MARSHALL & SWIFT / BOECKH

EXPRESS

Reference Guide

Agricultural™

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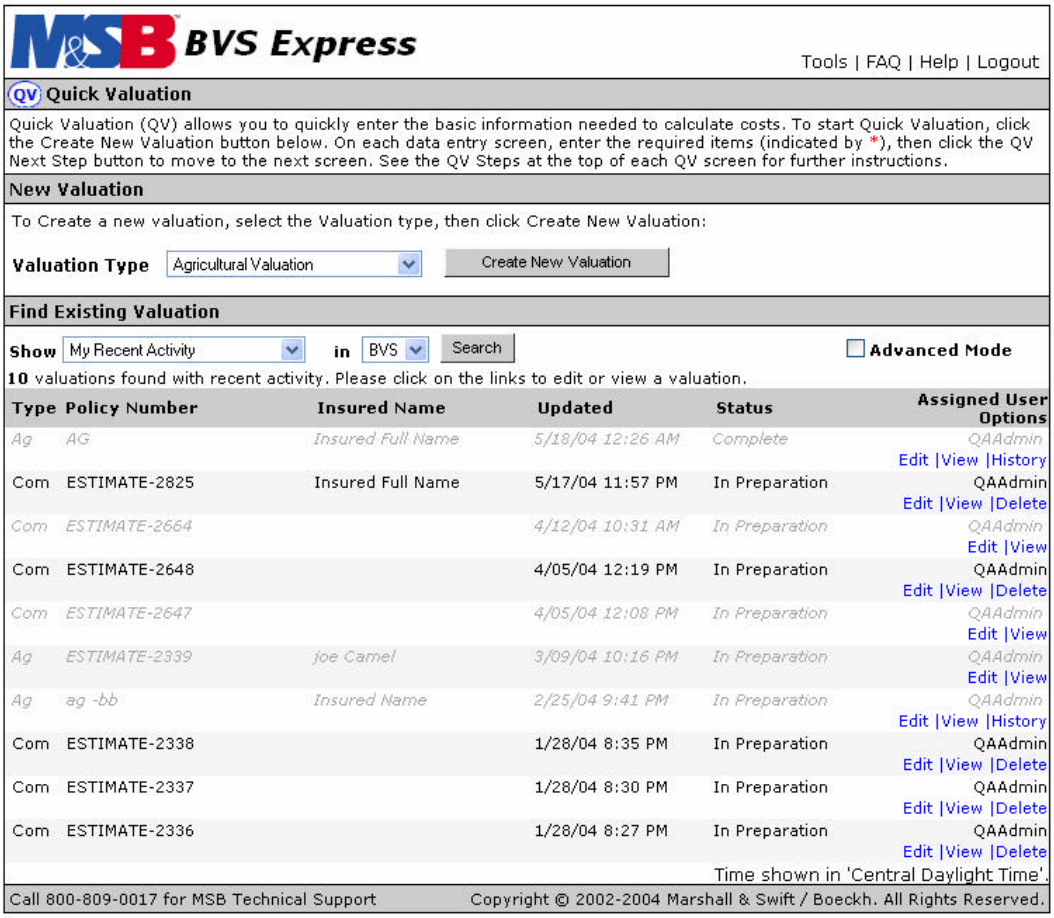
 Rev 06/04

This reference guide is designed to quickly give you the information you need to create a valuation from beginning to end. It is broken down into seven different sections (Getting Started, General Information, Exterior Features, Interior Features, Cost Adjustments, Reports/Calculate, and Administration) for ease of use. Remember, you can always reference the on-line help file as you work with the system by simply pressing F1 in any field or clicking on the field label.

VALUATION / RECORD SCREEN

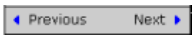
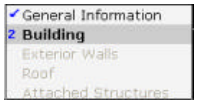
This screen allows you to create a new valuation file, edit an existing file, search for an existing file, access your user profile and system options, or log out of the system.



1 - Create a Valuation File(s)

This option allows you to create a new valuation file.

Entry Information	The required fields are Policy, Property Zip/Postal Code, Occupancy, Gross Floor Area, and Construction Type. You can enter additional information as known. **NOTE:** Depending upon your company preferences, additional fields can be set as required.

	To navigate through the required fields easily, click the Next Step link and you will be brought directly to the next required field.
	You can also navigate sequentially through the navigation links/pages (listed in the navigation links on the left-hand side of the screen) by clicking the <Previous and Next> links.
	You will also notice the blue checkmarks and numbers next to some of the navigation links on the left-hand side. The numbers denote that there are required fields on these pages and what the next step in the valuation process is. Once the required information has been entered, the numbers turn to blue checkmarks.
How To	1. Under **New Valuation**, use the drop-down list to select the appropriate **Valuation Type** (commercial or agricultural). 2. Click the **Create New Valuation** button. The valuation file opens to the General Information screen. 3. The **Policy Number** and the **Estimate Expiration Date** are the only required fields on this screen. **NOTE:** The valuation is automatically filled in with an estimate number (ie: Estimate - 1000). You can enter the actual policy number when you click the **Assign the Policy** button. 4. Enter the remaining information as applicable. 5. To quickly move to the next required step, click the **Next Step** button, otherwise, once the information is entered, click the **Building** navigation link on the left handside. 6. Enter the **Property Address** information. **NOTE:** The **Zip/Postal Code** is the only required field on this screen. 7. Enter the **Insurance Information** (separate insurance exclusions, coverage amount, and co-insurance requirement) as applicable. 8. The system will automatically set the **Location Adjustments** (climate) based upon the ZIP/Postal code you entered. If necessary, you can make a change to this setting. 9. Again, once the information is entered, click **the Next Step** button or click the next navigation link (**Construction**) to continue.

	10. Enter the **Occupancy** information (see page 19 for detailed information on adding occupancies). 11. Under the **Construction Details** section, enter the remaining information (gross floor area and construction type). 12. Repeat these steps, clicking on the **Next Step** button or next navigation link in the list (Exterior Walls, Roof, Interior Walls, etc...) until all the information has been entered for the valuation file.

2 – Edit a Valuation File(s)
This option will open an existing valuation file so that you can resume working on the file or make any necessary changes to it.

How To	1. Simply click on the **Edit** option on the right-hand side of the screen for the valuation file you wish to open. 2. If you do not see the desired estimate or policy in the list, you can use the **Search** function to locate the file. See Search for a Valuation File(s) below for additional information. 3. Once the valuation file is open, use the navigation links on the left-hand side to navigate the file. 4. Make your changes or additions to the file.

3 – Search for a Valuation File(s)
This option allows you to find specific valuations by selecting a pre-determined search field then entering the specific criteria. **NOTE:** Depending upon the role/access levels, different search fields will appear in the drop down list.

How To	1. At the top of the Valuations screen, use the **Search** drop-down list to select a search field. **NOTE:** The default setting is always set to **My Recent Activity**. 2. If applicable, type the specific criteria in the next field. 3. Click the **Search** button. All the files matching the search criteria will appear in the grid. 4. You can then sort the information that appears in the grid by simply clicking on the column heading. The files will appear in ascending/descending order based upon the column selected. 5. Now simply select the desired valuation.

Example	1. Select *Policy Number* for the search field 2. Type the number *1* in the criteria field 3. Click the **Search** button. 4. All the valuations starting with a 1 will appear in the grid.

Search Options
Below is a list of the most common search field options with definitions and/or examples. When searching, you can enter a combination or alpha and numeric characters and symbols like dashes, apostrophes, quotes, etc… can also be used. Also, the search function is not case sensitive.

My Recent Activity	The Valuation List will show the valuation files that you recently worked on (usually the last 10 files).
My Records	The Valuation List will show all the valuation files that are assigned to you.
Policy Number	Allows you to search for a valuation file based upon the estimate or policy number. **NOTE:** To search for an estimate file, you must first type in Estimate- then the beginning number.
Insured Name	Allows you to search for valuation files based upon the insured's name. **For Example:** If you type in john, the search will return valuation files that have john, Johnson, john's, etc... in the insured name field.
Address	Allows you to search for valuation files based upon the address of the property being valued. **For Example:** If you type in 23, the search will return valuation files that have 2300, 1234, 523, etc.... in the building address field.
City	Allows you to search for valuation files based upon the city of the property being valued.
State	Allows you to search for valuation files based upon the state of the property being valued.
Zip	Allows you to search for valuation files based upon the zip/postal code of the property being valued.

Valuation Type	Allows you to search for valuation files based upon the type of valuation being done (ie: commercial or agricultural).
Assigned User	Allows you to search for valuation files based upon the user assigned to the valuations.
Agency	Allows you to search for valuation files based upon the agency assigned to the valuations.
Updated within Last # of Days	Allows you to search for valuation files created within the last number of days, regardless of user, agency, etc...

USING BVS

This section explains how to use some of the features in BVS.

Using Online Help

Clicking the **Help** link at the top of the screen will open the on-line help system at the Table of Contents or main page of the on-line help system.

Clicking on the heading for each page (ie: General Info) will display the help topic for that specific page.

You can also access the on-line help from anywhere within the program by simply pressing the **F1** key on your keyboard when the cursor is in a field, or by clicking on the field label. The help system will open and display the topic that corresponds to your actual location in the application.

How To	**Contents** Using the table of contents, simply click on a topic listed on the left-hand side of the screen and the help topic will be displayed on the right-hand side. **Index** This option allows you to scroll through all the help topics in the on-line help system, or type in a keyword to find a particular topic. 1. Simply click on a topic listed in the index on the left-hand side of the screen and the help topic will be displayed on the right-hand side. 2. Or, type in a keyword (as you are typing, the program will begin searching for all corresponding topics) then select the appropriate topic. The help topic will be displayed on the right-hand side.

