ESTIMATOR 88
TUTORIAL

## ESTIMATOR 88

TUTORIAL

1. MICROSOFT OFFICE 2016 IS RECOMMENDED.
2. THIS ESTIMATOR IS FOR OMNI BLOCK $8 \times 8 \times 16$.
3. THE ESTIMATOR IS TO USED FOR THE PURPOSES OF ESTIMATING AND SHOULD NOT BE USED IN ANY WAY AS A CONTRACT.
4. IN NO WAY DOES THIS ESTIMATOR TOOL BIND OMNI BLOCK. EACH USER MUST VERIFY THE ACTUAL RESULTS OF THE ESTIMATOR TOOL.
5. INDEPENDENT OF THIS PROGRAM, A DETERMINATION OF THE REQUIRED DATA POINTS MUST BE COMPLETED (USE BID SHEET FORM - SEE PAGE 28 OF THIS TUTORIAL).
6. PERFORM A "SAVE AS" IMMEDIATELY SO THERE IS AN ORIGINAL VERSION.
7. THE GREEN CELLS IN THE PROGRAM ARE THE ONLY CELLS THAT DATA CAN BE ENTERED. THE OTHERS ARE PROTECTED.
8. ESTIMATOR 88 HAS 5 SECTIONS:
A. WALL INFORMATION
B. WINDOWS AND DOORS
C. QUANTITY CALCULATIONS
D. WHOLESALE COST
E. QUICK ESTIMATE

AN AUXILIARY HIDDEN AREA IS PRICING.
9. EACH STEP FULLY EXPLAINS THE DATA ENTRY FIELD AND ITS USE.
1ө. UNIT PRICING SHOULD BE SUPPLIED BY A LOCAL DISTRIBUTOR. OMNI BLOCK CANNOT ALWAYS SUPPLY THIS INFORMATION BECAUSE LOCAL BLOCK PLANTS CONTROL UNIT PRICING DUE TO LOCAL AGGREGATE AND LABOR COSTS.
11. IN ORDER TO BECOME FAMILIAR WITH THE ESTIMATOR, USE THE SAME ENTRY NUMBERS AS THIS TUTORIAL. ONCE FAMILIAR, CHANGE ENTRIES TO SEE HOW THE VARIOUS DATA FIELDS RELATE/AFFECT OTHER DATA FIELDS.

DATE: $\theta 3-\theta 5-17$
PAGE: $\theta_{2}$
ESTIMATOR 88 OVERVIEW


1. ENTER THE NUMBER OF DIFFERENT WALL HEIGHTS FOR OMN BLOCK AND IF USED, 8" ANDIOR 4" HIGH STANDARD CMU.

A MAXIMUM OF 5 DIFFERENT OMNI BLOCK WALL HEIGHTS MAY BE USED; 2 FOR 8" STANDARD CMU AND I FOR 4" STANDARD CMU.

WALL HEIGHT COLUMNS ONLY APPEAR WHEN THERE IS A NEED FOR THEM. IF I IS ENTERED FOR OMNI BLOCK WALL HEIGHT, THEN THE OTHER 4 DO NOT APPEAR.

WALL INFORMATION

Number of Omni Block Wall Heights Number of $8^{\prime \prime}$ CMU Wall Heights Number of $4^{\prime \prime}$ CMU Wall Heights

## Wall Height

Top of Wall Bond Beam (Yes / No)
Wall Length
Number of Corners
Total Windows and Doors
Total Wall Square Feet
0.00
$0.00 \quad 0.00$

0.00
0.00

Total Square Feet of Windows and Door 0.00

DATE: $\theta 3-\theta 5-17$
PAGE: $\Theta 4$
ESTIMATOR 88
STEP 1

4. UNDER WALL HEIGHT I USE THE DROP DOUN MENU IN THE "TOP OF WALL BOND BEAM" CELL ENTER "YES" (EXPLANATION IS ON PAGE 1 $\theta$ ).
5. ENTER $1 \ominus \theta$ IN THE WALL LENGTH CELL. THE WALL IS $1 \theta^{\prime} \theta^{\prime \prime}$ HIGH BY $1 \theta \theta^{\prime} \theta \theta^{\prime \prime}$ LONG.

ADD 12 ' $\theta$ " THEN YES THEN $1 \theta \theta^{\prime} \theta$ " UNDER "HEIGHT 2 ".

ALL WALL LENGTHS SHOULD BE BLOCK MODULE. BLOCK MODULE MEANS THAT THE LENGTH MUST BE DIVISIBLE BY 8".

A WAY TO IMMEDIATELY TELL IF A WALL IS BLOCK MODULE:

1) ANY EVEN NUMBER; $2^{\prime} \theta^{\prime \prime}, 4^{\prime} \theta^{\prime \prime}, 6^{\prime} \theta^{\prime \prime}, 8^{\prime} \theta^{\prime \prime}$.
2) $A N D$ EVEN NUMBER PLUS $8^{\prime \prime} ; 2^{\prime} 8^{\prime \prime}, 4^{\prime} 8^{\prime \prime}, 6^{\prime} 8^{\prime \prime} \ldots$
3) ANY ODD NUMBER PLUS $4 " ; 1^{\prime} 4 ", 3 \prime 4 \prime \prime, 5^{\prime} 4 " \ldots$

IN THE EVENT A WALL LENGTH IS NOT BLOCK MODULE, ROUND UP THE DATA ENTRY TO THE NEXT BLOCK MODULE DIMENSION.

EXAMPLE: A WALL LENGTH OF 99'6" MUST BE ENTERED AS $1 \theta \theta^{\prime} \theta^{\prime \prime}$.


