

# **ANEJO N° 21. REPLANTEO**

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## 21. ANEJO N° 21. REPLANTEO

### 21.1. INTRODUCCIÓN

El método utilizado habitualmente para el replanteo de los ejes que define la plataforma (transversales y longitudinales), es el conocido como replanteo por bisección.

No se facilita el replanteo por bisección, por la imposibilidad de la materialización de las bases de replanteo, por tanto se opta por facilitar los datos de las coordenadas de los vértices de Red Básica y los listados de entrada de los ejes de trazado, para cargarlos en el registrador de un equipo GPS, y así hacer el replanteo cada 20 metros de cada uno de los ejes, a partir de la opción replanteo de dicho equipo.

### 21.2. VÉRTICES DE LA RED BÁSICA

Se ha implantado una Red Básica constituida por cuatro vértices, denominados del V01 al V04. Estos puntos se encuentran materializados mediante clavos de acero, lo que garantiza su estabilidad y permanencia.

VÉRTICES DE LA RED BÁSICA			
NOMBRE	X	Y	Z
V1	448751,247	4477707,08	639,297
V2	450734,972	4478692,25	606,305
V3	452127,577	4478121,96	590,577
V4	450095,224	4477095,14	623,056
V5	453792,699	4478031,24	583,255
V6	454608,646	4477515,17	571,645

### 21.3. REPLANTEO

En el apéndice del presente Anejo se incluyen los listados del estado de alineaciones en planta y alzado de puntos sucesivos.

El significado de cada una de las columnas que aparecen en los listados "PUNTOS DEL EJE EN PLANTA", es el siguiente:

Columna "TIPO":	Indica la naturaleza geométrica del elemento (recta, circunferencia o clotoide).
Columna "P.K.":	Indica el punto kilométrico del trazado correspondiente al origen del elemento geométrico.
Columna "X":	Indica la coordenada "X" del punto de origen del elemento.
Columna "Y":	Indica la coordenada "Y" del punto de origen del elemento.
Columna "RADIO":	Indica el radio en metros de la alineación, en caso de ser ésta circular.
Columna "Cota":	Indica la cota en el inicio del tramo.
Columna "AZIMUT":	Indica el azimut del elemento en su origen.
Columna "PENDIENTE":	Indica la pendiente de la alineación, expresada en tanto por ciento, con signo positivo las ascendentes y negativo las descendentes.
Columna "PENDIENTE":	Indica la pendiente de la alineación, expresada en tanto por ciento, con signo positivo las ascendentes y negativo las descendentes.
Columna "PERALTE":	Indica el peralte puntual en cada perfil (izquierda y derecha) de la plataforma.

## **APÉNDICE 1. ESTADO DE ALINEACIONES EN PLANTA Y ALZADO CADA 20 M**

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 PROYECTO : 20180606\_NUDO EYM  
 EJE : 1 : A2\_MARGEN IZQUIERDA

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 PUNTOS DEL EJE EN PLANTA \*\*\*\*\*

TIPO	P.K.	X	Y	RADIO	COTA	AZIMUT	DIST. EJE	Pend (%)	PERAL_I	PERAL_D	Z PROJ.	ZT (eje)	Z TERR.
RECTA Rampa	0.000	451951.176	4477836.985	0.000	593.425	302.268048	0.000	1.675	3.17	3.17	593.425	593.415	593.415
RECTA Tg. Entrada	20.000	451931.189	4477837.698	0.000	593.748	302.268048	0.000	1.438	1.33	1.33	593.748	593.738	593.738
RECTA Rampa	40.000	451911.202	4477838.410	0.000	593.859	302.268048	0.000	0.553	1.33	1.33	593.859	593.849	593.849
RECTA Tg. Entrada	60.000	451891.214	4477839.122	0.000	593.967	302.268048	0.000	0.539	1.49	1.49	593.967	593.957	593.957
RECTA Tg. Entrada	80.000	451871.227	4477839.835	0.000	594.051	302.268048	0.000	0.421	2.24	2.24	594.051	594.041	594.041
RECTA Tg. Entrada	100.000	451851.240	4477840.547	0.000	594.099	302.268048	0.000	0.238	2.66	2.66	594.099	594.089	594.089
RECTA Tg. Entrada	120.000	451831.252	4477841.260	0.000	594.184	302.268048	0.000	0.424	2.55	2.55	594.184	594.174	594.174
RECTA Tg. Entrada	140.000	451811.265	4477841.972	0.000	594.290	302.268048	0.000	0.533	1.91	1.91	594.290	594.280	594.280
RECTA Tg. Entrada	160.000	451791.278	4477842.684	0.000	594.332	302.268048	0.000	0.260	1.81	1.81	594.332	594.322	594.322
RECTA Tg. Entrada	180.000	451771.290	4477843.397	0.000	594.523	302.268048	0.000	1.091	2.18	2.18	594.523	594.513	594.513
RECTA Tg. Entrada	200.000	451751.303	4477844.109	0.000	594.730	302.268048	0.000	0.749	1.86	1.86	594.730	594.720	594.720
RECTA Rampa	220.000	451731.316	4477844.821	0.000	594.950	302.268048	0.000	1.351	1.54	1.54	594.950	594.940	594.940
RECTA Rampa	240.000	451711.328	4477845.534	0.000	595.197	302.268048	0.000	1.126	1.22	1.22	595.197	595.187	595.187
CIRC. Rampa	245.769	451705.563	4477845.739	-5000.000	595.262	302.268048	0.000	1.126	1.13	1.13	595.262	595.252	595.252
CIRC. Tg. Entrada	260.000	451691.340	4477846.226	-5000.000	595.353	302.086853	0.000	0.432	0.91	0.91	595.353	595.343	595.343
CIRC. Tg. Entrada	280.000	451671.350	4477846.841	-5000.000	595.473	301.832205	0.000	0.672	0.59	0.59	595.473	595.463	595.463
CIRC. Tg. Entrada	300.000	451651.357	4477847.377	-5000.000	595.601	301.577557	0.000	0.621	0.27	0.27	595.601	595.591	595.591
CIRC. Tg. Entrada	320.000	451631.362	4477847.833	-5000.000	595.636	301.322909	0.000	0.182	-0.05	-0.05	595.636	595.626	595.626
CIRC. Tg. Entrada	340.000	451611.366	4477848.208	-5000.000	595.714	301.068262	0.000	0.448	-0.36	-0.36	595.714	595.704	595.704
CIRC. Tg. Entrada	360.000	451591.368	4477848.504	-5000.000	595.764	300.813614	0.000	0.166	-0.68	-0.68	595.764	595.754	595.754
CIRC. Pendiente	376.301	451575.068	4477848.685	12000.000	595.725	300.606066	0.000	-0.536	-0.94	-0.94	595.725	595.715	595.715
CIRC. Tg. Entrada	380.000	451571.369	4477848.721	12000.000	595.701	300.625691	0.000	-0.719	-1.00	-1.00	595.701	595.691	595.691
CIRC. Tg. Entrada	400.000	451551.370	4477848.935	12000.000	595.674	300.731794	0.000	0.421	1.08	1.08	595.674	595.664	595.664
CIRC. Tg. Entrada	420.000	451531.372	4477849.181	12000.000	595.703	300.837898	0.000	0.012	1.72	1.72	595.703	595.693	595.693
CIRC. Tg. Entrada	440.000	451511.374	4477849.461	12000.000	595.731	300.944001	0.000	0.000	3.17	3.17	595.731	595.721	595.721
CIRC. Tg. Entrada	460.000	451491.376	4477849.774	12000.000	595.691	301.050104	0.000	0.655	4.52	4.52	595.691	595.681	595.681
CIRC. Tg. Entrada	480.000	451471.379	4477850.121	12000.000	595.819	301.156207	0.000	0.641	4.28	4.28	595.819	595.809	595.809
CIRC. Tg. Entrada	500.000	451451.383	4477850.501	12000.000	595.963	301.262311	0.000	2.247	4.41	4.41	595.963	595.953	595.953
CIRC. Tg. Entrada	520.000	451431.387	4477850.914	12000.000	596.296	301.368414	0.000	0.877	1.85	1.85	596.296	596.286	596.286
CIRC. Tg. Entrada	540.000	451411.392	4477851.360	12000.000	596.468	301.474517	0.000	1.117	2.96	2.96	596.468	596.458	596.458
CIRC. Tg. Entrada	560.000	451391.398	4477851.840	12000.000	596.744	301.580621	0.000	1.514	3.40	3.40	596.744	596.734	596.734
CIRC. Tg. Entrada	580.000	451371.405	4477852.353	12000.000	596.998	301.686724	0.000	1.212	2.33	2.33	596.998	596.988	596.988
CIRC. Tg. Entrada	600.000	451351.412	4477852.900	12000.000	597.245	301.792827	0.000	1.300	1.78	1.78	597.245	597.235	597.235
CIRC. Rampa	620.000	451331.420	4477853.480	12000.000	597.502	301.898931	0.000	1.929	2.99	2.99	597.502	597.492	597.492
CIRC. Tg. Entrada	640.000	451311.430	4477854.093	12000.000	597.812	302.005034	0.000	1.026	3.68	3.68	597.812	597.802	597.802
CIRC. Tg. Entrada	660.000	451291.440	4477854.739	12000.000	598.060	302.111137	0.000	1.225	3.04	3.04	598.060	598.050	598.050
CIRC. Tg. Entrada	680.000	451271.452	4477855.419	12000.000	598.336	302.217240	0.000	1.638	2.32	2.32	598.336	598.326	598.326
RECTA Rampa	685.627	451265.828	4477855.616	0.000	598.427	302.247092	0.000	1.203	1.88	1.88	598.427	598.417	598.417
RECTA Tg. Entrada	700.000	451251.464	4477856.124	0.000	598.579	302.247092	0.000	1.419	0.77	0.77	598.579	598.569	598.569
RECTA Tg. Entrada	720.000	451231.477	4477856.829	0.000	598.903	302.247092	0.000	1.379	2.05	2.05	598.903	598.893	598.893
RECTA Tg. Entrada	740.000	451211.489	4477857.535	0.000	599.148	302.247092	0.000	1.538	2.28	2.28	599.148	599.138	599.138
RECTA Tg. Entrada	760.000	451191.502	4477858.241	0.000	599.446	302.247092	0.000	1.524	2.10	2.10	599.446	599.436	599.436
RECTA Tg. Entrada	780.000	451171.514	4477858.947	0.000	599.771	302.247092	0.000	1.960	1.84	1.84	599.771	599.761	599.761
RECTA Tg. Entrada	800.000	451151.527	4477859.653	0.000	599.978	302.247092	0.000	1.150	1.96	1.96	599.978	599.968	599.968
RECTA Tg. Entrada	820.000	451131.539	4477860.358	0.000	600.143	302.247092	0.000	-0.170	2.32	2.32	600.143	600.133	600.133
RECTA Tg. Entrada	840.000	451111.551	4477861.064	0.000	600.367	302.247092	0.000	1.124	0.00	0.00	600.367	600.357	600.357
RECTA Tg. Entrada	860.000	451091.564	4477861.770	0.000	600.508	302.247092	0.000	0.702	0.00	0.00	600.508	600.498	600.498
RECTA Tg. Entrada	880.000	451071.576	4477862.476	0.000	600.857	302.247092	0.000	1.748	0.00	0.00	600.857	600.847	600.847
RECTA Tg. Entrada	900.000	451051.589	4477863.182	0.000	601.090	302.247092	0.000	1.163	0.00	0.00	601.090	601.080	601.080
RECTA Tg. Entrada	920.000	451031.601	4477863.887	0.000	601.353	302.247092	0.000	1.313	0.00	0.00	601.353	601.343	601.343

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 EJE : 1 : A2\_MARGEN IZQUIERDA

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\*\*\*\*\* PUNTOS DEL EJE EN PLANTA \*\*\*\*\*

TIPO	P.K.	X	Y	RADIO	COTA	AZIMUT	DIST. EJE	Pend (%)	PERAL_I	PERAL_D	Z PROJ.	ZT (eje)	Z TERR.
RECTA Tg. Entrada	940.000	451011.614	4477864.593	0.000	601.607	302.247092	0.000	1.272	0.00	0.00	601.607	601.597	601.597
RECTA Rampa	960.000	450991.626	4477865.299	0.000	601.853	302.247092	0.000	1.225	0.00	0.00	601.853	601.843	601.843
RECTA Tg. Entrada	980.000	450971.639	4477866.005	0.000	602.098	302.247092	0.000	1.225	0.00	0.00	602.098	602.088	602.088
RECTA Tg. Entrada	1000.000	450951.651	4477866.710	0.000	602.361	302.247092	0.000	1.317	0.00	0.00	602.361	602.351	602.351
RECTA Tg. Entrada	1020.000	450931.664	4477867.416	0.000	602.653	302.247092	0.000	1.462	0.00	0.00	602.654	602.643	602.643
RECTA Tg. Entrada	1040.000	450911.676	4477868.122	0.000	602.982	302.247092	0.000	1.644	0.00	0.00	602.982	602.972	602.972
RECTA Tg. Entrada	1060.000	450891.688	4477868.828	0.000	603.356	302.247092	0.000	1.871	0.00	0.00	603.356	603.346	603.346
CIRC. Rampa	1079.591	450872.110	4477869.519	-2500.000	603.531	302.247092	0.000	0.894	0.00	0.00	603.531	603.521	603.521
CIRC. Tg. Entrada	1080.000	450871.701	4477869.534	-2500.000	603.535	302.236672	0.000	0.894	0.00	0.00	603.535	603.525	603.525
CIRC. Tg. Entrada	1100.000	450851.711	4477870.156	-2500.000	603.862	301.727376	0.000	1.633	0.00	0.00	603.862	603.852	603.852
CIRC. Tg. Entrada	1120.000	450831.716	4477870.619	-2500.000	604.252	301.218080	0.000	1.950	0.00	0.00	604.252	604.242	604.242
CIRC. Tg. Entrada	1140.000	450811.718	4477870.922	-2500.000	604.601	300.708784	0.000	1.745	0.00	0.00	604.601	604.591	604.591
CIRC. Tg. Entrada	1160.000	450791.719	4477871.064	-2500.000	604.817	300.199489	0.000	1.083	0.00	0.00	604.817	604.807	604.807
CIRC. Tg. Entrada	1180.000	450771.719	4477871.047	-2500.000	604.971	299.690193	0.000	0.769	0.00	0.00	604.971	604.961	604.961
RECTA Rampa	1198.908	450752.812	4477870.883	0.000	605.176	299.208707	0.000	1.083	0.00	0.00	605.176	605.166	605.166
RECTA Tg. Entrada	1200.000	450751.720	4477870.870	0.000	605.187	299.208707	0.000	1.083	0.00	0.00	605.188	605.177	605.177
RECTA Tg. Entrada	1220.000	450731.721	4477870.621	0.000	605.385	299.208707	0.000	0.985	0.00	0.00	605.385	605.375	605.375
RECTA Tg. Entrada	1240.000	450711.723	4477870.373	0.000	605.647	299.208707	0.000	2.659	0.00	0.00	605.647	605.637	605.637
RECTA Tg. Entrada	1260.000	450691.725	4477870.124	0.000	605.875	299.208707	0.000	1.438	0.00	0.00	605.875	605.865	605.865
RECTA Tg. Entrada	1280.000	450671.726	4477869.875	0.000	606.189	299.208707	0.000	1.568	0.00	0.00	606.189	606.179	606.179
RECTA Tg. Entrada	1300.000	450651.728	4477869.627	0.000	606.470	299.208707	0.000	1.404	0.00	0.00	606.470	606.460	606.460
RECTA Tg. Entrada	1320.000	450631.729	4477869.378	0.000	606.767	299.208707	0.000	1.486	0.00	0.00	606.767	606.757	606.757
RECTA Tg. Entrada	1340.000	450611.731	4477869.130	0.000	606.976	299.208707	0.000	1.047	0.00	0.00	606.976	606.966	606.966
CIRC. Rampa	1356.096	450595.636	4477868.930	2000.000	607.203	299.208707	0.000	1.410	0.00	0.00	607.203	607.193	607.193
CIRC. Rampa	1360.000	450591.732	4477868.885	2000.000	607.258	299.332971	0.000	1.411	0.00	0.00	607.258	607.248	607.248
CIRC. Tg. Entrada	1380.000	450571.733	4477868.775	2000.000	607.541	299.969591	0.000	1.411	0.00	0.00	607.541	607.531	607.531
CIRC. Tg. Entrada	1400.000	450551.733	4477868.866	2000.000	607.858	300.606210	0.000	1.586	0.00	0.00	607.858	607.848	607.848
CIRC. Tg. Entrada	1420.000	450531.735	4477869.156	2000.000	607.974	301.242830	0.000	0.582	0.00	0.00	607.974	607.964	607.964
CIRC. Rampa	1435.282	450516.457	4477869.513	-15000.000	608.168	301.729266	0.000	1.269	0.00	0.00	608.168	608.158	608.158
CIRC. Tg. Entrada	1440.000	450511.741	4477869.640	-15000.000	608.228	301.709241	0.000	1.269	0.00	0.00	608.228	608.218	608.218
CIRC. Tg. Entrada	1460.000	450491.748	4477870.164	-15000.000	608.302	301.624358	0.000	0.370	0.00	0.00	608.302	608.292	608.292
CIRC. Tg. Entrada	1480.000	450471.754	4477870.661	-15000.000	608.510	301.539476	0.000	1.039	0.00	0.00	608.510	608.500	608.500
CIRC. Tg. Entrada	1500.000	450451.760	4477871.131	-15000.000	608.575	301.454593	0.000	0.324	0.00	0.00	608.575	608.565	608.565
CIRC. Tg. Entrada	1520.000	450431.764	4477871.575	-15000.000	608.648	301.369710	0.000	0.367	0.00	0.00	608.648	608.638	608.638
CIRC. Tg. Entrada	1540.000	450411.769	4477871.992	-15000.000	608.978	301.284828	0.000	1.648	0.00	0.00	608.978	608.968	608.968
CIRC. Tg. Entrada	1560.000	450391.773	4477872.382	-15000.000	608.701	301.199945	0.000	-1.383	0.00	0.00	608.701	608.691	608.691
CIRC. Tg. Entrada	1580.000	450371.776	4477872.746	-15000.000	608.948	301.115063	0.000	1.233	0.00	0.00	608.948	608.938	608.938
CIRC. Tg. Entrada	1600.000	450351.779	4477873.082	-15000.000	609.094	301.030180	0.000	0.732	0.00	0.00	609.094	609.084	609.084
CIRC. Rampa	1613.310	450338.470	4477873.292	30000.000	609.339	300.973689	0.000	1.838	0.00	0.00	609.339	609.329	609.329
CIRC. Tg. Entrada	1620.000	450331.781	4477873.395	30000.000	609.462	300.987884	0.000	1.838	0.00	0.00	609.462	609.452	609.452
CIRC. Tg. Entrada	1640.000	450311.784	4477873.712	30000.000	609.537	301.030326	0.000	0.378	0.00	0.00	609.537	609.527	609.527
CIRC. Tg. Entrada	1660.000	450291.786	4477874.042	30000.000	609.744	301.072767	0.000	1.035	0.00	0.00	609.744	609.734	609.734
CIRC. Tg. Entrada	1680.000	450271.789	4477874.386	30000.000	609.835	301.115208	0.000	0.205	0.00	0.00	609.835	609.825	609.825
CIRC. Tg. Entrada	1700.000	450251.793	4477874.743	30000.000	609.982	301.157650	0.000	0.855	0.00	0.00	609.982	609.972	609.972
CIRC. Tg. Entrada	1720.000	450231.796	4477875.113	30000.000	610.034	301.200091	0.000	0.464	0.00	0.00	610.034	610.024	610.024
CIRC. Tg. Entrada	1740.000	450211.800	4477875.497	30000.000	610.173	301.242532	0.000	0.692	0.00	0.00	610.173	610.163	610.163
CIRC. Rampa	1760.000	450191.804	4477875.894	30000.000	610.301	301.284973	0.000	0.642	0.00	0.00	610.301	617.490	617.490
CIRC. Tg. Entrada	1780.000	450171.808	4477876.304	30000.000	610.432	301.327415	0.000	0.779	0.00	0.00	610.432	610.422	610.422
CIRC. Tg. Entrada	1800.000	450151.812	4477876.728	30000.000	610.521	301.369856	0.000	0.444	0.00	0.00	610.521	610.511	610.511
CIRC. Tg. Entrada	1820.000	450131.817	4477877.165	30000.000	610.643	301.412297	0.000	0.609	0.00	0.00	610.643	610.633	610.633

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 PROYECTO : 20180606\_NUDO EYM  
 EJE : 1 : A2\_MARGEN IZQUIERDA

