

Project Closeout

Foreman's Development Series

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Definition



Project Closeout

- A structured process that includes all Documents, Certificates, and Inspections required to complete a construction project.

Objectives



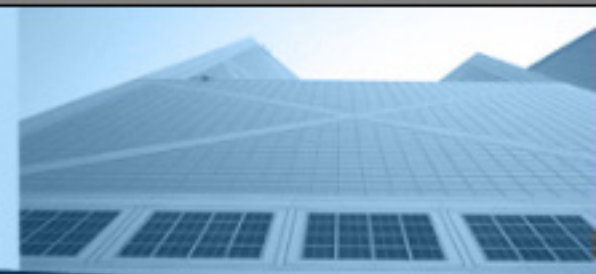
- To become familiar with typical closeout procedures.
- To identify required documents, certificates, and inspections needed for project closeout.
- To understand the importance of customer relationships to ensure the continuity of Union work.

Group Activity #1



Make a list of all the things that you think will be required to close out a project.

Group Activity #1



Record Drawings

Final As-Built Drawings
Shop Drawings
O&M Manuals
QA/QC Records

Code Inspections

Electrical Inspection Final
Certificate of Occupancy Permit
Elevator Acceptance
Fire Marshall's Acceptance
Closeout of Electrical Permits

Commissioning

Documentation
Operations Videos
Training Requirements
Testing Results

Spare Parts

Extra Materials
Salvaged Equipment
Keys & Key Schedules

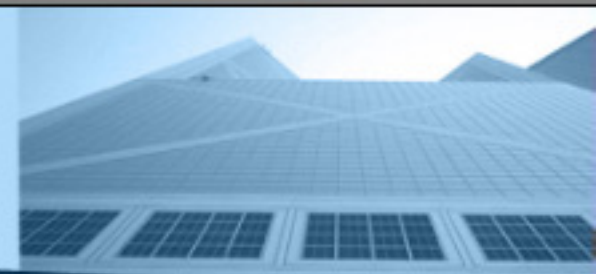
Money Items

Application for Final Payment
Lien Waivers / Affidavits
Affidavits for Payment of Debts
Wage Certificates

Contract Requirements

Completed Punch Lists
Resolution of Change Orders
Claims Resolved
RFI Resolution Log
Warranties and Guarantees

Specifications



- The Closeout procedures are usually located in Division 1, Section 01770 of the Specifications.
- Other Specification Sections will be referred to as they relate to additional closeout information.

Why is it Important?



- To finish the job and demobilize as quickly and efficiently as possible
- To start the Warranty period
- To reduce the Contractor's Bond
- To request Final Payment

Punch List



- A list of things to do at the end of the job, prior to Substantial Completion:
 - that are incomplete, damaged, or
 - unacceptable work not meeting Specification.
- The GC will request a Final Inspection and the Punch List process begins.

What is “Substantial Completion”?



“The stage at which the building is sufficiently complete, in accordance with the construction contract documents, for the Owner to use or occupy for its intended purpose.”

Group Activity #2



According to Specification Section 01770, 1.3 A, before requesting “Inspection for Substantial Completion”.....

- What items listed here do you think will be the Foreman’s responsibility?

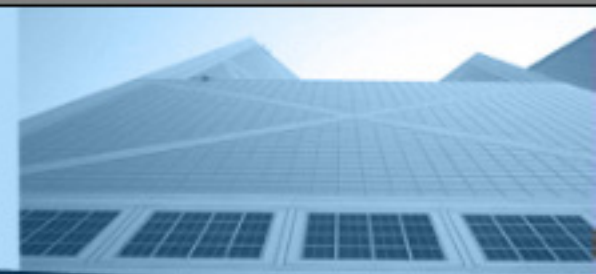
Shrink the Job



Getting ready for the Final Inspection:

