

부산외곽순환 고속도로 건설공사 실시설계

	1122.37640	1+122.37640	198345.01706	219994.23684	296° 27' 15.31"
	1122.53470	1+122.53470	198345.08757	219994.09511	296° 26' 54.90"
	1123.53410	1+123.53410	198345.53242	219993.20018	296° 24' 46.06"
	1124.14200	1+124.14200	198345.80273	219992.65568	296° 23' 27.69"
	1124.19840	1+124.19840	198345.82780	219992.60516	296° 23' 20.42"
	1125.09870	1+125.09870	198346.22772	219991.79856	296° 21' 24.36"
	1125.22480	1+125.22480	198346.28370	219991.68557	296° 21' 8.10"
	1125.73980	1+125.73980	198346.51223	219991.22405	296° 20' 1.71"
	1125.89680	1+125.89680	198346.58187	219991.08334	296° 19' 41.47"
	1126.24330	1+126.24330	198346.73551	219990.77277	296° 18' 56.80"
	1126.88740	1+126.88740	198347.02093	219990.19536	296° 17' 33.77"
	1127.54560	1+127.54560	198347.31237	219989.60519	296° 16' 8.92"
	1127.90140	1+127.90140	198347.46980	219989.28612	296° 15' 23.05"
	1128.56220	1+128.56220	198347.76201	219988.69344	296° 13' 57.86"
	1132.55550	1+132.55550	198349.52265	219985.10923	296° 5' 23.06"
	1133.69170	1+133.69170	198350.02197	219984.08862	296° 2' 56.59"
	1134.42130	1+134.42130	198350.34221	219983.43306	296° 1' 22.53"
	1135.77350	1+135.77350	198350.93495	219982.21770	295° 58' 28.21"
	1136.88410	1+136.88410	198351.42102	219981.21912	295° 56' 5.04"
	1137.59630	1+137.59630	198351.73235	219980.57857	295° 54' 33.23"
EC	1139.71210	1+139.71210	198352.65559	219978.67482	295° 50' 0.47"

IP8 (좌향)

구분	원 곡 선		교각(IA)	11° 0' 14.05"	
IP좌표	X	198382.03710	방위각	1	295° 50' 0.47"
	Y	219917.98672		2	284° 49' 46.41"

원 중심 좌표	X	197722.61049	R	700.00000	C L	134.43804
	Y	219673.64503	T L	67.42640	S L	3.23987

구분	누가거리	X 좌표	Y 좌표
B C	1139.71210	198352.65559	219978.67482
E C	1274.15014	198399.29452	219852.80619

구분	누가거리	측점(STA.)	X좌표	Y좌표	방위각
EC	1139.71210	1+139.71210	198352.65559	219978.67482	295° 50' 0.47"
	1140.00000	1+140.00000	198352.78099	219978.41567	295° 48' 35.63"
	1141.44940	1+141.44940	198353.41069	219977.11020	295° 41' 28.55"
	1142.59630	1+142.59630	198353.90704	219976.07628	295° 35' 50.60"
	1142.92420	1+142.92420	198354.04864	219975.78053	295° 34' 13.98"
	1142.93350	1+142.93350	198354.05266	219975.77214	295° 34' 11.24"
	1143.32360	1+143.32360	198354.22093	219975.42020	295° 32' 16.29"

제6장 선형계산부

	1144.06850	1+144.06850	198354.54170	219974.74790	295° 28' 36.79"
	1144.07810	1+144.07810	198354.54583	219974.73923	295° 28' 33.96"
	1144.49860	1+144.49860	198354.72659	219974.35957	295° 26' 30.06"
	1144.79360	1+144.79360	198354.85326	219974.09315	295° 25' 3.13"
	1144.80300	1+144.80300	198354.85730	219974.08466	295° 25' 0.36"
	1145.62420	1+145.62420	198355.20932	219973.34274	295° 20' 58.38"
	1145.94170	1+145.94170	198355.34519	219973.05578	295° 19' 24.83"
	1145.94560	1+145.94560	198355.34686	219973.05225	295° 19' 23.68"
	1145.95480	1+145.95480	198355.35080	219973.04394	295° 19' 20.97"
	1146.33700	1+146.33700	198355.51417	219972.69842	295° 17' 28.35"
	1146.64060	1+146.64060	198355.64382	219972.42389	295° 15' 58.89"
	1147.06640	1+147.06640	198355.82544	219972.03877	295° 13' 53.42"
	1147.07580	1+147.07580	198355.82945	219972.03026	295° 13' 50.65"
	1147.77570	1+147.77570	198356.12748	219971.39699	295° 10' 24.41"
	1147.78490	1+147.78490	198356.13139	219971.38866	295° 10' 21.70"
	1148.46580	1+148.46580	198356.42071	219970.77228	295° 7' 1.07"
	1148.89750	1+148.89750	198356.60383	219970.38135	295° 4' 53.86"
	1153.60120	1+153.60120	198358.58344	219966.11452	294° 41' 47.85"
	1154.67440	1+154.67440	198359.03109	219965.13914	294° 36' 31.62"
	1155.35330	1+155.35330	198359.31350	219964.52176	294° 33' 11.57"
	1156.34390	1+156.34390	198359.72450	219963.62045	294° 28' 19.67"
	1157.38270	1+157.38270	198360.15412	219962.67465	294° 23' 13.58"
	1158.03930	1+158.03930	198360.42495	219962.07651	294° 20' 0.10"
	1160.00000	1+160.00000	198361.23034	219960.28886	294° 10' 22.35"
	1163.25960	1+163.25960	198362.55819	219957.31198	293° 54' 21.87"
	1164.20440	1+164.20440	198362.94048	219956.44798	293° 49' 43.47"
	1164.49550	1+164.49550	198363.05803	219956.18167	293° 48' 17.69"
	1164.80640	1+164.80640	198363.18345	219955.89719	293° 46' 46.08"
	1165.42120	1+165.42120	198363.43110	219955.33448	293° 43' 44.92"
	1165.66170	1+165.66170	198363.52784	219955.11429	293° 42' 34.05"
	1166.01170	1+166.01170	198363.66850	219954.79380	293° 40' 50.92"
	1166.57000	1+166.57000	198363.89253	219954.28242	293° 38' 6.41"
	1166.84970	1+166.84970	198364.00461	219954.02616	293° 36' 43.99"
	1166.91410	1+166.91410	198364.03041	219953.96715	293° 36' 25.02"
	1166.91420	1+166.91420	198364.03045	219953.96706	293° 36' 24.99"
	1167.14850	1+167.14850	198364.12424	219953.75235	293° 35' 15.95"
	1167.41700	1+167.41700	198364.23163	219953.50626	293° 33' 56.83"
	1167.41710	1+167.41710	198364.23167	219953.50617	293° 33' 56.80"
	1167.73950	1+167.73950	198364.36050	219953.21063	293° 32' 21.80"
	1168.30730	1+168.30730	198364.58706	219952.68999	293° 29' 34.49"
	1168.86080	1+168.86080	198364.80750	219952.18228	293° 26' 51.39"
	1168.86090	1+168.86090	198364.80754	219952.18219	293° 26' 51.36"
	1169.17540	1+169.17540	198364.93262	219951.89363	293° 25' 18.69"
	1169.17550	1+169.17550	198364.93266	219951.89354	293° 25' 18.66"
	1175.44460	1+175.44460	198367.39882	219946.12991	292° 54' 31.39"

부산외곽순환 고속도로 건설공사 실시설계

	1176.20690	1+176.20690	198367.69517	219945.42757	292° 50' 46.76"
	1176.70330	1+176.70330	198367.88774	219944.97005	292° 48' 20.49"
	1177.39910	1+177.39910	198368.15712	219944.32851	292° 44' 55.46"
	1178.13560	1+178.13560	198368.44156	219943.64915	292° 41' 18.44"
	1178.61530	1+178.61530	198368.62644	219943.20651	292° 38' 57.09"
	1180.00000	1+180.00000	198369.15841	219941.92807	292° 32' 9.07"
	1185.24480	1+185.24480	198371.15037	219937.07628	292° 6' 23.62"
	1185.87990	1+185.87990	198371.38911	219936.48776	292° 3' 16.48"
	1186.19330	1+186.19330	198371.50672	219936.19727	292° 1' 44.13"
	1186.30160	1+186.30160	198371.54734	219936.09687	292° 1' 12.22"
	1186.81670	1+186.81670	198371.74029	219935.61927	291° 58' 40.44"
	1186.88550	1+186.88550	198371.76603	219935.55547	291° 58' 20.16"
	1187.23160	1+187.23160	198371.89545	219935.23448	291° 56' 38.18"
	1187.50160	1+187.50160	198371.99630	219934.98402	291° 55' 18.62"
	1187.80560	1+187.80560	198372.10973	219934.70198	291° 53' 49.04"
	1187.84330	1+187.84330	198372.12379	219934.66700	291° 53' 37.93"
	1187.84340	1+187.84340	198372.12383	219934.66690	291° 53' 37.91"
	1187.91070	1+187.91070	198372.14892	219934.60446	291° 53' 18.07"
	1188.18330	1+188.18330	198372.25050	219934.35149	291° 51' 57.75"
	1188.18340	1+188.18340	198372.25054	219934.35140	291° 51' 57.72"
	1188.41070	1+188.41070	198372.33516	219934.14043	291° 50' 50.74"
	1188.81340	1+188.81340	198372.48491	219933.76661	291° 48' 52.08"
	1189.18410	1+189.18410	198372.62257	219933.42242	291° 47' 2.85"
	1189.18420	1+189.18420	198372.62261	219933.42233	291° 47' 2.82"
	1189.40720	1+189.40720	198372.70533	219933.21524	291° 45' 57.11"
	1189.40730	1+189.40730	198372.70537	219933.21515	291° 45' 57.08"
	1196.92090	1+196.92090	198375.45402	219926.22240	291° 9' 3.09"
	1197.42520	1+197.42520	198375.63581	219925.75200	291° 6' 34.49"
	1197.76870	1+197.76870	198375.75945	219925.43153	291° 4' 53.28"
	1198.23740	1+198.23740	198375.92789	219924.99414	291° 2' 35.17"
	1198.72900	1+198.72900	198376.10425	219924.53526	291° 0' 10.31"
	1199.06380	1+199.06380	198376.22417	219924.22268	290° 58' 31.66"
	1200.00000	1+200.00000	198376.55871	219923.34829	290° 53' 55.79"
	1206.76100	1+206.76100	198378.93995	219917.02054	290° 20' 43.57"
	1207.17180	1+207.17180	198379.08266	219916.63532	290° 18' 42.52"
	1207.45780	1+207.45780	198379.18189	219916.36709	290° 17' 18.25"
	1207.47250	1+207.47250	198379.18699	219916.35330	290° 17' 13.92"
	1207.84300	1+207.84300	198379.31536	219916.00575	290° 15' 24.74"
	1207.87680	1+207.87680	198379.32706	219915.97404	290° 15' 14.78"
	1208.15910	1+208.15910	198379.42473	219915.70917	290° 13' 51.60"
	1208.24460	1+208.24460	198379.45429	219915.62895	290° 13' 26.41"
	1208.52440	1+208.52440	198379.55097	219915.36638	290° 12' 3.96"
	1208.53870	1+208.53870	198379.55590	219915.35296	290° 11' 59.75"
	1208.55770	1+208.55770	198379.56246	219915.33513	290° 11' 54.15"
	1208.55780	1+208.55780	198379.56250	219915.33503	290° 11' 54.12"

	1208.77900	1+208.77900	198379.63884	219915.12742	290° 10' 48.94"
	1208.77910	1+208.77910	198379.63887	219915.12733	290° 10' 48.91"
	1208.93420	1+208.93420	198379.69236	219914.98174	290° 10' 3.21"
	1209.21030	1+209.21030	198379.78750	219914.72255	290° 8' 41.85"
	1209.44730	1+209.44730	198379.86909	219914.50004	290° 7' 32.01"
	1209.44740	1+209.44740	198379.86912	219914.49995	290° 7' 31.98"
	1209.60030	1+209.60030	198379.92172	219914.35638	290° 6' 46.93"
	1209.60040	1+209.60040	198379.92175	219914.35628	290° 6' 46.90"
	1218.32230	1+218.32230	198382.86988	219906.14780	289° 23' 56.87"
	1218.32240	1+218.32240	198382.86991	219906.14771	289° 23' 56.84"
	1219.16900	1+219.16900	198383.15062	219905.34900	289° 19' 47.38"
	1219.16910	1+219.16910	198383.15066	219905.34891	289° 19' 47.35"
	1220.00000	1+220.00000	198383.42522	219904.56468	289° 15' 42.51"
	1221.89050	1+221.89050	198384.04646	219902.77917	289° 6' 25.45"
	1222.02030	1+222.02030	198384.08894	219902.65652	289° 5' 47.20"
	1222.67240	1+222.67240	198384.30199	219902.04021	289° 2' 35.05"
	1222.80000	1+222.80000	198384.34361	219901.91959	289° 1' 57.45"
	1223.03800	1+223.03800	198384.42119	219901.69458	289° 0' 47.32"
	1223.80000	1+223.80000	198384.66904	219900.97402	288° 57' 2.79"
	1225.13220	1+225.13220	198385.10048	219899.71362	288° 50' 30.24"
	1225.28040	1+225.28040	198385.14833	219899.57335	288° 49' 46.57"
	1225.55000	1+225.55000	198385.23530	219899.31816	288° 48' 27.13"
	1225.74640	1+225.74640	198385.29859	219899.13224	288° 47' 29.26"
	1225.85840	1+225.85840	198385.33466	219899.02621	288° 46' 56.25"
	1226.00420	1+226.00420	198385.38159	219898.88817	288° 46' 13.29"
	1226.26930	1+226.26930	198385.46684	219898.63715	288° 44' 55.18"
	1226.46250	1+226.46250	198385.52891	219898.45419	288° 43' 58.25"
	1227.51290	1+227.51290	198385.86551	219897.45919	288° 38' 48.73"
	1227.90660	1+227.90660	198385.99129	219897.08612	288° 36' 52.72"
	1228.15950	1+228.15950	198386.07197	219896.84643	288° 35' 38.20"
	1228.20000	1+228.20000	198386.08488	219896.80805	288° 35' 26.27"
	1228.34500	1+228.34500	198386.13109	219896.67061	288° 34' 43.54"
	1228.42040	1+228.42040	198386.15511	219896.59913	288° 34' 21.32"
	1228.58740	1+228.58740	198386.20828	219896.44083	288° 33' 32.11"
	1228.67010	1+228.67010	198386.23460	219896.36242	288° 33' 7.75"
	1228.83620	1+228.83620	198386.28743	219896.20495	288° 32' 18.80"
	1228.85350	1+228.85350	198386.29293	219896.18855	288° 32' 13.70"
	1229.01880	1+229.01880	198386.34546	219896.03182	288° 31' 25.00"
	1229.09300	1+229.09300	198386.36903	219895.96146	288° 31' 3.13"
	1229.10050	1+229.10050	198386.37141	219895.95435	288° 31' 0.92"
	1229.23760	1+229.23760	198386.41494	219895.82434	288° 30' 20.52"
	1229.33870	1+229.33870	198386.44702	219895.72847	288° 29' 50.73"
	1229.51920	1+229.51920	198386.50427	219895.55729	288° 28' 57.55"
	1229.66220	1+229.66220	198386.54959	219895.42166	288° 28' 15.41"
	1229.76240	1+229.76240	198386.58133	219895.32662	288° 27' 45.88"