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 \* \* \* PUNTOS DEL EJE EN PLANTA \* \* \*  
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TIPO	P.K.	X	Y	RADIO	COTA	AZIMUT	DIST. EJE	Pend (%)	PERAL_I	PERAL_D	Z PROJ.	ZT (eje)	Z TERR.
CIRC. Rampa	1840.000	450111.822	4477877.615	30000.000	610.809	301.454739	0.000	0.829	0.00	0.00	610.809	611.383	611.383
CIRC. Tg. Entrada	1860.000	450091.828	4477878.079	30000.000	610.975	301.497180	0.000	0.829	0.00	0.00	610.975	610.965	610.965
CIRC. Tg. Entrada	1880.000	450071.833	4477878.556	30000.000	611.010	301.539621	0.000	0.176	0.00	0.00	611.010	611.000	611.000
CIRC. Tg. Entrada	1900.000	450051.839	4477879.046	30000.000	611.011	301.582063	0.000	0.007	0.00	0.00	611.011	611.001	611.001
CIRC. Rampa	1920.000	450031.846	4477879.550	30000.000	611.118	301.624504	0.000	0.531	0.00	0.00	611.118	618.188	618.188
CIRC. Rampa	1940.000	450011.852	4477880.067	30000.000	611.224	301.666945	0.000	0.531	0.00	0.00	611.224	613.195	613.195
CIRC. Tg. Entrada	1960.000	449991.859	4477880.597	30000.000	611.448	301.709387	0.000	1.189	0.00	0.00	611.448	611.438	611.438
CIRC. Tg. Entrada	1980.000	449971.867	4477881.141	30000.000	611.511	301.751828	0.000	0.316	0.00	0.00	611.511	611.501	611.501
CIRC. Tg. Entrada	2000.000	449951.874	4477881.698	30000.000	611.570	301.794269	0.000	0.292	0.00	0.00	611.570	611.560	611.560
CIRC. Tg. Entrada	2020.000	449931.883	4477882.268	30000.000	611.788	301.836711	0.000	1.094	0.00	0.00	611.788	611.778	611.778
CIRC. Tg. Entrada	2040.000	449911.891	4477882.852	30000.000	611.969	301.879152	0.000	0.901	0.00	0.00	611.969	611.959	611.959
CIRC. Tg. Entrada	2060.000	449891.900	4477883.448	30000.000	612.052	301.921593	0.000	0.417	0.00	0.00	612.052	612.042	612.042
CIRC. Tg. Entrada	2080.000	449871.909	4477884.059	30000.000	612.261	301.964035	0.000	1.045	0.00	0.00	612.261	612.251	612.251
CIRC. Tg. Entrada	2100.000	449851.919	4477884.682	30000.000	612.422	302.006476	0.000	0.806	0.00	0.00	612.422	612.412	612.412
CIRC. Tg. Entrada	2120.000	449831.929	4477885.319	30000.000	612.547	302.048917	0.000	0.625	0.00	0.00	612.547	612.537	612.537
RECTA Rampa	2124.346	449827.586	4477885.459	0.000	612.612	302.058139	0.000	1.490	0.00	0.00	612.612	612.602	612.602
RECTA Tg. Entrada	2140.000	449811.940	4477885.965	0.000	612.846	302.058139	0.000	1.490	0.00	0.00	612.846	612.836	612.836
RECTA Tg. Entrada	2160.000	449791.950	4477886.612	0.000	613.119	302.058139	0.000	1.066	2.63	2.63	613.119	613.109	613.109
RECTA Tg. Entrada	2180.000	449771.961	4477887.258	0.000	613.458	302.058139	0.000	1.943	2.04	2.04	613.458	613.448	613.448
RECTA Tg. Entrada	2200.000	449751.971	4477887.905	0.000	613.825	302.058139	0.000	2.387	1.52	1.52	613.825	613.815	613.815
RECTA Tg. Entrada	2220.000	449731.981	4477888.551	0.000	614.161	302.058139	0.000	1.838	1.77	1.77	614.161	614.151	614.151
RECTA Tg. Entrada	2240.000	449711.992	4477889.198	0.000	614.563	302.058139	0.000	1.656	2.11	2.11	614.563	614.553	614.553
RECTA Rampa	2260.000	449692.002	4477889.844	0.000	615.016	302.058139	0.000	2.643	2.37	2.37	615.016	615.006	615.006
RECTA Tg. Entrada	2280.000	449672.013	4477890.491	0.000	615.450	302.058139	0.000	1.884	2.18	2.18	615.450	615.440	615.440
RECTA Rampa	2300.000	449652.023	4477891.137	0.000	615.892	302.058139	0.000	2.456	1.60	1.60	615.892	615.882	615.882
RECTA Tg. Entrada	2320.000	449632.034	4477891.784	0.000	616.393	302.058139	0.000	2.538	2.13	2.13	616.393	616.383	616.383
RECTA Tg. Entrada	2340.000	449612.044	4477892.430	0.000	616.954	302.058139	0.000	3.117	1.31	1.31	616.954	616.944	616.944
RECTA Tg. Entrada	2360.000	449592.055	4477893.077	0.000	617.556	302.058139	0.000	3.018	1.13	1.13	617.556	617.546	617.546
RECTA Tg. Entrada	2380.000	449572.065	4477893.723	0.000	618.167	302.058139	0.000	3.015	1.18	1.18	618.167	618.157	618.157
RECTA Tg. Entrada	2400.000	449552.076	4477894.370	0.000	618.751	302.058139	0.000	2.924	1.59	1.59	618.751	618.741	618.741
RECTA Tg. Entrada	2420.000	449532.086	4477895.016	0.000	619.357	302.058139	0.000	3.194	1.85	1.85	619.357	619.347	619.347
RECTA Tg. Entrada	2440.000	449512.096	4477895.662	0.000	620.007	302.058139	0.000	3.164	1.69	1.69	620.007	619.997	619.997
CIRC. Rampa	2447.745	449504.356	4477895.913	10000.000	620.236	302.058139	0.000	2.957	1.87	1.87	620.236	620.226	620.226
CIRC. Tg. Entrada	2460.000	449492.107	4477896.316	10000.000	620.594	302.136159	0.000	2.871	2.14	2.14	620.594	620.584	620.584
CIRC. Tg. Entrada	2480.000	449472.119	4477897.007	10000.000	621.228	302.263483	0.000	2.892	1.97	1.97	621.228	621.218	621.218
RECTA Rampa	2495.875	449456.254	4477897.584	0.000	621.695	302.364548	0.000	2.541	2.37	2.37	621.695	621.685	621.685
RECTA Tg. Entrada	2500.000	449452.132	4477897.737	0.000	621.800	302.364548	0.000	2.541	2.49	2.49	621.800	621.790	621.790
RECTA Tg. Entrada	2520.000	449432.146	4477898.480	0.000	622.455	302.364548	0.000	0.669	1.76	1.76	622.455	622.445	622.445
RECTA Tg. Entrada	2540.000	449412.160	4477899.223	0.000	623.047	302.364548	0.000	3.026	2.33	2.33	623.047	623.037	623.037
RECTA Tg. Entrada	2560.000	449392.174	4477899.965	0.000	623.713	302.364548	0.000	3.386	1.75	1.75	623.713	623.703	623.703
RECTA Tg. Entrada	2580.000	449372.188	4477900.708	0.000	624.333	302.364548	0.000	2.996	1.62	1.62	624.333	624.323	624.323
RECTA Tg. Entrada	2600.000	449352.201	4477901.451	0.000	624.942	302.364548	0.000	2.864	1.78	1.78	624.942	624.932	624.932
RECTA Rampa	2620.000	449332.215	4477902.194	0.000	625.587	302.364548	0.000	3.082	1.55	1.55	625.587	625.577	625.577
RECTA Tg. Entrada	2640.000	449312.229	4477902.936	0.000	626.202	302.364548	0.000	3.070	1.80	1.80	626.202	626.192	626.192
RECTA Tg. Entrada	2660.000	449292.243	4477903.679	0.000	626.818	302.364548	0.000	3.073	1.38	1.38	626.818	626.808	626.808
RECTA Tg. Entrada	2680.000	449272.257	4477904.422	0.000	627.433	302.364548	0.000	3.074	2.13	2.13	627.433	627.423	627.423
RECTA Rampa	2700.000	449252.270	4477905.164	0.000	628.068	302.364548	0.000	3.183	1.90	1.90	628.068	628.058	628.058
RECTA Rampa	2720.000	449232.284	4477905.907	0.000	628.705	302.364548	0.000	3.187	1.03	1.03	628.705	628.695	628.695
RECTA Rampa	2740.000	449212.298	4477906.650	0.000	629.343	302.364548	0.000	3.183	0.60	0.60	629.343	629.333	629.333
RECTA Tg. Entrada	2760.000	449192.312	4477907.392	0.000	630.028	302.364548	0.000	3.612	0.12	0.12	630.028	630.018	630.018

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 PUNTOS DEL EJE EN PLANTA \*\*\*\*\*  
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TIPO	P.K.	X	Y	RADIO	COTA	AZIMUT	DIST. EJE	Pend (%)	PERAL_I	PERAL_D	Z PROJ.	ZT (eje)	Z TERR.
CLOT. Rampa	2777.475	449174.849	4477908.041	-1000000.000	630.673	302.364548	0.000	3.651	-1.11	-1.11	630.672	630.663	630.663
CLOT. Tg. Entrada	2780.000	449172.326	4477908.135	-20946.975	630.765	302.360710	0.000	3.651	-1.28	-1.28	630.765	630.755	630.755
CLOT. Tg. Entrada	2800.000	449152.338	4477908.842	-2348.457	631.427	302.059238	0.000	3.330	-1.51	-1.51	631.427	631.417	631.417
CLOT. Tg. Entrada	2820.000	449132.345	4477909.378	-1243.962	632.109	301.276391	0.000	3.435	-3.12	-3.12	632.109	632.099	632.099
CLOT. Tg. Entrada	2840.000	449112.347	4477909.593	-846.056	632.789	300.012167	0.000	2.922	-3.95	-3.95	632.789	632.779	632.779
CLOT. Tg. Entrada	2860.000	449092.349	4477909.335	-641.015	633.374	298.266567	0.000	2.923	-2.54	-2.54	633.374	633.364	633.364
CIRC. Rampa	2865.641	449086.711	4477909.156	-600.000	633.539	297.687161	0.000	2.924	-3.03	-3.03	633.539	633.529	633.529
CIRC. Tg. Entrada	2880.000	449072.369	4477908.463	-600.000	633.948	296.163650	0.000	2.919	-4.29	-4.29	633.948	633.938	633.938
CLOT. Rampa	2880.704	449071.666	4477908.420	-600.000	633.960	296.088926	0.000	1.746	-4.29	-4.29	633.960	633.950	633.950
CLOT. Tg. Entrada	2900.000	449052.427	4477906.949	-768.104	634.033	294.265620	0.000	-0.560	-4.29	-4.29	634.033	634.023	634.023
CLOT. Tg. Entrada	2920.000	449032.531	4477904.916	-1082.443	634.085	292.848667	0.000	0.263	-4.29	-4.29	634.085	634.075	634.075
CLOT. Tg. Entrada	2940.000	449012.676	4477902.515	-1832.294	634.010	291.913091	0.000	-0.379	-4.29	-4.29	634.010	634.000	634.000
CLOT. Tg. Entrada	2960.000	448992.848	4477899.898	-5963.306	633.845	291.458891	0.000	-0.821	-4.29	-4.29	633.845	633.835	633.835
RECTA Pendiente	2968.871	448984.057	4477898.707	0.000	633.754	291.411539	0.000	-1.033	-4.29	-4.29	633.754	633.744	633.744
RECTA Tg. Entrada	2980.000	448973.029	4477897.210	0.000	633.639	291.411539	0.000	-1.033	-4.29	-4.29	633.639	633.629	633.629
RECTA Tg. Entrada	3000.000	448953.211	4477894.521	0.000	633.661	291.411539	0.000	0.112	-4.29	-4.29	633.661	633.651	633.651
RECTA Tg. Entrada	3020.000	448933.393	4477891.831	0.000	633.657	291.411539	0.000	-0.019	-4.29	-4.29	633.657	633.647	633.647
RECTA Tg. Entrada	3040.000	448913.575	4477889.141	0.000	633.626	291.411539	0.000	-0.157	-4.29	-4.29	633.626	633.616	633.616
RECTA Tg. Entrada	3060.000	448893.756	4477886.451	0.000	633.629	291.411539	0.000	0.013	-4.29	-4.29	633.629	633.619	633.619
RECTA Tg. Entrada	3080.000	448873.938	4477883.761	0.000	633.598	291.411539	0.000	-0.154	-4.29	-4.29	633.598	633.588	633.588
RECTA Tg. Entrada	3100.000	448854.120	4477881.071	0.000	633.611	291.411539	0.000	0.066	-4.29	-4.29	633.611	633.601	633.601
RECTA Pendiente	3120.000	448834.302	4477878.381	0.000	633.604	291.411539	0.000	-0.035	-4.29	-4.29	633.604	633.594	633.594
CIRC. Pendiente	3138.367	448816.101	4477875.910	2200.000	633.598	291.411539	0.000	-0.035	-4.29	-4.29	633.598	633.588	633.588
CIRC. Tg. Entrada	3140.000	448814.483	4477875.691	2200.000	633.597	291.458783	0.000	-0.035	-4.29	-4.29	633.597	633.587	633.587
CIRC. Pendiente	3160.000	448794.651	4477873.106	2200.000	633.540	292.037528	0.000	-0.285	-4.29	-4.29	633.540	640.715	640.715
CIRC. Tg. Entrada	3180.000	448774.796	4477870.701	2200.000	633.483	292.616274	0.000	-0.285	-4.29	-4.29	633.483	633.473	633.473
CIRC. Tg. Entrada	3200.000	448754.920	4477868.477	2200.000	633.581	293.195019	0.000	0.491	-4.29	-4.29	633.581	633.571	633.571
CIRC. Tg. Entrada	3220.000	448735.025	4477866.434	2200.000	633.730	293.773764	0.000	0.747	-4.29	-4.29	633.730	633.720	633.720
CIRC. Tg. Entrada	3240.000	448715.112	4477864.572	2200.000	633.603	294.352509	0.000	-0.635	-4.29	-4.29	633.603	633.593	633.593
CIRC. Tg. Entrada	3260.000	448695.183	4477862.890	2200.000	633.644	294.931255	0.000	0.203	-4.29	-4.29	633.644	633.634	633.634
CIRC. Tg. Entrada	3280.000	448675.239	4477861.390	2200.000	633.622	295.510000	0.000	-0.109	-4.29	-4.29	633.622	633.612	633.612
CIRC. Tg. Entrada	3300.000	448655.283	4477860.071	2200.000	633.483	296.088745	0.000	-0.697	-4.29	-4.29	633.483	633.473	633.473
CIRC. Pendiente	3320.000	448635.315	4477858.934	2200.000	633.246	296.667490	0.000	-1.185	-4.29	-4.29	633.246	637.183	637.183
CIRC. Pendiente	3340.000	448615.338	4477857.979	2200.000	633.009	297.246236	0.000	-1.172	-4.29	-4.29	633.009	632.999	632.999
CIRC. Tg. Entrada	3360.000	448595.353	4477857.205	2200.000	632.774	297.824981	0.000	-1.172	-4.29	-4.29	632.774	632.764	632.764
CIRC. Tg. Entrada	3380.000	448575.362	4477856.612	2200.000	632.472	298.403726	0.000	-1.377	-4.29	-4.29	632.472	632.462	632.462
CIRC. Tg. Entrada	3400.000	448555.366	4477856.202	2200.000	632.053	298.982471	0.000	-2.950	-4.29	-4.29	632.053	632.043	632.043
CIRC. Tg. Entrada	3420.000	448535.368	4477855.973	2200.000	631.581	299.561217	0.000	-2.714	-4.29	-4.29	631.581	631.571	631.571
CIRC. Tg. Entrada	3440.000	448515.368	4477855.926	2200.000	631.125	300.139962	0.000	-2.279	-4.29	-4.29	631.125	631.115	631.115
RECTA Pendiente	3442.983	448512.385	4477855.935	0.000	631.056	300.226269	0.000	-2.332	-4.29	-4.29	631.056	631.046	631.046
RECTA Tg. Entrada	3460.000	448495.368	4477855.995	0.000	630.659	300.226269	0.000	-2.332	-4.29	-4.29	630.659	630.649	630.649
RECTA Tg. Entrada	3480.000	448475.368	4477856.066	0.000	630.223	300.226269	0.000	-2.178	-4.29	-4.29	630.223	630.213	630.213
RECTA Pendiente	3492.691	448462.677	4477856.111	0.000	630.019	300.226269	0.000	-1.609	-4.29	-4.29	630.019	630.009	630.009



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\*\*\*\*\* PUNTOS DEL EJE EN PLANTA \*\*\*\*\*

TIPO	P.K.	X	Y	RADIO	COTA	AZIMUT	DIST. EJE	Pend (%)	PERAL_I	PERAL_D	Z PROJ.	ZT (eje)	Z TERR.
RECTA Rampa	0.000	448461.723	4477833.580	0.000	632.345	100.019543	0.000	0.728	-2.00	2.00	632.345	630.879	630.879
RECTA Rampa	20.000	448481.723	4477833.574	0.000	632.490	100.019543	0.000	0.728	-2.00	1.37	632.490	631.924	631.924
RECTA Rampa	40.000	448501.723	4477833.567	0.000	632.636	100.019543	0.000	0.728	-2.00	0.01	632.636	631.284	631.284
CLOT. Rampa	40.128	448501.851	4477833.567	-1000000.000	632.637	100.019543	0.000	0.728	-2.00	0.00	632.637	631.286	631.286
CLOT. Rampa	60.000	448521.723	4477833.573	-5647.413	632.781	99.907537	0.000	0.728	-2.00	-1.36	632.781	631.759	631.759
CLOT. Rampa	80.000	448541.723	4477833.649	-2814.637	632.927	99.568628	0.000	0.728	-2.72	-2.72	632.927	632.965	632.965
CIRC. Rampa	96.241	448557.963	4477833.813	-2000.000	633.045	99.126485	0.000	0.728	-3.83	-3.83	633.045	633.025	633.025
CIRC. Rampa	100.000	448561.722	4477833.868	-2000.000	633.087	99.006818	0.000	1.108	-3.83	-3.83	633.087	633.303	633.303
CIRC. Rampa	120.000	448581.717	4477834.280	-2000.000	633.308	98.370199	0.000	1.108	-3.83	-3.83	633.308	633.350	633.350
CIRC. Tg. Entrada	140.000	448601.708	4477834.892	-2000.000	633.530	97.733579	0.000	1.108	-3.83	-3.83	633.530	633.510	633.510
CIRC. Rampa	160.000	448621.691	4477835.703	-2000.000	633.823	97.096959	0.000	1.463	-3.83	-3.83	633.823	633.803	633.803
CIRC. Horizontal	180.000	448641.666	4477836.715	-2000.000	634.080	96.460339	0.000	0.000	-3.83	-3.83	634.080	640.249	640.249
CIRC. Tg. Entrada	200.000	448661.629	4477837.926	-2000.000	634.080	95.823719	0.000	0.449	-3.83	-3.83	634.081	634.060	634.060
CIRC. Tg. Entrada	220.000	448681.579	4477839.337	-2000.000	634.081	95.187100	0.000	0.002	-3.83	-3.83	634.081	634.061	634.061
CIRC. Tg. Entrada	240.000	448701.514	4477840.947	-2000.000	634.048	94.550480	0.000	-0.164	-3.83	-3.83	634.048	634.028	634.028
CIRC. Rampa	258.302	448719.741	4477842.595	-3024.500	633.959	93.967906	0.000	0.492	-3.83	-3.83	633.959	633.939	633.939
CIRC. Rampa	260.000	448721.432	4477842.757	-3024.500	633.968	93.932167	0.000	0.492	-3.79	-3.79	633.968	634.151	634.151
CIRC. Tg. Entrada	280.000	448741.334	4477844.726	-3024.500	634.066	93.511192	0.000	0.492	-3.29	-3.29	634.066	634.046	634.046
CIRC. Tg. Entrada	300.000	448761.224	4477846.827	-3024.500	633.962	93.090217	0.000	0.600	-2.83	-2.83	633.962	633.942	633.942
CIRC. Pendiente	320.000	448781.099	4477849.059	-3024.500	633.818	92.669242	0.000	-0.720	-2.83	-2.83	633.818	640.751	640.751
CIRC. Pendiente	340.000	448800.959	4477851.422	-3024.500	633.674	92.248266	0.000	-0.720	-2.83	-2.83	633.674	640.815	640.815
CIRC. Tg. Entrada	360.000	448820.802	4477853.917	-3024.500	633.530	91.827291	0.000	-0.720	-2.83	-2.83	633.530	633.510	633.510
RECTA Rampa	376.276	448836.939	4477856.044	0.000	633.560	91.484700	0.000	0.182	-2.83	-2.83	633.560	633.540	633.540
RECTA Rampa	380.000	448840.629	4477856.541	0.000	633.566	91.484700	0.000	0.182	-2.77	-2.77	633.566	633.546	633.546
RECTA Tg. Entrada	400.000	448860.451	4477859.208	0.000	633.603	91.484700	0.000	0.182	-2.40	-2.40	633.603	633.583	633.583
RECTA Tg. Entrada	420.000	448880.272	4477861.875	0.000	633.638	91.484700	0.000	0.175	-2.02	-2.02	633.638	633.618	633.618
RECTA Tg. Entrada	440.000	448900.094	4477864.543	0.000	633.613	91.484700	0.000	-0.133	-1.06	-1.06	633.613	633.593	633.593
RECTA Tg. Entrada	460.000	448919.915	4477867.210	0.000	633.590	91.484700	0.000	-0.114	-0.06	-0.06	633.591	633.570	633.570
RECTA Tg. Entrada	480.000	448939.736	4477869.877	0.000	633.605	91.484700	0.000	0.118	1.45	1.45	633.605	633.585	633.585
RECTA Tg. Entrada	500.000	448959.558	4477872.544	0.000	633.607	91.484700	0.000	0.011	3.00	3.00	633.607	633.587	633.587
RECTA Tg. Entrada	520.000	448979.379	4477875.211	0.000	633.578	91.484700	0.000	-0.145	4.54	4.54	633.578	633.558	633.558
RECTA Tg. Entrada	540.000	448999.200	4477877.879	0.000	633.590	91.484700	0.000	0.061	6.09	6.09	633.590	633.570	633.570
CLOT. Rampa	544.545	449003.705	4477878.485	1000000.000	633.595	91.484700	0.000	0.294	6.44	6.44	633.595	633.575	633.575
CIRC. Rampa	557.034	449016.086	4477880.118	800.723	633.632	91.981162	0.000	0.639	7.41	7.41	633.632	633.612	633.612
CIRC. Tg. Entrada	560.000	449019.030	4477880.485	800.723	633.646	92.216973	0.000	0.364	7.41	7.41	633.646	633.626	633.626
CIRC. Tg. Entrada	580.000	449038.909	4477882.676	800.723	633.581	93.807086	0.000	-0.328	6.17	6.17	633.581	633.561	633.561
CIRC. Tg. Entrada	600.000	449058.836	4477884.370	800.723	633.709	95.397199	0.000	0.640	4.93	4.94	633.709	633.689	633.689
CIRC. Tg. Entrada	620.000	449078.800	4477885.565	800.723	633.130	96.987311	0.000	-2.892	3.69	3.71	633.130	633.110	633.110
CIRC. Tg. Entrada	640.000	449098.787	4477886.262	800.723	632.629	98.577424	0.000	-2.508	4.42	4.47	632.629	632.609	632.609
CIRC. Tg. Entrada	660.000	449118.786	4477886.459	800.723	632.008	100.167536	0.000	-3.105	4.08	4.91	632.008	631.988	631.988
CLOT. Pendiente	672.604	449131.389	4477886.327	800.723	631.627	101.169628	0.000	-2.959	4.39	4.42	631.628	631.607	631.607
CLOT. Tg. Entrada	680.000	449138.783	4477886.159	1078.095	631.409	101.682006	0.000	-2.959	3.78	3.76	631.409	631.389	631.389
CLOT. Tg. Entrada	700.000	449158.772	4477885.504	17040.769	630.793	102.309868	0.000	-3.105	3.52	3.50	630.793	630.773	630.773
RECTA Pendiente	701.351	449160.122	4477885.455	0.000	630.751	102.312392	0.000	-3.090	3.55	3.54	630.751	630.731	630.731
RECTA Pendiente	720.000	449178.759	4477884.777	0.000	630.173	102.312392	0.000	-3.100	3.20	3.22	630.173	630.153	630.153
RECTA Tg. Entrada	740.000	449198.746	4477884.051	0.000	629.557	102.312392	0.000	-3.078	2.39	2.41	629.557	629.537	629.537
RECTA Tg. Entrada	760.000	449218.733	4477883.325	0.000	628.975	102.312392	0.000	-2.909	2.30	2.32	628.975	628.955	628.955
RECTA Tg. Entrada	780.000	449238.720	4477882.598	0.000	628.420	102.312392	0.000	-2.776	2.72	2.73	628.420	628.400	628.400
RECTA Tg. Entrada	800.000	449258.706	4477881.872	0.000	627.749	102.312392	0.000	-3.354	2.43	2.41	627.749	627.729	627.729
RECTA Tg. Entrada	820.000	449278.693	4477881.146	0.000	627.166	102.312392	0.000	-2.917	2.37	2.37	627.166	627.146	627.146