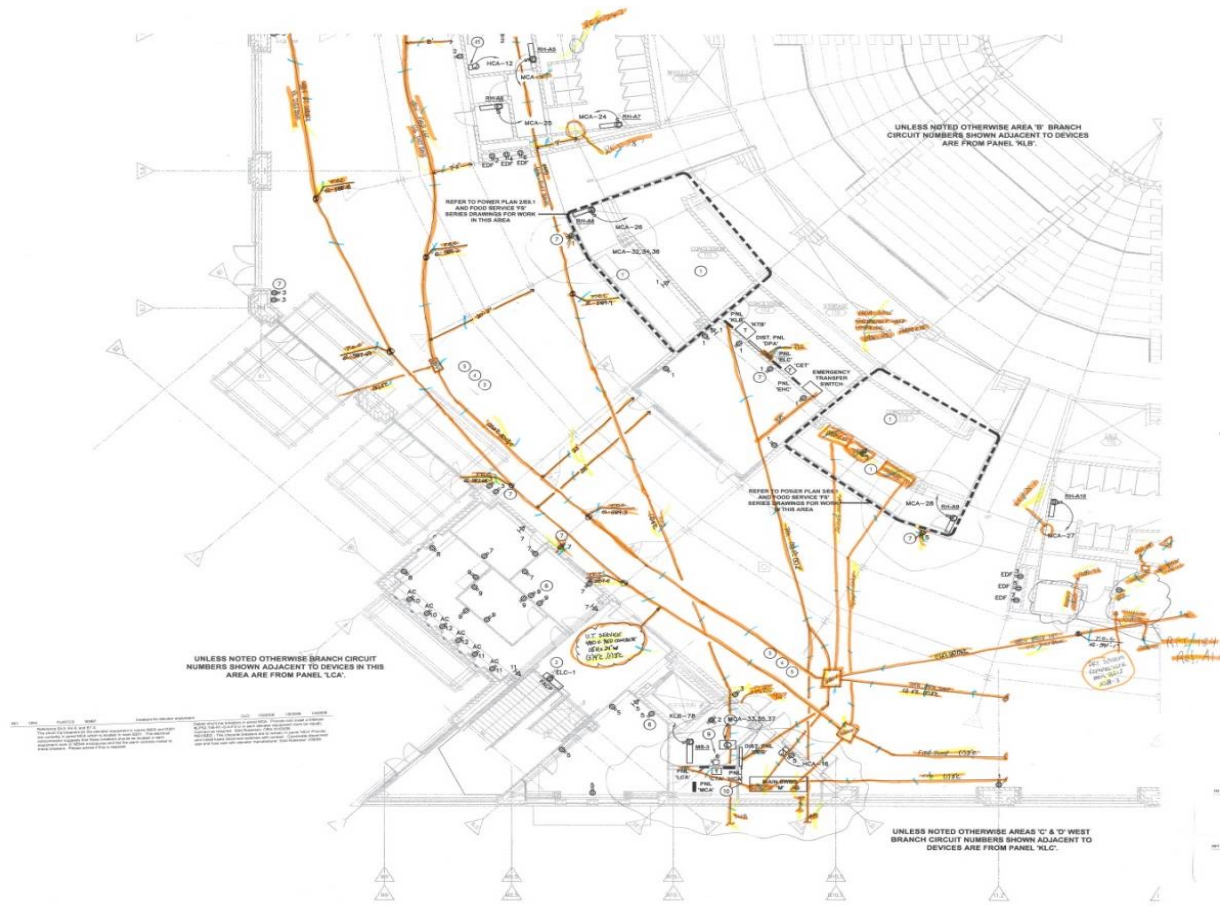
- Start shrinking the job as soon as possible
- Complete Task Sheets by Room/Area (Foreman's To-Do List)
- Qualified QA/QC Person?

Project Record Documents



- As-Built Record Drawings
- Operation & Maintenance Manuals
- Required Inspections & Certificates
- Commissioning
- Guarantees and Warranties
- Affidavits & Certified Final Payroll Reports

Final As-Built Drawings



1 POWER PLAN - CONCOURSE LEVEL - AREA 'B'
SCALE: 1/8" = 1'-0"

GENERAL NOTES:
1. REFER TO SHEET E4.1 FOR GENERAL ELECTRICAL NOTES THAT SHALL APPLY TO ALL SHEETS IN THIS SET UNLESS NOTED OTHERWISE IN THE REVEYED NOTES.