부산외곽순환 고속도로 건설공사 실시설계

	1233.36790	1+233.36790	198387.71433	219891.90377	288° 10' 3.47"
	1233.96490	1+233.96490	198387.90023	219891.33645	288° 7' 7.56"
	1235.94020	1+235.94020	198388.51188	219889.45823	287° 57' 25.51"
	1236.50000	1+236.50000	198388.68426	219888.92563	287° 54' 40.56"
	1238.37010	1+238.37010	198389.25702	219887.14540	287° 45' 29.51"
	1238.56330	1+238.56330	198389.31592	219886.96140	287° 44' 32.58"
	1238.70880	1+238.70880	198389.36024	219886.82282	287° 43' 49.70"
	1238.77990	1+238.77990	198389.38189	219886.75509	287° 43' 28.75"
	1238.89630	1+238.89630	198389.41732	219886.64421	287° 42' 54.45"
	1238.97090	1+238.97090	198389.44001	219886.57315	287° 42' 32.47"
	1239.08690	1+239.08690	198389.47529	219886.46264	287° 41' 58.29"
	1239.11490	1+239.11490	198389.48380	219886.43597	287° 41' 50.04"
	1239.23040	1+239.23040	198389.51890	219886.32593	287° 41' 16.01"
	1239.30050	1+239.30050	198389.54020	219886.25915	287° 40' 55.35"
	1239.48890	1+239.48890	198389.59740	219886.07964	287° 39' 59.84"
	1239.63100	1+239.63100	198389.64051	219885.94424	287° 39' 17.96"
	1240.00000	1+240.00000	198389.75233	219885.59259	287° 37' 29.23"
	1248.77600	1+248.77600	198392.35705	219877.21210	286° 54' 23.26"
	1248.91960	1+248.91960	198392.39879	219877.07470	286° 53' 40.95"
	1248.91970	1+248.91970	198392.39882	219877.07460	286° 53' 40.92"
	1249.03050	1+249.03050	198392.43101	219876.96858	286° 53' 8.27"
	1249.12080	1+249.12080	198392.45724	219876.88217	286° 52' 41.66"
	1249.17150	1+249.17150	198392.47195	219876.83366	286° 52' 26.72"
	1249.17160	1+249.17160	198392.47198	219876.83356	286° 52' 26.69"
	1249.26280	1+249.26280	198392.49845	219876.74629	286° 51' 59.82"
	1249.31350	1+249.31350	198392.51316	219876.69777	286° 51' 44.88"
	1249.31360	1+249.31360	198392.51319	219876.69767	286° 51' 44.85"
	1249.37270	1+249.37270	198392.53033	219876.64111	286° 51' 27.43"
	1249.42310	1+249.42310	198392.54494	219876.59288	286° 51' 12.58"
	1249.51230	1+249.51230	198392.57080	219876.50751	286° 50' 46.30"
	1249.51360	1+249.51360	198392.57117	219876.50626	286° 50' 45.92"
	1249.59190	1+249.59190	198392.59386	219876.43132	286° 50' 22.84"
	1249.65270	1+249.65270	198392.61147	219876.37313	286° 50' 4.93"
	1249.76130	1+249.76130	198392.64292	219876.26918	286° 49' 32.93"
	1249.84030	1+249.84030	198392.66578	219876.19356	286° 49' 9.65"
	1249.90060	1+249.90060	198392.68323	219876.13584	286° 48' 51.88"
	1259.33940	1+259.33940	198395.35261	219867.08244	286° 2' 30.61"
	1259.44080	1+259.44080	198395.38063	219866.98499	286° 2' 0.73"
	1259.52080	1+259.52080	198395.40272	219866.90810	286° 1' 37.16"
	1259.62150	1+259.62150	198395.43051	219866.81131	286° 1' 7.48"
	1259.62160	1+259.62160	198395.43054	219866.81122	286° 1' 7.45"
	1259.72180	1+259.72180	198395.45819	219866.71490	286° 0' 37.93"
	1259.80100	1+259.80100	198395.48003	219866.63878	286° 0' 14.59"
	1260.00000	1+260.00000	198395.53486	219866.44748	285° 59' 15.95"
	1269.46030	1+269.46030	198398.07900	219857.33577	285° 12' 48.34"

	1269.52690	1+269.52690	198398.09648	219857.27150	285° 12' 28.72"
	1269.58040	1+269.58040	198398.11051	219857.21988	285° 12' 12.95"
	1269.64740	1+269.64740	198398.12808	219857.15522	285° 11' 53.21"
	1269.64750	1+269.64750	198398.12810	219857.15512	285° 11' 53.18"
	1269.65450	1+269.65450	198398.12994	219857.14837	285° 11' 51.12"
	1269.71350	1+269.71350	198398.14540	219857.09143	285° 11' 33.73"
	1269.72060	1+269.72060	198398.14726	219857.08458	285° 11' 31.64"
	1269.76650	1+269.76650	198398.15929	219857.04028	285° 11' 18.12"
	1269.77350	1+269.77350	198398.16112	219857.03353	285° 11' 16.05"
	1269.83910	1+269.83910	198398.17831	219856.97022	285° 10' 56.72"
	1269.83990	1+269.83990	198398.17852	219856.96945	285° 10' 56.49"
	1269.87570	1+269.87570	198398.18789	219856.93489	285° 10' 45.94"
	1269.90530	1+269.90530	198398.19564	219856.90633	285° 10' 37.22"
	1269.95780	1+269.95780	198398.20938	219856.85566	285° 10' 21.75"
	1269.99340	1+269.99340	198398.21870	219856.82130	285° 10' 11.26"
	1270.02280	1+270.02280	198398.22639	219856.79292	285° 10' 2.59"
	1270.68540	1+270.68540	198398.39945	219856.15332	285° 6' 47.35"
	1270.74820	1+270.74820	198398.41582	219856.09269	285° 6' 28.84"
	1270.79860	1+270.79860	198398.42896	219856.04404	285° 6' 13.99"
	1270.86170	1+270.86170	198398.44540	219855.98311	285° 5' 55.40"
	1270.92400	1+270.92400	198398.46162	219855.92296	285° 5' 37.04"
	1270.97390	1+270.97390	198398.47461	219855.87479	285° 5' 22.34"
EC	1274.15014	1+274.15014	198399.29452	219852.80619	284° 49' 46.41"

IP9 (좌향)

구분	크로소이드		교각 (IA)	2° 4' 52.20"	
IP좌표	X	198403.26486	방위각	1	284° 49' 46.41"
	Y	219837.81040		2	282° 44' 54.21"

R 1	700.00000	A	207.00000	R 2	1701.50000
L 1	61.21286	원중심 좌표 1		L 2	25.18307
X 1	61.20116	X	197722.61049	X 2	25.18294
Y 1	0.89202	Y 2	219673.64503	Y 2	0.06212
T 1	0.04372	원중심 좌표 2		T 2	0.00740
TL1	40.81266	X	196748.23776	TL2	16.78876
TK1	20.40800	Y 2	219442.32503	TK2	8.39440

구분	누가거리	X 좌표	Y 좌표
K E	1274.15014	198399.29452	219852.80619
K A E	1310.17993	198407.79325	219817.79516

부산외곽순환 고속도로 건설공사 실시설계

구 분	누가거리	측정(STA.)	X좌표	Y좌표	방위각
KE	1274.15014	1+274.15014	198399.29452	219852.80619	284° 49' 46.41"
	1279.75830	1+279.75830	198400.70883	219847.37932	284° 23' 29.59"
	1279.79480	1+279.79480	198400.71790	219847.34396	284° 23' 19.83"
	1279.82440	1+279.82440	198400.72525	219847.31529	284° 23' 11.91"
	1279.86150	1+279.86150	198400.73447	219847.27935	284° 23' 1.99"
	1279.89780	1+279.89780	198400.74349	219847.24419	284° 22' 52.30"
	1279.92720	1+279.92720	198400.75079	219847.21571	284° 22' 44.45"
	1280.00000	1+280.00000	198400.76887	219847.14519	284° 22' 25.04"
	1289.96500	1+289.96500	198403.18414	219837.47738	283° 42' 8.33"
	1289.98090	1+289.98090	198403.18791	219837.46193	283° 42' 4.86"
	1289.99400	1+289.99400	198403.19101	219837.44921	283° 42' 1.99"
	1290.01010	1+290.01010	198403.19483	219837.43357	283° 41' 58.48"
	1290.02600	1+290.02600	198403.19859	219837.41812	283° 41' 55.01"
	1290.03430	1+290.03430	198403.20056	219837.41005	283° 41' 53.20"
	1290.03440	1+290.03440	198403.20058	219837.40996	283° 41' 53.17"
	1290.03900	1+290.03900	198403.20167	219837.40549	283° 41' 52.17"
	1290.05000	1+290.05000	198403.20427	219837.39480	283° 41' 49.77"
	1290.05020	1+290.05020	198403.20432	219837.39461	283° 41' 49.73"
	1290.06300	1+290.06300	198403.20735	219837.38217	283° 41' 46.94"
	1290.06310	1+290.06310	198403.20738	219837.38207	283° 41' 46.91"
	1290.07870	1+290.07870	198403.21107	219837.36692	283° 41' 43.51"
	1290.07910	1+290.07910	198403.21116	219837.36653	283° 41' 43.43"
	1290.07920	1+290.07920	198403.21119	219837.36643	283° 41' 43.40"
	1290.08750	1+290.08750	198403.21315	219837.35837	283° 41' 41.59"
	1290.09470	1+290.09470	198403.21486	219837.35137	283° 41' 40.03"
	1290.09490	1+290.09490	198403.21491	219837.35118	283° 41' 39.98"
	1290.10770	1+290.10770	198403.21794	219837.33874	283° 41' 37.19"
	1290.10780	1+290.10780	198403.21796	219837.33864	283° 41' 37.17"
	1290.11610	1+290.11610	198403.21992	219837.33058	283° 41' 35.36"
	1290.12330	1+290.12330	198403.22163	219837.32358	283° 41' 33.80"
	1299.97300	1+299.97300	198405.50701	219827.74272	283° 9' 42.30"
	1299.97700	1+299.97700	198405.50792	219827.73883	283° 9' 41.62"
	1299.98040	1+299.98040	198405.50870	219827.73552	283° 9' 41.04"
	1299.98450	1+299.98450	198405.50963	219827.73152	283° 9' 40.34"
	1299.98850	1+299.98850	198405.51054	219827.72763	283° 9' 39.66"
	1299.99090	1+299.99090	198405.51109	219827.72529	283° 9' 39.25"
	1299.99190	1+299.99190	198405.51132	219827.72432	283° 9' 39.08"
	1299.99420	1+299.99420	198405.51184	219827.72208	283° 9' 38.69"
	1299.99810	1+299.99810	198405.51273	219827.71828	283° 9' 38.03"
	1300.00000	1+300.00000	198405.51316	219827.71643	283° 9' 37.71"
KAE	1310.17993	1+310.17993	198407.79325	219817.79516	282° 44' 54.21"

EP

EP 좌표	X	198407.79326	방위각	282 ° 44' 54.21"
	Y	219817.79515		

라. RAMP-D

BP

BP 좌표	X	198795.03210	방위각	196 ° 19' 22.02"
	Y	220750.64553		

IP1 (우향)

구 분	원 곡 선		교각(IA)	4 ° 18' 2.13"	
IP좌표	X	198723.42541	방위각	1	196 ° 19' 22.02"
	Y	220729.67536		2	200 ° 37' 24.15"

원 중심 좌표	X	199353.53139	R	1987.20000	C L	149.15817
	Y	218843.54240	T L	74.61412	S L	1.40029

구분	누가거리	X 좌표	Y 좌표
B C	-80.00000	198795.03210	220750.64553
E C	69.15817	198653.59287	220703.39452

구 분	누가거리	측점(STA.)	X좌표	Y좌표	방위각
BP	-80.00000	0- 80.00000	198795.03210	220750.64553	196 ° 19' 22.02"
	-60.00000	0- 60.00000	198775.86684	220744.92808	196 ° 53' 57.96"
	-40.00000	0- 40.00000	198756.76009	220739.01802	197 ° 28' 33.89"
	-20.00000	0- 20.00000	198737.71378	220732.91597	198 ° 3' 9.82"
	0.00000	0+ 0.00000	198718.72986	220726.62255	198 ° 37' 45.76"
	20.00000	0+ 20.00000	198699.81023	220720.13838	199 ° 12' 21.69"
	40.00000	0+ 40.00000	198680.95683	220713.46413	199 ° 46' 57.63"
	60.00000	0+ 60.00000	198662.17154	220706.60047	200 ° 21' 33.56"
EC	69.15817	0+ 69.15817	198653.59287	220703.39452	200 ° 37' 24.15"

IP2 (우향)

구 분	크 로 소 이 드		교각(IA)	9 ° 7' 50.18"	
IP좌표	X	198583.03631	방위각	1	200 ° 37' 24.15"
	Y	220676.84119		2	209 ° 45' 14.33"

부산외곽순환 고속도로 건설공사 실시설계

R 1	1987.20000	A	285.44384	R 2	490.00000
L 1	41.00150	원중심 좌표 1		L 2	166.28201
X 1	41.00107	X	199353.53139	X 2	165.80393
Y 1	0.14099	Y 2	218843.54240	Y 2	9.38534
T 1	0.01032	원중심 좌표 2		T 2	0.16968
TL1	27.33449	X	198782.68289	TL2	111.02231
TK1	13.66731	Y 2	220226.55775	TK2	55.57976

구분	누가거리	X 좌표	Y 좌표
K A E	69.15817	198653.59287	220703.39452
K E	194.43867	198539.50726	220651.95828

구 분	누가거리	측점(STA.)	X좌표	Y좌표	방위각
KAE	69.15817	0+ 69.15817	198653.59287	220703.39452	200 ° 37' 24.15"
	80.00000	0+ 80.00000	198643.45722	220699.54567	200 ° 58' 38.28"
	100.00000	0+100.00000	198624.83485	220692.25186	201 ° 50' 49.45"
	120.00000	0+120.00000	198606.34413	220684.63086	202 ° 59' 53.23"
	140.00000	0+140.00000	198588.03007	220676.59504	204 ° 25' 49.63"
	160.00000	0+160.00000	198569.94370	220668.05962	206 ° 8' 38.64"
	180.00000	0+180.00000	198552.14322	220658.94356	208 ° 8' 20.27"
KE	194.43867	0+194.43867	198539.50726	220651.95828	209 ° 45' 14.33"

IP3 (우향)

구 분	원 곡 선		교각(IA)	81 ° 26' 57.09"	
IP좌표	X	198173.28725	방위각	1	209 ° 45' 14.33"
	Y	220442.61255		2	291 ° 12' 11.41"

