DATOS DE PROYECTO

CAMINO TIPO " ARTESANAL "

VELOCIDAD DE PROYECTO	ANCHO DE CORONA	ANCHO DE CALZADA
30 km/h	6.00 m.	6.00 m.
CURVATURA MAXIMA	PENDIENTE MAXIMA	PENDIENTE GOBERNADORA
75°00'00"	10.75 %	7.0%

S E C C I O N T I P O

SIN ESCALA

SIMBOLOGIA

BANCOS DE NIVEL

PUNTOS DE APOYO

HOMBRO, EJE DEL CAMINO, HOMBRO

PUNTOS DE REFERENCIA

OBRA DE DRENAJE

ORILLA DE CAMINO EXISTENTE

NUMERO DE CURVA

CURVA DE NIVEL ORDINARIA

KILOMETRAJE

CURVA DE NIVEL MAESTRA A CADA 1 M

POSTE DE C.F.E.

COORDENADAS

TIRANTE (ARREMETIDA DE POSTE)

Camino: CONSTRUCCION DE CARRETERA SIN NOMBRE CON CONCRETO HIDRAULICO DEL BARRIO SAN LUCAS AL E.C. SAN PABLO VILLA DE MITLA - T.C. (TUXTEPEC-PALOMARES), TRAMO: DEL KM 0+000 AL KM. 2+530, SUBTRAMO: DEL KM 0+660 AL KM. 1+660.

PLANTA TOPOGRAFICA

DEL KM. 0+660.00 AL KM. 1+660.00

PROYECTO:

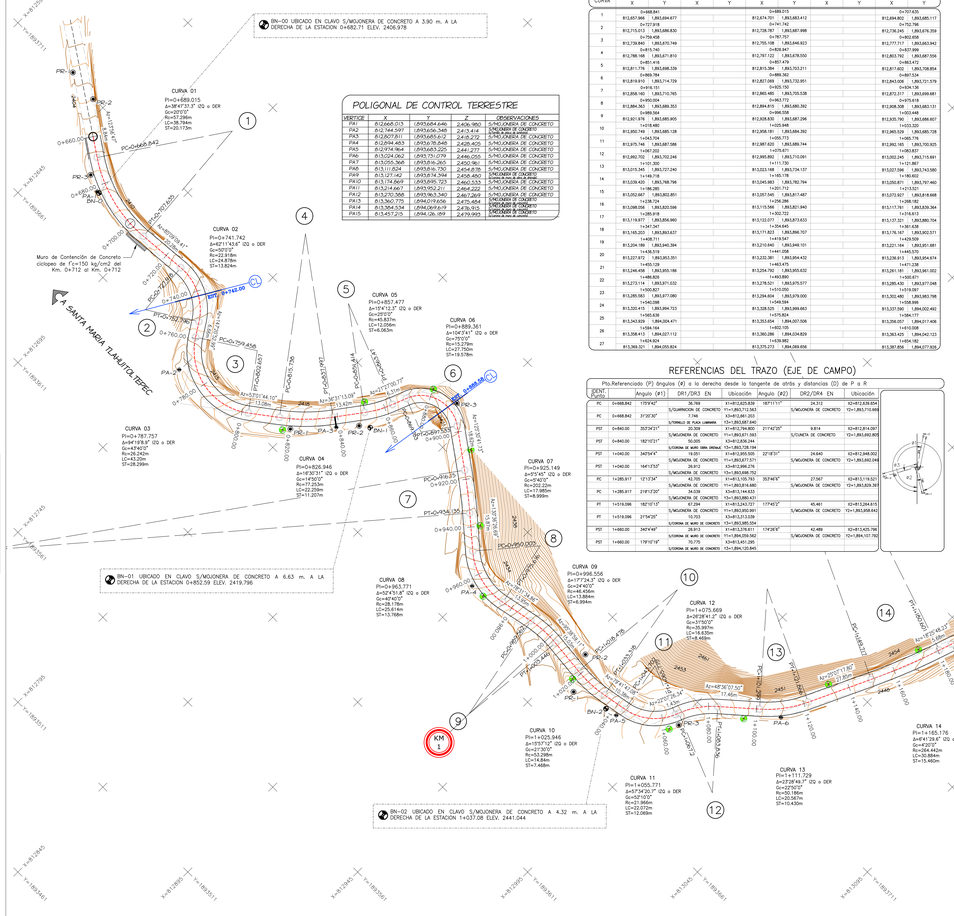
DIRECCION DE PROYECTOS Y CONTROL DE CALIDAD