- KEYED NOTES:**
- 1 REFER TO DRAWING PS-208 FOR ELECTRICAL EQUIPMENT CONNECTIONS REQUIRED IN THIS AREA. CIRCUIT EQUIPMENT TO PANEL '9L6'
 - 2 RECEPTACLE FOR POWER TO BANK FIRE ALARM CONTROL PANEL. COORDINATE LOCATION WITH FIRE ALARM PANEL REQUIREMENTS.
 - 3 RECEPTACLE PULL BOX FOR INTERSECTION OF EXISTING FIELD LIGHTING FEEDERS. BOX SHALL BE 24" x 12" AND COVER SHALL BE FLUSH WITH FINISHED FLOOR. COVER SHALL BE BRONZE WITH DESIGN AS SELECTED BY OWNER. INFORMATION FROM EXISTING PLANS INDICATED THIS BOX TO INTERCEPT TWO 1-1/2" AND ONE 1" CONDUITS WITH CONDUCTORS. CONDUCTOR SHALL IDENTIFY LOCATION, QUANTITY AND SIZE OF CONDUITS AND CONDUCTORS. LABEL THE FEEDERS TO DISTRIBUTION PANEL. 09P.
 - 4 PULL BOX SHALL BE 24" x 12" TO INTERCEPT FOUR 1-1/2" CONDUITS WITH CONDUCTORS. REFER TO NOTE 3 ABOVE FOR ADDITIONAL REQUIREMENTS.
 - 5 PULL BOX SHALL BE 24" x 12" TO INTERCEPT TWO 3/4" AND ONE 1" CONDUITS AND FEEDERS. REFER TO NOTE 3 ABOVE FOR ADDITIONAL REQUIREMENTS.
 - 6 RECEPTACLE LOCATED BY ABOVE FIN. CEILING. REFER TO TELECOMMUNICATIONS DRAWINGS FOR LOCATION.
 - 7 RECEPTACLE LOCATED 20" ABOVE FIN. FLOOR. REFER TO TELECOMMUNICATIONS DRAWINGS FOR LOCATION.
 - 8 ELEVATOR CONTROLLER CONNECTION. COORDINATE ALL REQUIREMENTS WITH ELEVATOR MANUFACTURER AND CODES.
 - 9 2 POLE 30 AMP DISCONNECT SWITCH FOR DISCONNECT OF ELEVATOR CONTROL. USE LIGHTING AND POWER CIRCUITS. COORDINATE LOCATION AND CONNECTIONS WITH ELEVATOR MANUFACTURER.
 - 10 CONNECTION TO DOMESTIC WATER HEAT TRADE EQUIPMENT. REFER TO MECHANICAL SPECIFICATIONS FOR HEAT TRADE EQUIPMENT.
 - 11 CONNECTION TO FIRE PROTECTION SYSTEM HEAT TRADE EQUIPMENT. REFER TO MECHANICAL SPECIFICATIONS FOR HEAT TRADE EQUIPMENT.

