Business

Putting Your Purchasing System to Work

by Joe Stoddard

In July we discussed the basics of a purchasing system, and how it can help you control costs and improve the quality of your projects. This month, let's look at what it takes to put your system into action.

First, a quick recap: Your purchasing system is essentially a pre-agreement with your subs and suppliers; there's no way to put together a successful purchasing system without their involvement. For simplicity, I'm going to refer to both purchase orders (for materials) and work orders (for anything involving labor) as "POs." Keep in mind, though, that some software systems correctly differentiate between POs and WOs, because there are subtle accounting differences and the boilerplate text you use for each can be different.

The Holy Trinity of Documents

Let's review the three documents that a successful purchasing system requires for every trade or vendor:

The purchase (or work) order. The PO is an agreement between you and the vendor for what the vendor is going to provide for your project — what must be done or delivered in order for that vendor to get paid.

A scope of work. A scope of work is a written specification for the job or materials to be supplied. Most builders are familiar with scopes but don't get detailed enough. Each PO requires a separate scope or at least a clear section taken from a larger scope. For example, if you have a PO for rough plumbing and a second PO for hooking up fixtures, there should also be a scope of work for each phase. The PO tells the vendor or sub *what* you want provided, and the scope details *how* you want the work delivered.

A blanket trade (or vendor) agreement. In contrast to a PO — which is an agreement about a specific project — a blanket trade agreement (for subs) or blanket vendor agreement (for suppliers) is more like a handbook for how you want other businesses to work with your company. It covers such issues as your payment procedures and terms, your job-site smoking and music policies, whether subs or suppliers can post a yard sign, the hours your sites are open, and so forth. Whereas a separate PO is issued for every purchase on every job, a blanket agreement is something you agree to just once and keep on file, maybe with an annual renewal.

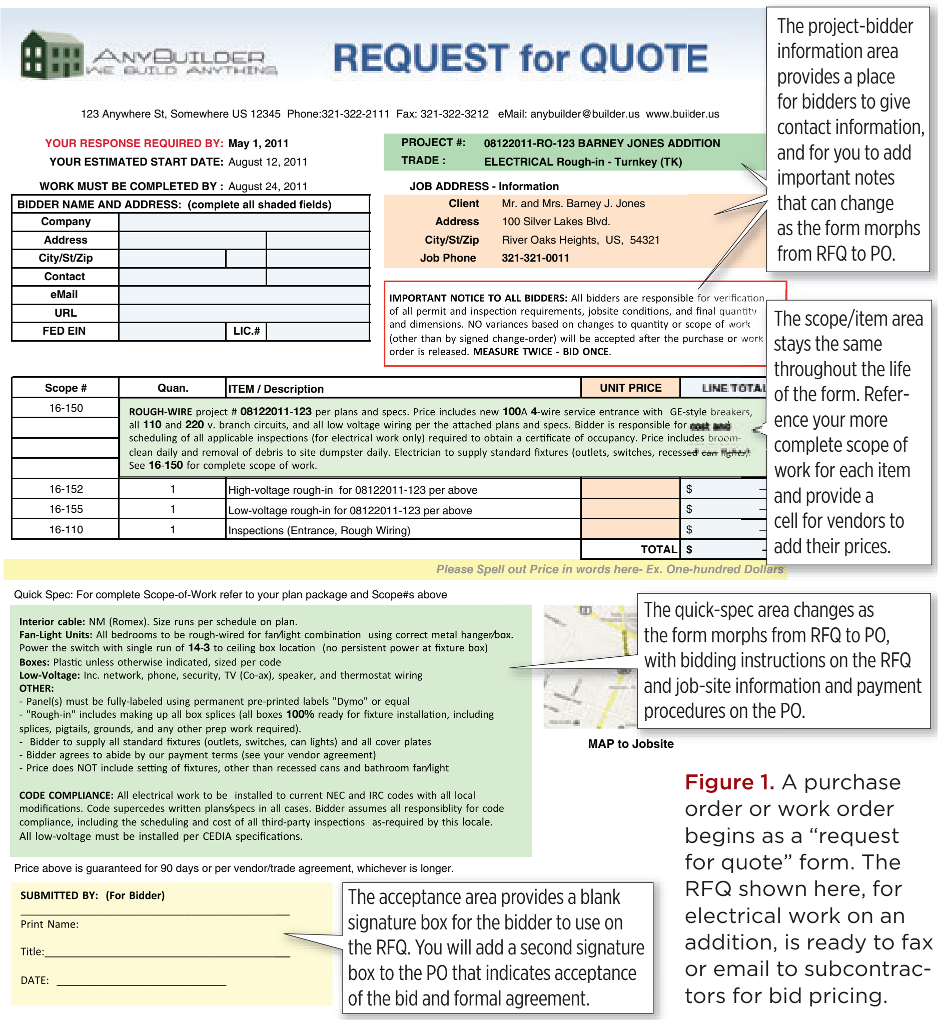
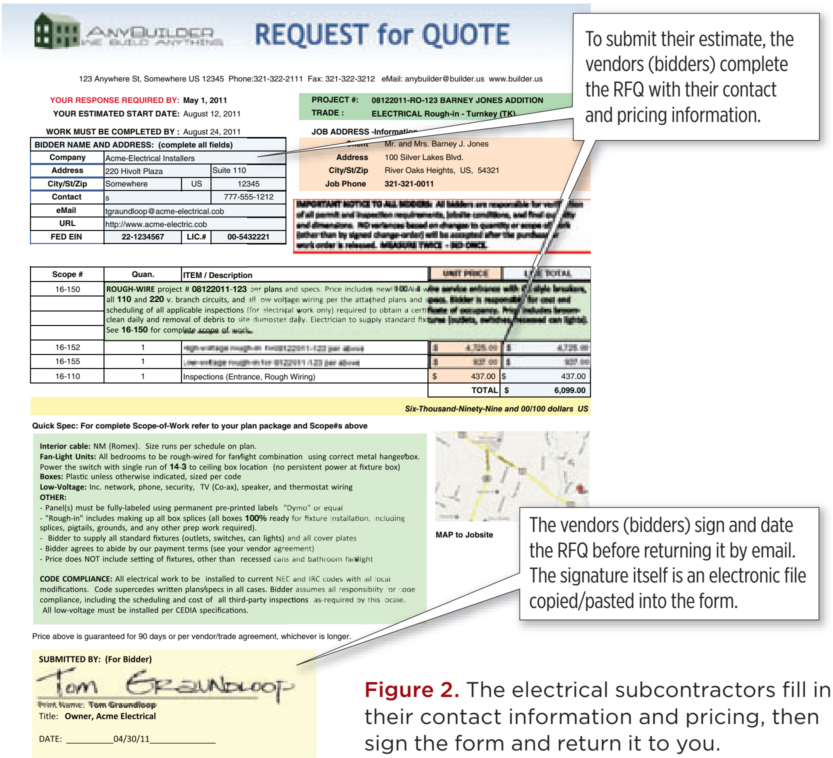


