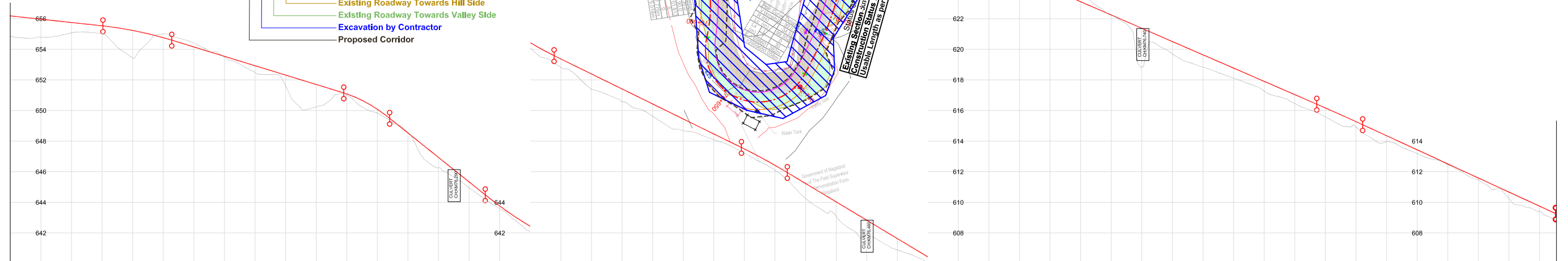
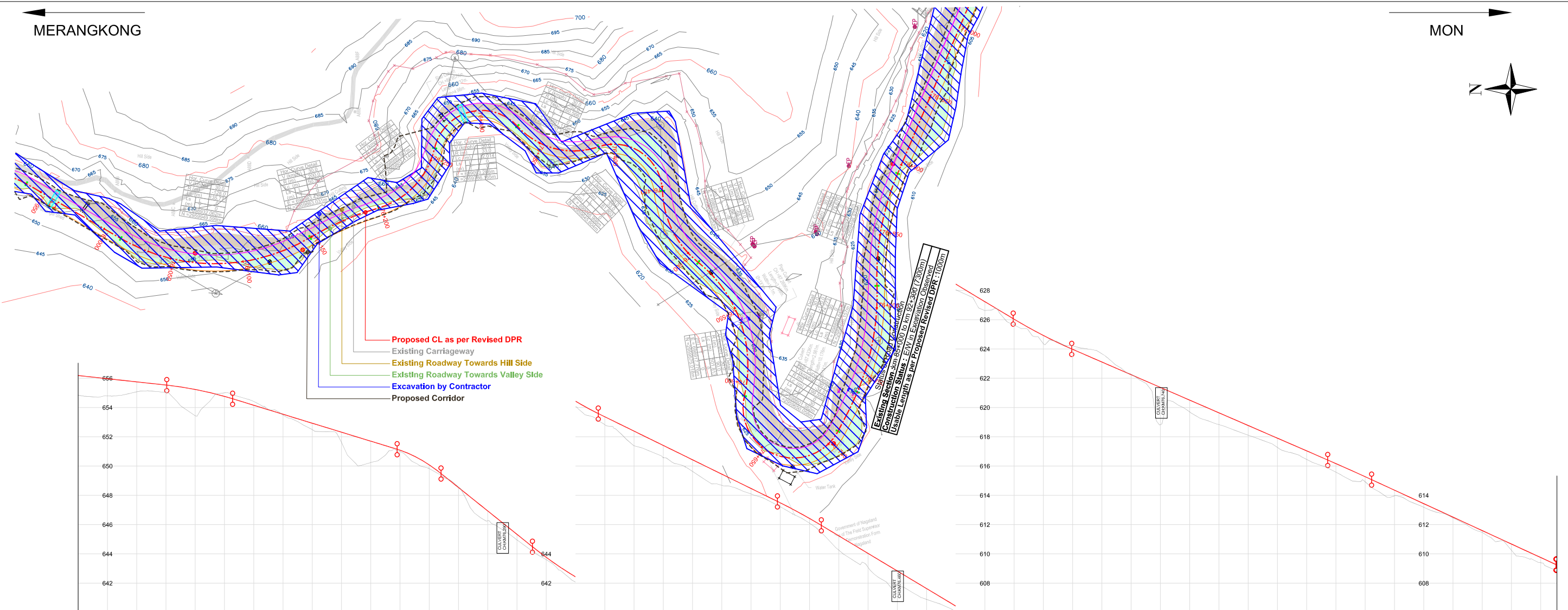




MERANGKONG

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PROPOSED LEVEL (FRL)	655.184	655.968	655.752	655.536	655.237	654.761	654.155	653.542	652.929	652.316	651.703	651.087	650.081	648.534	646.934	645.334	643.765	642.433	641.369	640.389	639.409	638.429	637.449	636.469	635.489	634.421	633.233	632.033	628.833	629.633	628.433	627.233	626.033	624.921	623.976	623.109	622.241	621.374	620.507	619.640	618.772	617.905	617.038	616.169	615.274	614.354	613.434	612.513	611.592	610.672	609.751
EXISTING LEVEL (NGL)	654.537	654.797	655.074	655.028	654.433	655.003	654.413	653.484	652.490	651.624	650.237	650.999	649.828	648.576	646.259	644.955	643.603	642.077	640.826	639.390	638.575	637.636	636.688	635.100	635.219	634.100	632.257	631.085	628.863	628.893	628.056	626.625	625.644	624.352	624.207	623.673	622.275	621.827	619.700	618.833	618.113	617.273	616.456	615.585	614.924	613.986	613.187	612.452	611.472	610.246	609.397
LEVEL DIFF. (FRL - NGL)	1.345	1.171	0.678	0.509	1.803	-0.242	-0.258	0.058	0.439	0.692	1.465	0.088	0.253	-0.042	0.675	0.378	0.162	0.355	0.543	1.000	0.834	0.794	0.762	0.369	0.269	0.322	0.975	0.947	0.969	0.740	0.377	0.608	0.390	0.570	-0.230	-0.564	-0.033	2.548	0.807	0.806	0.660	0.632	0.581	0.563	0.350	0.388	0.246	0.062	0.121	0.425	0.354
HORIZONTAL	R=128.0m L=135.8m		R=200.0m L=50.9m		R=55.0m L=58.8m		R=33.0m L=72.0m		R=52.0m L=60.6m		R=33.0m L=61.8m		R=65.0m L=56.4m		R=90.0m L=101.8m		R=34.5m L=99.6m		L=30.0m		R=170.0m L=74.3m		R=180.0m L=78.7m		L=128.7m																										
SUPERELEVATION	3.13%		2.50%		7.00%		7.00%		7.00%		7.00%		6.15%		4.44%		7.00%				2.50%		2.50%		2.50%																										
CURVE WIDENING	5.6		5.6		6.2		6.2		6.2		5.9		5.9		5.9		5.6				5.6		5.6		5.6																										
VERTICAL SCHEMATIC	5.2m L=45.0m		L=112.5m G=-3.1		L=30.0m G=-8.0		L=62.5m G=-4.9		L=45.0m G=-4.9		L=122.5m G=-4.9		L=30.0m G=-6.0		L=131.3m G=-6.0		L=40.0m G=-4.3				L=175.0m G=-4.3		L=30.0m G=-4.6		L=126.2m G=-4.6																										
WIDENING/IMPROVEMENT PROPOSAL	Widening on Right Side (Valley) with Geometric Improvement BC = 30mm, DBM = 50mm, WMM = 250mm, GSB = 150mm, SG = 500mm (CBR > 8% @ 97% of MDD)																																																		
CHAINAGE	76+000	76+020	76+040	76+060	76+080	76+100	76+120	76+140	76+160	76+180	76+200	76+220	76+240	76+260	76+280	76+300	76+320	76+340	76+360	76+380	76+400	76+420	76+440	76+460	76+480	76+500	76+520	76+540	76+560	76+580	76+600	76+620	76+640	76+660	76+680	76+700	76+720	76+740	76+760	76+780	76+800	76+820	76+840	76+860	76+880	76+900	76+920	76+940	76+960	76+980	77+000

Notes :  
1) All Levels are in m unless otherwise indicated.

Proposed CL :	Existing Road :
Proposed Edges :	Existing Hill :
Contours 20m Interval :	Existing Valley :
Contours 5m Interval :	Existing Hill Cutting Line :
Proposed Major Bridge :	Existing Hill Toe Line :
Proposed Minor Bridge :	Existing Valley Line :
Proposed Pipe Culvert :	Important Buildings :
Proposed Slab Culvert :	Other Buildings/Huts/Tile house :
Proposed Box Culvert :	Excavation by Contractor :

R0	Sep. 2017	Tender Drawings	NKM/RJ	HK	HK	NKS & SKB	Tapas Mukherjee
Revision	Date	Stage / Report	Topography	Designed	Drawn	Checked	Approved

Client : Ministry of Road Transport & Highways (Government of India)

Consultant : RITES LIMITED, RITES BHAWAN, Plot No. 1, Sector- 29, Gurgaon-122001

Project : Preparation of Revised Detailed Project Report and Verification of Executed Quantities/Items for Widening to 2 Lane of Merangkong-Tamlu-Mon Road, Changtongya-Longleng Road, Chakabama-Zunheboto Road & Pftusero-Phek Road under Phase 'A' of SARDP-NE in the State of Nagaland

Scale : Horizontal 0 50 100, Vertical 0 5 10

Title : ALIGNMENT PLAN & PROFILE : MERANGKONG TAMLU MON ROAD

Page No. : MTM - 77

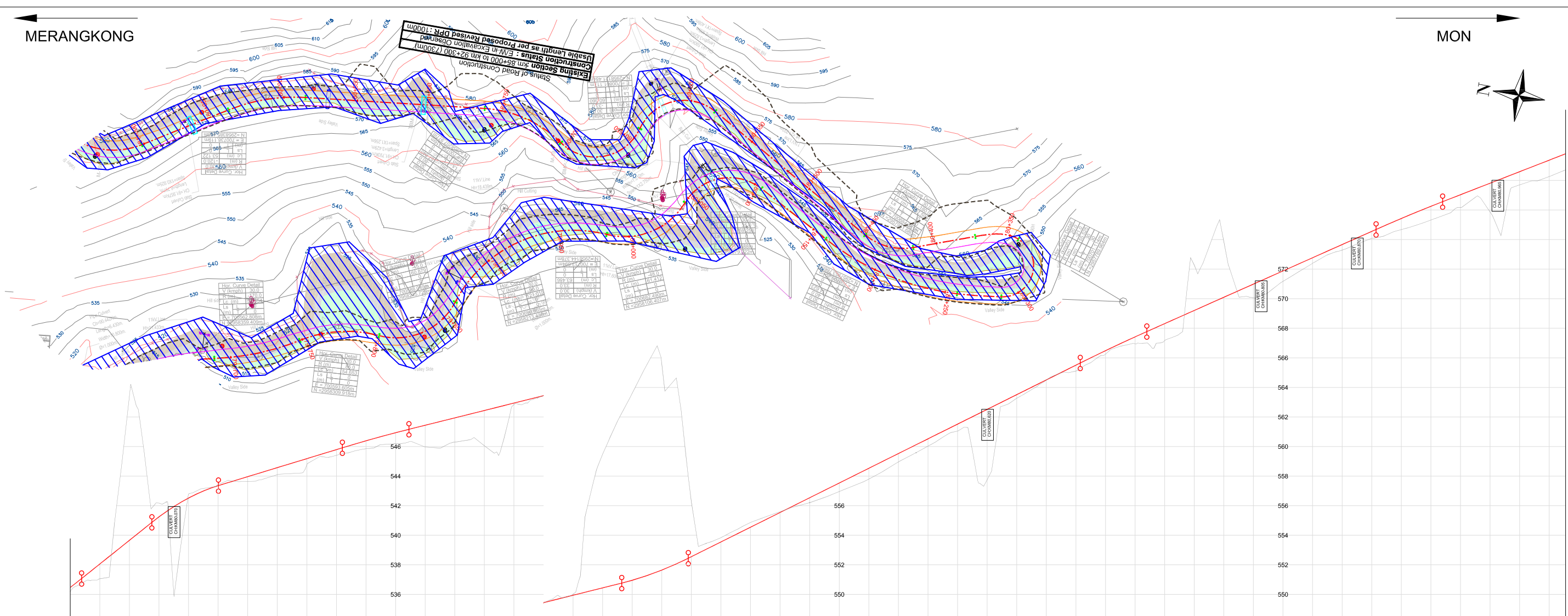






MERANGKONG

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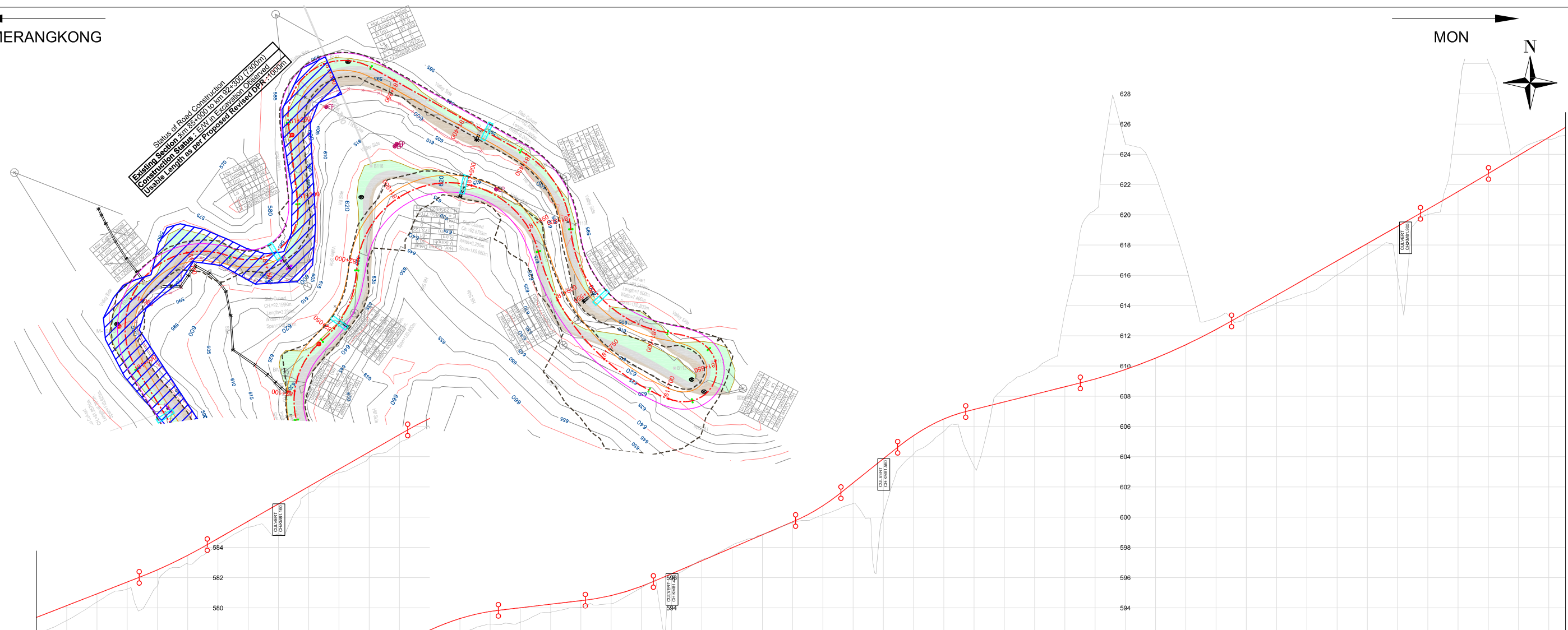
PROPOSED LEVEL (FRL)	535.493	538.055	538.655	541.242	542.517	543.352	543.963	544.573	545.184	545.794	546.389	546.936	547.441	547.941	548.441	548.941	549.441	549.941	550.441	550.954	551.463	551.971	552.477	552.980	553.485	553.990	554.494	554.997	555.500	556.003	556.506	557.009	557.512	558.015	558.518	559.021	559.524	560.027	560.530	561.033	561.536	562.039	562.542	563.045	563.548	564.051	564.554	565.057	565.560	566.063	566.566	567.069	567.572	568.075	568.578	569.081	569.584	570.087	570.590	571.093	571.596	572.099	572.602	573.105	573.608	574.111	574.614	575.117	575.620	576.123	576.626	577.129	577.632	578.135	578.638	579.141																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
EXISTING LEVEL (NGL)	535.493	537.056	538.619	541.182	542.745	543.308	543.871	544.434	544.997	545.560	546.123	546.686	547.249	547.812	548.375	548.938	549.501	550.064	550.627	551.190	551.753	552.316	552.879	553.442	554.005	554.568	555.131	555.694	556.257	556.820	557.383	557.946	558.509	559.072	559.635	560.198	560.761	561.324	561.887	562.450	563.013	563.576	564.139	564.702	565.265	565.828	566.391	566.954	567.517	568.080	568.643	569.206	569.769	570.332	570.895	571.458	572.021	572.584	573.147	573.710	574.273	574.836	575.399	575.962	576.525	577.088	577.651	578.214	578.777	579.340	579.903	580.466	581.029	581.592	582.155	582.718	583.281	583.844	584.407	584.970	585.533	586.096	586.659	587.222	587.785	588.348	588.911	589.474	590.037	590.600	591.163	591.726	592.289	592.852	593.415	593.978	594.541	595.104	595.667	596.230	596.793	597.356	597.919	598.482	599.045	599.608	600.171	600.734	601.297	601.860	602.423	602.986	603.549	604.112	604.675	605.238	605.801	606.364	606.927	607.490	608.053	608.616	609.179	609.742	610.305	610.868	611.431	611.994	612.557	613.120	613.683	614.246	614.809	615.372	615.935	616.498	617.061	617.624	618.187	618.750	619.313	619.876	620.439	621.002	621.565	622.128	622.691	623.254	623.817	624.380	624.943	625.506	626.069	626.632	627.195	627.758	628.321	628.884	629.447	630.010	630.573	631.136	631.699	632.262	632.825	633.388	633.951	634.514	635.077	635.640	636.203	636.766	637.329	637.892	638.455	639.018	639.581	640.144	640.707	641.270	641.833	642.396	642.959	643.522	644.085	644.648	645.211	645.774	646.337	646.900	647.463	648.026	648.589	649.152	649.715	650.278	650.841	651.404	651.967	652.530	653.093	653.656	654.219	654.782	655.345	655.908	656.471	657.034	657.597	658.160	658.723	659.286	659.849	660.412	660.975	661.538	662.101	662.664	663.227	663.790	664.353	664.916	665.479	666.042	666.605	667.168	667.731	668.294	668.857	669.420	669.983	670.546	671.109	671.672	672.235	672.798	673.361	673.924	674.487	675.050	675.613	676.176	676.739	677.302	677.865	678.428	678.991	679.554	680.117	680.680	681.243	681.806	682.369	682.932	683.495	684.058	684.621	685.184	685.747	686.310	686.873	687.436	687.999	688.562	689.125	689.688	690.251	690.814	691.377	691.940	692.503	693.066	693.629	694.192	694.755	695.318	695.881	696.444	697.007	697.570	698.133	698.696	699.259	699.822	700.385	700.948	701.511	702.074	702.637	703.200	703.763	704.326	704.889	705.452	706.015	706.578	707.141	707.704	708.267	708.830	709.393	709.956	710.519	711.082	711.645	712.208	712.771	713.334	713.897	714.460	715.023	715.586	716.149	716.712	717.275	717.838	718.401	718.964	719.527	720.090	720.653	721.216	721.779	722.342	722.905	723.468	724.031	724.594	725.157	725.720	726.283	726.846	727.409	727.972	728.535	729.098	729.661	730.224	730.787	731.350	731.913	732.476	733.039	733.602	734.165	734.728	735.291	735.854	736.417	736.980	737.543	738.106	738.669	739.232	739.795	740.358	740.921	741.484	742.047	742.610	743.173	743.736	744.299	744.862	745.425	745.988	746.551	747.114	747.677	748.240	748.803	749.366	749.929	750.492	751.055	751.618	752.181	752.744	753.307	753.870	754.433	754.996	755.559	756.122	756.685	757.248	757.811	758.374	758.937	759.500	760.063	760.626	761.189	761.752	762.315	762.878	763.441	764.004	764.567	765.130	765.693	766.256	766.819	767.382	767.945	768.508	769.071	769.634	770.197	770.760	771.323	771.886	772.449	773.012	773.575	774.138	774.701	775.264	775.827	776.390	776.953	777.516	778.079	778.642	779.205	779.768	780.331	780.894	781.457	782.020	782.583	783.146	783.709	784.272	784.835	785.398	785.961	786.524	787.087	787.650	788.213	788.776	789.339	789.902	790.465	791.028	791.591	792.154	792.717	793.280	793.843	794.406	794.969	795.532	796.095	796.658	797.221	797.784	798.347	798.910	799.473	800.036	800.599	801.162	801.725	802.288	802.851	803.414	803.977	804.540	805.103	805.666	806.229	806.792	807.355	807.918	808.481	809.044	809.607	810.170	810.733	811.296	811.859	812.422	812.985	813.548	814.111	814.674	815.237	815.800	816.363	816.926	817.489	818.052	818.615	819.178	819.741	820.304	820.867	821.430	821.993	822.556	823.119	823.682	824.245	824.808	825.371	825.934	826.497	827.060	827.623	828.186	828.749	829.312	829.875	830.438	831.001	831.564	832.127	832.690	833.253	833.816	834.379	834.942	835.505	836.068	836.631	837.194	837.757	838.320	838.883	839.446	840.009	840.572	841.135	841.698	842.261	842.824	843.387	843.950	844.513	845.076	845.639	846.202	846.765	847.328	847.891	848.454	849.017	849.580	850.143	850.706	851.269	851.832	852.395	852.958	853.521	854.084	854.647	855.210	855.773	856.336	856.899	857.462	858.025	858.588	859.151	859.714	860.277	860.840	861.403	861.966	862.529	863.092	863.655	864.218	864.781	865.344	865.907	866.470	867.033	867.596	868.159	868.722	869.285	869.848	870.411	870.974	871.537	872.100	872.663	873.226	873.789	874.352	874.915	875.478	876.041	876.604	877.167	877.730	878.293	878.856	879.419	879.982	880.545	881.108	881.671	882.234	882.797	883.360	883.923	884.486	885.049	885.612	886.175	886.738	887.301	887.864	888.427	888.990	889.553	890.116	890.679	891.242	891.805	892.368	892.931	893.494	894.057	894.620	895.183	895.746	896.309	896.872	897.435	897.998	898.561	899.124	899.687	900.250	900.813	901.376	901.939	902.502	903.065	903.628	904.191	904.754	905.317	905.880	906.443	907.006	907.569	908.132	908.695	909.258	909.821	910.384	910.947	911.510	912.073	912.636	913.199	913.762	914.325	914.888	915.451	916.014	916.577	917.140	917.703	918.266	918.829	919.392	919.955	920.518	921.081	921.644	922.207	922.770	923.333	923.896	924.459	925.022	925.585	926.148	926.711	927.274	927.837	928.400	928.963	929.526	930.089	930.652	931.215	931.778	932.341	932.904	933.467	934.030	934.593	935.156	935.719	936.282	936.845	937.408	937.971	938.534	939.097	939.660	940.223	940.786	941.349	941.912	942.475	943.038	943.601	944.164	944.727	945.290	945.853	946.416	946.979	947.542	948.105	948.668	949.231	949.794	950.357	950.920	951.483	952.046	952.609	953.172	953.735	954.298	954.861	955.424	955.987	956.550	957.113	957.676	958.239	958.802	959.365	959.928	960.491	961.054	961.617	962.180	962.743	963.306	963.869	964.432	964.995	965.558	966.121	966.684	967.247	967.810	968.373	968.936	969.499	970.062	970.625	971.188	971.751	972.314	972.877	973.440	974.003	974.566	975.129	975.692	976.255	976.818	977.381	977.944	978.507	979.070	979.633	980.196	980.759	981.322	981.885	982.448	983.011	983.574	984.137	984.700	985.263	985.826	986.389	986.952	987.515	988.078	988.641	989.204	989.767	990.330	990.893	991.456	992.019	992.582	993.145	993.708	994.271	994.834	995.397	995.960	996.523	997.086	997.649	998.212	998.775	999.338	999.901	1000.464	1001.027	1001.590	1002.153	1002.716	1003.279	1003.842	1004.405	1004.968	1005.531	1006.094	1006.657	1007.220	1007.783	1008.346	1008.909	1009.472	1010.035	1010.598	1011.161	1011.724	1012.287	1012.850	1013.413	1013.976	1014.539	1015.102	1015.665	1016.228	1016.791	1017.354	1017.917	1018.480	1019.043	1019.606	1020.169	1020.732	1021.295	1021.858	1022.421	1022.984	1023.547	1024.110	1024.673	1025.236	1025.799	1026.362	1026.925	1027.488	1028.051	1028.614	1029.177	1029.740	1030.303	1030.866	1031.429	1031.992	1032.555	1033.118	1033.681	1034.244	1034.807	1035.370	1035.933	1036.496	1037.059	1037.622	1038.185	1038.748	1039.311	1039.874	1040.437	1041.000	1041.563	1042.126	1042.689	1043.252	1043.815	1044.378	1044.941	1045.504	1046.067	1046.630	1047.193	1047.756	1048.319	1048.882	1049.445	1050.008	1050.571	1051.134	1051.697	1052.260	1052.823	1053.386	1053.949	1054.512	1055.075	1055.638	1056.201	1056.764	1057.327	1057.890	1058.453	1059.016	1059.579

