207	-0.175	0.000	0.000	0.000	0.000	0.000
9	(L=26)	0.184	0.176	0.000	0.000	0.000	0.000	0.000
		-0.207	-0.175	0.000	0.000	0.000	0.000	0.000
10	H B1	1.780	1.753	0.000	0.000	0.000	0.000	0.000
11	H B2	0.776	0.757	0.000	0.000	0.000	0.000	0.000
12	T(L=6) + H B1	2.090	2.028	0.000	0.000	0.000	0.000	0.000
		1.435	1.439	0.000	0.000	0.000	0.000	0.000
13	T(L=11) + H B1	1.968	1.911	0.000	0.000	0.000	0.000	0.000
		1.572	1.552	0.000	0.000	0.000	0.000	0.000
14	T(L=16) + H B1	1.964	1.908	0.000	0.000	0.000	0.000	0.000
		1.574	1.558	0.000	0.000	0.000	0.000	0.000
15	T(L=21) + H B1	1.964	1.908	0.000	0.000	0.000	0.000	0.000
		1.574	1.558	0.000	0.000	0.000	0.000	0.000
16	T(L=26) + H B1	1.964	1.908	0.000	0.000	0.000	0.000	0.000
		1.574	1.558	0.000	0.000	0.000	0.000	0.000
17	T(L=6) + H B2	1.086	1.052	0.000	0.000	0.000	0.000	0.000
		0.431	0.463	0.000	0.000	0.000	0.000	0.000
18	T(L=11) + H B2	0.964	0.935	0.000	0.000	0.000	0.000	0.000
		0.568	0.579	0.000	0.000	0.000	0.000	0.000
19	T(L=16) + H B2	0.960	0.935	0.000	0.000	0.000	0.000	0.000
		0.570	0.562	0.000	0.000	0.000	0.000	0.000
20	T(L=21) + H B2	0.960	0.935	0.000	0.000	0.000	0.000	0.000
		0.570	0.562	0.000	0.000	0.000	0.000	0.000
21	T(L=26) + H B2	0.960	0.935	0.000	0.000	0.000	0.000	0.000
		0.570	0.562	0.000	0.000	0.000	0.000	0.000



NO.	LOAD NAME	D-Z (MM) 50	D-Z (MM) 51	D-Z (MM) 52	D-Z (MM) 53	D-Z (MM) 54	D-Z (MM) 55	D-Z (MM) 56
1		0.000	0.000	0.000	0.000	0.000	0.000	0.596
2		0.000	0.000	0.000	0.000	0.000	0.000	1.827
3	HA1	0.000	0.000	0.000	0.000	0.000	0.000	0.444
4	HA2	0.000	0.000	0.000	0.000	0.000	0.000	-3.940
5	(L=6)	0.000	0.000	0.000	0.000	0.000	0.000	5.490
6	(L=11)	0.000	0.000	0.000	0.000	0.000	0.000	-4.007
7	(L=16)	0.000	0.000	0.000	0.000	0.000	0.000	7.861
8	(L=21)	0.000	0.000	0.000	0.000	0.000	0.000	-5.290
9	(L=26)	0.000	0.000	0.000	0.000	0.000	0.000	5.168
10	HB1	0.000	0.000	0.000	0.000	0.000	0.000	-3.466
11	HB2	0.000	0.000	0.000	0.000	0.000	0.000	4.931
12	T(L=6) + HB1	0.000	0.000	0.000	0.000	0.000	0.000	-3.282
13	T(L=11) + HB1	0.000	0.000	0.000	0.000	0.000	0.000	4.931
14	T(L=16) + HB1	0.000	0.000	0.000	0.000	0.000	0.000	-3.282
15	T(L=21) + HB1	0.000	0.000	0.000	0.000	0.000	0.000	-0.998
16	T(L=26) + HB1	0.000	0.000	0.000	0.000	0.000	0.000	-0.044
17	T(L=6) + HB2	0.000	0.000	0.000	0.000	0.000	0.000	6.863
18	T(L=11) + HB2	0.000	0.000	0.000	0.000	0.000	0.000	-6.289
19	T(L=16) + HB2	0.000	0.000	0.000	0.000	0.000	0.000	4.169
20	T(L=21) + HB2	0.000	0.000	0.000	0.000	0.000	0.000	-4.464
21	T(L=26) + HB2	0.000	0.000	0.000	0.000	0.000	0.000	3.933
		0.000	0.000	0.000	0.000	0.000	0.000	-4.280
		0.000	0.000	0.000	0.000	0.000	0.000	7.797
		0.000	0.000	0.000	0.000	0.000	0.000	-5.354
		0.000	0.000	0.000	0.000	0.000	0.000	5.104
		0.000	0.000	0.000	0.000	0.000	0.000	-3.530
		0.000	0.000	0.000	0.000	0.000	0.000	4.867
		0.000	0.000	0.000	0.000	0.000	0.000	-3.546
		0.000	0.000	0.000	0.000	0.000	0.000	4.867
		0.000	0.000	0.000	0.000	0.000	0.000	-3.546
		0.000	0.000	0.000	0.000	0.000	0.000	4.867
		0.000	0.000	0.000	0.000	0.000	0.000	-3.546
		0.000	0.000	0.000	0.000	0.000	0.000	4.867
		0.000	0.000	0.000	0.000	0.000	0.000	-3.546

NO.	LOAD NAME	D-Z (MM) 57	D-Z (MM) 58	D-Z (MM) 59	D-Z (MM) 60	D-Z (MM) 61	D-Z (MM) 62	D-Z (MM) 63
1		0.341	0.278	0.255	0.251	0.330	0.251	0.245
2		1.813	1.766	1.766	1.764	1.763	1.766	1.775
3	HAT	0.249	0.173	0.138	0.089	0.055	0.091	0.140
4	HAT	-3.389	-2.976	-2.751	-2.751	-2.763	-2.755	-2.779
5	(L=6)	4.672	4.107	3.894	3.858	3.855	3.860	3.909
6	(L=11)	-3.318	-2.887	-2.625	-2.627	-2.632	-2.632	-2.686
7	(L=16)	3.683	3.505	1.922	0.843	0.376	0.262	0.262
8	(L=21)	-3.875	-2.542	-1.501	-0.731	-0.407	-0.356	-0.361
9	(L=26)	3.864	2.181	1.164	0.513	0.230	0.159	0.160
10	HB1	-2.537	-1.585	-0.913	-0.445	-0.252	-0.218	-0.219
11	HB2	3.742	2.135	1.160	0.510	0.225	0.155	0.155
12	T(L=6) + HB1	-2.431	-1.519	-0.888	-0.435	-0.225	-0.221	-0.219
13	T(L=11) + HB1	3.742	2.135	1.160	0.510	0.225	0.155	0.155
14	T(L=16) + HB1	-2.431	-1.519	-0.888	-0.435	-0.225	-0.217	-0.219
15	T(L=21) + HB1	-1.234	-1.481	-1.254	-1.517	-1.453	-1.403	-1.355
16	T(L=26) + HB1	0.035	0.163	0.140	0.083	0.032	0.034	0.033
17	T(L=6) + HB2	4.449	2.024	0.268	-0.673	-1.077	-1.140	-1.093
18	T(L=11) + HB2	-5.110	-4.023	-3.055	-2.248	-1.859	-1.759	-1.715
19	T(L=16) + HB2	2.630	0.700	-0.390	-1.004	-1.223	-1.243	-1.195
20	T(L=21) + HB2	-3.772	-3.066	-2.467	-1.962	-1.705	-1.621	-1.573
21	T(L=26) + HB2	3.508	0.652	-0.394	-1.007	-1.228	-1.247	-1.199
22	T(L=6) + HB1	-3.666	-3.000	-2.442	-1.952	-1.706	-1.623	-1.573
23	T(L=11) + HB1	2.508	0.652	-0.394	-1.007	-1.228	-1.247	-1.199
24	T(L=16) + HB1	-3.666	-3.000	-2.442	-1.952	-1.706	-1.623	-1.573
25	T(L=21) + HB1	3.718	3.069	2.062	0.927	0.407	0.296	0.294
26	T(L=26) + HB1	-3.840	-2.379	-1.361	-0.648	-0.375	-0.323	-0.328
27	T(L=6) + HB2	3.899	2.345	1.304	0.596	0.261	0.193	0.192
28	T(L=11) + HB2	-2.502	-1.422	-0.773	-0.362	-0.220	-0.184	-0.186
29	T(L=16) + HB2	3.777	2.286	1.500	0.594	0.257	0.189	0.188
30	T(L=21) + HB2	-2.396	-1.356	-0.748	-0.352	-0.222	-0.186	-0.186
31	T(L=26) + HB2	3.777	2.286	1.500	0.594	0.257	0.189	0.188
32	T(L=6) + HB2	-2.396	-1.356	-0.748	-0.352	-0.224	-0.187	-0.187
33	T(L=11) + HB2	3.777	2.286	1.500	0.594	0.257	0.189	0.188
34	T(L=16) + HB2	-2.396	-1.356	-0.748	-0.352	-0.224	-0.187	-0.188
35	T(L=21) + HB2	3.777	2.286	1.500	0.594	0.257	0.189	0.188
36	T(L=26) + HB2	-2.396	-1.356	-0.748	-0.352	-0.224	-0.187	-0.188