원 중심 좌표	X	198782.68289	R	490.00000	C L	696.56271
	Y	220226.55775	T L	421.83259	S L	156.56224

구분	누가거리	X 좌표	Y 좌표
B C	194.43867	198539.50726	220651.95828
E C	891.00138	198325.85404	220049.33643

구 분	누가거리	측점(STA.)	X좌표	Y좌표	방위각
BC	194.43867	0+194.43867	198539.50726	220651.95828	209° 45' 14.33"
	200.00000	0+200.00000	198534.69488	220649.17098	210° 24' 15.36"
	220.00000	0+220.00000	198517.65669	220638.69985	212° 44' 34.33"
	240.00000	0+240.00000	198501.05997	220627.54220	215° 4' 53.30"
	260.00000	0+260.00000	198484.93236	220615.71661	217° 25' 12.27"
	280.00000	0+280.00000	198469.30072	220603.24278	219° 45' 31.24"

	300.00000	0+300.00000	198454.19110	220590.14149	222° 5' 50.22"
	320.00000	0+320.00000	198439.62865	220576.43457	224° 26' 9.19"
	340.00000	0+340.00000	198425.63765	220562.14484	226° 46' 28.16"
	360.00000	0+360.00000	198412.24140	220547.29611	229° 6' 47.13"
	380.00000	0+380.00000	198399.46220	220531.91311	231° 27' 6.10"
	400.00000	0+400.00000	198387.32135	220516.02147	233° 47' 25.07"
	420.00000	0+420.00000	198375.83907	220499.64766	236° 7' 44.05"
	440.00000	0+440.00000	198365.03448	220482.81895	238° 28' 3.02"
	460.00000	0+460.00000	198354.92559	220465.56338	240° 48' 21.99"
	480.00000	0+480.00000	198345.52924	220447.90969	243° 8' 40.96"
	500.00000	0+500.00000	198336.86106	220429.88728	245° 28' 59.93"
	520.00000	0+520.00000	198328.93552	220411.52617	247° 49' 18.90"
	540.00000	0+540.00000	198321.76579	220392.85696	250° 9' 37.88"
	560.00000	0+560.00000	198315.36384	220373.91073	252° 29' 56.85"
	580.00000	0+580.00000	198309.74032	220354.71905	254° 50' 15.82"
	600.00000	0+600.00000	198304.90460	220335.31389	257° 10' 34.79"
	620.00000	0+620.00000	198300.86473	220315.72757	259° 30' 53.76"
	640.00000	0+640.00000	198297.62745	220295.99272	261° 51' 12.73"
	660.00000	0+660.00000	198295.19814	220276.14220	264° 11' 31.71"
	680.00000	0+680.00000	198293.58086	220256.20909	266° 31' 50.68"
	700.00000	0+700.00000	198292.77830	220236.22659	268° 52' 9.65"
	720.00000	0+720.00000	198292.79179	220216.22799	271° 12' 28.62"
	740.00000	0+740.00000	198293.62131	220196.24659	273° 32' 47.59"
	760.00000	0+760.00000	198295.26548	220176.31568	275° 53' 6.56"
	780.00000	0+780.00000	198297.72156	220156.46846	278° 13' 25.54"
	800.00000	0+800.00000	198300.98547	220136.73799	280° 33' 44.51"
	820.00000	0+820.00000	198305.05175	220117.15713	282° 54' 3.48"
	840.00000	0+840.00000	198309.91365	220097.75851	285° 14' 22.45"
	860.00000	0+860.00000	198315.56306	220078.57444	287° 34' 41.42"
	880.00000	0+880.00000	198321.99057	220059.63687	289° 55' 0.40"
EC	891.00138	0+891.00138	198325.85404	220049.33643	291° 12' 11.41"

IP4 (우향)

구 분	크 로 소 이 드		교각(1A)	3° 28' 58.90"	
IP좌표	X	198333.03879	방위각	1	291° 12' 11.41"
	Y	220030.81608		2	294° 41' 10.31"

R 1	490.00000	A	170.85519	R 2	0.00000
L 1	59.57448	원중심 좌표 1		L 2	0.00000
X 1	59.55247	X	198782.68289	X 2	0.00000
Y 1	1.20686	Y 2	220226.55775	Y 2	0.00000
T 1	0.06079	원중심 좌표 2		T 2	0.00000
TL1	39.72401	X	0.00000	TL2	0.00000
TK1	19.86515	Y 2	0.00000	TK2	0.00000

부산외곽순환 고속도로 건설공사 실시설계

구분	누가거리	X 좌표	Y 좌표
K E	891.00138	198325.85404	220049.33643
K A	950.57587	198349.62945	219994.72249

구분	누가거리	측점(STA.)	X좌표	Y좌표	방위각
KE	891.00138	0+891.00138	198325.85404	220049.33643	291 ° 12' 11.41"
	900.00000	0+900.00000	198329.18161	220040.97579	292 ° 10' 33.29"
	920.00000	0+920.00000	198337.00811	220022.57144	293 ° 46' 7.40"
	940.00000	0+940.00000	198345.21860	220004.33463	294 ° 34' 35.15"
KA	950.57587	0+950.57587	198349.62945	219994.72249	294 ° 41' 10.31"

IP5 (좌향)

구분	크로소이드		교각(IA)	2 ° 25' 54.90"	
IP좌표	X	198366.26136	방위각	1	294 ° 41' 10.31"
	Y	219958.53916		2	292 ° 15' 15.41"

R 1	0.00000	A	205.00000	R 2	703.60000
L 1	0.00000	원중심 좌표 1		L 2	59.72854
X 1	0.00000	X	0.00000	X 2	59.71778
Y 1	0.00000	Y 2	0.00000	Y 2	0.84495
T 1	0.00000	원중심 좌표 2		T 2	0.04244
TL1	0.00000	X	197722.61235	TL2	39.82278
TK1	0.00000	Y 2	219673.64368	TK2	19.91293

구분	누가거리	X 좌표	Y 좌표
K A	950.57587	198349.62945	219994.72249
K E	1010.30441	198373.80274	219940.10950

구분	누가거리	측점(STA.)	X좌표	Y좌표	방위각
KA	950.57587	0+950.57587	198349.62945	219994.72249	294 ° 41' 10.31"
	960.00000	0+960.00000	198353.56241	219986.15825	294 ° 37' 32.35"
	980.00000	0+980.00000	198361.82646	219967.94555	294 ° 5' 45.62"
	1000.00000	1+ 0.00000	198369.83459	219949.61912	293 ° 1' 15.64"
KE	1010.30441	1+ 10.30441	198373.80274	219940.10950	292 ° 15' 15.41"

IP6 (좌향)

구분	원곡선		교각(IA)	7 ° 25' 36.56"	
IP좌표	X	198391.09695	방위각	1	292 ° 15' 15.41"
	Y	219897.84584		2	284 ° 49' 38.85"

원 중심 좌표	X	197722.61235	R	703.60000	C L	91.20240
	Y	219673.64368	T L	45.66516	S L	1.48033

구분	누가거리	X 좌표	Y 좌표
B C	1010.30441	198373.80274	219940.10950
E C	1101.50681	198402.78308	219853.70129

구 분	누가거리	측점(STA.)	X좌표	Y좌표	방위각
BC	1010.30441	1+ 10.30441	198373.80274	219940.10950	292 ° 15' 15.41"
	1020.00000	1+ 20.00000	198377.41270	219931.11109	291 ° 27' 53.08"
	1040.00000	1+ 40.00000	198384.46576	219912.39673	289 ° 50' 9.96"
	1060.00000	1+ 60.00000	198390.98409	219893.48947	288 ° 12' 26.83"
	1080.00000	1+ 80.00000	198396.96242	219874.40459	286 ° 34' 43.70"
	1100.00000	1+100.00000	198402.39591	219855.15751	284 ° 57' 0.58"
EC	1101.50681	1+101.50681	198402.78308	219853.70129	284 ° 49' 38.85"

IP7 (좌향)

구 분	크 로 소 이 드		교각(IA)	2 ° 4' 47.50"	
IP좌표	X	198406.76919	방위각	1	284 ° 49' 38.85"
	Y	219838.64368		2	282 ° 44' 51.35"

R 1	703.60000	A	208.12757	R 2	1705.10000
L 1	61.56493	원중심 좌표 1		L 2	25.40443
X 1	61.55315	X	197722.61235	X 2	25.40428
Y 1	0.89770	Y 2	219673.64368	Y 2	0.06308
T 1	0.04375	원중심 좌표 2		T 2	0.00745
TL1	41.04740	X	196748.24011	TL2	16.93633
TK1	20.52539	Y 2	219442.32164	TK2	8.46819

구분	누가거리	X 좌표	Y 좌표
K E	1101.50681	198402.78308	219853.70129
K A E	1137.66731	198411.31208	219818.56309

구 분	누가거리	측점(STA.)	X좌표	Y좌표	방위각
KE	1101.50681	1+101.50681	198402.78308	219853.70129	284 ° 49' 38.85"
	1120.00000	1+120.00000	198407.30381	219835.76956	283 ° 32' 51.70"
KAE	1137.66731	1+137.66731	198411.31208	219818.56309	282 ° 44' 51.35"
KAE	1137.66731	1+137.66731	198411.31208	219818.56309	282 ° 44' 51.35"

EP

EP 좌표	X	198411.31208	방위각	282 ° 44' 51.35"
	Y	219818.56309		

마. RAMP-E-1

BP

BP 좌표	X	198411.40033	방위각	81 ° 11' 39.11"
	Y	219184.68062		

IP1 (우향)

구 분	원 곡 선		교각(IA)	0 ° 30' 25.70"	
IP좌표	X	198412.54057	방위각	1	81 ° 11' 39.11"
	Y	219192.04119		2	81 ° 42' 4.81"

원 중심 좌표	X	196748.23804	R	1683.00000	C L	14.89663
	Y	219442.32419	T L	7.44836	S L	0.01648

구분	누가거리	X 좌표	Y 좌표
B C	0.00000	198411.40033	219184.68062
E C	14.89663	198413.61561	219199.41156

구 분	누가거리	측점(STA.)	X좌표	Y좌표	방위각
BC	0.00000	0+ 0.00000	198411.40033	219184.68062	81 ° 11' 39.11"
	0.04660	0+ 0.04660	198411.40746	219184.72667	81 ° 11' 44.83"
	11.92660	0+ 11.92660	198413.18435	219196.47301	81 ° 36' 0.81"
EC	14.89663	0+ 14.89663	198413.61561	219199.41156	81 ° 42' 4.81"

IP2 (우향)

구 분	원 곡 선		교각(IA)	6 ° 34' 14.17"	
IP좌표	X	198423.55767	방위각	1	81 ° 42' 4.81"
	Y	219267.57300		2	88 ° 16' 18.98"

원 중심 좌표	X	197226.18063	R	1200.00000	C L	137.61439
	Y	219372.61130	T L	68.88270	S L	1.97539

구분	누가거리	X 좌표	Y 좌표
B C	14.89663	198413.61561	219199.41156
E C	152.51102	198425.63488	219336.42438

구 분	누가거리	측점(STA.)	X좌표	Y좌표	방위각
EC	14.89663	0+ 14.89663	198413.61561	219199.41156	81° 42' 4.81"
	19.84660	0+ 19.84660	198414.31996	219204.31116	81° 56' 15.65"
	20.00000	0+ 20.00000	198414.34146	219204.46305	81° 56' 42.02"
	39.64640	0+ 39.64640	198416.93502	219223.93728	82° 52' 58.98"
	40.00000	0+ 40.00000	198416.97878	219224.28816	82° 53' 59.76"
	59.44540	0+ 59.44540	198419.22584	219243.60308	83° 49' 42.18"
	60.00000	0+ 60.00000	198419.28534	219244.15448	83° 51' 17.51"
	79.24290	0+ 79.24290	198421.19175	219263.30251	84° 46' 25.12"
	80.00000	0+ 80.00000	198421.26048	219264.05648	84° 48' 35.26"
	99.03820	0+ 99.03820	198422.83225	219283.02949	85° 43' 7.68"
	100.00000	0+100.00000	198422.90366	219283.98863	85° 45' 53.00"
	118.83070	0+118.83070	198424.14695	219302.77805	86° 39' 49.76"
	120.00000	0+120.00000	198424.21443	219303.94540	86° 43' 10.75"
	138.61980	0+138.61980	198425.13562	219322.54221	87° 36' 31.26"
	140.00000	0+140.00000	198425.19242	219323.92124	87° 40' 28.50"
EC	152.51102	0+152.51102	198425.63488	219336.42438	88° 16' 18.98"

IP3 (우향)

구 분	원 곡 선		교각(IA)	14 ° 0' 54.84"	
IP좌표	X	198430.75017	방위각	1	88 ° 16' 18.98"
	Y	219505.97614		2	102 ° 17' 13.82"

원 중심 좌표	X	197046.26249	R	1380.00000	C L	337.56450
	Y	219378.03934	T L	169.62891	S L	10.38627

구분	누가거리	X 좌표	Y 좌표
B C	152.51102	198425.63488	219336.42438
E C	490.07552	198394.65116	219671.71940

구 분	누가거리	측점(STA.)	X좌표	Y좌표	방위각
EC	152.51102	0+152.51102	198425.63488	219336.42438	88° 16' 18.98"
	158.40470	0+158.40470	198425.80003	219342.31574	88° 30' 59.90"
	160.00000	0+160.00000	198425.84040	219343.91053	88° 34' 58.34"
	170.00000	0+170.00000	198426.05149	219353.90828	88° 59' 53.01"
	178.18380	0+178.18380	198426.17033	219362.09120	89° 20' 16.22"
	180.00000	0+180.00000	198426.19013	219363.90730	89° 24' 47.69"
	197.95640	0+197.95640	198426.25719	219381.86344	90° 9' 31.58"
	200.00000	0+200.00000	198426.25001	219383.90703	90° 14' 37.03"
	215.00000	0+215.00000	198426.10472	219398.90625	90° 51' 59.04"
	217.72180	0+217.72180	198426.06088	219401.62770	90° 58' 45.86"
	220.00000	0+220.00000	198426.02005	219403.90553	91° 4' 26.38"
	222.66200	0+222.66200	198425.96759	219406.56702	91° 11' 4.26"