Figure 1. A purchase order or work order begins as a "request for quote" form. The RFQ shown here, for electrical work on an addition, is ready to fax or email to subcontractors for bid pricing.


ANYBUILDER
REQUEST for QUOTE

123 Anywhere St, Somewhere US 12345 Phone:321-322-2111 Fax: 321-322-3212 eMail: anybuilder@builder.us www.builder.us

YOUR RESPONSE REQUIRED BY: May 1, 2011
YOUR ESTIMATED START DATE: August 12, 2011
WORK MUST BE COMPLETED BY : August 24, 2011

PROJECT #: 08122011-RO-123 BARNEY JONES ADDITION
TRADE : ELECTRICAL Rough-in - Turnkey (TK)

BIDDER NAME AND ADDRESS: (complete all fields)			
Company	Acme-Electrical Installers		
Address	220 Hivolt Plaza		Suite 110
City/St/Zip	Somewhere	US	12345
Contact	s		777-555-1212
eMail	tgraundloop@acme-electrical.cob		
URL	http://www.acme-electric.cob		
FED EIN	22-1234567	LIC.#	00-5432221

JOB ADDRESS -Information
Client: Mr. and Mrs. Barney J. Jones
Address: 100 Silver Lakes Blvd.
City/St/Zip: River Oaks Heights, US, 54321
Job Phone: 321-321-0011

Scope #	Quan.	ITEM / Description	UNIT PRICE	LINE TOTAL
16-150		ROUGH-WIRE project # 08122011-123 per plans and specs. Price includes new ... all 110 and 220 v. branch circuits, and all low voltage wiring per the attached plans and ... scheduling of all applicable inspections (for electrical work only) required to obtain a certi... clean daily and removal of debris to site dumpster daily. Electrician to supply standard fix... See 16-150 for complete scope of work.		
16-152	1			
16-155	1			
16-110	1	Inspections (Entrance, Rough Wiring)	$ 437.00	$ 437.00
			TOTAL	$ 6,099.00

Six-Thousand-Ninety-Nine and 00/100 dollars US

Quick Spec: For complete Scope-of-Work refer to your plan package and Scope#s above