NO.	LOAD NAME	D-Z (MM) 64	D-Z (MM) 65	D-Z (MM) 66	D-Z (MM) 67	D-Z (MM) 68	D-Z (MM) 69	D-Z (MM) 70
1		0.276	0.339	0.594	1.313	0.917	0.674	0.591
2		1.778	1.810	1.825	4.329	4.260	4.207	4.175
3	HA1	0.174	0.248	0.438	0.494	0.287	0.193	0.143
4	HA2	-3.003	-3.411	-3.945	-3.906	-3.363	-2.898	-2.595
5	(L=6)	4.129	4.687	5.490	7.766	6.630	5.677	5.372
6	(L=11)	-2.911	-3.338	-4.007	-4.147	-3.377	-2.876	-2.574
7	(L=16)	0.306	0.509	0.293	10.827	7.789	4.995	2.742
8	(L=21)	-0.378	-0.347	-0.295	-4.992	-3.784	-2.647	-1.658
9	(L=26)	0.186	0.188	0.178	6.698	4.810	3.075	1.681
10		-0.229	-0.210	-0.179	-3.256	-2.473	-1.672	-1.031
11		0.181	0.183	0.175	6.698	4.810	3.075	1.678
12		-0.228	-0.208	-0.176	-3.010	-2.247	-1.561	-0.977
13		0.181	0.183	0.175	6.698	4.810	3.075	1.678
14		-0.228	-0.208	-0.176	-3.010	-2.247	-1.561	-0.977
15		1.298	-1.244	-1.204	-1.086	-1.245	-1.378	-1.461
16		0.037	0.044	0.045	0.210	0.523	0.754	0.810
17		-0.991	-0.935	-0.910	9.741	6.544	3.617	1.282
18		-1.676	-1.591	-1.499	-6.078	-5.029	-4.025	-3.118
19		-1.112	-1.057	-1.026	5.612	3.564	1.696	0.221
20		-1.526	-1.454	-1.382	-4.342	-3.718	-3.051	-2.491
21		-1.116	-1.061	-1.029	5.612	3.564	1.696	0.218
22		-1.525	-1.452	-1.380	-4.097	-3.492	-2.940	-2.438
23		-1.116	-1.061	-1.029	5.612	3.564	1.696	0.218
24		-1.525	-1.452	-1.380	-4.097	-3.492	-2.940	-2.438
25		0.343	0.353	0.359	11.038	8.312	5.749	3.552
26		-0.342	-0.303	-0.250	-4.782	-3.261	-1.893	-0.848
27		0.222	0.231	0.223	6.909	3.333	3.829	2.491
28		-0.192	-0.166	-0.133	-3.045	-1.949	-0.918	-0.221
29		0.218	0.227	0.220	6.909	3.333	3.829	2.488
30		-0.191	-0.164	-0.131	-2.800	-1.723	-0.807	-0.168
31		0.218	0.227	0.220	6.909	3.333	3.829	2.488
32		-0.191	-0.164	-0.131	-2.800	-1.723	-0.807	-0.168
33		0.218	0.227	0.220	6.909	3.333	3.829	2.488
34		-0.191	-0.164	-0.131	-2.800	-1.723	-0.807	-0.168

NO.	LOAD NAME	D-Z (MM) 71	D-Z (MM) 72	D-Z (MM) 73	D-Z (MM) 74	D-Z (MM) 75	D-Z (MM) 76	D-Z (MM) 77
1		0.608	0.639	0.609	0.591	0.674	0.916	1.311
2		4.159	4.155	4.163	4.183	4.218	4.270	4.335
3	HA1 (+)	0.084	0.036	0.086	0.145	0.194	0.285	0.487
4	HA2 (-)	-2.583	-2.588	-2.590	-2.607	-2.612	-3.375	-3.912
5	(L=6) (+)	5.354	5.348	5.343	5.388	5.696	6.642	7.762
6	(L=6) (-)	-2.527	-2.532	-2.535	-2.587	-2.589	-2.586	-4.146
7	(L=11) (+)	1.162	0.474	0.284	0.278	0.348	0.375	0.376
8	(L=11) (-)	-0.872	-0.533	-0.524	-0.527	-0.533	-0.470	-0.380
9	(L=16) (+)	0.712	0.297	0.183	0.172	0.214	0.228	0.228
10	(L=16) (-)	-0.536	-0.351	-0.328	-0.324	-0.325	-0.285	-0.230
11	(L=21) (+)	0.718	0.296	0.173	0.165	0.206	0.222	0.224
12	(L=21) (-)	-0.520	-0.360	-0.334	-0.328	-0.325	-0.284	-0.227
13	(L=26) (+)	0.718	0.296	0.173	0.165	0.206	0.222	0.224
14	(L=26) (-)	-0.524	-0.344	-0.327	-0.328	-0.325	-0.284	-0.227
15	HB1 (+)	-1.486	-1.467	-1.422	-1.364	-1.304	-1.244	-1.185
16	T(L=6) + HB1 (+)	0.726	0.612	0.540	0.511	0.505	0.506	0.510
17	T(L=11) + HB1 (-)	-0.324	-0.993	-1.138	-1.086	-0.956	-0.869	-0.809
18	T(L=16) + HB1 (+)	-2.358	-2.020	-1.946	-1.891	-1.837	-1.714	-1.565
19	T(L=21) + HB1 (-)	-0.769	-1.170	-1.239	-1.192	-1.090	-1.016	-0.957
20	T(L=26) + HB1 (+)	-2.022	-1.818	-1.750	-1.689	-1.629	-1.529	-1.415
21	T(L=6) + HB2 (+)	-0.768	-1.171	-1.248	-1.200	-1.098	-1.022	-0.961
22	T(L=11) + HB2 (-)	-2.006	-1.827	-1.756	-1.692	-1.629	-1.528	-1.412
23	T(L=16) + HB2 (+)	-0.768	-1.171	-1.248	-1.200	-1.098	-1.022	-0.961
24	T(L=21) + HB2 (-)	-2.016	-1.831	-1.758	-1.694	-1.629	-1.528	-1.412
25	T(L=26) + HB2 (+)	-0.768	-1.171	-1.248	-1.200	-1.098	-1.022	-0.961
26	T(L=6) + HB2 (-)	-2.010	-1.811	-1.748	-1.692	-1.629	-1.528	-1.412
27	T(L=11) + HB2 (+)	1.889	1.086	0.823	0.789	0.853	0.881	0.886
28	T(L=16) + HB2 (-)	-0.146	0.059	0.015	-0.016	-0.029	0.036	0.130
29	T(L=21) + HB2 (+)	1.444	0.909	0.722	0.683	0.718	0.734	0.738
30	T(L=26) + HB2 (-)	0.191	0.261	0.212	0.187	0.179	0.221	0.280
31	T(L=6) + HB2 (+)	1.445	0.908	0.713	0.676	0.710	0.728	0.734
32	T(L=11) + HB2 (-)	0.206	0.252	0.205	0.183	0.179	0.222	0.283
33	T(L=16) + HB2 (+)	1.445	0.908	0.713	0.676	0.710	0.728	0.734
34	T(L=21) + HB2 (-)	0.197	0.248	0.203	0.182	0.179	0.222	0.283
35	T(L=26) + HB2 (+)	1.445	0.908	0.713	0.676	0.710	0.728	0.734
36	T(L=6) + HB2 (-)	0.203	0.268	0.213	0.183	0.179	0.222	0.283

NO.	LOAD NAME	D-Z(MM)	78	D-Z(MM)	79	D-Z(MM)	80	D-Z(MM)	81	D-Z(MM)	82	D-Z(MM)	83	D-Z(MM)	84
1		1.564	0.821	0.694	0.617	0.630	0.668	0.630	0.668	0.630	0.668	0.630	0.668	0.630	0.668
2		4.715	4.526	4.496	4.482	4.465	4.447	4.465	4.447	4.465	4.447	4.465	4.447	4.465	4.447
3	HA1	0.362	0.210	0.139	0.101	0.055	0.019	0.055	0.019	0.055	0.019	0.055	0.019	0.055	0.019
4	HA2	-2.624	-2.238	-1.939	-1.714	-1.692	-1.688	-1.692	-1.688	-1.692	-1.688	-1.692	-1.688	-1.692	-1.688
5	(L=6)	6.783	5.822	5.198	4.985	4.976	4.956	4.985	4.956	4.985	4.956	4.985	4.956	4.985	4.956
6	(L=11)	-2.872	-2.286	-1.954	-1.731	-1.685	-1.685	-1.685	-1.685	-1.685	-1.685	-1.685	-1.685	-1.685	-1.685
7	(L=16)	9.981	7.098	4.226	2.227	0.938	0.365	0.938	0.365	0.938	0.365	0.938	0.365	0.938	0.365
8	(L=21)	-3.225	-2.487	-1.821	-1.186	-0.651	-0.439	-0.651	-0.439	-0.651	-0.439	-0.651	-0.439	-0.651	-0.439
9	(L=26)	6.810	4.992	2.712	1.372	0.578	0.153	0.578	0.153	0.578	0.153	0.578	0.153	0.578	0.153
10	HB1	-2.087	-1.607	-1.162	-0.756	-0.411	-0.282	-0.411	-0.282	-0.411	-0.282	-0.411	-0.282	-0.411	-0.282
11	HB2	6.675	4.871	2.683	1.371	0.581	0.231	0.581	0.231	0.581	0.231	0.581	0.231	0.581	0.231
12	T(L=6) + HB1	-1.940	-1.520	-1.088	-0.711	-0.398	-0.231	-0.398	-0.231	-0.398	-0.231	-0.398	-0.231	-0.398	-0.231
13	T(L=11) + HB1	6.675	4.871	2.683	1.371	0.581	0.231	0.581	0.231	0.581	0.231	0.581	0.231	0.581	0.231
14	T(L=16) + HB1	-1.940	-1.520	-1.088	-0.711	-0.400	-0.278	-0.400	-0.278	-0.400	-0.278	-0.400	-0.278	-0.400	-0.278
15	T(L=21) + HB1	-0.776	-0.836	-0.875	-0.937	-0.983	-0.990	-0.983	-0.990	-0.983	-0.990	-0.983	-0.990	-0.983	-0.990
16	T(L=26) + HB1	0.274	0.633	1.101	1.080	0.902	0.727	0.902	0.727	0.902	0.727	0.902	0.727	0.902	0.727
17	T(L=6) + HB2	9.205	6.260	3.351	1.291	-0.034	-0.625	-0.034	-0.625	-0.034	-0.625	-0.034	-0.625	-0.034	-0.625
18	T(L=11) + HB2	-4.001	-3.325	-2.696	-2.123	-1.634	-1.289	-1.634	-1.289	-1.634	-1.289	-1.634	-1.289	-1.634	-1.289
19	T(L=16) + HB2	6.034	4.154	1.837	0.436	-0.405	-0.759	-0.405	-0.759	-0.405	-0.759	-0.405	-0.759	-0.405	-0.759
20	T(L=21) + HB2	-2.663	-2.446	-2.037	-1.692	-1.394	-1.222	-1.394	-1.222	-1.394	-1.222	-1.394	-1.222	-1.394	-1.222
21	T(L=26) + HB2	5.900	4.032	1.808	0.434	-0.402	-0.759	-0.402	-0.759	-0.402	-0.759	-0.402	-0.759	-0.402	-0.759
		-2.716	-2.359	-1.963	-1.648	-1.381	-1.281	-1.381	-1.281	-1.381	-1.281	-1.381	-1.281	-1.381	-1.281
		5.900	4.032	1.808	0.434	-0.402	-0.759	-0.402	-0.759	-0.402	-0.759	-0.402	-0.759	-0.402	-0.759
		-2.716	-2.359	-1.963	-1.648	-1.389	-1.288	-1.389	-1.288	-1.389	-1.288	-1.389	-1.288	-1.389	-1.288
		5.900	4.032	1.808	0.434	-0.402	-0.759	-0.402	-0.759	-0.402	-0.759	-0.402	-0.759	-0.402	-0.759
		-2.716	-2.359	-1.963	-1.648	-1.383	-1.268	-1.383	-1.268	-1.383	-1.268	-1.383	-1.268	-1.383	-1.268
		10.256	7.732	5.327	3.307	1.840	1.091	1.840	1.091	1.840	1.091	1.840	1.091	1.840	1.091
		-2.951	-1.854	-0.720	-0.106	0.250	0.287	0.250	0.287	0.250	0.287	0.250	0.287	0.250	0.287
		7.084	5.625	3.813	2.452	1.479	0.958	1.479	0.958	1.479	0.958	1.479	0.958	1.479	0.958
		-1.813	-0.974	-0.061	0.324	0.491	0.445	0.324	0.445	0.324	0.445	0.324	0.445	0.324	0.445
		6.950	5.504	3.784	2.451	1.482	0.958	1.482	0.958	1.482	0.958	1.482	0.958	1.482	0.958
		-1.665	-0.887	0.013	0.369	0.504	0.435	0.369	0.435	0.369	0.435	0.369	0.435	0.369	0.435
		6.950	5.504	3.784	2.451	1.482	0.958	1.482	0.958	1.482	0.958	1.482	0.958	1.482	0.958
		-1.665	-0.887	0.013	0.369	0.429	0.429	0.369	0.429	0.369	0.429	0.369	0.429	0.369	0.429
		6.950	5.504	3.784	2.451	1.482	0.958	1.482	0.958	1.482	0.958	1.482	0.958	1.482	0.958
		-1.665	-0.887	0.013	0.369	0.501	0.449	0.501	0.449	0.501	0.449	0.501	0.449	0.501	0.449