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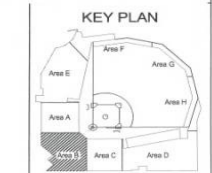
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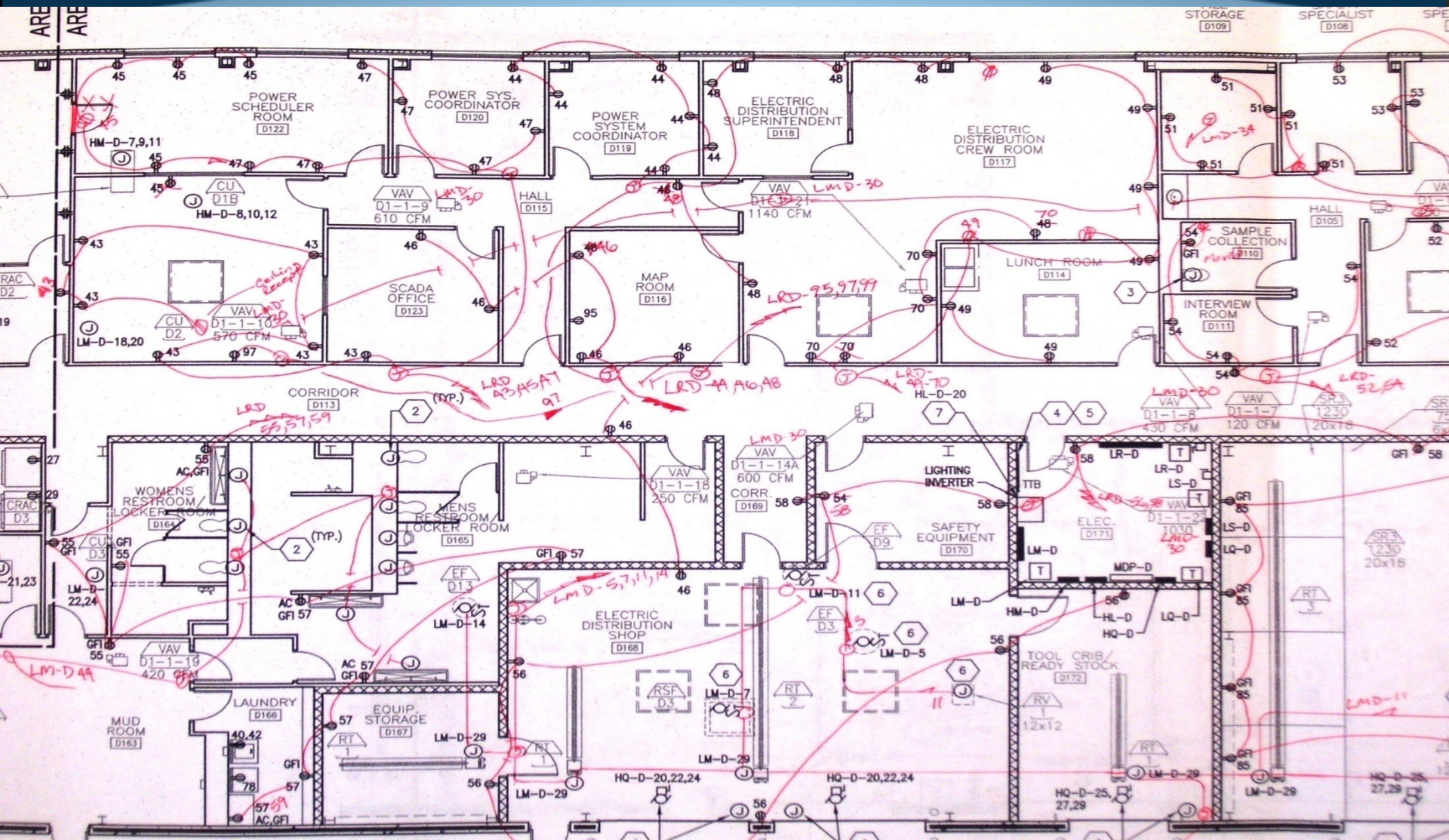
O'CONNELL ROBERTSON & ASSOCIATES, INC.
ARCHITECTURE
ENGINEERING
INTERIORS

POWER PLAN - CONCOURSE LEVEL - AREA 'B'
THE UNIVERSITY OF TEXAS AT AUSTIN
RENOVATIONS TO UFCU DISCH-FALK FIELD

E4.5
POWER PLAN - CONCOURSE LEVEL - AREA 'B'
SCALE: 1/8" = 1'-0"

