

23RD ANNUAL



23RD LCI CONGRESS
OCTOBER 19-22

Are We Done Yet?

Curtis Schwartz

Lionel Campbell

Natasha Schnaitmann

Southland Industries

October 20, 2021

Health precautions to keep everyone as safe as possible at Congress:

- Wear masks at all times in indoor events.
- Complete your daily health screening on your phone and bring it with you when you enter the center each day.
- Practice social distancing to the extent possible. Seating at plenary sessions is being structured to help with this.
- If you feel ill at any time, please leave the conference and return to your room/consult a physician as necessary.
- Ultimately, our collective health and safety at Congress is up to all of us. Thanks for your support!



The Last 5% of the Job Takes the Most Effort

Labor Budget
Exceeded



Last Job
Kicked Our Ass

Goal: Reduce
Go-Backs

**Respect for People:
Make Work Easier
for Installers**

Reflection

The How – What Can Make Your Job Easier



Conduct Field Survey After Major Milestones or at Monthly Safety Lunch

- Most common Go-Back?
- Simplify Processes



Respectfully Ask Questions

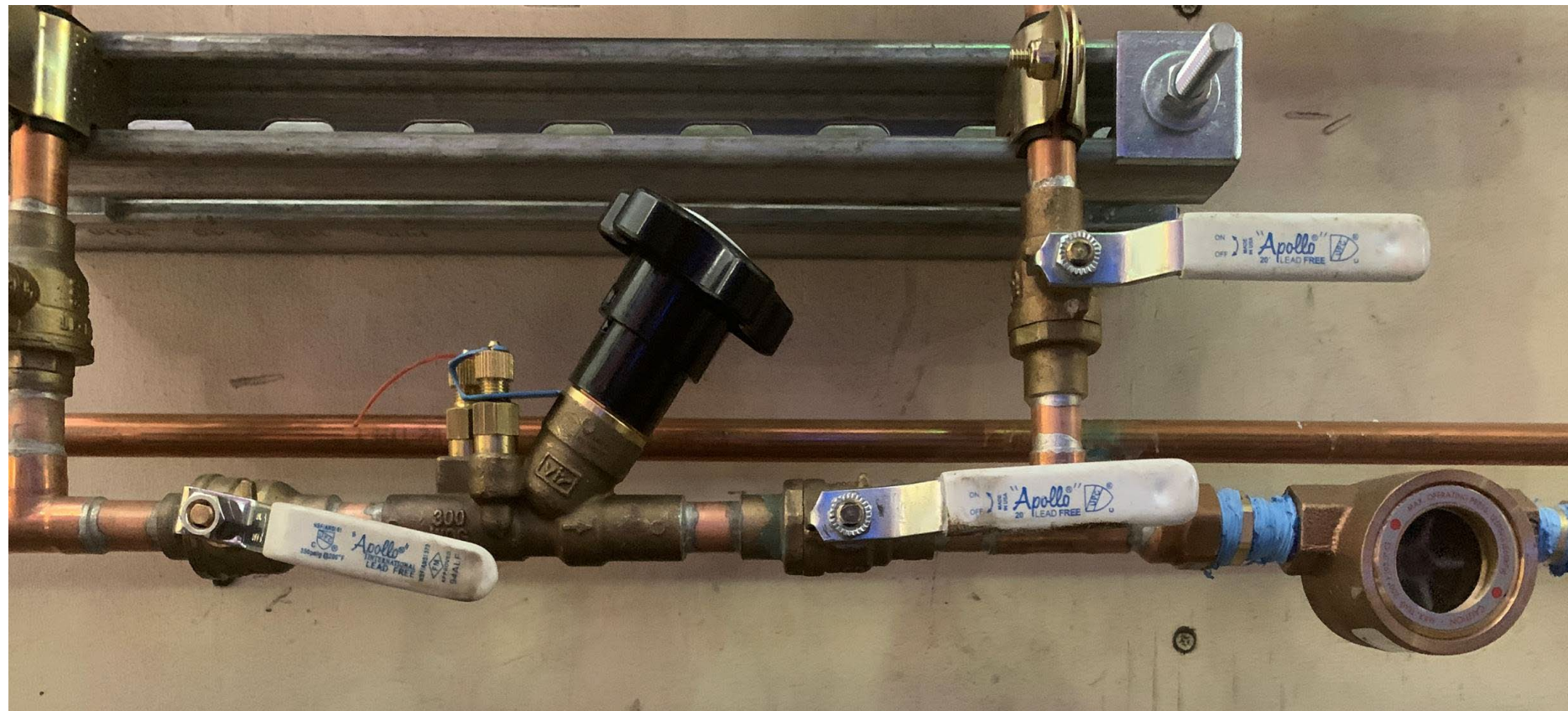
- Survey
- Time is of the essence



Identify Five Main Struggles

#1 Implement Circuit Solvers

- **Old Way:** manually adjust GPM, Go-Back to check flow rate after system is running
- Balancing cost varies
- Could spend a month and a half on one project



The Results

- **New Way:** Eliminate domestic hot water Go-Backs
 - Found product by doing online research
- Guaranteed Fixed Cost
- No increased pump size, results in energy savings



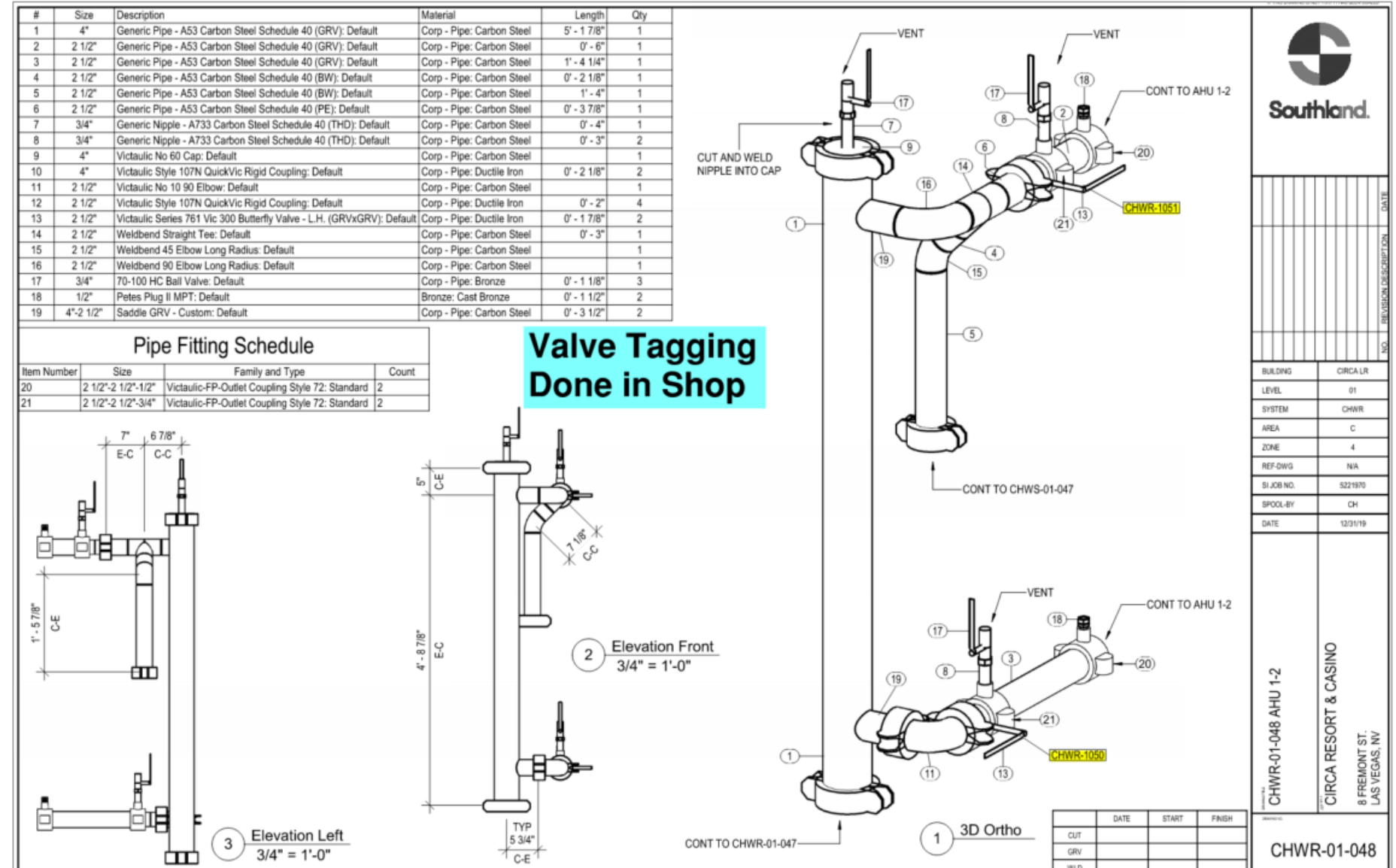
#1 Implement Circuit Solvers – Cost Analysis

