



Compass Software

CALCULATION

Calculation

Works for different
sets of staircase types

Staircase type 1

Staircase type 2

Staircase type ...

Small Parts

Screws, dowels,
fittings...

Article 1

Article 2

Article ...

Wages

Employee's wages
Hourly rate for
machine

Wages 1

Wages 2

Wages ...

Material

Types of wood
Price of wood
Wood waste

Production Costs

Labor costs, parts lists, work hours,
cumulative costs, detailed overview of costs

INSTRUCTION MANUAL

Calculation

Contents

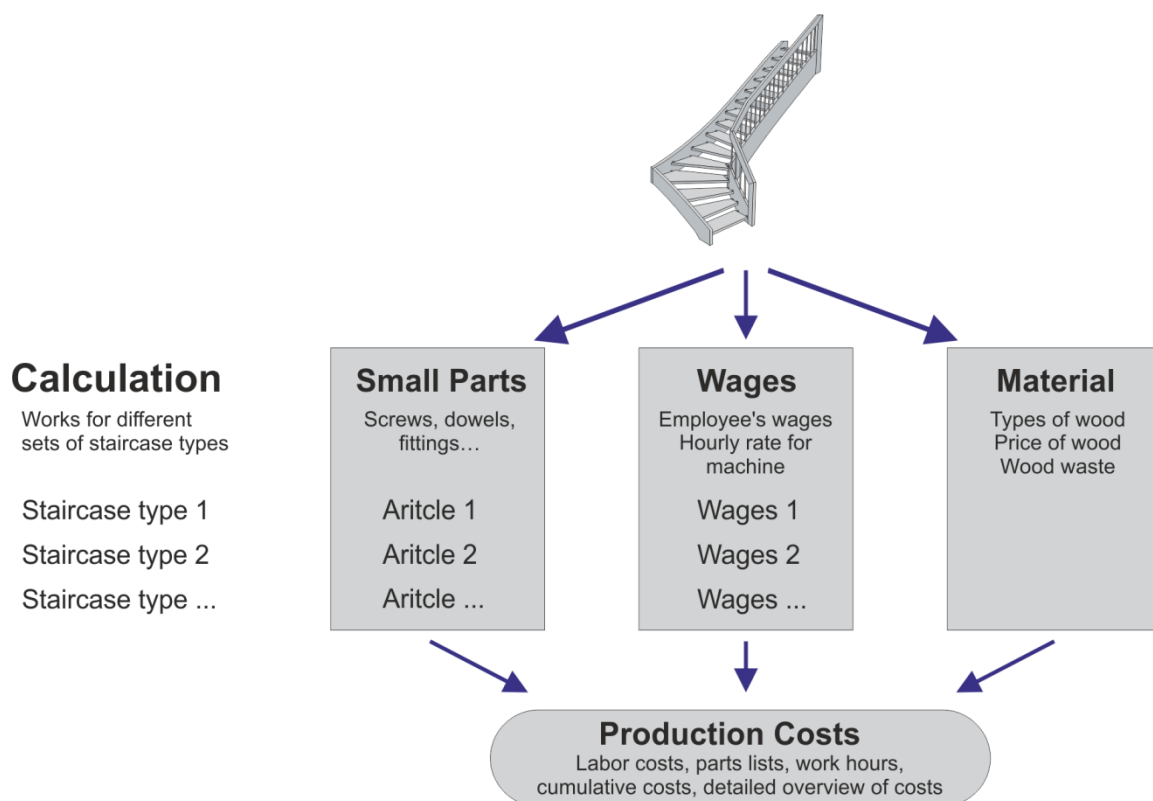
1. Why Use Calculation	3
2. General	4
3. Preparation	5
3.1 Currency Unit	5
3.2 Units for Lengths, Surfaces, and Volume	5
3.3 Units for References	6
4. Articles/Wages/Installation Costs	6
4.1 Where to Find	6
4.2 Articles	7
4.3 Wages	7
4.4 Installation Costs	7
5. Parts Lists/Wage Lists/Installation Costs Lists	8
5.1 Articles	8
5.2 Wages	9
5.3 Installation Costs	9
6. Creation of Calculation Sheet	10
7. Form	11
8. Construction and Calculation	12
9. Output	12
10. Content on an Example Form	13

Calculation

1. Why Use Calculation

The calculation module makes it possible to determine production costs for your staircase. Stop wasting time adding up prices, counting treads, and measuring lengths, Compass Software will do it for you. The calculation tool is fast and accurate.

You will be freed up to concentrate on construction, sending out quotes and receiving order confirmations!



The user assigns prices to the different staircase parts. Available units for pricing are per piece, length, or surface measurements. Furthermore, users are able to create many subcategories for staircase parts, for example treads can have different pricing for straight and winded treads, stringers for faceside and offside, posts for entrance posts and turn posts, etc.

After construction of the staircase the user will get a detailed overview of production costs at the touch of a button.

This manual will show you how easy it can be to calculate costs based on one example.

The set-up of the calculation tool is only necessary once and can be adjusted to accommodate your individual needs.