NO.	LOAD NAME	D-Z(MM) 85	D-Z(MM) 86	D-Z(MM) 87	D-Z(MM) 88	D-Z(MM) 89	D-Z(MM) 90	D-Z(MM) 91
1		0.616	0.700	0.625	1.572	0.000	0.000	0.000
2		4.473	4.541	4.556	4.739	0.000	0.000	0.000
3	HAT1 (+)	0.102	0.140	0.209	0.358	0.000	0.000	0.000
4	HAT2 (-)	-1.721	-1.951	-2.246	-2.631	0.000	0.000	0.000
5	(L=6) (+)	4.981	5.251	-2.246	6.808	0.000	0.000	0.000
6	(L=11) (+)	-1.738	-1.967	-2.293	-2.874	0.000	0.000	0.000
7	(L=16) (+)	0.195	0.254	0.282	0.294	0.000	0.000	0.000
8	(L=21) (+)	-0.431	-0.432	-0.373	-0.297	0.000	0.000	0.000
9	(L=26) (+)	0.125	0.157	0.171	0.178	0.000	0.000	0.000
10	HB1 (-)	-0.268	-0.265	-0.227	-0.180	0.000	0.000	0.000
11	HB2 (-)	0.117	0.151	0.167	0.176	0.000	0.000	0.000
12	T(L=6) + HB1 (+)	-0.271	-0.265	-0.226	-0.178	0.000	0.000	0.000
13	T(L=11) + HB1 (+)	0.117	0.151	0.167	0.176	0.000	0.000	0.000
14	T(L=16) + HB1 (+)	-0.919	-0.265	-0.226	-0.178	0.000	0.000	0.000
15	T(L=21) + HB1 (+)	0.686	0.682	0.666	0.680	0.000	0.000	0.000
16	T(L=26) + HB1 (+)	-0.725	-0.625	-0.552	-0.498	0.000	0.000	0.000
17	T(L=6) + HB2 (-)	-1.351	-1.312	-1.207	-1.089	0.000	0.000	0.000
18	T(L=11) + HB2 (-)	-0.795	-0.723	-0.662	-0.614	0.000	0.000	0.000
19	T(L=16) + HB2 (-)	-1.187	-1.144	-1.060	-0.972	0.000	0.000	0.000
20	T(L=21) + HB2 (-)	-0.802	-0.729	-0.667	-0.616	0.000	0.000	0.000
21	T(L=26) + HB2 (-)	-1.191	-1.144	-1.059	-0.970	0.000	0.000	0.000
22		-0.802	-0.729	-0.667	-0.616	0.000	0.000	0.000
23		-1.192	-1.144	-1.059	-0.970	0.000	0.000	0.000
24		-0.802	-0.729	-0.667	-0.616	0.000	0.000	0.000
25		-1.191	-1.144	-1.059	-0.970	0.000	0.000	0.000
26		0.880	0.936	0.948	0.974	0.000	0.000	0.000
27		0.234	0.230	0.292	0.383	0.000	0.000	0.000
28		0.810	0.839	0.837	0.858	0.000	0.000	0.000
29		0.418	0.417	0.439	0.500	0.000	0.000	0.000
30		0.603	0.633	0.632	0.656	0.000	0.000	0.000
31		0.414	0.417	0.440	0.502	0.000	0.000	0.000
32		0.803	0.833	0.832	0.856	0.000	0.000	0.000
33		0.413	0.417	0.440	0.502	0.000	0.000	0.000
34		0.803	0.833	0.832	0.856	0.000	0.000	0.000
35		0.414	0.417	0.440	0.502	0.000	0.000	0.000

NO.	LOAD NAME	D-Z (MM) 92	D-Z (MM) 93	D-Z (MM) 94	D-Z (MM) 95	D-Z (MM) 96	D-Z (MM) 97	D-Z (MM) 98
1		0.000	0.000	0.000	0.000	0.000	0.000	0.000
2		0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	HA1 (+)	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	HA2 (+)	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5	(L=6) (+)	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	(L=11) (+)	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7	(L=16) (+)	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	(L=21) (+)	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	(L=26) (+)	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	HB1	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11	HB2	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12	T(L=6) + HB1 (+)	0.000	0.000	0.000	0.000	0.000	0.000	0.000
13	T(L=11) + HB1 (+)	0.000	0.000	0.000	0.000	0.000	0.000	0.000
14	T(L=16) + HB1 (+)	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	T(L=21) + HB1 (+)	0.000	0.000	0.000	0.000	0.000	0.000	0.000
16	T(L=26) + HB1 (+)	0.000	0.000	0.000	0.000	0.000	0.000	0.000
17	T(L=6) + HB2 (+)	0.000	0.000	0.000	0.000	0.000	0.000	0.000
18	T(L=11) + HB2 (+)	0.000	0.000	0.000	0.000	0.000	0.000	0.000
19	T(L=16) + HB2 (+)	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	T(L=21) + HB2 (+)	0.000	0.000	0.000	0.000	0.000	0.000	0.000
21	T(L=26) + HB2 (+)	0.000	0.000	0.000	0.000	0.000	0.000	0.000

D-Z(MM)  
99

NO. LOAD NAME

1		0.000
2		0.000
3	HA1 (+)	0.000
4	HA2 (+)	0.000
5	(L=6) (+)	0.000
6	(L=11) (+)	0.000
7	(L=16) (+)	0.000
8	(L=21) (+)	0.000
9	(L=26) (+)	0.000
10	HB1 (-)	0.000
11	HB2 (-)	0.000
12	T(L=6) + HB1 (+)	0.000
13	T(L=11) + HB1 (+)	0.000
14	T(L=16) + HB1 (+)	0.000
15	T(L=21) + HB1 (+)	0.000
16	T(L=26) + HB1 (+)	0.000
17	T(L=6) + HB2 (+)	0.000
18	T(L=11) + HB2 (+)	0.000
19	T(L=16) + HB2 (+)	0.000
20	T(L=21) + HB2 (+)	0.000
21	T(L=26) + HB2 (+)	0.000