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\*\*\*\*\* PUNTOS DEL EJE EN PLANTA \*\*\*\*\*

TIPO	P.K.	X	Y	RADIO	COTA	AZIMUT	DIST. EJE	Pend (%)	PERAL_I	PERAL_D	Z PROJ.	ZT (eje)	Z TERR.
RECTA Tg. Entrada	840.000	449298.680	4477880.419	0.000	626.539	102.312392	0.000	-3.134	2.07	2.07	626.539	626.519	626.519
RECTA Tg. Entrada	860.000	449318.667	4477879.693	0.000	625.927	102.312392	0.000	-3.069	1.81	1.81	625.927	625.907	625.907
RECTA Tg. Entrada	880.000	449338.654	4477878.967	0.000	625.275	102.312392	0.000	-3.261	1.57	1.57	625.275	625.255	625.255
RECTA Tg. Entrada	900.000	449358.640	4477878.241	0.000	624.595	102.312392	0.000	-3.400	2.29	2.29	624.595	624.575	624.575
RECTA Tg. Entrada	920.000	449378.627	4477877.514	0.000	624.059	102.312392	0.000	-2.678	2.14	2.14	624.059	624.039	624.039
RECTA Pendiente	940.000	449398.614	4477876.788	0.000	623.410	102.312392	0.000	-3.246	2.11	2.11	623.410	623.390	623.390
RECTA Tg. Entrada	960.000	449418.601	4477876.062	0.000	622.794	102.312392	0.000	-2.541	2.14	2.14	622.794	622.774	622.774
RECTA Pendiente	980.000	449438.588	4477875.335	0.000	622.168	102.312392	0.000	-3.132	2.00	2.00	622.168	622.148	622.148
RECTA Tg. Entrada	1000.000	449458.574	4477874.609	0.000	621.609	102.312392	0.000	-2.669	2.22	2.23	621.609	621.589	621.589
RECTA Tg. Entrada	1020.000	449478.561	4477873.883	0.000	621.026	102.312392	0.000	-3.139	1.97	1.98	621.026	621.006	621.006
RECTA Tg. Entrada	1040.000	449498.548	4477873.156	0.000	620.429	102.312392	0.000	-3.382	1.90	1.90	620.429	620.409	620.409
CIRC. Pendiente	1058.447	449516.983	4477872.487	-2024.500	619.767	102.312392	0.000	-3.533	2.43	2.43	619.767	619.747	619.747
CIRC. Tg. Entrada	1060.000	449518.535	4477872.431	-2024.500	619.712	102.263569	0.000	-3.533	2.47	2.47	619.712	619.692	619.692
CIRC. Pendiente	1071.493	449530.022	4477872.055	56754.067	619.324	101.902160	0.000	-3.334	2.37	2.37	619.324	619.304	619.304
CIRC. Tg. Entrada	1080.000	449538.525	4477871.800	56754.067	619.066	101.911702	0.000	-2.724	2.29	2.30	619.066	619.046	619.046
CIRC. Tg. Entrada	1100.000	449558.516	4477871.196	56754.067	618.469	101.934137	0.000	-3.007	2.58	2.58	618.469	618.449	618.449
CIRC. Tg. Entrada	1120.000	449578.506	4477870.585	56754.067	617.846	101.956571	0.000	-3.461	2.26	2.26	617.846	617.826	617.826
RECTA Pendiente	1139.882	449598.379	4477869.971	0.000	617.325	101.978873	0.000	-2.948	1.77	1.77	617.325	617.305	617.305
RECTA Tg. Entrada	1140.000	449598.497	4477869.967	0.000	617.322	101.978873	0.000	-2.948	1.77	1.77	617.322	617.302	617.302
RECTA Tg. Entrada	1160.000	449618.487	4477869.345	0.000	616.785	101.978873	0.000	-3.065	1.55	1.55	616.785	616.765	616.765
RECTA Tg. Entrada	1180.000	449638.478	4477868.724	0.000	616.278	101.978873	0.000	-3.175	1.56	1.56	616.278	616.258	616.258
RECTA Tg. Entrada	1200.000	449658.468	4477868.102	0.000	615.690	101.978873	0.000	-3.533	2.34	2.34	615.690	615.670	615.670
RECTA Tg. Entrada	1220.000	449678.458	4477867.481	0.000	615.280	101.978873	0.000	-1.934	3.08	3.08	615.280	615.260	615.260
RECTA Tg. Entrada	1240.000	449698.449	4477866.859	0.000	614.887	101.978873	0.000	-2.129	0.12	0.12	614.887	614.867	614.867
RECTA Tg. Entrada	1260.000	449718.439	4477866.237	0.000	614.456	101.978873	0.000	-1.678	-5.76	-5.76	614.456	614.436	614.436
RECTA Tg. Entrada	1280.000	449738.429	4477865.616	0.000	614.017	101.978873	0.000	-2.198	-4.84	-4.84	614.017	613.997	613.997
RECTA Tg. Entrada	1300.000	449758.420	4477864.994	0.000	613.610	101.978873	0.000	-2.032	-1.43	-1.43	613.610	613.590	613.590
RECTA Tg. Entrada	1320.000	449778.410	4477864.373	0.000	613.429	101.978873	0.000	-0.908	0.51	0.51	613.429	613.409	613.409
RECTA Tg. Entrada	1340.000	449798.400	4477863.751	0.000	613.020	101.978873	0.000	-2.043	2.79	2.79	613.020	613.000	613.000
RECTA Tg. Entrada	1360.000	449818.391	4477863.129	0.000	612.814	101.978873	0.000	-1.029	2.84	2.84	612.814	612.794	612.794
RECTA Tg. Entrada	1380.000	449838.381	4477862.508	0.000	612.596	101.978873	0.000	-1.092	2.74	2.74	612.596	612.576	612.576
RECTA Tg. Entrada	1400.000	449858.371	4477861.886	0.000	612.451	101.978873	0.000	-0.724	2.63	2.63	612.451	612.431	612.431
RECTA Tg. Entrada	1420.000	449878.362	4477861.265	0.000	612.213	101.978873	0.000	-1.188	2.52	2.52	612.213	612.193	612.193
RECTA Tg. Entrada	1440.000	449898.352	4477860.643	0.000	612.052	101.978873	0.000	-0.804	2.41	2.41	612.052	612.032	612.032
RECTA Tg. Entrada	1460.000	449918.342	4477860.022	0.000	611.997	101.978873	0.000	-0.276	2.31	2.31	611.997	611.977	611.977
CIRC. Pendiente	1460.079	449918.421	4477860.019	-20000.000	611.997	101.978873	0.000	-0.695	2.30	2.30	611.997	611.977	611.977
CIRC. Tg. Entrada	1480.000	449938.333	4477859.410	-20000.000	611.597	101.915462	0.000	-2.007	2.20	2.20	611.597	611.577	611.577
CIRC. Tg. Entrada	1500.000	449958.324	4477858.818	-20000.000	611.553	101.851800	0.000	-0.217	2.09	2.09	611.553	611.533	611.533
CIRC. Tg. Entrada	1520.000	449978.316	4477858.247	-20000.000	611.520	101.788138	0.000	-0.167	1.98	1.98	611.520	611.500	611.500
CIRC. Tg. Entrada	1540.000	449998.308	4477857.695	-20000.000	611.520	101.724476	0.000	0.000	1.87	1.87	611.520	611.500	611.500
CIRC. Pendiente	1560.000	450018.301	4477857.163	-20000.000	611.303	101.660814	0.000	-1.084	1.77	1.77	611.303	618.231	618.231
CIRC. Tg. Entrada	1580.000	450038.295	4477856.651	-20000.000	611.086	101.597152	0.000	-1.084	1.66	1.66	611.086	611.066	611.066
CIRC. Tg. Entrada	1600.000	450058.289	4477856.160	-20000.000	611.020	101.533490	0.000	-0.331	1.55	1.55	611.020	611.000	611.000
CIRC. Tg. Entrada	1620.000	450078.283	4477855.688	-20000.000	610.901	101.469828	0.000	-1.038	1.44	1.44	610.901	610.881	610.881
CIRC. Pendiente	1636.485	450094.764	4477855.314	15000.000	610.800	101.417355	0.000	-0.137	1.35	1.35	610.800	611.838	611.838
CIRC. Pendiente	1640.000	450098.278	4477855.236	15000.000	610.795	101.432274	0.000	-0.137	1.34	1.34	610.795	611.991	611.991
CIRC. Tg. Entrada	1660.000	450118.273	4477854.772	15000.000	610.808	101.517156	0.000	0.539	1.23	1.23	610.808	610.788	610.788
CIRC. Tg. Entrada	1680.000	450138.267	4477854.282	15000.000	610.528	101.602039	0.000	-1.399	1.12	1.12	610.528	610.508	610.508
CIRC. Pendiente	1685.343	450143.608	4477854.147	-15000.000	610.524	101.624716	0.000	-0.189	1.09	1.09	610.524	610.504	610.504
CIRC. Pendiente	1700.000	450158.260	4477853.780	-15000.000	610.496	101.562510	0.000	-0.189	1.01	1.01	610.496	610.476	610.476

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 EJE : 2 : A2\_MARGEN DERECHA

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 PUNTOS DEL EJE EN PLANTA \*\*\*\*\*  
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TIPO	P.K.	X	Y	RADIO	COTA	AZIMUT	DIST. EJE	Pend (%)	PERAL_I	PERAL_D	Z PROJ.	ZT (eje)	Z TERR.
CIRC. Pendiente	1720.000	450178.255	4477853.303	-15000.000	610.458	101.477627	0.000	-0.189	0.90	0.90	610.458	617.503	617.503
CIRC. Pendiente	1740.000	450198.250	4477852.852	-15000.000	610.267	101.392745	0.000	-1.037	0.80	0.80	610.267	610.247	610.247
CIRC. Tg. Entrada	1760.000	450218.245	4477852.428	-15000.000	610.060	101.307862	0.000	-1.037	0.69	0.69	610.060	610.040	610.040
CIRC. Tg. Entrada	1780.000	450238.241	4477852.030	-15000.000	610.020	101.222979	0.000	-0.200	0.58	0.58	610.020	610.000	610.000
RECTA Pendiente	1789.167	450247.407	4477851.857	0.000	609.947	101.184072	0.000	-0.701	0.53	0.53	609.947	609.927	609.927
RECTA Tg. Entrada	1800.000	450258.238	4477851.655	0.000	609.871	101.184072	0.000	-0.701	0.47	0.47	609.871	609.851	609.851
RECTA Pendiente	1820.000	450278.234	4477851.283	0.000	609.798	101.184072	0.000	-0.368	0.37	0.37	609.798	613.239	613.239
RECTA Tg. Entrada	1840.000	450298.231	4477850.911	0.000	609.724	101.184072	0.000	-0.368	0.26	0.26	609.724	609.704	609.704
RECTA Tg. Entrada	1860.000	450318.227	4477850.539	0.000	609.599	101.184072	0.000	-0.627	0.15	0.15	609.599	609.579	609.579
RECTA Tg. Entrada	1880.000	450338.224	4477850.168	0.000	609.457	101.184072	0.000	-0.779	0.05	0.05	609.457	609.437	609.437
RECTA Tg. Entrada	1900.000	450358.220	4477849.796	0.000	609.386	101.184072	0.000	-0.083	0.00	0.00	609.386	609.366	609.366
RECTA Tg. Entrada	1920.000	450378.217	4477849.424	0.000	609.290	101.184072	0.000	-0.479	0.00	0.00	609.290	609.270	609.270
RECTA Tg. Entrada	1940.000	450398.213	4477849.052	0.000	609.166	101.184072	0.000	-0.623	0.00	0.00	609.166	609.146	609.146
RECTA Tg. Entrada	1960.000	450418.210	4477848.680	0.000	609.046	101.184072	0.000	-0.597	0.34	0.34	609.046	609.026	609.026
RECTA Tg. Entrada	1980.000	450438.207	4477848.308	0.000	608.908	101.184072	0.000	-0.692	0.02	0.02	608.908	608.888	608.888
RECTA Tg. Entrada	2000.000	450458.203	4477847.936	0.000	608.775	101.184072	0.000	-0.665	0.02	0.02	608.775	608.755	608.755
RECTA Tg. Entrada	2020.000	450478.200	4477847.564	0.000	608.658	101.184072	0.000	-0.588	0.01	0.01	608.658	608.638	608.638
RECTA Tg. Entrada	2040.000	450498.196	4477847.192	0.000	608.558	101.184072	0.000	-0.437	-0.02	-0.02	608.558	608.538	608.538
RECTA Tg. Entrada	2060.000	450518.193	4477846.820	0.000	608.491	101.184072	0.000	-0.336	-0.31	-0.31	608.491	608.471	608.471
RECTA Tg. Entrada	2080.000	450538.189	4477846.448	0.000	608.356	101.184072	0.000	-0.753	-2.35	-2.35	608.356	608.336	608.336
CIRC. Pendiente	2086.250	450544.438	4477846.332	-2000.000	608.320	101.184072	0.000	-0.579	-2.97	-2.97	608.320	608.300	608.300
CIRC. Tg. Entrada	2100.000	450558.187	4477846.123	-2000.000	608.282	100.746384	0.000	-0.273	-0.16	-0.16	608.282	608.262	608.262
CIRC. Tg. Entrada	2120.000	450578.186	4477845.989	-2000.000	608.167	100.109764	0.000	-0.473	-0.89	-0.89	608.167	608.147	608.147
CIRC. Tg. Entrada	2140.000	450598.186	4477846.054	-2000.000	608.020	99.473144	0.000	-0.735	-2.43	-2.43	608.020	608.000	608.000
CIRC. Pendiente	2152.138	450610.323	4477846.191	6700.000	607.594	99.086779	0.000	-0.508	0.57	0.57	607.594	607.574	607.574
CIRC. Tg. Entrada	2160.000	450618.184	4477846.300	6700.000	607.464	99.161482	0.000	-1.659	0.15	0.15	607.464	607.444	607.444
CIRC. Tg. Entrada	2180.000	450638.183	4477846.533	6700.000	607.218	99.351518	0.000	-1.231	-0.93	-0.93	607.218	607.198	607.198
CIRC. Tg. Entrada	2200.000	450658.182	4477846.707	6700.000	607.082	99.541554	0.000	0.124	-1.46	-1.46	607.082	607.063	607.063
CIRC. Tg. Entrada	2220.000	450678.182	4477846.821	6700.000	606.725	99.731589	0.000	-1.787	3.39	3.39	606.725	606.705	606.705
CIRC. Tg. Entrada	2240.000	450698.182	4477846.876	6700.000	606.556	99.921625	0.000	-0.847	-4.24	-4.24	606.556	606.536	606.536
CIRC. Tg. Entrada	2260.000	450718.182	4477846.871	6700.000	606.096	100.111661	0.000	-2.296	-2.53	-2.53	606.096	606.076	606.076
CIRC. Tg. Entrada	2280.000	450738.182	4477846.806	6700.000	605.883	100.301697	0.000	-1.067	2.80	2.80	605.883	605.863	605.863
CIRC. Tg. Entrada	2300.000	450758.181	4477846.681	6700.000	605.567	100.491732	0.000	-1.578	-3.43	-3.43	605.567	605.547	605.547
CIRC. Tg. Entrada	2320.000	450778.180	4477846.497	6700.000	605.308	100.681768	0.000	-1.299	-0.08	-0.08	605.308	605.288	605.288
CIRC. Tg. Entrada	2340.000	450798.179	4477846.253	6700.000	605.014	100.871804	0.000	-1.471	-2.44	-2.44	605.014	604.994	604.994
CIRC. Tg. Entrada	2360.000	450818.177	4477845.949	6700.000	604.613	101.061840	0.000	-2.005	-2.25	-2.25	604.613	604.593	604.593
CIRC. Tg. Entrada	2380.000	450838.173	4477845.585	6700.000	604.391	101.251875	0.000	-1.109	-0.65	-0.65	604.391	604.371	604.371
CIRC. Tg. Entrada	2400.000	450858.169	4477845.162	6700.000	604.134	101.441911	0.000	-1.282	3.72	3.72	604.134	604.114	604.114
CIRC. Tg. Entrada	2420.000	450878.163	4477844.680	6700.000	603.844	101.631947	0.000	-1.452	1.10	1.10	603.844	603.824	603.824
CIRC. Tg. Entrada	2440.000	450898.156	4477844.137	6700.000	603.643	101.821983	0.000	-1.005	1.55	1.55	603.643	603.623	603.623
CIRC. Tg. Entrada	2460.000	450918.146	4477843.535	6700.000	603.437	102.012018	0.000	-1.031	-0.41	-0.41	603.437	603.417	603.417
CIRC. Tg. Entrada	2480.000	450938.136	4477842.873	6700.000	603.251	102.202054	0.000	-0.928	-2.36	-2.36	603.251	603.231	603.231
RECTA Pendiente	2490.684	450948.813	4477842.495	0.000	603.103	102.303571	0.000	-1.779	2.24	2.24	603.103	603.083	603.083
RECTA Tg. Entrada	2500.000	450958.123	4477842.158	0.000	603.019	102.303571	0.000	-0.906	7.11	7.11	603.019	602.999	602.999
RECTA Tg. Entrada	2520.000	450978.110	4477841.435	0.000	602.645	102.303571	0.000	-1.866	1.19	1.19	602.645	602.625	602.625
RECTA Tg. Entrada	2540.000	450998.097	4477840.711	0.000	602.461	102.303571	0.000	-0.924	1.27	1.27	602.461	602.441	602.441
RECTA Tg. Entrada	2560.000	451018.083	4477839.987	0.000	602.224	102.303571	0.000	-1.185	-7.11	-7.11	602.224	602.204	602.204
RECTA Tg. Entrada	2580.000	451038.070	4477839.264	0.000	602.039	102.303571	0.000	-0.440	5.42	5.42	602.039	602.019	602.019
RECTA Tg. Entrada	2600.000	451058.057	4477838.540	0.000	601.675	102.303571	0.000	-1.823	6.23	6.23	601.675	601.655	601.655
RECTA Tg. Entrada	2620.000	451078.044	4477837.817	0.000	601.450	102.303571	0.000	-1.123	0.96	0.96	601.450	601.430	601.430

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\*\*\*\*\* PUNTOS DEL EJE EN PLANTA \*\*\*\*\*