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Status of Road Construction  
Existing Section: km 25.000 to km 27.500 (2500m)  
Construction Status: E/W / Excavation Observed  
Usable Length as per Proposed Revised DPR: 1000m



PROPOSED LEVEL (FRL)	575.371	580.150	580.930	581.709	582.518	583.476	584.587	585.732	586.878	588.023	589.168	590.313	591.458	592.523	593.295	593.764	594.010	594.245	594.479	594.815	595.337	595.425	596.262	597.120	597.979	598.837	599.696	600.756	602.267	603.867	605.399	606.497	607.125	607.825	608.125	608.625	609.140	610.521	611.404	612.414	613.537	614.677	615.817	616.957	618.097	619.237	620.378	621.538	622.724	623.924	625.124																		
EXISTING LEVEL (NGL)	575.285	579.166	580.393	581.246	581.449	582.913	584.203	585.335	584.886	587.603	588.933	589.954	590.925	591.896	592.434	592.925	593.054	593.713	594.245	594.029	594.815	595.337	596.148	597.190	598.145	598.857	599.632	600.158	600.899	602.267	603.202	604.174	605.399	605.679	606.345	607.125	608.567	608.744	608.125	613.551	608.625	620.339	609.140	624.710	609.767	610.521	622.649	616.644	611.404	613.188	613.348	613.537	614.162	614.821	615.817	616.028	616.957	617.352	618.097	619.237	620.019	620.378	621.538	622.724	630.110	624.202	623.924	624.956	625.124
LEVEL DIFF. (FRL - NGL)	1.105	0.984	0.537	0.463	1.068	0.563	0.385	0.397	1.989	0.420	0.234	0.359	0.534	0.627	0.862	0.840	0.955	0.532	0.451	0.537	0.089	0.113	-0.069	-0.167	-0.020	0.064	0.598	1.369	3.666	1.226	0.819	3.780	-0.942	-1.618	-4.926	-11.199	-14.943	-12.128	-5.241	-0.753	0.190	0.515	0.997	0.930	0.745	3.230	0.360	-5.777	-7.385	-0.278	0.168																		
HORIZONTAL	R=51.0m L=127.4m		R=33.0m L=67.9m		L=54.1m		R=37.0m L=61.3m		L=113.3m		R=65.0m L=63.9m		R=75.0m L=101.2m		L=30.0m R=21.0m L=43.0m L=30.0m		R=145.0m L=120.8m		R=61.1m L=173.1m																																																		
SUPERELEVATION	7.00%		7.00%		2.50%		7.00%		2.50%		6.15%		5.33%		7.00%		2.76%		6.55%																																																		
CURVE WIDENING	6.2		6.5		6.5		6.5		5.9		6.5		5.6																																																								
VERTICAL SCHEMATIC	L=45.0m		G=5.7		L=60.0m		G=1.2		L=45.0m		G=4.3		L=30.0m		G=8.0		L=45.0m		L=75.8m		L=100.0m		G=5.7		L=124.9m		L=45.0m																																										
WIDENING/IMPROVEMENT PROPOSAL	Widening on Left Side (Valley) with Geometric Improvement												Widening on Left Side (Hill) with Geometric Improvement												Widening on Right Side (Valley) with Geometric Improvement																																												
CHAINAGE	81+000	81+020	81+040	81+060	81+080	81+100	81+120	81+140	81+160	81+180	81+200	81+220	81+240	81+260	81+280	81+300	81+320	81+340	81+360	81+380	81+400	81+420	81+440	81+460	81+480	81+500	81+520	81+540	81+560	81+580	81+600	81+620	81+640	81+660	81+680	81+700	81+720	81+740	81+760	81+780	81+800	81+820	81+840	81+860	81+880	81+900	81+920	81+940	81+960	81+980	82+000																		

Notes :  
1) All Levels are in m unless otherwise indicated.

Proposed CL :	Existing Road :
Proposed Edges :	Existing Hill :
Contours 20m Interval :	Existing Valley :
Contours 5m Interval :	Existing Hill Cutting Line :
Proposed Major Bridge :	Existing Hill Toe Line :
Proposed Minor Bridge :	Existing Valley Line :
Proposed Pipe Culvert :	Important Buildings :
Proposed Slab Culvert :	Other Buildings/Huts/Tile house :
Proposed Box Culvert :	Excavation by Contractor :

R0	Sep. 2017	Tender Drawings	NKM/RJ	HK	HK	NKS & SKB	Tapas Mukherjee
Revision	Date	Stage / Report	Topography	Designed	Drawn	Checked	Approved

Client : Ministry of Road Transport & Highways (Government of India)

Consultant : RITES LIMITED, RITES BHAWAN, Plot No. 1, Sector- 29, Gurgaon-122001

Project : Preparation of Revised Detailed Project Report and Verification of Executed Quantities/Items for Widening to 2 Lane of Merangkong-Tamlu-Mon Road, Changtongya-Longleng Road, Chakabama-Zunheboto Road & Pftusero-Phek Road under Phase 'A' of SARDP-NE in the State of Nagaland

Scale : Horizontal 0 50 100, Vertical 0 5 10

Title : ALIGNMENT PLAN & PROFILE : MERANGKONG TAMLU MON ROAD

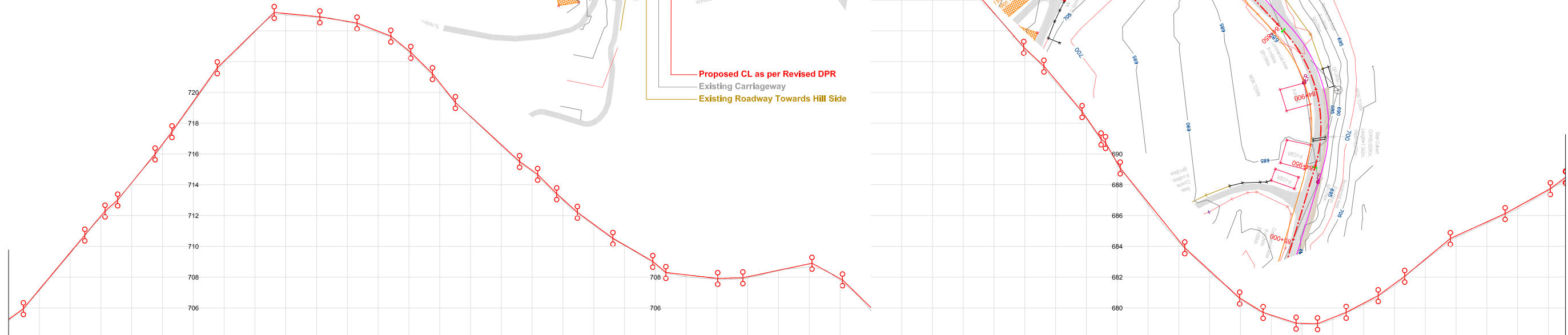
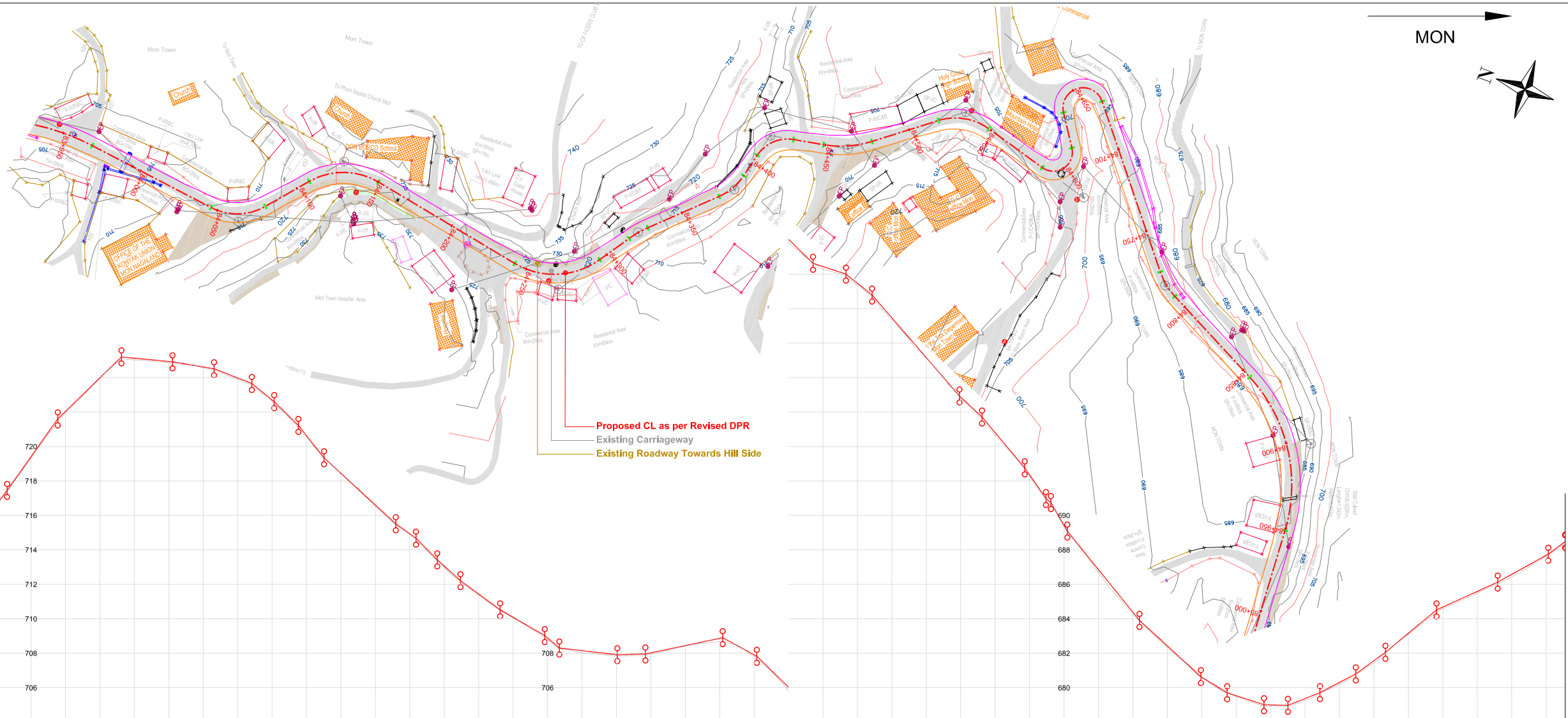
Page No. : MTM - 82





MERANGKONG

MON



PROPOSED LEVEL (FRL)	705.174	705.263	707.196	707.196	709.593	709.593	711.979	711.979	714.136	714.136	716.643	716.643	719.408	719.408	722.035	722.035	723.979	723.979	725.123	725.123	724.929	724.929	724.613	724.613	723.975	723.975	722.700	722.700	720.624	720.624	718.439	718.439	716.600	716.600	714.932	714.932	713.053	713.053	711.433	711.433	710.084	710.084	708.884	708.884	708.149	708.149	707.918	707.918	707.918	707.918	708.025	708.025	708.445	708.445	708.866	708.866	707.905	707.905	706.022	706.022	704.444	704.444	703.473	703.473	701.467	701.467	699.159	699.159	696.866	696.866	694.803	694.803	692.353	692.353	689.425	689.425	686.855	686.855	684.380	684.380	682.426	682.426	680.610	680.610	679.535	679.535	679.001	679.001	679.370	679.370	680.306	680.306	681.570	681.570	683.161	683.161	684.679	684.679	685.588	685.588	686.576	686.576	687.680	687.680
EXISTING LEVEL (NGL)	705.174	707.127	707.196	709.521	709.593	711.867	711.979	714.152	714.136	716.560	716.643	719.317	719.408	721.939	722.035	723.947	723.979	725.030	725.123	724.859	724.929	724.688	724.613	723.886	723.975	722.607	722.700	720.520	720.624	718.414	718.439	716.515	716.600	714.849	714.932	712.995	713.053	711.370	711.433	710.047	710.084	708.803	708.884	708.032	708.149	707.857	707.918	707.953	708.025	708.415	708.445	708.651	708.866	707.805	707.905	705.837	706.022	704.295	704.444	703.355	703.473	701.352	701.467	699.111	699.159	696.816	696.866	694.671	694.803	692.275	692.353	689.348	689.425	686.679	686.855	684.277	684.380	682.332	682.426	680.564	680.610	679.482	679.535	678.934	679.001	679.256	679.370	680.206	680.306	681.439	681.570	683.105	683.161	684.570	684.679	685.488	685.588	686.439	686.576	687.612	687.680			
LEVEL DIFF. (FRL - NGL)	0.079	0.069	0.069	0.071	0.071	0.112	0.112	-0.016	-0.016	0.082	0.082	0.091	0.091	0.097	0.097	0.032	0.032	0.093	0.093	0.069	0.069	0.046	0.046	0.090	0.090	0.093	0.093	0.104	0.104	0.025	0.025	0.086	0.086	0.082	0.082	0.059	0.059	0.064	0.064	0.036	0.036	0.080	0.080	0.117	0.117	0.062	0.062	0.072	0.072	0.030	0.030	0.214	0.214	0.099	0.099	0.185	0.185	0.148	0.148	0.118	0.118	0.115	0.115	0.047	0.047	0.050	0.050	0.133	0.133	0.078	0.078	0.076	0.076	0.176	0.176	0.103	0.103	0.094	0.094	0.046	0.046	0.053	0.053	0.067	0.067	0.114	0.114	0.100	0.100	0.131	0.131	0.056	0.056	0.109	0.109	0.101	0.101	0.137	0.137	0.069	0.069			
HORIZONTAL	Mon Town																																																																																																							
SUPERELEVATION																																																																																																								
CURVE WIDENING																																																																																																								
VERTICAL SCHEMATIC	Mon Town																																																																																																							
WIDENING/IMPROVEMENT PROPOSAL	No Geometric Improvement BC = 30mm , DBM = 50mm																				No Geometric Improvement BC = 30mm , DBM = 50mm																																																																																			
CHAINAGE	84+000	84+020	84+040	84+060	84+080	84+100	84+120	84+140	84+160	84+180	84+200	84+220	84+240	84+260	84+280	84+300	84+320	84+340	84+360	84+380	84+400	84+420	84+440	84+460	84+480	84+500	84+520	84+540	84+560	84+580	84+600	84+620	84+640	84+660	84+680	84+700	84+720	84+740	84+760	84+780	84+800	84+820	84+840	84+860	84+880	84+900	84+920	84+940	84+960	84+980	85+000																																																					

Notes :  
1) All Levels are in m unless otherwise indicated.

Proposed CL :	Existing Road :
Proposed Edges :	Existing Hill :
Contours 20m Interval :	Existing Valley :
Contours 5m Interval :	Existing Hill Cutting Line :
Proposed Major Bridge :	Existing Hill Toe Line :
Proposed Minor Bridge :	Existing Valley Line :
Proposed Pipe Culvert :	Important Buildings :
Proposed Slab Culvert :	Other Buildings/Huts/Tile house :
Proposed Box Culvert :	Excavation by Contractor :

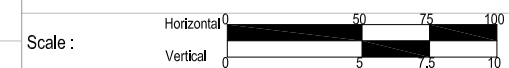
R0	Sep. 2017	Tender Drawings	NKM/RJ	HK	HK	NKS & SKB	Tapas Mukherjee
Revision	Date	Stage / Report	Topography	Designed	Drawn	Checked	Approved

Client : Ministry of Road Transport & Highways (Government of India)

Consultant : RITES LIMITED, RITES BHAWAN,  
Plot No. 1, Sector- 29, Gurgaon-122001



Project : Preparation of Revised Detailed Project Report and Verification of Executed Quantities/Items for Widening to 2 Lane of Merangkong-Tamlu-Mon Road, Changtongya-Longleng Road, Chakabama-Zunheboto Road & Pftusero-Phek Road under Phase 'A' of SARDP-NE in the State of Nagaland