Item	Material List Price			Labor, Manhours						Material + Labor			Labor Rate
	Size			Install			Balance ⁷						\$ 95.00
	1/2"	3/4"	1"	1/2"	3/4"	1"	1/2"	3/4"	1"	1/2"	3/4"	1"	
Circuit Solver Valve, NPT	\$ 302.00	\$ 320.00	\$ 544.00										
Circuit Setter, NPT	\$ 92.00	\$ 102.00	\$ 130.00	0.42	0.56	0.68	1.00	1.00	2.00				
ProPress Ball Valve	\$ 37.57	\$ 50.10	\$ 71.30	0.42	0.56	0.68							
ProPress Check Valve	\$ 112.71	\$ 144.57	\$ 204.91	0.42	0.56	0.68							
ProPress Strainer	\$ 70.70	\$ 89.13	\$ 141.74	0.42	0.56	0.68							
Assembly													
Circuit Solver Valve, NPT Union, w/ Check Valve ¹	\$ 314.00	\$ 332.00	\$ 556.00	\$ 39.90	\$ 53.20	\$ 64.60				\$ 353.90	\$ 385.20	\$ 620.60	
Circuit Setter Valve, NPT ²	\$ 204.71	\$ 246.57	\$ 334.91	\$ 79.80	\$ 106.40	\$ 129.20	\$ 95.00	\$ 95.00	\$ 190.00	\$ 379.51	\$ 447.97	\$ 654.11	
Circuit Solver Valve, NPT Union, w/ 2 Ball Valves ¹	\$ 386.00	\$ 402.00	\$ 640.00	\$ 39.90	\$ 53.20	\$ 64.60				\$ 425.90	\$ 455.20	\$ 704.60	
Circuit Setter Valve, NPT ³	\$ 167.14	\$ 202.20	\$ 272.60	\$ 119.70	\$ 159.60	\$ 193.80	\$ 95.00	\$ 95.00	\$ 190.00	\$ 381.84	\$ 456.80	\$ 656.40	

- SET IT AND FORGET IT!!
- This cost is labor to install circuit solvers or circuit setters only
- Cost does not represent any go-back labor that we would have to do for circuit setters

#2 Valve Tag In Shop – Field Labor Savings

- Recent project 1M SF
- Two workers went back with ladders for three weeks; posed a safety risk
- Next job installed valve tags in shop
- For project this size, labor savings was about \$23K



