Managing Minor Renovation Work

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All FM’s get asked about renovation work

- Be an advisor to your company
- It’s complicated
- Enhance your value
- Prepare now
Conference Room Renovation
What Can’t We See?

- Power
- Data
- Plumbing
- Air conditioning
What is a firewall & how can I tell?

- Slow the spread of a fire
- Thicker than most office walls
- Extend from the floor to the bottom of the next floor
- Most walls that extend above drop ceilings are fire walls
- All holes in fire walls are sealed
What about the doors?

- Doors on fire walls must be fire rated
- Even windows in fire walls must be fire rated
What about a “supporting wall”?

- “Load bearing walls”
- Cannot be removed without providing adequate bracing
- Most walls that extend above drop ceilings
- Usually true where rooms have hard ceilings
What about Asbestos or Lead?

- Could be in the wall, the drywall, the mud or paint
- Expensive to test & abate
- Abatement requires Air Monitoring, Containment, and Specialized Disposal
What about the floor?

- Need to patch, but extra in storage doesn’t match.
- Flooring is continuous under the wall, but still doesn’t match.
- Redo the floors.
Questions?
What about the ceiling?

- Continuous or independently constructed
- Same or different
If the ceiling heights aren’t all the same?

- Lights - not as easy as lowering a bit
- Fire sprinklers - qualified professionals
- Registers and returns
- Fire sensors, PA equipment, lighting & outlet sensors
Lighting Zones

- Switches near doors
- The switched lights need to make sense with the new room set up
  - Lights might be missing
  - Light fixture patterns might vary from room to room
  - Light fixtures might not all be the same
  - People like to walk in to dark rooms, and reach for the switch
- Most conference rooms have display walls which need dimming
- Major lighting changes can trigger Title 24
Title 24:
Building Energy Efficiency Standards

Applies to you if you are modifying, moving, replacing, or disconnecting and reconnecting at least 10% or 40 light fixtures in a room

Title 24 keeps changing, check it again before you do anything
What about the AC?

- Conference rooms need much more cooling than offices
- Conference rooms need their own thermostats
- Thermostats, registers and returns should all be in places that make sense for the room
- Conference rooms also don’t always need to have the AC on
What about fresh air?

- Fresh air can be calculated by occupancy factors
- It can be based on air changes per hour
- Lots can be saved by modulating the fresh air with CO2 monitoring
Is there enough building AC capacity?

- There isn’t enough capacity to DO IT RIGHT
- No room above the ceiling
  - Recirculating for minimal space
  - Put big equipment outside, evap. coils inside
- No room on the roof, use other space
Electrical outlets

- Will you need any extra outlets?
- Is there enough extra panel space and power available?
- Electrical rule of thumb: plan to use 80% of a breaker’s rated capacity.
  - Most computer workstations < 2 amps
  - Most laser printers = 11 amps, need their own 20 amp breaker
  - Copiers, large printers, & other special equipment often need 30 amp breakers
- Regulations vary from city to city
Questions?
Is there enough room for emergency egress?

- Calculated as a fraction of an inch of door space per occupant
- Varies from city to city
- Classroom seating doesn’t allow as many as stadium seating
- Parts of the room must be set aside for safety, fire aisles
- Limits on how many free standing chairs can go in a row without an aisle
- Free standing chairs are required to be secured to each other in longer rows
- Aisle spaces are regulated
- As-builts should show your emergency egress plan
- If you want to modify the existing emergency egress plan you need a professional
What about the doors?

- Doors must open out in the direction of the exit
- Panic door hardware must be used
- Recessed doorways might be required for larger rooms
- Lighted exit signs
- Emergency exit lighting
- Maximum occupancy sign
Floor Moisture

Floor moisture might be a pre-existing condition
- If it is, this is the best time to do something about it

Symptoms
- Hard bumps in hard flooring, seams, holes or cracks in the flooring
- Wet or damp spots or stains that aren’t from spills
- If you have symptoms, you can have the moisture content tested

What can you do?
- Moisture barriers can be placed under hard floors
- You can try to eliminate the sources of the moisture
Will I need anything else?

- Emergency exist signs: lighted, radioactive
- Emergency lighting: 90 minutes
- Fire alarm hardware: sensors, hold-open hardware
- Presentation equipment: Screens, AV, additional electrical, data
- Sound proofing, acoustical absorption materials
Questions?
Do you need a permit?