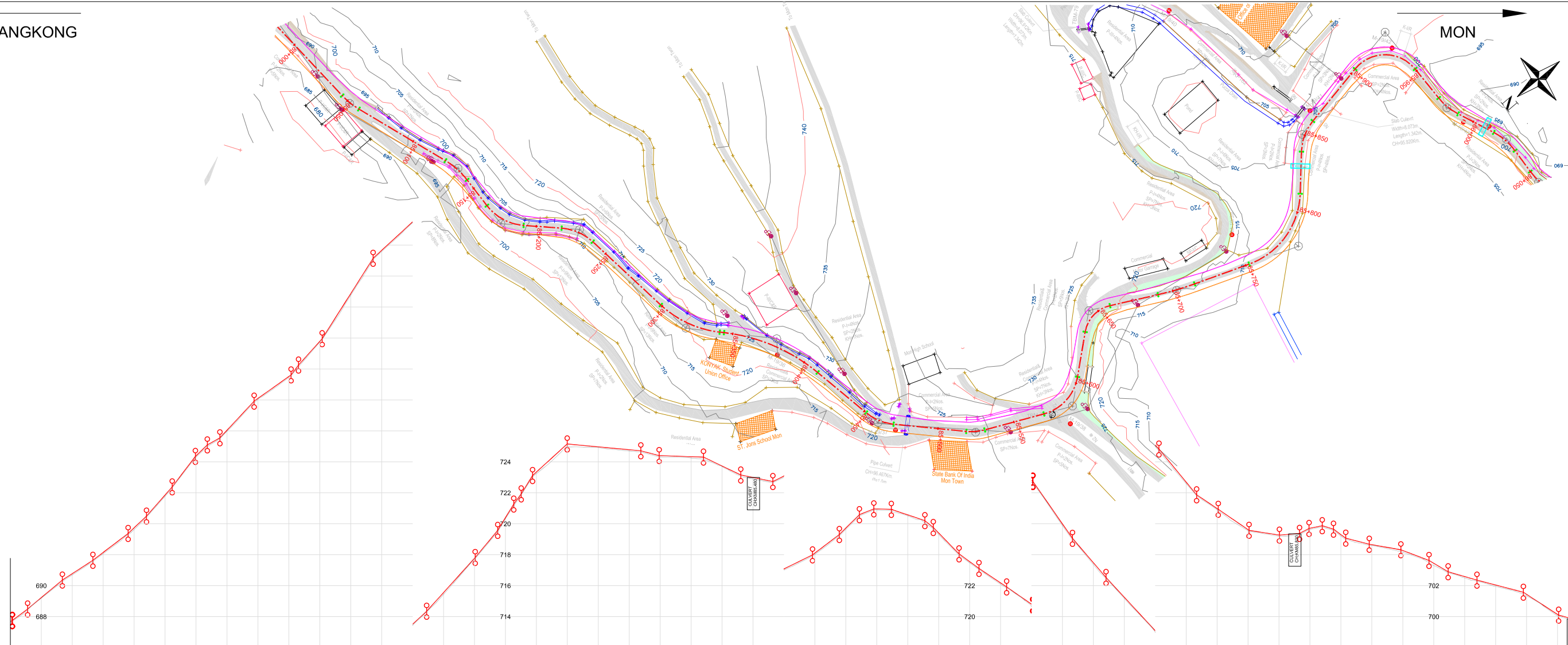


Title : ALIGNMENT PLAN & PROFILE :  
MERANGKONG TAMLU MON ROAD

Page No. :  
MTM - 85

MERANGKONG

MON



PROPOSED LEVEL (FRL)	687.980	689.226	690.775	692.145	693.739	695.868	698.387	700.039	702.094	703.513	705.785	708.870	711.661	713.508	715.555	717.768	720.390	723.341	725.155	724.969	724.784	724.404	724.335	723.731	722.990	723.082	724.104	725.720	726.956	726.575	725.402	723.555	722.179	720.802	717.893	717.992	715.483	713.251	711.089	708.691	706.985	706.620	705.270	705.709	705.300	704.649	704.272	703.449	702.588	701.954	702.043	701.344	701.442	700.055	700.142
EXISTING LEVEL (NGL)	687.974	689.193	690.691	692.060	693.621	695.774	698.307	699.968	702.028	703.434	705.728	708.763	711.585	713.446	715.435	717.712	720.321	723.234	725.037	724.935	724.701	724.322	724.335	723.688	722.896	723.001	724.022	725.635	726.883	726.511	725.301	723.473	722.097	720.675	717.893	717.893	715.369	713.173	711.001	708.595	706.908	706.545	705.192	705.632	705.210	704.591	704.159	703.304	702.499	701.954	702.043	701.344	701.442	700.055	700.142
LEVEL DIFF. (FRL - NGL)	0.006	0.034	0.085	0.085	0.119	0.093	0.080	0.071	0.065	0.078	0.057	0.106	0.075	0.062	0.121	0.057	0.068	0.107	0.117	0.034	0.083	0.082	0.083	0.043	0.094	0.080	0.082	0.085	0.073	0.063	0.101	0.083	0.082	0.128	0.109	0.113	0.078	0.089	0.096	0.077	0.075	0.078	0.076	0.091	0.057	0.113	0.144	0.089	0.090	0.097	0.087				
HORIZONTAL	Mon Town																																																						
SUPERELEVATION																																																							
CURVE WIDENING																																																							
VERTICAL SCHEMATIC	Mon Town																																																						
WIDENING/IMPROVEMENT PROPOSAL	No Geometric Improvement BC = 30mm , DBM = 50mm																				No Geometric Improvement BC = 30mm , DBM = 50mm																																		
CHAINAGE	85+000	85+020	85+040	85+060	85+080	85+100	85+120	85+140	85+160	85+180	85+200	85+220	85+240	85+260	85+280	85+300	85+320	85+340	85+360	85+380	85+400	85+420	85+440	85+460	85+480	85+500	85+520	85+540	85+560	85+580	85+600	85+620	85+640	85+660	85+680	85+700	85+720	85+740	85+760	85+780	85+800	85+820	85+840	85+860	85+880	85+900	85+920	85+940	85+960	85+980	86+000				

Notes :  
1) All Levels are in m unless otherwise indicated.

Proposed CL :	Existing Road :
Proposed Edges :	Existing Hill :
Contours 20m Interval :	Existing Valley :
Contours 5m Interval :	Existing Hill Cutting Line :
Proposed Major Bridge :	Existing Hill Toe Line :
Proposed Minor Bridge :	Existing Valley Line :
Proposed Pipe Culvert :	Important Buildings :
Proposed Slab Culvert :	Other Buildings/Huts/Tile house :
Proposed Box Culvert :	Excavation by Contractor :

R0	Sep. 2017	Tender Drawings	NKM/RJ	HK	HK	NKS & SKB	Tapas Mukherjee
Revision	Date	Stage / Report	Topography	Designed	Drawn	Checked	Approved

Client : Ministry of Road Transport & Highways (Government of India)

Consultant : RITES LIMITED, RITES BHAWAN, Plot No. 1, Sector- 29, Gurgaon-122001

Project : Preparation of Revised Detailed Project Report and Verification of Executed Quantities/Items for Widening to 2 Lane of Merangkong-Tamlu-Mon Road, Changtongya-Longleng Road, Chakabama-Zunheboto Road & Pftusero-Phek Road under Phase 'A' of SARDP-NE in the State of Nagaland

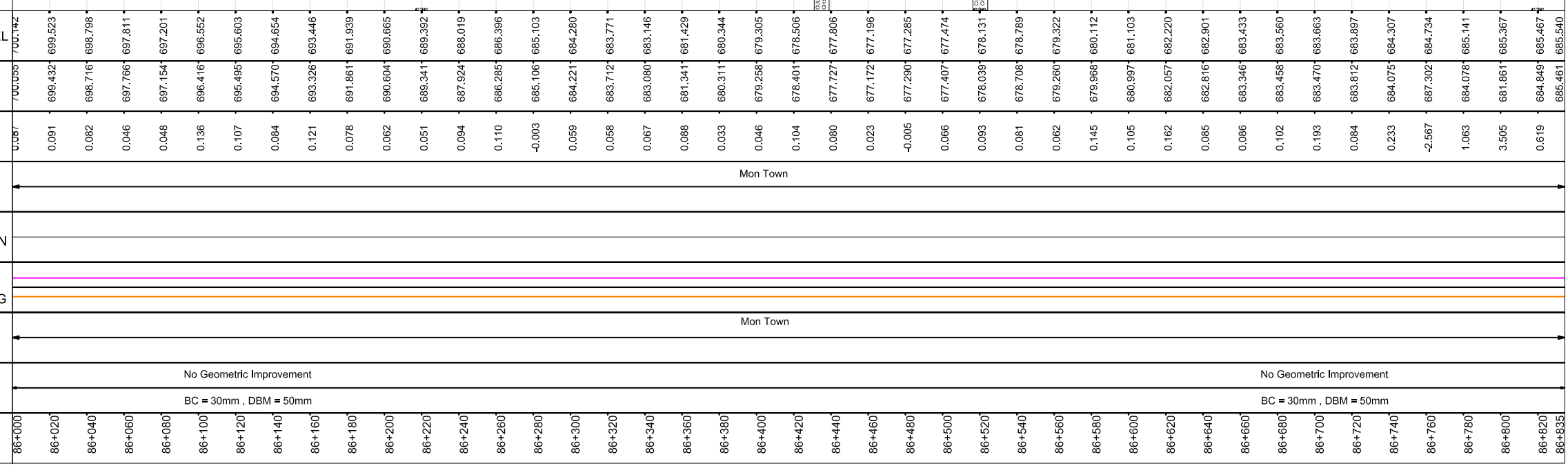
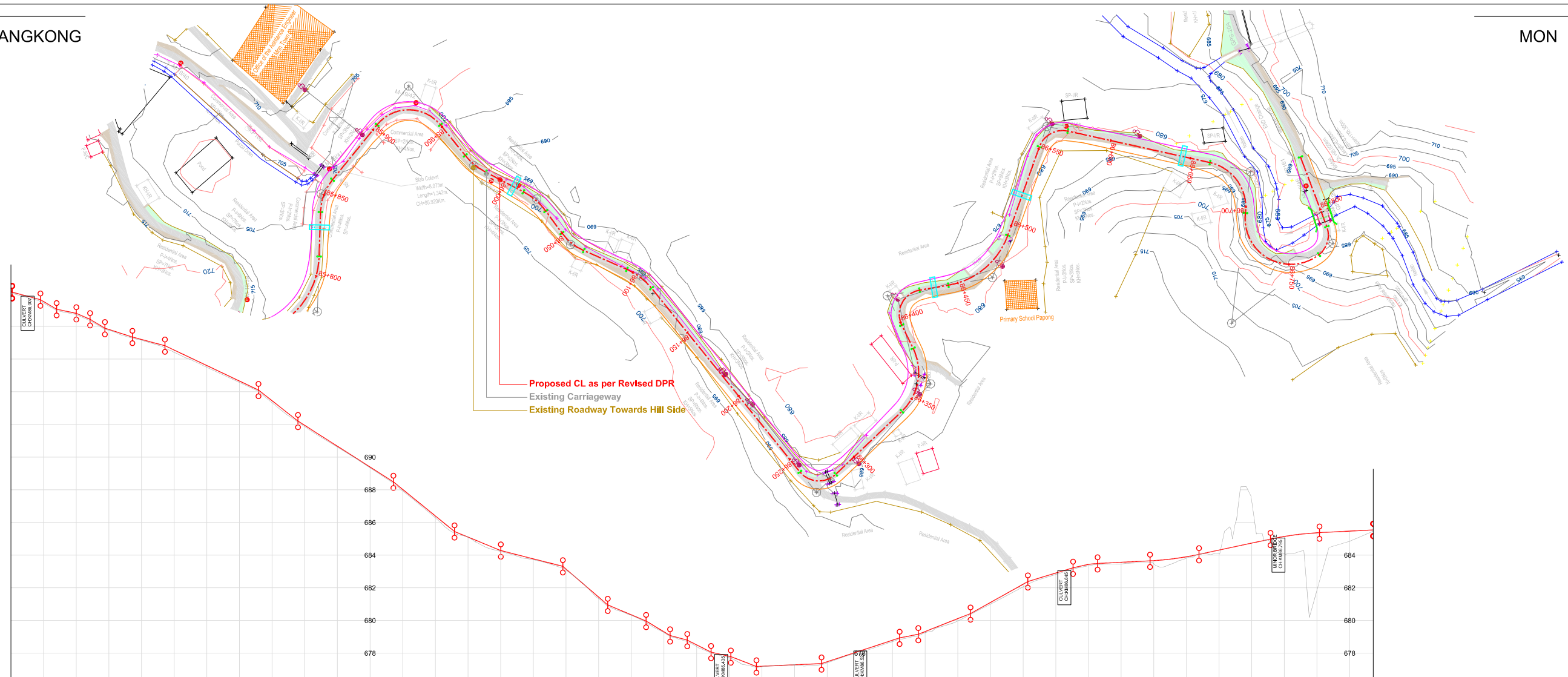
Scale : Horizontal 0 50 100, Vertical 0 5 10

Title : ALIGNMENT PLAN & PROFILE : MERANGKONG TAMLU MON ROAD

Page No. : MTM - 86

MERANGKONG

MON



Notes :  
1) All Levels are in m unless otherwise indicated.

Legend :	
Proposed CL :	Existing Road :
Proposed Edges :	Existing Hill :
Contours 20m Interval :	Existing Valley :
Contours 5m Interval :	Existing Hill Cutting Line :
Proposed Major Bridge :	Existing Hill Toe Line :
Proposed Minor Bridge :	Existing Valley Line :
Proposed Pipe Culvert :	Important Buildings :
Proposed Slab Culvert :	Other Buildings/Huts/Tile house :
Proposed Box Culvert :	Excavation by Contractor :

Revision	Date	Stage / Report	Topography	Designed	Drawn	Checked	Approved
R0	Sep. 2017	Tender Drawings	NKM/RJ	HK	HK	NKS & SKB	Tapas Mukherjee

Client : Ministry of Road Transport & Highways (Government of India)

Consultant : RITES LIMITED, RITES BHAWAN,  
Plot No. 1, Sector- 29, Gurgaon-122001



Project : Preparation of Revised Detailed Project Report and Verification of Executed Quantities/Items for Widening to 2 Lane of Merangkong-Tamlu-Mon Road, Changtongya-Longleng Road, Chakabama-Zunheboto Road & Pftusero-Phek Road under Phase 'A' of SARDP-NE in the State of Nagaland



Title : ALIGNMENT PLAN & PROFILE :  
MERANGKONG TAMLU MON ROAD


Page No. :  
MTM - 87

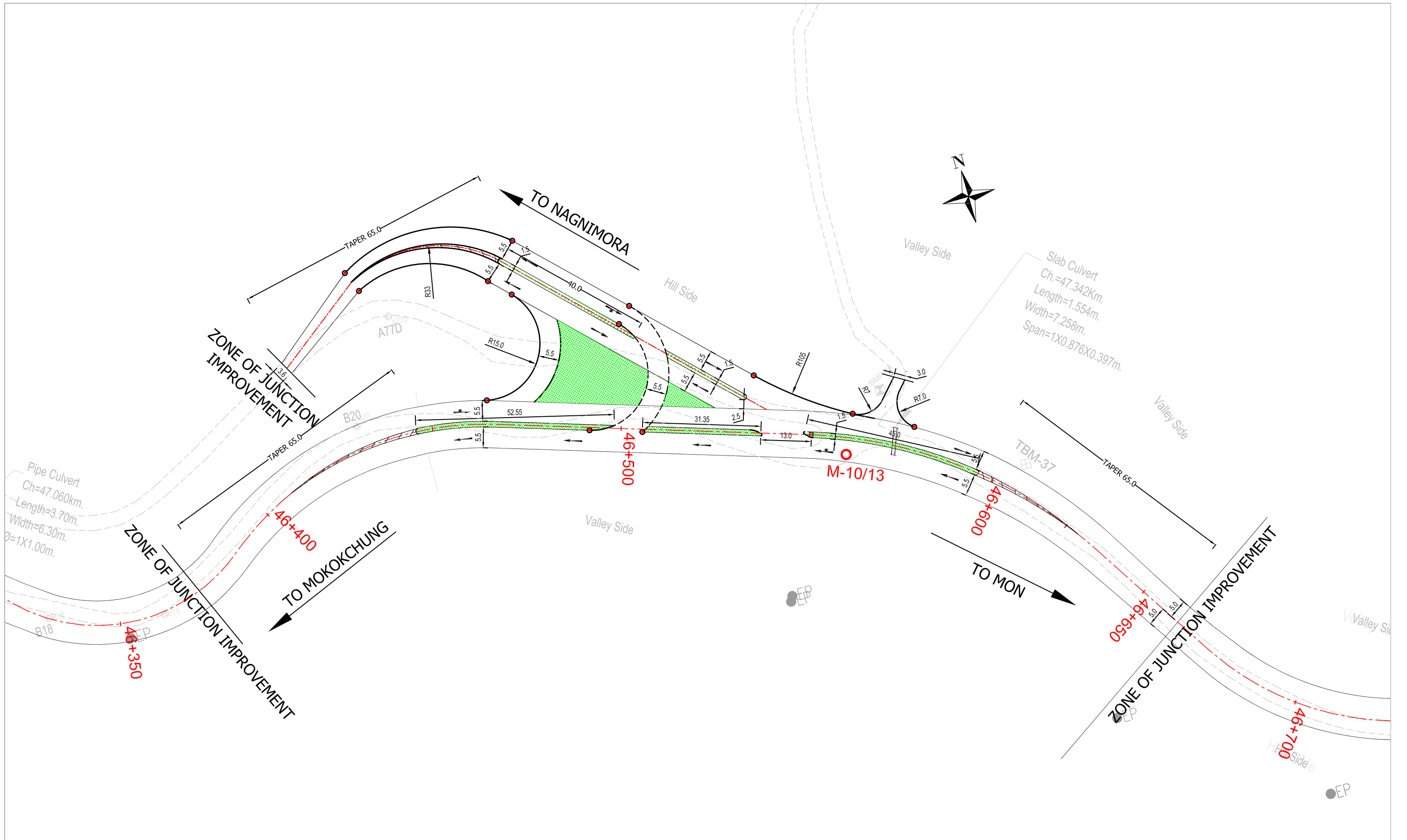




Notes :  
1) All Levels are in m unless otherwise indicated.

R0	Sep. 2017	Tender Drawings	NKM	SR	SR	NKS	Tapas Mukherjee
Revision	Date	Stage / Report	Topography	Designed	Drawn	Checked	Approved

Client : Ministry of Road Transport & Highways (Government of India)	Consultant : RITES LIMITED, RITES BHAWAN, Plot No. 1, Sector- 29, Gurgaon-122001	
Project : Preparation of Revised Detailed Project Report and Verification of Executed Quantities/Items for Widening to 2 Lane of Merangkong-Tamlu-Mon Road, Changtongya-Longleng Road, Chakabama-Zunheboto Road & Pfutsero-Phek Road under Phase 'A' of SARDP-NE in the State of Nagaland		
Scale : 1:1000	Title : JUNCTION AT KM 11+800 ON MTM ROAD	Page No. JN - 02



Notes :  
1) All Levels are in m unless otherwise indicated.

R0	Sep. 2017	Tender Drawings	NKM	SR	SR	NKS	Tapas Mukherjee
Revision	Date	Stage / Report	Topography	Designed	Drawn	Checked	Approved

Client : Ministry of Road Transport & Highways (Government of India)

Consultant : RITES LIMITED, RITES BHAWAN,  
Plot No. 1, Sector- 29, Gurgaon-122001



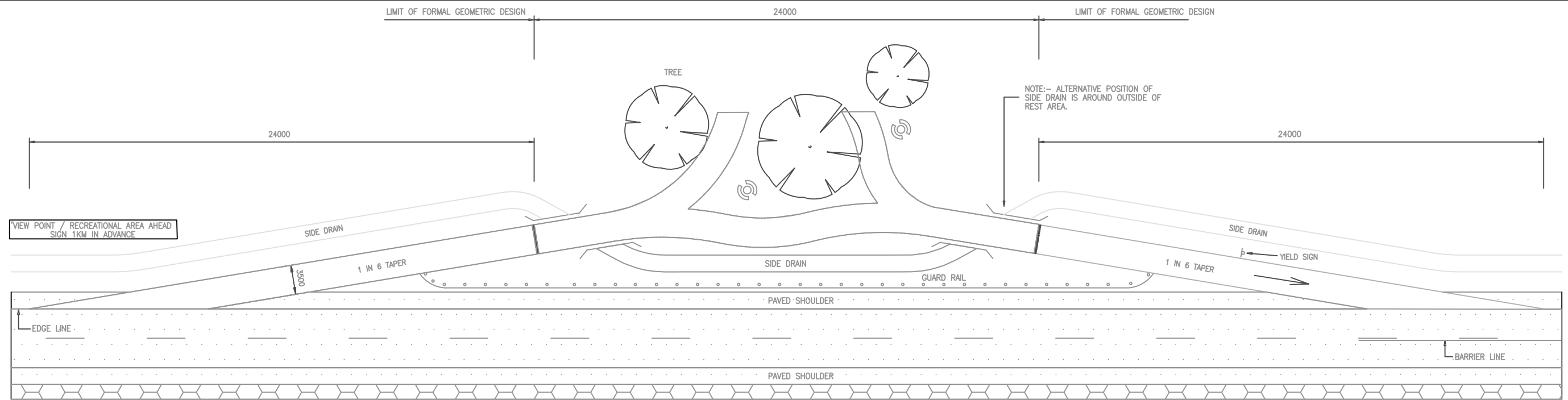
Project : Preparation of Revised Detailed Project Report and Verification of Executed Quantities/Items for Widening to 2 Lane of Merangkong-Tamlu-Mon Road, Changtongya-Longleng Road, Chakabama-Zunheboto Road & Pfutsero-Phek Road under Phase 'A' of SARDP-NE in the State of Nagaland

Scale : 1:750

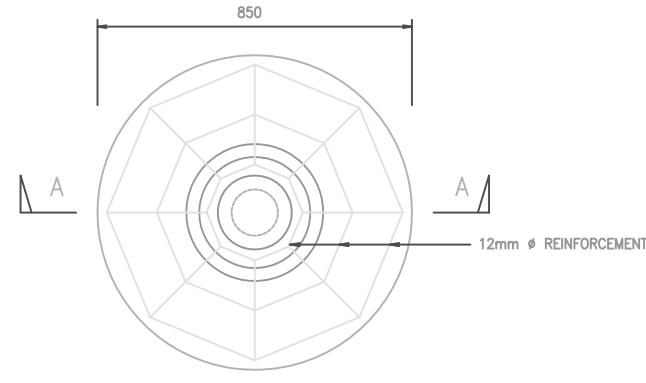
Title : JUNCTION AT KM 46+550 ON MTM ROAD