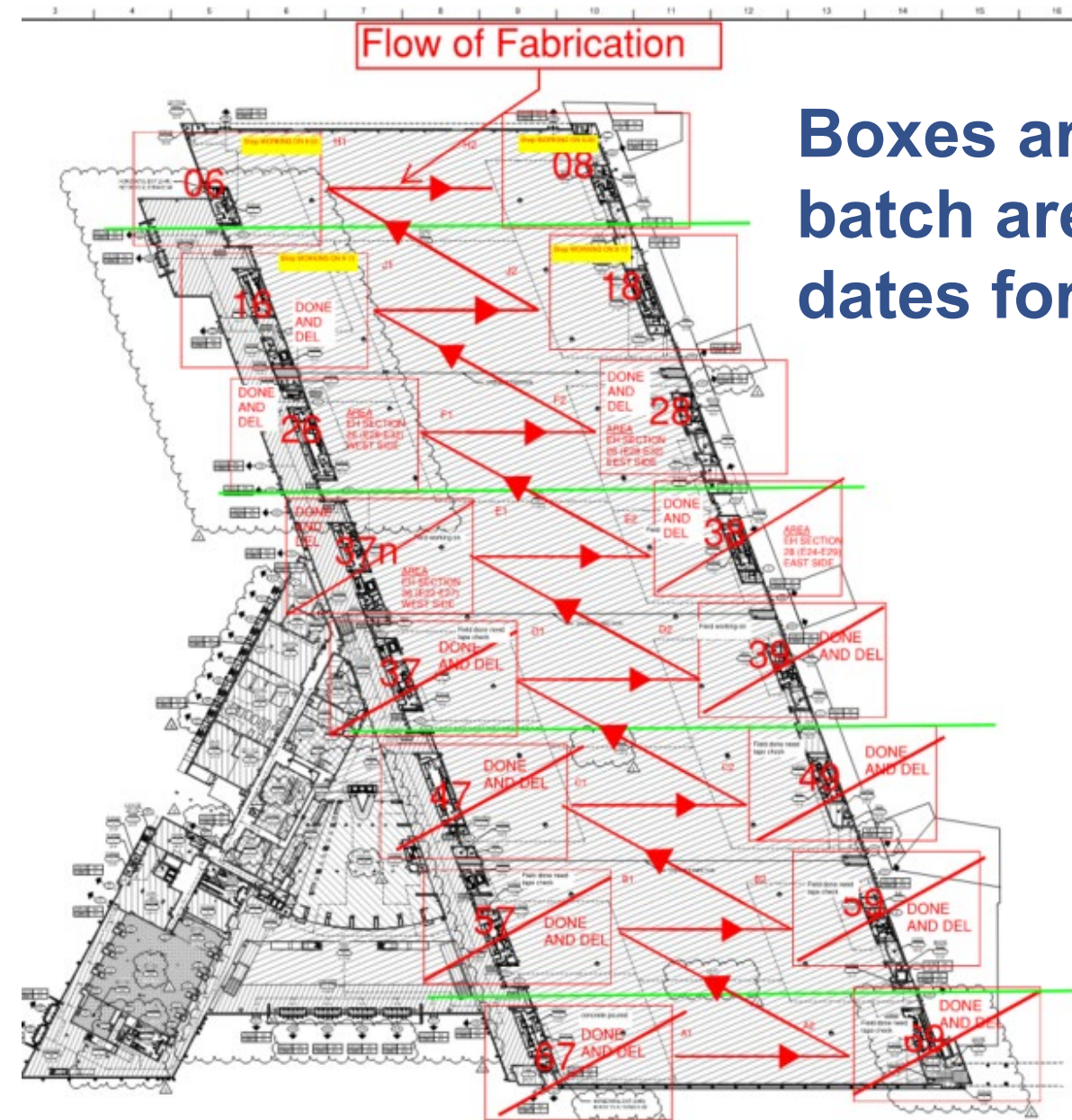
#3 Small Batches – Utilize Shop Strengths

- Shop Conditions
 - Use Small Batch Ordering
 - Good Fabrication
 - No Lay Down
 - Rapid Batch Assembly
 - Poor Material Management
 - Small batch material deliveries but bulk buy pricing



#3 Small Batches – Utilize Shop Strengths

- Easy sorting of material as prefabbed
- Less material management
- With increased fabrication, field went from 15-20ft/mday (on-site) to 35-40ft/mday after changing process, using detailing/shop and Trimble
- Allowed shop and field to meet productivity rates on a complicated project
- Over 60,000 ft of underground piping



Boxes are small batch areas with dates for BOM's

#4 Praxair Bottle Tracking Process Improvement

- Lost Bottles = Purchased Bottles
- Cost \$100-\$1K / Bottle
- Last 4 Years Purchased \$6K-\$7K / Year



Sentry - SOUTHLAND INDUSTRIES #MMS# (71480677) as of 7/20/2021 5:00 PM

17 rows.