TIPO	P.K.	X	Y	RADIO	COTA	AZIMUT	DIST. EJE	Pend (%)	PERAL_I	PERAL_D	Z PROJ.	ZT (eje)	Z TERR.
CIRC. Pendiente	2639.219	451097.251	4477837.122	-8000.000	601.184	102.303571	0.000	-1.271	-0.02	-0.02	601.184	601.164	601.164
CIRC. Tg. Entrada	2640.000	451098.031	4477837.093	-8000.000	601.177	102.297360	0.000	-0.984	0.00	0.00	601.177	601.157	601.157
RECTA Pendiente	2655.218	451113.240	4477836.559	0.000	601.028	102.176260	0.000	-0.978	-0.11	0.15	601.028	601.008	601.008
RECTA Tg. Entrada	2660.000	451118.019	4477836.395	0.000	601.020	102.176260	0.000	-0.163	-0.15	0.20	601.020	601.000	601.000
RECTA Tg. Entrada	2680.000	451138.007	4477835.712	0.000	600.728	102.176260	0.000	-1.461	-0.30	0.41	600.728	600.708	600.708
RECTA Tg. Entrada	2700.000	451157.996	4477835.028	0.000	600.414	102.176260	0.000	-1.569	-0.45	0.61	600.414	600.394	600.394
RECTA Tg. Entrada	2720.000	451177.984	4477834.345	0.000	600.124	102.176260	0.000	-1.452	-0.60	0.81	600.124	600.104	600.104
RECTA Tg. Entrada	2740.000	451197.972	4477833.661	0.000	599.974	102.176260	0.000	-0.746	-0.75	1.02	599.974	599.954	599.954
RECTA Tg. Entrada	2760.000	451217.960	4477832.978	0.000	599.655	102.176260	0.000	-1.598	-0.90	1.22	599.655	599.635	599.635
RECTA Tg. Entrada	2780.000	451237.949	4477832.294	0.000	599.338	102.176260	0.000	-1.583	-1.05	1.42	599.338	599.318	599.318
RECTA Tg. Entrada	2800.000	451257.937	4477831.610	0.000	599.091	102.176260	0.000	-1.237	-1.20	1.63	599.091	599.071	599.071
RECTA Tg. Entrada	2820.000	451277.925	4477830.927	0.000	598.867	102.176260	0.000	-1.119	-1.35	1.83	598.867	598.847	598.847
RECTA Tg. Entrada	2840.000	451297.914	4477830.243	0.000	598.757	102.176260	0.000	0.033	-1.50	1.82	598.757	598.737	598.737
RECTA Tg. Entrada	2860.000	451317.902	4477829.560	0.000	598.508	102.176260	0.000	-1.246	-1.66	0.66	598.508	598.488	598.488
RECTA Tg. Entrada	2880.000	451337.890	4477828.876	0.000	598.148	102.176260	0.000	-1.798	-1.81	-0.50	598.148	598.128	598.128
RECTA Tg. Entrada	2900.000	451357.879	4477828.193	0.000	597.908	102.176260	0.000	-1.202	-1.96	-1.66	597.908	597.888	597.888
CIRC. Pendiente	2904.675	451362.551	4477828.033	-8000.000	597.861	102.176260	0.000	-0.391	-1.99	-1.94	597.861	597.841	597.841
CIRC. Pendiente	2911.277	451369.149	4477827.810	-4024.500	597.822	102.123724	0.000	-0.639	-2.32	-2.32	597.822	597.802	597.802
CIRC. Tg. Entrada	2920.000	451377.868	4477827.528	-4024.500	597.687	101.985738	0.000	-1.536	-2.32	-2.32	597.688	597.667	597.667
CIRC. Tg. Entrada	2940.000	451397.859	4477826.954	-4024.500	597.317	101.669365	0.000	-1.850	-2.32	-2.32	597.318	597.297	597.297
CIRC. Tg. Entrada	2960.000	451417.854	4477826.480	-4024.500	597.093	101.352993	0.000	-1.122	-2.32	-2.32	597.093	597.073	597.073
CIRC. Tg. Entrada	2980.000	451437.850	4477826.104	-4024.500	596.992	101.036621	0.000	-0.504	-2.32	-2.32	596.992	596.972	596.972
RECTA Pendiente	2989.453	451447.302	4477825.962	0.000	596.878	100.887094	0.000	-1.206	-2.32	-2.32	596.878	596.858	596.858
RECTA Tg. Entrada	3000.000	451457.848	4477825.815	0.000	596.802	100.887094	0.000	-1.217	-2.00	-1.71	596.802	596.782	596.782
RECTA Tg. Entrada	3020.000	451477.846	4477825.536	0.000	596.687	100.887094	0.000	-0.573	-2.00	-0.55	596.687	596.667	596.667
RECTA Tg. Entrada	3040.000	451497.844	4477825.257	0.000	596.590	100.887094	0.000	-0.484	-2.00	0.61	596.590	596.570	596.570
RECTA Tg. Entrada	3060.000	451517.842	4477824.979	0.000	596.405	100.887094	0.000	-0.925	-2.00	1.77	596.405	596.385	596.385
RECTA Tg. Entrada	3080.000	451537.840	4477824.700	0.000	596.187	100.887094	0.000	-1.014	-2.00	2.00	596.188	596.167	596.167
RECTA Tg. Entrada	3100.000	451557.838	4477824.421	0.000	595.879	100.887094	0.000	-1.544	-2.00	2.00	595.879	595.859	595.859
CIRC. Pendiente	3102.754	451560.592	4477824.383	9000.000	595.861	100.887094	0.000	-0.627	-2.00	2.00	595.861	595.841	595.841
CIRC. Tg. Entrada	3120.000	451577.836	4477824.126	9000.000	595.845	101.009085	0.000	-0.097	-2.00	2.00	595.845	595.825	595.825
CIRC. Tg. Entrada	3140.000	451597.833	4477823.787	9000.000	595.837	101.150556	0.000	-0.039	-2.00	2.00	595.837	595.817	595.817
CIRC. Tg. Entrada	3160.000	451617.830	4477823.403	9000.000	595.771	101.292027	0.000	-0.327	-2.00	2.00	595.771	595.751	595.751
CIRC. Tg. Entrada	3180.000	451637.825	4477822.975	9000.000	595.678	101.433498	0.000	-0.466	-2.00	2.00	595.678	595.658	595.658
CIRC. Tg. Entrada	3200.000	451657.819	4477822.502	9000.000	595.579	101.574969	0.000	-0.495	-2.00	2.00	595.579	595.559	595.559
CIRC. Tg. Entrada	3220.000	451677.813	4477821.986	9000.000	595.517	101.716440	0.000	-0.313	-2.00	2.00	595.517	595.497	595.497
CIRC. Tg. Entrada	3240.000	451697.805	4477821.424	9000.000	595.419	101.857911	0.000	-0.489	-2.00	2.00	595.419	595.399	595.399
CIRC. Tg. Entrada	3260.000	451717.796	4477820.818	9000.000	595.319	101.999383	0.000	-0.497	-2.00	2.00	595.319	595.299	595.299
CIRC. Tg. Entrada	3280.000	451737.785	4477820.168	9000.000	595.293	102.140854	0.000	-0.133	-2.00	2.00	595.293	595.273	595.273
CIRC. Tg. Entrada	3300.000	451757.773	4477819.473	9000.000	595.251	102.282325	0.000	-0.208	-2.00	2.00	595.251	595.231	595.231
RECTA Pendiente	3303.501	451761.272	4477819.347	0.000	595.233	102.307087	0.000	-0.528	-2.00	2.00	595.233	595.213	595.213
RECTA Tg. Entrada	3320.000	451777.760	4477818.750	0.000	595.171	102.307087	0.000	-0.374	-2.00	2.00	595.171	595.151	595.151
RECTA Tg. Entrada	3340.000	451797.747	4477818.025	0.000	595.074	102.307087	0.000	-0.486	-2.00	2.00	595.074	595.054	595.054
RECTA Tg. Entrada	3360.000	451817.734	4477817.300	0.000	594.863	102.307087	0.000	-1.055	-2.00	2.00	594.863	594.843	594.843
RECTA Tg. Entrada	3380.000	451837.721	4477816.576	0.000	594.821	102.307087	0.000	-0.208	-2.00	2.00	594.821	594.801	594.801
RECTA Tg. Entrada	3400.000	451857.707	4477815.851	0.000	594.728	102.307087	0.000	-0.468	-2.00	2.00	594.728	594.708	594.708
RECTA Tg. Entrada	3420.000	451877.694	4477815.126	0.000	594.653	102.307087	0.000	-0.374	-2.00	2.00	594.653	594.633	594.633
CIRC. Pendiente	3424.933	451882.624	4477814.948	14975.500	594.629	102.307087	0.000	-0.389	-2.00	2.00	594.629	594.609	594.609
CIRC. Tg. Entrada	3440.000	451897.681	4477814.394	14975.500	594.570	102.371137	0.000	-0.389	-2.00	2.00	594.570	594.550	594.550
CIRC. Tg. Entrada	3460.000	451917.667	4477813.636	14975.500	594.407	102.456159	0.000	-0.815	-2.00	2.00	594.407	594.387	594.387

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 \* \* \* PUNTOS DEL EJE EN PLANTA \* \* \*  
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TIPO	P.K.	X	Y	RADIO	COTA	AZIMUT	DIST. EJE	Pend (%)	PERAL_I	PERAL_D	Z PROJ.	ZT (eje)	Z TERR.
CIRC. Tg. Entrada	3480.000	451937.651	4477812.851	14975.500	594.304	102.541180	0.000	-0.517	-2.00	2.00	594.304	594.284	594.284
CIRC. Pendiente	3492.969	451950.610	4477812.328	14975.500	594.235	102.596312	0.000	-0.528	-2.00	2.00	594.235	594.215	594.215

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 EJE : 9 : TRANSFER 2

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 \* \* \* PUNTOS DEL EJE EN PLANTA \* \* \*  
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TIPO	P.K.	X	Y	RADIO	COTA	AZIMUT	DIST. EJE	Pend (%)	PERAL_I	PERAL_D	Z PROJ.	ZT (eje)	Z TERR.
CIRC. Rampa	0.000	449752.828	4477927.872	1996.500	614.127	297.979611	0.000	3.119	0.00	0.00	614.127	614.504	614.504
CLOT. Rampa	1.928	449750.901	4477927.811	1996.500	614.187	298.041091	0.000	3.119	1.39	1.39	614.187	614.505	614.505
CIRC. Rampa	12.566	449740.283	4477928.131	30.000	614.480	309.497659	0.000	2.194	2.88	2.88	614.480	614.775	614.775
CIRC. KV 568	20.000	449733.143	4477930.131	30.000	614.607	325.273585	0.000	1.272	3.11	3.11	614.607	614.991	614.991
CLOT. KV -362	37.554	449719.792	4477941.140	30.000	615.052	362.523531	0.000	2.239	2.00	2.00	615.052	615.297	615.297
CLOT. Rampa	40.000	449718.512	4477943.224	38.786	615.100	367.126938	0.000	1.843	2.00	2.00	615.100	615.161	615.161
RECTA Rampa	48.354	449714.921	4477950.762	0.000	615.254	373.982687	0.000	1.843	2.00	2.00	615.254	615.222	615.222
RECTA Rampa	55.122	449712.231	4477956.973	0.000	615.379	373.982687	0.000	1.843	2.00	2.00	615.379	615.365	615.365

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 EJE : 10 : VIA SERVICIO AV ARAGON

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\*\*\*\*\* PUNTOS DEL EJE EN PLANTA \*\*\*\*\*

TIPO	P.K.	X	Y	RADIO	COTA	AZIMUT	DIST. EJE	Pend (%)	PERAL_I	PERAL_D	Z PROJ.	ZT (eje)	Z TERR.
CIRC. Rampa	0.000	451367.169	4477855.968	11996.500	596.980	301.709701	0.000	1.087	1.98	1.98	596.980	596.933	596.933
CIRC. Rampa	20.000	451347.177	4477856.521	11996.500	597.198	301.815835	0.000	1.087	1.97	1.97	597.198	597.146	597.146
CIRC. Rampa	40.000	451327.185	4477857.108	11996.500	597.476	301.921969	0.000	1.390	3.19	3.19	597.476	597.455	597.455
CIRC. Rampa	51.061	451316.129	4477857.447	2500.000	597.619	301.980668	0.000	1.299	3.52	3.52	597.619	597.601	597.601
CIRC. Tg. Entrada	60.000	451307.195	4477857.741	2500.000	597.736	302.208292	0.000	1.299	3.54	3.54	597.736	597.719	597.719
CIRC. Rampa	80.000	451287.210	4477858.515	2500.000	598.024	302.717588	0.000	1.441	2.87	2.87	598.024	598.013	598.013
CIRC. Tg. Entrada	100.000	451267.232	4477859.448	2500.000	598.346	303.226884	0.000	1.609	2.20	2.20	598.346	598.307	598.307
RECTA Rampa	101.949	451265.286	4477859.548	0.000	598.368	303.276504	0.000	1.136	2.21	2.21	598.368	598.333	598.333
RECTA Tg. Entrada	120.000	451247.259	4477860.477	0.000	598.573	303.276504	0.000	1.136	2.29	2.29	598.573	598.570	598.570
RECTA Tg. Entrada	140.000	451227.285	4477861.505	0.000	598.877	303.276504	0.000	1.414	2.13	2.13	598.877	598.868	598.868
RECTA Rampa	160.000	451207.312	4477862.534	0.000	599.109	303.276504	0.000	1.513	2.36	2.36	599.109	599.091	599.091
RECTA Tg. Entrada	180.000	451187.338	4477863.563	0.000	599.441	303.276504	0.000	2.326	1.89	1.89	599.441	599.435	599.435
RECTA Tg. Entrada	200.000	451167.365	4477864.592	0.000	599.724	303.276504	0.000	1.352	1.93	1.93	599.724	599.714	599.714
RECTA Tg. Entrada	220.000	451147.391	4477865.621	0.000	599.935	303.276504	0.000	1.419	1.87	1.87	599.935	599.921	599.921
CIRC. Rampa	237.015	451130.399	4477866.496	2500.000	600.044	303.276504	0.000	0.707	1.32	1.32	600.044	599.985	599.985
CIRC. Tg. Entrada	240.000	451127.418	4477866.652	2500.000	600.065	303.352515	0.000	0.707	1.33	1.33	600.065	599.997	599.997
CIRC. Tg. Entrada	260.000	451107.450	4477867.784	2500.000	600.134	303.861811	0.000	0.746	1.36	1.36	600.134	600.117	600.117
CIRC. Tg. Entrada	280.000	451087.492	4477869.077	2500.000	600.459	304.371107	0.000	0.630	1.39	1.39	600.459	600.367	600.367
CIRC. Tg. Entrada	300.000	451067.545	4477870.529	2500.000	600.734	304.880403	0.000	1.505	1.43	1.43	600.734	600.564	600.564
CIRC. Tg. Entrada	320.000	451047.610	4477872.140	2500.000	601.066	305.389699	0.000	0.000	1.46	1.46	601.066	600.998	600.998
CIRC. Tg. Entrada	340.000	451027.688	4477873.911	2500.000	601.360	305.898994	0.000	1.447	1.49	1.49	601.360	601.249	601.249
RECTA Rampa	345.184	451022.527	4477874.396	0.000	601.435	306.031013	0.000	1.162	1.50	1.50	601.435	601.317	601.317
RECTA Tg. Entrada	360.000	451007.777	4477875.797	0.000	601.607	306.031013	0.000	0.000	0.90	0.90	601.607	601.519	601.519
CLOT. Rampa	364.927	451002.873	4477876.263	-1000000.000	601.663	306.031013	0.000	1.156	0.70	0.70	601.663	601.587	601.587
CLOT. Tg. Entrada	380.000	450987.866	4477877.683	-5970.911	601.842	305.950658	0.000	0.000	0.10	0.10	601.842	601.794	601.794
CLOT. Tg. Entrada	400.000	450967.949	4477879.502	-2566.071	602.086	305.595947	0.000	1.743	-0.71	-0.71	602.086	602.065	602.065
CLOT. Tg. Entrada	420.000	450948.019	4477881.165	-1634.192	602.308	304.958293	0.000	0.000	-1.73	-1.73	602.308	602.298	602.298
CIRC. Rampa	424.927	450943.106	4477881.541	-1500.000	602.356	304.757773	0.000	0.984	-1.93	-1.93	602.356	602.346	602.346
CIRC. Tg. Entrada	440.000	450928.070	4477882.591	-1500.000	602.559	304.118052	0.000	1.399	-2.37	-2.37	602.559	602.549	602.549
CIRC. Tg. Entrada	460.000	450908.104	4477883.750	-1500.000	602.873	303.269226	0.000	1.547	-3.11	-3.11	602.873	602.863	602.863
CIRC. Tg. Entrada	480.000	450888.124	4477884.644	-1500.000	603.139	302.420399	0.000	1.289	-3.06	-3.06	603.139	603.129	603.129
CIRC. Tg. Entrada	500.000	450868.134	4477885.271	-1500.000	603.401	301.571573	0.000	1.017	-3.05	-3.05	603.401	603.391	603.391
CLOT. Rampa	518.535	450849.602	4477885.614	-1500.000	603.641	300.784929	0.000	1.294	-3.08	-3.08	603.641	603.631	603.631
CLOT. Tg. Entrada	520.000	450848.137	4477885.631	-1513.303	603.660	300.723020	0.000	2.033	-3.08	-3.08	603.660	603.650	603.650
CLOT. Tg. Entrada	540.000	450828.137	4477885.731	-1721.745	603.896	299.932585	0.000	5.083	-3.29	-3.29	603.896	603.886	603.886
CLOT. Tg. Entrada	560.000	450808.138	4477885.599	-1996.781	604.202	299.244009	0.000	1.531	-2.10	-2.10	604.202	604.192	604.192
CLOT. Tg. Entrada	580.000	450788.141	4477885.267	-2376.391	604.453	298.657293	0.000	1.255	-2.35	-2.35	604.453	604.443	604.443
CLOT. Tg. Entrada	600.000	450768.147	4477884.766	-2934.220	604.699	298.172435	0.000	1.326	-3.35	-3.35	604.699	604.689	604.689
CLOT. Tg. Entrada	620.000	450748.157	4477884.130	-3834.266	604.995	297.789437	0.000	1.419	-2.58	-2.58	604.995	604.985	604.985
CLOT. Tg. Entrada	640.000	450728.171	4477883.388	-5530.786	605.188	297.508298	0.000	0.949	-2.53	-2.53	605.188	605.178	605.178
CLOT. Tg. Entrada	660.000	450708.188	4477882.575	-9920.032	605.481	297.329018	0.000	1.605	0.21	0.21	605.481	605.471	605.471
CLOT. Tg. Entrada	680.000	450688.206	4477881.721	-48062.757	605.755	297.251597	0.000	1.419	1.05	1.05	605.755	605.745	605.745
CIRC. Rampa	685.202	450683.009	4477881.497	5000.000	605.812	297.248152	0.000	1.230	1.15	1.15	605.812	605.802	605.802
CIRC. Tg. Entrada	700.000	450668.224	4477880.879	5000.000	605.993	297.436572	0.000	0.709	1.31	1.31	605.993	605.983	605.983
CIRC. Tg. Entrada	720.000	450648.238	4477880.114	5000.000	606.201	297.691220	0.000	1.109	1.39	1.39	606.201	606.190	606.190
CIRC. Tg. Entrada	740.000	450628.250	4477879.429	5000.000	606.526	297.945868	0.000	2.036	1.47	1.47	606.526	606.516	606.516
CIRC. Tg. Entrada	760.000	450608.259	4477878.823	5000.000	606.900	298.200516	0.000	1.135	2.12	2.12	606.900	606.890	606.890
CIRC. Tg. Entrada	780.000	450588.266	4477878.298	5000.000	607.154	298.455164	0.000	0.970	1.79	1.79	607.154	607.144	607.144
CIRC. Rampa	795.739	450572.532	4477877.941	5000.000	607.379	298.655553	0.000	2.440	2.42	2.42	607.379	607.369	607.369

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\*\*\*\*\* PUNTOS DEL EJE EN PLANTA \*\*\*\*\*