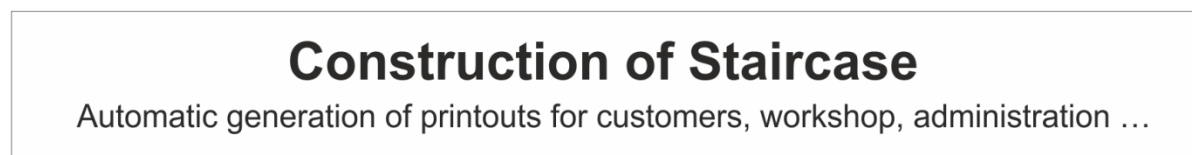
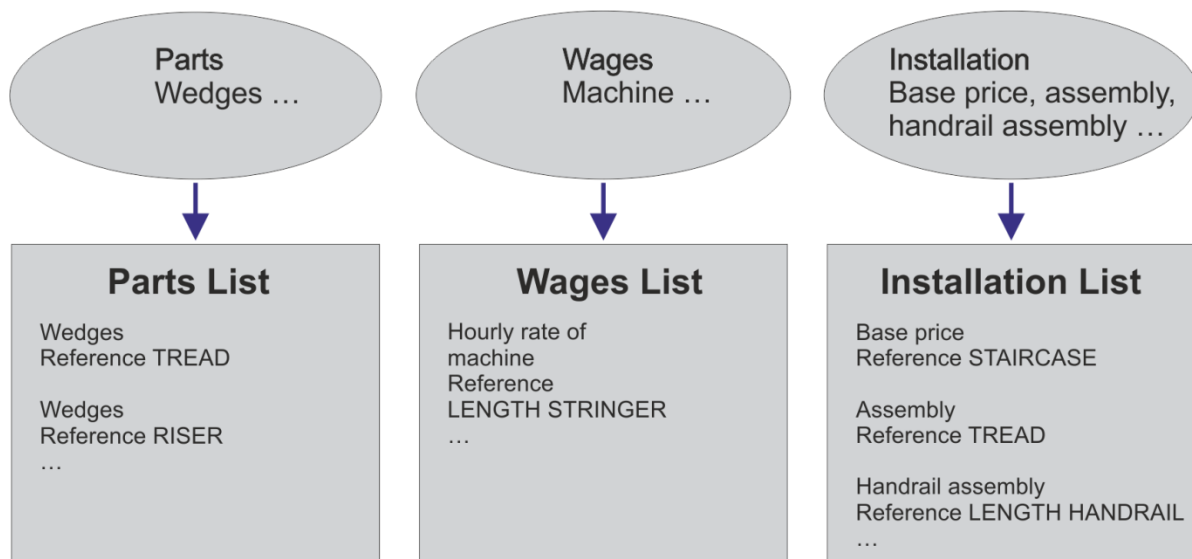
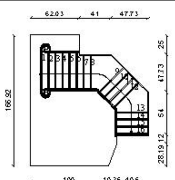
Calculation

2. General

The calculation utilizes 3 different values:

- Parts (articles, wages, installation costs)
- References (taken from construction details for the most part)
- Lists (for the parts and references mentioned above; one or more if you work with different staircase types)

This manual will explain the creation of lists in order to explain how the system works.

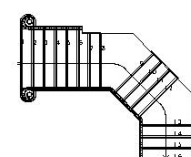



Quotation for Staircase test 2 1:67.50

Description	Quantity	Costs	Total quantity	Total costs
Wood treads	187.45	\$		
Polymastic	720.00	\$		
Installation	640.00	\$		
Volats	120.00	\$		
Taxes	1499.42	\$		
Subtotal				
Total				

Internal quoting for staircase test 2

Wages	Quantity	Costs	Total quantity	Total costs
Bored	16.000	640.00 \$		
Workshop	1.000	80.00 \$		
Installation				
Transport	300.000	300.00 \$		
Basic	1.000	100.00 \$		
Per tread	16.000	240.00 \$		
Description	Quantity	Costs	Number	Total quantity Total costs
Treads	Quantity	Costs	Number	Total quantity Total costs
Bored	1.000	40.00 \$	16.000	640.00 \$
Tread bullnose	Quantity	Costs	Number	Total quantity Total costs
Workshop	0.500	80.00 \$	1.000	40.00 \$
Tread bullnose	Quantity	Costs	Number	Total quantity Total costs
Workshop	0.500	80.00 \$	1.000	40.00 \$
Description	Quantity	Costs	Number	Total quantity Total costs
Staircase	Quantity	Costs	Number	Total quantity Total costs
Transport	300.000	1.00 \$	1.000	300.000 300.00 \$
Basic	1.000	100.00 \$	1.000	100.00 \$
Treads	Quantity	Costs	Number	Total quantity Total costs
Per tread	1.000	15.00 \$	16.000	240.00 \$



Material Price

Material	Red Oak V	Price
Treads	Red Oak V	720.00 \$
Strings	Red Oak V	Transport, Installation 40.00 \$
Posts	Red Oak V	Sum 1360.00 \$

Customer
Address
30 St. George Road
Massachusetts 01104

Calculation

3. Preparation

In the tool bar select the drop-down menu for **Predefintion** → **System** → **Units**.

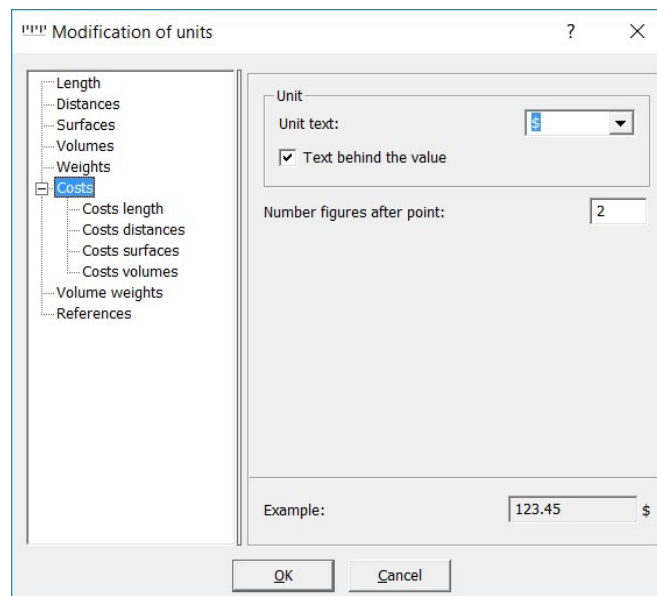
3.1 Currency Unit

Here you can define the **currency unit** for the cost calculation.

Unit text: Choose the currency unit you want to work with

Text behind the value: If the box is checked the unit will appear behind the amount, e.g. 10 \$. If the box is clear the unit will appear before the amount, e.g. \$ 10.

Number figures after point: Enter the decimal places you want to display. The decimal places will have no influence on the accuracy of calculation.



Modification of units

Unit: \$

Unit text: \$

☒ Text behind the value

Number figures after point: 2

Example: 123.45 \$

OK Cancel

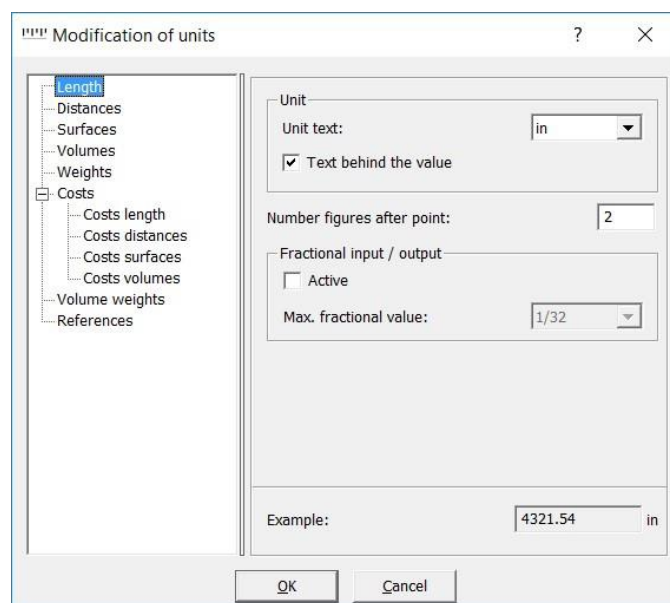
3.2 Units for Lengths, Surfaces, and Volume

Here you can define the units you want to use for the cost calculation. The units are used as References in the calculation.