Customer	Customer Name	Delivered	Order	Purchase Order	Days Held	Category	Group	Type	Product Code	Description	Ownership	Barcode	Serial Number	Status
71480677	SOUTHLAND INDUSTRIES #MMS#	5/17/2021	91873382 (717804)	717804	64	GS2-Pkg Industrial Gas	G20-Pkg Ind General Pures	B20-Argon	AR T	ARGON T	LINDE	200007510124	T59.222	Delivered
71480677	SOUTHLAND INDUSTRIES #MMS#	3/3/2021	91232491 (5222077-708711)	5222077-708711	139	GS2-Pkg Industrial Gas	G22-Pkg Ind Metal Fabrica	A22-Gas Metal Arc Welding-General	AR STAR14-T	STARGOLD C25 ARG-CO2 25% T	LINDE	200005790972	HPT097550	Delivered
71480677	SOUTHLAND INDUSTRIES #MMS#	2/26/2021	91198371 (708370)	708370	144	GS2-Pkg Industrial Gas	G22-Pkg Ind Metal Fabrica	A22-Gas Metal Arc Welding-General	AR STAR14-T	STARGOLD C25 ARG-CO2 25% T	LINDE	200005793691	WISC0CH1640	Delivered

- Improvement: Vendor put QR Code on Bottles
- No Bottles Purchased – Saved \$7K / Year

#5 Tool Inventory Scanning Process Improvement

Old Way

- No place for barcode
- No iPad friendly
- No sort option
- No ability to create forms

9	Grinders	52-610260	52-610260	Angle Grinder 4-1/2"-5"	OK	1	1	52-Damon Wildmon	Truck Tools	Wildmon, Damon	Southwest - LV
0	Levels & Transits	52-610126	52-610126	Leser Multi- Directional Beam Compact	OK	1	1	52-Damon Wildmon	Truck Tools	Wildmon, Damon	Southwest - LV
1	Safety Equipment	52-610047	52-610047	Lifeline-Lanyard Double	OK	1	1	52-Damon Wildmon	Truck Tools	Wildmon, Damon	Southwest - LV
2	Drills	52-610609		Hammer Drill Cordless	OK	1	1	52-Damon Wildmon	Truck Tools	Wildmon, Damon	Southwest - LV
3	Miscellaneous	52-610866	52-610866	Impact Wrench Cordless	OK	1	1	52-Damon Wildmon	Truck Tools	Wildmon, Damon	Southwest - LV
4	Cutters	52-611026	52-611026	Double Cuts Cordless	OK	1	1	52-Damon Wildmon	Truck Tools	Wildmon, Damon	Southwest - LV
5	Miscellaneous	52-610884	52-610884	Impact Wrench Cordless/Driver	OK	1	1	52-Damon Wildmon	Truck Tools	Wildmon, Damon	Southwest - LV
6	Drills	52-611123	52-611123	Drill 1/4" Cordless Impact	OK	1	1	52-Damon Wildmon	Truck Tools	Wildmon, Damon	Southwest - LV
7	Ladders	52-612775		8' Step Ladder	OK	1	1	52-Damon Wildmon	Truck Tools	Wildmon, Damon	Southwest - LV
8	Cutters	52-609896		Cordless Tubing Cutter	OK	1	1	52-Danny Vella	Truck Tools	Vella, Danny	Southwest - LV
9	Miscellaneous	52-610954	52-610954	Impact Wrench Cordless/Driver	OK	1	1	52-Danny Vella	Truck Tools	Vella, Danny	Southwest - LV
0	Drills	52-611053	52-611053	Hammer Drill Electric	OK	1	1	52-Danny Vella	Truck Tools	Vella, Danny	Southwest - LV
1	Saws	52-612334		Cordless Hackzall Reciprocating Saw	OK	1	1	52-Danny Vella	Truck Tools	Vella, Danny	Southwest - LV
2	Grinders	52-612824		Cordless Grinder 4-1/2"-5"	OK	1	1	52-Danny Vella	Truck Tools	Vella, Danny	Southwest - LV
3	Saws	52-613095		Cordless Bandsaw Compact	OK	1	1	52-Danny Vella	Truck Tools	Vella, Danny	Southwest - LV
4	Miscellaneous	52-613330		Cordless Drain Snake	OK	1	1	52-Danny Vella	Truck Tools	Vella, Danny	Southwest - LV
5	Miscellaneous	52-613336		Flat Drill Cleaning Machine	OK	1	1	52-Danny Vella	Truck Tools	Vella, Danny	Southwest - LV