Page No. JN - 03

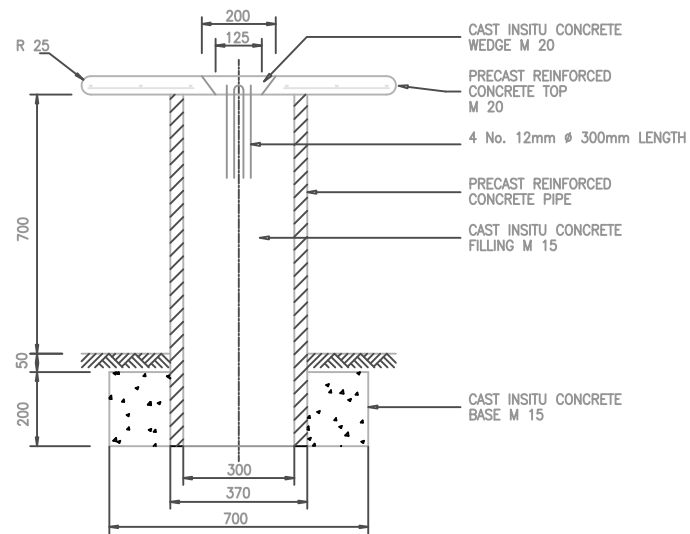
# **STANDARD DRAWINGS**



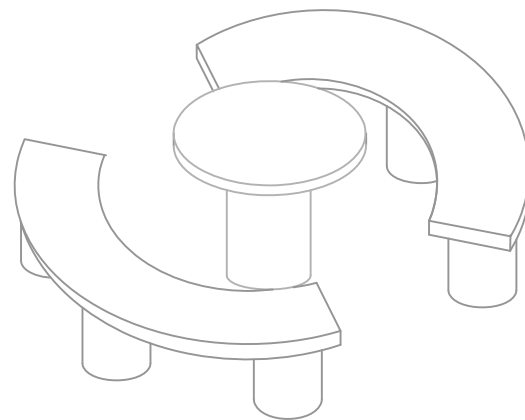
PLAN



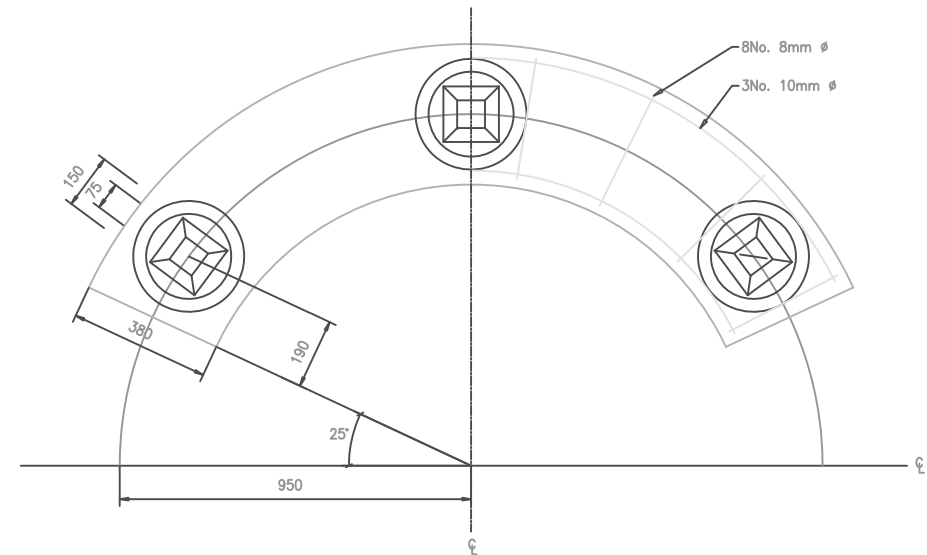
PLAN



SECTION A~A  
TABLE FOR REST AREA

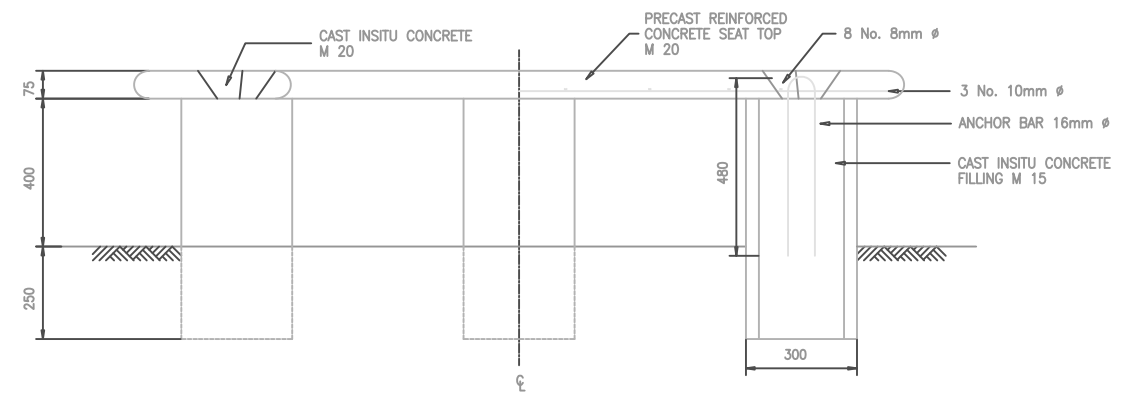


BENCH ARRANGEMENT  
ISOMETRIC VIEW



HALF PLAN

REINFORCEMENT DETAILS



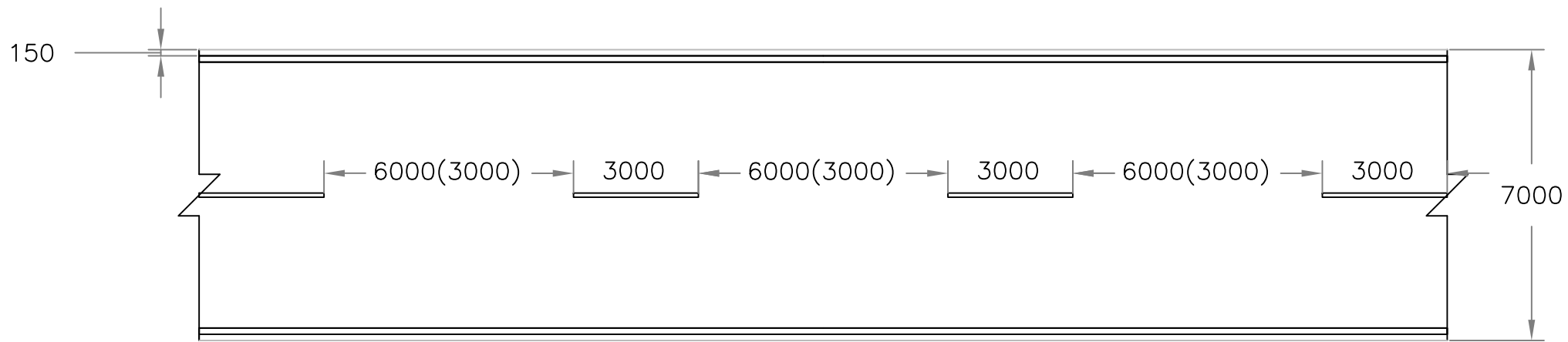
HALF ELEVATION

REINFORCEMENT DETAILS

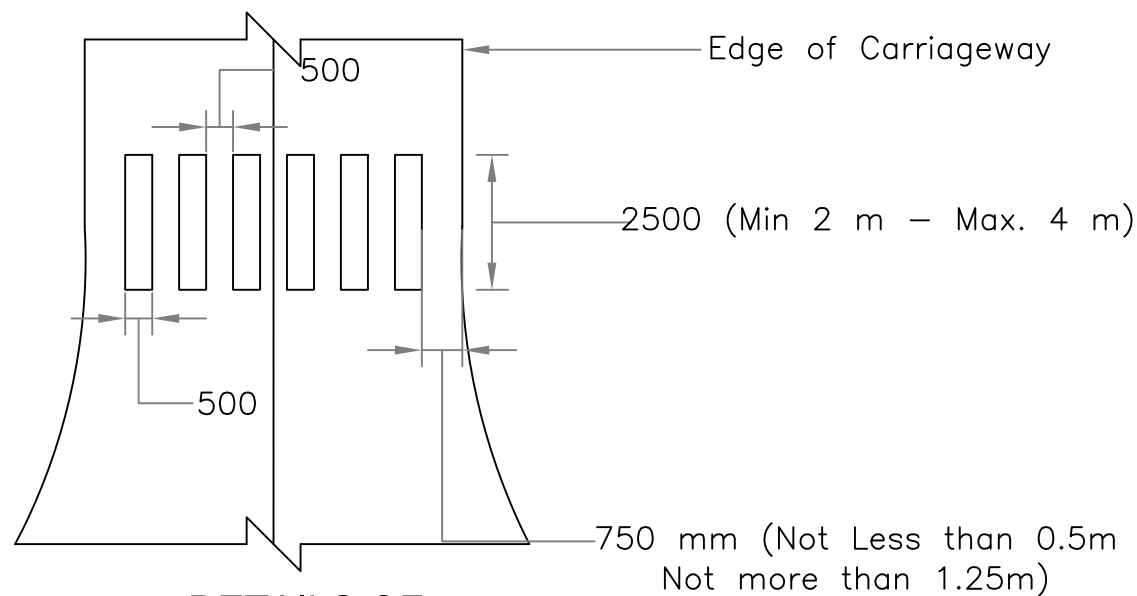
BENCH FOR REST AREA

R0	Sep. 2017	Tender Drawings	VPG	DR	NKS	Tapas Mukherjee
Revision	Date	Stage / Report	Designed	Drawn	Checked	Approved

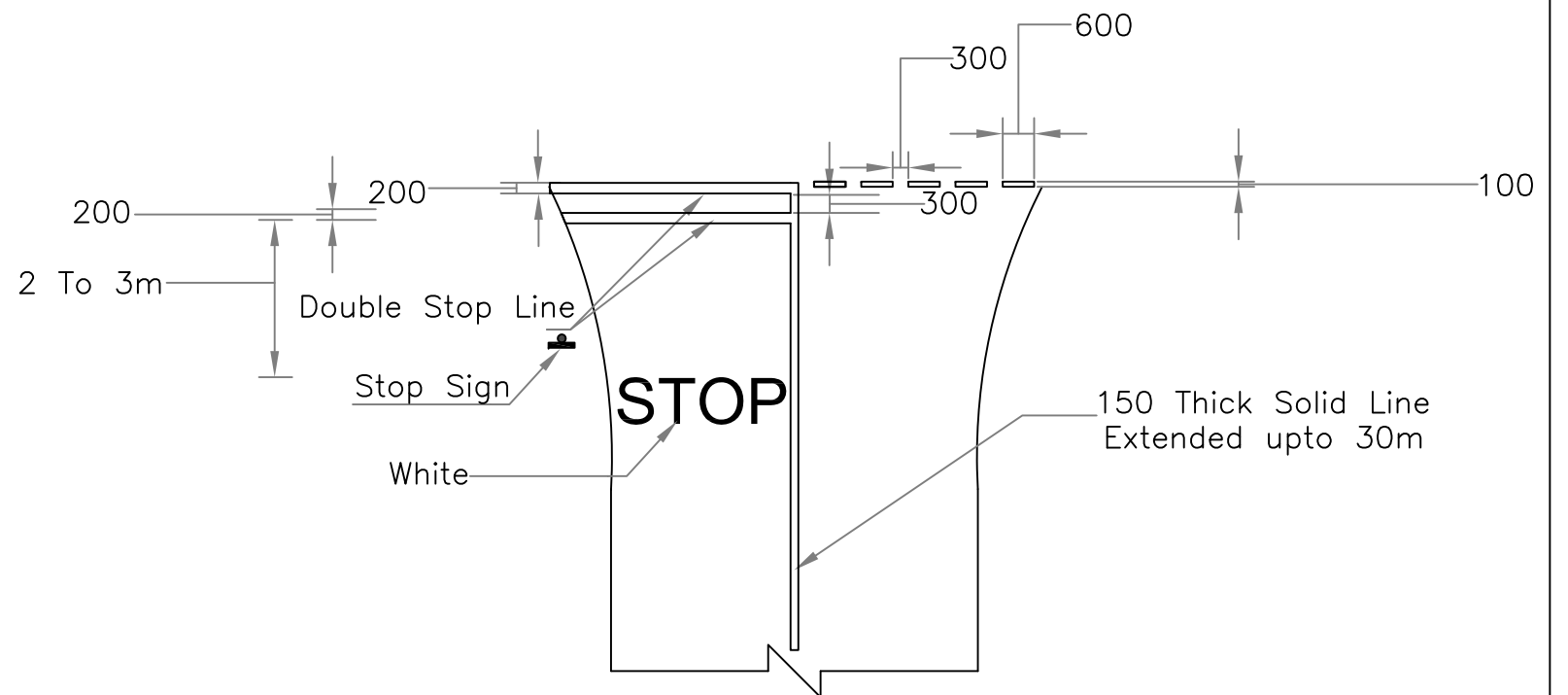
Client :	Ministry of Road Transport & Highways (Government of India)	Consultant :	MITES LIMITED, MITES BHAWAN, Plot No. 1, Sector- 29, Gurgaon-122001	
Project :	Preparation of Revised Detailed Project Report and Verification of Executed Quantities/Items for Widening to 2 Lane of Merangkong-Tamlu-MonRoad, Changtongya-LonglengRoad, Chakabama-Zunheboto Road & Pftusero-Phek Road under Phase 'A' of SARDP-NE in the State of Nagaland			
Scale :	Not to Scale	Title :	VIEW POINT - RECREATION AREA	Page No. 01



**LANE LINE AND EDGE LINE MARKING WITH WHITE COLOUR  
FOR RURAL AREAS**

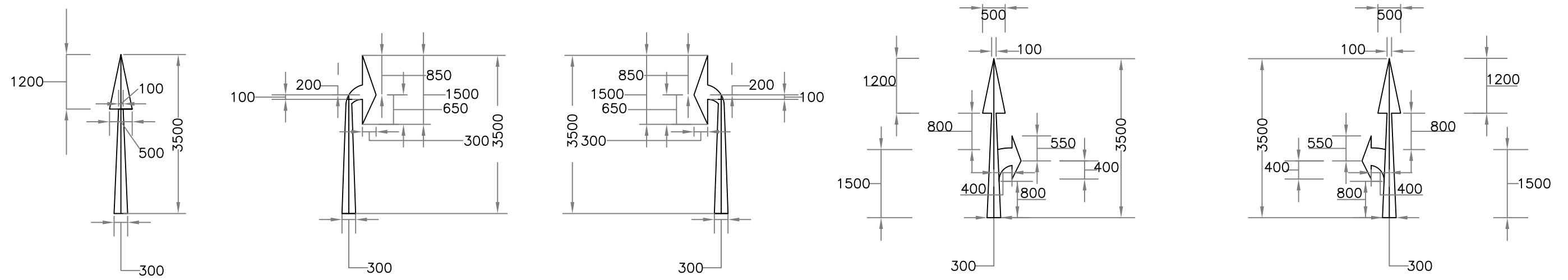


**DETAILS OF  
PEDESTRIAN CROSSING**

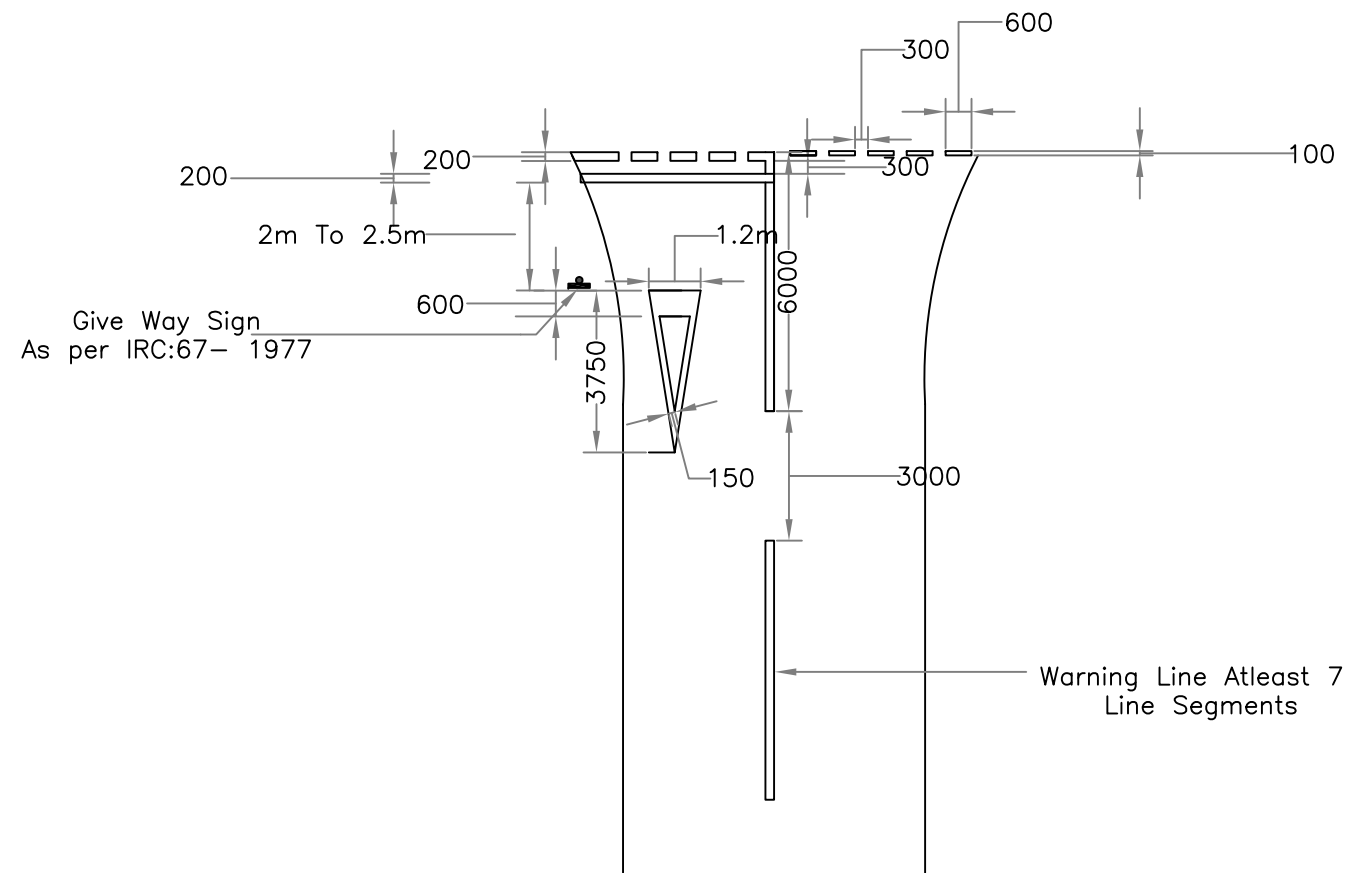


**STOP LINE MARKINGS FOR  
USE WITH STOP SIGN**


				Client : Ministry of Road Transport & Highways (Government of India)				Consultant : RITES LIMITED, RITES BHAWAN, Plot No. 1, Sector- 29, Gurgaon-122001					
				Project : Preparation of Revised Detailed Project Report and Verification of Executed Quantities/Items for Widening to 2 Lane of Merangkong-Tamlu-Mon Road, Changtongya-Longleng Road, Chakabama-Zunheboto Road & Pfitsero-Phek Road under Phase 'A' of SARDP-NE in the State of Nagaland									
R0	Sep. 2017	Tender Drawings		VPG	DR	NKS	Tapas Mukherjee	Scale : Not to Scale		Title : Details of Road Marking		Page No. 02	
Revision	Date	Stage / Report		Designed	Drawn	Checked	Approved						

