Lessons Learned: Labor Controls

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Introductions

Leslie Shiner
• Owner of The ShinerGroup
  – Financial & management consultant for over 25 years
  – MBA in Accounting and Finance from U.C. Berkeley
• Certifications
  – QuickBooks Advanced ProAdvisor
  – Sage Certified Consultant
• Author:
  – A Simple Guide to Turning a Profit as a Contractor

Annie Kendrick
• Owner of Kendrick Business Services
  – Over 20 years experience in construction accounting
  – B.S. University of Utah
• Certifications & Software
  – QuickBooks Advanced ProAdvisor
  – Developer Method CRM for Solar
• Business Development Programs
  – Port of Portland Mentor Protégé Program contracted trainer since 2012 for Estimating and Construction Accounting

From the Blog: Lessons Learned – Labor Controls

• My Sun Solar
  – Dave worked for a contractor who billed at $85 but only paid him $30
  – So he opened his own business to keep that profit on labor
  – He was sure to job cost his gross wages
  – He won several jobs and each job seemed profitable
  – But his bottom line was always negative
  – He couldn’t figure out where he was losing money!

Read the blog at:
What Did Dave Do Wrong?

My jobs look profitable, so why is my business losing money?

Learning Objectives

• Determine all costs that should be included in a fully burdened labor rate
• Uncover direct job costs hiding in your overhead costs
• Learn how to utilize this information to determine your billing rates
The Importance of Job Costing

• If you aren’t job costing, you can’t measure margins

• Need good understanding of the true cost of labor

• What do you really need to track?
  – Labor has the most risk
  – Are you tracking labor dollars and labor hours?

Basic Income Statement (P&L)

Multi-Step Financial Statement
For 12 Months Ended 12/31/XX

<table>
<thead>
<tr>
<th>Income</th>
<th>$XXX</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Direct Job Expenses or COGS)</td>
<td>$(XX)</td>
<td>xx%</td>
</tr>
<tr>
<td>Gross Profit</td>
<td>$XXX</td>
<td>Gross Margin</td>
</tr>
<tr>
<td>(Overhead Expenses)</td>
<td>$(XX)</td>
<td>xx%</td>
</tr>
<tr>
<td>Net Income</td>
<td>$XXX</td>
<td>xx%</td>
</tr>
</tbody>
</table>

All field labor costs (including burden) belong above the line!
Manage Labor Costs

- Know how much it costs to put an employee in the field
- Include fully burdened labor in estimates and job cost with same fully burdened rate
- As a solar contractor, majority of risk is in labor
  - *Billing rates need to cover gross wage, labor burden and overhead…*
  - *and still leave money for profit*

Fully Burdened Labor

- Burdened labor = gross pay to employees plus all the costs associated with paying employees
- Job cost fully burdened labor means:
  - *More accurate job costing*
  - *Higher COGS, lower overhead*
  - *Better understanding of true costs!*
- Allows accurate breakeven analysis and planning for growth
Job Cost Your Labor – With Burdens

- **Standard**
  - Payroll taxes

- **Other typical**
  - Workers' compensation
  - Liability insurance
  - Union Costs

- **Additional fringe benefits**
  - Health insurance
  - Pension and 401K
  - Vacation and sick

- **Variable overhead or “indirect direct”**
  - Vehicle expenses
  - Tools, communication equipment
  - Allocated overhead

Consider Other Costs

- **Variable overhead or “Indirect Direct”**
  - Communication equipment, cell phones
  - Vehicle costs
  - Small tools/supplies/consumables
  - Unbillable time, down time, windshield time
  - Safety meetings, production meetings
  - Education, training and certifications

- **All costs that belong to employees**
  - Ask yourself: If I hired another person, what costs would go up?
### Small Tools Calculations – Per Hour

- What was the total you spent last year on small tools?
- What were the total “productive” hours spent on the jobs?
- Divide to determine rate per hour
- Often rate is approximately $0.50/hr.
- Add burden per hour, not per dollar wage
  - *Less expensive employees often lose more tools than the more expensive employees*

### Vehicle Calculations

- Total spent on field vehicles
- Include:
  - *Fuel*
  - *Maintenance and repairs*
  - *Fees*
  - *Depreciation*
- Divide by total productive hours
- Determine rate per hour
- Often approximately $4 - $8 per hour
Think About Hourly vs. Monthly Costs

- You do the math
- Assume health insurance cost of $420 per month
- Assume 4.2 average weeks per month
- Cost is approximately $100 per week
- Hourly cost is $2.50 per hour
  - $100 ÷ 40 = $2.50

Understand Monthly Costs

- But what happens when an employee doesn’t work a full week? When it rains
- If you pay for only 32 hours in a week, it now costs $3.13 per hour
- What if your employee takes a week off unpaid?
- It still costs the same per month
  - But it costs more per hour!
Let’s Run Some Numbers