#5 Tool Inventory Scanning Process Improvement

New Way

- Barcode Search
- iPad Friendly
- 100% Paperless
- Yellow Are Drop-Down Menus That Pre-Populates Form

	A	B	C	D	E	F	G	H	I	J	K	L
1	Need Barcode	Bar Code #	Tool Type	Tool ID	Tool ID	Tool Description	Project ID	Project	Person	Serial Number	TOOL STATUS	TRANSFERRED TO
526			Gang Boxes	52-600861	52-600861	Chest Tall	5222191	P&G Eligo	Hurtado, Ricardo			
527			Welding Equipment	52-602187	52-602187	Arc Welder Gas	5222191	P&G Eligo	Hurtado, Ricardo	553356		
528			Pipe Machines & To	52-607859	52-607859	Pipe Vise Tri-Pod	5222191	P&G Eligo	Hurtado, Ricardo			
529			Grinders	52-613341		Angle Grinder 4-1/2"	5222191	P&G Eligo	Hurtado, Ricardo	H41BD191100224		
530			Grinders	52-613342		Angle Grinder 4-1/2"	5222191	P&G Eligo	Hurtado, Ricardo	H41BD191100225		
531			Gang Boxes	52-603389	52-603389	Chest Tall	5222191	P&G Eligo	Hurtado, Ricardo			
532			Pipe Machines & To	52-606191	52-606191	Pipe Vise Tri-Pod	5222191	P&G Eligo	Hurtado, Ricardo			
533			Welding Equipment	52-606948	52-606948	Arc Welder 180 Amp Gas	5222191	P&G Eligo	Hurtado, Ricardo	5572394		
534												

COINS_data
Tool Scan Bar #
ToolReturned_Form
ToolBroken_Form
ToolLostStolen_Form
ToolTransfer_Form

- Tool Inventory Time Reduced From a Week to Two Days
- Cost Savings \$2,300 / Foreman

How You Can Implement Improvements

- Ask questions to field personnel
 - What can make your life easier?
 - What is bugging you?
- Assign champions who are passionate
- Involve whole project team
- Make a plan and set a timeline
- Test run
- PDCA

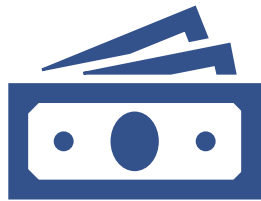
We saved 10 weeks and \$57,000



How Can You Apply This Tomorrow?