Interior cable: NM (Romex). Size runs per schedule on plan.
Fan-Light Units: All bedrooms to be rough-wired for fan/light combination using correct metal hanger/box. Power the switch with single run of 14-3 to ceiling box location (no persistent power at fixture box)
Boxes: Plastic unless otherwise indicated, sized per code
Low-Voltage: Inc. network, phone, security, TV (Co-ax), speaker, and thermostat wiring
OTHER:
- Panel(s) must be fully-labeled using permanent pre-printed labels "Dymo" or equal
- "Rough-in" includes making up all box splices (all boxes 100% ready for fixture installation, including splices, pigtails, grounds, and any other prep work required).
- Bidder to supply all standard fixtures (outlets, switches, can lights) and all cover plates
- Bidder agrees to abide by our payment terms (see your vendor agreement)
- Price does NOT include setting of fixtures, other than recessed cans and bathroom fan/light

CODE COMPLIANCE: All electrical work to be installed to current NEC and IRC codes with all local modifications. Code supercedes written plans/specs in all cases. Bidder assumes all responsibility for code compliance, including the scheduling and cost of all third-party inspections as-required by this locale. All low-voltage must be installed per CEDIA specifications.

MAP to Jobsite

Price above is guaranteed for 90 days or per vendor/trade agreement, whichever is longer.

SUBMITTED BY: (For Bidder)
Tom Graundloop
Print Name: Tom Graundloop
Title: Owner, Acme Electrical
DATE: 04/30/11

Figure 2. The electrical subcontractors fill in their contact information and pricing, then sign the form and return it to you.

Workflow Starts With RFQs

The same basic workflow will suffice for practically any size project, but for this month's example imagine a typical room-addition project where you'll sub some of the work and do other phases in-house.

Cost categories. First, you would determine all of the potential cost categories (foundation, framing, electrical) for the job at hand, using a comprehensive activity-cost list you've developed from, say, the NAHB chart of accounts (see "Introducing the NAHB Chart of Accounts," 10/10). This will become your master list of POs for the job (and any similar projects). It should be quite detailed, with each PO roughly corresponding to one task on a schedule. For example, "electrical" might require three separate POs and therefore three cost categories: "service entrance," "rough wiring," and "install fixtures/trim." It's better to have more POs — each with a discrete chunk of the work — than to try and combine multiple tasks on a single PO. Failing to be specific enough with POs is a common mistake.

Ideally you should be able to account for 100 percent of the direct costs of any job on your POs, starting with the earliest items like permits, layout, and utilities, and moving on to excavation, foundation, and framing — all the way through exterior and interior finishes. Some contractors also use POs to capture indirect job costs like dumpsters and Porta-Johns. Any cost category not released to an outside vendor should be captured on an "internal" PO — something you'll complete with your own crew.

Request for quote. The next three steps in the process all use the same basic form, which will save you considerable time and effort down the road. The simple form shown in **Figure 1** (see page 1) — the request for quote, or RFQ — morphs into a PO (or WO) with just a few simple changes and no redundant data entry.

For each cost category you intend to sub out or purchase from a vendor, you'll send out an RFQ that lists each of the items you want that particular vendor to price. This can be as simple as a lump sum — "Supply and install all rough and finished plumbing per the plans and scope of work" — or as detailed as a line-item bill-of-materials you provide to a lumberyard to price.