	Search This option allows you to search the entire on-line help system for any references to a particular item or topic. 1. Type in the word(s) you are searching for. You can use the "**?**" or "*" as wildcards when searching (ie: * *ceramic* would bring up all topics that contained ceramic in it). When you are done typing in your search, either click on the **List Topics** button or hit **Enter**. All appropriate topics will be displayed in the list below the search criteria. 2. From the list, select the desired topic. The help topic will be displayed on the right-hand side. 3. Repeat for additional searches.

Using The Knowledge Base
When you click the **FAQ** link at the top of the screen, the Knowledge Base page appears. The Knowledge Base to search for answers to questions you may have about using BVS. Also, this page allows you to see the most Frequently Asked Questions (FAQ's) as determined by MS/B, display the questions and answers most viewed by BVS Express users, and submit questions to MS/B Technical Support.

1 - FAQ's
When you display the Knowledge Base page, the FAQ's automatically appear in the **Search Results** section. You can scroll through the list to see all FAQ's

How To	If you search the knowledge base, etc., the FAQ's no longer appear in the **Search Results** section, do the following: 1. Click the **Show FAQ's** button. The FAQ's appear in the **Search Results** section. 2. To display the full answer to a FAQ, click the answer (in italics). Another page appears with the full answer displayed. You can print the answer by clicking the **Print** button, or click **OK** to return to the list.

2 - Searching the Knowledge Base
Enter information in the **Search Options** section to search the knowledge base.

How To	1. Type a word or series of words into the **Search** field. 2. To find questions containing the search word(s), click the **Questions** option button. To find answers containing your search word(s), click the **Answer Key Words** option button. 3. Click the **Search** button. The questions and answers that match your search words appear in the **Search Results** section.

	4. To display the full answer to a question, click the answer (in italics). Another page appears with the full answer displayed. You can print the answer by clicking the **Print** button, or click **OK** to return to the list.

3 - Displaying the Most Viewed Questions and Answers
You can display the Knowledge Base questions and answers most viewed by BVS Express users by clicking the **Most Viewed** button. By default, the **Search Results** section will display the 15 most viewed pages. However, your company may display a different number of questions and answers in this section.

4 - Submitting Questions to MS/B Technical Support
Occasionally, the answer to your question is not in the Knowledge Base. You can submit questions to MS/B Technical Support.

How To	1. Click the **Ask?** button. A new page appears. 2. Type your question in the field to the right of **Q:** 3. Click the **OK** button to send your question to MS/B Technical Support. 4. The question will be reviewed and, if applicable, the answer will be added to the Knowledge Base.

Buttons
Buttons tell BVS to perform some action.

How To	To click a button: • **Mouse:** Click the button (i.e., position the mouse pointer over the button, then press the left mouse button). • **Keyboard Only:** Press the **Tab** key until the button is highlighted, then press the **Enter** key. A button is highlighted when a dotted rectangle surrounds the label (name) on the button.
Example	The following button is on the Valuation/Record screen. It creates a new valuation record when you click it. Create

Checkboxes
Checkboxes are used to indicate that you want to select a given item.

How To	To select or deselect a checkbox: • **Mouse:** Click the checkbox or the text to the right of it.

	• **Keyboard Only:** Press the **Tab** key until the checkbox is highlighted, then press the space bar.
Example	The following checkboxes are on the Reports screen. When selected, these checkboxes indicate that you want to print the Summary and Equipment reports. Print Summary Report ☑ Print Equipment Report ☑

Data Fields
Data fields allow you to enter information for a single data item, such as the insured's name.

How To	To enter data in these fields: • **Mouse:** Click in the field, then type the desired data. • **Keyboard Only:** Press the **Tab** key until the cursor is in the field, then type the desired data.
Example	The following data field is on the General Information screen. You can type in the insured's name in the field. Insured Name [ ]

Drop-Down Lists
Drop-down lists have three elements:

- **Display Button:** The button () you press to display the drop-down list.
- **Selection List:** The drop-down list itself, which displays the possible selections. The currently selected item is highlighted in this list.
- **Selected Item:** A field at the top that displays the item from the list currently selected.

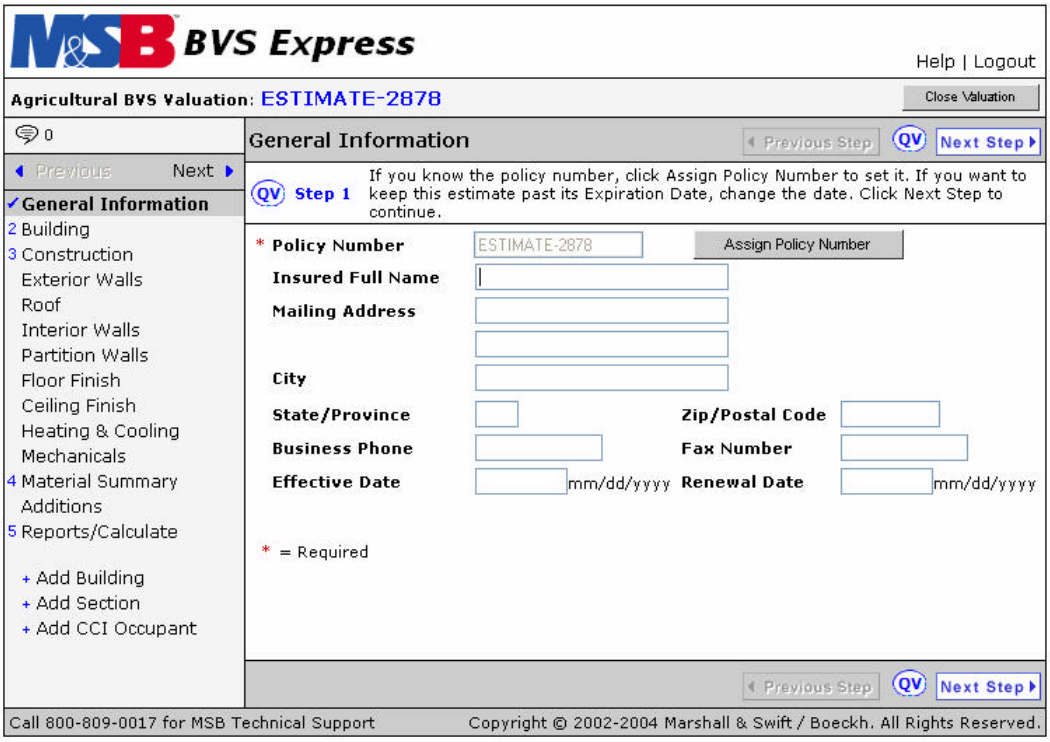
How To	To select an item from a drop-down list: • **Mouse:** Click  to display the drop-down list, then click on the desired item. If the drop-down list has more items than can be displayed at once, use the scroll bar that automatically appears to the right of the list to move to the desired item. • **Keyboard Only:** Press the **Tab** key until the currently selected item in the drop-down list is highlighted, then press the **Up Arrow** or **Down Arrow** key until the desired item is displayed.

Example	The following drop-down list is on the General Information screen. You can select the appropriate item for the valuation. 

Option Buttons
Option buttons (also called radio buttons) are used in instances in which you have two or more choices and can only select one of them.

How To	To select an option button: • **Mouse:** Click the button or the text following it. • **Keyboard Only:** Press the **Tab** key until the option button currently selected in the group is highlighted, then use the **Right Arrow** or **Left Arrow** key to move to the desired option button, then press the **Tab** key to select it.

GENERAL INFORMATION



Policy Number

The policy or record identifier assigned to the valuation.

How To	When creating a new valuation, an estimate number (i.e.: Estimate - 1000) is automatically filled in for you and cannot be changed. However, you can enter the actual policy number when you click the Assign Policy Number button. When entering the actual policy number, you can enter a combination of alpha and numeric characters, up to 32 characters. Symbols like dashes, apostrophes, quotes, etc. can also be used.

Estimate Expiration Date

The date the "Estimate" will expire and be removed from the system if the estimate has not been assigned a policy or record number. Typically this date has been set to 90 days from the creation of the valuation.

Assign Policy Button

This functionality allows you to assign a policy or record number to an "Estimate".

How To	Type in the Policy/Record number, then click the **OK** button.

Insured Full Name

Enter the full name of the insured property owner.

How To	You can enter a combination of alpha and numeric characters, up to 32 characters. Symbols like dashes, apostrophes, quotes, etc. can also be used.

Mailing Address

The street or mailing address for the owner of the property being valued. Enter the address for the owner of the property being valued. Use these fields when the address is different than the address of the property being valued.

How To	**Address Line 1 and Address Line 2** Enter a combination of alpha and numeric characters, up to 32 characters. Symbols like dashes, apostrophes, quotes, etc. can also be used. **City** Enter a combination of alpha and numeric characters, up to 32 characters. Symbols like dashes, apostrphes, quotes, etc. can also be used. **State / Province** Enter the two-character state or province code abbreviation for the property. **ZIP / Postal Code** You can enter a combination of alpha and numeric characters, up to 10 characters.

Business Phone Number

The business phone number of the Insured property owner.

How To	You can enter a combination of alpha and numeric characters, up to 14 characters. Symbols like dashes, apostrophes, quotes, etc. can also be used.

Fax Number

The fax number of the Insured property owner.

How To	You can enter a combination of alpha and numeric characters, up to 14 characters. Symbols like dashes, apostrophes, quotes, etc. can also be used.