부산외곽순환 고속도로 건설공사 실시설계

	237.47980	0+237.47980	198425.58174	219421.37972	91° 47' 59.03"
	240.00000	0+240.00000	198425.50030	219423.89861	91° 54' 15.72"
	257.22970	0+257.22970	198424.82025	219441.11477	92° 37' 11.00"
	260.00000	0+260.00000	198424.69085	219443.88204	92° 44' 5.07"
	276.97120	0+276.97120	198423.77690	219460.82851	93° 26' 21.70"
	280.00000	0+280.00000	198423.59188	219463.85165	93° 33' 54.41"
	296.70380	0+296.70380	198422.45232	219480.51643	94° 15' 31.08"
	300.00000	0+300.00000	198422.20362	219483.80324	94° 23' 43.76"
	305.00000	0+305.00000	198421.81139	219488.78783	94° 36' 11.09"
	316.42690	0+316.42690	198420.84720	219500.17394	95° 4' 39.04"
	320.00000	0+320.00000	198420.52636	219503.73261	95° 13' 33.10"
	336.14010	0+336.14010	198418.96233	219519.79666	95° 53' 45.52"
	340.00000	0+340.00000	198418.56046	219523.63558	96° 3' 22.45"
	350.00000	0+350.00000	198417.46940	219533.57536	96° 28' 17.12"
	355.84320	0+355.84320	198416.79854	219539.38041	96° 42' 50.49"
	360.00000	0+360.00000	198416.30633	219543.50797	96° 53' 11.79"
	375.53530	0+375.53530	198414.35680	219558.92038	97° 31' 53.81"
	380.00000	0+380.00000	198413.76444	219563.34560	97° 43' 1.14"
	395.00000	0+395.00000	198411.66950	219578.19852	98° 20' 23.14"
	395.21640	0+395.21640	198411.63809	219578.41262	98° 20' 55.49"
	400.00000	0+400.00000	198410.93532	219583.14432	98° 32' 50.48"
	405.50000	0+405.50000	198410.10704	219588.58159	98° 46' 32.55"
	406.40000	0+406.40000	198409.96944	219589.47101	98° 48' 47.07"
	410.20000	0+410.20000	198409.38207	219593.22534	98° 58' 15.05"
	414.88560	0+414.88560	198408.64358	219597.85237	99° 9' 55.39"
	416.50000	0+416.50000	198408.38550	219599.44601	99° 13' 56.69"
	420.00000	0+420.00000	198407.81958	219602.89995	99° 22' 39.83"
	424.50000	0+424.50000	198407.07910	219607.33861	99° 33' 52.43"
	431.50000	0+431.50000	198405.89848	219614.23832	99° 51' 18.70"
	432.70000	0+432.70000	198405.69258	219615.42053	99° 54' 18.06"
	434.54270	0+434.54270	198405.37439	219617.23555	99° 58' 53.48"
	440.00000	0+440.00000	198404.41785	219622.60836	100° 12' 29.17"
	441.50000	0+441.50000	198404.15121	219624.08447	100° 16' 13.37"
	444.36650	0+444.36650	198403.63721	219626.90451	100° 23' 21.82"
	454.18710	0+454.18710	198401.83183	219636.55772	100° 47' 49.68"
	457.20000	0+457.20000	198401.26419	219639.51666	100° 55' 20.01"
	460.00000	0+460.00000	198400.73087	219642.26540	101° 2' 18.52"
	461.50000	0+461.50000	198400.44286	219643.73749	101° 6' 2.72"
	473.81850	0+473.81850	198398.01720	219655.81477	101° 36' 43.93"
	478.80000	0+478.80000	198397.00569	219660.69249	101° 49' 8.50"
	480.00000	0+480.00000	198396.75939	219661.86694	101° 52' 7.86"
	480.50000	0+480.50000	198396.65647	219662.35623	101° 53' 22.59"
	480.90000	0+480.90000	198396.57400	219662.74764	101° 54' 22.38"
	485.00000	0+485.00000	198395.72217	219666.75817	102° 4' 35.20"
EC	490.07552	0+490.07552	198394.65116	219671.71940	102° 17' 13.82"

IP4 (우향)

구분	크로소이드		교각(IA)	0° 49' 0.01"	
IP좌표	X	198391.86045	방위각	1	102° 17' 13.82"
	Y	219684.53255		2	103° 6' 13.83"

R 1	1380.00000	A	233.00000	R 2	0.00000
L 1	39.33986	원중심 좌표 1		L 2	0.00000
X 1	39.33906	X	197046.26249	X 2	0.00000
Y 1	0.18691	Y 2	219378.03934	Y 2	0.00000
T 1	0.01425	원중심 좌표 2		T 2	0.00000
TL1	26.22685	X	0.00000	TL2	0.00000
TK1	13.11354	Y 2	0.00000	TK2	0.00000

구분	누가거리	X 좌표	Y 좌표
K E	490.07552	198394.65116	219671.71940
K A	529.41538	198385.91439	219710.07647

구분	누가거리	측점(STA.)	X좌표	Y좌표	방위각
KE	490.07552	0+490.07552	198394.65116	219671.71940	102° 17' 13.82"
	493.43640	0+493.43640	198393.93205	219675.00244	102° 25' 14.71"
	500.00000	0+500.00000	198392.50720	219681.40952	102° 38' 50.10"
	513.03750	0+513.03750	198389.61439	219694.12202	102° 57' 44.27"
	520.00000	0+520.00000	198388.04651	219700.90569	103° 3' 25.43"
KA	529.41538	0+529.41538	198385.91439	219710.07647	103° 6' 13.83"

IP5 (좌향)

구분	크로소이드		교각(IA)	6° 58' 27.38"	
IP좌표	X	198380.02248	방위각	1	103° 6' 13.83"
	Y	219735.38774		2	96° 7' 46.45"

R 1	0.00000	A	78.94473	R 2	160.00000
L 1	0.00000	원중심 좌표 1		L 2	38.95169
X 1	0.00000	X	0.00000	X 2	38.89402
Y 1	0.00000	Y 2	0.00000	Y 2	1.57878
T 1	0.00000	원중심 좌표 2		T 2	0.12172
TL1	0.00000	X	198537.71941	TL2	25.98798
TK1	0.00000	Y 2	219765.40001	TK2	13.00225

구분	누가거리	X 좌표	Y 좌표
K A	529.41538	198385.91439	219710.07647
K E	568.36707	198378.63414	219748.31565

부산외곽순환 고속도로 건설공사 실시설계

구 분	누가거리	측점(STA.)	X좌표	Y좌표	방위각
KA	529.41538	0+529.41538	198385.91439	219710.07647	103 ° 6' 13.83"
	530.00000	0+530.00000	198385.78185	219710.64588	103 ° 6' 8.18"
	532.61330	0+532.61330	198385.19022	219713.19132	103 ° 3' 24.60"
	540.00000	0+540.00000	198383.54558	219720.39259	102 ° 35' 19.87"
	552.14770	0+552.14770	198381.06741	219732.28427	100 ° 43' 42.44"
	560.00000	0+560.00000	198379.72912	219740.02131	98 ° 48' 14.39"
KE	568.36707	0+568.36707	198378.63414	219748.31565	96 ° 7' 46.45"

IP6 (좌향)

구 분	원 곡 선		교각(IA)	22 ° 33' 7.66"	
IP좌표	X	198375.22777	방위각	1	96 ° 7' 46.45"
	Y	219780.03492		2	73 ° 34' 38.79"

원 중심 좌표	X	198537.71941	R	160.00000	C L	62.97742
	Y	219765.40001	T L	31.90165	S L	3.14936

구분	누가거리	X 좌표	Y 좌표
B C	568.36707	198378.63414	219748.31565
E C	631.34449	198384.24698	219810.63507

구 분	누가거리	측점(STA.)	X좌표	Y좌표	방위각
BC	568.36707	0+568.36707	198378.63414	219748.31565	96 ° 7' 46.45"
	570.00000	0+570.00000	198378.46807	219749.94011	95 ° 32' 41.34"
	571.68670	0+571.68670	198378.31394	219751.61975	94 ° 56' 26.92"
	575.00000	0+575.00000	198378.06278	219754.92346	93 ° 45' 15.57"
	576.60190	0+576.60190	198377.96589	219756.52242	93 ° 10' 50.47"
	580.00000	0+580.00000	198377.81339	219759.91703	91 ° 57' 49.79"
	591.52130	0+591.52130	198377.83330	219771.43582	87 ° 50' 17.05"
	600.00000	0+600.00000	198378.37744	219779.89605	84 ° 48' 6.69"
	612.09300	0+612.09300	198379.92693	219791.88647	80 ° 28' 16.94"
	620.00000	0+620.00000	198381.42797	219799.64887	77 ° 38' 23.59"
	622.82980	0+622.82980	198382.05812	219802.40758	76 ° 37' 35.54"
	623.32220	0+623.32220	198382.17274	219802.88645	76 ° 27' 0.76"
	624.70000	0+624.70000	198382.50131	219804.22449	75 ° 57' 24.56"
EC	631.34449	0+631.34449	198384.24698	219810.63507	73 ° 34' 38.79"

IP7 (좌향)

구 분	크 로 스 이 드		교각(IA)	5 ° 24' 46.42"	
IP좌표	X	198387.09839	방위각	1	73 ° 34' 38.79"
	Y	219820.30928		2	68 ° 9' 52.37"

R 1	160.00000	A	69.54861	R 2	0.00000
L 1	30.23131	원 중심 좌표 1		L 2	0.00000
X 1	30.20434	X	198537.71941	X 2	0.00000
Y 1	0.95141	Y 2	219765.40001	Y 2	0.00000
T 1	0.09447	원 중심 좌표 2		T 2	0.00000
TL1	20.16364	X	0.00000	TL2	0.00000
TK1	10.08568	Y 2	0.00000	TK2	0.00000

구분	누가거리	X 좌표	Y 좌표
K E	631.34449	198384.24698	219810.63507
K A	661.57579	198394.59810	219839.02629

구분	누가거리	측점(STA.)	X좌표	Y좌표	방위각
KE	631.34449	0+631.34449	198384.24698	219810.63507	73° 34' 38.79"
	633.39950	0+633.39950	198384.84032	219812.60255	72° 51' 59.60"
	640.00000	0+640.00000	198386.89620	219818.87437	70° 55' 17.85"
	645.19330	0+645.19330	198388.64585	219823.76397	69° 45' 14.77"
	645.19340	0+645.19340	198388.64588	219823.76406	69° 45' 14.70"
	645.19800	0+645.19800	198388.64747	219823.76838	69° 45' 11.49"
	645.20070	0+645.20070	198388.64841	219823.77091	69° 45' 9.60"
	655.70000	0+655.70000	198392.41913	219833.56946	68° 22' 8.49"
	657.00670	0+657.00670	198392.90171	219834.78378	68° 17' 17.49"
	657.01560	0+657.01560	198392.90500	219834.79205	68° 17' 15.76"
	657.02560	0+657.02560	198392.90870	219834.80134	68° 17' 13.81"
	657.02570	0+657.02570	198392.90874	219834.80143	68° 17' 13.80"
	657.10900	0+657.10900	198392.93956	219834.87882	68° 16' 57.78"
	660.00000	0+660.00000	198394.01212	219837.56350	68° 10' 45.31"
KA	661.57579	0+661.57579	198394.59810	219839.02629	68° 9' 52.37"

IP8 (우향)

구분	크로소이드		교각(IA)	5° 24' 46.42"	
IP좌표	X	198402.09781	방위각	1	68° 9' 52.37"
	Y	219857.74330		2	73° 34' 38.79"

R 1	0.00000	A	69.54861	R 2	160.00000
L 1	0.00000	원 중심 좌표 1		L 2	30.23131
X 1	0.00000	X	0.00000	X 2	30.20434
Y 1	0.00000	Y 2	0.00000	Y 2	0.95141
T 1	0.00000	원 중심 좌표 2		T 2	0.09447
TL1	0.00000	X	198251.47678	TL2	20.16364
TK1	0.00000	Y 2	219912.65257	TK2	10.08568

부산외곽순환 고속도로 건설공사 실시설계

구분	누가거리	X 좌표	Y 좌표
K A	661.57579	198394.59810	219839.02629
K E	691.80710	198404.94922	219867.41751

구 분	누가거리	측점(STA.)	X좌표	Y좌표	방위각
KA	661.57579	0+661.57579	198394.59810	219839.02629	68° 9' 52.37"
	669.48040	0+669.48040	198397.52235	219846.37009	68° 32' 4.60"
	680.00000	0+680.00000	198401.24998	219856.20671	70° 10' 29.99"
	680.52410	0+680.52410	198401.42723	219856.69992	70° 17' 27.61"
	681.69560	0+681.69560	198401.81973	219857.80372	70° 33' 43.46"
	681.73190	0+681.73190	198401.83180	219857.83795	70° 34' 14.64"
	681.77570	0+681.77570	198401.84637	219857.87925	70° 34' 52.32"
	682.01120	0+682.01120	198401.92456	219858.10140	70° 38' 16.36"
KE	691.80710	0+691.80710	198404.94922	219867.41751	73° 34' 38.79"

IP9 (우향)

구 분	원 곡 선		교각(IA)	29° 36' 35.86"	
IP좌표	X	198416.90505	방위각	1	73° 34' 38.79"
	Y	219907.98095		2	103° 11' 14.65"

원 중심 좌표	X	198251.47678	R	160.00000	C L	82.68661
	Y	219912.65257	T L	42.28870	S L	5.49421

구분	누가거리	X 좌표	Y 좌표
B C	691.80710	198404.94922	219867.41751
E C	774.49371	198407.25744	219949.15446

구 분	누가거리	측점(STA.)	X좌표	Y좌표	방위각
BC	691.80710	0+691.80710	198404.94922	219867.41751	73° 34' 38.79"
	694.17270	0+694.17270	198405.60122	219869.69146	74° 25' 28.42"
	700.00000	0+700.00000	198407.06334	219875.33202	76° 30' 40.71"
	705.98200	0+705.98200	198408.34961	219881.17374	78° 39' 12.43"
	706.05320	0+706.05320	198408.36360	219881.24355	78° 40' 44.22"
	706.14640	0+706.14640	198408.38187	219881.33494	78° 42' 44.37"
	706.54510	0+706.54510	198408.45942	219881.72602	78° 51' 18.36"
	717.97480	0+717.97480	198410.26642	219893.00952	82° 56' 53.01"
	718.43800	0+718.43800	198410.32263	219893.46930	83° 6' 50.15"
	720.00000	0+720.00000	198410.50233	219895.02092	83° 40' 23.81"
	729.29390	0+729.29390	198411.25771	219904.28276	87° 0' 5.09"
	729.40790	0+729.40790	198411.26364	219904.39660	87° 2' 32.05"
	729.57060	0+729.57060	198411.27195	219904.55909	87° 6' 1.80"
	730.00000	0+730.00000	198411.29310	219904.98797	87° 15' 15.36"

	730.13960	0+730.13960	198411.29972	219905.12741	87° 18' 15.33"
	733.03980	0+733.03980	198411.40986	219908.02548	88° 20' 34.13"
	734.50000	0+734.50000	198411.44543	219909.48524	88° 51' 56.56"
	737.50000	0+737.50000	198411.47669	219912.48504	89° 56' 24.02"
	738.50000	0+738.50000	198411.47462	219913.48503	90° 17' 53.18"
	740.00000	0+740.00000	198411.45978	219914.98495	90° 50' 6.91"
	745.40000	0+745.40000	198411.28997	219920.38203	92° 46' 8.35"
	745.79000	0+745.79000	198411.27066	219920.77155	92° 54' 31.12"
	751.92640	0+751.92640	198410.84184	219926.89257	95° 6' 21.89"
	752.09610	0+752.09610	198410.82665	219927.06159	95° 10' 0.66"
	752.09620	0+752.09620	198410.82664	219927.06169	95° 10' 0.79"
	752.35890	0+752.35890	198410.80277	219927.32330	95° 15' 39.45"
	753.11900	0+753.11900	198410.73127	219928.08003	95° 31' 59.34"
	760.00000	0+760.00000	198409.92075	219934.91259	97° 59' 50.01"
	763.54900	0+763.54900	198409.38806	219938.42132	99° 16' 5.22"
	774.10610	0+774.10610	198407.34541	219948.77697	103° 2' 54.96"
	774.34910	0+774.34910	198407.29036	219949.01365	103° 8' 8.23"
	774.34920	0+774.34920	198407.29034	219949.01375	103° 8' 8.35"
EC	774.49371	0+774.49371	198407.25744	219949.15446	103° 11' 14.65"