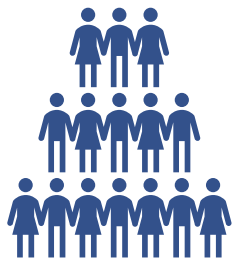
Survey
Template



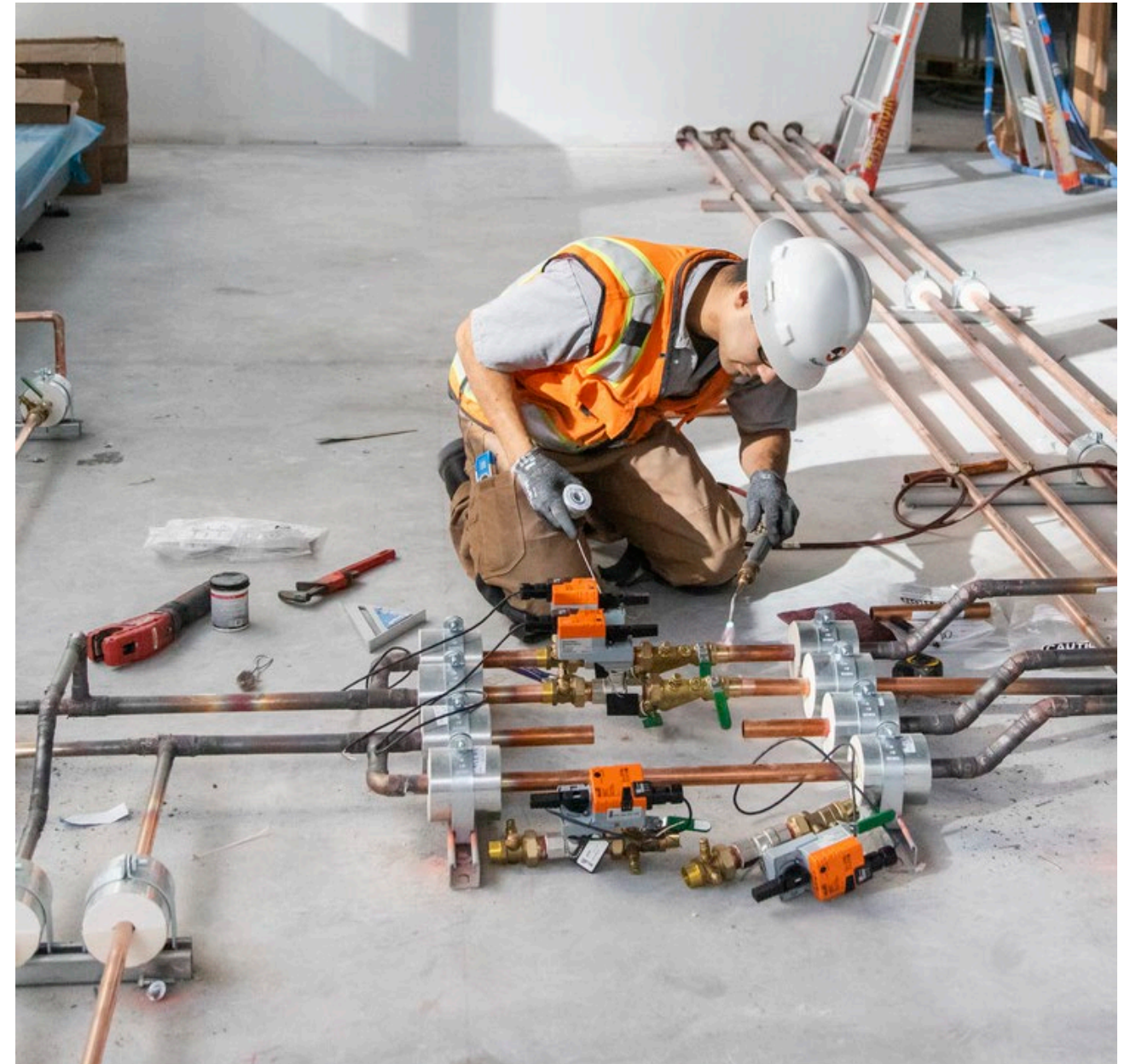
Analyze Cost Overruns
on Last Few Projects



Communicate with
Field Personnel



Enable Team
Members





23RD LCI CONGRESS
OCTOBER 19-22



In the spirit of continuous improvement, we would like to remind you to complete this session's survey! We look forward to receiving your feedback.

Contact Us

Natasha Schnaitmann

Southland Industries

nschnaitmann@southlandind.com

Curtis Schwartz

Southland Industries

cschwartz@southlandind.com

Lionel Campbell

Southland Industries

lcampbell@southlandind.com



23RD LCI CONGRESS
OCTOBER 19-22

Thank you for attending this presentation. Enjoy the rest of the 23rd Annual LCI Congress!