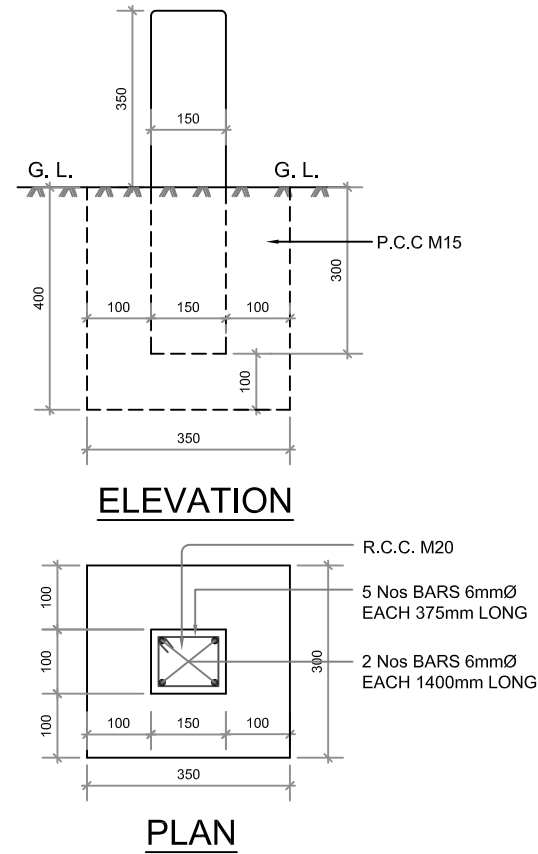


## ARROW MARKINGS FOR ROUTE DIRECTION FOR DESIGN SPEED OF 50 km/hr. OR LESS

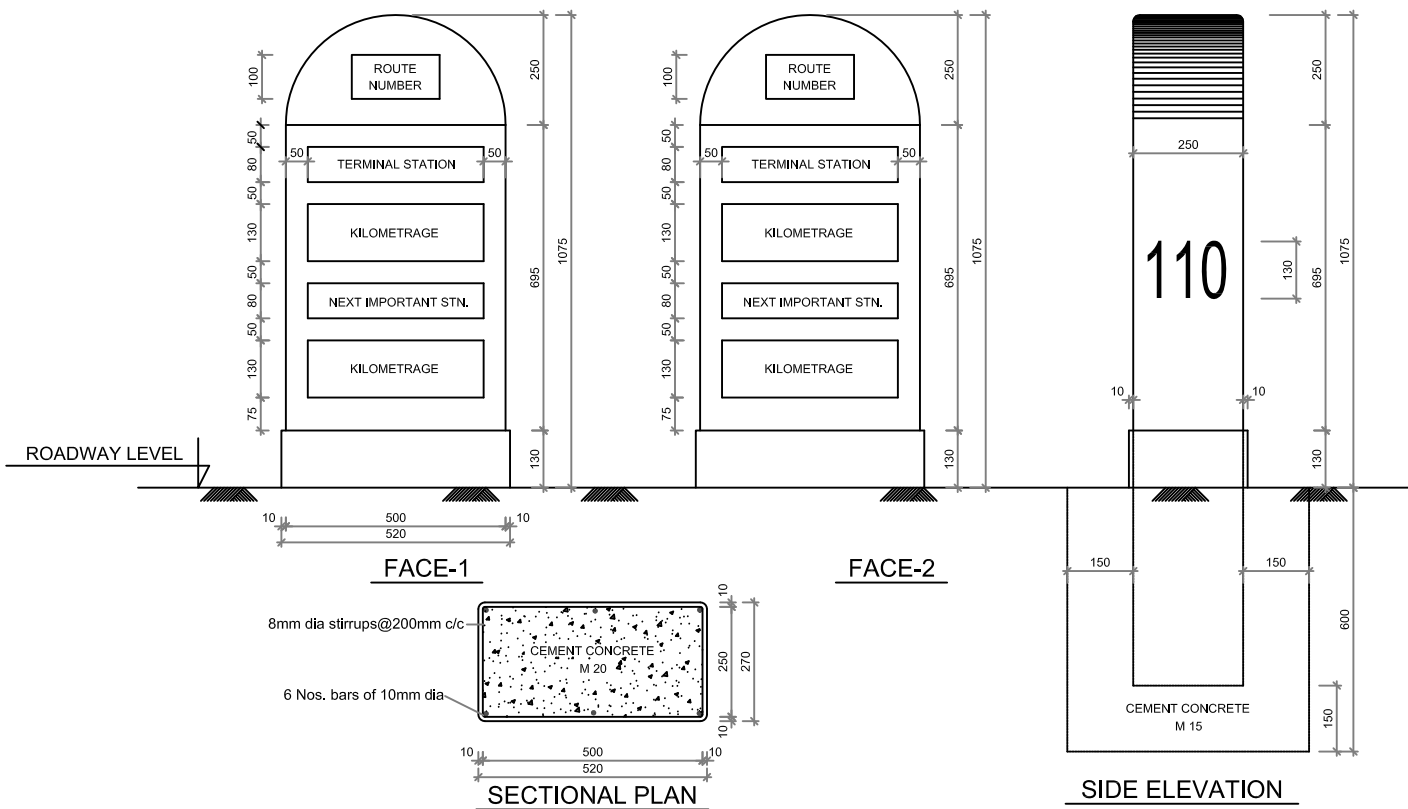


MARKINGS FOR GIVE WAY LINES

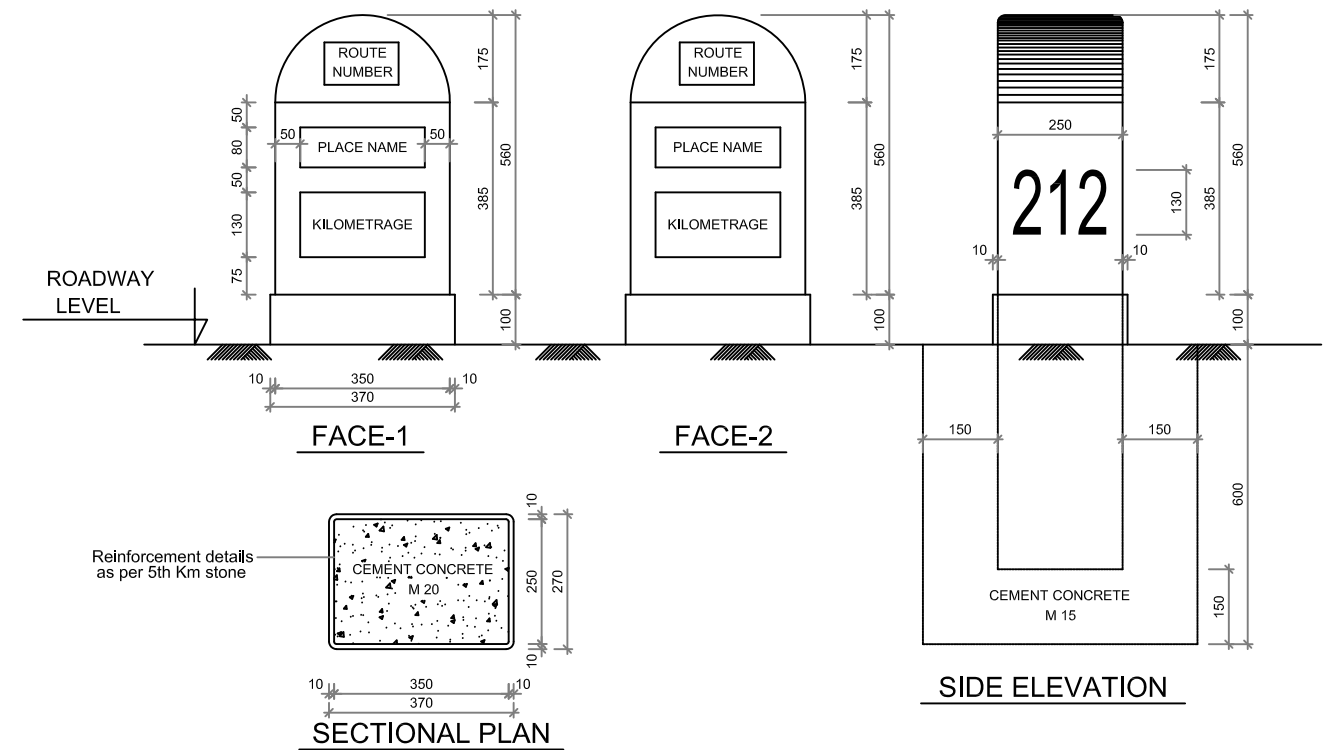
							Client : Ministry of Road Transport & Highways (Government of India)	Consultant : RITES LIMITED, RITES BHAWAN, Plot No. 1, Sector- 29, Gurgaon-122001	
							Project : Preparation of Revised Detailed Project Report and Verification of Executed Quantities/Items for Widening to 2 Lane of Merangkong-Tamlu-Mon Road, Changtongya-Longleng Road, Chakabama-Zunheboto Road & Pfitsero-Phek Road under Phase 'A' of SARDP-NE in the State of Nagaland	Title : Details of Road Marking	
R0	Sep. 2017	Tender Drawings	VPG	DR	NKS	Tapas Mukherjee	Scale : Not to Scale		
Revision	Date	Stage / Report	Designed	Drawn	Checked	Approved			



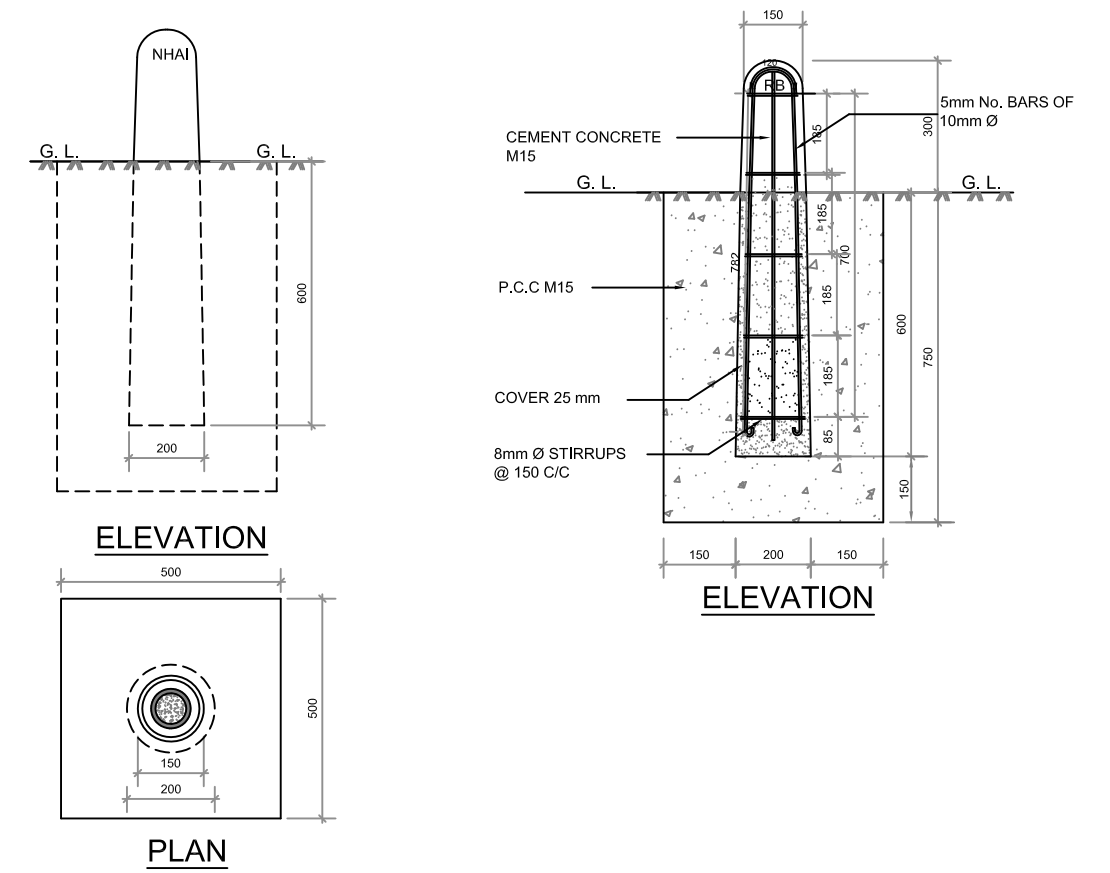
**TYPICAL DESIGN OF 200M STONES**



**TYPE DESIGN FOR THE 5th KILOMETRE STONE**



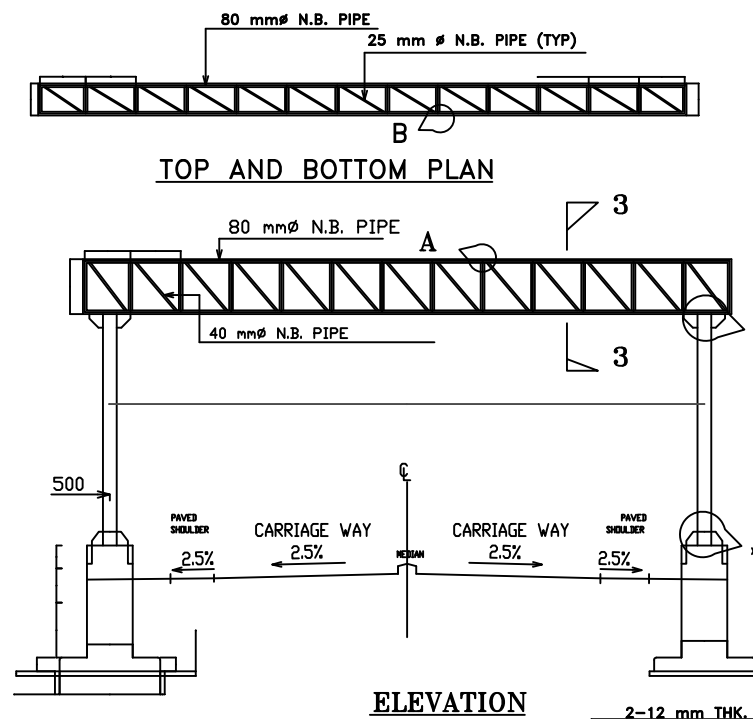
**TYPE DESIGN FOR KILOMETRE STONE**



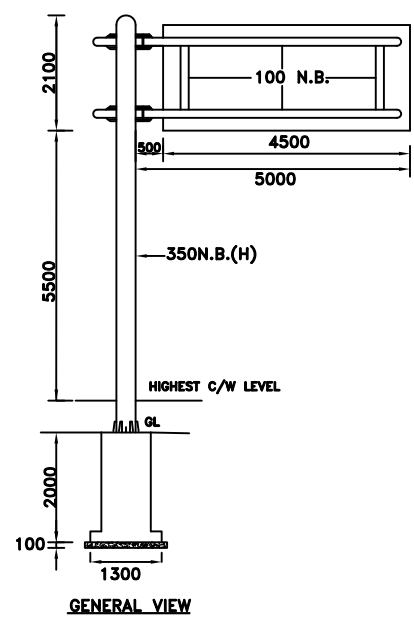
**TYPE DESIGN FOR BOUNDARY STONE**

R0	Sep. 2017	Tender Drawings	VPG	DR	NKS	Tapas Mukherjee
Revision	Date	Stage / Report	Designed	Drawn	Checked	Approved

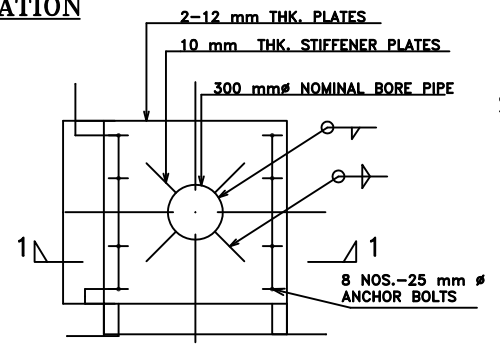
Client :	Ministry of Road Transport & Highways (Government of India)	Consultant :	MITES LIMITED, MITES BHAWAN, Plot No. 1, Sector- 29, Gurgaon-122001	
Project :	Preparation of Revised Detailed Project Report and Verification of Executed Quantities/Items for Widening to 2 Lane of Merangkong-Tamlu-MonRoad, Changtongya-LonglengRoad, Chakabama-Zunheboto Road & Pfutsero-Phek Road under Phase 'A' of SARDP-NE in the State of Nagaland			
Scale :	Not to Scale	Title :	KILOMETRE , HECTOMETRE & BOUNDARY STONE	Page No. 04



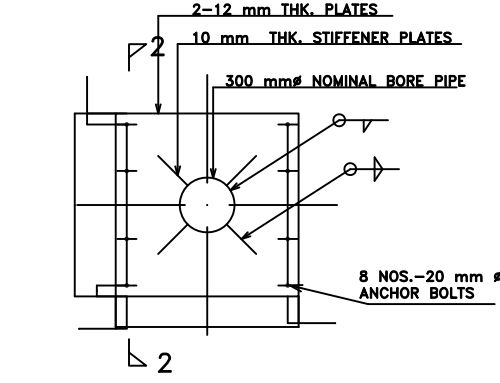
OVERHEAD SIGN BOARD



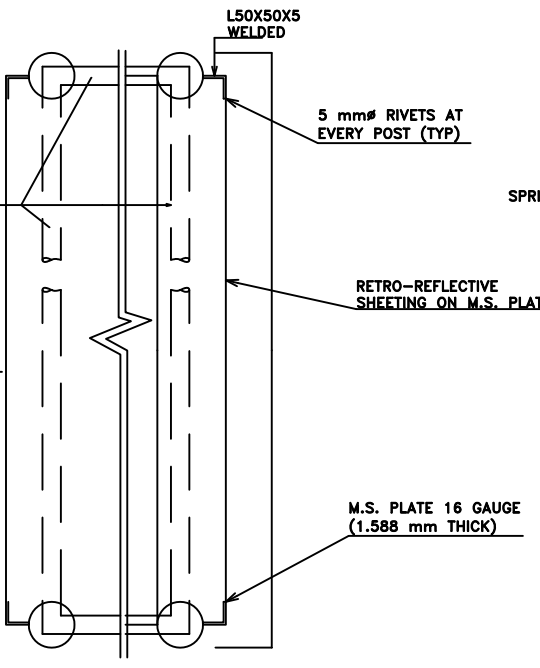
GENERAL VIEW



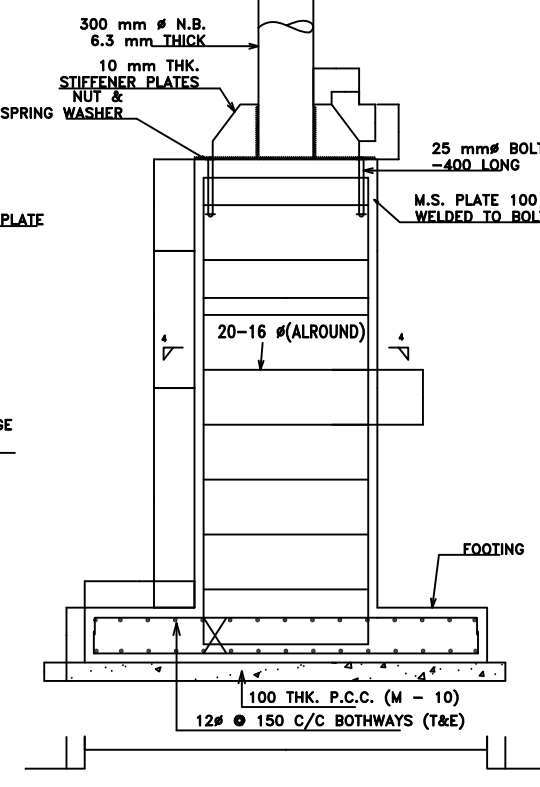
DETAILS OF COLUMN BASE AT X



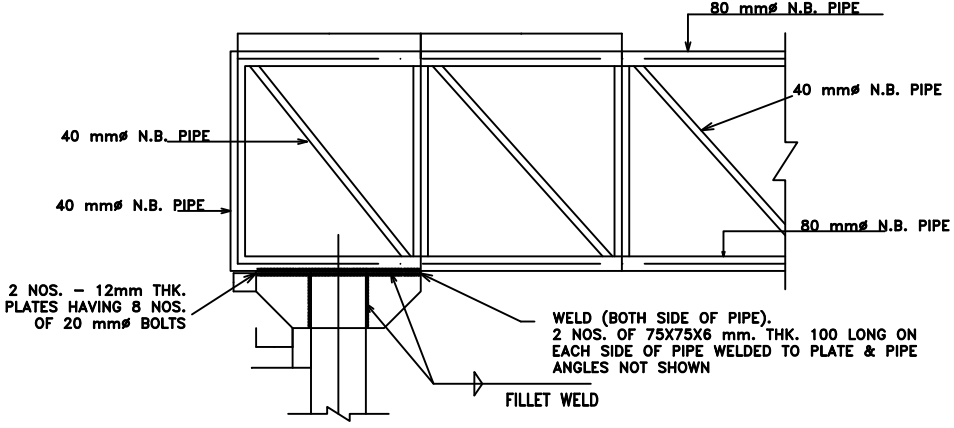
DETAILS OF COLUMN JUNCTION AT Y



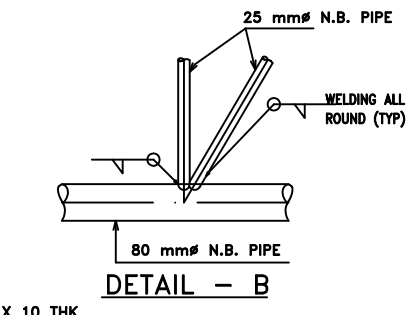
SECTION 3-3  
SIMILAR ARRANGEMENT ON THE OTHER SIDE



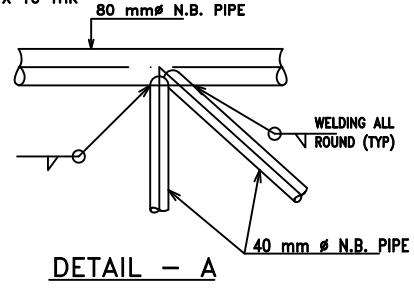
SECTION 1-1



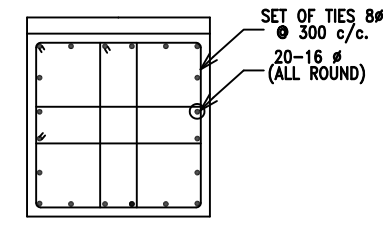
SECTION 2-2



DETAIL - B



DETAIL - A



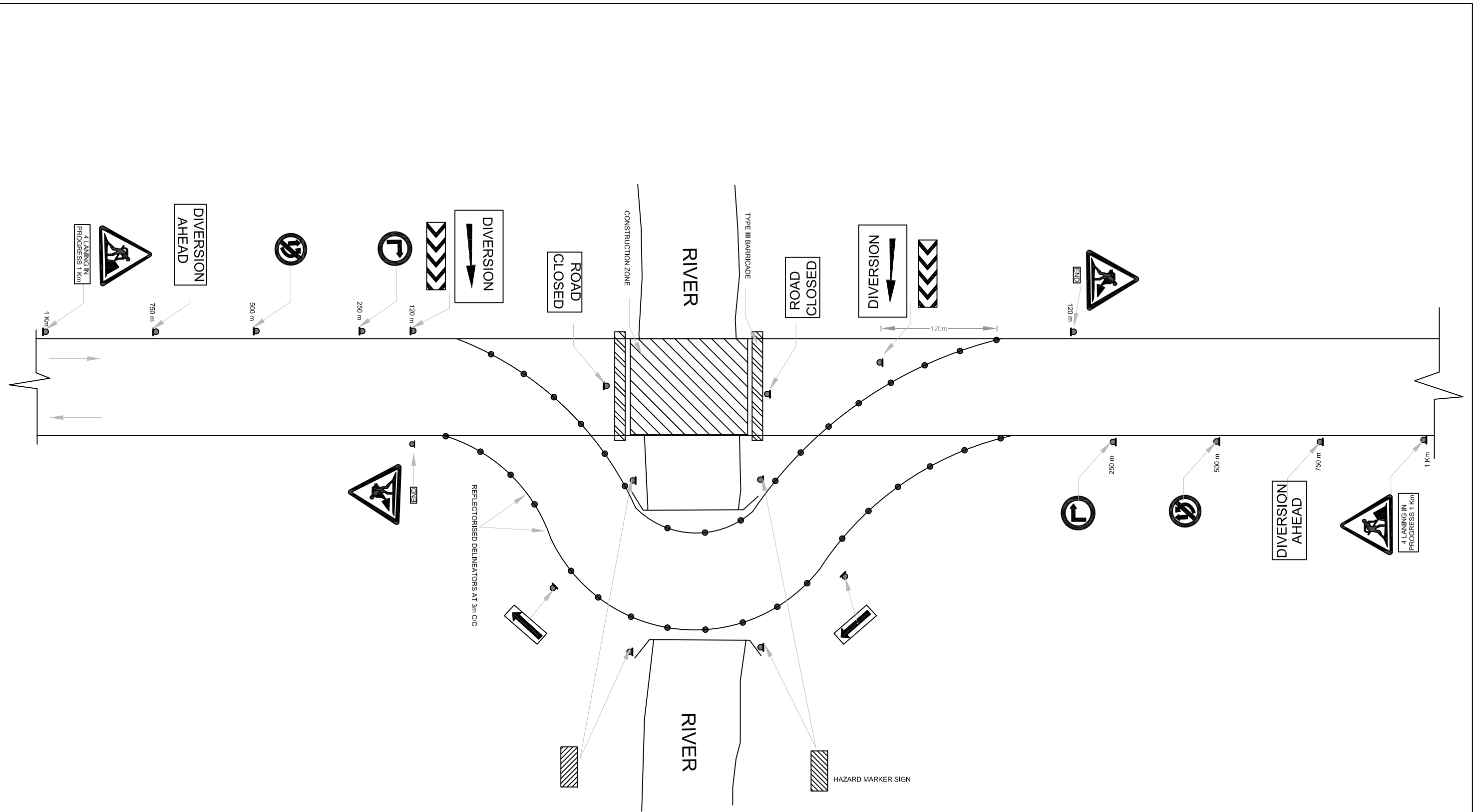
SECTION 4-4

- NOTES:**
- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED.
  - ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.
  - GRADE OF CONCRETE - M 25.
  - CLEAR COVER TO OUTERMOST STEEL.
    - PEDESTAL - 40mm
    - FOUNDATION - 50mm
  - STEEL TUBES ARE DESIGNED BY THEIR NOMINAL BORES
  - STEEL TUBES USED ARE CLASSIFIED MEDIUM TYPE STEEL TUBES.
  - STEEL TUBES CONFORMS TO GRADE 1st 210.
  - STEEL TUBE USED CONFORMS TO IS:1161-1998.
  - ELECTRODE USED CONFORMS TO RELEVANT I.S. SPECIFICATIONS.
  - WELDING IS DONE BY ARC WELDING.
  - 4.5 mm SIZE WELD MADE WITH A SINGLE PASS AND DONE ALL ROUND ON THE CONTACT LENGTH OF MEMBERS.
  - HIGH STRENGTH BOLTS CONFORMS TO IS:4000-1992.
  - DIA OF HOLES IN MS PLATE ARE MACHINE MADE & AS FOLLOWS.
 