Unit text: Choose the unit you want to use for lengths, surfaces, and volumes.

Text behind the value: If the box is checked the unit will appear behind the value, e.g. 10 cm². If the box is clear the unit will appear before the value, e.g. cm² 10.

Number figures after point: Enter the decimal places you want to display. The decimal places will have no influence on the accuracy of calculation.



Modification of units

Unit: in

Unit text: in

☒ Text behind the value

Number figures after point: 2

Fractional input / output

☐ Active

Max. fractional value: 1/32

Example: 4321.54 in

OK Cancel

Calculation

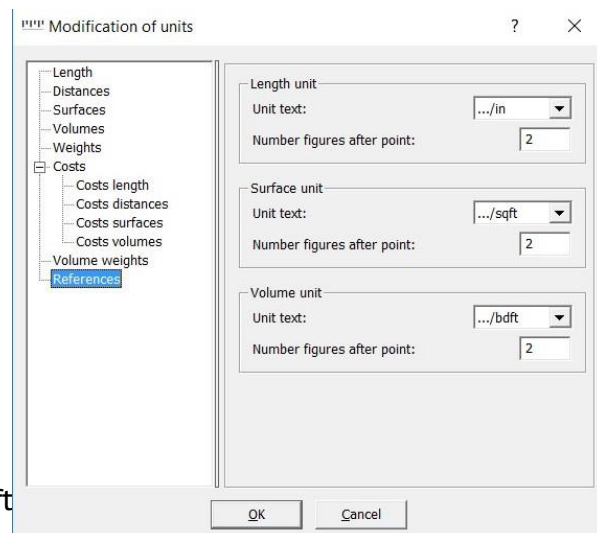
3.3 Units for References

Choose which **units** shall be used **for the references**. The chosen units will be displayed in the parts lists.

Unit text: Choose the unit you want to use for lengths, surfaces, and volumes.

Number figures after point: Enter the decimal places you want to display. The decimal places will have no influence on the accuracy of calculation.

Example: If you have activated the article varnish in the parts list, then you can determine here, whether the varnish is to be measured in m², cm², mm², in², or sqft

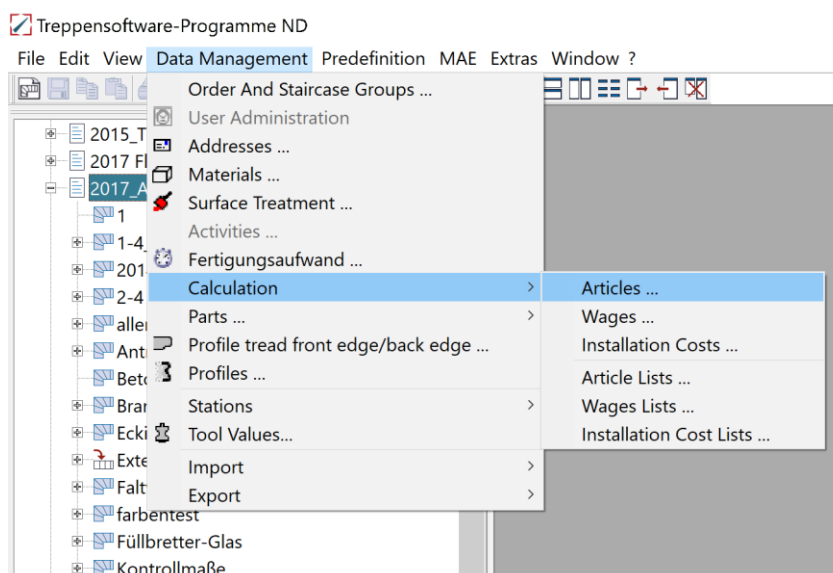


If you need more help with these settings, please refer to the **help section** in the staircase software program!

4. Articles/Wages/Installation Costs

4.1 Where to Find

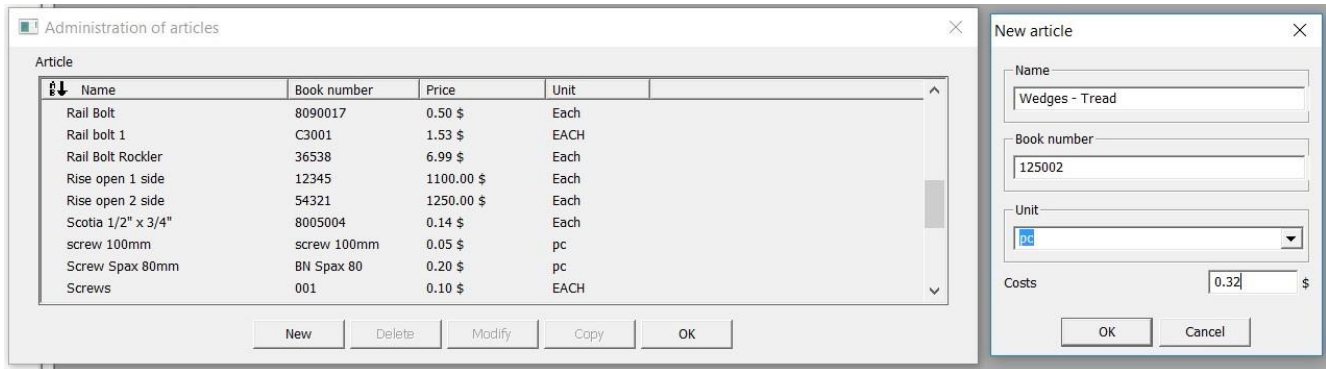
To edit the **settings for articles, wages, and installation costs**, please select the option as shown below.



Calculation

4.2 Articles

In the submenu select **new** to create a **new article**.