DATE: $\theta 3-\theta 5-17$
PAGE: $\theta 6$
6. IN THIS TUTORIAL THERE ARE 4 UINDOWS THAT ARE 4 ' $\theta^{\prime \prime} \times 6^{\prime} \theta^{\prime \prime}$. ENTER 4 IN THE FIRST LINT UNDER THE QUANTITY COLUMN.
7. USING THE DROP DOWN MENU UNDER UIDTH, SELECT $4 . \theta \theta$

| WINDOWS AND DOORS |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| QUANTITY | WIDTH | HEIGHT | VERTICAL | SQ. FT. |
| 4 |  | v | 0.00 | 0.00 |
|  | 0.67 |  |  |  |
|  | 1.33 |  |  |  |
|  |  |  |  |  |
|  | 2.67 |  |  |  |
|  |  |  |  |  |
|  | 3.33 |  |  |  |
|  | 4.00 |  |  |  |
| - | 4.67 |  |  |  |
|  |  |  |  |  |
|  | 5.33 |  |  |  |
|  | 6.00 |  |  |  |
|  | 6.67 |  |  |  |
|  |  |  |  |  |
|  | 7.33 |  |  |  |
|  | 8.00 |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

8. USING THE DROP DOUN MENU UNDER HEIGHT, SELECT $6 . \theta \theta$.

NOTICE THAT THE DROP DOUN MENU ONLY ALLOWS FOR BLOCK MODULE (8" INCREMENT) OPTIONS

ANY TIME YOUR WINDOW DIMENSION IS NOT BLOCK MODULE USE THE NEXT CLOSEST SMALLER OPTION. THEREFORE, A 5' ${ }^{\prime \prime}$ UINDOW DIMENSION WOULD REQUIRE A 4'8" DATA ENTRY.

THE FORM SHOULD APPEAR AS SHOUN BELOW.

| WINDOWS AND DOORS |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| QUANTITY | WIDTH | HEIGHT | VERTICAL | SQ. FT. |
| 4 | 4.00 | 6.00 | 24.00 | 96.00 |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

DATE: $\theta 3-\theta 5-17$
PAGE: $\Theta 1$
ESTIMATOR 88 STEPS 6, 7, \$ 8
9. COMPLETE THE UINDOWS AND DOORS SECTION BY ENTERING THE DATA IN THE OTHER CELLS AS SHOWN.

1Ө. THE "NUMBER OF CORNERS" LINE IS THE NUMBER OF ACTUAL CORNERS PER EACH WALL HEIGHT DETERMINED FROM THE PLAN SET. IN THIS EXAMPLE, THERE ARE 4 CORNERS IN THE I $\theta^{\prime} \theta^{\prime \prime}$ WALL SECTIONS AND 2 CORNERS IN THE 12' $\theta^{\prime \prime}$ WALL SECTIONS.
11. DETERMINE THE NUMBER OF WINDOWS AND DOORS FOR EACH WALL HEIGHT AND ENTER IT IN THE PROPER CELL. IN THIS EXAMPLE, THERE ARE 4 UINDOW AND DOORS IN THE I $\theta^{\prime} \theta^{\prime \prime}$ WALL AND 5 IN THE 12' $\theta^{\prime \prime}$ WALL.
12. THE 8" CMU IN THIS TUTORIAL IS AN EXAMPLE OF A CMU STEM WALL WITH A STANDARD CMU BOND BEAM. SINCE THERE ARE $2 \theta \theta^{\prime} \theta^{\prime \prime}$ LINEAL FEET OF OMNI BLOCK AND ASSUME A $16^{\prime} \theta^{\prime \prime} \times 8^{\prime} \theta^{\prime \prime}$ GARAGE DOOR (USUALLY NEVER INCLUDED IN THE UINDOWS AND DOORS) WITH 2'Ө" ABOVE GARAGE AREA THAT WILL BE SOLID GROUTED (NOT OMNI) IS A TOTAL LENGTH OF $216^{\prime} \theta^{\prime \prime}$. ENTER 216' $\theta^{\prime \prime}$ IN THE WALL LENGTH CELL UNDER 8" CMU HEIGHT 1.
13. SINCE THE GARAGE DOOR IS 8' $\theta^{\prime \prime}$ IN HEIGHT AND THERE IS NORMALLY A 4" SLOPE TO THE GARAGE FLOOR (RECESSING THE GARGE DOOR 4") THERE UILL NEED TO BE 16' "" OF 4" BLOCK $^{\prime}$ ABOVE THE GARAGE DOOR TO MAKE UP THE SLOPE. ENTER $16^{\prime} \theta^{\prime \prime}$ IN THE WALL LENGTH CELL UNDER 4" CMU HEIGHT 1.


THE GOAL OF THIS ESTIMATOR TO PROVIDE VERY ACCURATE TOTAL QUANTITIES FOR THE ENTIRE PROJECT AS EFFECIENTLY AS POSSIBLE. IN ORDER TO ACCOMPLISH THIS GOAL, ALL OF THE WINDOW AND DOOR OPENING SQUARE FOOTAGES ARE DEDUCTED FROM "WALL HEIGHT I". ALL OF THE HALVES ARE INCLUDED IN "WALL HEIGHT I" AS WELL. THIS MEANS THAT MORE BLOCK WILL BE DEDUCTED FROM WALL HEIGHT I THAN WOULD BE REQUIRED TO ACTUALLY BUILD IT.

THEREFORE, THE BLOCK AND INSERT QUANTITIES WILL ALW,AYS BE UNDERSTATED FOR WALL HEIGHT I AND OVER STATED FOR ANY SUBSEQUENT WALLS WITH OPENINGS IN THEM, BUT THE TOTAL REQUIRED TO BUILD ALL WALLS WILL BE ACCURATE.