• Costs that are a percentage of wages

**Burdened Hourly Rate**

<table>
<thead>
<tr>
<th>HOURLY COSTS:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross</td>
<td>25.00</td>
</tr>
<tr>
<td>Social Security</td>
<td>6.20% 1.55</td>
</tr>
<tr>
<td>Medicare</td>
<td>1.45% 0.36</td>
</tr>
<tr>
<td>State Unemployment</td>
<td>3.50% 0.88</td>
</tr>
<tr>
<td>CA Emp Training Tax</td>
<td>0.10% 0.03</td>
</tr>
<tr>
<td>FUTA</td>
<td>0.80% 0.20</td>
</tr>
<tr>
<td>Worker’s Comp</td>
<td>5.00% 1.25</td>
</tr>
<tr>
<td>Liability Insurance</td>
<td>5.00% 1.25</td>
</tr>
<tr>
<td>Holiday - # of days:</td>
<td>10 4.00% 1.00</td>
</tr>
<tr>
<td>Vacation - # of days:</td>
<td>15 6.00% 1.50</td>
</tr>
<tr>
<td>Total Hourly</td>
<td>33.01</td>
</tr>
</tbody>
</table>

Let’s Run Some Numbers

• Costs that are monthly or yearly

<table>
<thead>
<tr>
<th></th>
<th>Per Month</th>
<th>Per Year</th>
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<tbody>
<tr>
<td>Health Insurance (ER portion)</td>
<td>550</td>
<td>6,600.00</td>
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<tr>
<td>Dental/Vision</td>
<td>125</td>
<td>1,500.00</td>
</tr>
<tr>
<td>401K Match - Maximum</td>
<td>50</td>
<td>600.00</td>
</tr>
<tr>
<td>Cell Phones</td>
<td>100</td>
<td>1,200.00</td>
</tr>
<tr>
<td>Office Supplies/Small Tools</td>
<td>400</td>
<td>4,800.00</td>
</tr>
<tr>
<td>Vehicle Costs</td>
<td>1,500</td>
<td>18,000.00</td>
</tr>
<tr>
<td>Overhead per FTE</td>
<td>Others ?</td>
<td></td>
</tr>
</tbody>
</table>
Determine Burdened Cost Per Hour

Gross: $25.00/hour

Burdened: $50.61/hour

Burdened with 55% utilization: $92.02/hour

WSIC?

- Why should you care about true labor costs?
  - Tracking burdened cost provides more accurate job costing
  - Allows you to set correct hourly billing rates for pricing
    - Ensure that labor billing rates cover all costs
  - You can help employees understand costs of their time
Labor Shortage Is Severe

If projecting increased volume, you need to be sure you have the labor to complete the work

Or does your labor force need to be more efficient?

Employee Utilization

Total number of billable hours

Total number of hours paid

Labor Utilization Rate

Source: NAHB
Employee Utilization

How effective are your employees at generating revenue?

Upper Limit

Forecast

Last Year

Lower Limit

Employee Utilization

• Improve utilization before hiring more staff
  – *Increasing employee utilization will increase profitability without increasing expenses*

• Create an employee utilization goal

• Consider PTO (paid time off), training, production meetings, safety meetings, etc.
  – *80% to 85% may be the highest possible number you can achieve*
Benefits of Increased Utilization

- Increasing utilization reduces need for additional labor
- Increasing utilization reduces overhead, (cost of non-productive time)
- Increasing utilization provide ability to increase net profit
  - And ability to grow!

Labor Utilization Varies By Type Of Work

Service work includes:
- Higher overhead for dispatching and billing
- Increased time to stock truck for multiple jobs
- Increased driving time
- Lower efficiency

Larger contract work includes:
- Potentially fully productive days
- Additional costs for Site Superintendent

Determine where you can more easily improve utilization
Ask Your Employees

• Poll your employees
  – *Where do they see wasted time?*
  – *What can you do to make them more productive?*

• Are your most expensive employees doing the most difficult tasks?
  – *Who goes on the material runs?*

Ask Your Employees

• Do you need to hire more field personal or help your current crews be more efficient?
  – *Have you considered temporary labor force or more subcontractors?*
  – *Or would more administrative help make your employees more efficient?*
Consider Bonuses

Bonuses provide flexibility
- Wage increases are typically permanent
- Bonuses are discretionary

Employees must see their own impact
- Bonuses based on net profit are difficult to predict
- Employees must be able to answer this question:
  - "What can I do differently today to increase my bonus?"

Bonuses based on productivity can improve profits
- Provide budgeted hours on projects
- Provide incentives to keep projects on track
- Can base incentives on time instead of dollars

Apples to Apples Comparison

• Make sure you create estimates with same numbers that you job cost with
  - Estimate using burdened cost, not billing rate

<table>
<thead>
<tr>
<th></th>
<th>Hours</th>
<th>Rate</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimate</td>
<td>100</td>
<td>$80</td>
<td>$8,000</td>
</tr>
<tr>
<td>Actual</td>
<td>150</td>
<td>$40</td>
<td>$6,000</td>
</tr>
<tr>
<td>Variance</td>
<td>&lt;50&gt;</td>
<td></td>
<td>$2,000</td>
</tr>
</tbody>
</table>