DIA OF BOLTS	DIA OF HOLES
i) 20mm	21.5 mm
i) 25mm	26.5 mm
  - SIZE OF LETTERS AND COLOUR OF PAINT CONFORMS TO:
    - IRC :67
    - IRC :30
  - RETRO-REFLECTIVE SHEETING IS AS PER MORT&H SPECIFICATIONS SECTION 800.
  - CLEAR HEIGHT OF SIGN BOARD ABOVE INNER EDGE OF CARRIAGEWAY IS 5.5 M
  - GRADE OF STEEL - THERMO MECHANICALLY TREATED (TMT) BARS OF GRADE Fe 500, CONFORMING TO IS:1786.

RO	Sep. 2017	Tender Drawings	VPG	DR	NKS	Tapas Mukherjee
Revision	Date	Stage / Report	Designed	Drawn	Checked	Approved

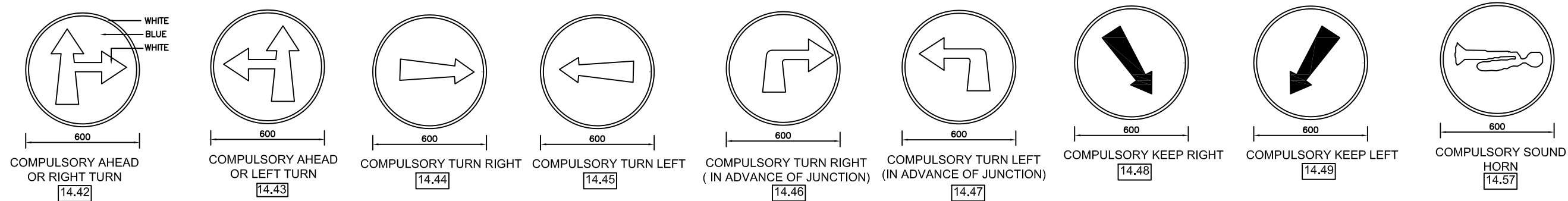
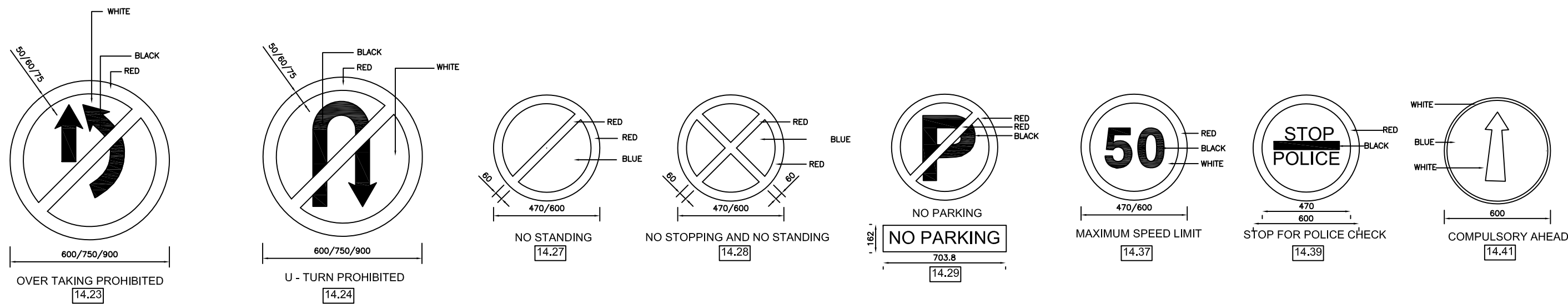
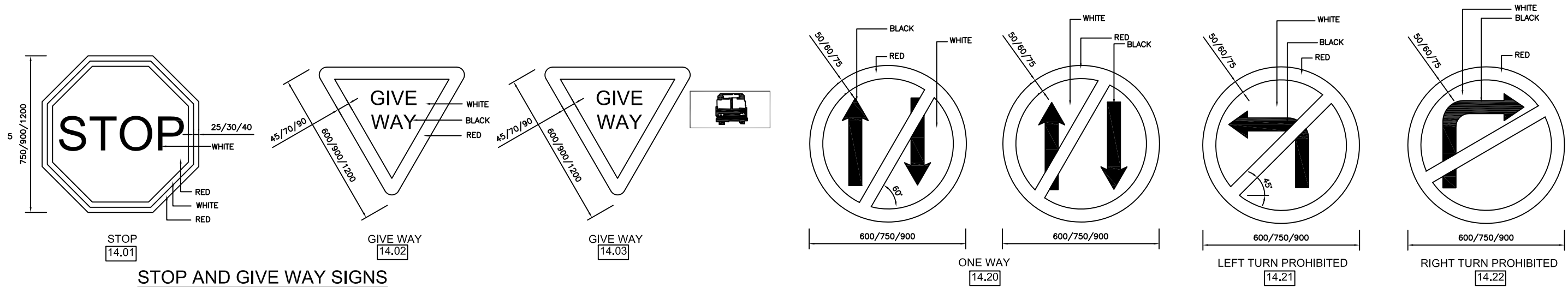
Client :	Ministry of Road Transport & Highways (Government of India)	Consultant :	MITES LIMITED, MITES BHAWAN, Plot No. 1, Sector- 29, Gurgaon-122001	
Project :	Preparation of Revised Detailed Project Report and Verification of Executed Quantities/Items for Widening to 2 Lane of Merangkong-Tamlu-MonRoad, Changtongya-LonglengRoad, Chakabama-Zunhebot Road & Pfulsero-Phek Road under Phase 'A' of SARDP-NE in the State of Nagaland	Title :	GANTRY BOARD	Page No. 05
Scale :	Not to Scale			



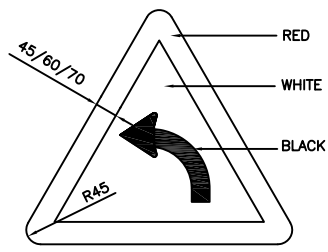
LAYOUT OF SIGNS AND CONTROL DEVICES FOR ROAD DIVERSION

R0	Sep. 2017	Tender Drawings	VPG	DR	NKS	Tapas Mukherjee
Revision	Date	Stage / Report	Designed	Drawn	Checked	Approved

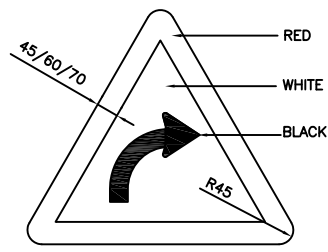
Client :	Ministry of Road Transport & Highways (Government of India)	Consultant :	RITES LIMITED, RITES BHAWAN, Plot No. 1, Sector- 29, Gurgaon-122001	
Project :	Preparation of Revised Detailed Project Report and Verification of Executed Quantities/Items for Widening to 2 Lane of Merangkong-Tamlu-MonRoad, Changtongya-LonglengRoad, Chakabama-Zunhebot Road & Pftusero-Phek Road under Phase 'A' of SARDP-NE in the State of Nagaland			
Scale :	Not to Scale	Title :	ROAD DIVERSION	Page No. 06



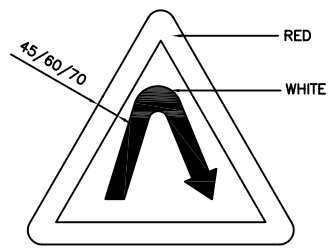
RO		Sep. 2017	Tender Drawings	VPG	DR	NKS	Tapas Mukherjee	Client : Ministry of Road Transport & Highways (Government of India)	Consultant : RITES LIMITED, RITES BHAWAN, Plot No. 1, Sector- 29, Gurgaon-122001	
Revision	Date	Stage / Report	Designed	Drawn	Checked	Approved	Scale : Not to Scale	Project : Preparation of Revised Detailed Project Report and Verification of Executed Quantities/Items for Widening to 2 Lane of Merangkong-Tamlu-MonRoad, Changtongya-LonglengRoad, Chakabama-Zunhebot Road & Pfitsero-Phek Road under Phase 'A' of SARDP-NE in the State of Nagaland	Title : DETAILS OF ROAD SIGNS	



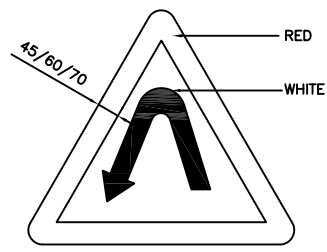
LEFT HAND CURVE  
15.01



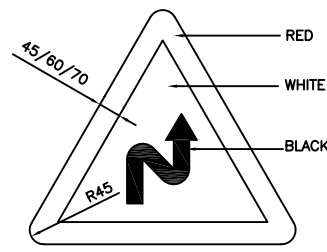
RIGHT HAND CURVE  
15.02



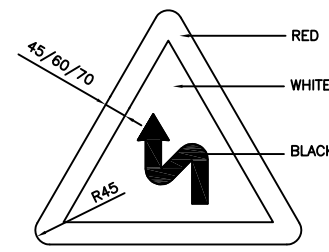
RIGHT HAIRPIN BEND  
15.03



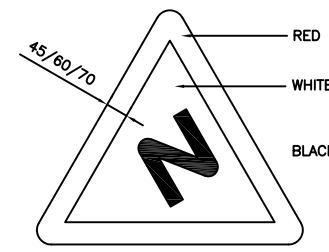
LEFT HAIRPIN BEND  
15.04



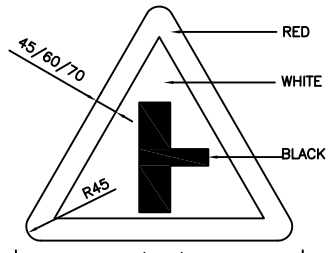
RIGHT REVERSE BEND  
15.05



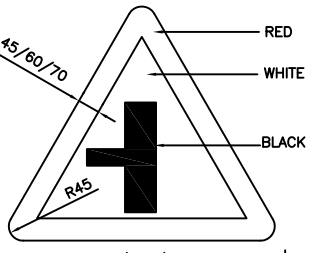
LEFT REVERSE BEND  
15.06



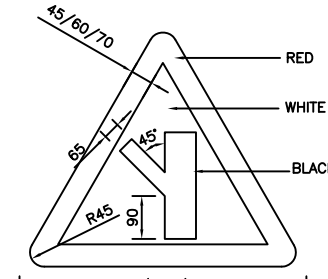
SERIES OF BENDS  
15.07



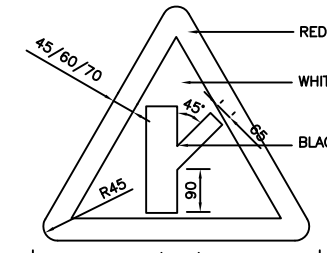
SIDE ROAD RIGHT  
15.09



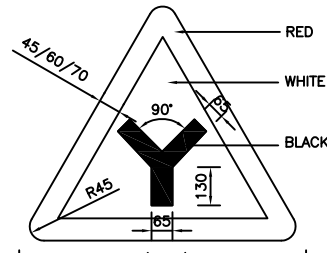
SIDE ROAD LEFT  
15.10



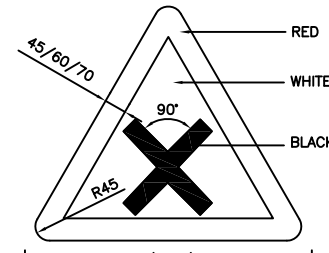
LEFT 'Y' INTERSECTIONS  
15.11



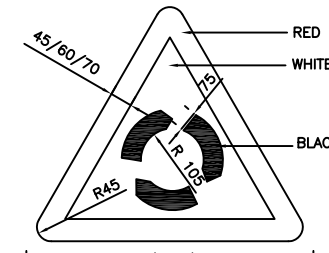
RIGHT 'Y' INTERSECTIONS  
15.12



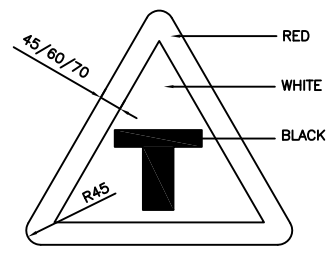
'Y' INTERSECTIONS  
15.13



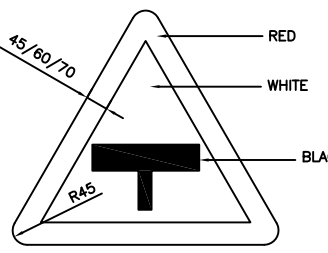
CROSS ROAD  
15.14



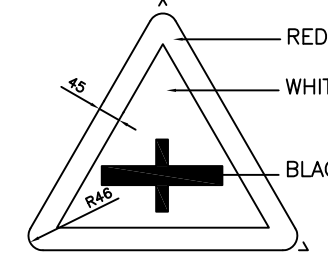
ROUNDABOUT  
15.15



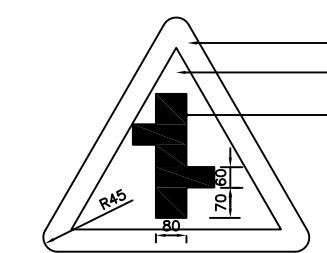
T - INTERSECTION  
15.17



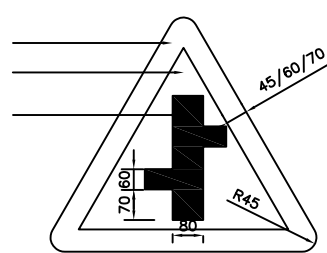
T - INT. MAJOR ROAD AHEAD  
15.18



MAJOR ROAD AHEAD  
15.19

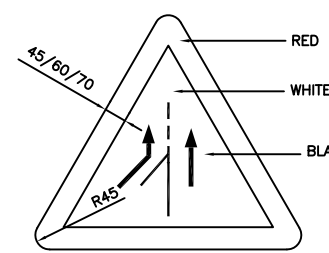


RIGHT  
15.20

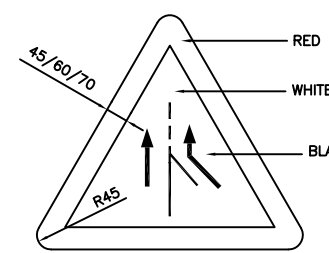


LEFT  
15.21

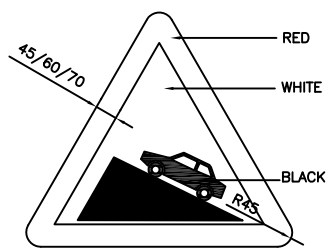
STAGGERED INTERSECTIONS



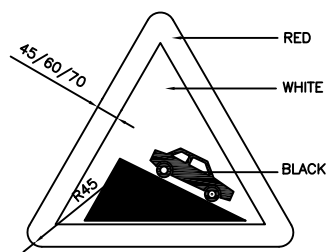
MERGING TRAFFIC AHEAD (FROM LEFT)  
15.22



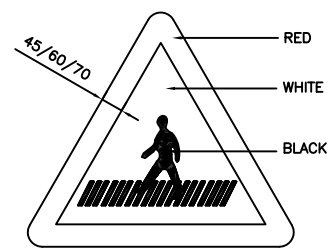
MERGING TRAFFIC AHEAD (FROM RIGHT)  
15.23



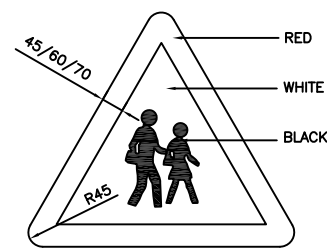
STEEP ASCENT  
15.26



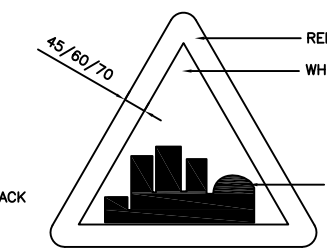
STEEP DESCENT  
15.27



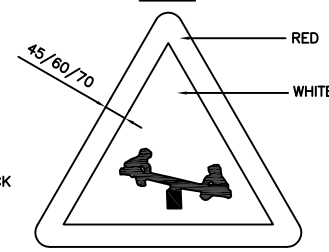
PEDESTRIAN CROSSING  
15.33



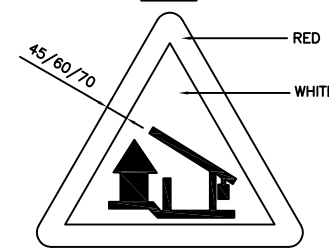
SCHOOL AHEAD  
15.34



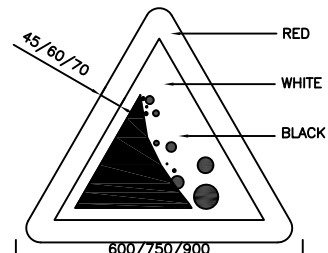
BUILT-UP AREA  
15.35



PLAYGROUND AHEAD  
15.58



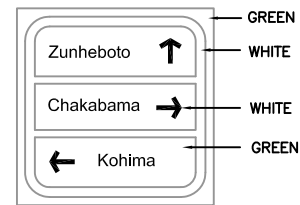
BARRIER  
15.60



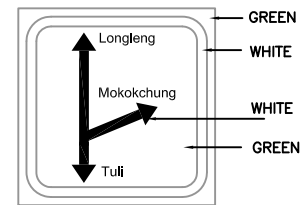
FALLING ROCKS  
15.65

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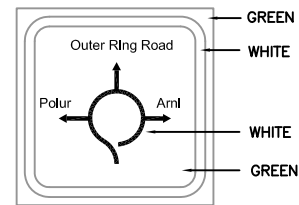
Client :	Ministry of Road Transport & Highways (Government of India)	Consultant :	RITES LIMITED, RITES BHAWAN, Plot No. 1, Sector- 29, Gurgaon-122001	
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Scale :	Not to Scale	Title :	DETAILS OF ROAD SIGNS	Page No. 08



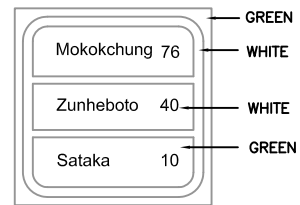
ADVANCE DIRECTION / DESTINATION SIGN  
I-1