NO.	LOAD NAME	M-Y(T,M)		Q-Z(T)		M-Y(T,M)		Q-Z(T)		M-Y(T,M)		Q-Z(T)	
		1	12	1	12	12	1	12	1	12	12	1	12
1		-0.008	8.716	22.906	-1.117	22.906	1.117	10.405					
2		-0.021	19.902	61.487	-6.493	61.487	6.493	60.503					
3	HA1	0.002	22.821	77.721	6.038	77.721	14.334	98.374					
4	HA2	-0.027	-1.294	-6.031	-14.334	-6.031	-6.028	-12.065					
		0.006	21.526	73.773	7.894	73.773	15.738	94.628					
		-0.026	-3.820	-17.799	-13.738	-17.799	-7.894	-35.605					
5	(L=6)	0.006	30.989	113.936	13.504	113.936	16.829	113.798					
		-0.039	-3.502	-16.318	-16.504	-16.318	-13.304	-32.641					
6	(L=11)	0.004	25.052	90.757	12.812	90.757	13.538	91.062					
		-0.031	-2.356	-10.979	-12.295	-10.979	-12.812	-21.961					
7	(L=16)	0.004	24.040	89.860	12.750	89.860	13.430	91.062					
		-0.031	-2.275	-10.597	-12.103	-10.597	-12.750	-21.198					
8	(L=21)	0.004	24.040	89.860	12.766	89.860	17.177	91.062					
		-0.031	-2.275	-10.597	-17.177	-10.597	-12.766	-21.198					
9	(L=26)	0.004	31.265	89.860	12.750	89.860	13.430	91.062					
		-0.031	-2.275	-10.597	-12.103	-10.597	-12.750	-21.198					
10	HB1	-0.004	2.826	13.169	-2.826	13.169	2.826	26.342					
11	HB2	-0.003	1.791	8.344	-1.791	8.344	1.791	16.690					
12	T(L=6) + HB1	0.001	33.616	127.105	10.478	127.105	19.655	140.139					
		-0.044	-0.676	-3.149	-19.330	-3.149	-10.478	-6.300					
13	T(L=11) + HB1	-0.001	27.879	103.926	9.986	103.926	16.364	117.404					
		-0.036	0.470	2.190	-15.122	2.190	-9.986	4.381					
14	T(L=16) + HB1	-0.001	26.866	103.029	9.923	103.029	16.256	117.404					
		-0.035	0.552	2.572	-14.929	2.572	-9.923	5.144					
15	T(L=21) + HB1	-0.001	26.866	103.029	9.940	103.029	20.004	117.404					
		-0.035	0.552	2.572	-20.004	2.572	-9.940	5.144					
16	T(L=26) + HB1	-0.001	34.092	103.029	9.923	103.029	16.256	117.404					
		-0.035	0.552	2.572	-14.929	2.572	-9.923	5.144					
17	T(L=6) + HB2	0.003	32.780	122.280	11.514	122.280	18.620	130.488					
		-0.042	-1.712	-7.974	-18.295	-7.974	-11.514	-15.951					
18	T(L=11) + HB2	0.001	26.843	99.101	11.022	99.101	15.329	107.752					
		-0.034	-0.566	-2.635	-14.086	-2.635	-11.022	-5.271					
19	T(L=16) + HB2	0.001	25.830	98.204	10.959	98.204	15.221	107.752					
		-0.034	-0.484	-2.253	-13.894	-2.253	-10.959	-4.508					
20	T(L=21) + HB2	0.001	25.830	98.204	10.975	98.204	18.968	107.752					
		-0.034	-0.464	-2.253	-18.968	-2.253	-10.975	-4.508					
21	T(L=26) + HB2	0.001	33.056	98.204	10.959	98.204	15.221	107.752					
		-0.034	-0.464	-2.253	-13.894	-2.253	-10.959	-4.508					

NO.	LOAD NAME	Q-Z(T)		M-Y(T,M)		Q-Z(T)		M-Y(T,M)		Q-Z(T)											
		23	12	23	34	23	34	34	23	34	45										
1		6.481		10.390		1.882		1.455		5.717		1.455		-5.717		-5.717		1.455		34	45
2		6.915		60.462		-6.810		-2.542		20.218		-2.542		20.218		-20.218		-2.542		34	45
3	HA1	12.990	(+)	98.272		-13.398		48.124		19.587		48.124		19.587		-19.587		48.124		34	45
4	HA2	-8.943	(-)	-12.053		10.923		-4.609		47.704		-4.609		47.704		-4.609		47.704		34	45
5	(L=6)	14.345	(+)	94.351		-15.178		-43.752		-5.212		-43.752		-5.212		-20.871		-43.752		34	45
6	(L=11)	-26.069	(-)	113.874		14.337		68.110		32.169		68.110		32.169		2.531		68.110		34	45
7	(L=16)	-5.421	(-)	32.593		-18.213		-2.531		26.118		-2.531		26.118		1.670		58.561		34	45
8	(L=21)	23.249	(+)	90.973		13.866		-41.540		-4.164		-41.540		-4.164		-26.601		58.512		34	45
9	(L=26)	-9.275	(-)	-21.931		-16.658		-39.792		-0.934		-39.792		-0.934		0.227		58.512		34	45
10	HB1	23.510	(+)	90.973		13.250		58.512		26.462		58.512		26.462		-26.675		58.512		34	45
11	HB2	-8.040	(-)	-21.169		-17.793		-39.792		26.706		-39.792		26.706		0.227		58.512		34	45
12	T(L=6) + HB1	23.243	(+)	139.991		13.929		58.512		-40.772		-40.772		-40.772		-26.534		58.512		34	45
13	T(L=11) + HB1	-8.288	(-)	-6.277		-17.736		-40.772		25.873		58.512		58.512		0.227		58.512		34	45
14	T(L=16) + HB1	20.423	(+)	117.290		13.250		58.512		-39.792		-39.792		-39.792		-26.080		58.512		34	45
15	T(L=21) + HB1	-12.101	(-)	4.386		-16.786		8.223		3.882		8.223		3.882		-3.882		8.223		34	45
16	T(L=26) + HB1	20.684	(+)	117.290		-3.882		0.839		3.398		0.839		3.398		-3.398		76.333		34	45
17	T(L=6) + HB2	-10.866	(-)	5.147		10.455		-53.935		36.051		-53.935		36.051		-1.551		76.333		34	45
18	T(L=11) + HB2	20.473	(+)	117.290		-22.095		66.784		30.000		66.784		30.000		-2.212		66.784		34	45
19	T(L=16) + HB2	-7.860	(-)	5.147		9.984		-33.317		-0.282		-33.317		-0.282		-30.483		66.735		34	45
20	T(L=21) + HB2	24.278	(+)	130.350		-20.540		66.735		30.344		66.735		30.344		-3.655		66.735		34	45
21	T(L=26) + HB2	-7.232	(-)	-15.917		9.367		-31.569		2.948		-31.569		2.948		-30.357		66.735		34	45
22	T(L=6) + HB2	21.438	(+)	107.649		-21.675		66.735		30.588		66.735		30.588		-3.655		66.735		34	45
23	T(L=11) + HB2	-11.066	(-)	-5.255		10.047		-32.548		3.655		-32.548		3.655		-30.416		66.735		34	45
24	T(L=16) + HB2	21.719	(+)	107.649		9.367		66.735		29.755		66.735		29.755		-3.655		66.735		34	45
25	T(L=21) + HB2	-9.831	(-)	-4.493		-20.668		-31.569		3.655		-31.569		3.655		-29.962		66.735		34	45
26	T(L=26) + HB2	21.449	(+)	107.649		10.939		68.948		35.567		68.948		35.567		-0.867		68.948		34	45
27	T(L=6) + HB2	-6.825	(-)	-4.493		-21.611		-61.320		0.867		-61.320		0.867		-36.894		68.948		34	45
28	T(L=11) + HB2	21.430	(+)	107.649		10.468		59.399		29.516		59.399		29.516		-1.728		59.399		34	45
29	T(L=16) + HB2	-7.722	(-)	-4.493		-20.056		-40.702		-0.766		-40.702		-0.766		-29.999		59.399		34	45
30	T(L=21) + HB2	21.719	(+)	107.649		9.852		59.350		29.860		59.350		29.860		-3.171		59.350		34	45
31	T(L=26) + HB2	-9.831	(-)	-4.493		-21.191		-38.954		2.464		-38.954		2.464		-30.073		59.350		34	45
32	T(L=6) + HB2	21.449	(+)	107.649		10.531		59.350		30.104		59.350		30.104		-29.932		59.350		34	45
33	T(L=11) + HB2	-6.825	(-)	-4.493		-21.134		-39.933		3.171		-39.933		3.171		-3.171		59.350		34	45
34	T(L=16) + HB2	21.430	(+)	107.649		9.852		59.350		29.271		59.350		29.271		-3.171		59.350		34	45
35	T(L=21) + HB2	-7.722	(-)	-4.493		-20.184		-38.954		3.171		-38.954		3.171		-29.478		59.350		34	45

