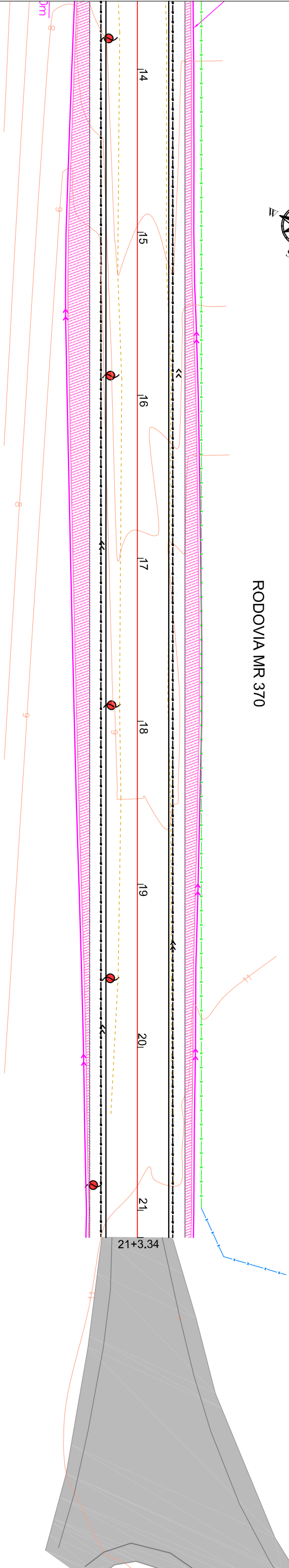
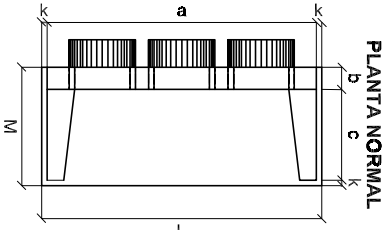