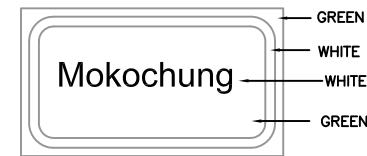
MAP TYPE ADVANCE DIRECTION SIGN  
I-2



ADVANCE DIRECTION SIGN ON ROTARY INTERSECTION  
I-3



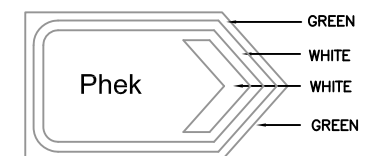
REASSURANCE SIGN  
I-5



PLACE IDENTIFICATION SIGN  
I-6



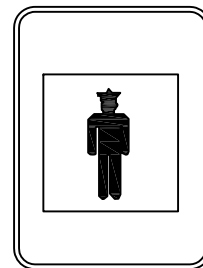
BUS BAY SIGN  
I-7



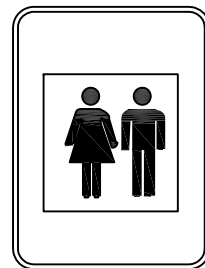
FLAG TYPE DIRECTION SIGN  
I-4



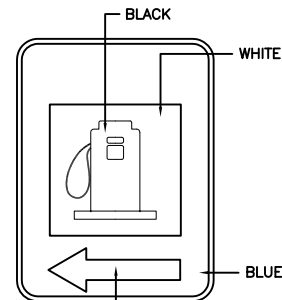
HOME ZONE  
I-38



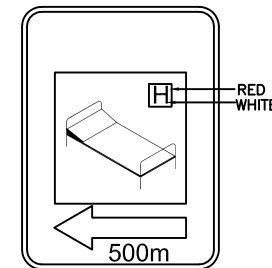
POLICE STATION  
I-30



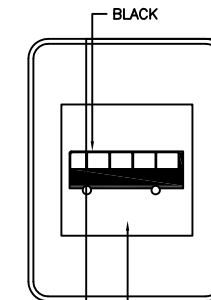
TOILET  
I-22



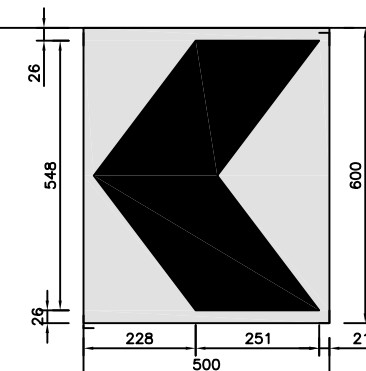
FILLING STATION  
I-23



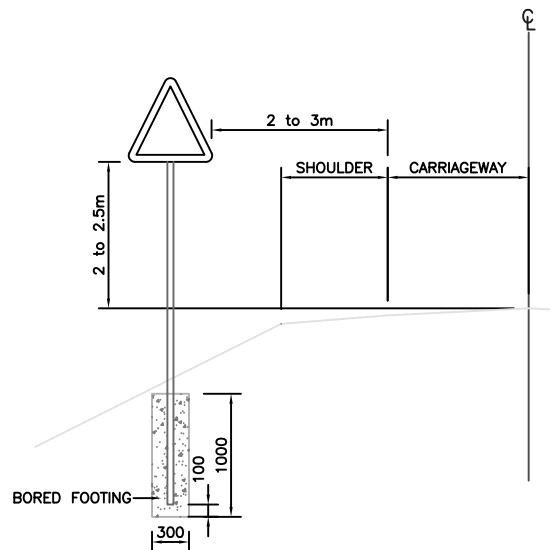
HOSPITAL  
I-24



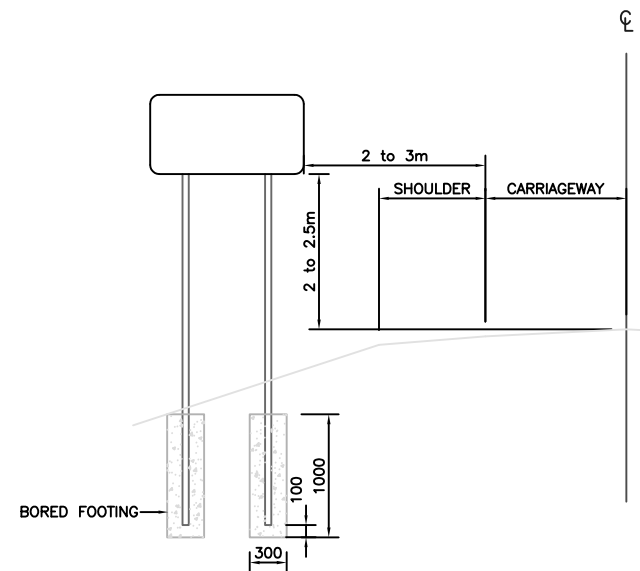
BUS STOP  
I-35



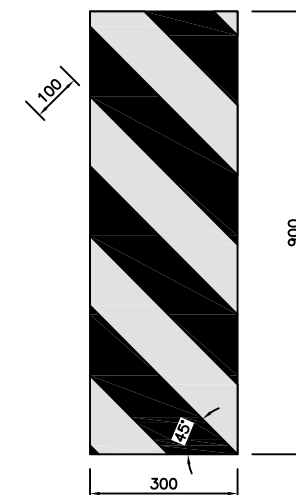
SINGLE CHEVRON (NORMAL)  
C-71



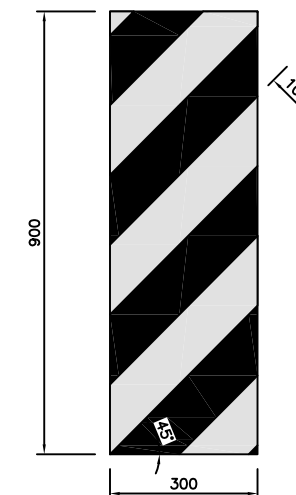
SINGLE LEAF SIGN



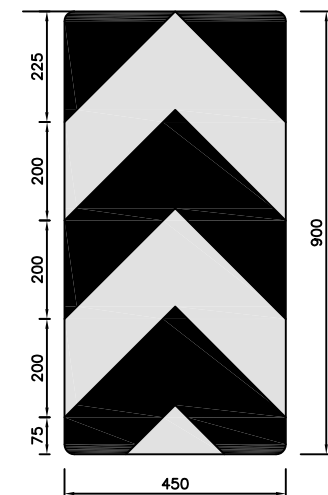
DIRECTIONAL SIGN (WITH BORED FOOTING)



OBJECT HAZARD (LEFT)  
C-75



OBJECT HAZARD (RIGHT)  
C-76

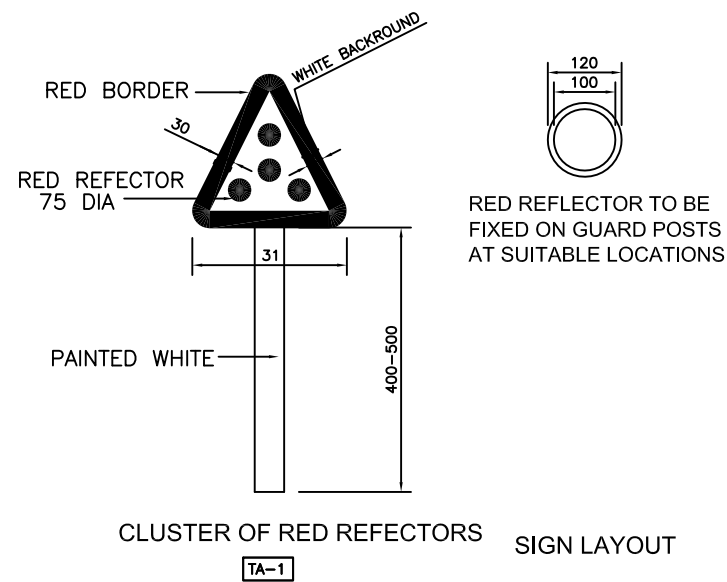


TWO WAY HAZARD MARKER  
C-77

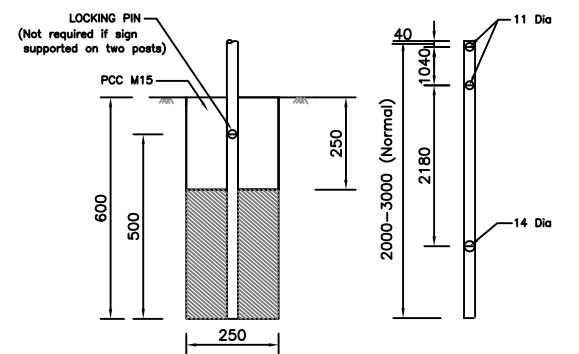
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Scale :	Not to Scale	Title :	DETAILS OF ROAD SIGNS
			Page No. 09

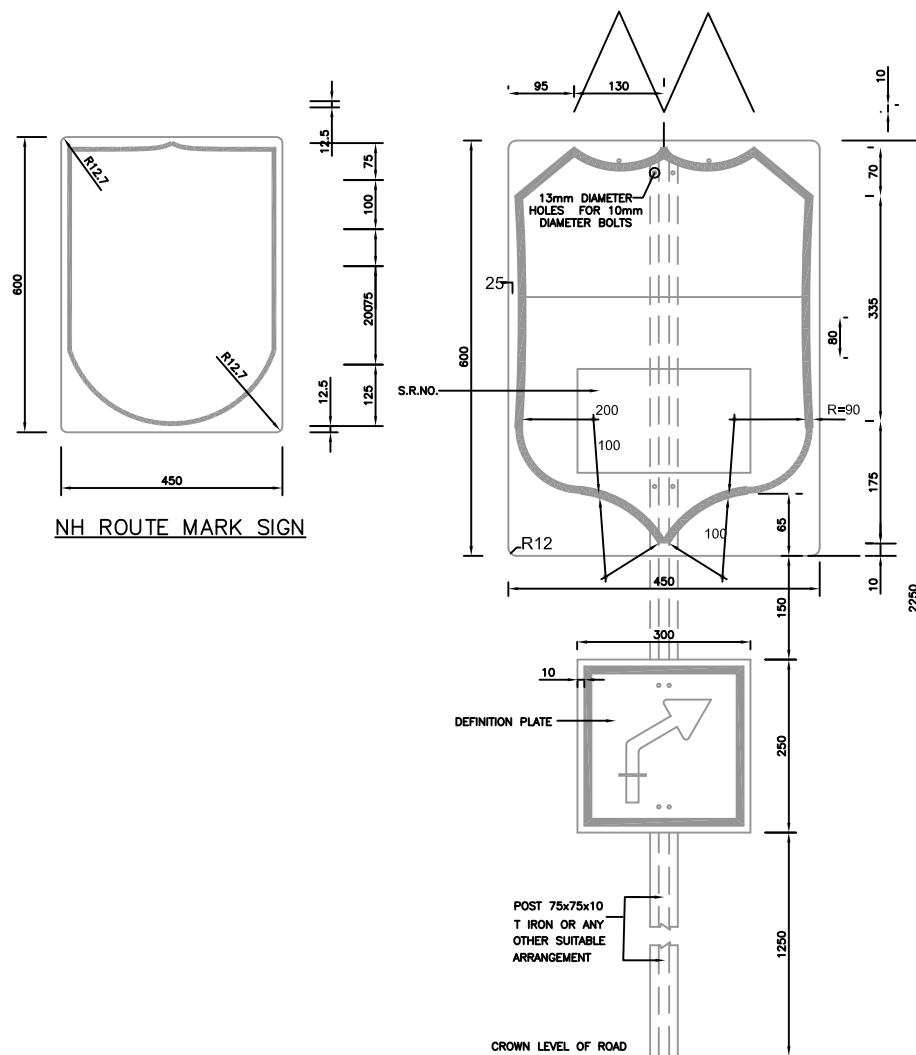
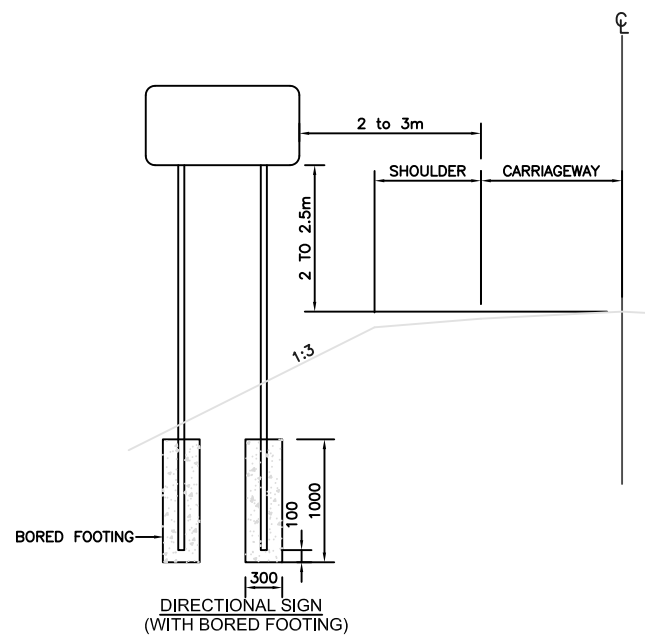
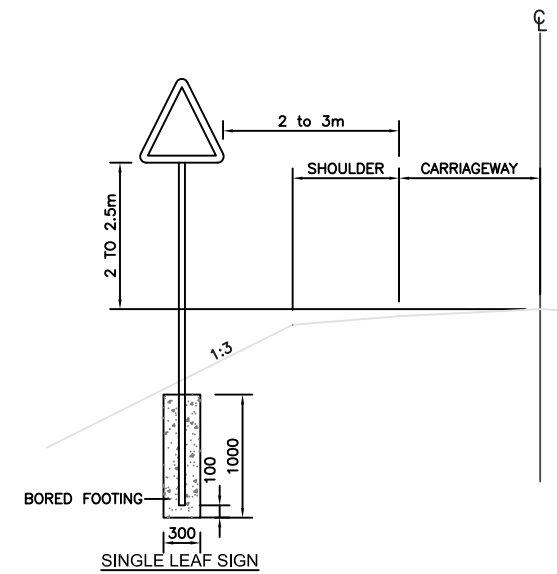




CLUSTER OF RED REFLECTORS SIGN LAYOUT

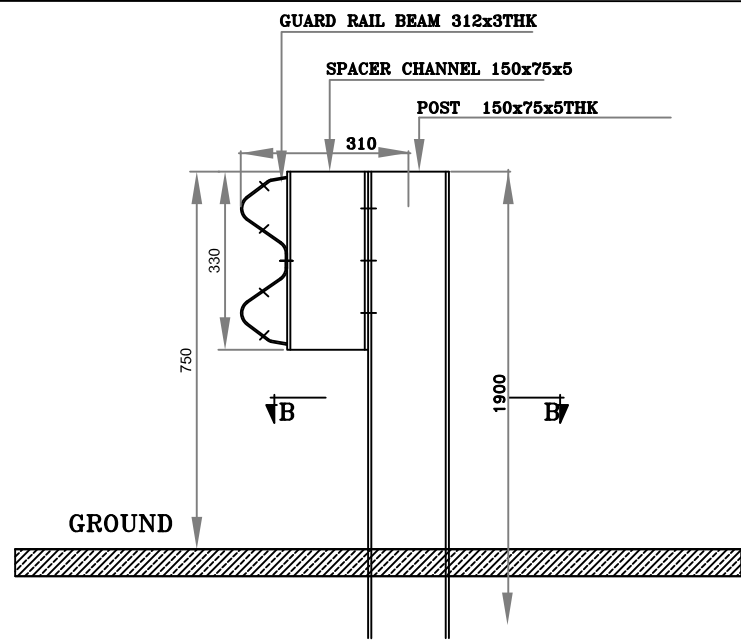


FOOTING DETAILS FOR SINGLE SIGN SUPPORT

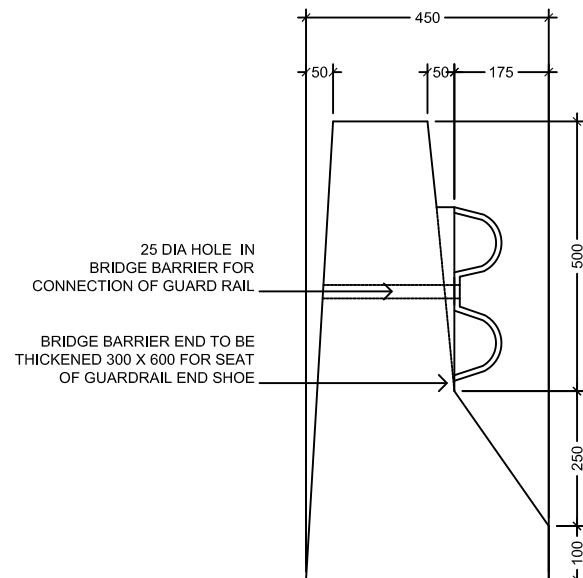


ASSEMBLY OF ROUTE MARKER SIGN ARRANGEMENT FOR ERECTION OF HIGHWAY ROUTE MARKER SIGN

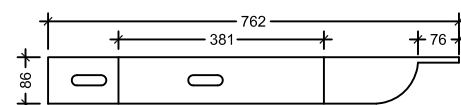
								Client : Ministry of Road Transport & Highways (Government of India)	Consultant : RITES LIMITED, RITES BHAWAN, Plot No. 1, Sector- 29, Gurgaon-122001	
								Project : Preparation of Revised Detailed Project Report and Verification of Executed Quantities/Items for Widening to 2 Lane of Merangkong-Tamlu-MonRoad, Changtongya-LonglengRoad, Chakabama-Zunhebot Road & Pftusero-Phek Road under Phase 'A' of SARDP-NE in the State of Nagaland		
R0	Sep. 2016	Stage 4 : Final Detailed Project Report / Volume VIII : Drawings		VPG	DR	NKS	Tapas Mukherjee	Scale : Not to Scale	Title : DETAILS OF ROAD SIGNS	Page No. 10
Revision	Date	Stage / Report		Designed	Drawn	Checked	Approved			



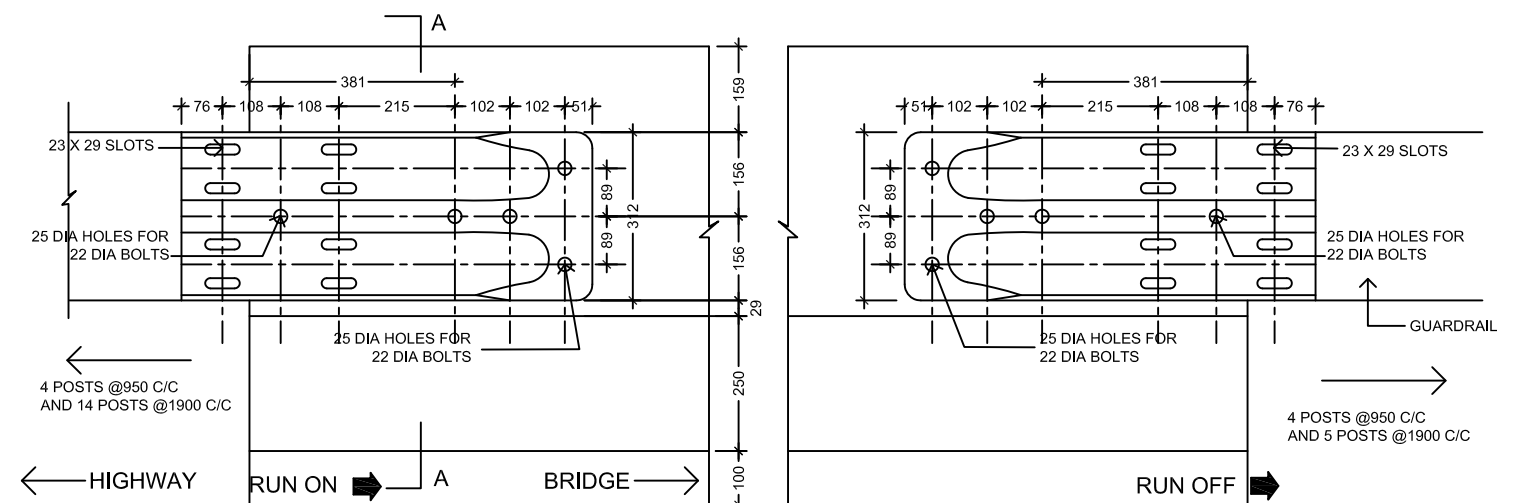
CROSS SECTION 'A-A'  
SCALE - 1:10



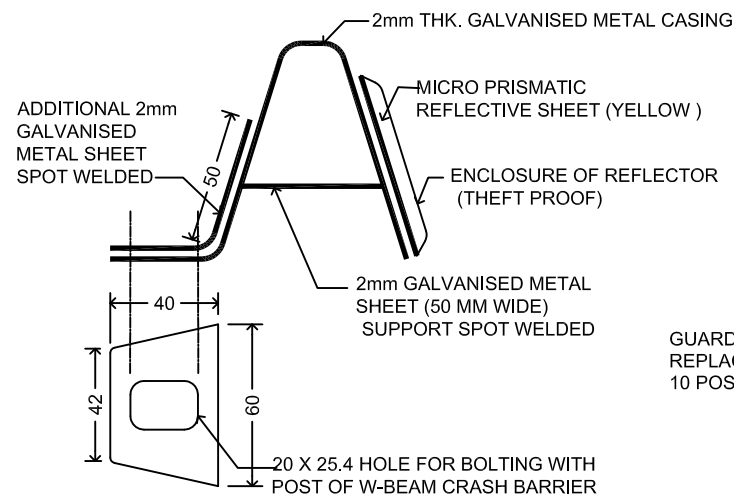
SECTION A-A



PLAN OF END SHOE

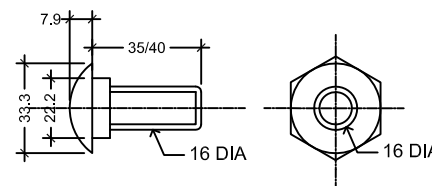


ELEVATION SHOWING BRIDGE BARRIER / GUARDRAIL CONNECTION

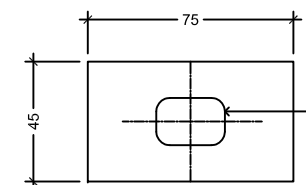


SHAPE : Equilateral Trapezium  
DIMENSIONS :  
FRONT CASING  
Top: 95 mm  
Bottom: 70 mm  
Height: 80 mm  
REFLECTIVE PORTION  
Top: 70 mm  
Bottom: 50 mm  
Height: 50 mm

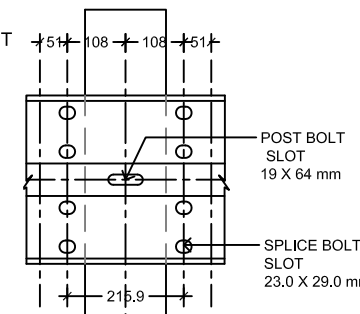
GUARD RAIL REFLECTOR WILL BE BOLTED REPLACING SPLICE WASHER EVERY 10 POSTS INTERVAL