Effective Date

Enter the date when the policy is put into effect.

How To	Enter this using a two-digit month, slash, two-digit date, then a four-digit year as follows: 01/01/2001.

Renewal Date

The renewal date is the date when the policy is up for renewal.

How To	Enter this using a two-digit month, slash, two-digit date, then a four-digit year as follows: 01/01/2001.

Value Basis

The program can create values based upon new construction/replacement costs or reconstruction costs.

How To	Use the drop-down list to switch between new construction or reconstruction. The system default is New Construction.

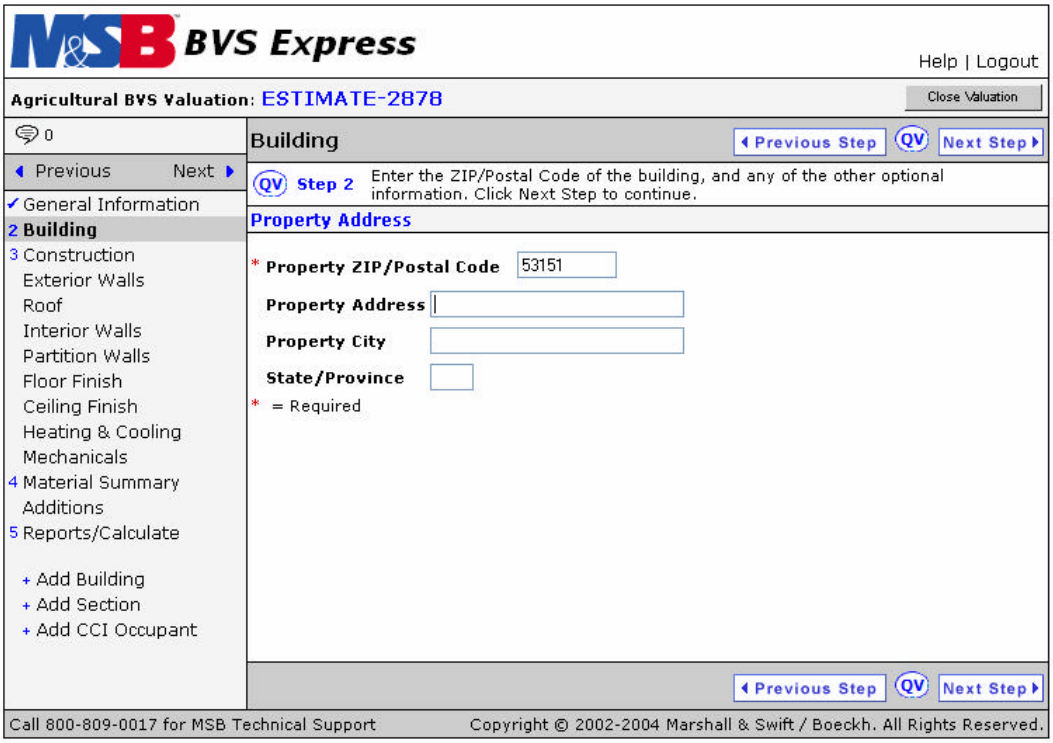
Reassign Button

This screen allows you to change the User assigned to a specific valuation, as well as, change the currently assigned "Agency". **NOTE:** Depending upon roles/assess levels, not everyone will be able to access this screen.

How To	1. To change a valuation assignment, open or edit the desired valuation. 2. Make sure the **Reports/Calculate** navigation link is selected on the left-hand side of the screen. 3. Click the **+ Reassign Valuation** link under the Valuation Dates section. 4. To change the assigned user, type in the user name you are looking for then click the **Find** button (ie: type in Kevin). 5. If more than one user matches what you typed in, a **Select User** drop-down list will appear. Use the drop-down to select the appropriate new user. 6. To change the assigned agency, type in the name you are looking for, then click the **Find** button. 7. If there is more than one match, a **Select Agency** drop-down list will appear. Use the drop-down to select the appropriate agency, group, etc...

	8. Click the **OK** button when you are done. You will be returned to the Reports/Calculate screen.

BUILDING INFORMATION



PROPERTY ADDRESS

ZIP/Postal Code

The zip code or Canadian postal code for the property being valued.

How To	You can enter a combination of alpha and numeric characters, up to 10 characters.

Building Name

The name for the property being valued.

How To	You can enter a combination of alpha and numeric characters, up to 32 characters.

Building Address

Enter the address for the property being valued.

How To	**Address Line 1 and Address Line 2** Enter a combination of alpha and numeric characters, up to 32 characters. Symbols like dashes, apostrophes, quotes, etc. can also be used. **City** Enter a combination of alpha and numeric characters, up to 32 characters. **State/Province** Enter the two-character state or province code abbreviation for the property.

INSURANCE INFORMATION

Separate Insurance Exclusion Costs

If checked, the program will separate insurance exclusion costs for the building being valued. MS/B defines and separates the following insurance exclusion costs: site prep, foundation wall, interior foundations, and approximately 12% of plumbing.

How To	Click the checkbox if you want separate insurance exclusion costs. These costs will be listed in a separate column in your valuation reports.

Current Coverage

The current dollar amount of insurance carried on the property.

How To	Enter up to $999,999,999 in whole dollar amounts only. Do not enter the dollar sign or commas.

Co-Insurance Requirement

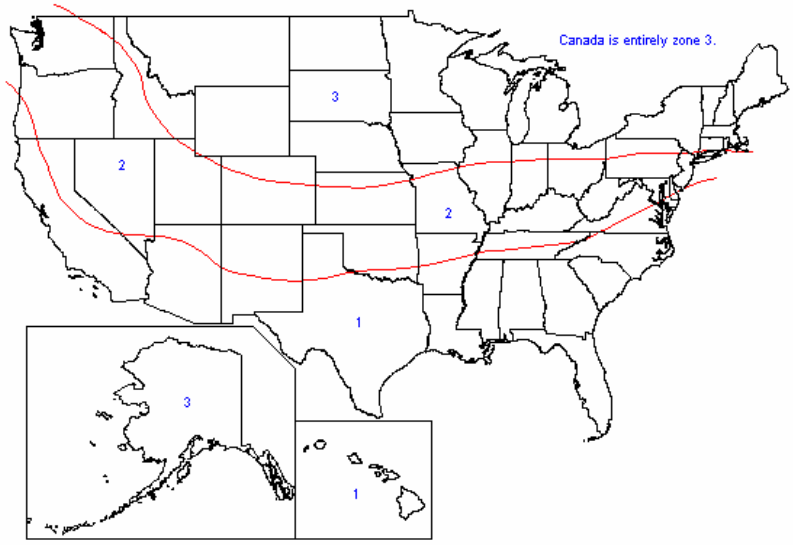
The minimum amount of insurance that must be carried on the policy, usually 80%, but your co-insurance requirement for the policy may be different as determined by your company.

How To	Enter a percentage between 1 and 100. Do not enter the percent sign.

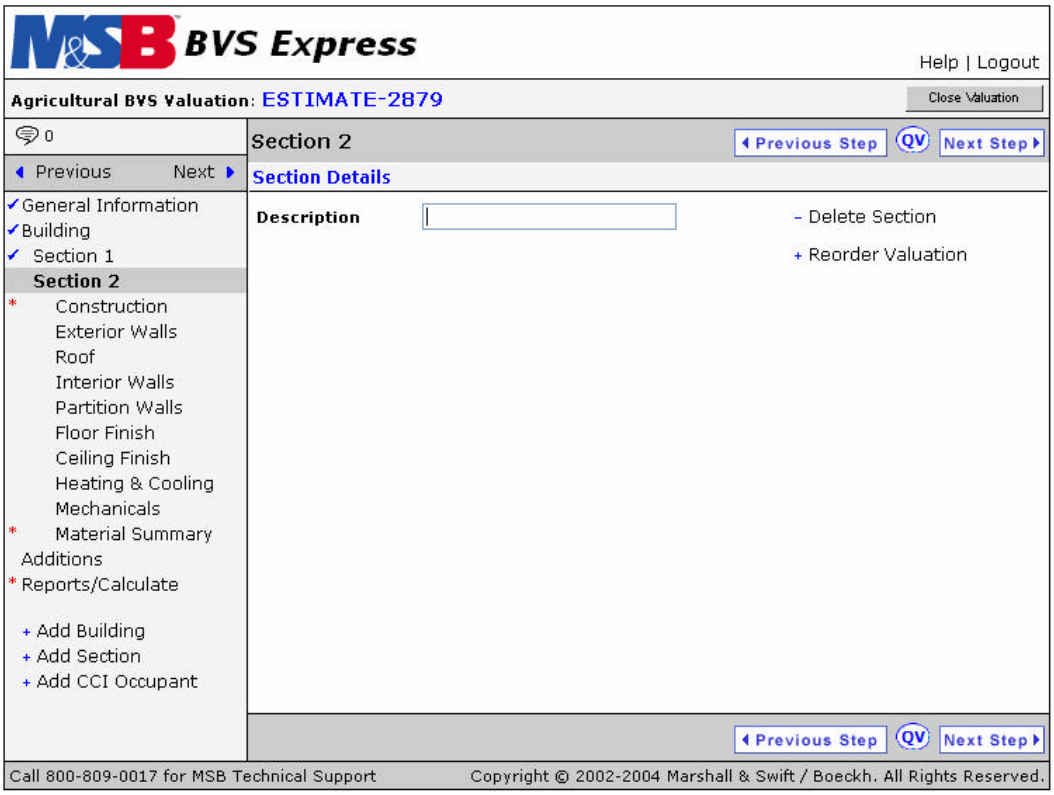
LOCATION ADJUSTMENTS

This section is used to adjust for the location's environmental factors.