The 'Administration of articles' window displays a table of existing articles. The 'New article' dialog box is open, showing the following fields:

Name	Book number	Price	Unit
Rail Bolt	8090017	0.50 \$	Each
Rail bolt 1	C3001	1.53 \$	EACH
Rail Bolt Rockler	36538	6.99 \$	Each
Rise open 1 side	12345	1100.00 \$	Each
Rise open 2 side	54321	1250.00 \$	Each
Scotia 1/2" x 3/4"	8005004	0.14 \$	Each
screw 100mm	screw 100mm	0.05 \$	pc
Screw Spax 80mm	BN Spax 80	0.20 \$	pc
Screws	001	0.10 \$	EACH

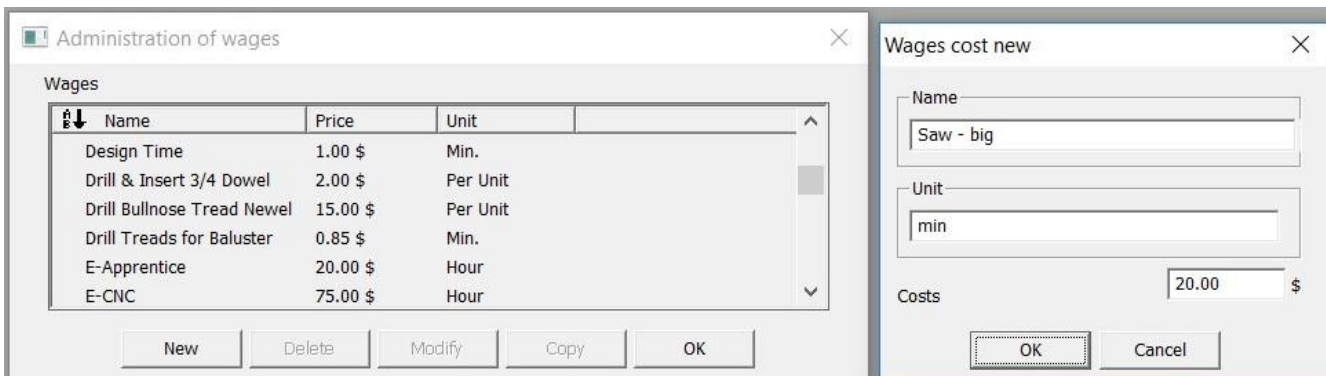
The 'New article' dialog box contains the following fields:

- Name: Wedges - Tread
- Book number: 125002
- Unit: pc
- Costs: 0.32 \$

Start with **wedges for treads** as shown above.

4.3 Wages

In the submenu select **new** to create a **new wage option**.



The 'Administration of wages' window displays a table of existing wages. The 'Wages cost new' dialog box is open, showing the following fields:

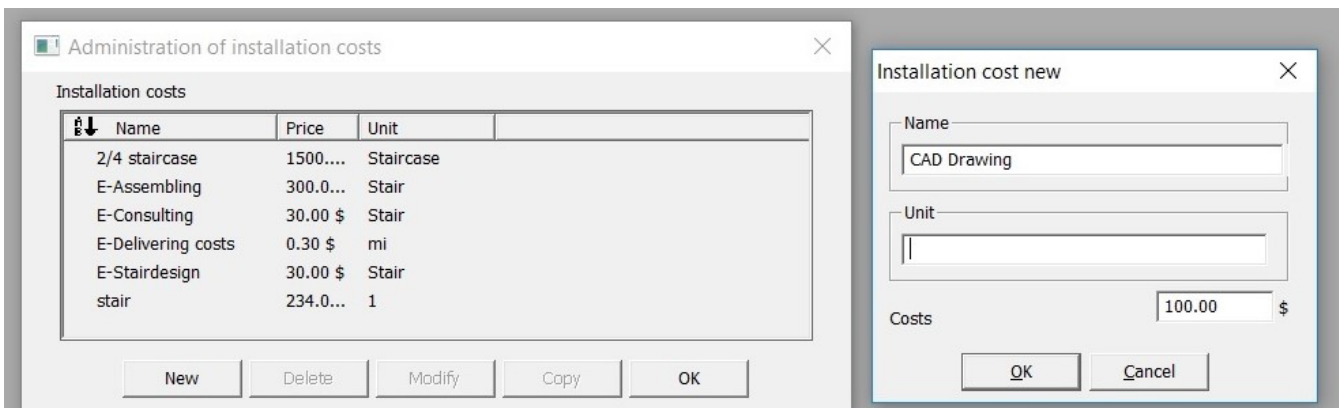
Name	Price	Unit
Design Time	1.00 \$	Min.
Drill & Insert 3/4 Dowel	2.00 \$	Per Unit
Drill Bullnose Tread Newel	15.00 \$	Per Unit
Drill Treads for Baluster	0.85 \$	Min.
E-Apprentice	20.00 \$	Hour
E-CNC	75.00 \$	Hour

The 'Wages cost new' dialog box contains the following fields:

- Name: Saw - big
- Unit: min
- Costs: 20.00 \$

4.4 Installation Costs

In the submenu select **new** to create a **new installation cost option**.



The 'Administration of installation costs' window displays a table of existing installation costs. The 'Installation cost new' dialog box is open, showing the following fields:

Name	Price	Unit
2/4 staircase	1500....	Staircase
E-Assembling	300.0...	Stair
E-Consulting	30.00 \$	Stair
E-Delivering costs	0.30 \$	mi
E-Stairdesign	30.00 \$	Stair
stair	234.0...	1

The 'Installation cost new' dialog box contains the following fields:

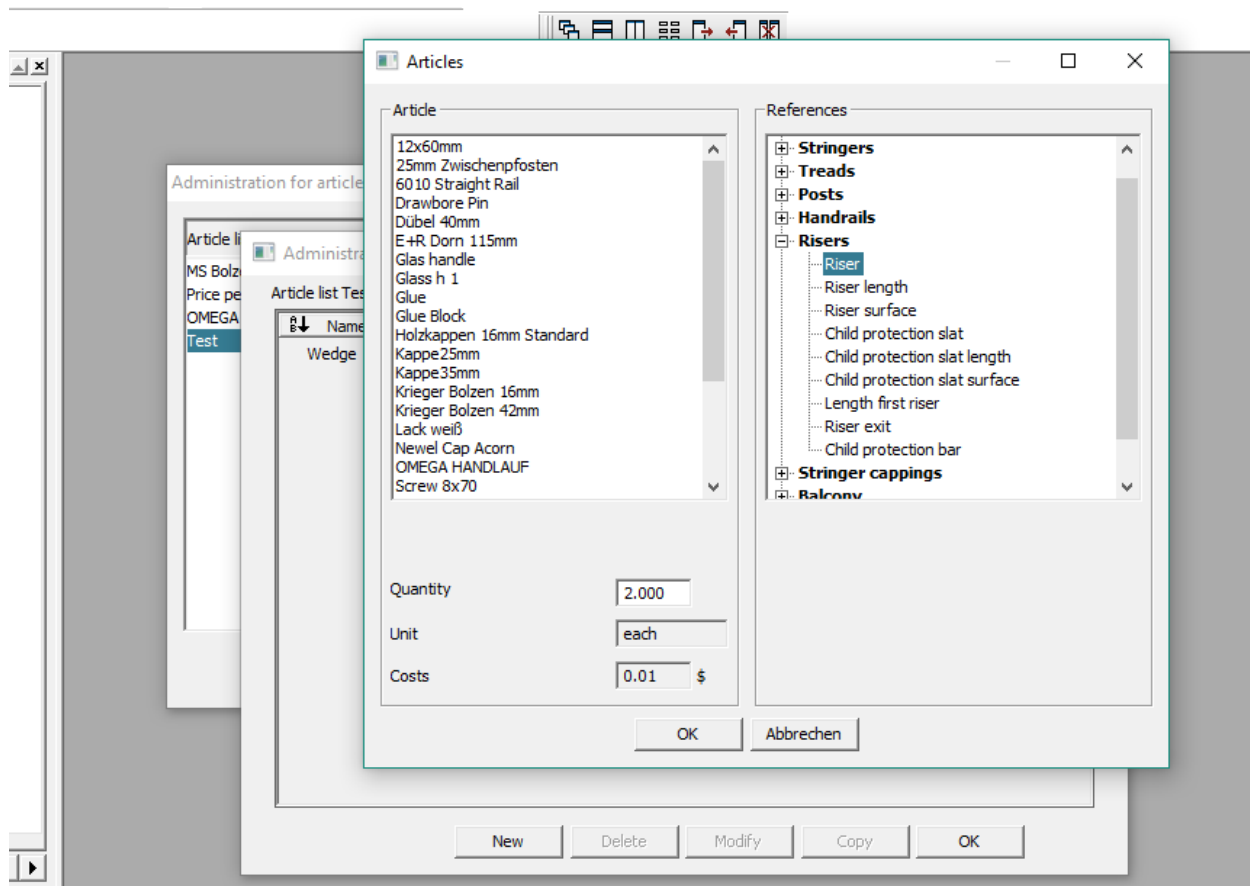
- Name: CAD Drawing
- Unit:
- Costs: 100.00 \$

Calculation

5. Parts Lists/Wage Lists/Installation Costs Lists

5.1 Articles

Enter the **submenu** for the **article list** same as above.



Create a new list by clicking on the **paper icon**. Choose a **name** for the new list and click in the **white open space** to enter. Then double click the **new list** to modify.

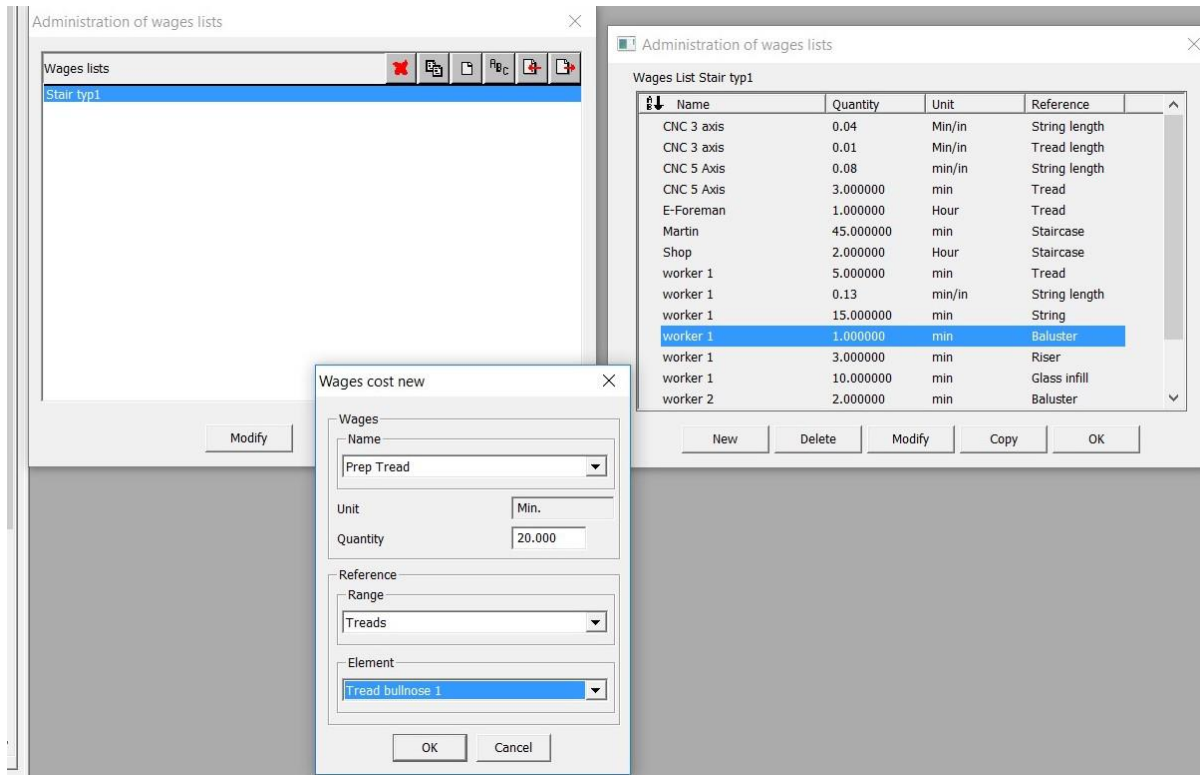
Click **new** to pick an article out of the database. By selecting a **quantity**, you will determine how many pieces of this article are one unit. The expandable menu will show you all possible reference parts for this article. You will be able to find all references for calculation. Select the **reference** you want the article to correspond to.

To start select **riser** for the article *wedge* – *riser*. The quantity is set at 2 for any standard closed staircase.