DLR Group
Architecture Engineering Planning Interiors

Final As-Built Drawings



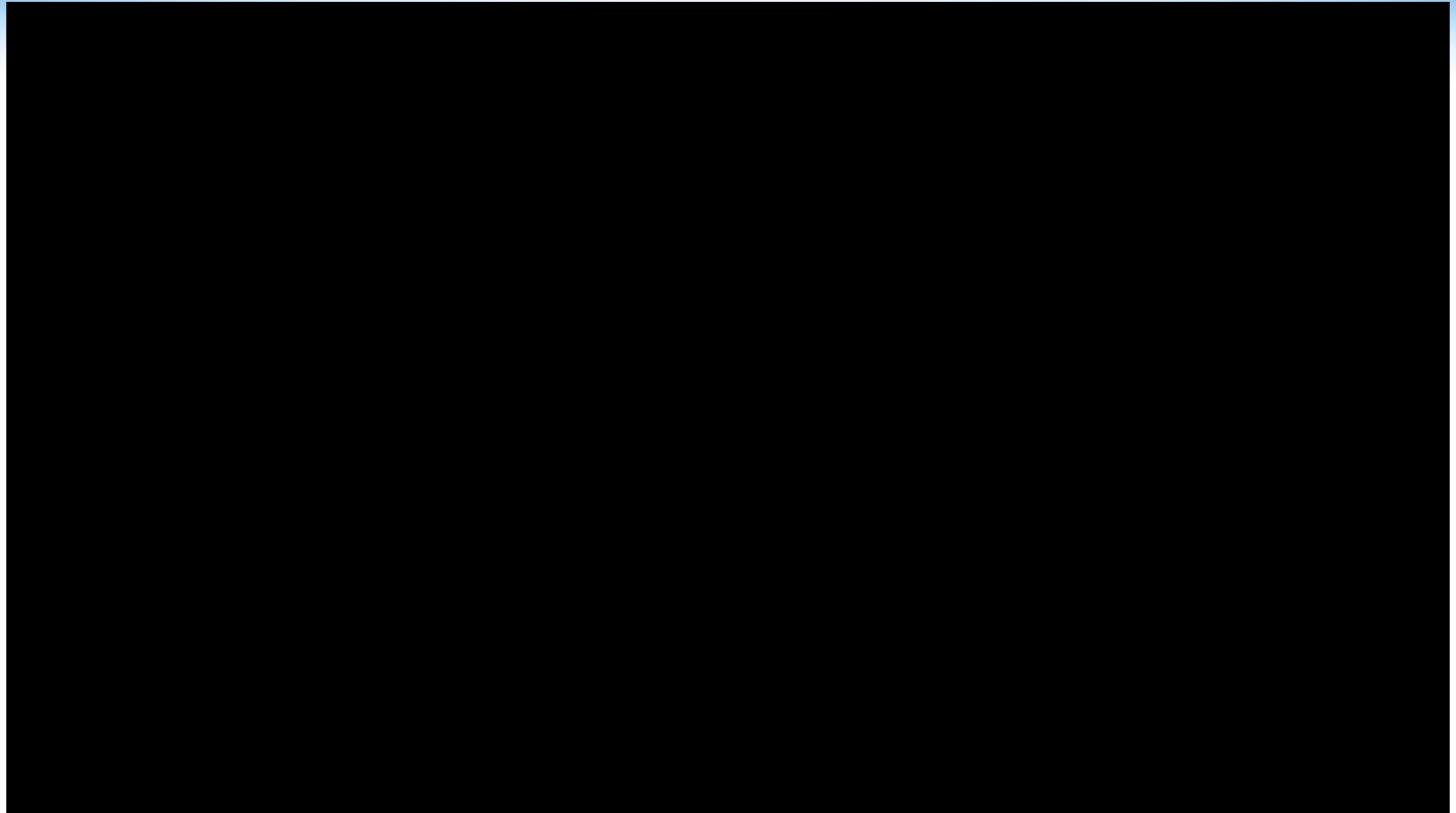
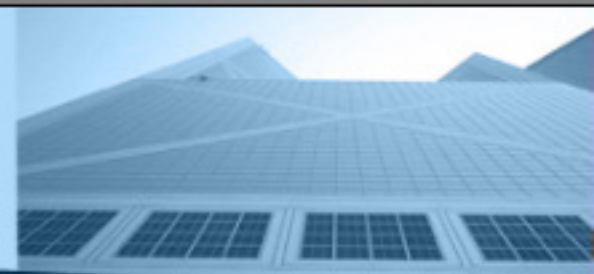
Group Activity #3



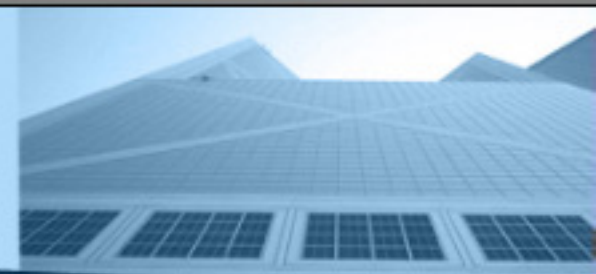
According to **Handout #2** -
Closeout Specifications,
Section #01770;

**How are you supposed to
mark up your As-Built
drawings?**

Digital As-Builts?



What does the Future Look Like??




What are O&M Manuals?



“O” Operation & “M” Maintenance Manuals

- These documents are required for all panels, switchgear, and equipment supplied by the Contractor.
- These Manuals will be turned over to the Owner.

What is a “Certificate of Occupancy”?



“A document from the local government that provides authorization for a building to be utilized as a public edifice or as a private residence.”

- The purpose of this Certificate is to verify that the building is in full compliance with all current building codes and is safe for occupancy.

What is a “Temporary” Certificate of Occupancy?