How To	For the location adjustments (climate is the only one available for agricultural valuations) use the drop-down list to select the appropriate option. **NOTE:** The system will automatically fill this information in based upon the zip/city code you entered earlier, but can be overridden by you.

Climate	 Use the drop-down list to select the climate that applies to this building section: (1) Warm, (2) Moderate, or (3) Cold, or if you know the corresponding number, simply type that number in the field. Each climate has different requirements (and associated costs) for heating and cooling, thermal resistance, and foundation depth. In addition to the levels of insulation, the climate affects other aspects of a building such as the foundation depth, roof structure, and heating and cooling loads. Buildings in cold climates require more insulation, deeper foundation walls (to be below the frost line), stronger roof structures (to support snow loads), and greater heating requirements.

SECTION INFORMATION

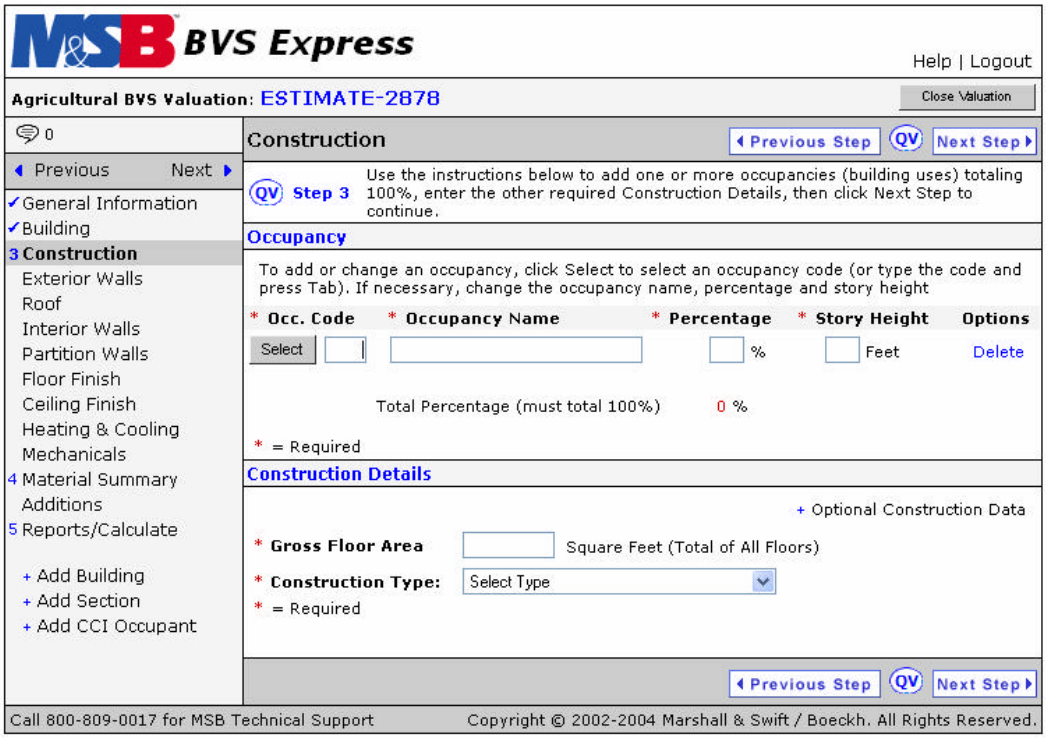


Section Description

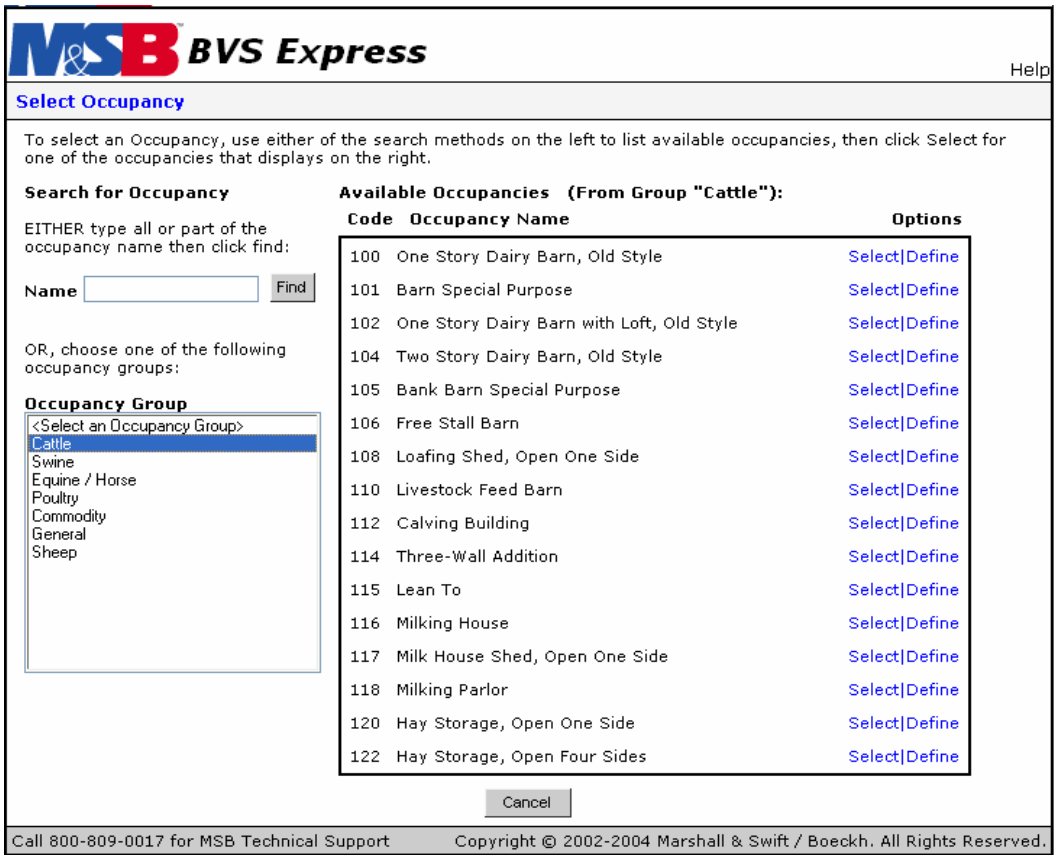
Section description is the identifier for the section. This description will appear on the screen as well as on the valuation reports.

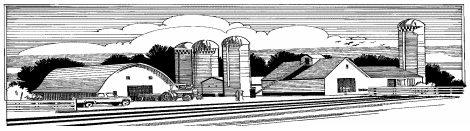
How To	Enter a combination of alpha and numeric characters, up to 32 characters. Symbols like dashes, apostrophes, quotes, etc. can also be used. This screen will only appear when there is more than 1 section for the building. Once the 2nd section has been added, simply click on the "Section 1", "Section 2", etc… navigation link on the left-hand side of the screen, then enter the description.

CONSTRUCTION INFORMATION



This section determines the occupancy that will be used for the valuation.

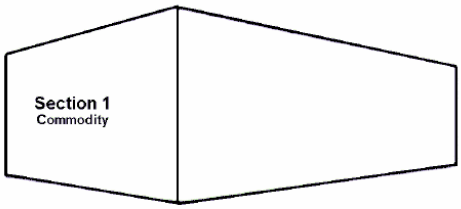
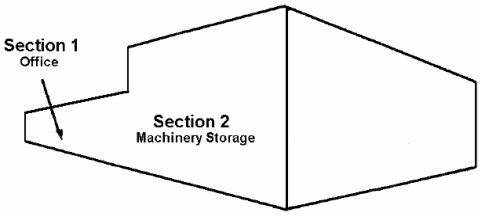




Occupancies

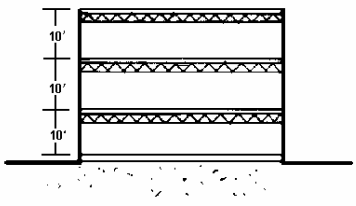
Enter the occupancy code and the percentage of the building section that conforms to the model. For example, if you are performing a valuation on a one story dairy barn with loft - old style, enter occupancy code 102 and a percentage for that code of 100%. If half of this building is office space, then enter the one story dairy barn with loft – old style at 50%, and the office at 50%. You may split the building into as many as five different occupancies, as long as the sum of the percentages equals 100%.

How To	1. Make sure the **Construction** navigation link is selected on the left-hand side of the screen. 2. Enter or select the **Occupancy Code** (click the Occupancy Selection link below for details on how to select an occupancy). 3. The **Occupancy Name** is automatically entered when you enter the occupancy code. 4. Enter the **Percentage** of the building or section that the occupancy you selected above is. 5. Enter the average **story height** for the building or section. 6. If your total percentage does not equal 100%, an additional occupancies line will appear and you can repeat the steps above. 7. To remove an occupancy that you have entered, click the **Delete** link in the **Options** column, next to the one to be removed. **NOTE:** Make sure you adjust the other occupancy percentages so that they equal 100%.
Occupancy Selection	8. When you do not know the occupancy code, click the **Select** button next to the Occ. Code field and the Occupancy Selection screen will appear. 9. Select the appropriate occupancy group from the **Occupancy Group** list. If you need, you can use the **Find** feature to locate a specific occupancy. 10. To see a brief description of any occupancy, click the **Define** link to the right of the desired occupancy. 11. Select the appropriate occupancy from the **Available Occupancies** list by clicking the **Select** link to the right of that occupancy. You will automatically be returned to the Construction screen.

