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Inward 45° Corner = 2	
Outward 45° Corner = 2	
Outward 90° Corner = 7	
Inward 90° Corner = 3	
IntegraT-Wall (Inside 90°) = 2	

EXAMPLE

MATERIAL ESTIMATE

(Manual Worksheet)

Date: _____

Name:		
Location:		
Start Date:		

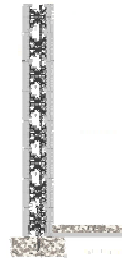
Project Specifications (Complete separate worksheets for walls with different heights and/or wall thicknesses)

Wall Length: _____	# Outside 90° Corners: _____	# Concrete Pours: _____		
Wall Height: _____	# Inside 90° Corners: _____		Size	Spacing
Web Size: _____	# Outside 45° Corners: _____	Vertical Rebar: _____		(feet)
Length of Brick: _____	# Inside 45° Corners: _____	Horizontal Rebar: _____		(feet)

1.) Calculate the number of courses

$$\frac{\text{Total Height (feet)}}{\text{Course Height (feet) } 1.02} = \text{Courses}$$

(Round up to closest .5)



2.) Calculate number of 90° Corners Sets

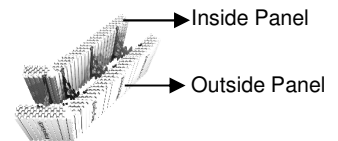
$$\# \text{ 90° corners} \times \# \text{ Courses} = \# \text{ 90° Corners Sets}$$



Total Sets:

3.) Number of 45° Panels

$$\# \text{ 45° corners} \times \# \text{ Courses} = \# \text{ 45° Corners Panels}$$



Simple Method:

Order the same amount of 45° Inside panels as 45° Outside panels

Total Inside Panels:
 Total Outside Panels:

OR

Adjusted for Brickledge Panels:

OR

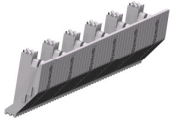
45° Corners Panels: _____
 # of 45° Inside Corners with Brick: _____ (Deduct)

45° Corners Panels: _____
 # of 45° Outside Corners with Brick: _____

Total Inside Panels:

Total Outside Panels:

4.) Calculate the number of Brickledge or Taper Panels



i.) Brickledge Panels

$$\frac{\text{Length of Brick (feet)}}{\text{(feet)}} - \text{(less)} \frac{\text{Door Widths (feet)}}{\text{(feet)}} = \frac{\text{_____}}{\text{(divided)}} \frac{4'}{\text{_____}} = \text{_____ Brickledge Panels}$$



ii.) Taper Panels

$$\frac{\text{Length of Brick (feet)}}{\text{(feet)}} / \text{(divided)} \frac{4'}{\text{_____}} = \text{_____ Taper Panels}$$

5.) Calculate the number of Standard Panels

a) Calculate the adjusted length of wall of standards. (Use information from page 1 Project Specification)

Wall Length: _____

less # Outside 90° Corners: _____ x 4' = _____

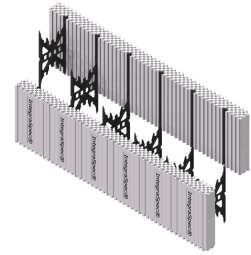
less # Inside 90° Corners: _____ x 2' = _____

less # Inside 45° Corners: _____ x 2' = _____

less # Outside 45° Corners: _____ x 3' = _____

(Add Above) → _____

Total Factored Length: (Deduct corners from wall length) _____



b) Calculate # of Standard Units per Row

Factored Length (5a) divided by Length of Standard Panel

$$\frac{\text{_____}}{4'} = \text{_____}$$

c) Calculate the # Standard Panels to be removed for all openings

Total sq.ft. of openings divided by square footage of Standard Panel

sq.ft. Openings: $\frac{\text{_____}}{4.08} = \text{_____}$

d) Calculate the total # of Standard Units

of Standard Units per Row (5b) multiplied by the # of Courses (1) less Opening Standards

$$\frac{\text{_____}}{(5b)} \times \frac{\text{_____}}{1} = \text{_____} - \frac{\text{_____}}{(5c)} = \text{_____ Standard Units}$$

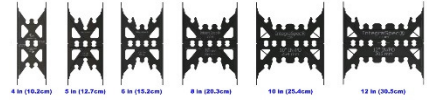
e) Calculate the total # of Standard Panels

Total # Standard Units (5d) times 2 less number of Brickledge or Taper Units

$$\frac{\text{_____}}{(5d)} \times \frac{2}{\text{_____}} = \text{_____} - \frac{\text{_____}}{(less) \quad 4} = \text{_____ Standard Panels}$$

Note: Increase panels to allow for waste. 3.5% is a typical waste factor, however increase waste factor for more difficult projects

$$\frac{\text{_____}}{(5e)} \times \frac{1.035}{3.50\%} = \text{_____ Total Standard Panels}$$



6.) Calculate the number of Webs/Spacers required

Total # of Standard Panels (5e):	x	<u>3</u>	=	
Total # of Brickledge Panels (4i):	x	<u>3</u>	=	
Total # of Taper Panels (4ii):	x	<u>3</u>	=	
Total # of 90° Corner Sets (2):	x	<u>4</u>	=	
Total # of 45° Inside Corner Panels (3):	x	<u>2</u>	=	
Total # of 45° Outside Corner Panels (3):	x	<u>2</u>	=	
				<u> </u>
			(Add above)	Total Webs/Spacers (Pieces)