Prior to completion of the entire building:

- A temporary permit to occupy certain parts of the building can be issued based on final completed inspections for those areas.
- A TCO is for a limited period of time but can be renewed.

What is "LEED"?

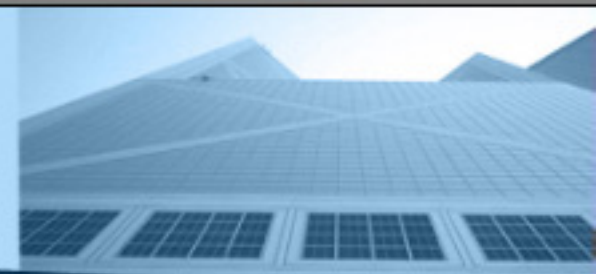


"Leadership in Energy & Environmental Design (LEED)" is a rating system devised by the United States Green Building Council (USGBC).

The purpose is:

- to evaluate the environmental performance of a building
- and encourage market transformation towards sustainable design.

Commissioning



Intent:


- To verify that the Project's energy-related systems are installed, and calibrated to perform according to the Owner's requirements, basis of design and construction documents.

Orientation & Training



The Contract Documents may call for Contractors to provide orientation and training for the Facilities Management personnel and other end-users on specific electrical, mechanical, and plumbing systems.

Final Cleaning



Final cleaning of all areas and all equipment is required.

- before requesting Final Inspection and Substantial Completion.

Spare Parts



The Specifications typically call for a certain quantity of tools, spare parts and extra materials to be turned over to the Owner at the end of the Project.

Transmittals

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LETTER OF TRANSMITTAL

Boondook Electric, Inc.
 PO BOX 11592
 ALBUQUERQUE, NM 87192
 (505) 884-0155

TO: Really Tough General Contracting, Inc.
 P. O. Box 222
 Albuquerque, NM 87125

 (505) 345-8000

DATE:	02/16/10	JOB NO:	1210
ATTENTION: Matt Anderson			
REF: Children's Hospital			
Boondook Project #1308			

WE ARE SENDING YOU: Attached Under separate cover via _____ the following items:

Shop Drawings Prints Plans Specifications
 Copy of Letter Change Order As Builts Submittals
 Other _____

QTY	DATE	NO.	DESCRIPTION
9	2/16/2010		3rd floor NBICU Fire alarm shop drawings for Fire Marshall approval
9	10/13/2009		3rd floor NBICU Fire alarm device submittals
1	10/13/2009		Pallet Fire Alarm Spare Parts

THESE ARE TRANSMITTED as checked below:

- For Approval Approved as submittec Resubmit copies for approva
 For your use Approved as notec Submit ____ copies for distribution
 As Requested Returned for corrections Return ____ approved copies
 For review and comment _____
 FOR BIDS DUE _____, 20 ____ PRINTS RETURNED AFTER LOAN TO US

REMARKS:

 Jed Clampet, Field Superintendent

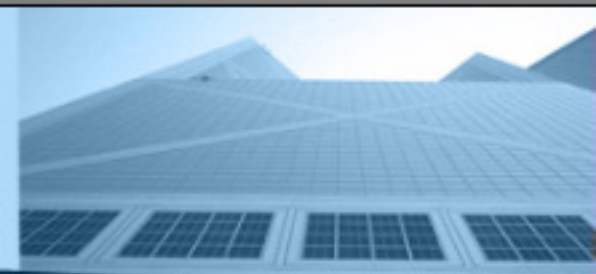
SIGNED: _____
 Really Tough Const. Representative

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Guarantees & Warranties



All Contractors are required to guarantee and warranty that:

- Their work conforms to the standards established in the Contract Documents.
- Their work is free of any defects in workmanship, materials, or equipment.

Latent Defects



A **Latent Defect** is a design or installation error that could not have been discovered by a reasonably thorough inspection before the project was completed.

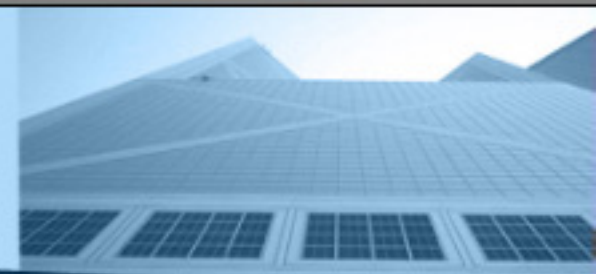
- A **Patent Defect** is one that could have easily been caught by a reasonable inspection.

