

To continually examine our processes to provide greater value to our customers without waste.

# The Lean Line



## SAVING SPACE IN THE SUNSHINE STATE

Our Grunau office & shop area in Orlando, Florida went through a remodel in 2006, and they applied some Lean principles to maximize their space and efficiency.

One area that stands out is their long-term storage. When a nearby shopping mall was going through some demolition, Grunau happened to be doing a walk-through and noticed the jobsite had a rolling rack file system. The Contractor said they planned to toss away the racks during the demo, unless we wanted to buy the system from them. With our positive working relationship, we was able to contact another person at the site who said we could have the system for free if we pulled it out within 5 days before demo began.

Other than our labor to remove the system and reinstall it at the Grunau office, we received approximately \$12,000 worth of racks. Besides the rolling files, some of the extra racks were used in the shop for additional material storage. Thanks to the several Orlando team members who were instrumental in putting the racks in place and making the file system work.

Before the remodel, a full room was filled with file boxes; plus boxes were stored in the mezzanine area out by the shop. By using the rolling system, file boxes are stacked in much less real estate and are all in one room now. It's estimated we saved approximately 2,000 square feet of space by using the rolling files and there was enough space in the file room to add a conference area for the Service Dept. Additionally, the rolling system is ergonomically advantageous since people no longer have to pull boxes down the steps from the mezzanine and the files are easier to find with clear labeling and maps on the end of each rack row. Below are some pictures of this space-saving file system.



