

If Time Is Money, How Can I Control the Clock?

by Joe Stoddard

Last month we talked about determining your break-even point for the year and calculating the overall “contribution margin” of every job. Knowing how many jobs you need to complete and collect for on a monthly and quarterly basis is critical to meeting the financial goals you set for the period. But how do you know on a week-by-week — or even day-by-day — basis whether your jobs are moving you toward the goal line?

To answer that question, I need to introduce a new benchmark: Time. Yes, you’re going to need to establish a schedule for every job. For those of you doing smaller jobs or handyman-type work, your “schedule” might be nothing more than an educated guess — jotted down on a wall calendar — about the number of days required. As you move into building complex multi-trade projects and running several projects at a time, it will become more important to accurately estimate time. Not understanding the financial impact of understaffing a job (or worse, of letting a job sit with nothing happening) is one of the main reasons growing contractors get into trouble.

Once you understand how time and money work

together, you’ll be able to calculate yet another dimension of your projects, the one known in the manufacturing world as *production gain*: the dollar value of the work you can expect to install in a given time period and the impact of that “gain” on your financial plan for the year.

Consider the example in **Figure 1**, a deck-framing job with direct costs (sticks and bricks) of \$16,499 marked up 33.34 percent for a selling price of \$22,000 (25 percent gross profit margin). It’s scheduled to run for 20 days. If this were your job and everything went exactly as planned, the deck’s average retail value should increase by \$1,100 each day that you worked on it: $\$22,000 \div 20 \text{ days} = \$1,100$ per day. The gain may actually be a little less on the days that you set treated posts and a little more on the days that you install the exotic ipe decking, but on average the daily production gain, at retail, would be \$1,100.

That \$1,100 daily production gain can also be broken down into the components we talked about last month: a daily gross profit of \$275 and, after subtracting the indirect job costs, a “contribution margin” of 16.5 percent of the selling price, or roughly \$182 per day.

Tracking Contribution Margin (CM) by Project								
Sample Deck-Building Project								
Direct Costs	\$16,499							
Indirect Costs	\$1,870							
Required CM/Day	\$385 (based on \$100,000 total annual fixed overhead)							
	Days in Production	Markup	Selling Price	Production Gain/Day	CM/Day	Daily CM Under/Over	GP %	GP \$
Original	20	33.34%	\$22,000	\$1,100	\$182	\$(203)	25%	\$5,501
Change Markup	20	60%	\$26,398	\$1,320	\$389	\$4	37%	\$9,899
Change Schedule	9	33.34%	\$22,000	\$2,444	\$403	\$18	25%	\$5,501
Change Both	15	48%	\$24,419	\$1,628	\$394	\$9	32%	\$7,920

Figure 1. Assuming you had \$100,000 in annual fixed costs, you would need a daily contribution margin of \$385 to stay afloat. This chart shows that the sample 20-day \$22,000 deck job falls short of that goal, but that raising the markup or shortening the schedule — or doing both — could make the difference.

Start With Contribution Margin

If you’re a smaller contractor, that last number — the contribution margin dollars per day — is arguably the most important, because it tells you instantly whether you’re on track to achieve your long-term goals. Let’s say you used last month’s column to calculate your break-even point for the year, and it turned out you need an annual contribution margin of \$100,000 to keep the doors open. Should you take the deck job? It will keep your crew busy for almost an entire month, and you sold it with a nice fat markup of 33.34 percent. On the surface, it’s a no-brainer — until you compare the job’s daily contribution margin with your actual overhead requirements.

Business | If Time Is Money, How Can I Control the Clock?

As shown in Figure 1, an annual fixed overhead (including owner's salary) of \$100,000 breaks down to roughly \$385 daily. If the deck is the only job you have going, every day you're on that job you'd be falling short by \$202 — or \$1,000 per week and \$4,000 for the month. Not only are you not on target to meet your goals for the year, but before long you won't be able to pay yourself and you'll be using the next job's down payment to cover this job's expenses.

Once you know how to calculate your break-even point, it should be clear that you can no longer accept work that will not support your day-to-day operating requirements. Markup by itself is not enough information to go on; every time you look at a job, you also need to think about how many days of production will be required to earn that profit margin.

If the job can't support your overhead for that period, you have some decisions to make. You can:

- **Cut the time.** One solution may be to streamline your production processes so you can do the same amount of work with the same manpower but in fewer days. If you could complete the deck in nine days total instead of 20, it would yield a daily contribution margin of \$403, comfortably above the \$385 requirement. Is this feasible? Perhaps not in the short term, but you'll be amazed at how much wasted effort you can find once you start looking for it.
- **Raise the price.** Shortening the schedule may not be realistic, but raising the markup to 60 percent would yield a gross profit of roughly 37 percent, yielding an acceptable daily contribution margin of \$389. In my opinion, you're always better

off dealing with fewer jobs and customers at a higher profit margin than higher volume at a lower margin, but selling high markup work requires good sales skills, especially in the current market.

• **Do both.** A more realistic approach might be a combination of somewhat higher prices and somewhat shorter timelines. In the case of the deck job, a markup of 48 percent coupled with shaving a week off the schedule yields a daily contribution margin of \$394, plenty to cover your \$385 daily "nut."

Multiple Trades, Multiple Jobs

So far we've been talking about a deck job that involved a single trade — carpentry — with a little foundation work thrown in. What if you're managing several different trades? The same principles apply, except now the scheduling becomes much more complicated because not every trade will supply the same production gain or the same daily contribution margin.