Lien Waivers



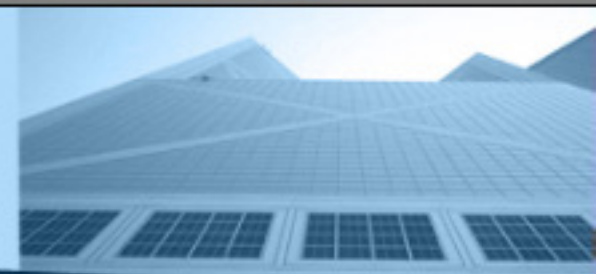
Each Contractor must include a signed and notarized **“Affidavit of Contractor”** with their Final Payment application.

Demobilization



- Removal of all tools and personnel from site.
- Inspect jobsite to verify complete removal.

Final Completion



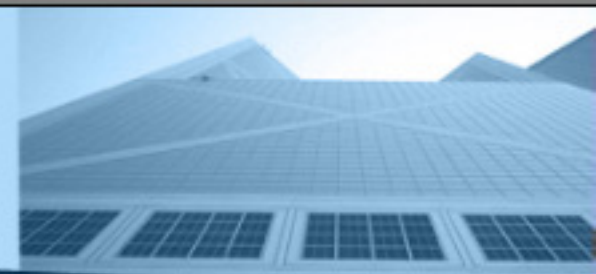
**The completion of all work
and all contract requirements
by the Contractor.**

What is “Retention”?



- Retention is the withholding of a portion of each progress payment earned by each contractor until a construction project is complete.
- Retention is calculated as a percentage, typically 5%-10% of each payment.

Customer Service



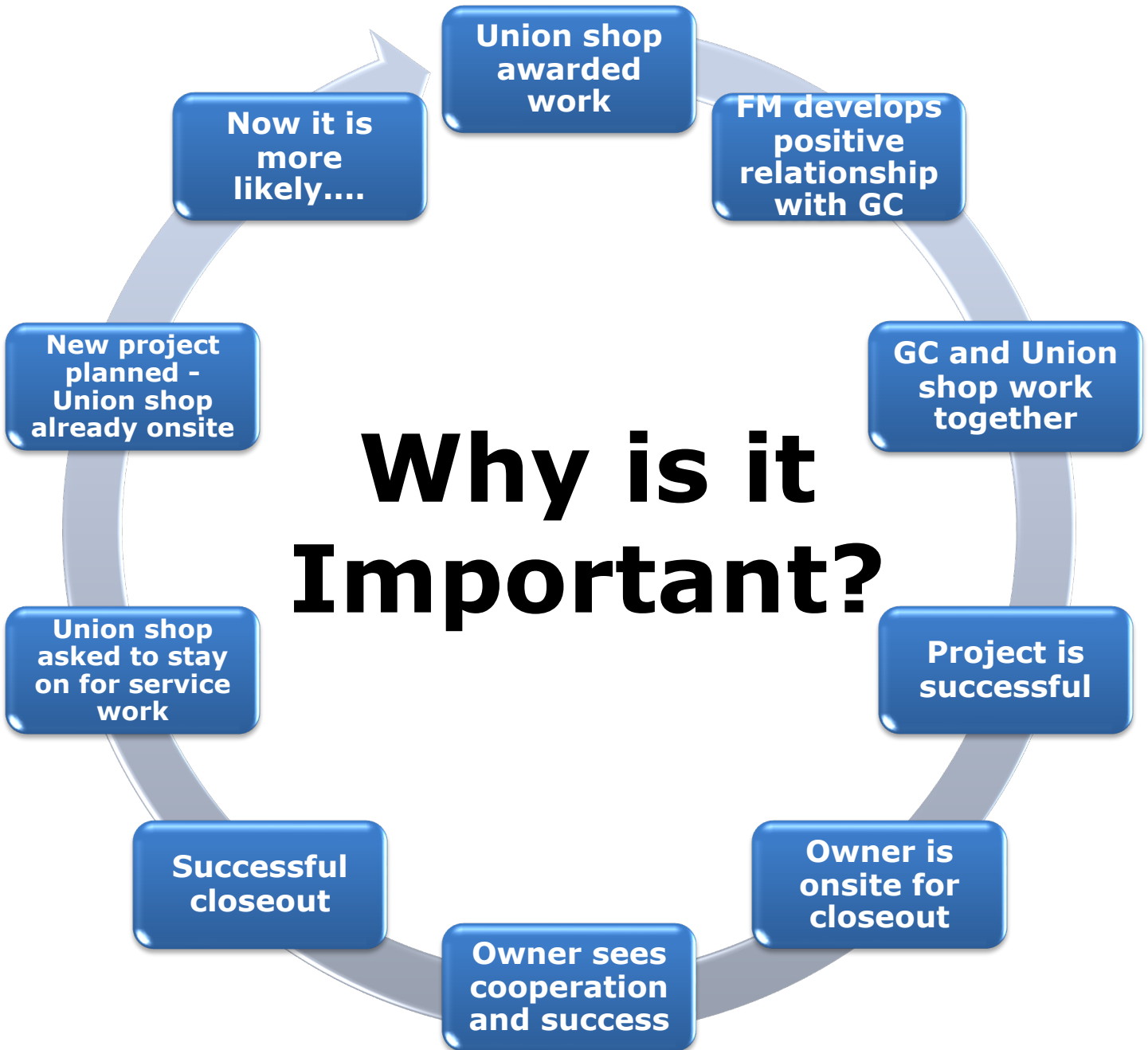
“You can do an excellent job at the beginning of the project, but it is the way you finish the project that the Customer will remember.”