ALL QUANTITIES ARE AUTOMTICALLY CALCULATED FROM THE DATA THAT IS ENTERED IN THE VARIOUS CELLS IN THE "WALL INFORMATION" SECTION. THE TOTALS REPRESENT THE MINIMUM QUANTITIES REQUIRED. THESE TOTALS DO NOT ACCOUNT FOR ANY BLOCK BREAKAGE, MIS-HANDLING, MIS-CUTS, OR POSSIBLE MINOR "AS BUILT" CHANGES.

15. DETERMINE STRETCHER ORDER QUANTITY. STRETCHERS ARE USUALLY STACKED $9 \theta$ TO A PALLET.

FROM THE "QUANTITY CALCULATIONS" SECTION, MINIMUM STRETCHERS REQUIRED TOTAL 1744. ROUNDING UP TO THE NEXT FULL PALLET, THERE WOULD BE $2 \theta$ PALLETS OR $180 \theta$ STRETCHERS PUT ON THE ORDER.

THIS WOULD MEAN THAT 56 EXTRA STRETCHER BLOCK WOULD BE INCLUDED IN THE 180日..


DATE: $\theta 3-\theta 5-17$
PAGE: 11
ESTIMATOR 88 STEP 15

15A. ADJUST AMOUNT OF STRETCHERS ON THE ORDER BY ADDING A PALLET (OR FRACTION OF A PALLET) IN THE +/PALLETS CELL. IN THIS EXAMPLE AN EXTRA PALLET IS ADDED TO THE ORDER. THIS MEANS THAT THERE ARE 56 EXTRA BLOCK PLUS $9 \theta$ STRETCHER BLOCK DUE TO THE ADDITIONAL PALLET TOTALLING 146 EXTRA STRETCHER BLOCK.

NOW THERE ARE 21 PALLETS OF STRETCHER BLOCK ON THE ORDER TOTALLING $1,89 \theta$.


WHOLESALE COST

| OMNI BLOCK: | Required Pallets | Extra Block | +/- Pallets | Total Extra | Total Pallets | Quantity | Price | Total Cost |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |
| Stretchers | 20.0 | 56 |  |  |  | \$3,402.00 |
| Corners | 4.0 | 36 | 0.0 36- |  | 4.0 |  |  | \$702.00 |
| Total Omni Block |  |  |  |  | \$4,104.00 |  |  |
| OTHER CMU BLOCK: |  |  |  |  |  |  |  |  |  |  |  |
| $8 \times 8 \times 8$ Halfs | 1.0 | 108 | 0.0 | 108 | 1.0 | 180 | \$1.40 | \$252.00 |
| $8 \times 8 \times 16$ Bond Beam CMU | 4.0 | 48 | 0.0 | 48 | 4.0 | 360 | \$1.60 | \$576.00 |
| $8 \times 8 \times 16 \mathrm{CMU}$ | 4.0 | 36 | 0.0 | 36 | 4.0 | 360 | \$1.60 | \$576.00 |
| $8 \times 4 \times 16 \mathrm{CMU}$ | 1.0 | 168 | 0.0 | 168 | 1.0 | 180 | \$1.55 | \$279.00 |
| Total Other CMU Block |  |  |  |  |  |  |  | \$1,404.00 |
| TOTAL BLOCK |  |  |  |  |  |  |  | \$5,508.00 |

DATE: $\theta 3-\theta 5-17$
PAGE: 12
ESTIMATOR 88 STEP 15A
16. DETERMINE CORNER ORDER QUANTITY. CORNERS ARE STACKED $9 \theta$ TO A PALLET. THERE ARE LEFT AND RIGHT CORNERS STACKED SEPARATELY. THERE ARE AN EVEN AMOUNT OF RIGHTS ( $5 \theta \%$ ) AND LEFTS ( $5 \theta \%$ ) CORNERS ON MOST EVERY PROJECT. NOTE, THE CORNERS CAN BE FLIPPED UPSIDE DOUN AND EFFECTIVELY USED THUS REDUCING THE EXACTNESS OF THE ORDER QUANTITY.

FROM THE "QUANTITY CALCULATIONS" SECTION THE TOTAL REQUIRED CORNERS ARE 324. ROUNDING UP TO THE NEXT FULL PALLET, THERE WOULD BE 4 PALLETS OR $36 \theta$ CORNERS PUT ON THE ORDER, WHICH WOULD INCLUDE 36 EXTRA CORNER BLOCK. 36 BLOCK IS AN ALLOW,ANCE OF A LITTLE OVER $10 \%$ AND SHOULD BE ENOUGH EXTRA CORNER BLOCK. THE CORNERS CAN BE ADJUSTED BY ENTERING AN ADDITIONAL NUMBER OF PALLETS IN THE +/- PALLETS CELL.

QUANTITY CALCULATIONS

| BLOCK | Omni Block Height 1 | Omni Block Height 2 | $8^{\prime \prime} \mathrm{CMU}$ <br> Height 1 | $4^{\prime \prime} \mathrm{CMU}$ <br> Height 1 | TOTALS |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Stretchers | 685 | 1,059 |  |  | 1,744 |
| Corners | 108 | 216 |  |  | 324 |
| $8 \times 8 \times 8$ Halfs | 72 |  |  |  |  |
| $8 \times 8 \times 16$ Bond Beam CMU | 75 | 75 | 162 |  | 312 |
| $8 \times 8 \times 16 \mathrm{CMU}$ |  |  | 324 |  | 324 |
| $8 \times 4 \times 16 \mathrm{CMU}$ |  |  |  | 12 | 12 |
| INSERTS |  |  |  |  |  |
| Short Inserts | 961 | 1,518 |  |  | 2,479 |
| Long Inserts | 739 | 1,167 |  |  | 1,906 |
| WHOLESALE COST |  |  |  |  |  |