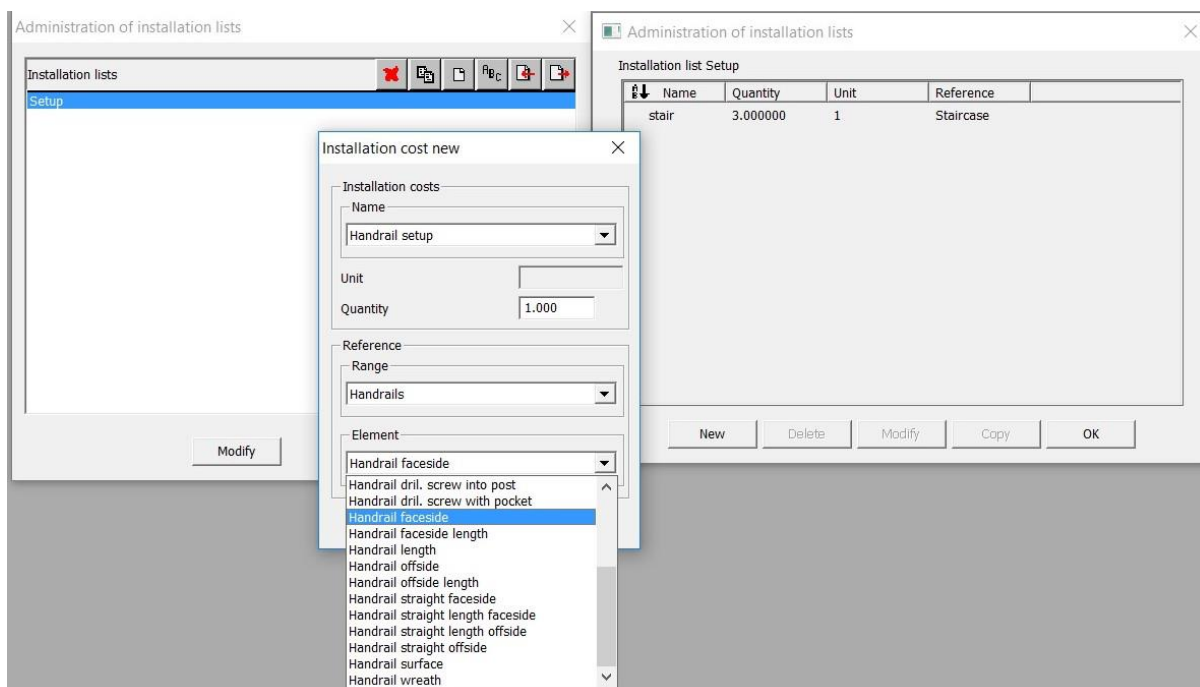
Do the same for the **lists of wages** and **installation costs**.