NO.	LOAD NAME	M-Y(T,M)		Q-Z(T,T)		M-Y(T,M)		Q-Z(T,T)		M-Y(T,M)		Q-Z(T,T)	
		45	34	45	34	45	56	56	45	56	45	56	45
1		-42.895	13.315	-42.867	13.304	1.430	-5.705	1.430	-5.705	1.430	-5.705	1.430	-5.705
2		-128.018	33.627	-127.930	33.597	-2.592	-20.188	-2.592	-20.188	-2.592	-20.188	-2.592	-20.188
3	HA1	5.888	27.607	5.884	27.607	4.482	1.318	4.482	1.318	4.482	1.318	4.482	1.318
4	HA2	-59.454	-1.878	-59.412	-1.878	-44.116	-4.054	-44.116	-4.054	-44.116	-4.054	-44.116	-4.054
5	(L=6)	9.274	28.120	9.267	28.106	47.455	47.455	47.455	47.455	47.455	47.455	47.455	47.455
6	(L=11)	-94.838	-2.584	-94.771	-2.589	-43.557	-20.860	-43.557	-20.860	-43.557	-20.860	-43.557	-20.860
7	(L=16)	0.000	41.755	0.000	41.711	67.697	3.934	67.697	3.934	67.697	3.934	67.697	3.934
8	(L=21)	-108.088	0.000	-106.029	0.000	-61.871	-29.026	-61.871	-29.026	-61.871	-29.026	-61.871	-29.026
9	(L=26)	0.000	36.358	0.000	36.354	58.269	4.924	58.269	4.924	58.269	4.924	58.269	4.924
10	HB1	-111.491	-0.070	-111.424	-0.071	-41.312	-26.155	-41.312	-26.155	-41.312	-26.155	-41.312	-26.155
11	HB2	0.000	31.242	0.000	31.253	58.245	6.787	58.245	6.787	58.245	6.787	58.245	6.787
12	T(L=6) + HB1	-102.537	-0.227	-102.468	-0.229	-39.560	-23.490	-39.560	-23.490	-39.560	-23.490	-39.560	-23.490
13	T(L=11) + HB1	0.000	30.285	0.000	30.279	58.245	7.618	58.245	7.618	58.245	7.618	58.245	7.618
14	T(L=16) + HB1	-86.619	-0.227	-86.561	-0.229	-40.571	-24.170	-40.571	-24.170	-40.571	-24.170	-40.571	-24.170
15	T(L=21) + HB1	0.000	29.785	0.000	29.773	58.245	7.661	58.245	7.661	58.245	7.661	58.245	7.661
16	T(L=26) + HB1	-66.998	-0.227	-66.958	-0.229	-39.560	-21.458	-39.560	-21.458	-39.560	-21.458	-39.560	-21.458
17	T(L=6) + HB2	-9.869	3.882	-9.862	3.882	-10.091	0.049	-10.091	0.049	-10.091	0.049	-10.091	0.049
18	T(L=11) + HB2	-14.998	3.396	-14.987	3.396	-3.736	-2.414	-3.736	-2.414	-3.736	-2.414	-3.736	-2.414
19	T(L=16) + HB2	-9.869	4.637	-9.862	4.637	57.606	3.983	57.606	3.983	57.606	3.983	57.606	3.983
20	T(L=21) + HB2	-115.958	3.882	-115.892	3.882	-71.962	-28.977	-71.962	-28.977	-71.962	-28.977	-71.962	-28.977
21	T(L=26) + HB2	-9.869	40.240	-9.862	36.305	48.179	4.973	48.179	4.973	48.179	4.973	48.179	4.973
		-121.360	3.312	-121.286	3.312	-51.403	-26.106	-51.403	-26.106	-51.403	-26.106	-51.403	-26.106
		-9.869	35.124	-9.862	31.204	48.155	6.836	48.155	6.836	48.155	6.836	48.155	6.836
		-112.606	3.655	-112.530	3.655	-49.651	-23.641	-49.651	-23.641	-49.651	-23.641	-49.651	-23.641
		-9.869	34.165	-9.862	30.230	48.155	7.667	48.155	7.667	48.155	7.667	48.155	7.667
		-96.488	3.655	-96.423	3.655	-50.662	-24.121	-50.662	-24.121	-50.662	-24.121	-50.662	-24.121
		-9.869	33.668	-9.862	29.724	48.155	7.710	48.155	7.710	48.155	7.710	48.155	7.710
		-76.867	3.655	-76.820	3.655	-49.651	-21.409	-49.651	-21.409	-49.651	-21.409	-49.651	-21.409
		-14.998	45.153	-14.987	44.125	63.961	1.520	63.961	1.520	63.961	1.520	63.961	1.520
		-121.087	3.398	-121.017	3.398	-65.607	-31.440	-65.607	-31.440	-65.607	-31.440	-65.607	-31.440
		-14.998	39.756	-14.987	38.768	54.533	2.510	54.533	2.510	54.533	2.510	54.533	2.510
		-126.689	3.328	-126.612	3.328	-45.048	-28.569	-45.048	-28.569	-45.048	-28.569	-45.048	-28.569
		-14.998	34.640	-14.987	33.667	54.509	4.373	54.509	4.373	54.509	4.373	54.509	4.373
		-117.535	3.171	-117.456	3.171	-43.296	-25.904	-43.296	-25.904	-43.296	-25.904	-43.296	-25.904
		-14.998	33.681	-14.987	32.693	54.509	5.204	54.509	5.204	54.509	5.204	54.509	5.204
		-101.617	3.171	-101.548	3.171	-44.308	-26.584	-44.308	-26.584	-44.308	-26.584	-44.308	-26.584
		-14.998	35.183	-14.987	32.187	54.509	5.247	54.509	5.247	54.509	5.247	54.509	5.247
		-81.996	3.171	-81.945	3.171	-43.296	-23.872	-43.296	-23.872	-43.296	-23.872	-43.296	-23.872

NO.	LOAD NAME	G-Z ( T ) 56 - 67	M-Y (T,M) 67 - 56	G-Z ( T ) 67 - 56	M-Y (T,M) 67 - 76	G-Z ( T ) 67 - 78	M-Y (T,M) 78 - 67	G-Z ( T ) 78 - 67
1		5.705	10.311	1.894	10.296	6.495	22.860	1.104
2		20.188	60.252	-6.779	60.193	6.953	61.354	6.455
3	H A1	4.054	5.191	1.318	5.186	3.185	2.593	0.556
4	H A2	-1.318	-20.737	-4.054	-29.698	-0.556	-14.851	-3.185
5	(L=6)	20.860	94.184	10.939	94.090	14.345	73.505	13.676
6	(L=11)	-5.220	-35.332	-15.163	-35.290	-8.667	-17.884	-7.884
7	(L=16)	27.490	113.025	19.532	112.907	22.718	113.485	23.571
8	(L=21)	-3.934	-32.238	-14.176	-32.191	-11.596	-16.098	-5.418
9	(L=26)	25.663	90.597	14.639	90.512	20.318	90.475	19.406
10	H B1	-4.924	-21.737	-16.759	-21.708	-9.823	-10.856	-9.593
11	H B2	23.270	90.597	15.930	90.512	21.143	89.592	19.217
12	T(L=6) + H B1	-6.787	-20.992	-17.689	-20.965	-9.107	-10.484	-5.133
13	T(L=11) + H B1	24.339	90.597	18.385	90.512	20.844	89.592	19.217
14	T(L=16) + H B1	-7.618	-20.992	-13.881	-20.965	-10.543	-10.484	-5.659
15	T(L=21) + H B1	21.245	90.597	18.385	90.512	20.027	89.592	19.217
16	T(L=26) + H B1	-7.661	-20.992	-11.808	-20.965	-10.543	-10.484	-6.104
17	T(L=6) + H B2	-0.049	-10.320	0.049	-10.308	1.106	-5.155	-1.106
18	T(L=11) + H B2	2.414	7.514	-2.414	7.510	-0.805	3.755	0.805
19	T(L=16) + H B2	27.441	102.705	19.581	102.599	23.823	108.331	22.465
20	T(L=21) + H B2	-2.983	-42.557	-14.127	-42.499	-10.490	-21.253	-6.523
21	T(L=26) + H B2	25.614	80.278	14.688	80.204	21.423	85.320	18.300
22	T(L=6) + H B1	-4.973	-32.057	-16.710	-32.016	-8.518	-16.071	-10.699
23	T(L=11) + H B1	23.221	80.278	15.979	80.204	22.249	84.437	18.111
24	T(L=16) + H B1	-6.836	-31.312	-17.640	-31.272	-8.001	-15.639	-6.238
25	T(L=21) + H B1	24.290	80.278	18.434	80.204	21.949	84.437	18.111
26	T(L=26) + H B1	-7.667	-31.312	-13.832	-31.272	-9.438	-15.639	-6.764
27	T(L=6) + H B2	21.196	80.278	18.434	80.204	21.133	84.437	18.111
28	T(L=11) + H B2	-7.710	-31.512	-11.759	-31.272	-9.438	-15.639	-7.210
29	T(L=16) + H B2	29.904	120.539	17.118	120.416	21.912	117.241	24.376
30	T(L=21) + H B2	-1.520	-24.723	-16.590	-24.682	-12.401	-12.343	-4.612
31	T(L=26) + H B2	28.077	98.112	12.225	98.022	19.512	94.230	20.211
32	T(L=6) + H B1	-2.510	-14.223	-19.173	-14.199	-10.429	-7.100	-8.788
33	T(L=11) + H B1	25.684	98.112	13.516	98.022	20.337	93.347	20.022
34	T(L=16) + H B1	-4.373	-13.478	-20.103	-13.455	-9.912	-6.729	-4.327
35	T(L=21) + H B1	26.753	98.112	15.971	98.022	20.038	93.347	20.022
36	T(L=26) + H B1	-5.204	-13.478	-16.295	-13.455	-11.349	-6.729	-4.853
37	T(L=6) + H B2	23.659	98.112	15.971	98.022	19.222	93.347	20.022
38	T(L=11) + H B2	-5.247	-13.478	-14.222	-13.455	-11.349	-6.729	-5.299