Did you come in over or under budget?
Determine True Hourly Cost Before Setting a Billing Rate

- Determine gross wages
- Add burdens (some are percentages, some are fixed per year)
- Determine total labor costs
- Determine billable hours per year
- Determine burdened hourly cost for billable hours worked

Setting a Billing Rate

- Job revenue must produce enough money to cover
  - Direct job expenses
  - Overhead
  - And provide a profit

- What is your equipment, material & subcontrator markup?
  - How much overhead does that cover

- Billing rates for labor may provide more opportunity for markup
Sample Pricing

<table>
<thead>
<tr>
<th>Labor at Billing Rates</th>
<th>Includes Markup</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plus Equip/Material/Sub Costs</td>
<td></td>
</tr>
<tr>
<td>Subtotal</td>
<td></td>
</tr>
<tr>
<td>Markup</td>
<td></td>
</tr>
<tr>
<td>Sales Price</td>
<td></td>
</tr>
</tbody>
</table>

Right-Size Your Company

- Labor is tied to volume

- Determine the revenue generated per employee
  - Use as metrics for staffing

- If you do not fully burden your payroll:
  - Your overhead will increase at higher rate than direct expenses when volume goes up
  - Your gross margin will not be consistent
  - Your net profit may go down as your volume goes up
Summary

- Fully burdened labor is more accurate
- Use to create accurate estimates
- Find burdens hiding in your overhead
- Manage employee utilization
- Review billing rates

Thank You

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Business Development Program

• Blog Posts and Webinars
• QuickBooks Assessment or Re-assessment
• Ongoing help with QuickBooks and business questions
• Remote CFO Meetings

Lessons Learned – Blog and Webinar Program

• Labor Controls webinar and blog post
  – *This was the third webinar in the series of 6*

• 4th webinar and blog post: Making Decisions Based on False Profits

• Watch for the Energy Trust newsletter for more information
  – *Or check the website*

Learn more about other Lessons Learned at:
QuickBooks Assessment

- Analyze current business processes and compare to best practices for the solar industry:
  - Chart of Accounts setup and reporting
  - Project set up for tracking profitability – estimate vs actual
  - Project set up for managing projects and change orders
  - Use of cost codes for the solar industry
  - Entering of transactions associated with production and overhead
  - Best use of time tracking
  - Handling of inventory stock for job costing
  - Use of the matching principle
  - Accuracy of posting procedures
  - Many more review items summarized in 35-40 page report
  - Suggested improvements checklist
  - Follow up with meeting to discuss findings with key team members and outline for assistance

$500 after ETO match

Ongoing Help with Your Business

- Assistance with…
  - Payroll for good job costing set up
  - Forecasting and budgets
  - Labor burden calculations
  - Asset and Loan setup
  - 3rd party program integration and implementation
  - Work in Progress Reports
  - Tracking key performance indicators
  - Much more, just ask

$100 per hour after ETO match
Remote CFO Meetings

- Potential topics:
  - Analyze trended Profit and Loss Statement
  - Evaluate profitability, gross, net
  - Evaluation overhead and markup
  - Review fully burdened labor costs
  - Review process for job costing
  - Analyze business plan, mission statement and vision statement
  - Perform ratio analysis
  - Create Key Performance Indicators (KPI) metrics for your company
  - Review internal controls
  - Create and manage a cash flow projection
  - Investigate productivity reports and charge-out rates
  - Reconcile your books to the latest tax return

$300 per meeting after ETO match

Pre-requisite: file assessment and clean up

How to Get Started

- Complete the participation agreement and send to Jeni Hall at Energy Trust of Oregon. Jeni.Hall@energytrust.org

  - Once approved you will be directed to Survey Monkey to answer a few questions about your business and then you will be contacted to set up your first meeting.

  - You can also contact Annie Kendrick at Annie@AnnieKendrick.com or 541-926-6438 and she will help you navigate the start up process
## Burdened Hourly Rate*

<table>
<thead>
<tr>
<th>Total Estimated Hours Paid</th>
<th>2,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Estimated Billable Hours</td>
<td>1,100</td>
</tr>
</tbody>
</table>

### Hourly Costs:

| Gross | 25.00 |

Social Security | 6.20% | 1.55 |
Medicare | 1.45% | 0.36 |
State Unemployment | 3.50% | 0.88 |
CA Emp Training Tax | 0.10% | 0.03 |
FUTA | 0.80% | 0.20 |

Worker's Comp | 5.00% | 1.25 |
Liability Insurance | 5.00% | 1.25 |
Holiday - # of days: | 10 | 4.00% | 1.00 |
Vacation - # of days: | 15 | 6.00% | 1.50 |

Total Hourly | 33.01 |

### Convert to Yearly

| Hours paid per year | 2,000 | 66,025.00 |

<table>
<thead>
<tr>
<th>Per Month</th>
<th>Per Year</th>
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Total Yearly Cost | 101,225.00 |

| Total burdened hourly rate | 2,000 | 50.61 |
| Total hourly billable cost | 1,100 | 92.02 |
| Utilization rate | | 55% |

(*enter amounts in yellow only)

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