REVISÓ:

CAMINOS BIENESTAR

JEFE DE LA UNIDAD DE ESTUDIOS Y PROYECTOS	DIRECTOR DE PROYECTOS Y CONTROL DE CALIDAD	EL DIRECTOR GENERAL
Cédula Profesional 8652384 ING. JAIRO RAMIREZ REYES	Cédula Profesional 12890930 ING. ALVARO PEREZ HERNANDEZ	ING. MOISES SALAZAR MARTINEZ

2025	Escala 1:750	Plano 1 DE 5



POLIGONAL DE CONTROL TERRESTRE

VERTICE	X	Y	Z	OBSERVACIONES
PA1	812,657.504	1,853,654.646	2,406.960	S/MOJONERA DE CONCRETO
PA2	812,744.597	1,853,634.340	2,413.414	S/MOJONERA DE CONCRETO
PA3	812,827.811	1,853,651.612	2,419.294	S/MOJONERA DE CONCRETO
PA4	812,894.463	1,853,676.649	2,426.406	S/MOJONERA DE CONCRETO
PA5	812,974.964	1,853,683.325	2,441.277	S/MOJONERA DE CONCRETO
PA6	813,024.062	1,853,731.079	2,446.055	S/MOJONERA DE CONCRETO
PA7	813,055.366	1,853,816.265	2,450.962	S/MOJONERA DE CONCRETO
PA8	813,111.824	1,853,816.750	2,454.818	S/MOJONERA DE CONCRETO
PA9	813,127.142	1,853,814.394	2,456.480	S/MOJONERA DE CONCRETO
PA10	813,174.849	1,853,895.723	2,460.533	S/MOJONERA DE CONCRETO
PA11	813,214.667	1,853,952.211	2,464.222	S/MOJONERA DE CONCRETO
PA12	813,251.366	1,853,963.340	2,467.269	S/MOJONERA DE CONCRETO
PA13	813,360.775	1,854,019.656	2,475.464	S/MOJONERA DE CONCRETO
PA14	813,384.534	1,854,069.617	2,478.913	S/MOJONERA DE CONCRETO
PA15	813,457.216	1,854,126.499	2,479.993	S/MOJONERA DE CONCRETO