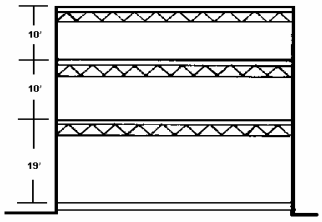
Examples	 **Commodity Building** In the case of a commodity building with a small amount of office space within, a single section would be appropriate. **Section 1 = Commodity**  **Machinery Storage Building with Office** If there is a large amount of office space within the machinery storage building, or if the office is a distinct structural area, use two occupancies. **Section 1 = Office** **Section 2 = Machinery Storage**

Story Height

Occupancies have been developed using an average story height for each occupancy. For cases where the story height of a building differs from the average listed, you can adjust accordingly. The adjustment is made to allow for the additional framing and exterior wall cost to provide the additional height or for the decrease in cost for a lower height.

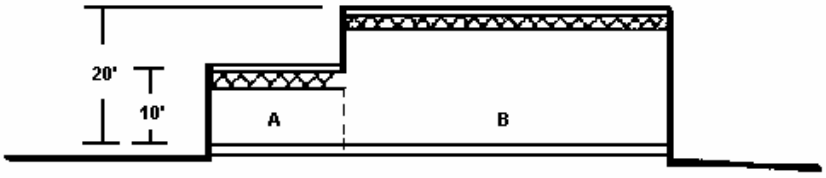
How To	Story height is determined by measuring the distance from the top of one floor to the top of the next floor or roof. The following drawings illustrate how to determine the story height in most cases.
Examples	 **Multiple Stories of Equal Height** Again, determination is relatively simple. Since all story heights are equal, story height would be measured from the top of the floor to the top of the next floor, or to the top of the roof.

Story Height = 10'



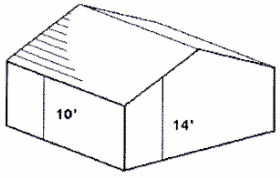
Story Height Varies but Floor Area is Equal
In cases when the heights of one or more floors vary and floor areas are equal, the height should be determined by taking an average story height.
Average Story Height = 13'

(10' + 10' + 19')/3 = 13'



Story Height Varies and Floor Area Varies
Where the story heights of the building vary and the areas are not equal, further adjustments are necessary to reflect the average story height.
Average Story Height = 17'

Area A = 3,000 SF
Area B = 7,000 SF
10,000 SF
[(20 x 7,000) / 10,000] + [(10 x 3,000) / 10,000] =
14' + 3' = 17'



Buildings with Pitched Roofs and Gable Ends
For buildings with pitched roofs and gable ends, average the story height of the gable end walls with the lower sidewalls. Measure the gable end story height from the midpoint of the roof slope, and average this with the height of the sidewalls.
Average Story Height = 12'

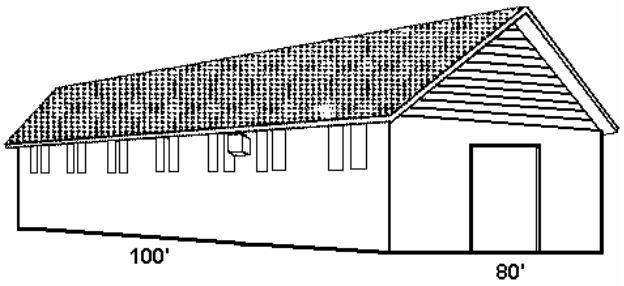
(10' + 14' + 10' + 14')/4 = 12'

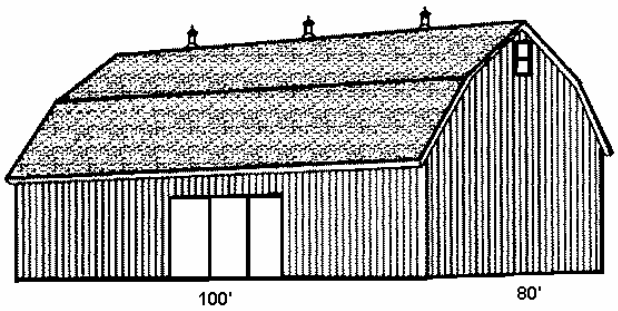
CONSTRUCTION DETAILS

Construction details include the gross floor area and construction type.

Gross Floor Area

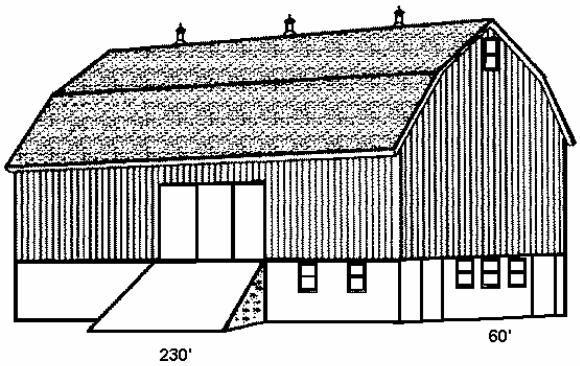
The gross floor area is the total floor area (measured in square feet or meters) of all floors in the building that you would like considered in your valuation. This would include stairwells and elevator shafts, but would not include areas such as basements and mezzanines. A one-story building with exterior wall dimensions of 100' x 100' would have a gross floor area of 10,000 square feet. If that same building was three-stories, the gross floor area would be 30,000 square feet. If the first two stories were 10,000 square feet each and the third floor was 5,000 square feet, then the gross floor area would be 25,000 square feet.

How To	1. To determine the gross floor area, you first need to figure the ground floor area. For a valuation to be accurate, proper determination of the floor area is crucial. 2. Once the individual ground floor areas have been figured, the gross floor area can be computed by multiplying the ground floor area by the total number of stories. Enter an area up to a total of 9,999,999. You do not need to enter the commas, the system will automatically put them in once you tab off the field.
Examples	 **1-Story Building** One-Story Building 80 ft. x 100 ft. Ground Floor Area 80 ft. x 100 ft = 8,000 SF **GROSS FLOOR AREA 8,000 SF x 1 story = 8,000 SF**



1-Story Barn with Loft

One-Story Barn w/Loft	80 ft. x 100 ft.	
Ground Floor Area	80 ft. x 100 ft.	= 8,000 SF
GROSS FLOOR AREA	**8,000 SF x 1 stories**	**= 8,000 SF**

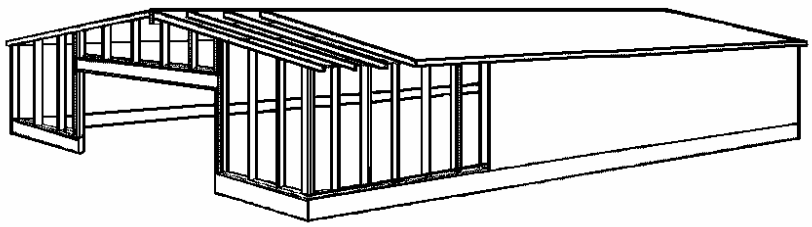


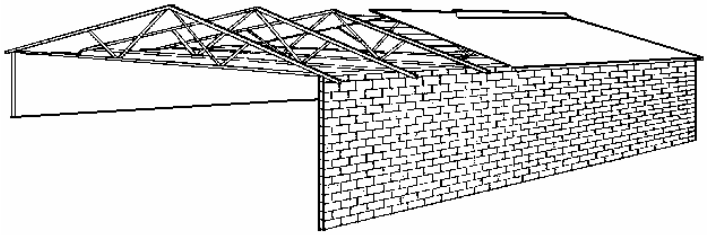
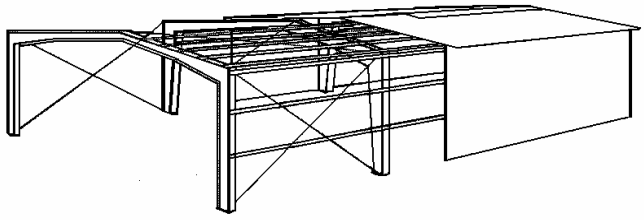
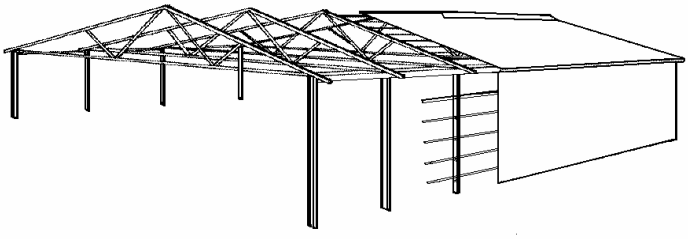
2-Story Building

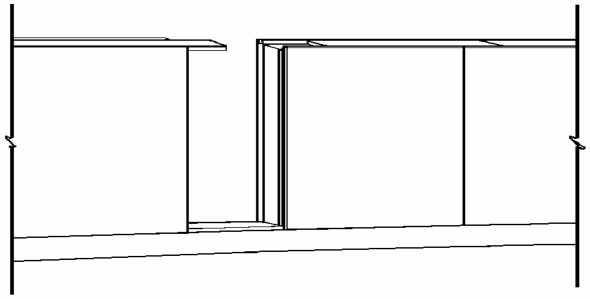
Two-Story Building	60 ft. x 230 ft.	
Ground Floor Area	60 ft. x 230 ft.	= 13,800 SF
GROSS FLOOR AREA	**13,800 SF x 2 stories**	**= 27,600SF**

Construction Types

To distinguish between the five different construction materials and assemblies, their corresponding cost differences, and fire-related characteristics, the following construction types (listed under related topics) are used.