IP10 (우향)

구분	크로소이드		교각(IA)	6° 17' 40.93"	
IP좌표	X	198404.58088	방위각	1	103° 11' 14.65"
	Y	219960.57731		2	109° 28' 55.58"

R 1	160.00000	A	75.00000	R 2	0.00000
L 1	35.15625	원중심 좌표 1		L 2	0.00000
X 1	35.11384	X	198251.47678	X 2	0.00000
Y 1	1.28635	Y 2	219912.65257	Y 2	0.00000
T 1	0.10986	원중심 좌표 2		T 2	0.00000
TL1	23.45234	X	0.00000	TL2	0.00000
TK1	11.73224	Y 2	0.00000	TK2	0.00000

구분	누가거리	X 좌표	Y 좌표
K E	774.49371	198407.25744	219949.15446
K A	809.64996	198396.75924	219982.68690

구분	누가거리	측점(STA.)	X좌표	Y좌표	방위각
KE	774.49371	0+774.49371	198407.25744	219949.15446	103° 11' 14.65"
	774.75290	0+774.75290	198407.19810	219949.40677	103° 16' 47.55"
	775.73540	0+775.73540	198406.96953	219950.36231	103° 37' 27.11"
	780.00000	0+780.00000	198405.91404	219954.49412	105° 0' 17.22"

부산외곽순환 고속도로 건설공사 실시설계

	785.82650	0+785.82650	198404.32501	219960.09956	106 ° 35' 29.62"
	796.04980	0+796.04980	198401.22467	219969.84089	108 ° 32' 24.32"
	796.39050	0+796.39050	198401.11621	219970.16387	108 ° 35' 12.10"
	796.39060	0+796.39060	198401.11617	219970.16396	108 ° 35' 12.15"
	796.98990	0+796.98990	198400.92476	219970.73187	108 ° 39' 56.95"
	798.24460	0+798.24460	198400.52157	219971.92003	108 ° 49' 10.57"
	800.00000	0+800.00000	198399.95249	219973.58062	109 ° 0' 28.22"
	808.11590	0+808.11590	198397.27076	219981.24063	109 ° 28' 12.43"
KA	809.64996	0+809.64996	198396.75924	219982.68690	109 ° 28' 55.58"

IP11 (좌향)

구 분	크 로 소 이 드		교각(IA)	1 ° 28' 37.43"	
IP좌표	X	198388.71999	방위각	1	109 ° 28' 55.58"
	Y	220005.41157		2	108 ° 0' 18.15"

R 1	0.00000	A	159.23042	R 2	701.25000
L 1	0.00000	원중심 좌표 1		L 2	36.15590
X 1	0.00000	X	0.00000	X 2	36.15350
Y 1	0.00000	Y 2	0.00000	Y 2	0.31068
T 1	0.00000	원중심 좌표 2		T 2	0.02578
TL1	0.00000	X	199051.90380	TL2	24.10477
TK1	0.00000	Y 2	220233.63093	TK2	12.05273

구분	누가거리	X 좌표	Y 좌표
K A	809.64996	198396.75924	219982.68690
K E	845.80586	198384.99449	220016.87407

구 분	누가거리	측점(STA.)	X좌표	Y좌표	방위각
KA	809.64996	0+809.64996	198396.75924	219982.68690	109° 28' 55.58"
	818.05290	0+818.05290	198393.96043	219990.61003	109° 24' 8.36"
	818.52330	0+818.52330	198393.80420	219991.05373	109° 23' 35.31"
	819.26520	0+819.26520	198393.55794	219991.75357	109° 22' 39.51"
	819.27530	0+819.27530	198393.55459	219991.76310	109° 22' 38.72"
	820.00000	0+820.00000	198393.31424	219992.44678	109° 21' 39.84"
	820.84390	0+820.84390	198393.03461	219993.24300	109° 20' 25.88"
	830.40280	0+830.40280	198389.89334	220002.27100	108° 59' 43.72"
	840.00000	0+840.00000	198386.81070	220011.35961	108° 26' 28.77"
	840.34190	0+840.34190	198386.70261	220011.68398	108° 25' 3.88"
	841.07170	0+841.07170	198386.47234	220012.37650	108° 21' 59.49"
	841.30000	0+841.30000	198386.40044	220012.59318	108° 21' 0.92"
	841.46490	0+841.46490	198386.34854	220012.74970	108° 20' 18.35"
	843.46180	0+843.46180	198385.72268	220014.64599	108° 11' 25.28"

	844.50000	0+844.50000	198385.39927	220015.63253	108° 6' 35.32"
KE	845.80585	0+845.80585	198384.99449	220016.87406	108° 0' 18.16"

EP

EP 좌표	X	198384.99449	방위각	108° 0' 18.16"
	Y	220016.87406		

바. RAMP-E-2

BP

BP 좌표	X	198386.18351	방위각	108° 0' 18.09"
	Y	220017.26043		

IP1 (좌향)

구 분	원 곡 선		교각(IA)	27° 5' 39.80"	
IP좌표	X	198334.04907	방위각	1	108° 0' 18.09"
	Y	220177.66589		2	80° 54' 38.28"

원 중심 좌표	X	199051.90410	R	700.00000	C L	331.02042
	Y	220233.63071	T L	168.66508	S L	20.03327

구분	누가거리	X 좌표	Y 좌표
B C	845.80585	198386.18351	220017.26043
E C	1176.82627	198360.69390	220344.21306

구 분	누가거리	측점(STA.)	X좌표	Y좌표	방위각
BP	845.80585	0+845.80585	198386.18351	220017.26043	108° 0' 18.09"
	855.00000	0+855.00000	198383.39910	220026.02275	107° 15' 8.90"
	860.00000	0+860.00000	198381.93326	220030.80304	106° 50' 35.58"
	863.16060	0+863.16060	198381.02429	220033.83011	106° 35' 4.27"
	864.50000	0+864.50000	198380.64322	220035.11416	106° 28' 29.60"
	876.60000	0+876.60000	198377.31217	220046.74646	105° 29' 4.16"
	880.00000	0+880.00000	198376.41241	220050.02524	105° 12' 22.30"
	885.00000	0+885.00000	198375.11818	220054.85483	104° 47' 48.98"
	885.11570	0+885.11570	198375.08864	220054.96669	104° 47' 14.89"
	889.00000	0+889.00000	198374.10766	220058.72507	104° 28' 10.33"
	895.00000	0+895.00000	198372.63339	220064.54111	103° 58' 42.34"
	900.00000	0+900.00000	198371.44294	220069.39732	103° 34' 9.02"
	905.75160	0+905.75160	198370.11649	220074.99385	103° 5' 54.23"

부산외곽순환 고속도로 건설공사 실시설계

	920.00000	0+920.00000	198367.02892	220088.90345	101° 55' 55.74"
	923.14570	0+923.14570	198366.38545	220091.98263	101° 40' 28.82"
	929.14900	0+929.14900	198365.19588	220097.86687	101° 10' 59.86"
	937.39030	0+937.39030	198363.64513	220105.96091	100° 30' 31.45"
	937.74920	0+937.74920	198363.57976	220106.31380	100° 28' 45.69"
	937.84560	0+937.84560	198363.56223	220106.40860	100° 28' 17.29"
	937.87570	0+937.87570	198363.55676	220106.43820	100° 28' 8.42"
	938.75370	0+938.75370	198363.39777	220107.30168	100° 23' 49.70"
	939.13740	0+939.13740	198363.32862	220107.67910	100° 21' 56.64"
	939.48530	0+939.48530	198363.26611	220108.02134	100° 20' 14.13"
	939.53600	0+939.53600	198363.25701	220108.07121	100° 19' 59.19"
	939.97190	0+939.97190	198363.17896	220108.50007	100° 17' 50.74"
	940.00000	0+940.00000	198363.17394	220108.52772	100° 17' 42.46"
	940.42070	0+940.42070	198363.09888	220108.94167	100° 15' 38.50"
	940.66640	0+940.66640	198363.05515	220109.18344	100° 14' 26.10"
	940.81910	0+940.81910	198363.02802	220109.33371	100° 13' 41.10"
	941.70670	0+941.70670	198362.87097	220110.20731	100° 9' 19.56"
	942.88760	0+942.88760	198362.66373	220111.36988	100° 3' 31.59"
	943.31770	0+943.31770	198362.58874	220111.79340	100° 1' 24.86"
	943.62370	0+943.62370	198362.53555	220112.09474	99° 59' 54.69"
	944.04137	0+944.04137	198362.46315	220112.50608	99° 57' 51.62"
	944.21720	0+944.21720	198362.43275	220112.67927	99° 56' 59.81"
	947.04930	0+947.04930	198361.94904	220115.46975	99° 43' 5.29"
	949.10000	0+949.10000	198361.60584	220117.49153	99° 33' 1.02"
	950.92960	0+950.92960	198361.30465	220119.29616	99° 24' 1.90"
	960.00000	0+960.00000	198359.88115	220128.25410	98° 39' 29.18"
	960.06640	0+960.06640	198359.87116	220128.31975	98° 39' 9.62"
	960.14900	0+960.14900	198359.85873	220128.40141	98° 38' 45.28"
	960.15070	0+960.15070	198359.85848	220128.40309	98° 38' 44.78"
	960.15080	0+960.15080	198359.85846	220128.40319	98° 38' 44.75"
	960.35280	0+960.35280	198359.82813	220128.60290	98° 37' 45.22"
	960.47840	0+960.47840	198359.80929	220128.72708	98° 37' 8.22"
	960.61540	0+960.61540	198359.78877	220128.86253	98° 36' 27.85"
	960.89180	0+960.89180	198359.74746	220129.13583	98° 35' 6.40"
	961.03830	0+961.03830	198359.72561	220129.28069	98° 34' 23.23"
	961.07740	0+961.07740	198359.71978	220129.31935	98° 34' 11.71"
	961.13420	0+961.13420	198359.71132	220129.37552	98° 33' 54.97"
	961.31920	0+961.31920	198359.68379	220129.55846	98° 33' 0.46"
	961.32380	0+961.32380	198359.68310	220129.56300	98° 32' 59.11"
	961.33690	0+961.33690	198359.68116	220129.57596	98° 32' 55.25"
	961.41260	0+961.41260	198359.66991	220129.65082	98° 32' 32.94"
	961.41430	0+961.41430	198359.66966	220129.65250	98° 32' 32.44"
	961.41440	0+961.41440	198359.66964	220129.65260	98° 32' 32.41"
	961.42880	0+961.42880	198359.66750	220129.66684	98° 32' 28.17"
	962.77590	0+962.77590	198359.46871	220130.99919	98° 25' 51.22"

	963.62170	0+963.62170	198359.34521	220131.83593	98° 21' 42.00"
	964.07660	0+964.07660	198359.27920	220132.28601	98° 19' 27.96"
	964.66100	0+964.66100	198359.19484	220132.86429	98° 16' 35.75"
	965.50000	0+965.50000	198359.07456	220133.69462	98° 12' 28.53"
	965.70000	0+965.70000	198359.04603	220133.89258	98° 11' 29.60"
	967.70000	0+967.70000	198358.76390	220135.87258	98° 1' 40.27"
	968.09230	0+968.09230	198358.70922	220136.26105	97° 59' 44.67"
	968.70000	0+968.70000	198358.62495	220136.86288	97° 56' 45.61"
	970.90000	0+970.90000	198358.32425	220139.04223	97° 45' 57.34"
	976.95610	0+976.95610	198357.53187	220145.04625	97° 16' 12.83"
	978.20000	0+978.20000	198357.37556	220146.28029	97° 10' 6.30"
	978.68080	0+978.68080	198357.31572	220146.75735	97° 7' 44.62"
	979.15780	0+979.15780	198357.25669	220147.23068	97° 5' 24.07"
	980.00000	0+980.00000	198357.15324	220148.06651	97° 1' 15.90"
	980.14210	0+980.14210	198357.13588	220148.20754	97° 0' 34.03"
	980.23810	0+980.23810	198357.12417	220148.30282	97° 0' 5.74"
	980.26840	0+980.26840	198357.12048	220148.33290	96° 59' 56.81"
	980.39280	0+980.39280	198357.10533	220148.45637	96° 59' 20.16"
	980.46680	0+980.46680	198357.09633	220148.52982	96° 58' 58.35"
	981.10410	0+981.10410	198357.01914	220149.16243	96° 55' 50.56"
	983.00000	0+983.00000	198356.79291	220151.04479	96° 46' 31.91"
	984.15930	0+984.15930	198356.65709	220152.19610	96° 40' 50.31"
	989.68530	0+989.68530	198356.03590	220157.68706	96° 13' 41.99"
	996.82630	0+996.82630	198355.29739	220164.78974	95° 38' 37.80"
	1000.00000	1+ 0.00000	198354.99243	220167.94875	95° 23' 2.62"
	1000.11820	1+ 0.11820	198354.98135	220168.06643	95° 22' 27.79"
	1002.32690	1+ 2.32690	198354.77795	220170.26574	95° 11' 36.97"
	1002.37710	1+ 2.37710	198354.77340	220170.31574	95° 11' 22.18"
	1008.74380	1+ 8.74380	198354.22638	220176.65887	94° 40' 6.14"
	1014.44990	1+ 14.44990	198353.78515	220182.34787	94° 12' 4.76"
	1015.14310	1+ 15.14310	198353.73471	220183.03923	94° 8' 40.50"
	1020.00000	1+ 20.00000	198353.40049	220187.88461	93° 44' 49.34"
	1020.69350	1+ 20.69350	198353.35551	220188.57665	93° 41' 24.99"
	1020.89030	1+ 20.89030	198353.34288	220188.77305	93° 40' 27.00"
	1026.41740	1+ 26.41740	198353.01047	220194.29013	93° 13' 18.37"
	1028.13570	1+ 28.13570	198352.91600	220196.00583	93° 4' 52.04"
	1032.04430	1+ 32.04430	198352.71681	220199.90934	92° 45' 40.32"
	1040.00000	1+ 40.00000	198352.37872	220207.85781	92° 6' 36.06"
	1040.94810	1+ 40.94810	198352.34446	220208.80529	92° 1' 56.69"
	1042.83810	1+ 42.83810	198352.27998	220210.69419	91° 52' 39.78"
	1049.62500	1+ 49.62500	198352.09048	220217.47842	91° 19' 19.92"
	1059.88450	1+ 59.88450	198351.92892	220227.73656	90° 28' 56.82"
	1060.00000	1+ 60.00000	198351.92796	220227.85205	90° 28' 22.78"
	1061.63600	1+ 61.63600	198351.91636	220229.48801	90° 20' 20.71"
	1063.45200	1+ 63.45200	198351.90797	220231.30399	90° 11' 25.60"