GEOMETRIA DEL ALINEAMIENTO HORIZONTAL

CURVA	PC/TE X	PC/TE Y	EC X	EC Y	PI/PST X	PI/PST Y	CE X	CE Y	PT/ET X	PT/ET Y
	0+688.841				0+689.015				0+707.635	
1	812,657.504	1,853,654.677			812,674.701	1,853,683.410			812,694.821	1,853,685.117
	0+727.98				0+741.742				0+755.786	
2	812,715.513	1,853,686.830			812,728.787	1,853,687.498			812,734.345	1,853,674.709
	0+799.458				0+799.757				0+802.658	
3	812,778.842	1,853,670.749			812,785.108	1,853,646.833			812,777.717	1,853,663.942
	0+815.740				0+828.947				0+837.899	
4	812,788.108	1,853,671.810			812,797.122	1,853,678.550			812,803.750	1,853,687.556
	0+851.416				0+857.479				0+863.472	
5	812,811.170	1,853,698.339			812,815.394	1,853,723.211			812,817.602	1,853,758.854
	0+893.784				0+889.362				0+887.534	
6	812,819.924	1,853,774.729			812,821.777	1,853,732.951			812,824.305	1,853,721.579
	0+916.135				0+925.150				0+934.126	
7	812,858.160	1,853,710.765			812,865.485	1,853,705.538			812,872.917	1,853,699.687
	0+950.214				0+963.772				0+975.818	
8	812,884.363	1,853,699.353			812,894.815	1,853,680.392			812,908.308	1,853,663.121
	0+989.564				0+998.558				1+002.448	
9	812,921.976	1,853,685.905			812,928.830	1,853,687.296			812,935.790	1,853,686.607
	1+018.880				1+025.946				1+033.320	
10	812,950.749	1,853,686.128			812,958.181	1,853,694.392			812,965.529	1,853,685.728
	1+045.713				1+053.770				1+060.779	
11	812,975.744	1,853,687.586			812,987.553	1,853,689.744			812,992.145	1,853,700.923
	1+075.669				1+089.729				1+103.789	
12	812,992.702	1,853,702.246			812,995.892	1,853,710.091			813,000.245	1,853,715.691
	1+131.300				1+111.730				1+121.867	
13	813,015.345	1,853,727.240			813,023.168	1,853,734.137			813,027.596	1,853,743.580
	1+145.718				1+165.178				1+183.602	
14	813,029.420	1,853,748.766			813,045.963	1,853,782.784			813,055.871	1,853,797.460
	1+196.285				1+201.712				1+213.521	
15	813,052.667	1,853,802.851			813,057.545	1,853,817.487			813,072.907	1,853,818.668
	1+236.124				1+256.286				1+268.182	
16	813,098.054	1,853,822.596			813,111.705	1,853,821.840			813,121.356	1,853,839.364
	1+277.991				1+322.720				1+367.449	
17	813,119.971	1,853,856.960			813,132.077	1,853,873.633			813,137.321	1,853,880.704
	1+347.247				1+354.645				1+361.838	
18	813,165.253	1,853,863.637			813,171.823	1,853,896.707			813,178.167	1,853,902.571
	1+408.711				1+419.547				1+430.509	
19	813,204.189	1,853,943.394			813,210.640	1,853,949.101			813,221.184	1,853,951.681
	1+436.319				1+441.058				1+445.570	
20	813,227.672	1,853,953.351			813,232.381	1,853,954.432			813,236.913	1,853,954.614
	1+460.475				1+463.476				1+471.238	
21	813,246.458	1,853,955.186			813,254.762	1,853,955.632			813,261.181	1,853,961.002
	1+479.899				1+493.900				1+507.901	
22	813,270.114	1,853,971.032			813,279.531	1,853,975.577			813,287.598	1,853,977.048
	1+520.827				1+510.050				1+519.097	
23	813,295.563	1,853,977.060			813,294.604	1,853,979.000			813,302.482	1,853,983.788
	1+540.098				1+549.594				1+558.998	
24	813,320.411	1,853,983.723			813,328.525	1,853,989.663			813,337.060	1,854,002.492
	1+565.638				1+578.824				1+594.177	
25	813,343.928	1,854,009.471			813,353.634	1,854,027.506			813,356.057	1,854,017.406
	1+594.164				1+602.105				1+610.008	
26	813,358.413	1,854,037.112			813,360.286	1,854,034.829			813,363.425	1,854,042.123
	1+624.424				1+639.982				1+654.182	
27	813,368.321	1,854,055.824			813,375.273	1,854,069.856			813,387.856	1,854,077.829

REFERENCIAS DEL TRAZO (EJE DE CAMPO)

Pto.Referenciado (P) ángulos (Ø) a la derecha desde la tangente de atrás y distancias (D) de P a Ø