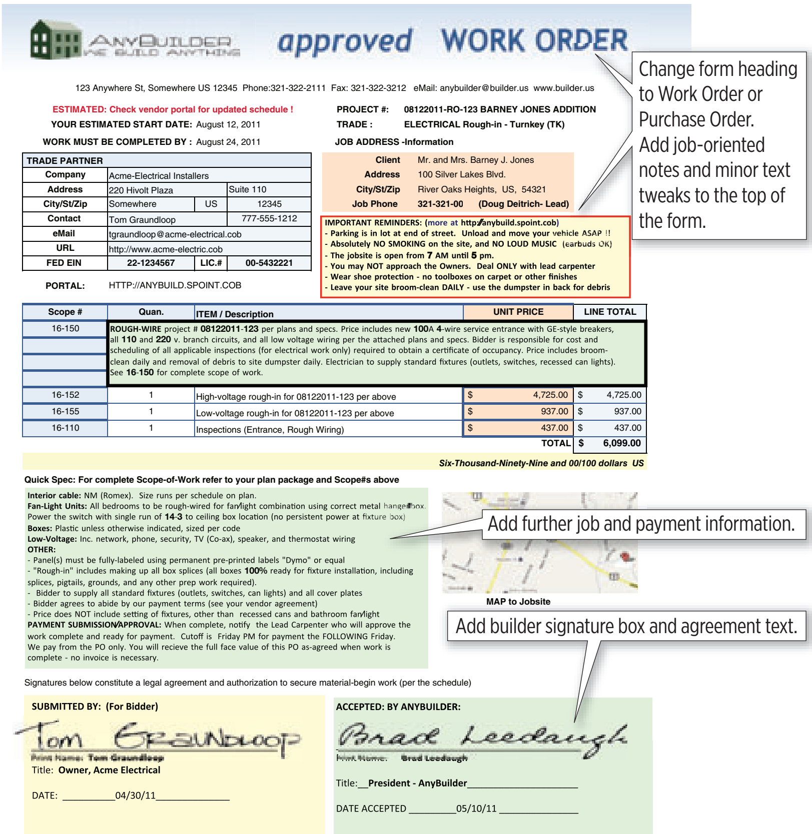
Signed vendor estimates. Subs and suppliers add their prices to the RFQ you've sent them, sign the bottom, and return it to you via fax or e-mail (**Figure 2**). If you've sent RFQs to multiple vendors, they'll all be pricing exactly the same thing. If you've done your homework and provided an adequate scope of work, the bids will be apples to apples, and the price provided should get that phase of the project built with no surprises (variances).

Buy-Out

Once you've reviewed the signed RFQs returned from your vendors and subcontractors, you'll decide who you want to hire to do the work (or buy materials from). This is called "buy-out." To buy out your job, you'll convert the estimates on the RFQs received from each vendor into a PO (or WO) and send it back out to the winning vendor at the appropriate time, this time adding your signature and the job notes and other information we discussed in July's column (**Figure 3, page 3**). Note that most of the PO form doesn't change; you're simply re-using the data entry from previous steps — the list of materials and labor you provided and the prices the subs and vendors returned to you.

Internal POs. At the same time you're releasing RFQs for the portions of the work you'll be purchasing from others, you should be completing detailed estimates for the portions of the work you intend to keep in-house. If you use historical cost data and lump sums to sell jobs, now is the time to create detailed estimates and bills-of-material for those phases.

PO release. After everything — plans, scopes, POs — has been reviewed for accuracy and completeness but before you actually start construction, you'll do the initial "release" of each set of POs to the winning vendors, including any internal



ANYBUILDER WE BUILD ANYTHING **approved WORK ORDER**

123 Anywhere St, Somewhere US 12345 Phone:321-322-2111 Fax: 321-322-3212 eMail: anybuilder@builder.us www.builder.us

ESTIMATED: Check vendor portal for updated schedule !
YOUR ESTIMATED START DATE: August 12, 2011
WORK MUST BE COMPLETED BY : August 24, 2011

PROJECT #: 08122011-RO-123 BARNEY JONES ADDITION
TRADE : ELECTRICAL Rough-in - Turnkey (TK)
JOB ADDRESS -Information

TRADE PARTNER			
Company	Acme-Electrical Installers		
Address	220 Hivolt Plaza		Suite 110
City/St/Zip	Somewhere	US	12345
Contact	Tom Graundloop		777-555-1212
eMail	tgraundloop@acme-electrical.cob		
URL	http://www.acme-electric.cob		
FED EIN	22-1234567	LIC.#	00-5432221

PORTAL: HTTP://ANYBUILD.SPOINT.COB

Client	Mr. and Mrs. Barney J. Jones
Address	100 Silver Lakes Blvd.
City/St/Zip	River Oaks Heights, US, 54321
Job Phone	321-321-00 (Doug Deitrich- Lead)

IMPORTANT REMINDERS: (more at http://anybuild.spoint.cob)
- Parking is in lot at end of street. Unload and move your vehicle ASAP !!
- Absolutely NO SMOKING on the site, and NO LOUD MUSIC (earbuds OK)
- The jobsite is open from 7 AM until 5 pm.
- You may NOT approach the Owners. Deal ONLY with lead carpenter
- Wear shoe protection - no toolboxes on carpet or other finishes
- Leave your site broom-clean DAILY - use the dumpster in back for debris

Scope #	Quan.	ITEM / Description	UNIT PRICE	LINE TOTAL
16-150		ROUGH-WIRE project # 08122011-123 per plans and specs. Price includes new 100A 4-wire service entrance with GE-style breakers, all 110 and 220 v. branch circuits, and all low voltage wiring per the attached plans and specs. Bidder is responsible for cost and scheduling of all applicable inspections (for electrical work only) required to obtain a certificate of occupancy. Price includes broom-clean daily and removal of debris to site dumpster daily. Electrician to supply standard fixtures (outlets, switches, recessed can lights). See 16-150 for complete scope of work.		
16-152	1	High-voltage rough-in for 08122011-123 per above	$ 4,725.00	$ 4,725.00
16-155	1	Low-voltage rough-in for 08122011-123 per above	$ 937.00	$ 937.00
16-110	1	Inspections (Entrance, Rough Wiring)	$ 437.00	$ 437.00
			TOTAL	$ 6,099.00