부산외곽순환 고속도로 건설공사 실시설계

	1067.20770	1+ 67.20770	198351.90556	220235.05969	89° 52' 58.93"
	1079.05160	1+ 79.05160	198352.02994	220246.90279	88° 54' 48.96"
	1080.00000	1+ 80.00000	198352.04856	220247.85101	88° 50' 9.50"
	1080.73050	1+ 80.73050	198352.06378	220248.58135	88° 46' 34.25"
	1081.54220	1+ 81.54220	198352.08159	220249.39285	88° 42' 35.07"
	1084.80810	1+ 84.80810	198352.16274	220252.65774	88° 26' 32.73"
	1099.41620	1+ 99.41620	198352.71215	220267.25524	87° 14' 48.25"
	1100.00000	1+100.00000	198352.74043	220267.83836	87° 11' 56.22"
	1102.44160	1+102.44160	198352.86400	220270.27683	86° 59' 56.77"
	1119.69990	1+119.69990	198353.97986	220287.49858	85° 35' 11.37"
	1120.00000	1+120.00000	198354.00302	220287.79778	85° 33' 42.94"
	1120.12390	1+120.12390	198354.01261	220287.92131	85° 33' 6.43"
	1137.87080	1+137.87080	198355.61316	220305.59541	84° 5' 57.06"
	1139.89350	1+139.89350	198355.82401	220307.60709	83° 56' 1.04"
	1140.00000	1+140.00000	198355.83527	220307.71299	83° 55' 29.66"
	1144.18570	1+144.18570	198356.29070	220311.87384	83° 34' 56.29"
	1148.47560	1+148.47560	198356.78326	220316.13536	83° 13' 52.21"
	1148.93630	1+148.93630	198356.83771	220316.59283	83° 11' 36.45"
	1154.62990	1+154.62990	198357.53549	220322.24349	82° 43' 38.76"
	1155.30160	1+155.30160	198357.62084	220322.90975	82° 40' 20.83"
	1155.69780	1+155.69780	198357.67148	220323.30270	82° 38' 24.08"
	1160.00000	1+160.00000	198358.23571	220327.56773	82° 17' 16.38"
	1160.01470	1+160.01470	198358.23769	220327.58230	82° 17' 12.05"
	1162.02350	1+162.02350	198358.51016	220329.57253	82° 7' 20.13"
	1163.18100	1+163.18100	198358.66975	220330.71898	82° 1' 39.05"
	1163.18140	1+163.18140	198358.66981	220330.71938	82° 1' 38.94"
	1164.64630	1+164.64630	198358.87450	220332.16990	81° 54' 27.28"
EC	1176.82627	1+176.82627	198360.69390	220344.21306	80° 54' 38.28"

IP2 (우향)

구 분	원 곡 선		교각(IA)	26° 10' 1.88"	
IP좌표	X	198379.05101	방위각	1	80° 54' 38.28"
	Y	220458.95666		2	107° 4' 40.17"

원 중심 좌표	X	197866.97233	R	500.00000	C L	228.35181
	Y	220423.20046	T L	116.20274	S L	13.32551

구분	누가거리	X 좌표	Y 좌표
B C	1176.82627	198360.69390	220344.21306
E C	1405.17808	198344.92570	220570.03565

구 분	누가거리	측점(STA.)	X좌표	Y좌표	방위각
EC	1176.82627	1+176.82627	198360.69390	220344.21306	80° 54' 38.28"
	1180.00000	1+180.00000	198361.18532	220347.34851	81° 16' 27.54"
	1180.08220	1+180.08220	198361.19779	220347.42976	81° 17' 1.45"
	1190.12100	1+190.12100	198362.61937	220357.36723	82° 26' 2.75"
	1200.00000	1+200.00000	198363.82327	220367.17243	83° 33' 58.13"
	1200.17950	1+200.17950	198363.84336	220367.35081	83° 35' 12.18"
	1207.50000	1+207.50000	198364.60777	220374.63122	84° 25' 32.11"
	1208.70000	1+208.70000	198364.72290	220375.82569	84° 33' 47.14"
	1209.60000	1+209.60000	198364.80737	220376.72171	84° 39' 58.42"
	1215.30000	1+215.30000	198365.30487	220382.39993	85° 19' 9.84"
	1220.00000	1+220.00000	198365.66637	220387.08599	85° 51' 28.73"
	1220.37290	1+220.37290	198365.69316	220387.45792	85° 54' 2.56"
	1228.07880	1+228.07880	198366.18477	220395.14805	86° 47' 1.47"
	1228.23110	1+228.23110	198366.19329	220395.30011	86° 48' 4.30"
	1228.68810	1+228.68810	198366.21859	220395.75641	86° 51' 12.83"
	1228.84040	1+228.84040	198366.22692	220395.90848	86° 52' 15.65"
	1231.43120	1+231.43120	198366.36164	220398.49578	87° 10' 4.44"
	1231.53290	1+231.53290	198366.36665	220398.59735	87° 10' 46.39"
	1232.14290	1+232.14290	198366.39629	220399.20663	87° 14' 58.03"
	1232.24450	1+232.24450	198366.40116	220399.30811	87° 15' 39.95"
	1233.50000	1+233.50000	198366.45958	220400.56225	87° 24' 17.88"
	1234.70000	1+234.70000	198366.51247	220401.76109	87° 32' 32.91"
	1240.00000	1+240.00000	198366.71166	220407.05732	88° 8' 59.32"
	1240.69740	1+240.69740	198366.73369	220407.75437	88° 13' 47.02"
	1250.92030	1+250.92030	198366.94502	220417.97491	89° 24' 4.27"
	1260.00000	1+260.00000	198366.95748	220427.05447	90° 26' 29.91"
	1261.18990	1+261.18990	198366.94689	220428.24433	90° 34' 40.78"
	1269.10000	1+269.10000	198366.80453	220436.15306	91° 29' 3.93"
	1270.70000	1+270.70000	198366.76052	220437.75246	91° 40' 3.98"
	1276.80000	1+276.80000	198366.54580	220443.84864	92° 22' 0.41"
	1277.60000	1+277.60000	198366.51212	220444.64793	92° 27' 30.43"
	1280.00000	1+280.00000	198366.40342	220447.04547	92° 44' 0.50"
	1281.89010	1+281.89010	198366.30971	220448.93324	92° 57' 0.23"
	1292.20000	1+292.20000	198365.67300	220459.22328	94° 7' 53.36"
	1295.30000	1+295.30000	198365.44007	220462.31451	94° 29' 12.21"
	1300.00000	1+300.00000	198365.05038	220466.99831	95° 1' 31.10"
	1302.84110	1+302.84110	198364.79348	220469.82777	95° 21' 3.13"
	1320.00000	1+320.00000	198362.90053	220486.88108	97° 19' 1.69"
	1324.09050	1+324.09050	198362.36297	220490.93610	97° 47' 9.14"
	1328.20000	1+328.20000	198361.78952	220495.00538	98° 15' 24.43"
	1329.50000	1+329.50000	198361.60116	220496.29166	98° 24' 20.72"
	1336.03200	1+336.03200	198360.60411	220502.74707	99° 9' 15.36"
	1336.35630	1+336.35630	198360.55241	220503.06722	99° 11' 29.15"
	1337.32980	1+337.32980	198360.39598	220504.02807	99° 18' 10.74"

부산외곽순환 고속도로 건설공사 실시설계

	1337.32990	1+337.32990	198360.39596	220504.02817	99° 18' 10.78"
	1337.65450	1+337.65450	198360.34339	220504.34848	99° 20' 24.69"
	1337.65460	1+337.65460	198360.34337	220504.34858	99° 20' 24.73"
	1339.49620	1+339.49620	198360.04114	220506.16521	99° 33' 4.45"
	1340.00000	1+340.00000	198359.95729	220506.66199	99° 36' 32.28"
	1340.40000	1+340.40000	198359.89037	220507.05635	99° 39' 17.29"
	1340.47230	1+340.47230	198359.87824	220507.12762	99° 39' 47.12"
	1340.70000	1+340.70000	198359.83996	220507.35208	99° 41' 21.05"
	1341.23200	1+341.23200	198359.75015	220507.87645	99° 45' 0.52"
	1342.10080	1+342.10080	198359.60227	220508.73257	99° 50' 58.92"
	1345.69170	1+345.69170	198358.97530	220512.26830	100° 15' 40.27"
	1358.30000	1+358.30000	198356.57313	220524.64531	101° 42' 21.57"
	1360.00000	1+360.00000	198356.22539	220526.30937	101° 54' 2.87"
	1360.72260	1+360.72260	198356.07586	220527.01633	101° 59' 0.97"
	1361.49620	1+361.49620	198355.91465	220527.77294	102° 4' 20.10"
	1367.70540	1+367.70540	198354.57836	220533.83660	102° 47' 1.58"
	1371.70000	1+371.70000	198353.67892	220537.72861	103° 14' 29.47"
	1372.61030	1+372.61030	198353.46960	220538.61452	103° 20' 44.99"
	1373.28000	1+373.28000	198353.31458	220539.26603	103° 25' 21.27"
	1373.61480	1+373.61480	198353.23675	220539.59166	103° 27' 39.38"
	1374.20000	1+374.20000	198353.10019	220540.16071	103° 31' 40.79"
	1374.73040	1+374.73040	198352.97585	220540.67632	103° 35' 19.60"
	1375.73420	1+375.73420	198352.73903	220541.65179	103° 42' 13.70"
	1380.00000	1+380.00000	198351.71078	220545.79179	104° 11' 33.46"
	1382.80000	1+382.80000	198351.01667	220548.50439	104° 30' 48.55"
	1383.40000	1+383.40000	198350.86596	220549.08516	104° 34' 56.07"
	1384.20000	1+384.20000	198350.66392	220549.85922	104° 40' 26.09"
	1384.22680	1+384.22680	198350.65713	220549.88515	104° 40' 37.14"
	1384.80000	1+384.80000	198350.51158	220550.43956	104° 44' 33.61"
	1390.09730	1+390.09730	198349.13643	220555.55523	105° 20' 58.90"
	1392.60830	1+392.60830	198348.46566	220557.97498	105° 38' 14.76"
	1395.02550	1+395.02550	198347.80848	220560.30113	105° 54' 51.93"
	1400.00000	1+400.00000	198346.42069	220565.07810	106° 29' 4.06"
EC	1405.17808	1+405.17808	198344.92570	220570.03565	107° 4' 40.17"
EC	1405.17808	1+405.17808	198344.92570	220570.03565	107° 4' 40.17"

EP

EP 좌표	X	198344.92570	방위각	107 ° 4' 40.17"
	Y	220570.03565		

사. RAMP-E-3

BP

BP 좌표	X	198343.73082	방위각	107° 4' 40.17"
	Y	220569.66856		

IP1 (우향)

구분	크로소이드		교각(IA)	23° 33' 24.52"	
IP좌표	X	198331.30418	방위각	1	107° 4' 40.17"
	Y	220610.11768		2	130° 38' 4.69"

R 1	498.75000	A	92.55966	R 2	100.00000
L 1	17.17752	원중심 좌표 1		L 2	85.67290
X 1	17.17701	X	197866.97233	X 2	84.11413
Y 1	0.09860	Y 2	220423.20046	Y 2	12.07367
T 1	0.01722	원중심 좌표 2		T 2	0.42836
TL1	11.45186	X	198237.78441	TL2	57.67407
TK1	5.72600	Y 2	220565.54082	TK2	29.06632

구분	누가거리	X 좌표	Y 좌표
K A E	1405.17808	198343.73082	220569.66856
K E	1473.67346	198313.67219	220630.66412

구분	누가거리	측점(STA.)	X좌표	Y좌표	방위각
BP	1405.17808	1+405.17808	198343.73082	220569.66856	107° 4' 40.17"
	1417.69500	1+417.69500	198339.86901	220581.57420	109° 2' 22.73"
	1420.00000	1+420.00000	198339.10814	220583.75000	109° 30' 54.58"
	1420.01370	1+420.01370	198339.10357	220583.76291	109° 31' 5.13"
	1437.51480	1+437.51480	198332.62513	220600.01532	114° 17' 21.08"
	1438.70000	1+438.70000	198332.13388	220601.09391	114° 41' 10.86"
	1439.50000	1+439.50000	198331.79803	220601.82000	114° 57' 35.07"
	1439.50000	1+439.50000	198331.79803	220601.82000	114° 57' 35.07"
	1440.00000	1+440.00000	198331.58636	220602.27299	115° 7' 58.03"
	1440.08470	1+440.08470	198331.55036	220602.34966	115° 9' 44.15"
	1440.60000	1+440.60000	198331.33053	220602.81572	115° 20' 33.52"
	1440.60000	1+440.60000	198331.33053	220602.81572	115° 20' 33.52"
	1442.60000	1+442.60000	198330.46326	220604.61787	116° 3' 34.42"
	1442.90000	1+442.90000	198330.33121	220604.88725	116° 10' 9.86"
	1444.00000	1+444.00000	198329.84258	220605.87276	116° 34' 38.36"
	1444.30000	1+444.30000	198329.70809	220606.14093	116° 41' 23.91"
	1447.70000	1+447.70000	198328.14646	220609.16099	118° 0' 31.62"

부산외곽순환 고속도로 건설공사 실시설계

	1451.20000	1+451.20000	198326.46459	220612.23030	119° 26' 49.69"
	1457.23710	1+457.23710	198323.37691	220617.41742	122° 7' 14.36"
	1460.00000	1+460.00000	198321.88152	220619.74059	123° 25' 31.81"
	1460.29330	1+460.29330	198321.71965	220619.98518	123° 34' 1.27"
KE	1473.67346	1+473.67346	198313.67219	220630.66412	130° 38' 4.69"

IP2 (우향)

구분	원곡선		교각(IA)	80° 11' 25.19"	
IP좌표	X	198258.84266	방위각	1	130° 38' 4.69"
	Y	220694.55662		2	210° 49' 29.88"

원 중심 좌표	X	198237.78441	R	100.00000	C L	139.95853
	Y	220565.54082	T L	84.19340	S L	30.72310

구분	누가거리	X 좌표	Y 좌표
B C	1473.67346	198313.67219	220630.66412
E C	1613.63199	198186.54270	220651.41448