\*\* UHURU BRIDGE \*\*

NO.	LOAD NAME	M-Y(T,M) 75 - 89	G-Z(T) 78 - 89	M-Y(T,M) 89 - 78	G-Z(T) 89 - 78	M-Y(T,M) 2 - 13	G-Z(T) 2 - 13	M-Y(T,M) 13 - 2
1		22.860	-1.104	0.007	8.703	-0.002	0.879	7.249
2		61.354	-6.455	0.020	19.864	-0.019	17.812	55.888
3	HA1	2.593	3.185	0.000	0.556	0.001	21.552	67.482
4	HA2	-14.851	-0.556	-0.005	-3.185	-0.024	-1.431	-3.196
5	(L=6)	73.505	7.884	0.023	21.475	0.004	20.242	63.525
6	(L=11)	-17.647	-13.676	-0.006	-3.785	-0.022	-3.210	-13.561
7	(L=16)	113.485	5.418	0.036	30.876	0.005	21.884	78.043
8	(L=21)	-16.098	-23.571	-0.005	-3.453	-0.027	-2.783	-12.967
9	(L=26)	90.475	4.709	0.029	24.974	0.004	25.346	65.853
10	HB1	-10.856	-19.406	-0.003	-2.328	-0.023	-2.095	-9.761
11	HB2	89.592	5.133	0.029	23.979	0.003	18.173	65.520
12	T(L=6) + HB1	-10.484	-19.217	-0.003	-2.249	-0.023	-2.417	-9.408
13	T(L=11) + HB1	89.592	5.659	0.029	23.979	0.003	20.797	65.520
14	T(L=16) + HB1	-10.484	-19.217	-0.003	-2.249	-0.023	-2.417	-9.408
15	T(L=21) + HB1	89.592	5.659	0.029	23.979	0.003	20.797	65.520
16	T(L=26) + HB1	-10.484	-19.217	-0.003	-2.249	-0.023	-2.417	-9.408
17	T(L=6) + HB2	5.155	1.106	-0.002	-1.106	-0.007	4.823	19.257
18	T(L=11) + HB2	3.755	-0.805	0.001	0.805	-0.005	3.603	14.051
19	T(L=16) + HB2	108.331	6.523	0.035	29.771	-0.002	26.707	97.300
20	T(L=21) + HB2	-21.253	-22.465	-0.007	-4.559	-0.034	2.040	6.290
21	T(L=26) + HB2	85.320	5.815	0.037	23.868	-0.003	30.169	85.110
22	T(L=6) + HB1	-16.011	-18.300	-0.005	-3.434	-0.030	2.728	9.496
23	T(L=11) + HB1	84.437	6.238	0.037	22.873	-0.003	22.996	84.777
24	T(L=16) + HB1	-15.639	-18.111	-0.005	-3.554	-0.030	2.406	9.849
25	T(L=21) + HB1	84.437	6.764	0.037	22.873	-0.003	25.620	84.777
26	T(L=26) + HB1	-15.639	-18.111	-0.005	-3.554	-0.030	0.173	10.131
27	T(L=6) + HB2	84.437	7.210	0.027	30.140	-0.003	25.873	84.777
28	T(L=11) + HB2	-15.639	-18.111	-0.005	-3.554	-0.030	2.864	10.131
29	T(L=16) + HB2	117.241	4.612	0.037	31.682	-0.000	25.486	92.094
30	T(L=21) + HB2	-12.343	-24.376	-0.004	-2.647	-0.032	0.820	1.084
31	T(L=26) + HB2	94.230	3.904	0.030	25.780	-0.001	28.949	79.904
32	T(L=6) + HB1	-7.100	-20.211	-0.002	-1.523	-0.028	1.508	4.290
33	T(L=11) + HB1	93.347	4.327	0.030	24.784	-0.001	21.776	79.571
34	T(L=16) + HB1	-6.729	-20.022	-0.002	-1.443	-0.028	1.186	4.643
35	T(L=21) + HB1	93.347	4.853	0.030	24.784	-0.002	24.400	79.571
36	T(L=26) + HB1	-6.729	-20.022	-0.002	-1.443	-0.028	-1.047	4.925
37	T(L=6) + HB2	93.347	5.299	0.030	32.051	-0.002	24.653	79.571
38	T(L=11) + HB2	-6.729	-20.022	-0.002	-1.443	-0.028	1.644	4.925

NO.	LOAD NAME	Q-Z(T) 13 - 2	M-Y(T.M) 13 - 24	Q-Z(T) 13 - 24	M-Y(T.M) 24 - 13	Q-Z(T) 24 - 13	M-Y(T.M) 24 - 35	Q-Z(T) 24 - 35
1		-2.233	7.249	2.233	20.815	-3.588	20.799	-5.806
2		-6.178	55.888	6.178	57.571	5.456	57.513	-7.113
3	HA1 (+)	6.234	67.462	12.722	83.304	13.974	83.323	11.740
4	HA2 (+)	-12.722	-3.196	-6.234	-9.451	-8.614	-9.452	-12.311
5	(L=6) (+)	7.734	63.525	12.061	78.963	14.891	78.887	11.656
6	(L=11) (+)	-12.061	-13.561	-7.734	-28.764	-8.183	-28.735	-13.792
7	(L=16) (+)	11.472	78.043	13.700	83.987	22.814	83.905	14.816
8	(L=21) (+)	-16.169	-12.967	-11.472	-25.938	-7.319	-25.903	-14.617
9	(L=26) (+)	11.258	65.853	11.725	66.885	20.484	66.822	14.057
10	HB1 (+)	-12.253	-9.761	-11.258	-19.301	-8.500	-19.281	-12.370
11	HB2 (-)	11.238	65.520	10.672	63.487	20.465	63.427	14.510
12	T(L=6) + HB1 (+)	-1.585	-9.408	-11.238	-18.554	-6.513	-18.537	-12.175
13	T(L=11) + HB1 (+)	11.238	65.520	12.043	63.487	20.465	63.427	16.280
14	T(L=16) + HB1 (+)	-9.808	-9.126	-11.238	-22.045	-6.859	-22.031	-13.577
15	T(L=21) + HB1 (+)	11.238	65.520	12.615	63.487	20.465	63.427	14.516
16	T(L=26) + HB1 (+)	-10.356	-9.126	-11.238	-23.424	-5.543	-23.411	-11.549
17	T(L=6) + HB2 (+)	-3.443	19.257	3.443	32.092	-1.476	32.060	-3.281
18	T(L=11) + HB2 (+)	-2.429	14.051	2.429	22.636	-0.667	22.616	-3.426
19	T(L=16) + HB2 (+)	8.029	97.300	17.143	116.079	21.337	115.966	11.535
20	T(L=21) + HB2 (+)	-19.612	6.290	-8.029	6.154	-8.796	6.158	-17.899
21	T(L=26) + HB2 (+)	7.815	85.110	15.168	98.977	19.008	98.882	10.775
22	T(L=6) + HB1 (+)	-15.696	9.496	-7.815	12.791	-9.976	12.780	-15.652
23	T(L=11) + HB1 (+)	7.795	84.777	14.116	95.579	18.988	95.487	11.228
24	T(L=16) + HB1 (+)	-11.029	9.849	-7.795	13.538	-7.989	13.523	-15.456
25	T(L=21) + HB1 (+)	7.795	84.777	15.486	95.579	18.988	95.487	12.998
26	T(L=26) + HB1 (+)	-13.251	10.131	-7.795	10.047	-8.336	10.029	-16.858
27	T(L=6) + HB2 (+)	7.795	84.777	16.059	95.579	18.988	95.487	11.235
28	T(L=11) + HB2 (+)	-13.800	10.131	-7.795	8.668	-7.020	8.649	-14.831
29	T(L=16) + HB2 (+)	9.043	92.094	16.128	106.623	22.146	106.521	11.390
30	T(L=21) + HB2 (+)	-18.598	1.064	-9.043	-3.302	-7.987	-3.287	-18.044
31	T(L=26) + HB2 (+)	8.829	79.904	14.154	89.321	19.817	89.438	10.630
32	T(L=6) + HB1 (+)	-14.682	4.290	-8.829	3.335	-9.167	3.335	-15.797
33	T(L=11) + HB1 (+)	8.809	79.571	13.101	86.124	19.797	86.043	11.084
34	T(L=16) + HB1 (+)	-10.014	4.643	-8.809	4.083	-7.180	4.079	-15.601
35	T(L=21) + HB1 (+)	8.809	79.571	14.471	86.124	19.797	86.043	12.853
36	T(L=26) + HB1 (+)	-12.237	4.925	-8.809	0.591	-7.527	0.585	-17.005
37	T(L=6) + HB2 (+)	8.809	79.571	15.044	86.124	19.797	86.043	11.090
38	T(L=11) + HB2 (+)	-12.785	4.925	-8.809	-0.788	-6.211	-0.795	-14.976

NO.	LOAD NAME	M-Y(T,M) 35 - 24	Q-Z(T,T) 35 - 24	M-Y(T,M) 35 - 46	Q-Z(T,T) 35 - 46	M-Y(T,M) 46 - 35	Q-Z(T,T) 46 - 35	M-Y(T,M) 46 - 57
1		-3.108	4.452	-3.108	-4.452	-20.702	3.098	-20.686
2		-2.753	18.747	-2.753	-18.747	-117.245	30.381	-117.165
3	HA1	(+)	43.260	43.260	4.578	2.127	25.831	2.126
4	HA2	(-)	-4.467	-4.467	-17.415	-50.110	-1.718	-50.079
5	(L=6)	(+)	41.714	18.549	4.955	3.392	26.235	3.389
6	(L=11)	(-)	-36.200	-4.955	-18.549	-79.969	-2.200	-79.918
7	(L=16)	(+)	48.683	24.621	2.894	0.997	31.767	0.999
8	(L=21)	(-)	-42.626	-2.894	-24.621	-78.504	-3.232	-78.461
9	(L=26)	(+)	44.467	20.724	4.456	0.000	28.719	0.000
10	HB1	(-)	-29.994	-5.856	-20.904	-76.608	-2.242	-76.565
11	HB2	(+)	44.867	20.064	6.144	0.650	24.841	0.650
12	T(L=6) + HB1	(-)	-29.863	-6.144	-20.064	-64.478	-1.383	-64.435
13	T(L=11) + HB1	(+)	44.867	20.078	44.867	0.650	25.975	0.650
14	T(L=16) + HB1	(-)	-30.000	-1.210	-30.000	-64.378	-2.308	-64.336
15	T(L=21) + HB1	(+)	44.867	20.489	44.867	0.650	24.127	0.650
16	T(L=26) + HB1	(-)	-28.578	-1.145	-28.578	-57.855	-2.148	-57.820
17	T(L=6) + HB2	(+)	10.813	5.248	10.813	-16.864	6.628	-16.852
18	T(L=11) + HB2	(-)	1.172	1.172	1.172	-25.744	6.362	-25.725
19	T(L=16) + HB2	(+)	59.496	29.869	59.496	-15.867	38.395	-15.853
20	T(L=21) + HB2	(-)	-31.813	2.354	-31.813	-95.368	3.396	-95.313
21	T(L=26) + HB2	(+)	55.280	25.973	55.280	-16.864	35.346	-16.852
22		(-)	-19.182	-0.607	-19.182	-93.473	4.386	-93.418
23		(+)	55.679	25.315	55.679	-16.215	31.469	-16.202
24		(-)	-19.050	-0.896	-19.050	-81.342	5.245	-81.288
25		(+)	55.679	25.326	55.679	-16.215	32.603	-16.202
26		(-)	-19.187	4.039	-19.187	-81.242	4.320	-81.189
27		(+)	55.679	25.738	55.679	-16.215	30.755	-16.202
28		(-)	-17.765	4.103	-17.765	-74.720	4.480	-74.673
29		(+)	49.855	29.809	49.855	-24.746	38.129	-24.726
30		(-)	-41.554	2.294	-41.554	-104.247	3.130	-104.186
31		(+)	45.639	25.912	45.639	-25.744	35.080	-25.725
32		(-)	-28.822	-0.668	-28.822	-102.352	4.120	-102.291
33		(+)	46.038	25.252	46.038	-25.094	31.203	-25.075
34		(-)	-28.691	-0.957	-28.691	-90.221	4.979	-90.161
35		(+)	46.038	25.266	46.038	-25.094	32.336	-25.075
36		(-)	-28.828	3.978	-28.828	-90.121	4.054	-90.062
37		(+)	46.038	25.677	46.038	-25.094	30.489	-25.075
38		(-)	-27.406	4.043	-27.406	-83.599	4.214	-83.546