7.) Calculate the number of IntegraBucks required for all openings

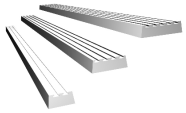
Total # of IntegraBucks = Total Height of All Openings times 2



Total Height of All Openings: (Feet) x 2 = **IntegraBucks**
(See Openings Worksheet) (Pieces)

8.) Calculate the # of IntegraHeaders

Total # of IntegraHeaders = Total Width of All Openings divided by IntegraHeader Length

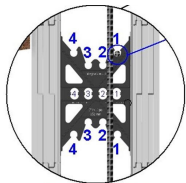


Total Width of All Openings: (Feet) / 8' (divided) = **IntegraHeaders**
(See Openings Worksheet) (Pieces)

9.) Calculate the amount of Steel Rebar

a.) Horizontal Rebar: Wall Height (feet) divided by the Horizontal Spacing (feet) times Wall Length (feet)

Note: (Adjust rebar spacing to accommodate panel heights or half heights)



NOTCHE(S) 1, 2, 3 & 4 FOR REBAR PLACEMENT (EXPLODED VIEW)

$$\frac{\text{Total Height (Feet)}}{\text{(Feet)}} \div \frac{\text{Horizontal Spacing (Feet)}}{\text{(Feet)}} \times \frac{\text{Total Length (Feet)}}{\text{(Feet)}} = \text{ } \text{Horizontal Rebar}$$

Note: Add extra material for overlaps and waste. Typical percentage is 12%, adjust for more difficult projects

Horizontal Rebar: x 12% = **Extra Horizontal Rebar**

b.) Vertical Rebar: Total Length divided by the Vertical Spacing (feet) times Total Height

$$\frac{\text{Total Length (Feet)}}{\text{(Feet)}} \div \frac{\text{Vertical Spacing (Feet)}}{\text{(Feet)}} \times \frac{\text{Total Height (Feet)}}{\text{(Feet)}} = \text{ } \text{Vertical Rebar}$$

Note: Add extra material for overlaps and waste. Typical percentage is 3%, adjust for multi level projects

Vertical Rebar: x 3% = **Extra Vertical Rebar**

Note: Horizontal Rebars and Vertical Rebars can be added together only if the size of bar is the same

10.) Calculate the amount of Concrete

a.) Wall Length times Actual Wall Height¹ less Total Square footage of Openings times Web/Spacer Size divided by 12

$$\frac{\text{Wall Length (Feet)}}{\text{(Feet)}} \times \frac{\text{Actual Wall Height}^1 \text{ (Feet)}}{\text{(Feet)}} - \frac{\text{sq.ft. Openings (Square Feet)}}{\text{(Square Feet)}} \times \frac{\text{Web/Spacer (inches)}}{\text{(inches)}} \div \frac{\text{Adjustment to Feet}}{\mathbf{12}} = \frac{\text{Cubic Feet}}{\text{(Cubic Feet)}}$$

Note¹: Actual Wall Height is the height to be built on site. This will depend on whether the top panel will be cut to match a specific height or left as a full panel. (eg. 9 Courses = 9 x 1.02 = 9.18)

Note²: Change Cubic Feet to Cubic Yards, Divide by 27

$$\text{Cubic Feet Concrete: } \frac{\text{Cubic Feet}}{\text{(Cubic Feet)}} \div \frac{\mathbf{27}}{\text{(Cubic Yards)}} = \frac{\text{Cubic Yards}}{\text{(Cubic Yards)}}$$

Concrete

b.) Add extra concrete material for brickledge, tapers & pumptruck

# Brickledge (4i)	x	Multiplier 0.0286	=	_____	}	=	_____	(Cubic Yards)
# Taper (4ii)	x	Multiplier 0.0083	=	_____				
# of pours	x	0.75	=	_____				

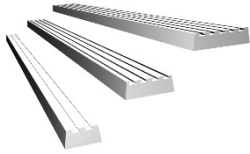
Concrete

Total Concrete: _____
(Cubic Yards)

Note³: Multiply Total Concrete by .765 to convert Cubic Yards to Cubic Metres

11.) Additional Work Space

Use this area to calculate other material such as waterproofing, parging, # of braces/scaffolding, labour, etc.



Headers



Openings Worksheet

Name:		
Location:		
Start Date:		

Windows (In feet)

	Width	Height	Sq.Ft.		Width	Height	Sq.Ft.		Width	Height	Sq.Ft.
1.)				11.)				21.)			
2.)				12.)				22.)			
3.)				13.)				23.)			
4.)				14.)				24.)			
4.)				15.)				25.)			
6.)				16.)				26.)			
7.)				17.)				27.)			
8.)				18.)				28.)			
9.)				19.)				29.)			
10.)				20.)				30.)			
Totals:											

Doors (In feet)

	Width	Height	Sq.Ft.		Width	Height	Sq.Ft.		Width	Height	Sq.Ft.
1.)				6.)				11.)			
2.)				7.)				12.)			
3.)				8.)				13.)			
4.)				9.)				14.)			
5.)				10.)				15.)			
Totals:											

Other (In feet)

	Width	Height	Sq.Ft.		Width	Height	Sq.Ft.		Width	Height	Sq.Ft.
1.)				6.)				11.)			
2.)				7.)				12.)			
3.)				8.)				13.)			
4.)				9.)				14.)			
5.)				10.)				15.)			
Totals:											

Note: This area can be used for fireplaces, interior openings or just walls end