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Boxes: Plastic unless otherwise indicated, sized per code
Low-Voltage: Inc. network, phone, security, TV (Co-ax), speaker, and thermostat wiring
OTHER:
- Panel(s) must be fully-labeled using permanent pre-printed labels "Dymo" or equal
- "Rough-in" includes making up all box splices (all boxes 100% ready for fixture installation, including splices, pigtails, grounds, and any other prep work required).
- Bidder to supply all standard fixtures (outlets, switches, can lights) and all cover plates
- Bidder agrees to abide by our payment terms (see your vendor agreement)
- Price does NOT include setting of fixtures, other than recessed cans and bathroom fan/light

PAYMENT SUBMISSION/APPROVAL: When complete, notify the Lead Carpenter who will approve the work complete and ready for payment. Cutoff is Friday PM for payment the FOLLOWING Friday. We pay from the PO only. You will recieve the full face value of this PO as-agreed when work is complete - no invoice is necessary.

Signatures below constitute a legal agreement and authorization to secure material-begin work (per the schedule)

SUBMITTED BY: (For Bidder)
Tom Graundloop
Print Name: Tom Graundloop
Title: **Owner, Acme Electrical**
DATE: __________04/30/11______________

ACCEPTED: BY ANYBUILDER:
Brad Leedaugh
Print Name: Brad Leedaugh
Title:__**President - AnyBuilder**____________________
DATE ACCEPTED _________05/10/11 _______________

Figure 3. Once signed by the sub and returned to you, the RFQ becomes the approved work order with the addition of your signature and any further job and payment information you want to include. Sent back to the winning sub, this becomes the "contract" for that portion of the job.

work orders for tasks you'll be doing with your own crew. It's important to have every task or activity covered, because those sets of POs will serve as the instructions your project manager will use to build the job. If you haven't used a formal scheduling system before now, each set of vendor POs or trade WOs — taken in rough chronological order — will serve as a good framework for managing the job.

The PO release can be all at once for smaller jobs or in stages as appropriate. While it's always better to have the entire job speced out and priced before the start date, that's not always possible if you're doing highly custom work or are working time-and-materials. A good rule of thumb is to lock down whatever you can as soon as you can.

Request for payment. Once the POs are released and the job is under way, you'll manage your job day to day using the POs and scopes of work to check quality and certify completion of tasks. When a task is finished, the associated PO can be automatically flagged for payment. Likewise, if a vendor requests payment, your project manager should be able to quickly determine whether the work has been done in compliance with the PO and scope of work. If it has, you'll flag the PO for payment per the terms in the blanket vendor agreement.

When Things Go Wrong

In a perfect world, the job would progress smoothly from beginning to end with no changes, but of course that never happens. You'll encounter "variances" of both time and money, caused by anything from bad weather to job-site theft to basic human error. When further material or labor is needed beyond the amount indicated on the original PO, your project manager should be able to authorize the additional expenditure (up to some relatively small amount) and order the materials or labor as required on a variance PO. Variance POs should somehow reference the original PO number and should also include a variance code — a consistent way of stating the reason for the additional expense.

If the variance is more than you've authorized your PM to approve in the field, he'll have to get approval directly from you or his supervisor. All vendors must be put on notice that you will not pay for anything extra that's shipped to or installed on your job unless it's accompanied by a signed variance PO. By having your job set up in a purchasing system, you'll be better able to figure out what went wrong so you can do something about it before the job ends — and use what you learn so the same thing doesn't happen again.

Change orders. Finally, there are the kinds of variances initiated by your clients. Change orders are no different from any other project variance, but if you expect to get paid for them and protect your profit margin, you'll need a system in place. We'll talk more about COs next time, when I look at some more advanced variance procedures.

The ability to lock in project costs quickly, accurately, and completely is a hallmark of a good purchasing system. And because purchasing and estimating go hand in hand, the mechanism you use to control the projects you've already sold will also allow you to quickly price projects you're bidding on, giving you an edge competitively. Over time, as you improve and perfect the system, you'll find that accurately estimating new projects gets easier and faster.

*JLC contributing editor **Joe Stoddard** moderates the Business Technology forum at jlconline.com.*