NO.	LOAD NAME	Q-Z ( T )		M-Y ( T, M )		Q-Z ( T )		M-Y ( T, M )		Q-Z ( T )	
		46	57	57	46	57	68	68	57	68	57
1		3.110	-3.032	-4.465	-3.032	4.465	20.935	-5.819	20.935	68	-57
2		30.445	-2.370	-18.811	-2.370	18.811	58.196	-7.177	58.196	68	-57
3	HA1	10.026	2.261	1.046	2.261	3.634	2.870	1.046	2.870	68	-57
4	HA2	26.269	36.510	-3.634	-36.510	4.964	-79.499	-3.634	-79.499	68	-57
5	(L=6)	-2.208	-36.147	-18.592	-36.147	4.964	-28.855	-13.847	-28.855	68	-57
6	(L=11)	31.820	48.984	4.048	48.984	21.410	84.510	17.982	84.510	68	-57
7	(L=16)	28.809	44.599	5.974	44.599	20.104	67.263	-13.009	67.263	68	-57
8	(L=21)	-2.254	-29.958	-20.278	-29.958	-5.974	-19.242	-12.364	-19.242	68	-57
9	(L=26)	24.830	44.967	7.562	44.967	16.295	63.843	15.985	63.843	68	-57
10	HB1	-1.379	-29.699	-16.295	-29.699	-7.562	-18.797	-12.138	-18.797	68	-57
11	HB2	25.984	44.967	7.619	44.967	17.459	63.843	17.721	63.843	68	-57
12	T(L=6) + HB1	-2.307	-29.944	-17.557	-29.944	-7.619	-21.731	-12.222	-21.731	68	-57
13	T(L=11) + HB1	24.140	44.967	7.621	44.967	16.261	63.843	17.467	63.843	68	-57
14	T(L=16) + HB1	-2.126	-28.576	-16.288	-28.576	-7.621	-23.157	-9.834	-23.157	68	-57
15	T(L=21) + HB1	5.165	-4.387	0.808	-13.086	0.808	-9.320	-0.808	-9.320	68	-57
16	T(L=26) + HB1	32.628	35.898	3.240	35.898	22.218	75.189	-2.817	75.189	68	-57
17	T(L=6) + HB2	-2.432	-55.682	-23.794	-55.682	-3.240	-35.651	-13.817	-35.651	68	-57
18	T(L=11) + HB2	29.617	31.513	5.166	31.513	20.912	57.942	13.586	57.942	68	-57
19	T(L=16) + HB2	-1.446	-43.044	-21.066	-43.044	-5.166	-28.562	-13.172	-28.562	68	-57
20	T(L=21) + HB2	25.638	31.880	6.754	31.880	17.103	54.523	15.177	54.523	68	-57
21	T(L=26) + HB2	-0.571	-42.785	-17.103	-42.785	-6.754	-28.117	-12.946	-28.117	68	-57
22	T(L=6) + HB2	26.792	31.880	6.811	31.880	18.267	54.523	16.913	54.523	68	-57
23	T(L=11) + HB2	-1.499	-43.030	-18.365	-43.030	-6.811	-31.051	-13.030	-31.051	68	-57
24	T(L=16) + HB2	24.948	31.880	6.813	31.880	17.069	54.523	16.659	54.523	68	-57
25	T(L=21) + HB2	-1.318	-41.663	-17.096	-41.663	-6.813	-32.477	-10.642	-32.477	68	-57
26	T(L=26) + HB2	36.985	44.597	0.057	44.597	25.401	95.990	15.164	95.990	68	-57
27	T(L=6) + HB2	1.925	-46.983	-26.978	-46.983	-0.057	-14.850	-15.826	-14.850	68	-57
28	T(L=11) + HB2	33.974	40.212	1.983	40.212	24.096	78.743	11.576	78.743	68	-57
29	T(L=16) + HB2	2.911	-34.345	-24.269	-34.345	-1.983	-7.761	-15.181	-7.761	68	-57
30	T(L=21) + HB2	29.995	40.580	3.571	40.580	20.286	75.324	13.167	75.324	68	-57
31	T(L=26) + HB2	3.786	-34.085	-20.286	-34.085	-3.571	-7.316	-14.955	-7.316	68	-57
32	T(L=6) + HB2	31.149	40.580	3.628	40.580	21.450	75.324	14.904	75.324	68	-57
33	T(L=11) + HB2	2.698	-34.331	-21.549	-34.331	-3.628	-10.250	-15.040	-10.250	68	-57
34	T(L=16) + HB2	29.305	40.580	3.629	40.580	20.252	75.324	14.649	75.324	68	-57
35	T(L=21) + HB2	3.039	-32.963	-20.279	-32.963	-3.629	-11.676	-12.651	-11.676	68	-57



NO.	LOAD NAME	M-Y(T,M) 68 - 79	Q-Z(T) 68 - 79	M-Y(T,M) 79 - 68	Q-Z(T) 79 - 68	M-Y(T,M) 79 - 90	Q-Z(T) 79 - 90	M-Y(T,M) 90 - 79
1		20.920	-3.598	7.305	2.244	7.305	-2.244	0.002
2		58.140	5.399	56.193	6.235	56.193	-6.235	0.018
3	HA1	2.867	2.673	1.434	0.308	1.434	2.673	0.000
4	HA2	-24.920	-0.308	-12.462	-2.673	-12.462	-0.308	-0.004
5	(L=6)	79.424	14.880	63.886	12.121	63.886	7.723	0.020
6	(L=11)	-28.826	-8.221	-13.646	-7.723	-13.646	-12.121	-0.005
7	(L=16)	84.432	20.229	78.468	19.220	78.468	6.080	0.025
8	(L=21)	-26.297	-11.036	-13.151	-6.080	-13.151	-17.932	-0.004
9	(L=26)	67.203	18.211	66.211	16.735	66.211	6.778	0.021
10	HB1	-19.221	-8.947	-9.758	-8.893	-9.758	-16.033	-0.003
11	HB2	63.785	19.268	65.876	15.887	65.876	5.687	0.021
12	T(L=6) + HB1	-18.786	-8.121	-9.469	-5.687	-9.469	-14.129	-0.003
13	T(L=11) + HB1	63.785	19.197	65.876	15.887	65.876	8.588	0.021
14	T(L=16) + HB1	-21.719	-9.201	-9.178	-6.405	-9.178	-14.129	-0.003
15	T(L=21) + HB1	63.785	18.463	65.876	13.887	65.876	6.265	0.021
16	T(L=26) + HB1	-23.146	-9.201	-9.178	-6.265	-9.178	-14.129	-0.003
17	T(L=6) + HB2	-9.308	0.998	-4.655	-0.998	-4.655	0.998	0.001
18	T(L=11) + HB2	11.472	-0.056	8.473	1.230	8.473	-1.230	0.003
19	T(L=16) + HB2	75.123	21.257	73.813	18.222	73.813	7.079	0.024
20	T(L=21) + HB2	-35.605	-10.038	-17.805	-7.079	-17.805	-16.933	-0.006
21	T(L=26) + HB2	57.894	19.209	61.557	15.737	61.557	7.777	0.019
22	T(L=6) + HB1	-28.529	-7.948	-14.412	-9.892	-14.412	-15.035	-0.005
23	T(L=11) + HB1	54.477	20.266	61.221	14.888	61.221	6.686	0.019
24	T(L=16) + HB1	-28.095	-7.122	-14.124	-6.686	-14.124	-13.130	-0.004
25	T(L=21) + HB1	54.477	20.195	61.221	14.888	61.221	9.586	0.019
26	T(L=26) + HB1	-31.027	-8.203	-13.833	-7.403	-13.833	-13.130	-0.004
27	T(L=6) + HB2	54.477	19.461	61.221	14.888	61.221	7.263	0.019
28	T(L=11) + HB2	-32.454	-8.203	-13.833	-7.263	-13.833	-13.130	-0.004
29	T(L=16) + HB2	95.903	20.202	86.941	20.450	86.941	4.850	0.028
30	T(L=21) + HB2	-14.826	-11.093	-4.678	-4.850	-4.678	-19.162	-0.001
31	T(L=26) + HB2	78.674	18.155	74.684	17.965	74.684	5.548	0.024
32	T(L=6) + HB1	-7.749	-9.003	-1.285	-7.663	-1.285	-17.264	-0.000
33	T(L=11) + HB1	75.257	19.211	74.348	17.117	74.348	4.457	0.024
34	T(L=16) + HB1	-7.315	-8.177	-0.996	-4.457	-0.996	-15.359	-0.000
35	T(L=21) + HB1	75.257	19.141	74.348	17.117	74.348	7.357	0.024
36	T(L=26) + HB1	-10.247	-9.258	-0.705	-5.174	-0.705	-15.359	-0.000
37	T(L=6) + HB2	75.257	18.408	74.348	17.117	74.348	5.035	0.024
38	T(L=11) + HB2	-11.674	-9.258	-0.705	-5.035	-0.705	-15.359	-0.000