구분	누가거리	측정(STA.)	X좌표	Y좌표	방위각
BC	1473.67346	1+473.67346	198313.67219	220630.66412	130° 38' 4.69"
	1476.89460	1+476.89460	198311.53547	220633.07437	132° 28' 48.78"
	1480.00000	1+480.00000	198309.40306	220635.33171	134° 15' 34.12"
	1481.01150	1+481.01150	198308.69348	220636.05255	134° 50' 20.49"
	1491.70000	1+491.70000	198300.76651	220643.21485	140° 57' 47.11"
	1491.90000	1+491.90000	198300.61104	220643.34066	141° 4' 39.64"
	1492.80000	1+492.80000	198299.90830	220643.90294	141° 35' 36.02"
	1493.00000	1+493.00000	198299.75145	220644.02703	141° 42' 28.55"
	1494.70000	1+494.70000	198298.40830	220645.06908	142° 40' 55.05"
	1494.70000	1+494.70000	198298.40830	220645.06908	142° 40' 55.05"
	1495.60000	1+495.60000	198297.69010	220645.61147	143° 11' 51.43"
	1495.60000	1+495.60000	198297.69010	220645.61147	143° 11' 51.43"
	1496.50000	1+496.50000	198296.96705	220646.14737	143° 42' 47.82"
	1496.53310	1+496.53310	198296.94036	220646.16695	143° 43' 56.09"
	1497.00000	1+497.00000	198296.56327	220646.44227	143° 59' 59.14"
	1500.00000	1+500.00000	198294.11015	220648.16897	145° 43' 7.08"
	1502.50000	1+502.50000	198292.02706	220649.55115	147° 9' 3.71"
	1502.74930	1+502.74930	198291.81745	220649.68611	147° 17' 37.92"
	1507.40000	1+507.40000	198287.84709	220652.10714	149° 57' 30.68"
	1509.00000	1+509.00000	198286.45568	220652.89703	150° 52' 30.92"
	1512.10000	1+512.10000	198283.72469	220654.36362	152° 39' 5.13"
	1516.15330	1+516.15330	198280.08769	220656.15226	154° 58' 25.66"
	1520.00000	1+520.00000	198276.57170	220657.71210	157° 10' 40.05"

	1526.08800	1+526.08800	198270.89192	220659.90126	160° 39' 57.45"
	1535.74590	1+535.74590	198261.63856	220662.65405	166° 11' 58.30"
	1540.00000	1+540.00000	198257.48693	220663.58066	168° 38' 13.01"
	1550.30000	1+550.30000	198247.30225	220665.08684	174° 32' 18.28"
	1551.67070	1+551.67070	198245.93692	220665.20795	175° 19' 25.55"
	1555.20000	1+555.20000	198242.41503	220665.43355	177° 20' 45.26"
	1555.29940	1+555.29940	198242.31573	220665.43810	177° 24' 10.29"
	1560.00000	1+560.00000	198237.61668	220665.54068	180° 5' 45.97"
	1561.60000	1+561.60000	198236.01677	220665.52519	181° 0' 46.21"
	1564.20000	1+564.20000	198233.41807	220665.44545	182° 30' 9.09"
	1565.70000	1+565.70000	198231.92005	220665.36871	183° 21' 43.06"
	1565.70000	1+565.70000	198231.92005	220665.36871	183° 21' 43.06"
	1566.90000	1+566.90000	198230.72256	220665.29116	184° 2' 58.24"
	1566.90000	1+566.90000	198230.72256	220665.29116	184° 2' 58.24"
	1569.00000	1+569.00000	198228.62952	220665.12087	185° 15' 9.80"
	1569.30000	1+569.30000	198228.33082	220665.09296	185° 25' 28.60"
	1570.40000	1+570.40000	198227.23634	220664.98295	186° 3' 17.51"
	1570.70000	1+570.70000	198226.93806	220664.95086	186° 13' 36.30"
	1574.79810	1+574.79810	198222.87439	220664.42302	188° 34' 29.24"
	1579.40000	1+579.40000	198218.34132	220663.63244	191° 12' 41.34"
	1580.00000	1+580.00000	198217.75312	220663.51401	191° 33' 18.93"
	1580.12060	1+580.12060	198217.63498	220663.48978	191° 37' 27.69"
	1581.70000	1+581.70000	198216.09055	220663.15934	192° 31' 45.43"
	1594.22030	1+594.22030	198204.07014	220659.68617	199° 42' 10.40"
	1597.20000	1+597.20000	198201.28027	220658.63994	201° 24' 36.48"
	1598.80000	1+598.80000	198199.79542	220658.04399	202° 19' 36.71"
	1600.00000	1+600.00000	198198.68814	220657.58147	203° 0' 51.89"
	1600.30000	1+600.30000	198198.41220	220657.46377	203° 11' 10.69"
	1608.50000	1+608.50000	198191.01526	220653.92999	207° 53' 4.40"
	1608.50000	1+608.50000	198191.01526	220653.92999	207° 53' 4.40"
	1609.00000	1+609.00000	198190.57390	220653.69504	208° 10' 15.72"
	1609.00000	1+609.00000	198190.57390	220653.69504	208° 10' 15.72"
	1609.60000	1+609.60000	198190.04582	220653.41019	208° 30' 53.31"
	1609.80000	1+609.80000	198189.87018	220653.31454	208° 37' 45.84"
	1613.53440	1+613.53440	198186.62653	220651.46445	210° 46' 8.60"
EC	1613.63199	1+613.63199	198186.54270	220651.41448	210° 49' 29.88"

IP3 (우향)

구분	크로소이드		교각(IA)	10° 1' 16.00"	
IP좌표	X	198176.50049	방위각	1	210° 49' 29.88"
	Y	220645.42219		2	220° 50' 45.88"

부산외곽순환 고속도로 건설공사 실시설계

R 1	100.00000	A	59.14413	R 2	0.00000
L 1	34.98028	원중심 좌표 1		L 2	0.00000
X 1	34.87342	X	198237.78441	X 2	0.00000
Y 1	2.03491	Y 2	220565.54082	Y 2	0.00000
T 1	0.17490	원중심 좌표 2		T 2	0.00000
TL1	23.35766	X	0.00000	TL2	0.00000
TK1	11.69417	Y 2	0.00000	TK2	0.00000

구분	누가거리	X 좌표	Y 좌표
K E	1613.63199	198186.54270	220651.41448
K A	1648.61226	198158.83113	220630.14560

구 분	누가거리	측점(STA.)	X좌표	Y좌표	방위각
KE	1613.63199	1+613.63199	198186.54270	220651.41448	210° 49' 29.88"
	1620.00000	1+620.00000	198181.17503	220647.98982	214° 8' 29.27"
	1623.70000	1+623.70000	198178.14320	220645.86918	215° 45' 48.11"
	1624.90000	1+624.90000	198177.17243	220645.16377	216° 14' 28.43"
	1624.90000	1+624.90000	198177.17243	220645.16377	216° 14' 28.43"
	1632.20000	1+632.20000	198171.38241	220640.71879	218° 38' 24.27"
	1632.30000	1+632.30000	198171.30432	220640.65632	218° 40' 0.75"
	1632.31690	1+632.31690	198171.29113	220640.64577	218° 40' 17.00"
	1632.40000	1+632.40000	198171.22626	220640.59383	218° 41' 36.64"
	1634.80000	1+634.80000	198169.36102	220639.08358	219° 17' 1.15"
	1637.70000	1+637.70000	198167.12618	220637.23550	219° 52' 15.12"
	1637.80000	1+637.80000	198167.04944	220637.17138	219° 53' 19.17"
	1637.90000	1+637.90000	198166.97272	220637.10724	219° 54' 22.63"
	1640.00000	1+640.00000	198165.36588	220635.75518	220° 14' 19.10"
	1645.30000	1+645.30000	198161.33789	220632.31061	220° 45' 22.42"
	1645.40000	1+645.40000	198161.26214	220632.24532	220° 45' 41.66"
	1645.50000	1+645.50000	198161.18640	220632.18002	220° 46' 0.31"
	1645.50000	1+645.50000	198161.18640	220632.18002	220° 46' 0.31"
KA	1648.61226	1+648.61226	198158.83113	220630.14560	220° 50' 45.88"

IP4 (좌향)

구 분	크 로 소 이 드		교각(IA)	10° 1' 16.00"	
IP좌표	X	198141.16178	방위각	1	220° 50' 45.88"
	Y	220614.86901		2	210° 49' 29.88"

R 1	0.00000	A	59.14413	R 2	100.00000
L 1	0.00000	원중심 좌표 1		L 2	34.98028
X 1	0.00000	X	0.00000	X 2	34.87342
Y 1	0.00000	Y 2	0.00000	Y 2	2.03491
T 1	0.00000	원중심 좌표 2		T 2	0.17490

TL1	0.00000	X	198079.87785	TL2	23.35766
TK1	0.00000	Y 2	220694.75038	TK2	11.69417

구분	누가거리	X 좌표	Y 좌표
K A	1648.61226	198158.83113	220630.14560
K E	1683.59254	198131.11957	220608.87671

구분	누가거리	측점(STA.)	X좌표	Y좌표	방위각
KA	1648.61226	1+648.61226	198158.83113	220630.14560	220° 50' 45.88"
	1649.22900	1+649.22900	198158.36458	220629.74224	220° 50' 34.67"
	1649.52900	1+649.52900	198158.13763	220629.54606	220° 50' 21.11"
	1650.53850	1+650.53850	198157.37377	220628.88604	220° 48' 56.49"
	1660.00000	1+660.00000	198150.17094	220622.75117	219° 47' 2.51"
	1669.80000	1+669.80000	198142.51355	220616.63663	217° 10' 10.36"
	1670.10000	1+670.10000	198142.27433	220616.45559	217° 3' 52.90"
	1670.80000	1+670.80000	198141.71484	220616.03491	216° 48' 51.53"
	1671.00000	1+671.00000	198141.55465	220615.91517	216° 44' 28.68"
	1673.40710	1+673.40710	198139.61433	220614.49068	215° 48' 40.20"
	1680.00000	1+680.00000	198134.17207	220610.77074	212° 46' 39.51"
KE	1683.59254	1+683.59254	198131.11957	220608.87671	210° 49' 29.88"

IP5 (좌향)

구분	원 곡 선		교각(IA)	43° 36' 58.41"	
IP좌표	X	198096.75844	방위각	1	210° 49' 29.88"
	Y	220588.37307		2	167° 12' 31.47"

원 중심 좌표	X	198079.87785	R	100.00000	C L	76.12468
	Y	220694.75038	T L	40.01357	S L	7.70834

구분	누가거리	X 좌표	Y 좌표
B C	1683.59254	198131.11957	220608.87671
E C	1759.71722	198057.73788	220597.23207

구분	누가거리	측점(STA.)	X좌표	Y좌표	방위각
BC	1683.59254	1+683.59254	198131.11957	220608.87671	210° 49' 29.88"
	1696.00000	1+696.00000	198120.09823	220603.19536	203° 42' 57.66"
	1700.00000	1+700.00000	198116.40483	220601.66021	201° 25' 27.07"
	1700.95840	1+700.95840	198115.51099	220601.31442	200° 52' 30.23"
	1701.70000	1+701.70000	198114.81710	220601.05273	200° 27' 0.57"
	1701.70000	1+701.70000	198114.81710	220601.05273	200° 27' 0.57"
	1703.00000	1+703.00000	198113.59611	220600.60645	199° 42' 19.13"

부산외곽순환 고속도로 건설공사 실시설계

	1703.50000	1+703.50000	198113.12497	220600.43904	199 ° 25' 7.80"
	1711.80000	1+711.80000	198105.19166	220598.00737	194 ° 39' 47.82"
	1720.00000	1+720.00000	198097.18256	220596.25903	189 ° 57' 54.11"
	1731.20000	1+731.20000	198086.06616	220594.94204	183 ° 32' 52.45"
	1733.72150	1+733.72150	198083.54779	220594.81775	182 ° 6' 11.48"
	1733.80000	1+733.80000	198083.46934	220594.81490	182 ° 3' 29.57"
	1740.00000	1+740.00000	198077.27041	220594.78438	178 ° 30' 21.15"
EC	1759.71722	1+759.71722	198057.73788	220597.23207	167 ° 12' 31.47"

IP6 (좌향)

구분	크로소이드		교각(IA)	12 ° 18' 28.26"	
IP좌표	X	198043.71078	방위각	1	167 ° 12' 31.47"
	Y	220600.41670		2	154 ° 54' 3.21"

R 1	100.00000	A	65.54578	R 2	0.00000
L 1	42.96250	원중심 좌표 1		L 2	0.00000
X 1	42.76467	X	198079.87785	X 2	0.00000
Y 1	3.06617	Y 2	220694.75038	Y 2	0.00000
T 1	0.21481	원중심 좌표 2		T 2	0.00000
TL1	28.71120	X	0.00000	TL2	0.00000
TK1	14.38407	Y 2	0.00000	TK2	0.00000

구분	누가거리	X 좌표	Y 좌표
K E	1759.71722	198057.73788	220597.23207
K A	1802.67971	198017.71062	220612.59557

구분	누가거리	측정(STA.)	X좌표	Y좌표	방위각
KE	1759.71722	1+759.71722	198057.73788	220597.23207	167 ° 12' 31.47"
	1760.00000	1+760.00000	198057.46221	220597.29506	167 ° 2' 50.11"
	1767.76310	1+767.76310	198049.96615	220599.30757	163 ° 1' 49.65"
	1780.00000	1+780.00000	198038.43337	220603.38833	158 ° 19' 50.76"
	1800.00000	1+800.00000	198020.13762	220611.45955	154 ° 56' 55.59"
	1801.66090	1+801.66090	198018.63325	220612.16344	154 ° 54' 28.13"
KA	1802.67971	1+802.67971	198017.71062	220612.59557	154 ° 54' 3.21"

IP7 (우향)

구분	원곡선		교각(IA)	0 ° 0' 0.00"	
IP좌표	X	197979.74702	방위각	1	154 ° 54' 3.21"
	Y	220630.37829		2	154 ° 54' 3.21"

제6장 선형계산부

원 중심 좌표	X	0.00000	R	0.00000	C L	0.00000
	Y	0.00000	T L	0.00000	S L	0.00000

구분	누가거리	X 좌표	Y 좌표
B C	1802.67971	198017.71062	220612.59557
E C	1886.52386	197941.78343	220648.16102

구 분	누가거리	측점(STA.)	X좌표	Y좌표	방위각
BC	1802.67971	1+802.67971	198017.71062	220612.59557	154 ° 54' 3.21"
	1820.00000	1+820.00000	198002.02580	220619.94258	154 ° 54' 3.21"
	1820.60000	1+820.60000	198001.48245	220620.19709	154 ° 54' 3.21"
	1821.10000	1+821.10000	198001.02966	220620.40918	154 ° 54' 3.21"
	1822.70000	1+822.70000	197999.58074	220621.08788	154 ° 54' 3.21"
	1831.66900	1+831.66900	197991.45864	220624.89240	154 ° 54' 3.21"
	1840.00000	1+840.00000	197983.91429	220628.42628	154 ° 54' 3.21"
	1854.55510	1+854.55510	197970.73355	220634.60034	154 ° 54' 3.21"
	1860.00000	1+860.00000	197965.80278	220636.90999	154 ° 54' 3.21"
	1866.80000	1+866.80000	197959.64487	220639.79445	154 ° 54' 3.21"
	1870.60000	1+870.60000	197956.20368	220641.40635	154 ° 54' 3.21"
	1874.56090	1+874.56090	197952.61679	220643.08651	154 ° 54' 3.21"
	1880.00000	1+880.00000	197947.69127	220645.39370	154 ° 54' 3.21"
EC	1886.52386	1+886.52386	197941.78343	220648.16102	154 ° 54' 3.21"