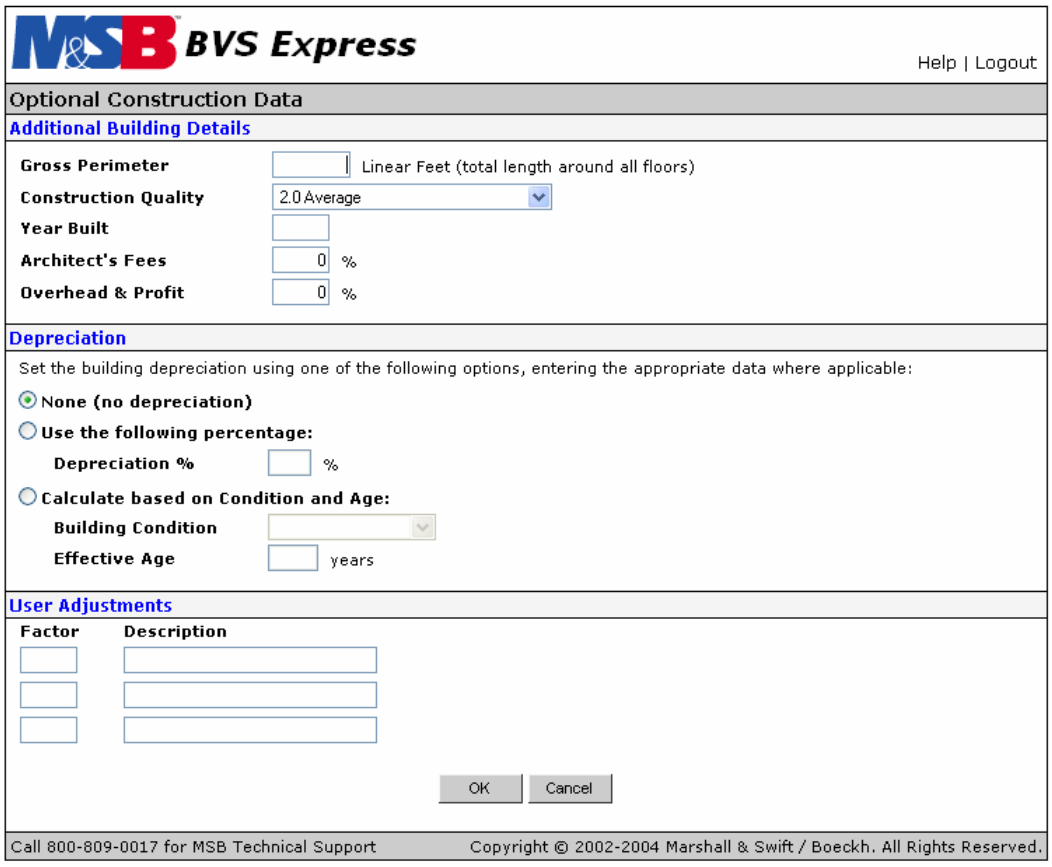
How To	Enter up to five different percentages for each type of construction that applies to this building section. Entries must total 100%.
Frame	

	A building where the exterior walls, bearing walls and partitions, and the structural floors and roof, and their supports, are wood or light-gauge metal. This includes buildings where the wood or light-gauge metal has been combined with other materials to form composite components such as wood or metal studs with brick or stone veneer, stucco or metal siding.
Masonry	 A building that has the exterior walls constructed of a material such as brick, hollow or solid concrete block, concrete, gypsum block, clay tile, stone, or similar materials. The structural floors and roof are of wood or light-gauge metal.
Pre-Engineered Metal	 A building that employs a system of pre-engineered rigid steel framing members. The exterior walls are of metal siding, sandwich panels, or masonry, and the roof is clad with metal roofing or sandwich panels.
Pole Frame	 A building where the structural skeleton consists of timbers or poles. The poles or posts are set into the ground on top of concrete pads, and then back filled to anchor the post structure.

Structural Insulated Panel (SIP)	 A load bearing wall material, made up of rigid insulation sandwiched between two pieces of plywood or other material.

OPTIONAL CONSTRUCTION DATA

The optional construction data screen allows you to enter the additional building details, depreciation, and user adjustment information.

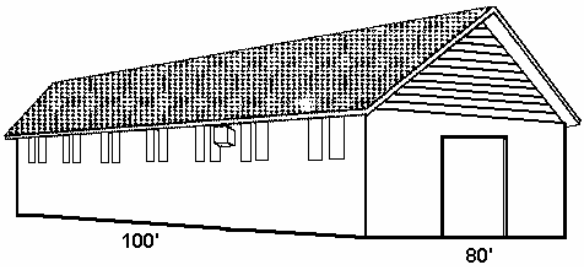
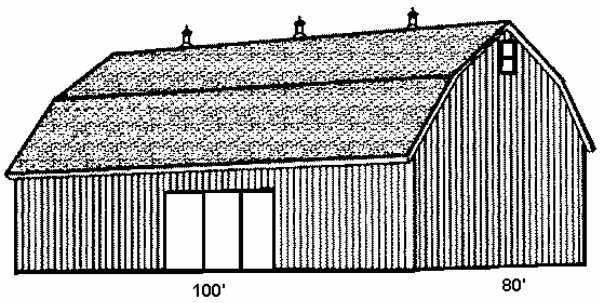


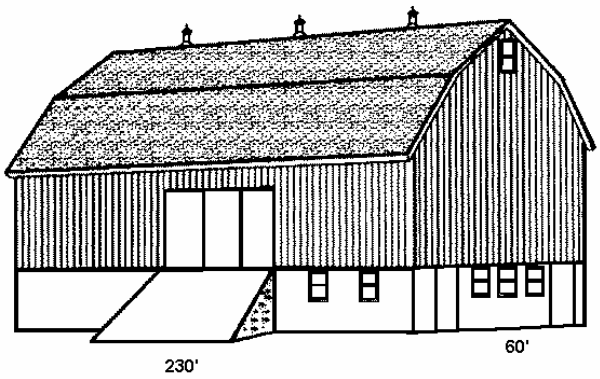
Gross Perimeter

The gross perimeter is the total distance around the outside of the building for each floor, or for the building section. For multiple story buildings, combine the perimeters of each floor together to arrive at the gross perimeter. If you are dividing the building into different sections, then enter only the perimeter of the building section. See the following examples for determining perimeter.

Buildings having the same area but different configurations, or perimeters, will have different costs. In any cost per square foot method of valuation, the costs of the exterior wall must be converted to a square foot cost. The models developed for this program use the most typical building size and shape to calculate the contributing cost of the exterior walls.

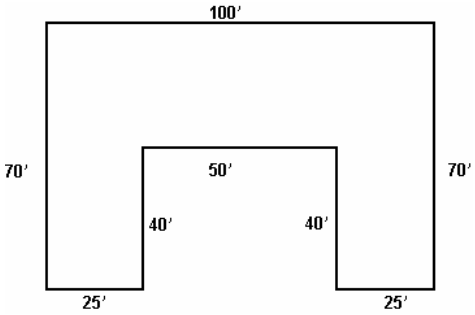
As more information becomes known on a particular building, base costs can be refined to more accurately represent the cost of that building. The area must be calculated to arrive at the replacement cost of a building. If the perimeter can be calculated, this area and perimeter relationship can be used to arrive at a factor that will accurately attribute the cost of the exterior wall. The actual perimeter will always produce a more accurate value and should be used when available.

How To	Enter an area up to a total of 999,999. You do not need to enter the commas; the system will automatically put them in once you tab off the field.
Examples	 **1-Story Building** One-Story Building 80 ft. x 100 ft. Ground Floor Perimeter 80 + 80 + 100 + 100 = 360 ft. **TOTAL PERIMETER 360 ft. x 1 story = 360 ft.**  **1-Story Barn with Loft** One-Story Barn w/Loft 80 ft. x 100 ft. Ground Floor Perimeter 80 + 80 + 100 + 100 = 360 ft. **TOTAL PERIMETER 360 SF x 1 story = 360 ft.**



2-Story Building

Two-Story Building	60 ft. x 230 ft.	
Ground Floor Perimeter	60 + 60 + 230 + 230 =	600 ft.
TOTAL PERIMETER	**600 SF x 2 stories**	**= 1,200 ft.**



1-Story Irregular Shape

Ground Floor Perimeter		
(70+100+70+25+40+50+40+25)		= 420 ft.
TOTAL PERIMETER	**420 ft. x 1 story**	**= 420 ft.**

Construction Quality

Occupancies have been constructed based on average characteristics for the occupancy, with average defined as the common characteristics of a majority of buildings within that occupancy. The quality adjustment to be made is not one of a barn quality versus a warehouse quality, but rather the quality of the barn being valued versus the average quality of barns. The construction quality adjustments are meant to be guidelines only. Economy is not the lowest cost for which the structure could be built and superior is not the highest cost for buildings of a particular type. Rather, they are typical for buildings of superior or economy construction quality.

How To	Either enter a number between 1.0 and 5.0 (economy, average, superior, and premium), or use the drop-down list and select the appropriate number. If the building is judged to be between two quality designations, then enter a factor between the two. For example, if the building is slightly better than average, then enter a quality factor of 2.2. If no entry is made, the quality is assumed to be average.

Year Built

How To	Enter a four-digit year for the year that the section was completed.

Architectural Fees

Architectural fees are compensation paid for architectural or engineering services rendered. The default percentage is 0%.

How To	Enter a percentage up to 99.9%. Any entries you make will override the default percentage.