|  | Required Pallets | Extra Block | +/- Pallets | Total Extra | Total Pallets | Quantity | Price | Total Cost |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| OMNI BLOCK: |  |  |  |  |  |  |  |  |
| Stretchers | 20.0 | 56 | 1.0 | 446 | 21.0 | 4,890 | \$1.80 | \$3,402.00 |
| Corners Total Omni Block | 4.0 |  | 0.0 | 36 | 4.0 | 360 | \$1.95 | $\begin{aligned} & \$ 702.00 \\ & \$ 4,104.00 \end{aligned}$ |
| OTHER CMU BLOCK: |  |  |  |  |  |  |  |  |
| $8 \times 8 \times 8$ Halfs | 1.0 | 108 | 0.0 | 108 | 1.0 | 180 | \$1.40 | \$252.00 |
| $8 \times 8 \times 16$ Bond Beam CMU | 4.0 | 48 | 0.0 | 48 | 4.0 | 360 | \$1.60 | \$576.00 |
| $8 \times 8 \times 16 \mathrm{CMU}$ | 4.0 | 36 | 0.0 | 36 | 4.0 | 360 | \$1.60 | \$576.00 |
| $8 \times 4 \times 16 \mathrm{CMU}$ | 1.0 | 168 | 0.0 | 168 | 1.0 | 180 | \$1.55 | \$279.00 |
| Total Other CMU Block |  |  |  |  |  |  |  | \$1,404.00 |
| TOTAL BLOCK |  |  |  |  |  |  |  | \$5,508.00 |

DATE: $\theta 3-\theta 5-17$
PAGE: 13
ESTIMATOR 88 STEP 16
17. DETERMINE THE NUMBER OF $8 \times 8 \times 8$ HALFS. HALFS ARE STACKED $18 \theta$ TO A PALLET. FROM THE "QUANTITY CALCULATIONS" SECTION, TOTAL HALF BLOCK REQUIRED IS 72. ROUNDING UP TO THE NEXT FULL PALLET, THERE WOULD BE 1 PALLET OR $18 \theta$ HALFS PUT ON THE ORDER, THIS WOULD INCLUDE $1 \ominus 8$ EXTRA HALFS AND THAT IS FAR TOO MANY TO PUT ON THE ORDER.

HALFS ARE REQUIRED AT ALL WINDOW AND DOOR JAMBS AT A FREQUENCY OF ONE EVERY OTHER COURSE ON BOTH SIDES OF THE OPENING. THIS IS WHY THE VERTICAL HEIGHT OF ALL OPENINGS IS PART OF THE AUTOMATIC CALCULATIONS. IF THERE IS A SITUATION WHERE A BLOCK WALL ENDS OR THERE ARE CONTROL JOINTS, THE HALFS CAN BE ADDED BY ADJUSTING THE +/- PALLETS COLUMN.


DATE: $\theta 3-\theta 5-17$
PAGE: 14
ESTIMATOR 88 STEP 17

17A. ADJUST AMOUNT OF HALFS ON THE ORDER BY ENTERING A NEGATIVE FRACTION (EXPRESSED BY A DECIMAL) IN THE +/PALLETS CELL. IN THIS EXAMPLE A - $\theta .5 \theta$ IS ENTERED EFFECTIVELY REDUCING THE ORDER TO $1 / 2$ OF A PALLET. NOW THERE ARE ONLY 18 EXTRA HALF BLOCK ( $108-9 \theta$ ).

THEREFORE, 18 PLUS THE 72 FROM THE "QUANTITY CALCULATIONS" TOTAL $9 \theta$ HALF BLOCK TO BE PUT ON THE ORDER. THIS SHOULD BE PLENTY OF EXTRA HALFS.

QUANTITY CALCULATIONS

| BLOCK | Omni Block Height 1 | Omni Block Height 2 | $8^{\prime \prime} \mathrm{CMU}$ <br> Height 1 | $4^{\prime \prime} \mathrm{CMU}$ <br> Height 1 | TOTALS |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Stretchers | 685 | 1,059 |  |  | 1,744 |
| Corners | 108 | 216 |  |  | 324 |
| $8 \times 8 \times 8$ Halfs | 72 |  |  |  | 72 |
| $8 \times 8 \times 16$ Bond Beam CMU | 75 | 75 | 162 |  | 372 |
| $8 \times 8 \times 16 \mathrm{CMU}$ |  |  | 324 |  | 324 |
| $8 \times 4 \times 16 \mathrm{CMU}$ |  |  |  | 12 | 12 |

INSERTS

|  |  |  |
| :--- | :--- | :--- |
| Short Inserts | 961 | 1,518 |
| Long Inserts | 739 | 1,167 |

WHOLESALE COST

|  | Required Pallets | Extra Block | +/-Pallets | Total Extra | Total Pallets | Quantity | Price | Total Cost |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stretchers | 20.0 | 56 | 1.0 | 146 | 21.0 | 1,890 | \$1.80 | \$3,402.00 |
| Corners | 4.0 | 36 | 0.0 | 36 | 4.0 | 360 | \$1.95 | \$702.00 |
| Total Omni Block |  |  |  |  |  |  |  | \$4,104.00 |
| OTHER CMU BLOCK: |  |  |  | - |  | - |  |  |
| $8 \times 8 \times 8$ Halfs | 1.0 | 108 | (0.5) | 18 | 0.5 | 90 | \$1.40 | \$126.00 |
| $8 \times 8 \times 16$ Bond Beam CMU | 4.0 | 48 | 0.0 |  | 4.0 | 360 | \$1.60 | \$576.00 |
| $8 \times 8 \times 16 \mathrm{CMU}$ | 4.0 | 36 | 0.0 | 36 | 4.0 | 360 | \$1.60 | \$576.00 |
| $8 \times 4 \times 16 \mathrm{CMU}$ | 1.0 | 168 | 0.0 | 168 | 1.0 | 180 | \$1.55 | \$279.00 |
| Total Other CMU Block |  |  |  |  |  |  |  | \$1,278.00 |
| TOTAL BLOCK |  |  |  |  |  |  |  | \$5,382.00 |

DATE: $\theta 3-\theta 5-17$
PAGE: 15
ESTIMATOR 88
STEP 17A
18. DETERMINE THE NUMBER OF $8 \times 8 \times 16$ BOND BEAM CMU. BOND BEAM CMU ARE STACKED $9 \theta$ TO A PALLET.

