

Estimating With Electronic Documents

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I. Introduction.

- A. This class is intended to teach you how to do quantity takeoffs from electronic plans.
- B. It presumes that you are already an estimator or a junior estimator.
- C. If you're brand new at it, I'll just share the best piece of advice I ever got, when I first started learning commercial estimating back in 1982 in Georgia. My boss handed me a big set of plans and said, "Just make believe it's a big barbecue chicken and pick it clean."

II. Sources of Electronic Plans.

- A. CD or DVD provided by architect (or by GC if you're a sub).
- B. Architect's (or GC's if you're a sub) private ftp site
- C. On-line plan rooms.
 - 1. National:
 - a) McGraw-Hill Dodge
 - b) iSqFt.com
 - c) The Blue Book
 - 2. Local:
 - a) Local Builders Exchange

III. Downloading from On-Line Plan Rooms.

- A. User name and password.
 - 1. As a member.
 - 2. As a guest—by invitation.
- B. Some require you to first download proprietary viewer.
 - 1. iSqFt
 - 2. Maxview
 - 3. Follow instructions (usually an 800 phone # for support)
- C. Where to save on your computer (or on server if used).
 - 1. Default “**SAVE**” locations vary by website. Not uncommon for new users to hunt all over their C-drive trying to find the file.
 - 2. Better to create one folder for all electronic plans, then when downloading, choose “**SAVE TO.**” There should be a browser (magnifying glass icon) next to “**SAVE TO**” button that will let you choose the location (or “destination”).
- D. While at the website, don’t forget to download the specs and any addenda.
- E. If given a choice of downloading pdf or tiff versions, tiff pages use less memory and pages turn faster. If only pdf plans available, some takeoff software’s will covert pdf to tiff for you, after you download plans.

IV. Download Demonstration.

- A. From local Builders Exchange.
 - 1. User name and password
 - 2. Go to plan room
 - 3. Select job
 - 4. select plans
 - 5. check-out or download
- B. From CD.
 - 1. Load and open CD
 - 2. Create destination folder
 - 3. Plans on CD are either loose pages or in a manila folder
 - a) If loose pages on CD, click EDIT, then SELECT ALL. When they are high-lighted, drag to destination folder.
 - b) If in folder on CD, drag to destination folder.

V. Various Brands of Estimating Software.

- A. iSqFt; Maxview; PlanSwift, Vertigraph's BidScreen XL; The Edge, Maxwell Systems Quest, etc.
- B. On Center Software's "On Screen Takeoff" (OST)
 - 1. OST is used with several major Estimating Software brands.
 - a) On Center Software's Quickbid
 - b) Timberline Estimating Software
 - c) MC2 Ice

VI. On Screen Takeoff—BID TAB and COVER SHEET.

- A. Brief overview of OST window: icons, tabs, etc.
- B. Create NEW BID. Our example is a 3-story hotel.
- C. Open "Cover Sheet" for new bid.
- D. Add images either by selecting individually, or use "Auto Add Images," which loads them all at once. If selecting individually, you can hold CTRL key down and select multiple images. You would choose this approach if, for example, there were 400 pages and you only needed 50.
- E. Convert pdf's to tiff's, when you can leave computer alone for awhile.
- F. Go through plans to determine areas and possible typical areas.
- G. Create "Areas" to filter out for schedule of values, stocking, etc.
- H. Create "Typical Areas" to speed takeoff of identical areas, such as typical rooms, typical floors, etc. If items have a height associated with them, then floors at different heights can't be typical for those conditions.
- I. For floors that are typical, you can set them up as typical areas or just copy and paste the takeoff from one floor to the next.

VII. On Screen Takeoff—IMAGE TAB and Conditions.

- A. There are three types of conditions—linear, area and count.
 - 1. Linear examples = continuous footings, walls, duct work.
 - 2. Area examples = slabs on grade, carpet, roofing.
 - 3. Count examples = spot footings, doors, electric fixtures.
- B. Creating a condition.
 - 1. Organize conditions by category (Divisions 1-16, etc).
 - 2. Assign them to "Layers," so your plans don't get cluttered.
 - 3. Decide if you need to "round up."
 - 4. Assign quantity 2 if used, such as counting segments for linear conditions, or perimeter for area conditions. Assign quantity 3 if used, such as volume for area conditions.
 - 5. Set "Slope" if used (roofs, ceilings, etc.).
 - 6. Using "Advanced" tab.
 - a) Set 'Round up' if used, such as for acoustic ceilings, usually rounded up to two-foot increments. Set tolerance, curved segments, etc. (See Help menu –Condition Properties.)