Why it is Important!



- It costs 6 to 10 times more money to get a new Client than it does to keep an existing one.
- Exceptionally satisfied customers will tell an average of 5 people about their positive experience.
- Dissatisfied customers tell an average of 10 other people about their bad experience; 12% tell up to 20 people.
- 25%-50% of operating expense can be due to poor service quality and not doing things right the first time.

Why is it Important?



What's Important?



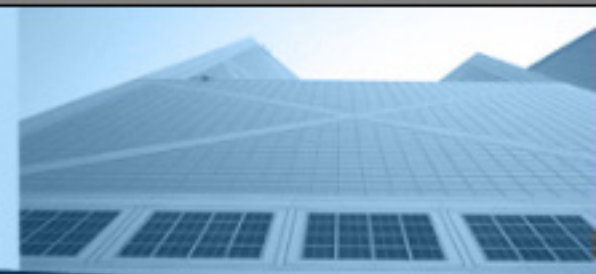
What Do Customers Really Want from their Contractors?

Rank the following six items from one to six as you believe your Customers would rank them in importance.

1 = Most Important.....6 = Least Important

- On schedule
- Good communication
- Personal attention
- No surprises
- Dependability
- Returned phone calls

What's Important?

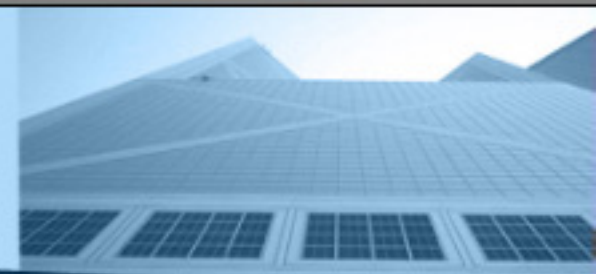


What Customers Really Want from Contractors?

Here is how clients ranked the following six items in importance to them:

- #1 Personal attention**
- #2 Dependability**
- #3 Returned phone calls**
- #4 Good communication**
- #5 On schedule**
- #6 No surprises**

Communication



- Use Active Listening.
- Control negative emotions.
- If things start heading south...don't disappear.
- Show you care.
- Pay attention to service quality as well as technical quality.

Quality Service



Based on customer service research by Leonard L. Berry at Texas A&M University, here are the top five dimensions of service quality all customers want and expect from a company:

- 1. Reliability**
- 2. Assurance**
- 3. Tangibles**
- 4. Empathy**
- 5. Responsiveness**

Excellence.....



“Excellence is never an accident.”

“It is always a result of high intentions, sincere effort, intelligent direction, skillful execution and the vision to see obstacles as opportunities.”

Summary



Foremen play a vital role in the Project Closeout process!

- By understanding how the process works you can now be more proactive in your approach.
- Your help will make Project Closeout a much shorter and smoother process.
- Successful Closeout and good Customer Service will help us get more work in the future.