EJE	P	Ángulos (Ø)	DIR./GRA. EN	Ubicación	Ángulo (Ø)	DIR./GRA. EN	Ubicación
PC	0+668.842	179°9'47"	36.788	0+481.0,625.839	181°11'11"	24.312	0+812,639.834
			S/MUNICIPAL DE CONCRETO	1+,853,712.563		S/MUNICIPAL DE CONCRETO	1+,853,710.666
PC	0+668.842	3°35'35"	3.746	0+481,661.353			
			S/TRIPOLI DE PLACA LAMINA	1+,853,687.060			
PST	0+840.00	353°24'31"	20.309	0+812,784.800	211°42'25"	9.814	0+812,814.097
			S/MUNICIPAL DE CONCRETO	1+,853,671.593		S/CUNETA DE CONCRETO	1+,853,662.800
PST	0+840.00	182°12'31"	50.005	0+812,836.244			
			S/CORONA DE MURO DE OBRA DE DRENAJE	1+,853,726.194			
PST	1+040.00	345°24'4"	19.051	0+812,955.505	23°18'31"	24.643	0+812,948.002
			S/MUNICIPAL DE CONCRETO	1+,853,917.071		S/MUNICIPAL DE CONCRETO	1+,853,892.048
PST	1+040.00	164°13'57"	29.18	0+812,998.276			
			S/MUNICIPAL DE CONCRETO	1+,853,880.431			
PC	1+095.417	13°13'34"	40.105	0+813,130.763	352°46'9"	27.567	0+813,119.521
			S/MUNICIPAL DE CONCRETO	1+,853,818.680		S/MUNICIPAL DE CONCRETO	1+,853,808.842
PC	1+295.417	218°13'20"	34.039	0+813,144.833			
			S/MUNICIPAL DE CONCRETO	1+,853,680.431			
PT	1+519.096	182°12'12"	87.334	0+813,243.727	177°42'9"	45.461	0+813,284.610
			S/MUNICIPAL DE CONCRETO	1+,853,850.891		S/MUNICIPAL DE CONCRETO	1+,853,868.642
PST	1+519.096	217°47'25"	10.753	0+813,313.039			
			S/CORONA DE MURO DE CONCRETO	1+,853,885.554			
PST	1+660.00	345°4'49"	29.845	0+813,412.744	14°28'8"	42.488	0+813,425.798
			S/CORONA DE MURO DE CONCRETO	1+,853,972.554		S/CORONA DE MURO DE CONCRETO	1+,854,007.792
PST	1+660.00	179°10'19"	16.775	0+813,451.295			
			S/CORONA DE MURO DE CONCRETO	1+,854,123.842			

DATOS DE CURVAS HORIZONTALES

CURVA	P.I.	Def. ↑	Gc	Tc	Lc	Ee	Le	Xc	Yc	k	p
1	0+889.015	98°47'31.0" IZQ	20°00"00"	57.266m	20.174m	38.784m					
2	0+741.742	42°11'43.6" DER	20°00"00"	22.918m	13.824m	24.878m					
3	0+761.757	64°19'8.9" IZQ	43°40'0"	26.242m	29.299m	43.200m					
4	0+826.947	93°53'7.7" IZQ	49°30'0"	17.263m	22.259m	11.207m					
5	0+857.479	74°12'3" IZQ	29°57"	38.317m	49.628m	14.063m					
6	0+889.362	90°00'0" IZQ	20°03"	14.279m	17.950m	19.578m					
7	0+925.149	73°46'1" IZQ	20°03"	57.296m	73.772m	9.999m					
8	0+963.772	52°43'51.8" IZQ	40°42'00"	28.178m	13.788m	25.614m					
9	0+998.558	177°21'42.3" IZQ	1°00'00"	1146.450m	3.884m	5.994m					
10	1+025.948	175°31'12" IZQ	2°30'00"	-53.298m	14.848m	7.448m					
11	1+053.770	57°34'20.1" IZQ	42°10'00"	-27.866m	28.010m	12.068m					
12	1+075.671	38°28'41.2" IZQ	37°00'00"	-38.178m	18.635m	8.469m					
13	1+111.729	27°28'27.2" IZQ	57°15'00"	-60.186m	20.567m	10.430m					
14	1+165.176	41°43'24.1" IZQ	43°23'00"	-264.442m	30.884m	15.490m					
15	1+201.731	67°10'33" IZQ	49°20'00"	-23.228m	27.236m	15.427m					
16	1+256.284	39°25'31.7" IZQ	57°15'00"	-60.186m	41.419m	17.561m					
17	1+322.721	39°25'31.7" IZQ	57°45'00"	-30.355m	20.895m	16.805m					
18	1+354.644	38°34'56.3" IZQ	58°30'00"	-28.648m	14.291m	7.398m					
19	1+419.546	36°41'37" IZQ	38°10'00"	-30.324m	20.798m	10.836m					
20	1+441.057	10°42'38.4" IZQ	2°40'00"	-86.419m	16.139m	4.539m					
21	1+463.475	36°58'58.8" IZQ	38°10'00"	-30.324m	19.939m	9.344m					
22	1+493.899	38°10.3" IZQ	37°30'00"	-28.284m	13.845m	7.064m					
23	1+510.050	10°42'38.4" IZQ	2°40'00"	-84.158m	18.270m	9.223m					
24	1+549.594	14°07'46.6" IZQ	4°50'00"	-77.253m	15.844m	8.496m					
25	1+578.824	49°24'1.0" IZQ	42°40'00"	-17.999m	18.541m	10.188m					
26	1+602.104	34°36'8.0" IZQ	12°00'00"	-84.185m	15.844m	7.941m					
27	1+639.982	37°24'8.8" IZQ	43°20'00"	-52.188m	29.258m	15.098m					