FROM THE QUANTITY CALCULATIONS SECTION, THERE ARE 312 BOND BEAM CMU REQUIRED. ROUNDING UP TO THE NEXT FULL PALLET, THERE WOULD BE 4 PALLETS OR $36 \theta$ BOND BEAM CMU'S PUT ON THE ORDER.
$36 \theta$ WOULD INCLUDE 48 EXTRA BOND BEAM CMU'S AND FOR THIS EXAMPLE, ASSUME THAT IS TOO MANY EXTRA BOND BEAM CMU BLOCK.


DATE: $\theta 3-\theta 5-17$
PAGE: 16
ESTIMATOR 88 STEP 18

18A ADJUST AMOUNT OF BOND BEAM CMU ON THE ORDER BY ENTERING A NEGATIVE FRACTION (EXPRESSED BY A DECIMAL) IN THE +/- PALLETS CELL. IN THIS E×AMPLE A - $\theta .4 \theta$ IS ENTERED. THERE ARE NOW ONLY 12 EXTRA BOND BEAM CMU BLOCK (4836) BECAUSE 36 IS $4 \theta \%$ OR $\theta .4 \theta$ OF A FULL PALLET.

THE ORDER WOULD NOW HAVE 324 BOND BEAM CMU ON IT.


|  | Required Pallets | Extra Block | +/- Pallets | Total Extra | Total Pallets | Quantity | Price | Total Cost |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stretchers | 20.0 | 56 | 1.0 | 146 | 21.0 | 1,890 | \$1.80 | \$3,402.00 |
| Corners | 4.0 | 36 | 0.0 | 36 | 4.0 | 360 | \$1.95 | \$702.00 |
| Total Omni Block |  |  |  |  |  |  |  | \$4,104.00 |
| OTHER CMU BLOCK: |  |  |  |  |  |  |  |  |
| $8 \times 8 \times 8$ Halfs | 1.0 | 100 | (0.5) | 19 | 0.5 | 00 | \$1.40 | \$126.00 |
| $8 \times 8 \times 16$ Bond Beam CMU | 4.0 | 48 | (0.4) | 12 | 3.6 | 324 | \$1.60 | \$518.40 |
| $8 \times 8 \times 16 \mathrm{CMU}$ | 4.0 | 36 | 0.0 | 36 | 4.0 | 360 | \$1.60 | \$576.00 |
| $8 \times 4 \times 16 \mathrm{CMU}$ | 1.0 | 168 | 0.0 | 168 | 1.0 | 180 | \$1.55 | \$279.00 |
| Total Other CMU Block |  |  |  |  |  |  |  | \$1,220.40 |
| TOTAL BLOCK |  |  |  |  |  |  |  | \$5,324.40 |

DATE: $\theta 3-\theta 5-17$
PAGE: 17
ESTIMATOR 88 STEP 18A
19. DETERMINE THE NUMBER OF $8 \times 8 \times 16 \mathrm{CMU} .8 \times 8 \times 16 \mathrm{CMU}$ ARE STACKED $9 \theta$ TO A PALLET.

FROM THE "QUANTITY CALCULATIONS" SECTION, THERE ARE 324 $8 \times 8 \times 16$ CMU'S REQUIRED. ROUNDING UP TO THE NE $\times T$ FULL

PALLET, THERE WOULD BE 4 PALLETS OR $36 \theta 8 \times 8 \times 16$ CMU'S PUT ON THE ORDER.
$36 \theta$ WOULD INCLUDE 36 EXTRA $8 \times 8 \times 16$ CMU'S AND THAT IS PROBABLY ABOUT THE RIGHT AMOUNT.

THIS BLOCK QUANTITY CAN BE ADJUSTED THE SAME AS THE OTHER EXAMPLES PROVIDED THUS FAR.