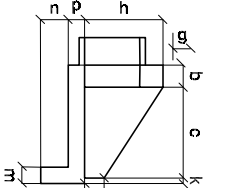
RODOVIA MR 370



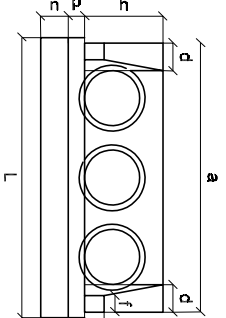
BUEIRO TRIPO TUBULAR DE CONCRETO - BOCAS NORMAIS E ESCONSAS



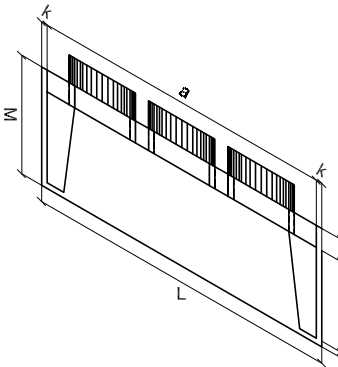
VISTA LATERAL



VISTA FRONTAL



PLANTA ESCONSO



DIMENSÖES E CONSUMOS MEDIOS PARA UMA UNIDADE

BUEIRO TRIPO TUBULAR $\Phi = 100$														BUEIRO TRIPO TUBULAR $\Phi = 150$													
Esq.	A	B	C	D	E	F	G	H	I	J	K	L	M	Esq.	A	B	C	D	E	F	G	H	I	J	K	L	M
0°	410	35	430	13,38	3,811	18,682	5,891	2,820	0,810	0,333	600	25,441	9,733	47,888	6,818	7,202	557,0	836	600	25,441	9,733	47,888	6,818	7,202	557,0	836	
5°	412	35	432	13,38	3,814	18,688	5,898	2,822	0,810	0,335	602	25,538	9,747	47,912	6,828	7,210	558,0	838	602	25,538	9,747	47,912	6,828	7,210	558,0	838	
10°	414	36	434	13,46	3,828	18,733	5,900	2,824	0,810	0,338	604	25,635	9,761	47,936	6,841	7,224	559,0	840	604	25,635	9,761	47,936	6,841	7,224	559,0	840	
15°	416	36	436	13,54	3,838	18,809	5,902	2,826	0,810	0,341	606	25,732	9,775	47,960	6,854	7,238	560,0	842	606	25,732	9,775	47,960	6,854	7,238	560,0	842	
20°	418	37	438	13,62	3,848	18,916	5,904	2,828	0,810	0,344	608	25,829	9,789	47,984	6,867	7,252	561,0	844	608	25,829	9,789	47,984	6,867	7,252	561,0	844	
25°	420	37	440	13,70	3,858	19,009	5,906	2,830	0,810	0,347	610	25,926	9,803	48,008	6,880	7,266	562,0	846	610	25,926	9,803	48,008	6,880	7,266	562,0	846	
30°	422	37	442	13,78	3,868	19,109	5,908	2,832	0,810	0,350	612	26,023	9,817	48,032	6,893	7,280	563,0	848	612	26,023	9,817	48,032	6,893	7,280	563,0	848	
35°	424	38	444	13,86	3,878	19,209	5,910	2,834	0,810	0,353	614	26,120	9,831	48,056	6,906	7,294	564,0	850	614	26,120	9,831	48,056	6,906	7,294	564,0	850	
40°	426	38	446	13,94	3,888	19,309	5,912	2,836	0,810	0,356	616	26,217	9,845	48,080	6,919	7,308	565,0	852	616	26,217	9,845	48,080	6,919	7,308	565,0	852	
45°	428	39	448	14,02	3,898	19,409	5,914	2,838	0,810	0,359	618	26,314	9,859	48,104	6,932	7,322	566,0	854	618	26,314	9,859	48,104	6,932	7,322	566,0	854	
50°	430	39	450	14,10	3,908	19,509	5,916	2,840	0,810	0,362	620	26,411	9,873	48,128	6,945	7,336	567,0	856	620	26,411	9,873	48,128	6,945	7,336	567,0	856	
55°	432	40	452	14,18	3,918	19,609	5,918	2,842	0,810	0,365	622	26,508	9,887	48,152	6,958	7,350	568,0	858	622	26,508	9,887	48,152	6,958	7,350	568,0	858	
60°	434	40	454	14,26	3,928	19,709	5,920	2,844	0,810	0,368	624	26,605	9,901	48,176	6,971	7,364	569,0	860	624	26,605	9,901	48,176	6,971	7,364	569,0	860	
65°	436	41	456	14,34	3,938	19,809	5,922	2,846	0,810	0,371	626	26,702	9,915	48,200	6,984	7,378	570,0	862	626	26,702	9,915	48,200	6,984	7,378	570,0	862	
70°	438	41	458	14,42	3,948	19,909	5,924	2,848	0,810	0,374	628	26,799	9,929	48,224	6,997	7,392	571,0	864	628	26,799	9,929	48,224	6,997	7,392	571,0	864	
75°	440	42	460	14,50	3,958	20,009	5,926	2,850	0,810	0,377	630	26,896	9,943	48,248	7,010	7,406	572,0	866	630	26,896	9,943	48,248	7,010	7,406	572,0	866	
80°	442	42	462	14,58	3,968	20,109	5,928	2,852	0,810	0,380	632	26,993	9,957	48,272	7,023	7,420	573,0	868	632	26,993	9,957	48,272	7,023	7,420	573,0	868	
85°	444	43	464	14,66	3,978	20,209	5,930	2,854	0,810	0,383	634	27,090	9,971	48,296	7,036	7,434	574,0	870	634	27,090	9,971	48,296	7,036	7,434	574,0	870	
90°	446	43	466	14,74	3,988	20,309	5,932	2,856	0,810	0,386	636	27,187	9,985	48,320	7,049	7,448	575,0	872	636	27,187	9,985	48,320	7,049	7,448	575,0	872	
95°	448	44	468	14,82	3,998	20,409	5,934	2,858	0,810	0,389	638	27,284	10,000	48,344	7,062	7,462	576,0	874	638	27,284	10,000	48,344	7,062	7,462	576,0	874	
100°	450	44	470	14,90	4,008	20,509	5,936	2,860	0,810	0,392	640	27,381	10,014	48,368	7,075	7,476	577,0	876	640	27,381	10,014	48,368	7,075	7,476	577,0	876	
105°	452	45	472	14,98	4,018	20,609	5,938	2,862	0,810	0,395	642	27,478	10,028	48,392	7,088	7,490	578,0	878	642	27,478	10,028	48,392	7,088	7,490	578,0	878	