COORDENADAS DEL EJE DE TRAZO

ESTACION	PUNTO OBSERVADO	SUBTANGENTE A ESTE	TANGENTE NORTE	SUBTANGENTE ADELANTE	DISTANCIA	DEFLEXIONES +	DEFLEXIONES −	SENTIDO	RUMBO GRADOS	RUMBO MINUTOS	RUMBO SEGUNDOS	RUMBO CUADRANTE	PROYECCIONES COSENO	PROYECCIONES SENO	PROYECCIONES +N	PROYECCIONES −S	PROYECCIONES +E	PROYECCIONES −W	COORDENADAS NORTE	COORDENADAS ESTE
0+660.00	NORTE																		1853659.614	812650.631
0+680.00	PA-12	0.000	8.841	20.174	29.015				68°	47'	37.30 "	IZQ	0.36842	0.92966	0.00	16.20	24.07	0.00	1853643.414	812673.153
0+741.74	PA-11	42.284	8.283	61.958	89.299				68°	47'	37.30 "	IZQ	0.36842	0.92966	0.00	41.04	24.32	0.00	1853618.100	812698.187
0+767.76	PA-10	18.012	3.552	26.028	44.784				68°	47'	37.30 "	IZQ	0.36842	0.92966	0.00	51.43	24.32	0.00	1853607.709	812698.187
0+826.95	PA-9	59.185	11.681	59.185	84.000				68°	47'	37.30 "	IZQ	0.36842	0.92966	0.00	73.00	24.32	0.00	1853585.852	812698.187
0+857.48	PA-8	30.523	6.023	30.523	43.333				68°	47'	37.30 "	IZQ	0.36842	0.92966	0.00	84.58	24.32	0.00	1853574.267	812698.187
0+889.36	PA-7	31.881	6.293	31.881	45.269				68°	47'	37.30 "	IZQ	0.36842	0.92966	0.00	96.72	24.32	0.00	1853562.123	812698.187
0+925.15	PA-6	35.787	7.064	35.787	50.800				68°	47'	37.30 "	IZQ	0.36842	0.92966	0.00	111.63	24.32	0.00	1853547.220	812698.187
0+963.77	PA-5	38.622	7.624	38.622	54.833				68°	47'	37.30 "	IZQ	0.36842	0.92966	0.00	128.08	24.32	0.00	1853530.770	812698.187
0+998.56	PA-4	34.788	6.866	34.788	49.388				68°	47'	37.30 "	IZQ	0.36842	0.92966	0.00	143.41	24.32	0.00	1853515.437	812698.187
1+025.95	PA-3	27.390	5.406	27.390	38.890				68°	47'	37.30 "	IZQ	0.36842	0.92966	0.00	154.71	24.32	0.00	1853504.137	812698.187
1+053.77	PA-2	27.822	5.492	27.822	39.507				68°	47'	37.30 "	IZQ	0.36842	0.92966	0.00	166.19	24.32	0.00	1853492.659	812698.187
1+075.67	PA-1	21.898	4.322	21.898	31.096				68°	47'	37.30 "	IZQ	0.36842	0.92966	0.00	174.74	24.32	0.00	1853484.109	812698.187