| QUANTITY CALCULATIONS |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| BLOCK | Omni Block Height 1 | Omni Block Height 2 |  |  |  | $\begin{aligned} & 8 " \mathrm{CMU} \\ & \text { Height } 1 \\ & \hline \end{aligned}$ |  | $\begin{aligned} & 4^{4 "} \text { CMU } \\ & \text { Height } 1 \end{aligned}$ | TOTALS |
| Stretchers | 685 | 1,059 |  |  |  |  |  |  | 1,744 |
| Corners | 108 | 216 |  |  |  |  |  |  | 324 |
| $8 \times 8 \times 8$ Halfs | 72 |  |  |  |  |  |  |  | 72 |
| $8 \times 8 \times 16$ Bond Beam CMU | 75 | 75 |  |  |  | 162 |  |  | 3 |
| $8 \times 8 \times 16 \mathrm{CMU}$ |  |  |  |  |  | 324 |  |  | 324 |
| $8 \times 4 \times 16 \mathrm{CMU}$ |  |  |  |  |  |  |  |  | 12 |
| INSERTS |  |  |  |  |  |  |  |  |  |
| Short Inserts | 961 | 1,518 |  |  |  |  |  |  | 2,479 |
| Long Inserts | 739 | 1,167 |  |  |  |  |  |  | 1,906 |
| WHOLESALE COST |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| Stretchers | 20.0 | 56 | 1.0 | 146 | 21.0 | 1,890 | \$1.80 |  | \$3,402.00 |
| Corners | 4.0 | 36 | 0.0 | 36 | 4.0 | 360 | \$1.95 |  | \$702.00 |
| Total Omni Block |  |  |  |  |  |  |  |  | \$4,104.00 |
| OTHER CMU BLOCK: |  |  |  |  |  |  |  |  |  |
| $8 \times 8 \times 8$ Halfs | 1.0 | 108 | (0.5) | 18 | 0.5 | 90 | \$1.40 |  | \$126.00 |
| $8 \times 8 \times 16$ Bond Beam CMU | 4.0 | 48 | (0.4) | 12 | 3.6 | 384 | \$1.60 |  | \$518.40 |
| $8 \times 8 \times 16 \mathrm{CMU}$ | 4.0 | 36 | 0.0 | 36 | 4.0 | 360 | \$1.60 |  | \$576.00 |
| $8 \times 4 \times 16 \mathrm{CMU}$ | $1.0{ }^{-}$ | 168 |  | 168 | 1.0 | 180 | \$1.55 |  | \$279.00 |
| Total Other CMU Block |  |  |  |  |  |  |  |  | \$1,220.40 |
| TOTAL BLOCK |  |  |  |  |  |  |  |  | \$5,324.40 |

DATE: $\theta 3-\theta 5-17$
PAGE: 18
ESTIMATOR 88 STEP 19

2ө. DETERMINE THE NUMBER OF $8 \times 4 \times 16$ CMU. THEY ARE
STACKED $18 \theta$ TO A PALLET.

FROM THE "QUANTITY CALCULATIONS" SECTION, THERE ARE 12
$8 \times 4 \times 16$ CMU REQUIRED. ROUNDING UP TO THE NEXT FULL PALLET, THERE WOULD BE 1 PALLET OR $18 \theta 8 \times 4 \times 16$ CMU'S PUT ON THE ORDER.
$18 \theta$ WOULD INCLUDE 168 EXTRA $8 \times 4 \times 16$ CMU'S AND THAT IS FAR TOO MANY.


|  | Required Palets | Extra Block | +/- Pallets | Total Ex | Total Pallets | Quantity | Price | Total Cost |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| OMn block: |  |  |  |  |  |  |  |  |
| Stretchers | 20.0 | 56 | 1.0 | 146 | 21.0 | 1,890 | \$1.80 | \$3,402.00 |
| Corners | 4.0 | 36 | 0.0 | 36 | 4.0 | 360 | \$1.95 | \$702.00 |
| Total Omni Block |  |  |  |  |  |  |  | \$4,104.00 |
| OTHER CMU BLOCK: |  |  |  |  |  |  |  |  |
| $8 \times 8 \times 8$ Halfs | 1.0 | 108 | (0.5) | 18 | 0.5 | 90 | \$1.40 | \$126.00 |
| $8 \times 8 \times 16$ Bond Beam CMU | 4.0 | 48 | (0.4) | 12 | 3.6 | 324 | \$1.60 | \$518.40 |
| $8 \times 8 \times 16 \mathrm{CMU}$ | 4.0 | 30 | 0.0 | 36 | 4.0 | -300 | \$1.60 | \$576.00 |
| $8 \times 4 \times 16 \mathrm{CMU}$ | 1.0 | 168 | 0.0 | 168 | 1.0 | 180 | \$1.55 | \$279.00 |
| Total Other CMU Block |  |  |  |  |  |  |  | \$1,220.40 |
| TOTAL BLOCK |  |  |  |  |  |  |  | \$5,324.40 |

DATE: $\theta 3-\theta 5-17$
PAGE: 19
ESTIMATOR 88 STEP $2 \theta$
$2 \theta A$ ADJUST AMOUNT OF $8 \times 4 \times 16 \mathrm{CMU}$ ON THE ORDER BY
ENTERING A NEGATIVE FRACTION (EXPRESSED BY A DECIMAL) IN THE +/- PALLETS CELL. IN THIS EXAMPLE A - $0.9 \theta$ IS ENTERED. THIS MEANS THAT THERE ARE NOW ONLY 6 EXTRA $8 \times 4 \times 16$ CMU BLOCK ( 168 - 162) BECAUSE 162 IS $9 \theta \%$ OR $\theta .9 \theta$ OF A FULL
PALLET.
THE ORDER WOULD NOW HAVE $188 \times 4 \times 16$ CMU ON IT.

QUANTITY CALCULATIONS


|  | Required Pallets | Extra Block | +/- Pallets | Total Extra | Total Pallets | Quantity | Price | Total Cost |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |
| Stretchers | 20.0 | 56 | 1.0 | 146 | 21.0 | 1,890 | \$1.80 | \$3,402.00 |
| Corners | 4.0 | 36 | 0.0 | 36 | 4.0 | 360 | \$1.95 | \$702.00 |
| Total Omni Block |  |  |  |  |  |  |  | \$4,104.00 |
| OTHER CMU BLOCK: |  |  |  |  |  |  |  |  |
| $8 \times 8 \times 8$ Halfs | 1.0 | 108 | (0.5) | 18 | 0.5 | 90 | \$1.40 | \$126.00 |
| $8 \times 8 \times 16$ Bond Beam CMU | 4.0 | 48 | (0.4) | 12 | 3.6 | 324 | \$1.60 | \$518.40 |
| $8 \times 8 \times 16 \mathrm{CMU}$ | 4.0 | -36 | 8.0 | -36 | 4.0 | -360 | \$1.60 | \$576.00 |
| $8 \times 4 \times 16 \mathrm{CMU}$ <br> Total Other CMU Block | 1.0 | 168 | (0.9) | 6 | 0.1 | $18$ | \$1.55 | $\begin{aligned} & \$ 27.90 \\ & \$ 1,220.40 \end{aligned}$ |
| TOTAL BLOCK |  |  |  |  |  |  |  | \$5,324.40 |

DATE: $\theta 3-\theta 5-17$
PAGE: $2 \theta$
ESTIMATOR 88 STEP $2 \theta A$
21. DETERMINE THE NUMBER OF SHORT INSERTS. THERE ARE $1 \theta \theta$ TO A BAG.