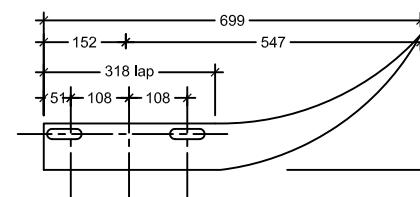
SPLICE / POST BOLT & NUT  
SCALE 1:2



SPLICE WASHER  
SCALE 1:2



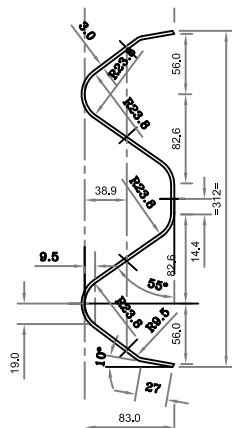
BEAM SPLICE  
SCALE 1:10



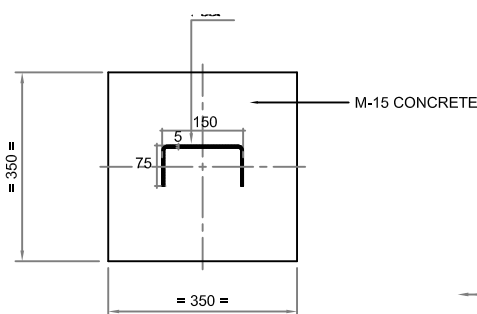
PLAN

NOTES :

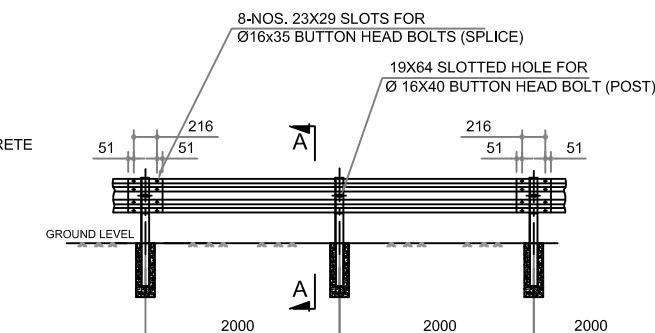
1. ALL DIMENSIONS ARE IN mm UNLESS NOTED OTHERWISE.
2. ALL PUNCHING DIMENSIONS UNLESS OTHERWISE STATED = ±1mm.
3. WELDING ELECTRODES SHALL CONFORM TO IS:314.
4. FOR GUARD RAIL BEAMS, POSTS & SPACER MATERIAL SHALL CONFORM TO IS:10748, GRADE-II. IS 808, IS 2062
5. BOLTS, NUTS & WASHERS SHALL BE ELECTRO GALVANISED.
6. GUARD RAIL, POSTS, SPACERS, FOUNDATION BOLTS SHALL BE HOT DIP GALVANISED.
7. THE OVER LAPPING OF THE GAURD RAIL BEAM SHALL BE ACHIEVED USING SUITABLE SIZE WASHERS.
8. GUARD RAILS ARE TO BE PROVIDED WHEREVER:-  
a) HEIGHT OF THE EMBANKMENT IS MORE THAN 3M
9. END OF CONCRETE BRIDGE BARRIERS SHALL BE PROVIDED WITH HOLES AND SEAT FOR END SHOE CONNECTION AS SHOWN. THE END SHOE SHALL BE FURNISHED AND INSTALLED WITH ROADWAY APPROACH GUARD RAIL.
10. W-BEAM GUARDRAIL ARE TO BE FABRICATED AND INSTALLED AS PER SECTION 810 OF MOST SPECIFICATION FOR METAL BEAM CRASH BARRIER.



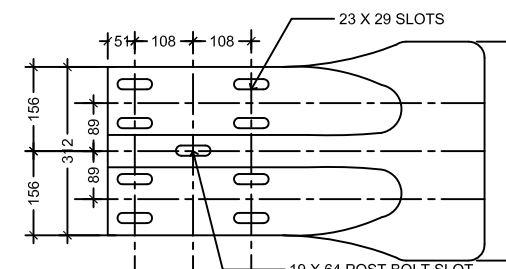
TYPICAL CROSS SECTION OF GUARD RAIL BEAM  
SCALE- 1:5



SECTION 'B-B'  
SCALE - 1:10



ELEVATION OF SINGLE SIDED GUARD RAIL  
SCALE - 1:50



ELEVATION OF W BEAM END SECTION ( FLARED )  
SCALE 1:10

Notes :  
1) ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE INDICATED.

R0	Sep. 2017	Tende Drawings	VPG	DR	NKS	Tapas Mukherjee
Revision	Date	Stage / Report	Designed	Drawn	Checked	Approved

Client : Ministry of Road Transport & Highways (Government of India)

Consultant : RITES LIMITED, RITES BHAWAN,  
Plot No. 1, Sector- 29, Gurgaon-122001

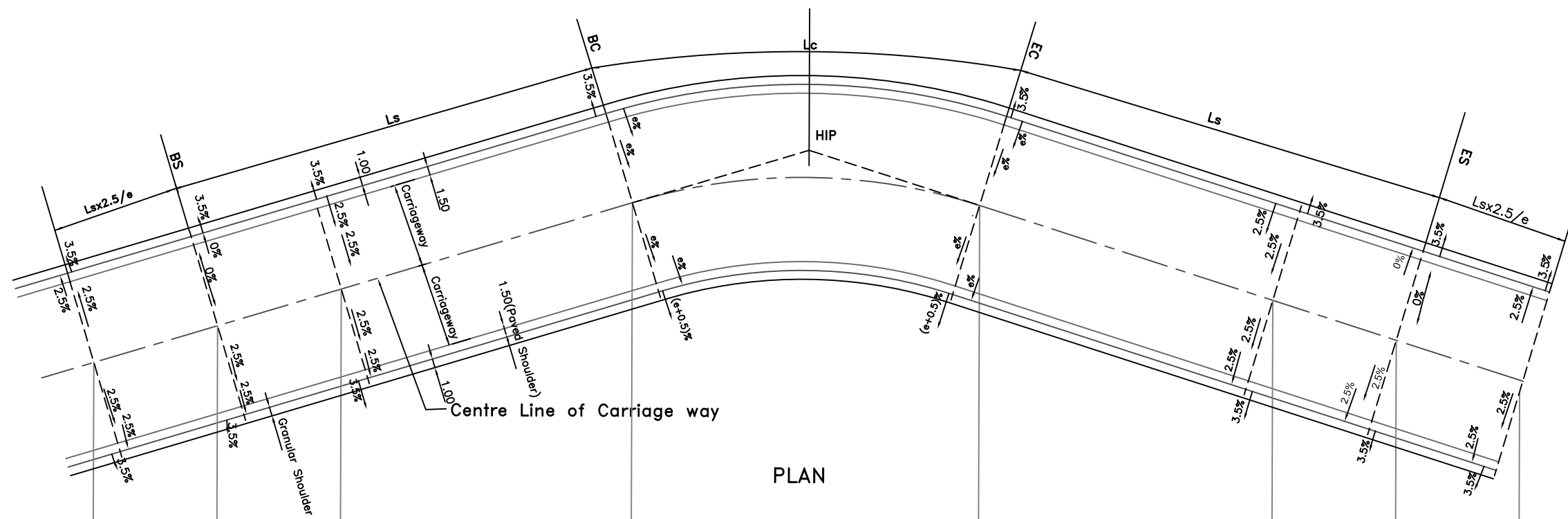


Project : Preparation of Revised Detailed Project Report and Verification of Executed Quantities/Items for Widening to 2 Lane of Merangkong-Tamlu-MonRoad, Changtongya-LonglengRoad, Chakabama-Zunheboto Road & Pftusero-Phek Road under Phase 'A' of SARDP-NE in the State of Nagaland

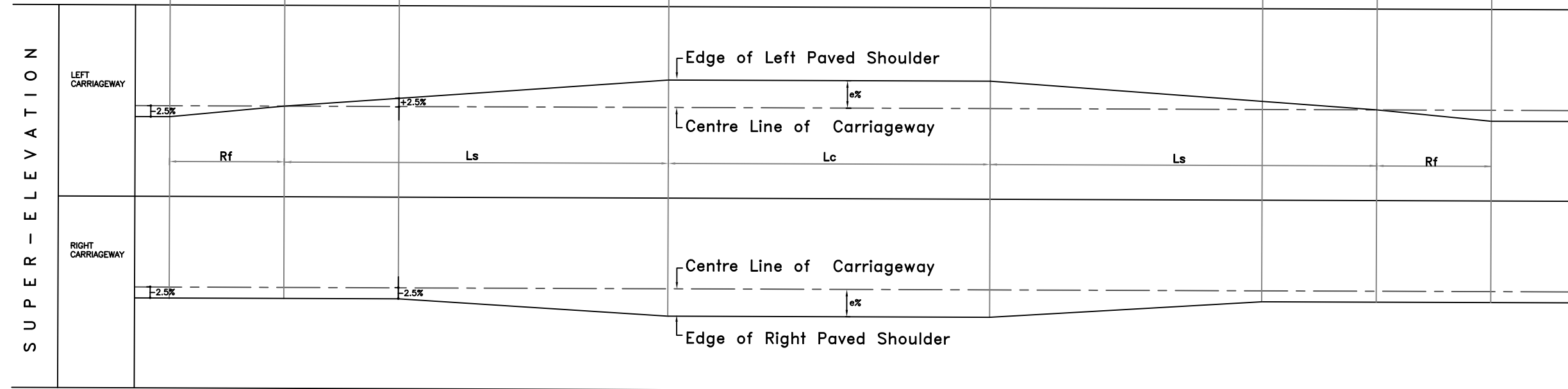
Scale : Not to Scale

Title : DETAILS OF ROAD SIGNS

Page No. 11



PLAN



ELEVATION

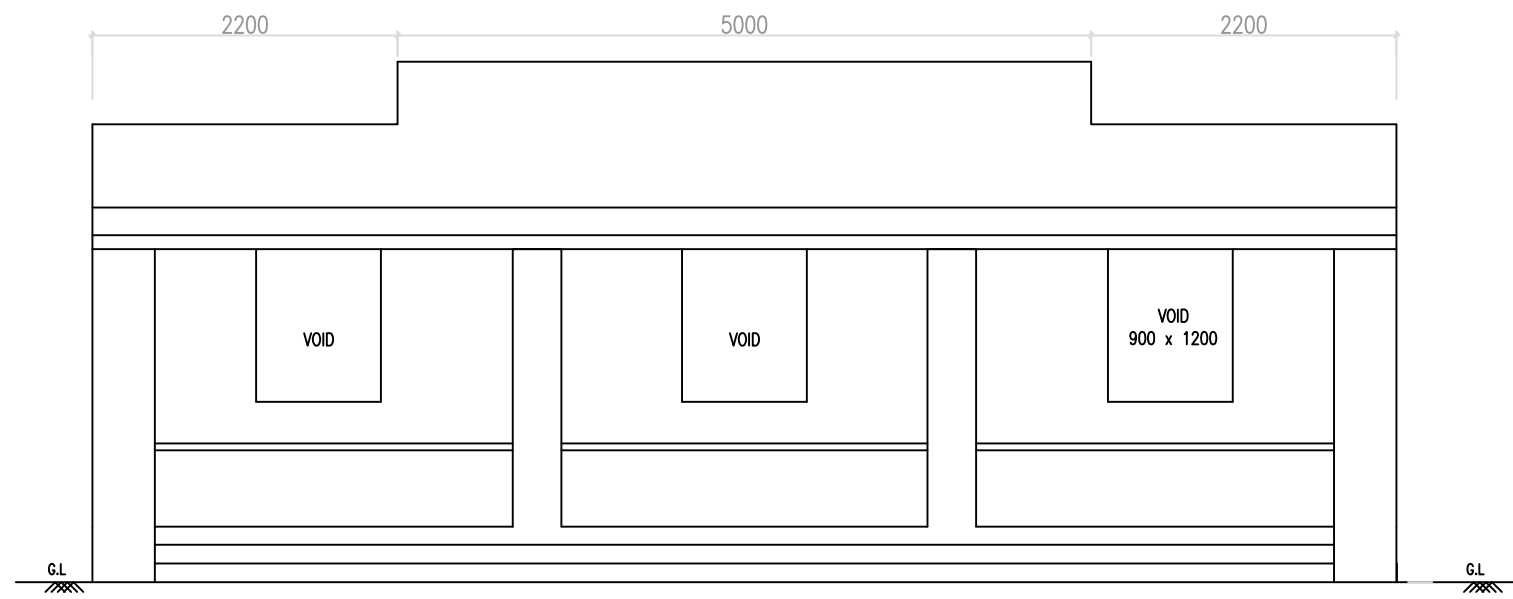
NOTES:  
 1  $Rf = \text{superelevation Runoff Length} = Ls \times 2.5 / e$   
 2 Maximum Superelevation ( $e_{max}$ ) =  $VxV / (225 * R)$ , Limited up to 7.0%  
 3.5 All dimensions are in metre unless otherwise specified

Notes :  
 1) ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE INDICATED.

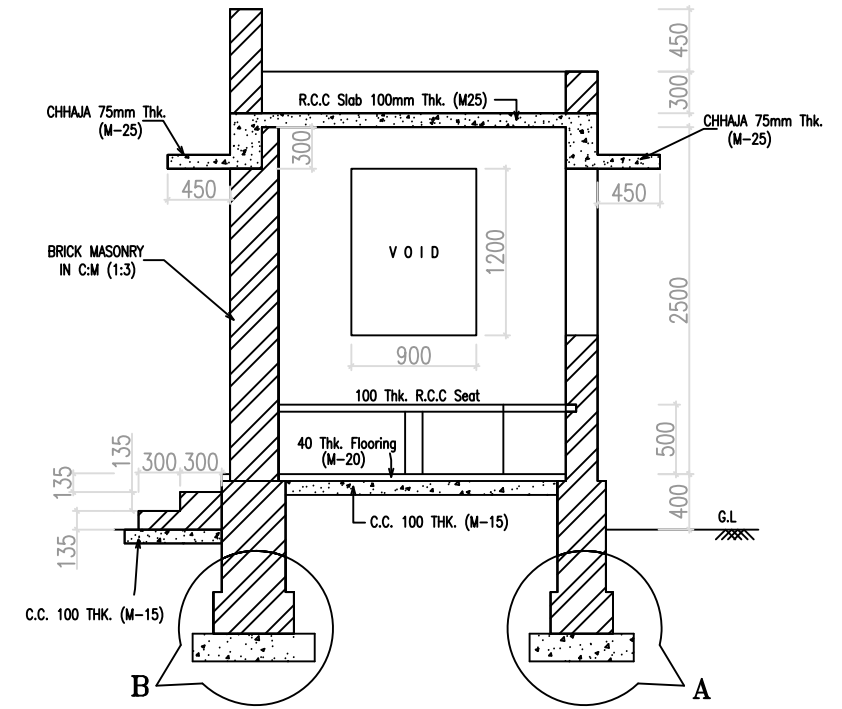
RO	Sep. 2017	Tender Drawings	VGP	DR	NKS	Tapas Mukherjee
Revision	Date	Stage / Report	Designed	Drawn	Checked	Approved

Client :	Ministry of Road Transport & Highways (Government of India)	Consultant :	RITES LIMITED, RITES BHAWAN, Plot No. 1, Sector- 29, Gurgaon-122001
Project :	Preparation of Revised Detailed Project Report and Verification of Executed Quantities/Items for Widening to 2 Lane of Merangkong-Tamlu-Mon Road, Changtongya-Longleng Road, Chakabama-Zunhebot Road & Pftusero-Phek Road under Phase 'A' of SARDP-NE in the State of Nagaland		
Scale :	Not to Scale	Title :	Typical Drawing for Attainment of Superelevation in 2-Lane Road
		Page No. :	12

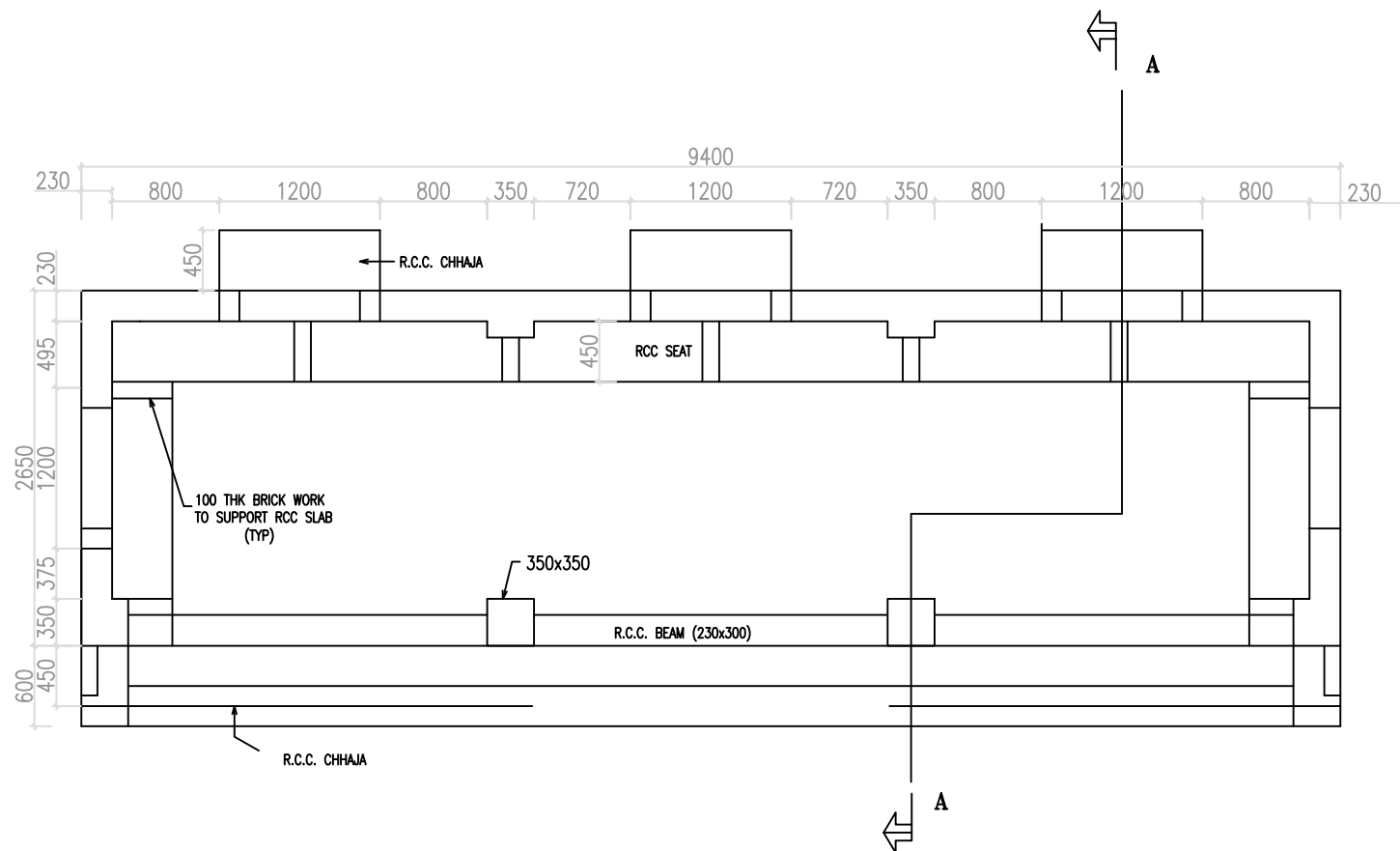




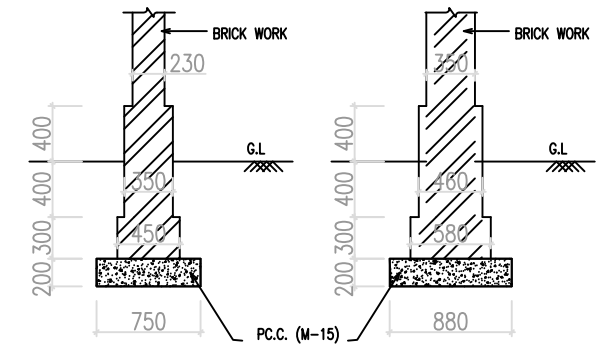
**ELEVATION**



**SECTION AT A-A**



**PLAN**



**FOOTING DETAIL-A**

**FOOTING DETAIL-B**

**NOTES:**

1. ALL DIMENSIONS ARE IN MILLIMETRES AND LEVELS ARE IN METRES UNLESS OTHERWISE SPECIFIED.
2. ONLY WRITTEN DIMENSIONS TO BE FOLLOWED.
3. BRICK WALLS ARE PLASTERED IN CEMENT MORTAR IN PROPORTION 1:6 (15mm THICK).
4. BUS SHELTERS ARE PAINTED WITH TWO COATS OF SNOWCEM.

				Client : Ministry of Road Transport & Highways (Government of India)				Consultant : RITES LIMITED, RITES BHAWAN, Plot No. 1, Sector- 29, Gurgaon-122001					
				Project : Preparation of Revised Detailed Project Report and Verification of Executed Quantities/Items for Widening to 2 Lane of Merangkong-Tamlu-MonRoad, Changtongya-LonglengRoad, Chakabama-Zunheboto Road & Pfutsero-Phek Road under Phase 'A' of SARDP-NE in the State of Nagaland								Title : BUS SHELTER	
R0	Sep. 2017	Tender Drawings	VPG	DR	NKS	Tapas Mukherjee	Scale : Not to Scale				Page No. 13		
Revision	Date	Stage / Report	Designed	Drawn	Checked	Approved							