1+111.73	PA-1	36.058	7.117	36.058	51.220				68°	47'	37.30 "	IZQ	0.36842	0.92966	0.00	188.99	24.32	0.00	1853469.862	812698.187
1+165.18	PA-1	53.453	10.553	53.453	75.929				68°	47'	37.30 "	IZQ	0.36842	0.92966	0.00	209.78	24.32	0.00	1853449.069	812698.187
1+201.73	PA-1	36.553	7.216	36.553	51.917				68°	47'	37.30 "	IZQ	0.36842	0.92966	0.00	223.99	24.32	0.00	1853434.858	812698.187
1+256.28	PA-1	54.553	10.768	54.553	77.500				68°	47'	37.30 "	IZQ	0.36842	0.92966	0.00	245.98	24.32	0.00	1853412.866	812698.187
1+322.72	PA-1	66.440	13.113	66.440	94.360				68°	47'	37.30 "	IZQ	0.36842	0.92966	0.00	272.98	24.32	0.00	1853385.866	812698.187
1+354.64	PA-1	31.923	6.302	31.923	45.340				68°	47'	37.30 "	IZQ	0.36842	0.92966	0.00	285.28	24.32	0.00	1853373.566	812698.187
1+419.55	PA-1	64.902	12.810	64.902	92.170				68°	47'	37.30 "	IZQ	0.36842	0.92966	0.00	309.09	24.32	0.00	1853349.757	812698.187
1+441.06	PA-1	21.511	4.246	21.511	30.555				68°	47'	37.30 "	IZQ	0.36842	0.92966	0.00	317.43	24.32	0.00	1853341.417	812698.187
1+463.48	PA-1	22.418	4.425	22.418	31.843				68°	47'	37.30 "	IZQ	0.36842	0.92966	0.00	326.08	24.32	0.00	1853332.768	812698.187
1+493.90	PA-1	30.424	6.005	30.424	43.220				68°	47'	37.30 "	IZQ	0.36842	0.92966	0.00	337.68	24.32	0.00	1853321.168	812698.187
1+510.05	PA-1	16.150	3.187	16.150	22.938				68°	47'	37.30 "	IZQ	0.36842	0.92966	0.00	343.84	24.32	0.00	1853315.004	812698.187
1+549.59	PA-1	39.544	7.806	39.544	56.175				68°	47'	37.30 "	IZQ	0.36842	0.92966	0.00	358.93	24.32	0.00	1853299.911	812698.187
1+578.82	PA-1	29.230	5.769	29.230	41.523				68°	47'	37.30 "	IZQ	0.36842	0.92966	0.00	370.10	24.32	0.00	1853288.744	812698.187
1+602.10	PA-1	23.280	4.595	23.280	33.074				68°	47'	37.30 "	IZQ	0.36842	0.92966	0.00	379.00	24.32	0.00	1853279.850	812698.187
1+639.98	PA-1	37.882	7.478	37.882	53.820				68°	47'	37.30 "	IZQ	0.36842	0.92966	0.00	393.45	24.32	0.00	1853265.400	812698.187
1+660.00	PA-1	20.018	3.951	20.018	28.431				68°	47'	37.30 "	IZQ	0.36842	0.92966	0.00	401.09	24.32	0.00	1853257.760	812698.187