FROM THE "QUANTITY CALCULATIONS" SECTION, 2,479 SHORT INSERTS ARE REQUIRED. ROUNDING UP TO THE NEXT FULL BAG, THERE WOULD BE 25 BAGS OR $2,5 \theta \theta$ SHORT INSERTS PUT ON THE ORDER.

THE ORDER WOULD HAVE 21 EXTRA SHORT INSERTS ON IT.
THE PROGRAM CALCULATES ONE LONG INSERT FOR EVERY STRETCHER AND $1 / 2$ OF A LONG INSERT FOR EACH CORNER. THE SHORT INSERTS ARE THEN CALCULATED AT $3 \theta \%$ MORE THAN THE LONG INSERTS. THIS CALCULATION IS BASED UPON A 48" VERTICAL REBAR SPACING REQUIREMENT.


DATE: $\theta 3-\theta 5-17$
PAGE: 21
ESTIMATOR 88
STEP 21

21A ADJUST AMOUNT OF SHORT INSERTS ON THE ORDER BY ENTERING A POSITIVE WHOLE NUMBER (INSERTS ARE ALWAYS SOLD IN $1 \theta \theta$ COUNT BAGS) IN THE +/- BAGS CELL.

IN THIS EXAMPLE I IS ENTERED. THIS MEANS THAT THERE ARE NOW 121 EXTRA SHORT INSERTS ( $21+1 \theta \theta$ ).

THE ORDER WOULD HAVE 26 BAGS OF SHORT INSERTS ON IT.

| QUANTITY CALCULATIONS |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Omni Block Height 1 | Omni Block Height 2 | $8^{\prime \prime} \mathrm{CMU}$ <br> Height 1 | $4^{\prime \prime} \mathrm{CMU}$ Height 1 | TOTALS |
| INSERTS |  |  |  |  |  |
| Short Inserts | 961 | 1,518 |  |  | 2,479 |
| Long Inserts | 739 | 1,167 |  |  | 1,906 |

WHOLESALE COST

|  | Required Pallets | Extra Block | +/- Pallets | Total Extra | Total Pallets | Quantity | Price | Total Cost |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Stretchers | 20.0 | 56 | 1.0 | 146 | 21.0 | 1,890 | \$1.80 | \$3,402.00 |
| Corners | 4.0 | 36 | 0.0 | 36 | 4.0 | 360 | \$1.95 | \$702.00 |
| Total Omni Block |  |  |  |  |  |  |  | \$4,104.00 |
| OTHER CMU BLOCK: |  |  |  |  |  |  |  |  |
| $8 \times 8 \times 8$ Halfs | 1.0 | 108 | (0.5) | 18 | 0.5 | 90 | \$1.40 | \$126.00 |
| $8 \times 8 \times 16$ Bond Beam CMU | 4.0 | 48 | (0.4) | 12 | 3.6 | 324 | \$1.60 | \$518.40 |
| $8 \times 8 \times 16 \mathrm{CMU}$ | 4.0 | 36 | 0.0 | 36 | 4.0 | 360 | \$1.60 | \$576.00 |
| $8 \times 4 \times 16 \mathrm{CMU}$ | 1.0 | 168 | (0.9) | 6 | 0.1 | 18 | \$1.55 | \$27.90 |
| Total Other CMU Block |  |  |  |  |  |  |  | \$1,220.40 |
| TOTAL BLOCK |  |  |  |  |  |  |  | \$5,324.40 |
|  | Required Bags | Extra Foam | + Bags | Total Extra | Total Bags | Quantity | Price |  |
| INSERTS: | $25$ |  |  |  |  |  |  |  |
| Long Inserts |  |  |  |  |  | \$2,120.00 |
| TOTAL INSERTS |  |  |  |  |  | \$4,616.00 |

DATE: $\theta 3-\theta 5-17$
PAGE: 22
ESTIMATOR 88 STEP 21A
22. DETERMINE THE NUMBER OF LONG INSERTS. THERE ARE $1 \theta \theta$ TO A BAG.

FROM THE QUNTITY CALCULATIONS SECTION, 1,9ө6 LONG INSERTS ARE REQUIRED. ROUNDING UP TO THE NEXT FULL BAG, THERE WOULD BE $2 \theta$ BAGS OR $2, \theta \theta \theta$ LONG INSERTS PUT ON THE ORDER.

THE ORDER WOULD HAVE 94 EXTRA LONG INSERTS ON IT, WHICH IS LITTLE MORE THAN IDEAL, BUT BAGS ARE ONLY SOLD IN I $\theta \theta$ 'S.

THE PROGRAM CALCULATES ONE LONG INSERT FOR EVERY STRETCHER AND $1 / 2$ OF A LONG INSERT FOR EACH CORNER. THE SHORT INSERTS ARE THEN CALCULATED AT 30\% MORE THAN THE LONG INSERTS. THIS CALCULATION IS BASED UPON A 48" VERTICAL REBAR SPACING REQUIREMENT.