Calculation

5.2 Wages



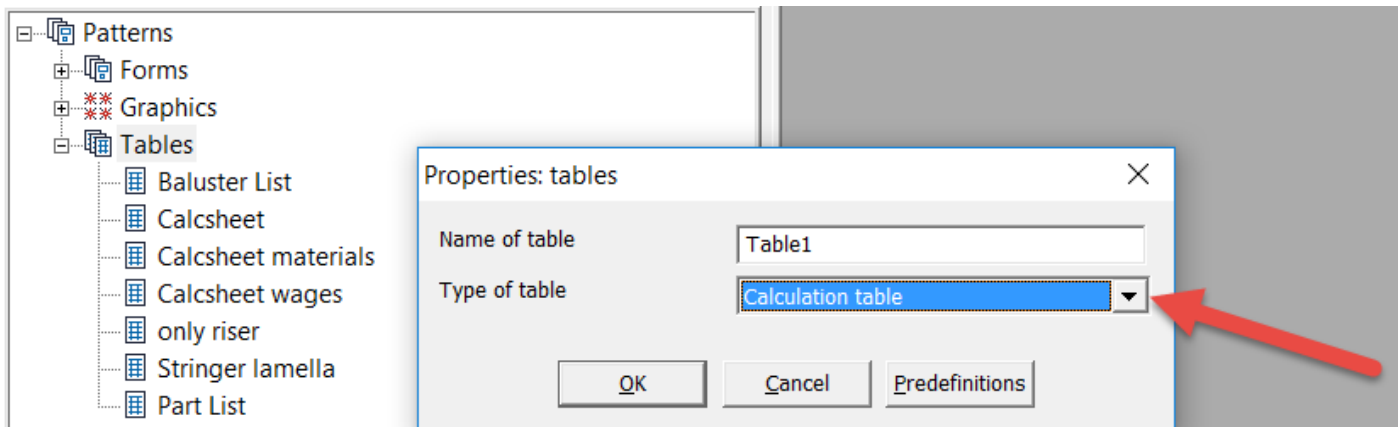
5.3 Instalation Costs



Calculation

6. Creation of Calculation Sheet

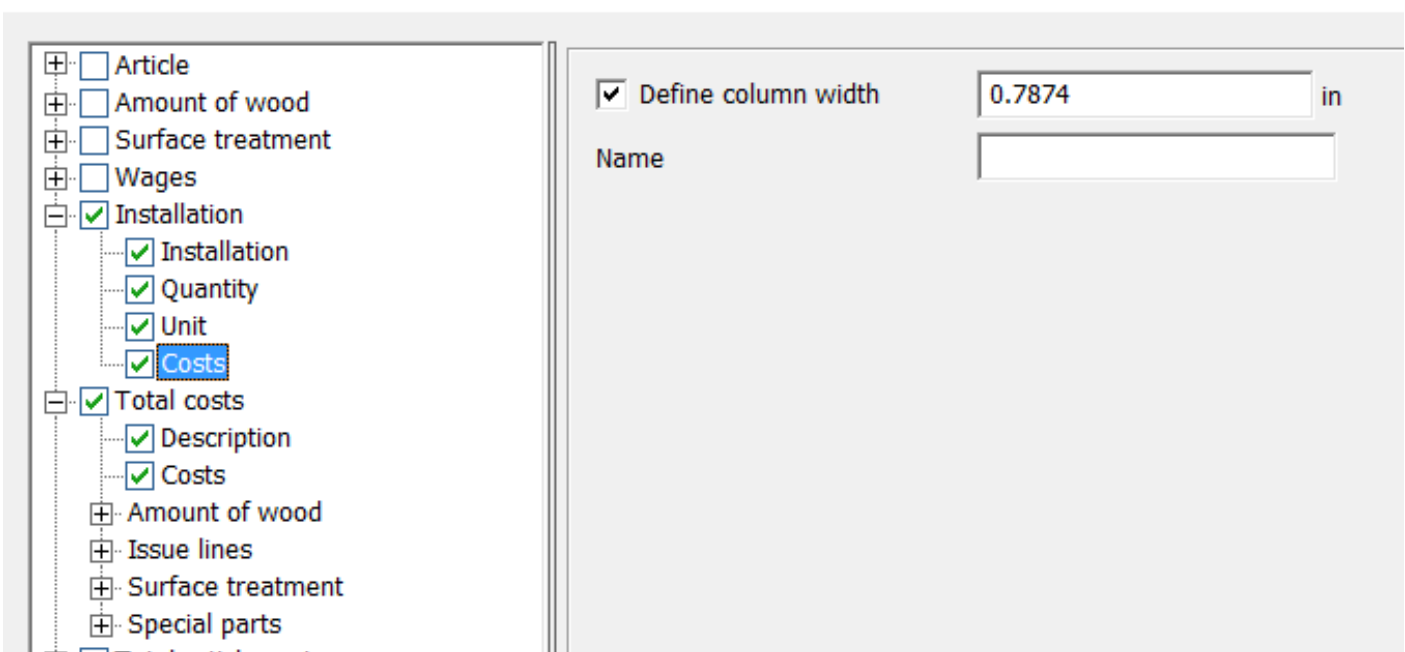
In the workspace switch to the **tab for patterns**. Open the tree and click right on **tables**. Choose **new**.



Enter a **name** for the list and select the **type of table**. Then click on **predefinitions** to edit the table. In the predefinitions you can customize the table with as many values and information you want to display on the form.

The below setting serves as an example.

Calculation table



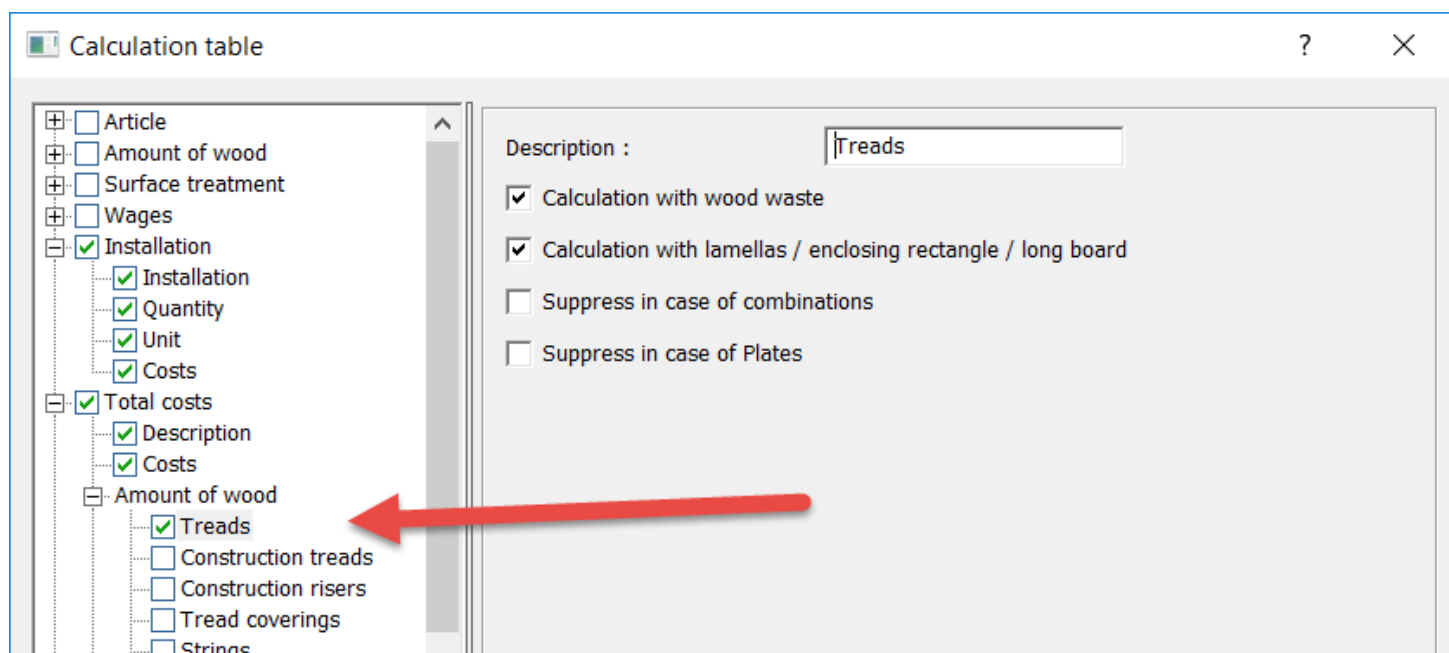
Calculation

You can choose as many boxes as you wish. By clicking on one of the **nodes** you can edit its properties.

A width of approximately 1.5 inches is recommended as it is wide enough to display most values. Do this for **all selected values** and finish by clicking **OK**.

Do the same for **wages**, (costs, set wages) and for **total costs** (costs, description).

Also select the **amount of wood**, which will show the amount of wood you need for the staircase. The **sub-nodes** give you **different settings** on how the parts will calculate the wood needed.



7. Form

Please refer to the **help option** on how to create a form (Forms – creation – tables).

After creating the table click left on the **symbol in the table**. Move the cursor towards the design sheet. Then click left and hold left to **draw the outside of the table** on the sheet. Release the left cursor button and the table is inserted.

A window with settings will appear: Properties Table. By selecting the option **load predefinitions**, you can select the list you have already created previously. Afterwards close the form and click **OK** and switch back to the **tree of orders**.