Overhead and Profit

The general cost of operating and maintaining a business in addition to specific costs related to a particular job and the profit from construction activities is referred to as overhead and profit. The default percentage is 0%.

How To	Enter a percentage up to 99.9%. Any entries you make will override the default percentage.

Depreciation

Depreciation is a lessening in value or worth of a building caused by wear and tear from use, structural defects, building service deficiencies and exposure to elements. Two items are taken into account when determining normal depreciation:

Building Condition	The general, overall condition of the building (considers the desirability and usefulness of the building). **Excellent** The building is in perfect, like-new condition. It is very well maintained with no evidence of physical deterioration and is occupied by the use for which originally intended. All building services are modern, proper and adequate. **Good** Although it has been well maintained, some minor deterioration is visible and the building is still being used as originally intended. Its building services are proper and adequate. **Average** The building is beginning to show signs of normal wear and tear. The building is still used as originally intended or occupied by a use for which it was renovated. The building services are functional.

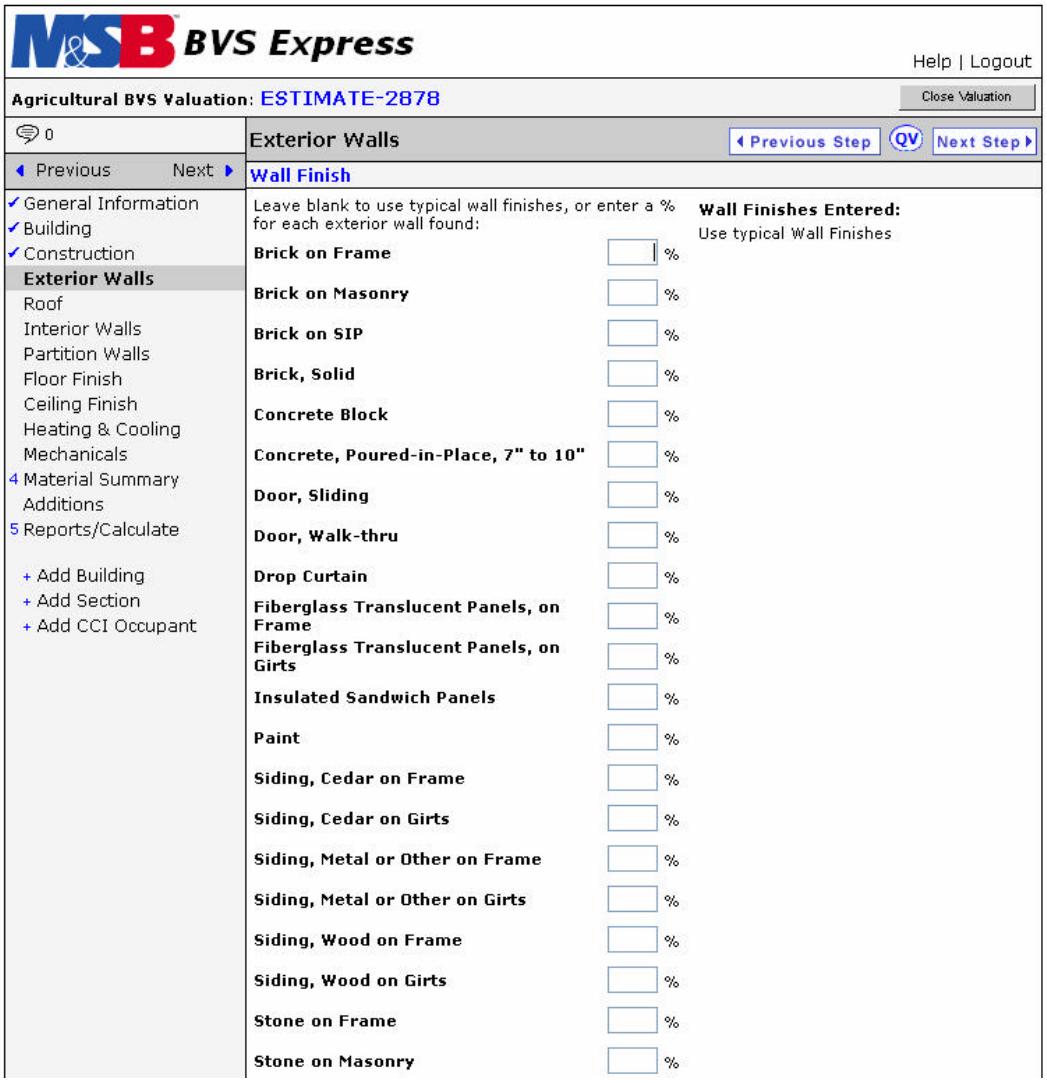
	Fair The building is beginning to show some minor structural deterioration. The building is still used as originally intended or occupied by a use for which it was renovated. Maintenance has been deferred and rehabilitation is needed. **Poor** Definite deterioration is obvious throughout the building. The building may be occupied by a use other than originally intended and the building services may be partially removed, unused, or made adequate through adaptation for the present occupancy. **Dilapidated** The building is structurally unsound. The building requires complete replacement of major components and extraordinary repairs.
Effective Age	Effective age is the number of years of apparent age, sometimes determined by deducting the estimated remaining life from normal life. Remodeling or renovating the building can reduce effective age. The effective ageot the actual age, is used in combination with the Building Condition to estimate an appropriate amount of depreciation. Actual age is the number of years between the date the building was constructed and the inspection date.
Depreciation Percentage	You can enter a depreciation percentage, which overrides the depreciation percentage that is calculated based on the condition and effective age.
How To	Click the appropriate radio button (None, Use the Following Percentage, or Calculate Based upon Condition and Age). If you choose to enter the actual percentage, enter a percentage between 0 and 99. If you want the system to calculate the depreciation percentage for you, enter the building condition and effective age.

User Adjustments

A user adjustment factor allows you to make a global modification to all the costs generated by the system.

How To	Enter up to three factors and descriptions. The factor is expressed as <, =, > 1.00. For example, 1.10 equals adding 10% to the costs generated by the system and .90 equals subtracting 10% from the costs generated by the system. For the description, you can enter a combination of alpha and numeric characters, up to 32 characters. Symbols like dashes, apostrophes, quotes, etc. can also be used.

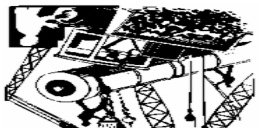
EXTERIOR WALLS



Exterior Wall Finishes

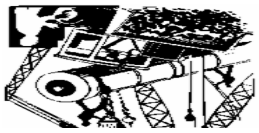
There are 29 different choices (including none) for exterior wall finish materials.

How To	If you want to have the system calculate the percentages for you, leave these fields blank, otherwise enter the percentage, up to 999, of each exterior wall finish material found on the building or section. You do not need to take into consideration the wall openings (doors and windows) as the program will do this for you. Generally, your exterior wall percentages should equal 100%. However, the program will allow for those situations where entries over 100% are necessary. The program also has an entry field for None that when used, will remove that percentage of the wall finishes from the occupancy. If you enter a total percentage of less than 100%, the program will automatically default the remaining percentage to None.



Brick on Frame	Face brick attached to a wood or metal stud frame structure using corrugated steel ties. The brick provides ornamentation only, not structural support for the building. **Included in Cost:** Face brick, mortar, steel or wood studs, and sheathing. Also associated with the exterior wall costs are the interior wall finishes appropriate for the occupancy, insulation, and the labor necessary to erect the wall.
Brick on Masonry	Face brick attached with masonry ties to a reinforced concrete block or masonry backup wall. The brick provides ornamentation only, not structural support for the building. **Included in Cost:** Face brick, mortar, steel or wood studs, and sheathing. Also associated with the exterior wall costs are the interior wall finishes appropriate for the occupancy, insulation, and the labor necessary to erect the wall.
Brick on SIP	Face brick attached to a structural insulated panel (SIP). The brick provides ornamentation only, not structural support for the building. **Included in Cost:** Face brick and the structural insulated panel.
Brick, Solid	This is a solid brick wall, two rows thick, with varying mortar thicknesses depending upon the structural requirements. This wall is used for full structural support. **Included in Cost:** Face brick, brick backup and mortar. Also associated with the exterior wall costs are the interior wall finishes appropriate for the occupancy, insulation, and the labor necessary to erect the wall.
Concrete Block	Concrete formed into an 8" x 16" (depth usually varies) block and allowed to set until it hardens. The inside of the block is usually hollow but can be solid in some areas of a wall. Unless covered with some other material, each block is easily recognized. **Included in Cost:** 8" x 16" concrete block and mortar. Also associated with the exterior wall costs are the interior wall finishes appropriate for the occupancy, insulation, and the labor necessary to erect the wall.
Concrete, Poured-in-Place, 7" to 10"	A solid 7" to 10" concrete wall. The wall is created by laying forms where the wall will be, then trucking in or making on site, a concrete mix that is then poured into those forms. Once poured, the wall will not be moved to a different location. The finished product may be made to look like stone, brick, or wood. **Included in Cost:** Building and removal of the forms, reinforcing, and concrete. Also associated with the exterior wall costs are the interior wall finishes appropriate for the occupancy, insulation, and the labor necessary to erect the wall.