Rolling Rack System ↑



Service Conference Room ↑



File/Conf Room Combination ↑

Map of File Boxes on 1 Rack →

Rack 2 A											
0000	0001	0002	0003	0004	0005	0006	0007	0008	0009	0010	0011
0000	0001	0002	0003	0004	0005	0006	0007	0008	0009	0010	0011
0012	0013	0014	0015	0016	0017	0018	0019	0020	0021	0022	0023
0024	0025	0026	0027	0028	0029	0030	0031	0032	0033	0034	0035
0036	0037	0038	0039	0040	0041	0042	0043	0044	0045	0046	0047
0048	0049	0050	0051	0052	0053	0054	0055	0056	0057	0058	0059
0060	0061	0062	0063	0064	0065	0066	0067	0068	0069	0070	0071
0072	0073	0074	0075	0076	0077	0078	0079	0080	0081	0082	0083
0084	0085	0086	0087	0088	0089	0090	0091	0092	0093	0094	0095
0096	0097	0098	0099	0100	0101	0102	0103	0104	0105	0106	0107
0108	0109	0110	0111	0112	0113	0114	0115	0116	0117	0118	0119
0120	0121	0122	0123	0124	0125	0126	0127	0128	0129	0130	0131
0132	0133	0134	0135	0136	0137	0138	0139	0140	0141	0142	0143
0144	0145	0146	0147	0148	0149	0150	0151	0152	0153	0154	0155
0156	0157	0158	0159	0160	0161	0162	0163	0164	0165	0166	0167
0168	0169	0170	0171	0172	0173	0174	0175	0176	0177	0178	0179
0180	0181	0182	0183	0184	0185	0186	0187	0188	0189	0190	0191
0192	0193	0194	0195	0196	0197	0198	0199	0200	0201	0202	0203
0204	0205	0206	0207	0208	0209	0210	0211	0212	0213	0214	0215
0216	0217	0218	0219	0220	0221	0222	0223	0224	0225	0226	0227
0228	0229	0230	0231	0232	0233	0234	0235	0236	0237	0238	0239
0240	0241	0242	0243	0244	0245	0246	0247	0248	0249	0250	0251
0252	0253	0254	0255	0256	0257	0258	0259	0260	0261	0262	0263
0264	0265	0266	0267	0268	0269	0270	0271	0272	0273	0274	0275
0276	0277	0278	0279	0280	0281	0282	0283	0284	0285	0286	0287
0288	0289	0290	0291	0292	0293	0294	0295	0296	0297	0298	0299
0300	0301	0302	0303	0304	0305	0306	0307	0308	0309	0310	0311
0312	0313	0314	0315	0316	0317	0318	0319	0320	0321	0322	0323
0324	0325	0326	0327	0328	0329	0330	0331	0332	0333	0334	0335
0336	0337	0338	0339	0340	0341	0342	0343	0344	0345	0346	0347
0348	0349	0350	0351	0352	0353	0354	0355	0356	0357	0358	0359
0360	0361	0362	0363	0364	0365	0366	0367	0368	0369	0370	0371
0372	0373	0374	0375	0376	0377	0378	0379	0380	0381	0382	0383
0384	0385	0386	0387	0388	0389	0390	0391	0392	0393	0394	0395
0396	0397	0398	0399	0400	0401	0402	0403	0404	0405	0406	0407
0408	0409	0410	0411	0412	0413	0414	0415	0416	0417	0418	0419
0420	0421	0422	0423	0424	0425	0426	0427	0428	0429	0430	0431
0432	0433	0434	0435	0436	0437	0438	0439	0440	0441	0442	0443
0444	0445	0446	0447	0448	0449	0450	0451	0452	0453	0454	0455
0456	0457	0458	0459	0460	0461	0462	0463	0464	0465	0466	0467
0468	0469	0470	0471	0472	0473	0474	0475	0476	0477	0478	0479
0480	0481	0482	0483	0484	0485	0486	0487	0488	0489	0490	0491
0492	0493	0494	0495	0496	0497	0498	0499	0500	0501	0502	0503
0504	0505	0506	0507	0508	0509	0510	0511	0512	0513	0514	0515
0516	0517	0518	0519	0520	0521	0522	0523	0524	0525	0526	0527
0528	0529	0530	0531	0532	0533	0534	0535	0536	0537	0538	0539
0540	0541	0542	0543	0544	0545	0546	0547	0548	0549	0550	0551
0552	0553	0554	0555	0556	0557	0558	0559	0560	0561	0562	0563
0564	0565	0566	0567	0568	0569	0570	0571	0572	0573	0574	0575
0576	0577	0578	0579	0580	0581	0582	0583	0584	0585	0586	0587
0588	0589	0590	0591	0592	0593	0594	0595	0596	0597	0598	0599
0600	0601	0602	0603	0604	0605	0606	0607	0608	0609	0610	0611
0612	0613	0614	0615	0616	0617	0618	0619	0620	0621	0622	0623
0624	0625	0626	0627	0628	0629	0630	0631	0632	0633	0634	0635
0636	0637	0638	0639	0640	0641	0642	0643	0644	0645	0646	0647
0648	0649	0650	0651	0652	0653	0654	0655	0656	0657	0658	0659
0660	0661	0662	0663	0664	0665	0666	0667	0668	0669	0670	0671
0672	0673	0674	0675	0676	0677	0678	0679	0680	0681	0682	0683
0684	0685	0686	0687	0688	0689	0690	0691	0692	0693	0694	0695
0696	0697	0698	0699	0700	0701	0702	0703	0704	0705	0706	0707
0708	0709	0710	0711	0712	0713	0714	0715	0716	0717	0718	0719
0720	0721	0722	0723	0724	0725	0726	0727	0728	0729	0730	0731
0732	0733	0734	0735	0736	0737	0738	0739	0740	0741	0742	0743
0744	0745	0746	0747	0748	0749	0750	0751	0752	0753	0754	0755
0756	0757	0758	0759	0760	0761	0762	0763	0764	0765	0766	0767
0768	0769	0770	0771	0772	0773	0774	0775	0776	0777	0778	0779
0780	0781	0782	0783	0784	0785	0786	0787	0788	0789	0790	0791
0792	0793	0794	0795	0796	0797	0798	0799	0800	0801	0802	0803
0804	0805	0806	0807	0808	0809	0810	0811	0812	0813	0814	0815
0816	0817	0818	0819	0820	0821	0822	0823	0824	0825	0826	0827
0828	0829	0830	0831	0832	0833	0834	0835	0836	0837	0838	0839
0840	0841	0842	0843	0844	0845	0846	0847	0848	0849	0850	0851
0852	0853	0854	0855	0856	0857	0858	0859	0860	0861	0862	0863
0864	0865	0866	0867	0868	0869	0870	0871	0872	0873	0874	0875
0876	0877	0878	0879	0880	0881	0882	0883	0884	0885	0886	0887
0888	0889	0890	0891	0892	0893	0894	0895	0896	0897	0898	0899
0900	0901	0902	0903	0904	0905	0906	0907	0908	0909	0910	0911
0912	0913	0914	0915	0916	0917	0918	0919	0920	0921	0922	0923
0924	0925	0926	0927	0928	0929	0930	0931	0932	0933	0934	0935
0936	0937	0938	0939	0940	0941	0942	0943	0944	0945	0946	0947
0948	0949	0950	0951	0952	0953	0954	0955	0956	0957	0958	0959
0960	0961	0962	0963	0964	0965	0966	0967	0968	0969	0970	0971
0972	0973	0974	0975	0976	0977	0978	0979	0980	0981	0982	0983
0984	0985	0986	0987	0988	0989	0990	0991	0992	0993	0994	0995
0996	0997	0998	0999	1000	1001	1002	1003	1004	1005	1006	1007
1008	1009	1010	1011	1012	1013	1014	1015	1016	1017	1018	1019
1020	1021	1022	1023	1024	1025	1026	1027	1028	1029	1030	1031
1032	1033	1034	1035	1036	1037	1038	103				