TIPO	P.K.	X	Y	RADIO	COTA	AZIMUT	DIST. EJE	Pend (%)	PERAL_I	PERAL_D	Z PROJ.	ZT (eje)	Z TERR.
CIRC. Pendiente	-100.000	454643.386	4477499.896	200.000	571.316	306.534195	0.000	-0.079	0.00	0.00	571.316	571.778	571.778
CIRC. KV 771	-80.000	454623.627	4477502.936	200.000	571.386	312.900393	0.000	1.359	0.26	0.26	571.386	571.778	571.778
CLOT. KV -625	-64.033	454608.131	4477506.770	200.000	571.717	317.982847	0.000	1.702	0.46	0.46	571.717	571.778	571.778
CLOT. KV -625	-60.000	454604.270	4477507.932	217.316	571.773	319.215446	0.000	1.057	0.51	0.51	571.773	571.778	571.778
CLOT. Tg. Entrada	-40.000	454585.427	4477514.624	380.825	572.005	323.816597	0.000	2.521	0.77	0.77	572.005	571.985	571.985
CLOT. Tg. Entrada	-20.000	454566.959	4477522.297	1538.099	572.342	325.902181	0.000	2.838	0.95	0.95	572.342	572.322	572.322
CLOT. Rampa	-13.419	454560.918	4477524.910	-1000000.000	572.531	326.038384	0.000	2.886	0.53	0.53	572.531	572.511	572.511
CLOT. Rampa	0.000	454548.591	4477530.210	-754.394	572.918	325.472198	0.000	2.883	-0.35	-0.35	572.918	572.898	572.898
CIRC. Rampa	1.043	454547.630	4477530.616	-700.000	572.948	325.380789	0.000	2.885	-0.42	-0.42	572.948	572.928	572.928
CIRC. Rampa	20.000	454530.062	4477537.738	-700.000	573.480	323.656703	0.000	2.750	-1.85	-1.85	573.480	573.460	573.460
CIRC. Rampa	40.000	454511.326	4477544.733	-700.000	574.028	321.837790	0.000	2.663	-3.38	-3.38	574.028	574.008	574.008
CIRC. Tg. Entrada	60.000	454492.398	4477551.189	-700.000	574.547	320.018876	0.000	2.550	-4.44	-4.44	574.547	574.527	574.527
CLOT. Rampa	78.919	454474.329	4477556.797	-700.000	574.890	318.298287	0.000	1.742	-4.84	-4.84	574.890	574.870	574.870
CLOT. Tg. Entrada	80.000	454473.292	4477557.103	-708.223	574.908	318.200533	0.000	1.729	-4.86	-4.86	574.909	574.888	574.888
CLOT. Tg. Entrada	100.000	454454.033	4477562.491	-904.852	575.103	316.598074	0.000	0.800	-4.75	-4.75	575.103	575.083	575.083
CLOT. Tg. Entrada	120.000	454434.658	4477567.453	-1252.631	575.315	315.386285	0.000	1.587	-4.64	-4.64	575.315	575.295	575.295
CLOT. Tg. Entrada	140.000	454415.207	4477572.104	-2034.640	575.432	314.565169	0.000	0.369	-3.72	-3.72	575.432	575.412	575.412
CLOT. Tg. Entrada	160.000	454395.710	4477576.564	-5415.509	575.540	314.134723	0.000	0.541	-2.52	-2.52	575.540	575.520	575.520
RECTA Rampa	172.036	454383.968	4477579.206	0.000	575.642	314.063977	0.000	0.978	-2.45	-2.45	575.642	575.622	575.622
RECTA Tg. Entrada	180.000	454376.197	4477580.951	0.000	575.720	314.063977	0.000	0.978	-2.41	-2.41	575.720	575.700	575.700
CLOT. Rampa	187.990	454368.402	4477582.702	1000000.000	575.792	314.063977	0.000	0.905	-2.27	-2.27	575.792	575.772	575.772
CLOT. Rampa	200.000	454356.686	4477585.344	2186.796	575.896	314.238798	0.000	0.873	-2.07	-2.07	575.896	575.876	575.876
CLOT. Tg. Entrada	220.000	454337.216	4477589.919	820.486	576.061	315.305824	0.000	0.757	-1.37	-1.37	576.061	576.041	576.041
CLOT. Tg. Entrada	240.000	454317.865	4477594.967	504.976	576.167	317.342422	0.000	0.665	0.08	0.08	576.167	576.147	576.147
CLOT. Tg. Entrada	260.000	454298.729	4477600.776	364.725	576.438	320.348592	0.000	1.923	1.28	1.28	576.438	576.418	576.418
CLOT. Tg. Entrada	280.000	454279.942	4477607.625	285.446	576.796	324.324334	0.000	1.642	0.72	0.72	576.796	576.776	576.776
CLOT. Tg. Entrada	300.000	454261.682	4477615.772	234.478	577.159	329.269647	0.000	1.746	5.95	5.95	577.159	577.139	577.139
CLOT. Tg. Entrada	320.000	454244.184	4477625.444	198.954	577.491	335.184533	0.000	1.636	6.95	6.95	577.492	577.471	577.471
CIRC. Rampa	326.221	454238.942	4477628.793	190.000	577.587	337.222079	0.000	1.481	6.56	6.56	577.587	577.567	577.567
CIRC. Tg. Entrada	340.000	454227.738	4477636.808	190.000	577.774	341.838889	0.000	1.270	5.70	5.70	577.774	577.754	577.754
CLOT. Rampa	354.066	454216.930	4477645.805	190.000	577.942	346.551868	0.000	1.151	4.55	4.55	577.942	577.922	577.922
CLOT. Tg. Entrada	360.000	454212.572	4477649.833	229.318	578.002	348.369697	0.000	0.964	4.07	4.07	578.002	577.982	577.982
CLOT. Tg. Entrada	380.000	454198.543	4477664.083	757.984	578.201	351.985721	0.000	1.013	4.33	4.33	578.201	578.182	578.182
RECTA Rampa	388.675	454192.627	4477670.429	0.000	578.292	352.350037	0.000	1.052	3.74	3.74	578.292	578.273	578.273
RECTA Tg. Entrada	400.000	454184.920	4477678.727	0.000	578.407	352.350037	0.000	0.987	2.98	2.98	578.407	578.387	578.387
CLOT. Rampa	402.092	454183.497	4477680.259	1000000.000	578.426	352.350037	0.000	0.872	3.16	3.16	578.426	578.406	578.406
CLOT. Rampa	420.000	454171.424	4477693.485	345.578	578.572	353.999566	0.000	0.745	4.70	4.70	578.572	578.552	578.552
CLOT. Tg. Entrada	440.000	454158.808	4477708.995	163.255	578.744	359.741301	0.000	0.879	5.48	5.48	578.744	578.724	578.724
CIRC. Rampa	440.815	454158.328	4477709.654	159.818	578.751	360.062610	0.000	0.825	5.50	5.50	578.751	578.731	578.731
CIRC. Tg. Entrada	460.000	454148.024	4477725.824	159.818	578.917	367.704689	0.000	0.824	6.15	6.15	578.917	578.897	578.897
CLOT. Rampa	469.452	454143.679	4477734.216	159.818	579.019	371.469756	0.000	0.945	5.65	5.65	579.019	578.998	578.998
CLOT. Tg. Entrada	480.000	454139.400	4477743.856	211.218	579.128	375.160249	0.000	1.067	5.10	5.10	579.128	579.108	579.108
CLOT. Tg. Entrada	500.000	454132.497	4477762.623	541.312	579.353	379.350361	0.000	1.141	2.42	2.42	579.353	579.333	579.333
RECTA Rampa	512.797	454128.514	4477774.785	0.000	579.504	380.102894	0.000	1.132	-0.08	-0.08	579.504	579.484	579.484
RECTA Tg. Entrada	520.000	454126.300	4477781.638	0.000	579.586	380.102894	0.000	1.291	-1.49	-1.49	579.586	579.566	579.566
CLOT. Rampa	520.100	454126.269	4477781.733	-1000000.000	579.587	380.102894	0.000	1.343	-1.50	-1.50	579.587	579.567	579.567
CLOT. Tg. Entrada	540.000	454119.258	4477800.338	-69.294	579.847	370.961639	0.000	1.187	-4.99	-4.99	579.847	579.827	579.827
CIRC. Rampa	547.679	454115.454	4477807.002	-50.000	579.927	362.545473	0.000	1.616	-4.70	-4.70	579.927	579.907	579.907
CIRC. Tg. Entrada	560.000	454107.428	4477816.310	-50.000	580.073	346.858053	0.000	1.067	-3.03	-3.03	580.073	580.053	580.053
CIRC. Rampa	571.204	454098.355	4477822.843	60.000	580.241	332.592447	0.000	1.848	-1.26	-1.26	580.241	580.221	580.221

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\*\*\*\*\* PUNTOS DEL EJE EN PLANTA \*\*\*\*\*

TIPO	P.K.	X	Y	RADIO	COTA	AZIMUT	DIST. EJE	Pend (%)	PERAL_I	PERAL_D	Z PROY.	ZT (eje)	Z TERR.
CIRC. Tg. Entrada	580.000	454091.029	4477827.697	60.000	580.410	341.925101	0.000	1.919	0.09	0.09	580.410	580.390	580.390
CIRC. Tg. Entrada	600.000	454077.524	4477842.323	60.000	580.775	363.145760	0.000	1.520	1.32	1.32	580.775	580.755	580.755
CIRC. Rampa	603.428	454075.732	4477845.245	-36.500	580.846	366.783167	0.000	1.526	1.66	1.66	580.846	580.826	580.826
CIRC. Rampa	604.282	454075.297	4477845.981	-36.500	580.860	365.293190	0.000	2.440	1.74	1.74	580.860	580.840	580.840

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 EJE : 12 : RAMAL 1

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\*\*\*\*\* PUNTOS DEL EJE EN PLANTA \*\*\*\*\*

TIPO	P.K.	X	Y	RADIO	COTA	AZIMUT	DIST. EJE	Pend (%)	PERAL_I	PERAL_D	Z PROY.	ZT (eje)	Z TERR.
CIRC. Rampa	0.000	450245.374	4477989.746	-250.000	610.619	311.254003	0.000	0.106	-4.78	-4.78	610.619	610.618	610.618
CLOT. Rampa	14.421	450231.112	4477991.871	-250.000	610.643	307.581634	0.000	0.318	-5.02	-5.02	610.643	610.642	610.642
CLOT. Tg. Entrada	20.000	450225.566	4477992.476	-307.108	610.661	306.293127	0.000	0.318	-5.69	-5.69	610.661	610.661	610.661
CLOT. Tg. Entrada	40.000	450205.624	4477993.978	-1696.312	610.967	303.844882	0.000	1.736	-6.72	-6.72	610.967	610.934	610.934
CIRC. Rampa	44.421	450201.210	4477994.241	2500.000	611.086	303.761916	0.000	2.682	-6.78	-6.78	611.086	611.021	611.021
CIRC. Rampa	60.000	450185.662	4477995.209	2500.000	611.614	304.158622	0.000	3.787	-7.00	-7.00	611.614	611.568	611.568
CIRC. KV -1085	80.000	450165.710	4477996.595	2500.000	612.408	304.667918	0.000	3.057	-7.00	-7.00	612.408	612.671	612.671
CIRC. KV -1085	100.000	450145.770	4477998.140	2500.000	612.835	305.177214	0.000	1.214	-7.00	-7.00	612.835	613.196	613.196
CIRC. KV -1085	120.000	450125.843	4477999.844	2500.000	612.893	305.686510	0.000	-0.629	-7.00	-7.00	612.893	614.296	614.296
CIRC. KV -1085	140.000	450105.930	4478001.708	2500.000	612.583	306.195806	0.000	-2.472	-7.00	-7.00	612.583	616.052	616.052
CLOT. KV -1085	143.905	450102.043	4478002.090	-1000000.000	612.480	306.295249	0.000	-2.832	-7.00	-7.00	612.480	616.180	616.180
CLOT. KV 1650	160.000	450086.011	4478003.502	-242.313	611.972	304.180975	0.000	-2.884	-7.00	-7.00	611.972	617.024	617.024
CIRC. KV 1650	173.905	450072.116	4478003.901	-130.000	611.630	298.949636	0.000	-2.041	-7.00	-7.00	611.630	615.962	615.962
CIRC. KV 1650	180.000	450066.026	4478003.658	-130.000	611.516	295.964926	0.000	-1.672	-7.00	-7.00	611.516	615.408	615.408
CIRC. KV 1650	200.000	450046.242	4478000.864	-130.000	611.303	286.170776	0.000	-0.459	-7.00	-7.00	611.303	614.871	614.871
CIRC. KV 1650	220.000	450027.120	4477995.071	-130.000	611.333	276.376625	0.000	0.753	-7.00	-7.00	611.333	614.047	614.047
CIRC. Rampa	240.000	450009.112	4477986.416	-130.000	611.587	266.582475	0.000	1.500	-7.00	-7.00	611.587	613.142	613.142
CLOT. Rampa	253.342	449997.929	4477979.149	-130.000	611.787	260.048653	0.000	1.500	-7.00	-7.00	611.787	613.081	613.081
CLOT. KV -5000	260.000	449992.635	4477975.113	-162.602	611.886	257.115174	0.000	1.452	-6.23	-6.23	611.886	613.177	613.177
CLOT. KV -5000	280.000	449977.599	4477961.933	-659.278	612.136	252.234337	0.000	1.052	-3.91	-3.91	612.136	613.854	613.854
CLOT. KV -5000	286.548	449972.824	4477957.453	1000000.000	612.201	251.918209	0.000	0.921	-3.15	-3.15	612.201	614.081	614.081
CLOT. KV -5000	300.000	449962.999	4477948.264	666.456	612.307	252.560717	0.000	0.652	-1.59	-1.59	612.307	614.328	614.328
CLOT. KV -5000	320.000	449948.000	4477935.037	268.006	612.397	255.891345	0.000	0.252	0.73	0.73	612.397	614.474	614.474
CLOT. KV -5000	340.000	449932.062	4477922.968	167.727	612.408	262.062304	0.000	-0.148	3.05	3.05	612.408	614.500	614.500
CIRC. KV -5000	346.317	449926.766	4477919.526	150.000	612.394	264.601701	0.000	-0.274	3.69	3.69	612.394	614.500	614.500
CIRC. Tg. Entrada	360.000	449914.831	4477912.844	150.000	612.338	270.408884	0.000	-0.536	3.69	3.69	612.338	614.302	614.302
CIRC. Tg. Entrada	380.000	449896.409	4477905.095	150.000	612.259	278.897147	0.000	-0.342	3.69	3.69	612.259	614.089	614.089
CIRC. Tg. Entrada	400.000	449877.121	4477899.864	150.000	612.237	287.385411	0.000	-0.016	3.19	3.19	612.237	613.774	613.774
CIRC. Tg. Entrada	420.000	449857.308	4477897.244	150.000	612.317	295.873675	0.000	0.564	2.07	2.07	612.317	613.607	613.607
CLOT. Rampa	420.234	449857.074	4477897.229	150.000	612.319	295.973117	0.000	0.849	2.06	2.06	612.319	613.607	613.607
RECTA Rampa	436.901	449840.416	4477896.792	0.000	612.472	299.509894	0.000	1.010	2.00	2.00	612.472	613.506	613.506
RECTA Tg. Entrada	440.000	449837.317	4477896.768	0.000	612.503	299.509894	0.000	1.010	2.00	2.00	612.503	613.480	613.480
RECTA Rampa	452.813	449824.504	4477896.670	0.000	612.641	299.509894	0.000	1.222	2.00	2.00	612.641	613.265	613.265



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 EJE : 13 : PASO SUPERIOR REPOSICIÓN

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\*\*\*\*\* PUNTOS DEL EJE EN PLANTA \*\*\*\*\*

TIPO	P.K.	X	Y	RADIO	COTA	AZIMUT	DIST. EJE	Pend (%)	PERAL_I	PERAL_D	Z PROJ.	ZT (eje)	Z TERR.
RECTA Rampa	0.000	450377.028	4478378.072	0.000	608.566	247.597805	0.000	0.826	2.00	2.00	608.566	608.546	608.546
CLOT. Rampa	5.473	450373.307	4478374.059	-1000000.000	608.611	247.597805	0.000	0.826	2.09	2.09	608.611	608.592	608.592
CLOT. Rampa	20.000	450363.431	4478363.405	-17208.746	608.734	247.570934	0.000	0.817	2.39	2.39	608.734	608.714	608.714
CLOT. Rampa	40.000	450349.851	4478348.722	-7240.606	608.897	247.446016	0.000	0.817	1.10	1.10	608.897	608.877	608.877
CLOT. Tg. Entrada	60.000	450336.311	4478334.002	-4584.843	609.045	247.219240	0.000	0.633	1.04	1.04	609.045	609.025	609.025
CLOT. Tg. Entrada	80.000	450322.836	4478319.223	-3354.467	609.189	246.890604	0.000	0.719	0.70	0.70	609.189	609.169	609.169
CLOT. Rampa	100.000	450309.450	4478304.364	-2644.733	609.436	246.460109	0.000	1.236	1.80	1.80	609.436	609.416	609.416
CLOT. Tg. Entrada	120.000	450296.176	4478289.404	-2182.882	609.671	245.927755	0.000	1.178	0.00	0.00	609.671	609.651	609.651
CLOT. Tg. Entrada	140.000	450283.040	4478274.323	-1858.356	609.791	245.293541	0.000	0.597	-0.60	-0.60	609.791	609.771	609.771
CLOT. Rampa	160.000	450270.067	4478259.101	-1617.835	610.021	244.557469	0.000	1.104	-1.81	-1.81	610.021	610.002	610.002
CIRC. KV 3000	172.139	450262.283	4478249.786	-1500.000	610.176	244.061029	0.000	1.479	-1.99	-1.99	610.176	610.138	610.138
CIRC. KV 3000	180.000	450257.282	4478243.721	-1500.000	610.303	243.727405	0.000	1.741	-2.11	-2.11	610.303	610.226	610.226
CLOT. KV 3000	189.209	450251.465	4478236.582	-1500.000	610.477	243.336578	0.000	2.048	-2.25	-2.25	610.477	610.366	610.366
CLOT. KV 3000	200.000	450244.703	4478228.172	-1603.846	610.718	242.893406	0.000	2.408	-2.42	-2.42	610.718	610.531	610.531
CLOT. KV 3000	220.000	450232.318	4478212.469	-1839.922	611.266	242.150469	0.000	3.075	-2.72	-2.72	611.266	610.839	610.839
CLOT. KV 3000	240.000	450220.104	4478196.631	-2157.491	611.947	241.509391	0.000	3.741	-3.02	-3.02	611.947	611.214	611.214
CIRC. Rampa	255.875	450210.515	4478183.979	-2500.000	612.572	241.073041	0.000	4.000	-3.24	-3.24	612.572	611.524	611.524
CIRC. Rampa	260.000	450208.038	4478180.681	-2500.000	612.737	240.968007	0.000	4.000	-3.24	-3.24	612.737	611.604	611.604
CIRC. Rampa	280.000	450196.101	4478164.634	-2500.000	613.537	240.458711	0.000	4.000	-3.24	-3.24	613.537	612.013	612.013
CLOT. Rampa	282.776	450194.455	4478162.399	-2500.000	613.648	240.388009	0.000	4.000	-3.24	-3.24	613.648	612.081	612.081
CLOT. Rampa	300.000	450184.296	4478148.490	-2264.640	614.337	239.926624	0.000	4.000	-3.46	-3.46	614.337	612.500	612.500
CLOT. Rampa	320.000	450172.633	4478132.243	-2041.468	615.137	239.333667	0.000	4.000	-3.74	-3.74	615.137	613.017	613.017
CLOT. Rampa	340.000	450161.130	4478115.882	-1858.335	615.937	238.679247	0.000	4.000	-4.03	-4.03	615.937	613.504	613.504
CLOT. Rampa	360.000	450149.804	4478099.398	-1705.354	616.737	237.963365	0.000	4.000	-4.31	-4.31	616.737	614.004	614.004
CLOT. Rampa	380.000	450138.671	4478082.783	-1575.644	617.537	237.186021	0.000	4.000	-4.59	-4.59	617.537	614.537	614.537
CIRC. KV -2300	393.260	450131.406	4478071.690	-1500.000	618.038	236.636742	0.000	3.495	-4.78	-4.78	618.038	614.934	614.934
CIRC. KV -2300	400.000	450127.751	4478066.028	-1500.000	618.264	236.350704	0.000	3.202	-4.78	-4.78	618.264	615.136	615.136
CIRC. KV -2300	420.000	450117.054	4478049.129	-1500.000	618.818	235.501877	0.000	2.332	-4.78	-4.78	618.818	615.679	615.679
CIRC. KV -2300	440.000	450106.583	4478032.089	-1500.000	619.197	234.653051	0.000	1.463	-4.78	-4.78	619.197	616.174	616.174
CIRC. KV -2300	460.000	450096.341	4478014.911	-1500.000	619.403	233.804225	0.000	0.593	-4.78	-4.78	619.403	616.657	616.657
CIRC. KV -2300	480.000	450086.328	4477997.598	-1500.000	619.434	232.955398	0.000	-0.277	-4.78	-4.78	619.434	617.103	617.103
CLOT. KV -2300	490.787	450081.024	4477988.205	-1500.000	619.379	232.497601	0.000	-0.746	-4.78	-4.78	619.379	617.314	617.314
CLOT. KV -2300	500.000	450076.546	4477980.154	-1934.450	619.292	232.150482	0.000	-1.146	-4.16	-4.16	619.292	617.476	617.476
CLOT. KV 3790	520.000	450066.941	4477962.611	-5210.243	618.977	231.699200	0.000	-1.883	-2.80	-2.80	618.977	617.802	617.802
RECTA KV 3790	531.811	450061.308	4477952.230	0.000	618.773	231.627045	0.000	-1.572	-2.00	-2.00	618.773	617.915	617.915
RECTA KV 3790	540.000	450057.405	4477945.031	0.000	618.653	231.627045	0.000	-1.356	-2.00	-2.00	618.653	617.994	617.994
RECTA KV 3790	560.000	450047.872	4477927.449	0.000	618.435	231.627045	0.000	-0.828	-2.00	-2.00	618.435	618.196	618.196
RECTA KV 3790	580.000	450038.340	4477909.866	0.000	618.322	231.627045	0.000	-0.300	-2.00	-2.00	618.322	618.269	618.269
RECTA Rampa	599.537	450029.029	4477892.691	0.000	618.314	231.627045	0.000	0.211	-2.00	-2.00	618.314	616.297	616.297