VIII. On Screen Takeoff—Getting Started on Takeoff.

- A. For each page, set the scale, set the area (the page is not the area).
- B. Set the zoom level to comfortable size, use pan window to navigate around page.
- C. Use dual screens to look at details. On large sets, I'll print half-size to look at details.
- D. *Always check the scale of every page that you do takeoff on.*

IX. On Screen Takeoff—Hands-On Practicum—The Takeoff.

- A. Tips and tricks of the trade.
 - 1. The shift key and snap angles. You can change snap angle on "TOOLS" tab, under options. But it slows you down. Keep it at 15 degrees and use shift key when you have odd angle on a condition. Applies to linear and area conditions.
 - 2. Curved segments. You draw the line straight, then use "Select" arrow icon to pull the center of the line to the radius you need. If multiple curves (serpentine), break it into segments that can be pulled to a single radius.
 - 3. Use "Back-out" icon to delete part of an area from a larger area, such as a skylight from a ceiling takeoff, or a grass median from an asphalt paving takeoff.
 - 4. You can make count items various shapes. Sometimes you'll want the shape to approximate the actual item. You can rotate rectangles, such as 2x4 lights in a ceiling, but sometimes it's faster just to make them square for counting purposes.
 - 5. Use up-down/side-side arrow keys to align takeoff items, but you must do it before going to the next item, or it won't work. In the latter case, use the "Select" arrow.

X. On Screen Takeoff—Hands-On Practicum.

A. I am leaving this part open to suggestions from you, depending on what trades are represented in the class. I've created some conditions for various trades, but can create any kind of linear, area or count condition that you want in a matter of seconds.

B. Our sample project is a three-story Best Western hotel (BW), but I have numerous other electronic plans on the computer for some of the items that don't occur on the BW.

C. Let's get to work (make believe it's a fat barbecue chicken & pick it clean):

1. Linear: Concrete spread footings BW sheet A900, types A, B and C.
2. Count: Spot footings BW A900.
3. Count: Doors Syracuse University (SU) A105.
4. Linear: 11'-4" CMU walls BW sheet A901.
5. Linear: 9'-4" CMU on BW A902. (Copy & paste or typical area for 3rd floor?)
6. Area: Slab on grade BW sheet A901.
7. Area: HC slabs at 2nd, 3rd and roof BW A902. (Copy & paste or typical area?)
8. Linear odd angles: SU A105, various walls.
9. Linear odd angles: SU A405, various soffits (set width).
10. Area odd angles; SU A405, paint unit ceilings.
11. Area with backout: BW SiteplanA, paving, less median.
12. Area with backout: BW SiteplanA, pool patio, less pool.
13. Area with slope: BW A905 roof decking.
14. Linear with segment count: BW A902 through A904 steel beams (typical?).
15. Curved linear: Indigo A101 various walls and storefront.
16. Suggestions or I'll keep going.

XI. Bonus: Now you can pretty much use a Digitizer.

A. OST is the software you use with a digitizer as well.

B. Everything you do with the mouse on electronic plans, you do the same way on a digitizer, but you use a touch-sensitive stylus instead of the mouse.

C. Remember to clamp your plans down, so they don't move.

D. Remember to mark a small cross-hair (red pen) at top left and bottom right of pages.

XII. Finally: Where does that information go? WORKSHEET Tab.

A. You can use the WORKSHEET tab, a simple excel spread sheet.

B. You can export to your own, custom excel spread sheet.

C. Quickbid, Timberline or MC2 Ice.

XIII. Questions.

A. Please ask any questions you have. A two-hour tutorial won't make you an expert, but I'd especially like a chance to help you with the one question you still have that would make you feel that you got a good start on it today.

B. Thank you all for coming.