Figure 2 shows a sample budget, by trade, for a room addition job that is being completely subbed out. Again, let's assume the remodeling company has a fixed annual overhead of \$100,000, or \$385 per day, \$1,923 per week. I've calculated the retail daily production gain and daily contribution margin for each trade by simply dividing the bid by the estimated number of days the trade will be on site. Note that most of the trades fall below the \$385 daily threshold. That means if the job were scheduled one trade at a time, it would not support the company's overhead, plus it would take 51 days — more than 10 weeks — to complete.

In this case, it's the responsibility of the project manager to set up the schedule so as to maximize the value being added to the job on any given day, with multiple trades on the job whenever possible and with little or preferably no

Tracking Contribution Margin (CM) by Trade Sample Room Addition (assumes 50% markup)							
	Days on Site	Direct Costs	Markup	Retail	Prod Gain Per Day	CM Per Day	Total CM Per Trade
Excavation	3	\$1,200	\$600	\$1,800	\$600	\$128	\$384
Foundation	5	\$5,000	\$2,500	\$7,500	\$1,500	\$320	\$1,600
Framing	5	\$3,500	\$1,750	\$5,250	\$1,050	\$224	\$1,120
Window-Door	3	\$4,000	\$2,000	\$6,000	\$2,000	\$427	\$1,280
Roofing	3	\$3,500	\$1,750	\$5,250	\$1,750	\$373	\$1,120
Siding	6	\$4,000	\$2,000	\$6,000	\$1,000	\$213	\$1,280
Plumbing	2	\$1,500	\$750	\$2,250	\$1,125	\$240	\$480
Electrical	3	\$1,500	\$750	\$2,250	\$750	\$160	\$480
HVAC	4	\$2,500	\$1,250	\$3,750	\$938	\$200	\$800
Insulation	1	\$1,400	\$700	\$2,100	\$2,100	\$448	\$448
Drywall	5	\$3,350	\$1,675	\$5,025	\$1,005	\$214	\$1,072
Paint	3	\$1,200	\$600	\$1,800	\$600	\$128	\$384
Interior Trim	4	\$5,000	\$2,500	\$7,500	\$1,875	\$400	\$1,600
Landscaping	2	\$3,000	\$1,500	\$4,500	\$2,250	\$480	\$960
Interior Punch	2	\$500	\$250	\$750	\$375	\$80	\$160
Totals	51	\$41,150	\$20,575	\$61,725	NA	NA	\$13,168

Figure 2. This chart shows production gain and contribution margin (CM) by trade for a sample room addition sold with a 50% markup for \$61,725 (33.33% gross profit margin). The example assumes indirect costs of 12% (for sales commission, supervision, etc.), leaving a CM percentage of 21.33% to cover the daily fixed expense of \$385. The CM per day for each trade is calculated by multiplying the trade's daily production gain by 21.33%.

Business | If Time Is Money, How Can I Control the Clock?

Scheduling Trades to Maximize Contribution Margin (CM)																					
			Week 1					Week 2					Week 3					Week 4			
Total CM Per Week			\$1,984					\$4,608					\$3,455					\$3,117			
Total CM Per Day			\$128	\$320	\$320	\$544	\$672	\$352	\$651	\$1,424	\$1,160	\$1,021	\$1,347	\$827	\$427	\$427	\$427	\$821	\$608	\$528	
Subcontractors	CM Per Day	Days on Site																			
Excavation	\$128	3	\$128	←dig			\$128	←backfill											\$128	←	
Foundation	\$320	5		\$320	\$320	\$320	\$320	←poured wall & flatwork						\$320	←exterior flatwork						
Framing	\$224	5				\$224	\$224	\$224	\$224	\$224											
Window & Door	\$427	3						\$427	\$427	\$427											
Roofing	\$373	3							\$373	\$373	\$373										
Siding & Ext. Trim	\$213	6											\$213	\$213	\$213	\$213	\$213	\$213			
Plumbing	\$240	2							\$240	←rough-in											
Electrical	\$160	3							\$160	\$160	←rough-in										
HVAC	\$200	4								\$200	\$200	\$200	←rough-in								
Insulation	\$448	1										\$448									
Drywall	\$214	5											\$214	\$214	\$214	\$214	\$214				
Paint	\$128	3						\$128	←paint trim									\$128	\$128		
Interior Trim	\$400	4											\$400	\$400	←casework					\$400	
Landscaping	\$480	2																\$480	\$480		
Interior Punch	\$80	2																			

	\$1,080	\$80
— final grade		
	\$240	←trim-out
	\$160	←trim-out
	\$200	←trim-out
	\$400	
	\$80	\$80

Figure 3. This schedule for the sample room addition in Figure 2 shows how stacking the trades on site — and thus shortening the time it takes to produce the job — helps achieve and exceed the company’s required daily contribution margin.

downtime when nothing is going on. The simple schedule in **Figure 3** stacks the trades where possible, cutting the overall completion time to four weeks and ensuring that each week covers the company’s fixed overhead requirements.

Providing Incentive

Since many owners are reluctant to talk specifically about markups and profit requirements with employees, using the idea of “daily contribution margin per trade” is a great way to incentivize your project managers without getting into sensitive numbers. Make a chart for your project managers listing the estimated gross daily dollar value for each trade, based on historical numbers. They can use this information to overlap the trades on the site whenever possible, and thus

strive to meet or beat daily and weekly contribution margin goals. This approach will also help to streamline the construction time for the project; building at a brisker pace, many studies have shown, keeps everyone on the job more focused and results in better quality and fewer warranty issues.

What if you’re a larger contractor and are already doing multiple projects at the same time? Then the total of all your jobs has to cover your daily margin requirements. If you have two crews, and one job is covering only 25 percent of the total, the other one will need to pick up the remaining 75 percent.

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