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 EJE : 14 : RAMAL 2

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 \* \* \* PUNTOS DEL EJE EN PLANTA \* \* \*  
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TIPO	P.K.	X	Y	RADIO	COTA	AZIMUT	DIST. EJE	Pend (%)	PERAL_I	PERAL_D	Z PROJ.	ZT (eje)	Z TERR.
CIRC. Pendiente	0.000	450078.991	4477998.854	-1507.000	619.760	232.848122	0.000	-0.585	-4.79	-4.79	619.760	616.947	616.947
CLOT. Pendiente	0.000	450078.991	4477998.854	1000000.000	619.760	232.848122	0.000	-0.585	-4.79	-4.79	619.760	616.947	616.947
CIRC. Pendiente	3.589	450077.211	4477995.738	200.000	619.739	233.419250	0.000	-0.585	-4.75	-4.75	619.739	617.098	617.098
CIRC. Pendiente	20.000	450068.413	4477981.889	200.000	619.581	238.643191	0.000	-1.211	-4.30	-4.30	619.581	617.273	617.273
CIRC. Pendiente	40.000	450056.203	4477966.060	200.000	619.233	245.009389	0.000	-1.928	-3.53	-3.53	619.233	617.150	617.150
CIRC. KV -2333	60.000	450042.474	4477951.528	200.000	618.827	251.375587	0.000	-2.352	0.98	0.98	618.827	616.392	616.392
CIRC. KV -2333	80.000	450027.362	4477938.439	200.000	618.270	257.741784	0.000	-3.209	5.48	5.48	618.270	615.596	615.596
CIRC. KV -2333	100.000	450011.020	4477926.925	200.000	617.543	264.107982	0.000	-4.067	7.00	7.00	617.543	614.599	614.599
CIRC. Pendiente	120.000	449993.609	4477917.099	200.000	616.665	270.474180	0.000	-4.500	7.00	7.00	616.665	613.789	613.789
CIRC. Pendiente	140.000	449975.305	4477909.061	200.000	615.765	276.840378	0.000	-4.500	7.00	7.00	615.765	613.404	613.404
CLOT. Pendiente	159.978	449956.310	4477902.896	200.000	614.866	283.199599	0.000	-4.500	7.00	7.00	614.866	613.208	613.208
CLOT. Pendiente	160.000	449956.289	4477902.890	200.043	614.865	283.206575	0.000	-4.500	7.00	7.00	614.865	613.208	613.208
CLOT. KV 1650	180.000	449936.765	4477898.584	248.562	613.965	288.950201	0.000	-4.454	6.02	6.02	613.965	613.147	613.147
CLOT. KV 1650	200.000	449916.956	4477895.862	328.155	613.195	293.451407	0.000	-3.242	5.05	5.05	613.195	613.121	613.121
CLOT. KV 1650	220.000	449897.015	4477894.350	482.731	612.668	296.710193	0.000	-2.030	4.07	4.07	612.668	613.034	613.034
CLOT. KV 1650	240.000	449877.027	4477893.666	912.614	612.383	298.726559	0.000	-0.818	3.10	3.10	612.383	612.833	612.833
CLOT. KV 1650	260.000	449857.029	4477893.420	8336.201	612.341	299.500506	0.000	0.394	2.12	2.12	612.341	613.221	613.221
RECTA KV 1650	262.459	449854.571	4477893.401	0.000	612.352	299.509894	0.000	0.543	2.00	2.00	612.352	613.236	613.236
RECTA Rampa	280.000	449837.030	4477893.266	0.000	612.517	299.509894	0.000	1.071	2.00	2.00	612.517	613.053	613.053
RECTA Tg. Entrada	300.000	449817.030	4477893.112	0.000	612.773	299.509894	0.000	1.489	2.00	2.00	612.773	613.204	613.204
RECTA Tg. Entrada	320.000	449797.031	4477892.958	0.000	613.021	299.509894	0.000	1.175	2.00	2.00	613.021	612.927	612.927
RECTA Rampa	340.000	449777.032	4477892.804	0.000	613.232	299.509894	0.000	1.995	2.00	2.00	613.232	613.218	613.218
CIRC. Rampa	345.107	449771.925	4477892.765	2500.000	613.334	299.509894	0.000	1.995	2.00	2.00	613.334	613.328	613.328
CIRC. Tg. Entrada	360.000	449757.032	4477892.695	2500.000	613.620	299.889140	0.000	1.884	1.73	1.73	613.620	613.609	613.609
CIRC. Tg. Entrada	380.000	449737.032	4477892.740	2500.000	614.004	300.398436	0.000	1.491	1.44	1.44	614.004	613.993	613.993
CIRC. Tg. Entrada	400.000	449717.033	4477892.945	2500.000	614.405	300.907732	0.000	2.123	2.64	2.64	614.405	614.378	614.378
CIRC. Tg. Entrada	420.000	449697.036	4477893.310	2500.000	614.802	301.417028	0.000	2.243	2.60	2.60	614.802	614.806	614.806
CIRC. Tg. Entrada	440.000	449677.043	4477893.835	2500.000	615.281	301.926323	0.000	2.140	2.68	2.68	615.281	615.287	615.287
RECTA Rampa	445.176	449671.870	4477893.997	0.000	615.379	302.058139	0.000	1.885	2.70	2.70	615.379	615.400	615.400
RECTA Rampa	445.176	449671.870	4477893.997	0.000	615.379	302.058139	0.000	1.885	2.70	2.70	615.379	615.400	615.400

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 EJE : 15 : ACCESO\_GLORIETA - AV ARAGÓN

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 PUNTOS DEL EJE EN PLANTA  
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TIPO	P.K.	X	Y	RADIO	COTA	AZIMUT	DIST. EJE	Pend (%)	PERAL_I	PERAL_D	Z PROJ.	ZT (eje)	Z TERR.
CIRC. Pendiente	0.000	451108.166	4477889.452	37.000	600.195	245.998073	0.000	-0.650	3.50	3.50	600.195	600.188	600.188
CIRC. Tg. Entrada	20.000	451091.618	4477878.658	37.000	600.300	280.409953	0.000	2.376	0.81	0.81	600.300	600.114	600.114
CLOT. Rampa	26.856	451084.930	4477877.197	37.000	600.377	292.205868	0.000	1.450	0.82	0.82	600.377	600.081	600.081
CLOT. Tg. Entrada	40.000	451071.807	4477877.225	357.086	600.578	304.685544	0.000	1.519	0.92	0.92	600.578	600.558	600.558
CIRC. Rampa	41.302	451070.509	4477877.323	2493.000	600.599	304.818205	0.000	1.586	0.92	0.92	600.599	600.537	600.537
CIRC. Rampa	45.917	451065.908	4477877.676	2493.000	600.675	304.936056	0.000	1.857	0.97	0.97	600.675	600.561	600.561

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 EJE : 16 : CARRIL DECELERACIÓN TRANSFER

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 PUNTOS DEL EJE EN PLANTA  
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TIPO	P.K.	X	Y	RADIO	COTA	AZIMUT	DIST. EJE	Pend (%)	PERAL_I	PERAL_D	Z PROJ.	ZT (eje)	Z TERR.
CIRC. Rampa	0.000	450275.634	4478125.299	200.000	608.474	7.906710	0.000	3.577	6.71	6.71	608.474	608.464	608.464
CIRC. Tg. Entrada	20.000	450279.099	4478144.988	200.000	609.131	14.272907	0.000	3.113	6.68	6.68	609.131	609.121	609.121
CIRC. Rampa	24.774	450280.216	4478149.630	450.175	609.282	15.792586	0.000	3.504	6.71	6.71	609.282	609.272	609.272
CIRC. Tg. Entrada	40.000	450284.203	4478164.323	450.175	609.815	17.945758	0.000	3.504	5.61	5.61	609.815	609.805	609.805
CIRC. Rampa	52.100	450287.725	4478175.899	420.000	610.143	19.656845	0.000	2.708	5.24	5.24	610.143	610.133	610.133
CIRC. Tg. Entrada	60.000	450290.196	4478183.402	420.000	610.357	20.854348	0.000	2.708	5.00	5.00	610.357	610.347	610.347
CIRC. Tg. Entrada	80.000	450297.080	4478202.179	420.000	610.602	23.885871	0.000	1.225	2.97	2.97	610.602	610.592	610.592
CIRC. Tg. Entrada	100.000	450304.849	4478220.606	420.000	610.436	26.917393	0.000	-0.829	3.13	3.13	610.436	610.426	610.426
CIRC. Tg. Entrada	120.000	450313.487	4478238.642	420.000	610.089	29.948916	0.000	-1.942	4.01	4.01	610.089	610.080	610.080
CIRC. Tg. Entrada	140.000	450322.973	4478256.247	420.000	609.765	32.980439	0.000	-0.584	4.30	4.30	609.765	609.755	609.755
CIRC. Tg. Entrada	160.000	450333.287	4478273.380	420.000	609.428	36.011962	0.000	-1.735	4.30	4.30	609.428	609.418	609.418
CIRC. Tg. Entrada	180.000	450344.405	4478290.003	420.000	609.110	39.043484	0.000	-1.590	4.30	4.30	609.110	609.100	609.100
CIRC. Pendiente	183.420	450346.384	4478292.792	420.000	609.066	39.561833	0.000	-1.294	4.30	4.30	609.066	609.056	609.056

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 EJE : 17 : TRANSFER

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 PUNTOS DEL EJE EN PLANTA  
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TIPO	P.K.	X	Y	RADIO	COTA	AZIMUT	DIST. EJE	Pend (%)	PERAL_I	PERAL_D	Z PROJ.	ZT (eje)	Z TERR.
CIRC. Pendiente	0.000	450299.810	4478199.553	416.500	610.475	23.665462	0.000	-0.551	2.97	2.97	610.475	610.256	610.256
CIRC. Pendiente	0.000	450299.810	4478199.553	200.000	610.475	23.665462	0.000	-0.551	2.97	2.97	610.475	610.256	610.256
CIRC. Tg. Entrada	20.000	450307.994	4478217.793	200.000	610.321	30.031660	0.000	-0.988	2.82	2.82	610.321	610.403	610.403
CIRC. KV 1775	40.000	450317.957	4478235.125	200.000	609.925	36.397857	0.000	-1.559	3.08	3.08	609.925	610.000	610.000
CIRC. KV -1096	60.000	450329.601	4478251.376	200.000	609.652	42.764055	0.000	-1.908	2.91	2.91	609.652	609.579	609.579
CIRC. KV -1096	68.712	450335.170	4478258.075	-200.000	609.451	45.537157	0.000	-2.702	2.99	2.99	609.451	609.440	609.440
CIRC. Tg. Entrada	80.000	450342.329	4478266.800	-200.000	609.148	41.944061	0.000	-2.112	3.26	3.26	609.148	609.138	609.138
RECTA Pendiente	91.284	450348.982	4478275.912	0.000	609.029	38.352347	0.000	-0.494	4.48	4.48	609.029	609.019	609.019
RECTA Pendiente	98.291	450352.952	4478281.686	0.000	608.953	38.352347	0.000	-1.205	4.41	4.41	608.953	608.943	608.943

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 EJE : 20 : RAMAL 3

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 \* \* \* PUNTOS DEL EJE EN PLANTA \* \* \*  
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TIPO	P.K.	X	Y	RADIO	COTA	AZIMUT	DIST. EJE	Pend (%)	PERAL_I	PERAL_D	Z PROJ.	ZT (eje)	Z TERR.
RECTA Pendiente	0.000	449602.587	4477866.338	0.000	617.165	101.978873	0.000	-2.477	1.68	1.68	617.165	617.119	617.119
CIRC. Pendiente	0.000	449602.587	4477866.338	1500.000	617.165	101.978873	0.000	-2.477	1.68	1.68	617.165	617.119	617.119
CIRC. Tg. Entrada	20.000	449622.572	4477865.583	1500.000	616.636	102.827700	0.000	-2.813	1.47	1.47	616.636	616.611	616.611
CIRC. Pendiente	40.000	449642.546	4477864.562	1500.000	616.098	103.676526	0.000	-3.118	1.31	1.31	616.098	616.111	616.111
CIRC. KV 2937	60.000	449662.504	4477863.275	1500.000	615.491	104.525352	0.000	-2.785	1.70	1.66	615.491	615.623	615.623
CIRC. KV 2937	80.000	449682.444	4477861.721	1500.000	615.002	105.374179	0.000	-2.104	2.36	2.22	615.002	615.217	615.217
CIRC. KV 2937	100.000	449702.361	4477859.902	1500.000	614.649	106.223005	0.000	-1.423	2.87	2.81	614.649	614.883	614.883
CLOT. KV 2937	113.020	449715.313	4477858.575	1500.000	614.493	106.775590	0.000	-0.980	2.97	2.94	614.493	614.638	614.638
CLOT. Pendiente	120.000	449722.251	4477857.812	732.779	614.432	107.226914	0.000	-0.800	3.02	3.01	614.432	614.506	614.506
CLOT. KV -2252	140.000	449742.070	4477855.143	297.206	614.239	110.237704	0.000	-1.346	4.52	4.53	614.239	614.196	614.196
CIRC. KV -2252	156.353	449758.117	4477852.011	200.000	613.959	114.591866	0.000	-2.073	4.76	4.75	613.959	613.939	613.939
CIRC. Tg. Entrada	160.000	449761.661	4477851.150	200.000	613.882	115.752642	0.000	-2.132	4.81	4.80	613.882	613.862	613.862
CIRC. Tg. Entrada	180.000	449780.775	4477845.291	200.000	613.513	122.118840	0.000	-2.746	4.09	4.11	613.513	613.493	613.493
CIRC. Pendiente	200.000	449799.208	4477837.553	200.000	613.258	128.485038	0.000	-1.213	3.88	3.88	613.258	613.227	613.227
CLOT. Pendiente	210.899	449808.901	4477832.572	200.000	613.113	131.954249	0.000	-2.661	2.97	2.97	613.113	613.079	613.079
CLOT. Tg. Entrada	220.000	449816.783	4477828.023	240.122	612.871	134.609208	0.000	-2.661	2.67	2.68	612.871	612.851	612.851
CLOT. Pendiente	240.000	449833.518	4477817.079	429.434	612.481	138.742907	0.000	-1.701	2.19	2.19	612.481	612.461	612.461
CLOT. Tg. Entrada	260.000	449849.728	4477805.365	2029.496	612.156	140.539051	0.000	-1.552	0.14	0.15	612.156	612.136	612.136
CLOT. Pendiente	265.368	449854.041	4477802.170	-1000000.000	612.084	140.623240	0.000	-1.343	-0.50	-0.49	612.084	612.063	612.063
CLOT. Tg. Entrada	280.000	449865.820	4477793.488	-824.934	611.909	140.058637	0.000	-1.123	-2.25	-2.25	611.909	611.889	611.889
CLOT. Tg. Entrada	300.000	449882.194	4477782.006	-348.538	611.746	137.460372	0.000	-1.063	-2.60	-2.60	611.746	611.726	611.726
CLOT. Tg. Entrada	320.000	449899.196	4477771.483	-220.944	611.702	132.752464	0.000	0.060	-3.13	-3.13	611.702	611.682	611.682
CIRC. Rampa	325.776	449904.262	4477768.709	-199.818	611.706	131.000245	0.000	0.076	-3.53	-3.52	611.706	611.685	611.685
CIRC. Rampa	340.000	449917.059	4477762.506	-199.818	611.798	126.468456	0.000	0.892	-4.50	-4.50	611.798	611.787	611.787
CIRC. Tg. Entrada	360.000	449935.728	4477755.356	-199.818	612.025	120.096473	0.000	0.667	-6.00	-6.00	612.025	611.947	611.947
CIRC. Tg. Entrada	380.000	449955.019	4477750.108	-199.818	612.223	113.724490	0.000	1.335	-6.05	-6.05	612.223	612.203	612.203
CIRC. Tg. Entrada	400.000	449974.737	4477746.814	-199.818	612.455	107.352508	0.000	1.065	-6.12	-6.12	612.455	612.435	612.435
CIRC. Tg. Entrada	420.000	449994.686	4477745.506	-199.818	612.889	100.980525	0.000	2.107	-6.00	-6.00	612.889	612.822	612.822
CIRC. Tg. Entrada	440.000	450014.666	4477746.199	-199.818	613.313	94.608542	0.000	2.010	-6.00	-6.00	613.313	613.293	613.293
CIRC. Rampa	458.702	450033.200	4477748.650	-199.818	613.828	88.649995	0.000	2.372	-6.00	-6.00	613.828	613.808	613.808

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 EJE : 21 : RAMAL 4

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 PUNTOS DEL EJE EN PLANTA \*\*\*\*\*

TIPO	P.K.	X	Y	RADIO	COTA	AZIMUT	DIST. EJE	Pend (%)	PERAL_I	PERAL_D	Z PROJ.	ZT (eje)	Z TERR.
CIRC. Rampa	0.000	449983.126	4477742.510	-203.318	612.861	104.587246	0.000	2.174	-6.07	-6.07	612.861	612.820	612.820
CLOT. Rampa	0.000	449983.126	4477742.510	1000000.000	612.861	104.587246	0.000	2.174	-6.07	-6.07	612.861	612.820	612.820
CIRC. Rampa	10.667	449993.754	4477741.616	150.000	613.107	106.850783	0.000	2.770	-5.82	-5.82	613.107	613.084	613.084
CIRC. Rampa	20.000	450002.997	4477740.326	150.000	613.383	110.811973	0.000	3.286	-5.45	-5.45	613.383	613.329	613.329
CLOT. KV -472	34.767	450017.405	4477737.118	150.000	613.883	117.079468	0.000	3.042	-4.91	-4.91	613.883	613.607	613.607
CLOT. KV -472	40.000	450022.428	4477735.652	218.644	614.013	118.951627	0.000	1.933	-5.23	-5.23	614.013	614.000	614.000
CLOT. KV -472	51.434	450033.299	4477732.109	-1000000.000	614.096	120.616244	0.000	-0.492	-5.95	-5.95	614.096	614.424	614.424
CLOT. KV -472	60.000	450041.433	4477729.423	-291.855	613.976	119.682010	0.000	-2.309	-6.49	-6.49	613.976	615.006	615.006
CIRC. KV -472	68.101	450049.193	4477727.099	-150.000	613.719	117.079468	0.000	-4.027	-7.00	-7.00	613.719	615.009	615.009
CIRC. Pendiente	80.000	450060.779	4477724.403	-150.000	613.146	112.029278	0.000	-5.000	-7.00	-7.00	613.146	614.500	614.500
CIRC. Pendiente	100.000	450080.615	4477721.965	-150.000	612.146	103.541014	0.000	-5.000	-7.00	-7.00	612.146	613.209	613.209
CIRC. KV 870	120.000	450100.599	4477722.186	-150.000	611.163	95.052750	0.000	-4.385	-7.00	-7.00	611.163	613.209	613.209
CIRC. KV 870	140.000	450120.376	4477725.062	-150.000	610.516	86.564487	0.000	-2.085	-7.00	-7.00	610.516	617.504	617.504
CIRC. Pendiente	160.000	450139.596	4477730.541	-150.000	610.312	78.076223	0.000	-0.400	-7.00	-7.00	610.312	614.937	614.937
CIRC. Pendiente	180.000	450157.916	4477738.526	-150.000	610.232	69.587960	0.000	-0.400	-7.00	-7.00	610.232	612.427	612.427
CLOT. Pendiente	185.100	450162.405	4477740.947	-150.000	610.212	67.423357	0.000	-0.400	-7.00	-7.00	610.212	612.335	612.335
CLOT. Pendiente	200.000	450175.048	4477748.822	-202.987	610.152	61.925050	0.000	-0.400	-5.17	-5.17	610.152	611.863	611.863
CLOT. Pendiente	220.000	450191.092	4477760.756	-386.028	610.072	57.139637	0.000	-0.400	-2.72	-2.72	610.072	612.047	612.047
CLOT. Pendiente	240.000	450206.498	4477773.508	-3928.463	609.992	55.328429	0.000	-0.400	-0.27	-0.27	609.992	611.800	611.800
CLOT. Pendiente	242.179	450208.163	4477774.915	1000000.000	609.984	55.310769	0.000	-0.400	0.00	0.00	609.984	611.799	611.799
CLOT. Pendiente	260.000	450221.841	4477786.338	480.450	609.912	56.491425	0.000	-0.400	1.25	1.25	609.912	611.853	611.853
CLOT. Pendiente	280.000	450237.701	4477798.516	226.382	609.832	60.628625	0.000	-0.400	2.65	2.65	609.832	611.689	611.689
CIRC. KV -15000	299.259	450253.921	4477808.882	150.000	609.744	67.423357	0.000	-0.522	4.00	4.00	609.744	611.000	611.000
CIRC. KV -15000	300.000	450254.568	4477809.244	150.000	609.740	67.737986	0.000	-0.527	4.00	4.00	609.740	611.000	611.000
CIRC. KV -15000	320.000	450272.649	4477817.758	150.000	609.622	76.226250	0.000	-0.660	4.00	4.00	609.622	610.398	610.398
CIRC. KV -15000	340.000	450291.701	4477823.793	150.000	609.476	84.714513	0.000	-0.793	4.00	4.00	609.476	609.500	609.500
CIRC. KV 18992	360.000	450311.386	4477827.242	150.000	609.319	93.202777	0.000	-0.747	4.00	4.00	609.319	609.099	609.099
CIRC. KV 18992	380.000	450331.355	4477828.043	150.000	609.180	101.691040	0.000	-0.642	4.00	4.00	609.180	609.004	609.004
RECTA KV 18992	380.926	450332.280	4477828.016	0.000	609.174	102.083877	0.000	-0.637	3.91	3.91	609.174	608.997	608.997
RECTA Pendiente	400.000	450351.345	4477827.392	0.000	609.060	102.083877	0.000	-0.589	2.00	2.00	609.060	608.849	608.849
RECTA Pendiente	406.126	450357.467	4477827.191	0.000	609.023	102.083877	0.000	-0.589	2.00	2.00	609.023	608.830	608.830

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 PROYECTO : 20180606\_NUDO EYM  
 EJE : 24 : REPOSICIÓN M14