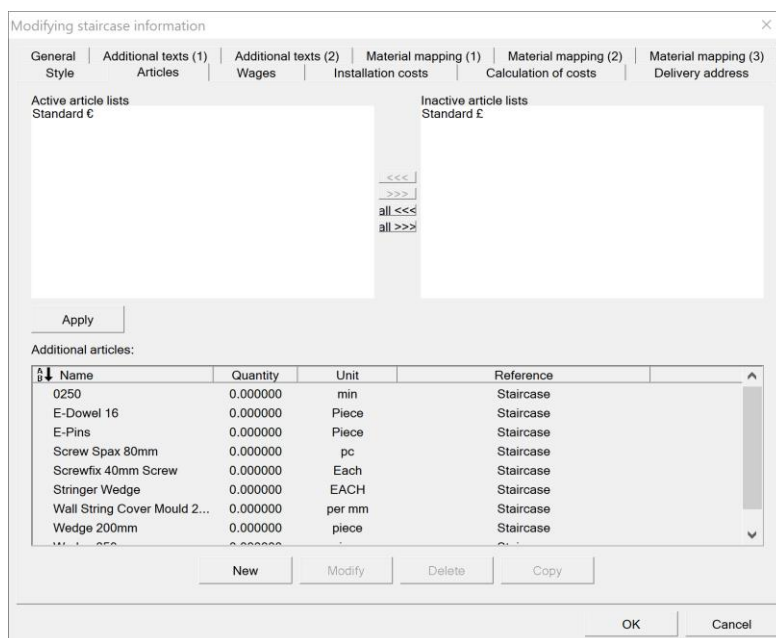
Calculation

8. Construction and Calculation

Click right on **an already created staircase** and enter the properties for the staircase. Go to the tab for **articles**. From the list choose which calculation you want to conduct and click **apply**.

You will see the respective articles in the gray box below the properties. You can do this for as many articles as you want.

By double clicking the **article** you will enter the properties and will be able to edit it. If you need an article that is not included in the list, click on **new** at the bottom. This will lead you to a list of articles you have already entered.



9. Output

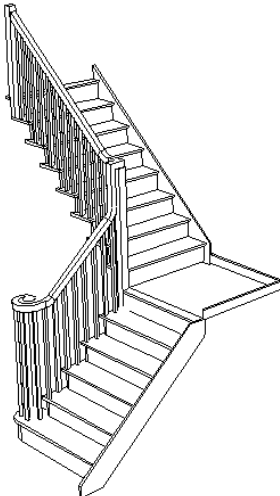
Construct the staircase just as you would any other project. After saving all pattern data click right on the **staircase** and select **Input form** from the pop-up menu.

The window **Legend Mapping** opens. Select **create calculation form**. If you want to select several forms in one go, hold down the **Ctrl-Key**. Confirm your choices with **OK**.

Then click left on the **+ sign** in front of the staircase in the tree of orders. The parts of the staircase will appear. Among the others, there will be a subsection for forms. Click on the **+** in front of forms to open the detailed view. The forms you have just created should appear.

Open the calculation form with a double click. You will see all the values you have chosen when creating the list of calculation. You can modify this list in this window to adjust it to your needs.

Internal quoting for staircase LSTAIR			
Wages	Set	Costs	
Machine	10.679	26.70 \$	
Installation	Set	Costs	
Basic	1.000	100.00 \$	
Per tread	14.000	210.00 \$	
Handrail setup	5.676	56.76 \$	
Description		Costs	
Wages		26.70 \$	
Installation		366.76 \$	
Articles		12.60 \$	
Sum :		406.06 \$	

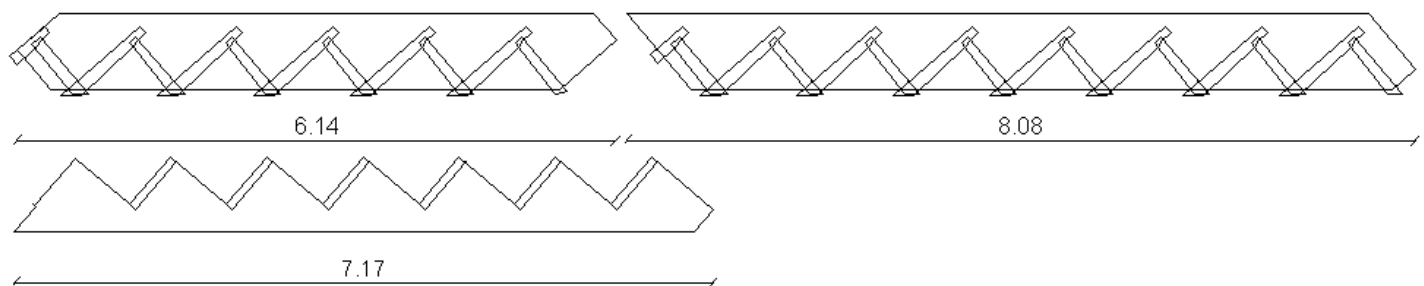


Calculation

10. Content on an Example Form

Wages

Used in this example to calculate the hourly machine rate.



Total length of all strings	ft
Machine works ½ minute per ft of stringer	ft x min
Hourly rate of machine is \$2.50/min	\$26.70

Result:

$$21.358\text{ft} \times 0.5 \text{ min/ft} \times \$2.50/\text{min} = \$26.70$$

Installation

Calculated from base price, cost per tread, and relative cost for handrail length.

Basic price \$100 per staircase	\$
Cost \$15 per tread	\$
Cost \$10 per ft handrail length	\$/ft x ft

Result:

$$\$100 + \$15 \times 14 + 5.676\text{ft} \times \$10/\text{ft} = \$366.76$$

Calculation

Articles

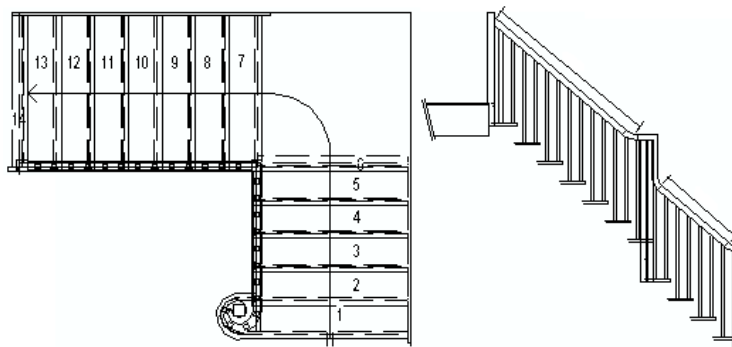
Used for counting wedges

2 wedges \$0.25 each per tread \$

2 wedges \$0.20 each per riser \$

Result:

$2 \times \$0.25 \times 14 + 2 \times \$0.20 \times 14$ = \$12.60



Total cost of the staircase

$\$26.70 + \$366.76 + \$12.60$ = \$406.60

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