IP8 (좌향)

구 분	크 로 소 이 드		교각(IA)	11 ° 4' 52.93"	
IP좌표	X	197918.38496	방위각	1	154 ° 54' 3.21"
	Y	220659.12122		2	143 ° 49' 10.28"

R 1	0.00000	A	62.19427	R 2	100.00000
L 1	0.00000	원중심 좌표 1		L 2	38.68128
X 1	0.00000	X	0.00000	X 2	38.53684
Y 1	0.00000	Y 2	0.00000	Y 2	2.48708
T 1	0.00000	원중심 좌표 2		T 2	0.19341
TL1	0.00000	X	197966.97347	TL2	25.83823
TK1	0.00000	Y 2	220747.47617	TK2	12.93987

구분	누가거리	X 좌표	Y 좌표
K A	1886.52386	197941.78343	220648.16102
K E	1925.20513	197907.94040	220666.76002

구 분	누가거리	측점(STA.)	X좌표	Y좌표	방위각
KA	1886.52386	1+886.52386	197941.78343	220648.16102	154 ° 54' 3.21"

부산외곽순환 고속도로 건설공사 실시설계

	1894.56630	1+894.56630	197934.50995	220651.59278	154 ° 25' 18.69"
	1900.00000	1+900.00000	197929.62517	220653.97258	153 ° 33' 21.21"
	1914.57860	1+914.57860	197916.80730	220660.91005	149 ° 4' 18.32"
	1920.00000	1+920.00000	197912.21644	220663.79294	146 ° 36' 4.28"
KE	1925.20513	1+925.20513	197907.94040	220666.76002	143 ° 49' 10.28"

IP9 (좌향)

구 분	원 곡 선		교각(IA)	20 ° 48' 14.52"	
IP좌표	X	197893.12328	방위각	1	143 ° 49' 10.28"
	Y	220677.59676		2	123 ° 0' 55.77"

원 중심 좌표	X	197966.97347	R	100.00000	C L	36.30989
	Y	220747.47617	T L	18.35707	S L	1.67095

구분	누가거리	X 좌표	Y 좌표
B C	1925.20513	197907.94040	220666.76002
E C	1961.51502	197883.12114	220692.98959

구 분	누가거리	측점(STA.)	X좌표	Y좌표	방위각
BC	1925.20513	1+925.20513	197907.94040	220666.76002	143 ° 49' 10.28"
	1934.89230	1+934.89230	197900.41029	220672.84814	138 ° 16' 9.07"
	1940.00000	1+940.00000	197896.68698	220676.34383	135 ° 20' 33.68"
	1954.02650	1+954.02650	197887.43257	220686.86887	127 ° 18' 21.95"
	1957.60000	1+957.60000	197885.31801	220689.74935	125 ° 15' 31.08"
	1960.00000	1+960.00000	197883.95621	220691.72551	123 ° 53' 0.72"
	1961.20000	1+961.20000	197883.29320	220692.72571	123 ° 11' 45.55"
	1961.51502	1+961.51502	197883.12114	220692.98959	123 ° 0' 55.77"
EC	1961.51502	1+961.51502	197883.12114	220692.98959	123 ° 0' 55.77"

IP10 (좌향)

구 분	크 로 소 이 드		교각(IA)	10 ° 8' 31.45"	
IP좌표	X	197876.67202	방위각	1	123 ° 0' 55.77"
	Y	220702.91449		2	112 ° 52' 24.32"

R 1	100.00000	A	59.50000	R 2	0.00000
L 1	35.40250	원중심 좌표 1		L 2	0.00000
X 1	35.29173	X	197966.97347	X 2	0.00000
Y 1	2.08422	Y 2	220747.47617	Y 2	0.00000
T 1	0.17701	원중심 좌표 2		T 2	0.00000
TL1	23.64052	X	0.00000	TL2	0.00000
TK1	11.83616	Y 2	0.00000	TK2	0.00000

구분	누가거리	X 좌표	Y 좌표
K E	1961.51502	197883.12114	220692.98959
K A	1996.91752	197867.48303	220724.69606

구분	누가거리	측점(STA.)	X좌표	Y좌표	방위각
KE	1961.51502	1+961.51502	197883.12114	220692.98959	123 ° 0' 55.77"
	1961.70000	1+961.70000	197883.02049	220693.14480	122 ° 54' 35.22"
	1963.10000	1+963.10000	197882.26795	220694.32532	122 ° 7' 39.70"
	1963.60000	1+963.60000	197882.00305	220694.74939	121 ° 51' 21.83"
	1964.80000	1+964.80000	197881.37540	220695.77215	121 ° 13' 14.37"
	1969.70000	1+969.70000	197878.92469	220700.01487	118 ° 52' 4.66"
	1972.16740	1+972.16740	197877.75339	220702.18649	117 ° 49' 49.29"
	1974.50000	1+974.50000	197876.68074	220704.25780	116 ° 56' 24.16"
	1979.50000	1+979.50000	197874.48108	220708.74777	115 ° 19' 41.91"
	1979.80000	1+979.80000	197874.35294	220709.01903	115 ° 14' 40.09"
	1980.00000	1+980.00000	197874.26773	220709.19997	115 ° 11' 21.80"
	1980.50000	1+980.50000	197874.05546	220709.65267	115 ° 3' 16.25"
	1980.75000	1+980.75000	197873.94972	220709.87921	114 ° 59' 18.94"
	1993.59510	1+993.59510	197868.77603	220721.63557	112 ° 57' 45.88"
KA	1996.91752	1+996.91752	197867.48303	220724.69606	112 ° 52' 24.32"

IP11 (우향)

구분	크로소이드		교각(IA)	6 ° 17' 39.18"	
IP좌표	X	197858.36789	방위각	1	112 ° 52' 24.32"
	Y	220746.30257		2	119 ° 10' 3.50"

R 1	0.00000	A	74.99711	R 2	160.00000
L 1	0.00000	원중심 좌표 1		L 2	35.15354
X 1	0.00000	X	0.00000	X 2	35.11114
Y 1	0.00000	Y 2	0.00000	Y 2	1.28615
T 1	0.00000	원중심 좌표 2		T 2	0.10985
TL1	0.00000	X	197712.93883	TL2	23.45052
TK1	0.00000	Y 2	220678.56769	TK2	11.73133

구분	누가거리	X 좌표	Y 좌표
K A	1996.91752	197867.48303	220724.69606
K E	2032.07106	197852.65043	220756.54634

구분	누가거리	측점(STA.)	X좌표	Y좌표	방위각
KA	1996.91752	1+996.91752	197867.48303	220724.69606	112 ° 52' 24.32"
	2000.00000	2+ 0.00000	197866.28408	220727.53581	112 ° 55' 18.54"

부산외곽순환 고속도로 건설공사 실시설계

	2017.32910	2+ 17.32910	197859.31805	220743.40207	114 ° 59' 43.72"
	2020.00000	2+ 20.00000	197858.17725	220745.81707	115 ° 35' 13.79"
KE	2032.07106	2+ 32.07106	197852.65043	220756.54634	119 ° 10' 3.50"

IP12 (우향)

구 분	원 곡 선		교각(IA)	21 ° 26' 7.37"	
IP좌표	X	197837.89128	방위각	1	119 ° 10' 3.50"
	Y	220782.98980		2	140 ° 36' 10.87"

원 중심 좌표	X	197712.93883	R	160.00000	C L	59.85888
	Y	220678.56769	T L	30.28348	S L	2.84069

구분	누가거리	X 좌표	Y 좌표
B C	2032.07106	197852.65043	220756.54634
E C	2091.92994	197814.48920	220802.21042

구 분	누가거리	측점(STA.)	X좌표	Y좌표	방위각
BC	2032.07106	2+ 32.07106	197852.65043	220756.54634	119° 10' 3.50"
	2040.00000	2+ 40.00000	197848.61620	220763.37131	122° 0' 25.13"
	2041.62970	2+ 41.62970	197847.74540	220764.74884	122° 35' 26.07"
	2042.60000	2+ 42.60000	197847.22029	220765.56477	122° 56' 16.94"
	2043.10000	2+ 43.10000	197846.94776	220765.98397	123° 7' 1.51"
	2044.80000	2+ 44.80000	197846.01142	220767.40286	123° 43' 33.08"
	2045.30000	2+ 45.30000	197845.73316	220767.81827	123° 54' 17.65"
	2053.90000	2+ 53.90000	197840.74647	220774.82364	126° 59' 4.39"
	2060.00000	2+ 60.00000	197836.98473	220779.62518	129° 10' 8.23"
	2065.70480	2+ 65.70480	197833.30345	220783.98287	131° 12' 42.60"
	2080.00000	2+ 80.00000	197823.41757	220794.30208	136° 19' 51.33"
	2081.30000	2+ 81.30000	197822.47359	220795.19589	136° 47' 47.24"
	2081.30000	2+ 81.30000	197822.47359	220795.19589	136° 47' 47.24"
	2081.80000	2+ 81.80000	197822.10859	220795.53762	136° 58' 31.81"
	2081.80000	2+ 81.80000	197822.10859	220795.53762	136° 58' 31.81"
	2089.26440	2+ 89.26440	197816.53485	220800.50155	139° 38' 54.58"
EC	2091.92994	2+ 91.92994	197814.48920	220802.21042	140° 36' 10.87"

IP13 (우향)

구 분	크 로 소 이 드		교각(IA)	9 ° 3' 51.74"	
IP좌표	X	197801.41759	방위각	1	140 ° 36' 10.87"
	Y	220812.94640		2	149 ° 40' 2.61"

R 1	160.00000	A	90.00000	R 2	0.00000
L 1	50.62500	원중심 좌표 1		L 2	0.00000
X 1	50.49844	X	197712.93883	X 2	0.00000
Y 1	2.66491	Y 2	220678.56769	Y 2	0.00000
T 1	0.15820	원중심 좌표 2		T 2	0.00000
TL1	33.79435	X	0.00000	TL2	0.00000
TK1	16.91533	Y 2	0.00000	TK2	0.00000

구분	누가거리	X 좌표	Y 좌표
K E	2091.92994	197814.48920	220802.21042
K A	2142.55494	197772.24941	220830.01319

구 분	누가거리	측점(STA.)	X좌표	Y좌표	방위각
KE	2091.92994	2+ 91.92994	197814.48920	220802.21042	140 ° 36' 10.87"
	2100.00000	2+100.00000	197808.13297	220807.18159	143 ° 15' 45.23"
	2112.45500	2+112.45500	197797.93747	220814.33270	146 ° 27' 46.98"
	2120.00000	2+120.00000	197791.59561	220818.41988	147 ° 52' 5.32"
	2123.00000	2+123.00000	197789.04879	220820.00533	148 ° 18' 53.80"
	2123.00000	2+123.00000	197789.04879	220820.00533	148 ° 18' 53.80"
	2123.50000	2+123.50000	197788.62316	220820.26770	148 ° 22' 59.59"
	2123.50000	2+123.50000	197788.62316	220820.26770	148 ° 22' 59.59"
	2126.00000	2+126.00000	197786.49055	220821.57230	148 ° 41' 53.09"
	2127.30000	2+127.30000	197785.37891	220822.24627	148 ° 50' 39.61"
	2129.90000	2+129.90000	197783.15082	220823.58628	149 ° 6' 3.55"
	2135.07920	2+135.07920	197778.69743	220826.23039	149 ° 28' 11.04"
	2140.00000	2+140.00000	197774.45442	220828.72260	149 ° 38' 39.49"
KA	2142.55494	2+142.55494	197772.24941	220830.01319	149 ° 40' 2.61"

IP14 (좌향)

구 분	크 로 소 이 드		교각(IA)	4 ° 57' 20.16"	
IP좌표	X	197740.75899	방위각	1	149 ° 40' 2.61"
	Y	220848.43875		2	144 ° 42' 42.45"

R 1	0.00000	A	131.53227	R 2	316.25000
L 1	0.00000	원중심 좌표 1		L 2	54.70589
X 1	0.00000	X	0.00000	X 2	54.66498
Y 1	0.00000	Y 2	0.00000	Y 2	1.57636
T 1	0.00000	원중심 좌표 2		T 2	0.08649
TL1	0.00000	X	197908.55805	TL2	36.48490
TK1	0.00000	Y 2	221117.12172	TK2	18.24830

부산외곽순환 고속도로 건설공사 실시설계

구분	누가거리	X 좌표	Y 좌표
K A	2142.55494	197772.24941	220830.01319
K E	2197.26083	197725.86370	220858.98061

구 분	누가거리	측점(STA.)	X좌표	Y좌표	방위각
KA	2142.55494	2+142.55494	197772.24941	220830.01319	149 ° 40' 2.61"
	2157.25290	2+157.25290	197759.57897	220837.46231	149 ° 18' 34.82"
	2160.00000	2+160.00000	197757.21837	220838.86735	149 ° 9' 48.45"
	2179.29140	2+179.29140	197740.78786	220848.97516	147 ° 25' 57.62"
	2180.00000	2+180.00000	197740.19097	220849.35705	147 ° 20' 44.27"
KE	2197.26083	2+197.26083	197725.86370	220858.98061	144 ° 42' 42.45"

IP15 (좌향)

구 분	원 곡 선		교각(IA)	12 ° 10' 58.50"	
IP좌표	X	197698.31530	방위각	1	144 ° 42' 42.45"
	Y	220878.47745		2	132 ° 31' 43.95"

원 중심 좌표	X	197908.55805	R	316.25000	C L	67.24487
	Y	221117.12172	T L	33.74969	S L	1.79576

구분	누가거리	X 좌표	Y 좌표
B C	2197.26083	197725.86370	220858.98061
E C	2264.50569	197675.50180	220903.34884

구 분	누가거리	측점(STA.)	X좌표	Y좌표	방위각
BC	2197.26083	2+197.26083	197725.86370	220858.98061	144 ° 42' 42.45"
	2200.00000	2+200.00000	197723.63471	220860.57266	144 ° 12' 55.90"
	2201.30390	2+201.30390	197722.57853	220861.33728	143 ° 58' 45.47"
	2220.00000	2+220.00000	197707.79075	220872.77248	140 ° 35' 31.49"
	2223.31530	2+223.31530	197705.24028	220874.89054	139 ° 59' 29.18"
	2240.00000	2+240.00000	197692.74948	220885.94923	136 ° 58' 7.07"
	2260.00000	2+260.00000	197678.57103	220900.05023	133 ° 20' 42.66"
EC	2264.50569	2+264.50569	197675.50180	220903.34884	132 ° 31' 43.95"
EC	2264.50569	2+264.50569	197675.50180	220903.34884	132 ° 31' 43.95"
	2280.00000	2+280.00000	197665.02824	220914.76716	132 ° 31' 43.95"
	2300.00000	2+300.00000	197651.50901	220929.50590	132 ° 31' 43.95"
	2320.00000	2+320.00000	197637.98978	220944.24463	132 ° 31' 43.95"
EP	2324.50500	2+324.50500	197634.94457	220947.56453	132 ° 31' 43.95"

EP

EP 좌표	X	197634.94457	방위각	132 ° 31' 43.95"
	Y	220947.56453		