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 \* \* \* PUNTOS DEL EJE EN PLANTA \* \* \*  
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TIPO	P.K.	X	Y	RADIO	COTA	AZIMUT	DIST. EJE	Pend (%)	PERAL_I	PERAL_D	Z PROJ.	ZT (eje)	Z TERR.
RECTA Horizontal	0.000	449998.700	4477596.744	0.000	622.573	216.120233	0.000	0.000	-1.02	-1.02	622.573	622.558	622.558
RECTA Rampa	20.000	449993.690	4477577.382	0.000	622.786	216.120233	0.000	1.062	0.29	0.29	622.786	622.771	622.771
RECTA Rampa	40.000	449988.680	4477558.020	0.000	623.129	216.120233	0.000	1.718	1.57	1.57	623.129	623.114	623.114
CIRC. Rampa	43.114	449987.899	4477555.005	2850.000	623.190	216.120233	0.000	2.168	1.95	1.95	623.190	623.175	623.175
CIRC. Rampa	60.000	449983.621	4477538.670	2850.000	623.585	216.497418	0.000	2.784	2.36	2.36	623.585	623.570	623.570
CIRC. Rampa	80.000	449978.428	4477519.356	2850.000	624.141	216.944169	0.000	2.897	2.08	2.08	624.141	624.126	624.126
CIRC. Tg. Entrada	100.000	449973.100	4477500.079	2850.000	624.721	217.390920	0.000	2.897	4.79	4.79	624.721	624.706	624.706
CIRC. Rampa	120.000	449967.636	4477480.840	2850.000	625.481	217.837670	0.000	3.853	4.76	4.76	625.481	625.466	625.466
CIRC. Rampa	140.000	449962.038	4477461.639	2850.000	626.300	218.284421	0.000	4.358	4.51	4.51	626.300	626.285	626.285
CIRC. Tg. Entrada	160.000	449956.305	4477442.478	2850.000	627.177	218.731172	0.000	4.081	4.89	4.89	627.177	627.162	627.162
CIRC. Rampa	180.000	449950.438	4477423.358	2850.000	628.026	219.177922	0.000	4.355	4.27	4.27	628.026	628.011	628.011
CIRC. Rampa	191.920	449946.878	4477411.982	2850.000	628.553	219.444195	0.000	4.718	3.78	3.78	628.553	628.538	628.538

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 EJE : 25 : COLECTORA M14

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 \* \* \* PUNTOS DEL EJE EN PLANTA \* \* \*  
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TIPO	P.K.	X	Y	RADIO	COTA	AZIMUT	DIST. EJE	Pend (%)	PERAL_I	PERAL_D	Z PROJ.	ZT (eje)	Z TERR.
CIRC. Horizontal	0.000	449968.984	4477742.797	-300.000	619.229	210.679685	0.000	0.000	-2.40	-2.40	619.229	619.209	619.209
CLOT. Rampa	18.424	449966.467	4477724.549	-300.000	619.352	206.770004	0.000	0.668	-2.81	-2.81	619.352	619.332	619.332
CLOT. Tg. Entrada	20.000	449966.304	4477722.981	-306.902	619.370	206.439314	0.000	1.154	-2.88	-2.88	619.370	619.350	619.350
CLOT. Rampa	40.000	449964.871	4477703.035	-433.440	619.577	202.896209	0.000	0.939	-1.83	-1.83	619.577	619.557	619.557
CLOT. Rampa	60.000	449964.359	4477683.043	-737.531	619.748	200.564272	0.000	0.710	-2.31	-2.31	619.748	619.728	619.728
CLOT. Rampa	80.000	449964.390	4477663.043	-2471.415	619.910	199.443502	0.000	1.127	-1.56	-1.56	619.910	619.890	619.890
RECTA Rampa	88.507	449964.474	4477654.536	0.000	620.018	199.333931	0.000	1.267	-1.59	-1.59	620.018	619.998	619.998
RECTA Tg. Entrada	100.000	449964.594	4477643.044	0.000	620.168	199.333931	0.000	1.313	-1.41	-1.41	620.168	620.148	620.148
RECTA Tg. Entrada	120.000	449964.803	4477623.045	0.000	620.440	199.333931	0.000	1.413	-1.22	-1.22	620.440	620.420	620.420
RECTA Tg. Entrada	140.000	449965.012	4477603.046	0.000	620.772	199.333931	0.000	1.653	-0.11	-0.11	620.772	620.752	620.752
RECTA Tg. Entrada	160.000	449965.222	4477583.048	0.000	621.223	199.333931	0.000	2.739	0.72	0.72	621.223	621.203	621.203
RECTA Tg. Entrada	180.000	449965.431	4477563.049	0.000	621.846	199.333931	0.000	3.315	1.46	1.46	621.846	621.826	621.826
CIRC. Rampa	182.016	449965.452	4477561.032	400.000	621.914	199.333931	0.000	3.411	1.56	1.56	621.914	621.894	621.894
CIRC. Rampa	200.000	449965.236	4477543.052	400.000	622.565	202.196121	0.000	3.762	2.04	2.04	622.565	622.545	622.545
CIRC. Tg. Entrada	220.000	449964.047	4477523.089	400.000	623.346	205.379220	0.000	3.956	3.53	3.53	623.346	623.326	623.326
CIRC. Tg. Entrada	240.000	449961.862	4477503.211	400.000	624.167	208.562319	0.000	4.334	4.24	4.24	624.167	624.147	624.147
CIRC. Tg. Entrada	260.000	449958.685	4477483.467	400.000	625.040	211.745417	0.000	4.382	4.36	4.36	625.040	625.020	625.020
CIRC. Tg. Entrada	280.000	449954.527	4477463.906	400.000	625.950	214.928516	0.000	4.738	4.28	4.28	625.950	625.930	625.930
CIRC. Tg. Entrada	300.000	449949.395	4477444.578	400.000	626.829	218.111615	0.000	4.101	4.85	4.85	626.829	626.808	626.808
CIRC. Rampa	304.529	449948.099	4477440.238	2842.800	627.016	218.832488	0.000	4.109	4.89	4.89	627.016	626.996	626.996
CIRC. Rampa	320.000	449943.549	4477425.451	2842.800	627.726	219.178939	0.000	4.726	4.26	4.26	627.726	627.706	627.706
CIRC. Rampa	331.845	449940.011	4477414.147	2842.800	628.286	219.444195	0.000	4.575	3.78	3.78	628.286	628.266	628.266

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 EJE : 26 : VIA SERVICIO PLENILUNIO

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 \* \* \* PUNTOS DEL EJE EN PLANTA \* \* \*  
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TIPO	P.K.	X	Y	RADIO	COTA	AZIMUT	DIST. EJE	Pend (%)	PERAL_I	PERAL_D	Z PROJ.	ZT (eje)	Z TERR.
RECTA Pendiente	0.000	450357.000	4477830.708	0.000	609.088	102.090294	0.000	-0.655	2.00	2.00	609.088	609.068	609.068
RECTA Tg. Entrada	20.000	450376.990	4477830.052	0.000	608.957	102.090294	0.000	-0.655	2.25	2.25	608.957	608.937	608.937
RECTA Tg. Entrada	40.000	450396.979	4477829.395	0.000	608.923	102.090294	0.000	-0.170	1.49	1.49	608.923	608.903	608.903
CIRC. Pendiente	50.654	450407.627	4477829.046	-9000.000	608.879	102.090294	0.000	-0.414	1.94	1.94	608.879	608.859	608.859
CIRC. Tg. Entrada	60.000	450416.968	4477828.744	-9000.000	608.840	102.024184	0.000	-0.414	2.32	2.32	608.840	608.820	608.820
CIRC. Tg. Entrada	80.000	450436.959	4477828.130	-9000.000	608.703	101.882712	0.000	-0.686	2.32	2.32	608.703	608.683	608.683
CIRC. Tg. Entrada	100.000	450456.951	4477827.561	-9000.000	608.603	101.741241	0.000	-0.500	1.96	1.96	608.603	608.583	608.583
CIRC. Pendiente	120.000	450476.944	4477827.036	-9000.000	608.447	101.599770	0.000	-0.780	1.81	1.81	608.447	608.427	608.427
CIRC. Tg. Entrada	140.000	450496.938	4477826.556	-9000.000	608.291	101.458299	0.000	-0.779	3.32	3.32	608.291	608.271	608.271
CIRC. Tg. Entrada	160.000	450516.933	4477826.120	-9000.000	608.179	101.316828	0.000	-0.561	2.66	2.66	608.179	608.159	608.159
CIRC. Tg. Entrada	180.000	450536.929	4477825.728	-9000.000	608.133	101.175357	0.000	-0.230	2.08	2.08	608.133	608.113	608.113
CIRC. Tg. Entrada	200.000	450556.926	4477825.381	-9000.000	608.001	101.033886	0.000	-0.660	2.11	2.11	608.001	607.981	607.981
CLOT. Pendiente	216.184	450573.108	4477825.133	-9000.000	607.846	100.919411	0.000	-0.961	2.81	2.81	607.846	607.826	607.826
CLOT. Pendiente	220.000	450576.924	4477825.079	-4491.951	607.809	100.878869	0.000	-0.973	2.97	2.97	607.809	607.789	607.789
CLOT. Pendiente	240.000	450596.923	4477824.886	-1239.175	607.622	100.223399	0.000	-0.884	3.00	3.00	607.622	607.594	607.594
CIRC. Pendiente	246.606	450603.529	4477824.882	-1000.000	607.563	99.843445	0.000	-0.884	2.95	2.95	607.563	607.535	607.535
CIRC. Pendiente	260.000	450616.922	4477825.005	-1000.000	607.445	98.990744	0.000	-0.884	2.84	2.84	607.445	607.415	607.415
CIRC. Pendiente	280.000	450636.915	4477825.522	-1000.000	607.167	97.717505	0.000	-1.323	2.24	2.24	607.167	607.134	607.134
CLOT. Pendiente	289.160	450646.068	4477825.892	-1000.000	607.042	97.134349	0.000	-1.500	2.10	2.10	607.042	607.022	607.022
CLOT. Tg. Entrada	300.000	450656.894	4477826.433	-1371.733	606.892	96.537770	0.000	-1.157	1.92	1.92	606.892	606.872	606.872
CLOT. Tg. Entrada	320.000	450676.858	4477827.633	-4366.723	606.620	95.927882	0.000	-1.910	1.62	1.62	606.620	606.600	606.600
CLOT. Pendiente	329.160	450685.999	4477828.225	1000000.000	606.484	95.861110	0.000	-0.543	1.79	1.79	606.484	606.464	606.464
CLOT. Tg. Entrada	340.000	450696.817	4477828.924	3690.100	606.402	95.954614	0.000	-1.082	1.98	1.98	606.402	606.382	606.382
CIRC. Pendiente	355.827	450712.615	4477829.878	1500.000	606.204	96.426994	0.000	-1.277	1.99	1.99	606.204	606.184	606.184
CIRC. Tg. Entrada	360.000	450716.781	4477830.107	1500.000	606.151	96.604108	0.000	-1.359	1.99	1.99	606.151	606.131	606.131
CIRC. Tg. Entrada	380.000	450736.759	4477831.040	1500.000	605.886	97.452934	0.000	-1.500	1.76	1.76	605.886	605.866	605.866
CIRC. Pendiente	400.000	450756.748	4477831.707	1500.000	605.592	98.301761	0.000	-1.261	1.55	1.55	605.592	605.572	605.572
CIRC. Pendiente	420.000	450776.744	4477832.107	1500.000	605.301	99.150587	0.000	-1.617	1.50	1.50	605.301	605.281	605.281
CLOT. Pendiente	431.817	450788.560	4477832.218	1500.000	605.109	99.652103	0.000	-1.598	1.47	1.47	605.109	605.089	605.089
CLOT. Tg. Entrada	440.000	450796.743	4477832.243	2164.108	604.978	99.946123	0.000	-1.598	1.45	1.45	604.978	604.958	604.958
CIRC. Pendiente	451.817	450808.560	4477832.227	6000.000	604.783	100.182620	0.000	-1.683	1.19	1.19	604.783	604.763	604.763
CIRC. Pendiente	460.000	450816.743	4477832.198	6000.000	604.645	100.269447	0.000	-1.842	1.00	1.00	604.645	604.620	604.620
CIRC. Tg. Entrada	480.000	450836.743	4477832.080	6000.000	604.333	100.481654	0.000	-1.355	1.14	1.14	604.333	604.313	604.313
CIRC. Tg. Entrada	500.000	450856.742	4477831.895	6000.000	604.063	100.693860	0.000	-2.104	1.76	1.76	604.063	604.042	604.042
CIRC. Tg. Entrada	520.000	450876.741	4477831.644	6000.000	603.679	100.906067	0.000	-1.710	1.45	1.45	603.679	603.659	603.659
CIRC. Tg. Entrada	540.000	450896.738	4477831.326	6000.000	603.438	101.118274	0.000	-1.272	1.00	1.00	603.438	603.418	603.418
CIRC. Tg. Entrada	560.000	450916.734	4477830.942	6000.000	603.131	101.330480	0.000	-1.345	1.10	1.10	603.131	603.111	603.111
CIRC. Tg. Entrada	580.000	450936.729	4477830.490	6000.000	602.908	101.542687	0.000	-1.114	0.98	0.98	602.908	602.888	602.888
CIRC. Tg. Entrada	600.000	450956.723	4477829.972	6000.000	602.692	101.754893	0.000	-1.083	1.13	1.13	602.692	602.672	602.672
CIRC. Pendiente	620.000	450976.714	4477829.388	6000.000	602.394	101.967100	0.000	-1.502	0.95	0.95	602.394	602.374	602.374
CIRC. Tg. Entrada	640.000	450996.703	4477828.737	6000.000	602.196	102.179307	0.000	-0.376	1.00	1.00	602.196	602.176	602.176
CIRC. Tg. Entrada	660.000	451016.690	4477828.019	6000.000	601.931	102.391513	0.000	-1.158	1.50	1.50	601.932	601.911	601.911
RECTA Pendiente	664.707	451021.394	4477827.840	0.000	601.867	102.441454	0.000	-1.375	1.47	1.47	601.867	601.847	601.847
RECTA Tg. Entrada	680.000	451036.676	4477827.254	0.000	601.631	102.441454	0.000	-1.613	1.37	1.37	601.631	601.611	601.611
RECTA Tg. Entrada	700.000	451056.661	4477826.487	0.000	601.261	102.441454	0.000	-1.877	1.53	1.53	601.261	601.241	601.241
RECTA Tg. Entrada	720.000	451076.646	4477825.720	0.000	601.089	102.441454	0.000	-0.860	1.75	1.75	601.089	601.069	601.069
RECTA Pendiente	738.915	451095.548	4477824.995	0.000	600.857	102.441454	0.000	-2.004	2.49	2.49	600.857	600.838	600.838

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 EJE : 30 : GLORIETA ALAMEDA OASUNA

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 PUNTOS DEL EJE EN PLANTA \* \* \*  
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TIPO	P.K.	X	Y	RADIO	COTA	AZIMUT	DIST. EJE	Pend (%)	PERAL_I	PERAL_D	Z PROJ.	ZT (eje)	Z TERR.
CIRC. KV -2045	0.000	449849.247	4477922.635	-18.000	613.270	0.000000	0.000	-0.237	-0.97	-0.97	613.270	612.432	612.432
CIRC. Pendiente	20.000	449839.233	4477938.766	-18.000	613.129	329.264470	0.000	-1.005	-0.19	-0.19	613.129	613.225	613.225
CIRC. KV 2045	40.000	449820.333	4477936.949	-18.000	612.947	258.528939	0.000	-0.572	0.80	0.80	612.947	612.880	612.880
CIRC. KV 2045	60.000	449813.577	4477919.205	-18.000	612.931	187.793409	0.000	0.406	0.90	0.90	612.931	612.935	612.935
CIRC. Rampa	80.000	449826.482	4477905.277	-18.000	613.095	117.057879	0.000	1.005	-0.00	-0.00	613.095	613.000	613.000
CIRC. KV -2045	100.000	449844.689	4477910.663	-18.000	613.259	46.322349	0.000	0.404	-0.90	-0.90	613.259	613.091	613.091
CIRC. KV -2045	113.097	449849.247	4477922.635	-18.000	613.270	400.000000	0.000	-0.237	-0.97	-0.97	613.270	612.432	612.432

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 EJE : 31 : DEFLECTORA 1

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 PUNTOS DEL EJE EN PLANTA \* \* \*  
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TIPO	P.K.	X	Y	RADIO	COTA	AZIMUT	DIST. EJE	Pend (%)	PERAL_I	PERAL_D	Z PROJ.	ZT (eje)	Z TERR.
CIRC. Rampa	0.000	449844.528	4477910.485	-18.000	613.259	47.169392	0.000	0.403	-1.06	-1.06	613.259	613.101	613.101
CIRC. Rampa	0.000	449844.528	4477910.485	30.000	613.259	47.169391	0.000	0.403	-1.06	-1.06	613.259	613.101	613.101
RECTA KV -341	13.071	449855.142	4477917.936	0.000	613.269	74.907205	0.000	-1.175	-1.64	-1.64	613.269	612.600	612.600
RECTA KV -341	20.000	449861.540	4477920.596	0.000	613.117	74.907205	0.000	-3.209	-1.52	-1.52	613.117	612.544	612.544
RECTA KV 564	40.000	449880.006	4477928.277	0.000	612.370	74.907205	0.000	-2.781	-1.87	-1.87	612.370	612.421	612.421
RECTA Pendiente	53.597	449892.561	4477933.499	0.000	612.152	74.907205	0.000	-0.721	-2.21	-2.21	612.152	612.371	612.371

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 EJE : 32 : DEFLECTORA 2

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 PUNTOS DEL EJE EN PLANTA \* \* \*  
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TIPO	P.K.	X	Y	RADIO	COTA	AZIMUT	DIST. EJE	Pend (%)	PERAL_I	PERAL_D	Z PROJ.	ZT (eje)	Z TERR.
RECTA Rampa	0.000	449889.968	4477940.069	0.000	611.994	275.303340	0.000	0.741	2.20	2.20	611.994	611.994	611.994
CIRC. KV 593	16.082	449875.082	4477933.986	300.000	612.303	275.303340	0.000	3.267	1.87	1.87	612.302	612.140	612.140
CIRC. KV 593	20.000	449871.445	4477932.527	300.000	612.443	276.134860	0.000	3.928	1.80	1.80	612.443	612.174	612.174
CIRC. KV -300	33.901	449858.396	4477927.739	15.000	613.013	279.084716	0.000	3.797	1.81	1.81	613.013	612.321	612.321
CIRC. KV -300	40.000	449852.386	4477926.982	15.000	613.183	304.970224	0.000	1.766	2.12	2.12	613.183	612.356	612.356
CIRC. Pendiente	51.692	449842.213	4477932.122	-14.500	613.185	354.593647	0.000	-0.878	-0.40	-0.40	613.185	613.000	613.000
CIRC. Pendiente	51.692	449842.213	4477932.122	-14.500	613.185	354.593647	0.000	-0.878	-0.40	-0.40	613.185	613.000	613.000



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 EJE : 33 : RAMAL DERECHA ALAMEDA OSUNA

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 \* \* \* PUNTOS DEL EJE EN PLANTA \* \* \*  
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TIPO	P.K.	X	Y	RADIO	COTA	AZIMUT	DIST. EJE	Pend (%)	PERAL_I	PERAL_D	Z PROJ.	ZT (eje)	Z TERR.
CIRC. Pendiente	0.000	449819.200	4477936.009	-18.000	612.943	253.318737	0.000	-0.567	1.34	1.34	612.943	612.905	612.905
CIRC. Pendiente	1.795	449817.928	4477934.743	25.000	612.933	246.970054	0.000	-0.567	1.34	1.34	612.933	612.932	612.932
CLOT. KV 984	16.783	449805.213	4477927.238	25.000	612.883	285.137694	0.000	0.286	1.29	1.29	612.883	613.406	613.406
CLOT. KV 984	20.000	449802.048	4477926.672	38.904	612.898	291.864893	0.000	0.613	1.65	1.65	612.898	613.437	613.437
CIRC. KV 984	25.671	449796.396	4477926.226	2000.000	612.949	296.595060	0.000	1.189	2.27	2.27	612.949	613.564	613.564
CIRC. KV 984	40.000	449782.085	4477925.512	2000.000	613.224	297.051168	0.000	2.646	2.27	2.27	613.224	613.853	613.853
CIRC. Rampa	60.000	449762.102	4477924.685	2000.000	613.888	297.687788	0.000	3.500	2.27	2.27	613.888	614.427	614.427
CIRC. KV -2000	80.000	449742.112	4477924.059	2000.000	614.535	298.324407	0.000	2.770	2.27	2.27	614.535	614.633	614.633
CIRC. KV -2000	100.000	449722.116	4477923.633	2000.000	614.989	298.961027	0.000	1.770	2.27	2.27	614.989	615.041	615.041
CIRC. Rampa	120.000	449702.118	4477923.406	2000.000	615.248	299.597647	0.000	1.000	2.27	2.27	615.248	615.103	615.103
CIRC. Rampa	140.000	449682.118	4477923.380	2000.000	615.448	300.234267	0.000	1.000	2.05	2.05	615.448	615.542	615.542
CIRC. KV 2928	150.900	449671.218	4477923.450	-1000.000	615.562	300.581227	0.000	1.180	1.78	1.78	615.562	615.704	615.704
CIRC. KV 2928	160.000	449662.118	4477923.491	-1000.000	615.683	300.001907	0.000	1.491	1.56	1.56	615.683	615.839	615.839
CIRC. KV 2928	180.000	449642.120	4477923.292	-1000.000	616.050	298.728668	0.000	2.174	1.08	1.08	616.050	616.433	616.433
CIRC. Rampa	200.000	449622.129	4477922.693	-1000.000	616.549	297.455428	0.000	2.708	0.93	0.93	616.549	616.946	616.946
CIRC. Rampa	220.000	449602.154	4477921.694	-1000.000	617.081	296.182189	0.000	2.589	0.90	0.90	617.081	617.394	617.394
CIRC. Tg. Entrada	240.000	449582.203	4477920.296	-1000.000	617.578	294.908949	0.000	2.378	0.88	0.88	617.578	617.619	617.619
CIRC. Rampa	259.295	449562.986	4477918.569	500.000	618.138	293.680571	0.000	3.226	0.95	0.95	618.138	618.335	618.335
CIRC. Tg. Entrada	260.000	449562.285	4477918.499	500.000	618.160	293.770293	0.000	3.226	0.95	0.95	618.160	618.362	618.362
CIRC. Tg. Entrada	280.000	449542.346	4477916.944	500.000	618.728	296.316772	0.000	2.734	0.92	0.92	618.728	618.752	618.752
CIRC. Tg. Entrada	300.000	449522.362	4477916.187	500.000	619.350	298.863251	0.000	3.674	0.99	0.99	619.350	619.516	619.516
CIRC. Rampa	300.224	449522.138	4477916.183	2496.500	619.358	298.891833	0.000	3.312	0.99	0.99	619.358	619.522	619.522
CIRC. Rampa	315.529	449506.834	4477915.964	2496.500	619.843	299.282114	0.000	2.929	1.00	1.00	619.843	619.907	619.907