\*\* UHURU BRIDGE \*\*

NO.	LOAD NAME	Q-ZC ( T ) 90 - 79	M-Y ( T, M ) 3 - 14	Q-ZC ( T ) 3 - 14	M-Y ( T, M ) 14 - 3	Q-ZC ( T ) 14 - 3	M-Y ( T, M ) 14 - 25	Q-ZC ( T ) 14 - 25
1		0.888	-0.003	2.344	8.074	-1.121	8.074	1.121
2		17.869	-0.019	17.735	55.534	-6.100	55.534	6.100
3	HA1	0.308	0.001	20.921	63.959	6.742	63.959	11.920
4	HA2	-2.673	-0.021	-0.795	-3.706	-11.920	-3.706	-6.742
5	L=6	20.280	0.004	19.640	60.137	8.052	60.137	11.294
6	(L=11)	-3.226	-0.021	-2.718	-12.664	-11.294	-12.664	-8.052
7	(L=16)	21.963	0.001	9.266	38.827	3.543	38.827	7.184
8	(L=21)	-2.820	-0.013	-2.282	-10.631	-7.184	-10.631	-3.543
9	(L=26)	25.379	0.003	6.597	27.012	2.980	27.012	4.868
10	HB1	-2.093	-0.009	-1.555	-7.244	-4.756	-7.244	-2.980
11	HB2	18.234	0.002	6.458	26.895	2.905	26.895	4.868
12	T(L=6) + HB1	-2.425	-0.009	-1.473	-6.862	-4.731	-6.862	-2.905
13	T(L=11) + HB1	20.855	0.002	6.458	26.895	2.905	26.895	4.868
14	T(L=16) + HB1	-4.658	-0.009	-1.473	-6.862	-4.731	-6.862	-2.905
15	T(L=21) + HB1	18.234	0.002	7.418	26.895	2.905	26.895	4.868
16	T(L=26) + HB1	-1.968	-0.009	-1.473	-6.862	-4.731	-6.862	-2.905
17	T(L=6) + HB2	-0.998	-0.011	10.717	31.040	-2.606	31.040	2.606
18	T(L=11) + HB2	2.404	0.007	8.762	24.746	1.859	24.746	1.859
19	T(L=16) + HB2	20.964	-0.007	19.983	69.867	0.938	69.867	9.789
20	T(L=21) + HB2	-3.819	-0.024	8.436	20.409	-9.789	20.409	-0.938
21	T(L=26) + HB2	24.381	0.008	17.314	58.052	0.375	58.052	7.473
22		-3.091	-0.020	9.163	23.797	-7.362	23.797	-0.375
23		17.236	0.008	17.175	57.935	0.299	57.935	7.473
24		-3.423	-0.020	9.245	24.178	-7.336	24.178	-0.299
25		19.837	0.006	17.175	57.935	0.299	57.935	7.974
26		-5.056	-0.020	9.245	24.178	-7.974	24.178	-0.299
27		17.236	0.008	18.135	57.935	0.299	57.935	7.473
28		-2.967	-0.020	9.245	24.178	-7.336	24.178	-0.299
29		24.367	0.005	18.028	63.573	1.684	63.573	9.043
30		-0.416	-0.022	6.481	14.115	-9.043	14.115	-1.684
31		27.784	0.006	15.359	51.758	1.121	51.758	6.727
32		0.312	-0.018	7.208	17.503	-6.615	17.503	-1.121
33		20.639	0.006	15.220	51.641	1.045	51.641	6.727
34		-0.030	-0.018	7.289	17.884	-6.590	17.884	-1.045
35		23.240	0.006	15.220	51.641	1.045	51.641	7.228
36		-2.253	-0.018	7.289	17.884	-7.228	17.884	-1.045
37		20.639	0.006	16.180	51.641	1.045	51.641	6.727
38		0.436	-0.018	7.289	17.884	-6.590	17.884	-1.045

NO.	LOAD NAME	M-Y(T,M)		G-Z(T)		M-Y(T,M)		G-Z(T)		M-Y(T,M)		G-Z(T)	
		25	14	25	14	25	36	36	25	36	25	36	25
1		10.452	0.101	10.442	-1.806	-0.825	3.028	-0.825	3.028	-0.825	3.028	-0.825	3.028
2		56.853	5.534	56.796	-6.898	-2.473	18.532	-2.473	18.532	-2.473	18.532	-2.473	18.532
3	HA1	74.745	14.980	74.673	13.017	41.524	16.445	41.524	16.445	41.524	16.445	41.524	16.445
4	HA2	-12.817	-7.539	-12.817	-11.045	-4.963	-5.116	-4.963	-5.116	-4.963	-5.116	-4.963	-5.116
5	(L=6)	70.606	15.663	70.539	12.791	39.724	17.663	39.724	17.663	39.724	17.663	39.724	17.663
6	(L=11)	-26.610	-7.146	-26.585	-12.596	-5.406	-5.406	-5.406	-5.406	-5.406	-5.406	-5.406	-5.406
7	(L=16)	61.186	3.474	61.124	1.980	23.385	11.524	23.385	11.524	23.385	11.524	23.385	11.524
8	(L=21)	-21.267	-6.369	-21.240	-10.937	-0.485	-0.485	-0.485	-0.485	-0.485	-0.485	-0.485	-0.485
9	(L=26)	41.022	4.571	40.982	2.349	16.670	8.087	16.670	8.087	16.670	8.087	16.670	8.087
10	HB1	-14.490	-5.792	-14.472	-8.607	-16.269	-0.752	-16.269	-0.752	-16.269	-0.752	-16.269	-0.752
11	HB2	41.022	4.495	40.982	2.210	16.433	8.168	16.433	8.168	16.433	8.168	16.433	8.168
12	T(L=6) + HB1	-13.726	-5.547	-13.710	-9.004	-15.935	-0.618	-15.935	-0.618	-15.935	-0.618	-15.935	-0.618
13	T(L=11) + HB1	41.022	4.495	40.982	2.497	16.433	8.732	16.433	8.732	16.433	8.732	16.433	8.732
14	T(L=16) + HB1	-13.726	-5.547	-13.710	-9.620	-15.948	-0.562	-15.948	-0.562	-15.948	-0.562	-15.948	-0.562
15	T(L=21) + HB1	24.280	8.961	24.247	6.184	18.061	5.383	18.061	5.383	18.061	5.383	18.061	5.383
16	T(L=26) + HB1	17.325	6.499	17.304	4.198	4.677	6.160	4.677	6.160	4.677	6.160	4.677	6.160
17	T(L=6) + HB2	85.466	14.435	85.322	8.164	41.446	16.907	41.446	16.907	41.446	16.907	41.446	16.907
18	T(L=11) + HB2	3.013	2.592	3.008	-4.754	-7.953	4.898	-7.953	4.898	-7.953	4.898	-7.953	4.898
19	T(L=16) + HB2	65.302	13.532	65.229	8.533	34.730	13.470	34.730	13.470	34.730	13.470	34.730	13.470
20	T(L=21) + HB2	9.790	3.169	9.776	-2.424	1.791	4.631	1.791	4.631	1.791	4.631	1.791	4.631
21	T(L=26) + HB2	65.302	13.456	65.229	8.393	34.494	13.551	34.494	13.551	34.494	13.551	34.494	13.551
22	T(L=6) + HB1	10.554	3.414	10.537	-2.820	2.125	4.765	2.125	4.765	2.125	4.765	2.125	4.765
23	T(L=11) + HB1	65.302	13.456	65.229	8.680	34.494	14.115	34.494	14.115	34.494	14.115	34.494	14.115
24	T(L=16) + HB1	10.554	3.915	10.537	-3.437	2.113	4.821	2.113	4.821	2.113	4.821	2.113	4.821
25	T(L=21) + HB1	65.302	13.456	65.229	8.593	34.494	13.747	34.494	13.747	34.494	13.747	34.494	13.747
26	T(L=26) + HB1	10.554	3.705	10.537	-2.901	2.125	4.821	2.125	4.821	2.125	4.821	2.125	4.821
27	T(L=6) + HB2	78.511	13.972	78.428	6.178	28.063	17.684	28.063	17.684	28.063	17.684	28.063	17.684
28	T(L=11) + HB2	-3.942	2.130	-3.936	-6.739	-21.336	5.675	-21.336	5.675	-21.336	5.675	-21.336	5.675
29	T(L=16) + HB2	58.347	13.069	58.285	6.347	21.347	14.247	21.347	14.247	21.347	14.247	21.347	14.247
30	T(L=21) + HB2	2.835	2.706	2.832	-4.409	-11.592	5.408	-11.592	5.408	-11.592	5.408	-11.592	5.408
31	T(L=26) + HB2	58.347	12.994	58.285	6.408	21.111	14.328	21.111	14.328	21.111	14.328	21.111	14.328
32	T(L=6) + HB1	3.598	2.951	3.594	-4.806	-11.258	5.542	-11.258	5.542	-11.258	5.542	-11.258	5.542
33	T(L=11) + HB1	58.347	12.994	58.285	6.695	21.111	14.892	21.111	14.892	21.111	14.892	21.111	14.892
34	T(L=16) + HB1	3.598	3.452	3.594	-5.422	-11.270	5.598	-11.270	5.598	-11.270	5.598	-11.270	5.598
35	T(L=21) + HB1	58.347	12.994	58.285	6.408	21.111	14.524	21.111	14.524	21.111	14.524	21.111	14.524
36	T(L=26) + HB1	3.598	3.243	3.594	-4.886	-11.258	5.598	-11.258	5.598	-11.258	5.598	-11.258	5.598