110°	454	45	474	15,06	4,028	20,709	5,940	2,864	0,810	0,398	644	27,575	10,042	48,416	7,101	7,504	579,0	880	644	27,575	10,042	48,416	7,101	7,504	579,0	880	
115°	456	46	476	15,14	4,038	20,809	5,942	2,866	0,810	0,401	646	27,672	10,056	48,440	7,114	7,518	580,0	882	646	27,672	10,056	48,440	7,114	7,518	580,0	882	
120°	458	46	478	15,22	4,048	20,909	5,944	2,868	0,810	0,404	648	27,769	10,070	48,464	7,127	7,532	581,0	884	648	27,769	10,070	48,464	7,127	7,532	581,0	884	
125°	460	47	480	15,30	4,058	21,009	5,946	2,870	0,810	0,407	650	27,866	10,084	48,488	7,140	7,546	582,0	886	650	27,866	10,084	48,488	7,140	7,546	582,0	886	
130°	462	47	482	15,38	4,068	21,109	5,948	2,872	0,810	0,410	652	27,963	10,098	48,512	7,153	7,560	583,0	888	652	27,963	10,098	48,512	7,153	7,560	583,0	888	
135°	464	48	484	15,46	4,078	21,209	5,950	2,874	0,810	0,413	654	28,060	10,112	48,536	7,166	7,574	584,0	890	654	28,060	10,112	48,536	7,166	7,574	584,0	890	
140°	466	48	486	15,54	4,088	21,309	5,952	2,876	0,810	0,416	656	28,157	10,126	48,560	7,179	7,588	585,0	892	656	28,157	10,126	48,560	7,179	7,588	585,0	892	
145°	468	49	488	15,62	4,098	21,409	5,954	2,878	0,810	0,419	658	28,254	10,140	48,584	7,192	7,602	586,0	894	658	28,254	10,140	48,584	7,192	7,602	586,0	894	
150°	470	49	490	15,70	4,108	21,509	5,956	2,880	0,810	0,422	660	28,351	10,154	48,608	7,205	7,616	587,0	896	660	28,351	10,154	48,608	7,205	7,616	587,0	896	
155°	472	50	492	15,78	4,118	21,609	5,958	2,882	0,810	0,425	662	28,448	10,168	48,632	7,218	7,630	588,0	898	662	28,448	10,168	48,632	7,218	7,630	588,0	898	
160°	474	50	494	15,86	4,128	21,709	5,960	2,884	0,810	0,428	664	28,545	10,182	48,656	7,231	7,644	589,0	900	664	28,545	10,182	48,656	7,231	7,644	589,0	900	
165°	476	51	496	15,94	4,138	21,809	5,962	2,886	0,810	0,431	666	28,642	10,196	48,680	7,244	7,658	590,0	902	666	28,642	10,196	48,680	7,244	7,658	590,0	902	
170°	478	51	498	16,02	4,148	21,909	5,964	2,888	0,810	0,434	668	28,739	10,210	48,704	7,257	7,672	591,0	904	668	28,739	10,210	48,704	7,257	7,672	591,0	904	
175°	480	52	500	16,10	4,158	22,009	5,966	2,890	0,810	0,437	670	28,836	10,224	48,728	7,270	7,686	592,0	906	670	28,836	10,224	48,728	7,270	7,686	592,0	906	
180°	482	52	502	16,18	4,168	22,109	5,968	2,892	0,810	0,440	672	28,933	10,238	48,752	7,283	7,700	593,0	908	672	28,933	10,238	48,752	7,283	7,700	593,0	908	
185°	484	53	504	16,26	4,178	22,209	5,970	2,894	0,810	0,443	674	29,030	10,252	48,776	7,296	7,714	594,0	910	674	29,030	10,252	48,776	7,296	7,714	594,0	910	
190°	486	53	506	16,34	4,188	22,309	5,972	2,896	0,810	0,446	676	29,127	10,266	48,800	7,309	7,728	595,0	912	676	29,127	10,266	48,800	7,309	7,728	595,0	912	
195°	488	54	508	16,42	4,198	22,409	5,974	2,898	0,810	0,449	678	29,224	10,280	48,824	7,322	7,742	596,0	914	678	29,224	10,280	48,824	7,322	7,742	596,0	914	
200°	490	54	510	16,50	4,208	22,509	5,976	2,900	0,810	0,452	680	29,321	10,294	48,848	7,335	7,756	597,0	916	680	29,321	10,294	48,848	7,335	7,756	597,0	916	
205°	492	55	512	16,58	4,218	22,609	5,978	2,902	0,810	0,455	682	29,418	10,308	48,872	7,348	7,770	598,0	918	682	29,418	10,308	48,872	7,348	7,770	598,0	918	
210°	494	55	514	16,6	4,228	22,709	5,980	2,904	0,810	0,458	684	29,515	10,322	48,896	7,361	7,784	599,0	920	684	29,515	10,322	48,896	7,361	7,784	599,0	920	
215°	496	56	516	16,68	4,238	22,809	5,982	2,906	0,810	0,461	686	29,612	10,336	48,920	7,374	7,798	600,0	922	686	29,612	10,336	48,920	7,374	7,798	600,0	922	
220°	498	56	518	16,76	4,248	22,909	5,984	2,908	0,810	0,464	688	29,709	10,350	48,944	7,387	7,812	601,0	924	688	29,709	10,350	48,944	7,387	7,812	601,0	924	
225°	500	57	520	16,84	4,258	23,009	5,986	2,910	0,810	0,467	690	29,806	10,364	48,968	7,400	7,826	602,0	926	690	29,806	10,364	48,968	7,400	7,826	602,0	926	
230°	502	57	522	16,92																							