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 EJE : 34 : RAMAL IZQUIERDA ALAMEDA OSUNA

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 \* \* \* PUNTOS DEL EJE EN PLANTA \* \* \*  
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TIPO	P.K.	X	Y	RADIO	COTA	AZIMUT	DIST. EJE	Pend (%)	PERAL_I	PERAL_D	Z PROJ.	ZT (eje)	Z TERR.
CIRC. Pendiente	0.000	449472.476	4477905.312	15000.000	620.990	100.157618	0.000	-3.049	-1.00	-1.00	620.990	620.939	620.939
CIRC. Tg. Entrada	20.000	449492.476	4477905.250	15000.000	620.376	100.242500	0.000	-3.087	-1.03	-1.03	620.376	620.313	620.313
CIRC. Pendiente	40.000	449512.476	4477905.160	15000.000	619.791	100.327383	0.000	-2.899	-1.05	-1.05	619.791	619.690	619.690
CIRC. Tg. Entrada	60.000	449532.476	4477905.044	15000.000	619.100	100.412266	0.000	-3.641	-1.06	-1.06	619.100	619.101	619.101
CIRC. Pendiente	80.000	449552.475	4477904.901	15000.000	618.588	100.497148	0.000	-2.825	-1.10	-1.10	618.588	618.499	618.499
CIRC. Tg. Entrada	100.000	449572.474	4477904.732	15000.000	617.991	100.582031	0.000	-3.143	-1.12	-1.12	617.991	617.896	617.896
CIRC. Tg. Entrada	120.000	449592.473	4477904.535	15000.000	617.507	100.666914	0.000	-2.307	-1.07	-1.07	617.507	617.280	617.280
CIRC. Pendiente	140.000	449612.472	4477904.313	15000.000	616.993	100.751796	0.000	-2.615	-1.07	-1.07	616.993	616.697	616.697
CIRC. Pendiente	160.000	449632.471	4477904.063	15000.000	616.463	100.836679	0.000	-2.682	-1.07	-1.07	616.463	616.128	616.128
CLOT. Pendiente	168.546	449641.016	4477903.948	15000.000	616.234	100.872949	0.000	-2.682	-0.79	-0.79	616.234	615.863	615.863
CLOT. Pendiente	180.000	449652.469	4477903.788	35104.711	615.927	100.907641	0.000	-2.682	0.81	0.81	615.927	615.565	615.565
CIRC. Pendiente	188.546	449661.014	4477903.665	-2000.000	615.698	100.915390	0.000	-2.682	2.00	2.00	615.698	615.376	615.376
CIRC. Pendiente	200.000	449672.467	4477903.533	-2000.000	615.390	100.550793	0.000	-2.682	2.00	2.00	615.390	615.127	615.127
CIRC. Pendiente	220.000	449692.467	4477903.460	-2000.000	614.854	99.914174	0.000	-2.682	2.00	2.00	614.854	614.695	614.695
CIRC. KV 3697	240.000	449712.466	4477903.587	-2000.000	614.368	99.277554	0.000	-2.157	2.00	2.00	614.368	614.318	614.318
CIRC. KV 3697	260.000	449732.464	4477903.914	-2000.000	613.991	98.640934	0.000	-1.616	2.00	2.00	613.991	613.956	613.956
CIRC. Pendiente	280.000	449752.457	4477904.441	-2000.000	613.671	98.004314	0.000	-1.600	2.00	2.00	613.671	613.628	613.628
CIRC. Pendiente	300.000	449772.443	4477905.168	-2000.000	613.351	97.367694	0.000	-1.600	1.17	1.17	613.351	613.300	613.300
CIRC. KV 1528	320.000	449792.422	4477906.094	-2000.000	613.059	96.731075	0.000	-1.000	-0.50	-0.50	613.059	613.045	613.045
CIRC. KV 1528	324.399	449796.815	4477906.325	200.000	613.021	96.591044	0.000	-0.712	-0.50	-0.50	613.021	612.979	612.979
CIRC. KV 1528	340.000	449812.410	4477906.552	200.000	612.990	101.556933	0.000	0.309	-0.50	-0.50	612.990	613.000	613.000
CIRC. KV 1528	348.625	449821.025	4477906.155	30.000	613.041	104.302370	0.000	0.874	-0.32	-0.32	613.041	613.000	613.000
CIRC. Rampa	354.338	449826.654	4477905.231	-18.000	613.097	116.425589	0.000	0.987	-0.05	-0.05	613.097	613.000	613.000
CIRC. Rampa	355.552	449827.838	4477904.961	-18.000	613.109	112.130936	0.000	0.987	-0.00	-0.00	613.109	613.000	613.000

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 EJE : 35 : PASO INFERIOR ALAMEDA OSUNA

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 PUNTOS DEL EJE EN PLANTA \*\*\*\*\*

TIPO	P.K.	X	Y	RADIO	COTA	AZIMUT	DIST. EJE	Pend (%)	PERAL_I	PERAL_D	Z PROJ.	ZT (eje)	Z TERR.
CIRC. Pendiente	0.000	450052.301	4478005.600	-133.500	611.497	289.480086	0.000	-0.377	-7.00	-7.00	611.497	614.872	614.872
CLOT. Rampa	11.815	450040.748	4478003.144	-133.500	611.463	283.845932	0.000	0.220	-7.13	-7.13	611.463	614.477	614.477
CLOT. Tg. Entrada	20.000	450032.891	4478000.854	-145.371	611.481	280.102082	0.000	0.220	-7.30	-7.30	611.481	613.923	613.923
CLOT. Rampa	40.000	450014.302	4477993.508	-185.726	611.734	272.295073	0.000	1.740	-7.04	-7.04	611.734	612.477	612.477
CLOT. Tg. Entrada	60.000	449996.606	4477984.204	-257.094	612.101	266.391121	0.000	1.930	-6.83	-6.83	612.101	612.295	612.295
CLOT. Tg. Entrada	80.000	449979.683	4477973.551	-417.543	612.388	262.390227	0.000	1.260	-3.81	-3.81	612.388	612.203	612.203
CLOT. KV -750	100.000	449963.288	4477962.098	-1110.732	612.322	260.292391	0.000	-1.659	1.36	1.36	612.322	612.537	612.537
CLOT. KV -750	112.047	449953.535	4477955.027	1000000.000	612.025	259.947152	0.000	-3.266	2.82	2.82	612.025	612.717	612.717
CLOT. KV -750	120.000	449947.095	4477950.360	657.230	611.723	260.332332	0.000	-4.326	3.79	3.79	611.723	612.722	612.722
CLOT. KV -750	140.000	449930.537	4477939.150	186.991	610.591	264.705528	0.000	-6.993	6.21	6.21	610.591	613.528	613.528
CIRC. Pendiente	146.893	449924.606	4477935.639	150.000	610.109	267.341771	0.000	-7.000	7.00	7.00	610.109	613.653	613.653
CIRC. Pendiente	160.000	449912.920	4477929.713	150.000	609.191	272.904418	0.000	-7.000	7.00	7.00	609.191	613.873	613.873
CIRC. KV 1000	180.000	449894.208	4477922.692	150.000	607.810	281.392682	0.000	-6.380	7.00	7.00	607.810	613.679	613.679
CIRC. KV 1000	200.000	449874.730	4477918.221	150.000	606.734	289.880946	0.000	-4.380	7.00	7.00	606.734	612.946	612.946
CIRC. KV 1000	220.000	449854.829	4477916.380	150.000	606.058	298.369209	0.000	-2.380	7.00	7.00	606.058	612.755	612.755
CLOT. KV 1000	220.739	449854.091	4477916.363	150.000	606.041	298.682714	0.000	-2.307	7.00	7.00	606.041	612.740	612.740
CLOT. KV 1000	240.000	449834.844	4477916.936	419.046	605.774	304.233195	0.000	-0.540	5.39	5.39	605.774	612.611	612.611
CIRC. KV 1000	250.739	449824.136	4477917.741	-200.000	605.773	305.048912	0.000	0.533	4.50	4.50	605.773	612.636	612.636
CIRC. KV 1000	260.000	449814.890	4477918.261	-200.000	605.865	302.100942	0.000	1.460	3.72	3.72	605.865	612.831	612.831
CIRC. KV 1000	277.394	449797.503	4477918.078	2000.000	606.271	296.564271	0.000	3.199	2.27	2.27	606.271	613.244	613.244
CIRC. KV 1000	280.000	449794.900	4477917.939	2000.000	606.357	296.647223	0.000	3.460	2.27	2.27	606.357	613.342	613.342
CIRC. KV 1000	300.000	449774.923	4477916.986	2000.000	607.249	297.283843	0.000	5.460	2.27	2.27	607.249	613.633	613.633
CIRC. Rampa	320.000	449754.937	4477916.233	2000.000	608.531	297.920463	0.000	7.000	2.27	2.27	608.531	614.167	614.167
CIRC. Rampa	340.000	449734.945	4477915.680	2000.000	609.931	298.557083	0.000	7.000	2.27	2.27	609.931	614.536	614.536
CIRC. Rampa	360.000	449714.948	4477915.327	2000.000	611.331	299.193702	0.000	7.000	2.27	2.27	611.331	614.794	614.794
CIRC. Rampa	380.000	449694.949	4477915.174	2000.000	612.731	299.830322	0.000	7.000	2.27	2.27	612.731	615.000	615.000
CLOT. Rampa	394.995	449679.954	4477915.190	-1000000.000	613.780	300.307640	0.000	7.000	2.27	2.27	613.780	615.371	615.371
CLOT. Rampa	400.000	449674.949	4477915.213	-7992.618	614.131	300.287709	0.000	7.000	2.04	2.04	614.131	615.427	615.427
CIRC. KV -950	408.329	449666.620	4477915.244	-3000.000	614.706	300.166169	0.000	6.608	1.66	1.66	614.706	615.656	615.656
CIRC. KV -950	420.000	449654.949	4477915.252	-3000.000	615.406	299.918497	0.000	5.380	1.13	1.13	615.406	615.977	615.977
CIRC. KV -950	440.000	449634.949	4477915.160	-3000.000	616.271	299.494083	0.000	3.275	1.00	1.00	616.271	616.255	616.255
CIRC. Rampa	460.000	449614.951	4477914.934	-3000.000	616.817	299.069670	0.000	2.631	1.00	1.00	616.817	616.860	616.860
CIRC. Tg. Entrada	480.000	449594.954	4477914.575	-3000.000	617.344	298.645257	0.000	2.631	1.00	1.00	617.344	617.334	617.334
CIRC. Tg. Entrada	500.000	449574.960	4477914.083	-3000.000	617.811	298.220844	0.000	2.335	1.00	1.00	617.811	617.801	617.801
CIRC. Rampa	514.417	449560.550	4477913.646	2500.000	618.268	297.914909	0.000	3.174	1.00	1.00	618.268	618.247	618.247
CIRC. Tg. Entrada	520.000	449554.969	4477913.469	2500.000	618.429	298.057083	0.000	2.618	0.97	0.97	618.429	618.419	618.419
CIRC. Tg. Entrada	540.000	449534.977	4477912.939	2500.000	618.967	298.566379	0.000	2.692	0.85	0.85	618.967	618.957	618.957
CIRC. Tg. Entrada	560.000	449514.980	4477912.568	2500.000	619.641	299.075674	0.000	3.440	0.73	0.73	619.641	619.631	619.631
CIRC. Tg. Entrada	580.000	449494.981	4477912.358	2500.000	620.226	299.584970	0.000	2.924	0.62	0.62	620.226	620.216	620.216
CIRC. Tg. Entrada	600.000	449474.981	4477912.308	2500.000	620.847	300.094266	0.000	3.102	0.50	0.50	620.847	620.837	620.837
CIRC. Tg. Entrada	620.000	449454.982	4477912.417	2500.000	621.434	300.603562	0.000	2.935	0.50	0.50	621.434	621.424	621.424
CIRC. Tg. Entrada	640.000	449434.984	4477912.687	2500.000	622.027	301.112858	0.000	2.965	0.50	0.50	622.027	622.017	622.017
CIRC. Tg. Entrada	660.000	449414.988	4477913.116	2500.000	622.643	301.622153	0.000	3.083	0.50	0.50	622.643	622.633	622.633
CIRC. Rampa	661.856	449413.132	4477913.164	1000.000	622.704	301.669426	0.000	3.279	0.50	0.50	622.704	622.694	622.694
CIRC. Tg. Entrada	680.000	449395.000	4477913.805	1000.000	623.299	302.824484	0.000	3.279	0.50	0.50	623.299	623.289	623.289
CLOT. Rampa	695.040	449379.981	4477914.585	1000.000	623.853	303.781952	0.000	3.682	0.50	0.50	623.853	623.833	623.833
CLOT. Tg. Entrada	700.000	449375.030	4477914.891	1080.543	624.035	304.085955	0.000	3.682	0.50	0.50	624.035	624.025	624.025
CLOT. Tg. Entrada	720.000	449355.083	4477916.338	1600.237	624.692	305.072950	0.000	3.283	0.50	0.50	624.692	624.682	624.682
CLOT. Rampa	740.000	449335.155	4477918.035	3083.049	625.436	305.677269	0.000	3.737	0.50	0.50	625.436	625.426	625.426
CLOT. Rampa	760.000	449315.239	4477919.861	42015.301	626.184	305.898912	0.000	3.737	0.50	0.50	626.184	626.174	626.174

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 EJE : 35 : PASO INFERIOR ALAMEDA OSUNA

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\*\*\*\*\* PUNTOS DEL EJE EN PLANTA \*\*\*\*\*

TIPO	P.K.	X	Y	RADIO	COTA	AZIMUT	DIST. EJE	Pend (%)	PERAL_I	PERAL_D	Z PROJ.	ZT (eje)	Z TERR.
RECTA Rampa	761.584	449313.662	4477920.008	0.000	626.244	305.900111	0.000	3.826	0.50	0.50	626.244	626.232	626.232
RECTA Rampa	780.000	449295.324	4477921.712	0.000	626.949	305.900111	0.000	3.864	0.50	0.50	626.949	626.939	626.939
RECTA Rampa	786.233	449289.118	4477922.289	0.000	627.190	305.900111	0.000	3.864	0.50	0.50	627.190	627.180	627.180

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 EJE : 36 : TRANSFER ALAMEDA OSUNA

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\*\*\*\*\* PUNTOS DEL EJE EN PLANTA \*\*\*\*\*

TIPO	P.K.	X	Y	RADIO	COTA	AZIMUT	DIST. EJE	Pend (%)	PERAL_I	PERAL_D	Z PROJ.	ZT (eje)	Z TERR.
CIRC. Rampa	0.000	449755.353	4477927.953	1996.500	614.048	297.899068	0.000	3.119	4.15	4.15	614.048	614.503	614.503
CIRC. Tg. Entrada	20.000	449735.361	4477927.394	1996.500	614.628	298.536804	0.000	2.686	2.41	2.41	614.628	614.797	614.797
CIRC. Rampa	21.797	449733.564	4477927.353	300.000	614.667	298.594114	0.000	2.170	2.45	2.45	614.667	614.825	614.825
CIRC. Tg. Entrada	40.000	449715.365	4477927.503	300.000	615.005	302.456848	0.000	1.605	2.45	2.45	615.005	615.228	615.228
CLOT. Rampa	53.473	449701.918	4477928.325	300.000	615.137	305.315869	0.000	0.786	2.37	2.37	615.137	615.139	615.139
CLOT. Rampa	60.000	449695.419	4477928.933	445.341	615.188	306.474958	0.000	0.786	2.37	2.37	615.188	615.156	615.156
CLOT. KV 1984	73.473	449682.031	4477930.436	-1000000.000	615.296	307.437935	0.000	1.007	2.30	2.30	615.296	615.148	615.148
CLOT. KV 1984	80.000	449675.547	4477931.192	-1532.055	615.372	307.302321	0.000	1.336	2.26	2.27	615.372	615.216	615.216
CIRC. KV 1984	93.473	449662.152	4477932.635	-500.000	615.598	306.164695	0.000	2.015	2.19	2.20	615.598	615.521	615.521
CIRC. KV 1984	100.000	449655.652	4477933.223	-500.000	615.740	305.333628	0.000	2.344	2.16	2.17	615.740	615.693	615.693
CIRC. Rampa	120.000	449635.694	4477934.498	-500.000	616.276	302.787149	0.000	2.766	2.05	2.07	616.276	616.210	616.210
RECTA Rampa	123.604	449632.093	4477934.643	0.000	616.376	302.328285	0.000	2.766	2.03	2.05	616.376	616.319	616.319
RECTA KV -1198	140.000	449615.708	4477935.242	0.000	616.824	302.328285	0.000	2.468	2.00	2.00	616.824	616.811	616.811
RECTA KV -1198	147.186	449608.526	4477935.505	0.000	616.980	302.328285	0.000	1.868	2.00	2.00	616.980	616.983	616.983

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 EJE : 37 : CONEXION RAMAL DERECHA ALAMEDA OSUNA

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\*\*\*\*\* PUNTOS DEL EJE EN PLANTA \*\*\*\*\*

TIPO	P.K.	X	Y	RADIO	COTA	AZIMUT	DIST. EJE	Pend (%)	PERAL_I	PERAL_D	Z PROJ.	ZT (eje)	Z TERR.
CIRC. Rampa	0.000	449542.304	4477928.813	6.323	618.604	215.018278	0.000	2.667	-1.50	-1.50	618.604	618.603	618.603
CIRC. Rampa	3.640	449540.509	4477925.704	35.000	618.701	251.671686	0.000	2.667	-1.19	-1.19	618.701	618.746	618.746
CIRC. Rampa	20.000	449526.484	4477917.573	35.000	619.187	281.428230	0.000	4.486	-0.13	-0.13	619.187	619.405	619.405
CIRC. Rampa	29.674	449516.955	4477916.098	2496.500	619.565	299.024016	0.000	3.421	0.99	0.99	619.565	619.583	619.583
CIRC. Rampa	35.945	449510.684	4477916.010	2496.500	619.710	299.183935	0.000	2.206	1.00	1.00	619.710	619.718	619.718

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 EJE : 38 : DEFLECTORA ENTRADA

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 \* \* \* PUNTOS DEL EJE EN PLANTA \* \* \*  
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TIPO	P.K.	X	Y	RADIO	COTA	AZIMUT	DIST. EJE	Pend (%)	PERAL_I	PERAL_D	Z PROY.	ZT (eje)	Z TERR.
RECTA Pendiente	0.000	449811.849	4477958.639	0.000	613.079	174.086446	0.000	-1.172	-1.20	-1.20	613.079	613.005	613.005
CIRC. KV 1268	18.081	449819.007	4477942.035	7.000	612.937	174.086446	0.000	-0.126	0.59	0.59	612.937	613.000	613.000
CIRC. Rampa	20.000	449819.517	4477940.192	7.000	612.936	191.535269	0.000	0.010	0.78	0.78	612.936	613.000	613.000
CIRC. Rampa	26.025	449817.806	4477934.608	-18.000	612.936	246.326564	0.000	0.010	0.73	0.73	612.936	613.089	613.089
CIRC. Rampa	26.025	449817.806	4477934.608	-18.000	612.936	246.326564	0.000	0.010	0.73	0.73	612.936	613.089	613.089

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 PROYECTO : 20180606\_NUDO EYM  
 EJE : 39 : DEFLECTORA SALIDA

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 \* \* \* PUNTOS DEL EJE EN PLANTA \* \* \*  
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TIPO	P.K.	X	Y	RADIO	COTA	AZIMUT	DIST. EJE	Pend (%)	PERAL_I	PERAL_D	Z PROY.	ZT (eje)	Z TERR.
CIRC. Pendiente	0.000	449840.751	4477937.921	-18.000	613.147	335.412653	0.000	-0.851	-1.50	-1.50	613.147	613.209	613.209
CIRC. Pendiente	0.000	449840.751	4477937.921	10.000	613.147	335.412652	0.000	-0.851	-1.50	-1.50	613.147	613.209	613.209
RECTA KV 385	6.056	449836.856	4477942.437	0.000	613.118	373.965292	0.000	0.223	-1.25	-1.25	613.118	613.341	613.341
RECTA Rampa	20.000	449831.311	4477955.231	0.000	613.389	373.965292	0.000	3.049	-2.00	-2.00	613.389	613.504	613.504
RECTA Rampa	29.877	449827.384	4477964.293	0.000	613.690	373.965292	0.000	3.049	-2.00	-2.00	613.690	613.691	613.691