Almost certainly

- All electrical modifications require permits
  - You don’t need one for a repair or like to like replacement
  - Replacing a broken light switch is ok, adding another one is not
  - You can’t move an outlet without a permit

- You can’t make any structural changes

- You can’t make any changes that alter the building egress patterns unless you involve an architect

- Many contractors will offer to do the work without a permit, you accept the responsibility including the liability ramifications if something goes wrong
What could go wrong?

At the very least

- Rip open so it can be inspected
- That could happen long afterwards and when your office is up and running

At the worst

- Rip it out, start over
- Personal Injury (If you have a fire, YOU could be held responsible for the injuries if you ignored regulations)

Contractors who are willing to cheat might also want to cheat you

- Safety
- No permit, no inspection, no recourse
Finding the right contractor

- Ask around
- Ask for recent references with work similar to yours in job size, job type, and company type
- Get multiple bids
  - If you call out five, two or three will bid, prices can vary by 100%
  - Companies are much more competitive when they don’t have other work
  - Pre-made pricing sheets force bidders to give you prices you can compare
    - Break the job costs down into elements you can compare
    - Lighting, ceiling work, fire sprinklers, doors frames and hardware, demo, new walls...
  - The lowest bid is frequently not the best value
- Everyone sharpens their pencils when they know they are competing
How can I make sure I get what I want?

- Write everything down in the SOW, Statement Of Work
  - Use language that a 5th grader can understand
    - Use descriptors that are specific and not ambiguous, “Lots” is not specific, 10 is.
    - Get all affected parties in your company to SIGN OFF on the SOW before it’s bid
    - BUY IN from all parties can help prevent change orders
- Be explicit, don’t let the contractor choose anything you care about
  - They will choose options that increase their profits
  - Call out things like the lumens you expect at the height you need them
  - Specify all the products you want included with part numbers and cut sheets
- Make the contractor responsible for compliance issues
  - He should profess to being your construction expert, make him help with the SOW development and make him responsible for any additional costs needed to comply with Federal, State, and Local ordinances, regulations and laws including job site safety
  - If they don’t know about that stuff, they’re not the right contractor
Questions?
What else can you do to ensure success?

- Get more funding than you think you need
  - SOW’s always increase after work begins
    - Employees think of new things they need after work begins (Keep them out of the worksite to minimize that and for “SAFETY REASONS”)
  - Contractors usually discover conditions no one thought of
  - Sometimes inspectors ask for changes no one thought of

- Allow more time than you think you need
  - Stuff happens, parts and people get held up, and schedules slip
  - It’s better to be ahead of schedule than behind

- Check and measure everything to make sure it’s what you asked for

- Get Lien releases for all the labor, materials, and independent contractors. No final payment without the releases.
Labor, materials, and independent contractors

- Many General Contractors will try to tell you one lien release from them is all your need... It’s usually not true.
  - Not all the workers are usually directly employed by them, many are subs
  - They rarely provide the materials out of their own stock
- In order to get complete lien releases you need to monitor the work

- Every company that provides materials must be noted
  - If any company that delivered materials was not paid, they can come after you
- Every subcontractor must provide a lien relief
  - Often that’s trades work like the electricians
  - If they wear a shirt with a different name than your GC company, get a release
What about contractors we know?

- **Most** companies that have ongoing relationships with contractors do not ask them for lien releases, and things work out just fine.
- Trusting relationships are the best and least expensive way to go but they are risky.
- You have little to lose from an electrician who does repairs but a lot to lose from a GC who might not pay hundreds of thousands of dollars worth of bills, leaving you responsible for that debt.
Potential steps

- Define the project goals and create a concept plan
- Buy in of concept from management and involved parties
- The design is created, preferably by qualified people
- Review and comment by management and involved parties
- Finalize the design and create a robust SOW
- Get management and involved parties to sign off on the SOW
- Bid the work, at least 5 contractors, cost break down, strategy, schedule
- Bid review, preferably by qualified people “best value” “not lowest bid”
- Pre-construction meeting, and ongoing meetings, quality, schedule, cost
- Punch list prior to last payment, as-builts, other paperwork, lien releases
Questions?