DATE: $\theta 3-\theta 5-17$
PAGE: 23
ESTIMATOR 88 STEP 22
23. DETERMINE THE NUMBER OF BLOCK SHIPMENTS. THERE ARE VARYING WEIGHTS OF BLOCK, BUT USUALLY THERE ARE 13 PALLETS OF BLOCK PER TRUCKLOAD. THE SUM OF THE TOTAL PALLETS COLUMN IS UNDER THE "QUANTITY" COLUMN AT THE LINE ITEM OF "PALLET CHARGES". DIVIDE THIS NUMBER BY 13, THEN ROUND UP AND ENTER THE NEXT WHOLE NUMBER IN THE SHIPMENTS CELL.

IN THIS EXAMPLE 34 PALLETS WOULD REQUIRE 2.62 TRUCKLOADS. THEREFORE, THE NUMBER 3 IS ENTERED UNDER THE "SHIPMENTS" COLUMN AT LINE ITEM - "BLOCK FREIGHT".
WHOLESALE COST

|  | Required Pallets | Extra Block | +/- Pallets | Total Extra | Tot/mallets | Quantity | Price | Total Cost |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| OMNI BLOCK: |  |  |  |  | - |  |  |  |
| Stretchers | 20.0 | 56 | 1.0 | 146 | 21.0 | 1,890 | \$1.80 | \$3,402.00 |
| Corners | 4.0 | 36 | 0.0 | 36 | 4.0 | 360 | \$1.95 | \$702.00 |
| Total Omni Block |  |  |  |  |  |  |  | \$4,104.00 |
| OTHER CMU BLOCK: |  |  |  |  |  |  |  |  |
| $8 \times 8 \times 8$ Halfs | 1.0 | 108 | (0.5) | 18 | 0.5 | 90 | \$1.40 | \$126.00 |
| $8 \times 8 \times 16$ Bond Beam CMU | 4.0 | 48 | (0.4) | 12 | 3.6 | 324 | \$1.60 | \$518.40 |
| $8 \times 8 \times 16 \mathrm{CMU}$ | 4.0 | 36 | 0.0 | 36 | 4.0 | 360 | \$1.60 | \$576.00 |
| $8 \times 4 \times 16 \mathrm{CMU}$ | 1.0 | 168 | (0.9) | 6 | 0.1 | 18 | \$1.55 | \$27.90 |
| Total Other CMU Block |  |  |  |  |  |  |  | \$1,220.40 |
| TOTAL BLOCK |  |  |  |  |  |  |  | \$5,324.40 |
|  | Required Bags | Extra Foam | + Bags | Total Extra | Total Bags | Quantity | Price |  |
| INSERTS: |  |  |  |  |  |  |  |  |
| Short Inserts | 25 | 21 | 1 | 121 | 26 | 2,600 | \$0.96 | \$2,496.00 |
| Long Inserts | 20 | 94 | 0 | 94 | 20 | 2,000 | \$1.06 | \$2,120.00 |
| TOTAL INSERTS |  |  |  |  |  |  |  | \$4,616.00 |
| TOTAL BLOCK AND INSERTS |  |  |  |  |  |  |  | \$9,940.40 |
| FREIGHT: (estimated) |  |  |  |  |  | Shipments | Price |  |
| Block Freight <br> Foam Insert Freight |  |  |  |  |  | 3 | $\begin{aligned} & \$ 400 \\ & \$ 600 \end{aligned}$ | $\begin{array}{r} \$ 1,200.00 \\ \$ 600.00 \end{array}$ |
| TOTAL FREIGHT |  |  |  |  | , |  |  | \$1,800.00 |
| Pallet Charges <br> Pallet Shrink Wrap Fee |  |  |  |  |  | $34$ | $\begin{array}{r} \$ 15.00 \\ \$ 2.00 \end{array}$ | $\begin{array}{r} \$ 510.00 \\ \$ 68.00 \end{array}$ |
| TOTAL |  |  |  |  |  |  |  | \$12,318.40 |
| Pallet Refund (if returned back to origin) |  |  |  |  |  | 34 | \$11.00) | (\$374.00) |

DATE: $\theta 3-\Theta 5-17$
PAGE: 24
ESTIMATOR 88 STEP 23
24. DETERMINE THE NUMBER OF INSERT SHIPMENTS. $42, \theta \theta \theta$ OR $42 \theta$ BAGS OF INSERTS CAN BE LOADED INTO ONE 53' SEMI VAN. THE SUM OF THE TOTAL BAGS COLUMN IS UNDER $42 \theta$, THEREFORE THE NUMBER ONE IS ENTERED IN THE "SHIPMENTS" COLUMN AT LINE ITEM - "FOAM INSERT FREIGHT".
25. IN SOME CASES, BLOCK PLANTS UILL ALLOW THE CONTRACTOR TO RETURN UNDAMAGED PALLETS FOR CREDIT. IN THIS EXAMPLE. THE BLOCK PLANT UILL CREDIT THE CONTRACTOR \$II.ӨӨ PER RETURNED PALLET. SUBTRACTING THIS AMOUNT FROM THE TOTAL YIELDS A NET COST. ENTER 34 UNDER THE "SHIPMENTS" COLUMN INTO THE LINE ITEM - "PALLET REFUND".


DATE: $\theta 3-\theta 5-17$
PAGE: 25

IN THIS EXAMPLE, THE WALL HEIGHT IS 11 '4" OR 11.33 , THE WALL LENGTH IS $2 \theta \theta^{\prime} \theta^{\prime \prime}$ AND THE PRICE PER SQUARE FOOT IS \$3.75.

THE QUICK ESTIMATE IS $\$ 8,498$.

THE NET BLOCK REQUIRED WOULD BE +/- 2164.
IF COMPARED TO THE EXAMPLE PROVIDED IN THIS TURORIAL, MOST OF THE VARIANCE IS ATTRIBUTED TO A SIGNIFICANTLY LOWER PERCENTAGE OF EGRESS THAN NORMAL IN THE E×AMPLE.