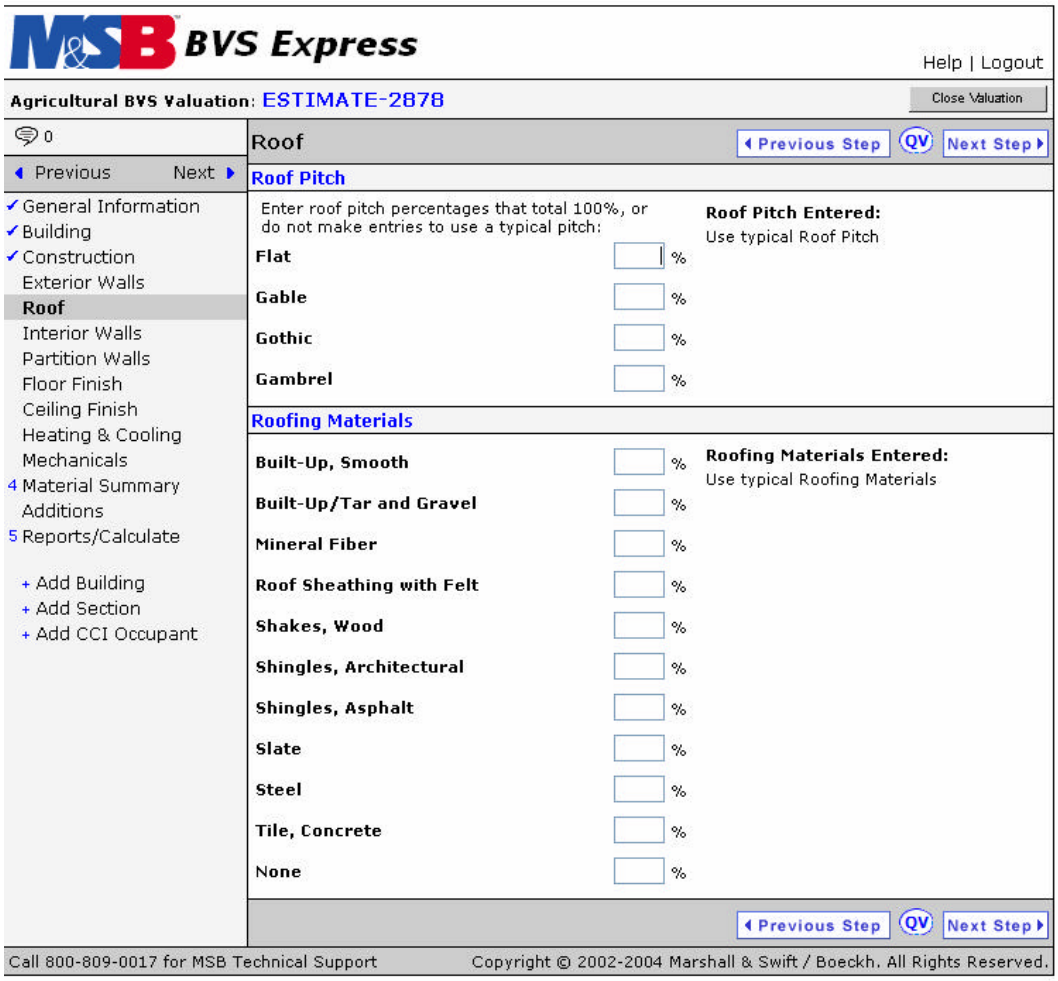
Door, Sliding	A type of door used on larger buildings. The door is hung on an overhead track with roller guides, and moves left to right. **Included in Cost:** Door, hardware, and the labor to install it.
Door, Walk-Thru	A door which people typically use to walk through. It is approximately 6'8" high and 3'0" wide. **Included in Cost:** Door, hardware, and the labor to install it.
Drop Curtain	A polyethylene sheet used on the exterior walls of a building. The curtain can be opened to allow light and air to enter the building. Many times the drop curtain system is used on structures which require lots of ventilation such as freestalls. **Included in Cost:** Curtain, pulleys, and other hardware necessary to raise and lower the curtain.
Fiberglass Translucent Panels on Frame	Fiberglass sheets used on the wall of the building to allow natural lighting. Most commonly found on pre-engineered buildings or "pole barns". The translucent panels have the same profile (corrugation) as the steel panels. **Included in Cost:** Corrugated fiberglass sheets and steel or wood studs.
Fiberglass Translucent Panels on Girts	Fiberglass sheets used on the wall of the building to allow natural lighting. Most commonly found on pre-engineered buildings or "pole barns". The translucent panels have the same profile (corrugation) as the steel panels. **Included in Cost:** Corrugated fiberglass sheets and 2" x 4" girts.
Insulated Sandwich Panels	A panel material used to sheath a building. The panel is made up of two sheets of plywood sandwiching a layer of foam insulation. This should not to be confused with SIP, which is a structural material. **Included in Cost:** Insulated sandwich panel. **NOTE**: The interior finishes of the exterior walls should be added under the Perimeter Wall Interior Finish section.
Paint	A liquid wall covering made of pigment and oil, solvent or water, used to color or decorate a surface. **Included in Cost:** One coat of primer, two finish coats and the labor to apply it.
Siding, Cedar on Frame	Wood board siding approximately 1" thick and 8" wide applied to a stud frame wall. **Included in Cost:** Cedar boards, metal or wood 2" x 4" framing, and the labor necessary to erect the wall.
Siding, Cedar on Girts	Wood board siding approximately 1" thick and 8" wide, applied to vertical and horizontal structural members. Because of the use of girts, this exterior wall option is normally associated with pre-engineered metal, steel frame, and pole frame buildings. Girts are the horizontal bracing that provides a surface for the siding to be fastened to.



	Included in Cost: Cedar boards, 2" x 4" blocking 2' on center, and the labor necessary to erect the wall.
Siding, Metal or Other on Girts	Corrugated metal siding applied to secondary horizontal framing members extending between columns or studs. Because of the use of girts, this exterior wall option is normally associated with pre-engineered metal, steel frame, and pole frame buildings. Girts are the horizontal bracing that provides a surface for the siding to be fastened to. **Included in Cost:** Corrugated or ribbed steel siding and 2" x 4" blocking 2' on center. **NOTE**: The interior finishes of the exterior walls should be added under the Perimeter Wall Interior Finish section.
Siding, Metal or Other on Masonry	Corrugated metal siding applied over a wall made of concrete block. **Included in Cost:** Concrete block wall, corrugated or ribbed steel siding, and 1" x 3" wood furring strips. **NOTE**: The interior finishes of the exterior walls should be added under the Perimeter Wall Interior Finish section.
Siding, Wood on Frame	Wood panels that are usually 4' x 8' sheets with shallow vertical groves, attached directly to the framed exterior wall. Typically referred to as T-111. **Included in Cost:** Wood panels (typically T-111) and 2" x 6" wood or steel studs. **NOTE**: The interior finishes of the exterior walls should be added under the Perimeter Wall Interior Finish section.
Siding, Wood on Girts	Wood panels that are usually 4' x 8' sheets with shallow vertical groves, fastened to structural framing with clips. Typically referred to as barn siding. **Included in Cost:** 4'x8' sheets of plywood (generally T-111), 2" x 4" blocking, and the labor necessary to erect the wall.
Stone on Frame	Stone such as granite, fieldstone, or limestone that is either found or quarried locally then is applied to a wood or steel stud frame wall. The stone provides ornamentation only, not structural support for the building. **Included in Cost:** Stone, 2" x 6" wood or steel studs, mortar, and wood sheathing. **NOTE**: The interior finishes of the exterior walls should be added under the Perimeter Wall Interior Finish section.
Stone on Masonry	Stone such as granite, fieldstone, or limestone that is either found or quarried locally then is anchored to a masonry wall. The stone provides ornamentation only, not structural support for the building. **Included in Cost:** 8" concrete block wall, stone and mortar. **NOTE**: The interior finishes of the exterior walls should be added under the Perimeter Wall Interior Finish section.

Stone on SIP	Stone such as granite, fieldstone, or limestone that is either found or quarried locally then is anchored to a structurally insulated panel (SIP). The stone provides ornamentation only, not structural support for the building. **Included in Cost:** Stone, mortar, and a structural insulated panel.
Stone Solid	Stone such as granite, fieldstone, or limestone that is either found or quarried locally then is mortared together to provide the external structural support. **Included in Cost:** 2' solid stone wall and mortar.
Structural Insulated Panels	A panel material used as a load bearing structure. The panel is made up of two sheets of plywood sandwiching a layer of foam insulation. **Included in Cost:** Structural insulated panel.
Stucco on Frame	A cement plaster used as an exterior wall surface finish that is usually applied to metal lath attached to a stud wall base. The plaster consists of Portland cement, lime, sand and water. **Included in Cost:** Stucco, 2" x 6" wood or steel studs, mortar, and wood sheathing. **NOTE**: The interior finishes of the exterior walls should be added under the Perimeter Wall Interior Finish section.
Stucco on Masonry	A cement plaster used as an exterior wall surface finish that is usually applied over a concrete block base. The plaster consists of Portland cement, lime, sand and water. **Included in Cost:** Stucco, 8" concrete block wall, and mortar. **NOTE**: The interior finishes of the exterior walls should be added under the Perimeter Wall Interior Finish section.
Stucco on SIP	A cement plaster used as an exterior wall surface finish that is usually applied over a structural insulated panel. The plaster consists of Portland cement, lime, sand and water. **Included in Cost:** Stucco and a structural insulated panel.
Wall Vent, Tilt Open	A wall vent which allows air to exit or enter a building. The vents typically are large hinged panels that are simply held open with a latch. These are very common in moderate climates. **Included in Cost:** Vent panel, hardware, and the labor to install it.

ROOF

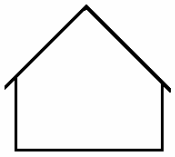
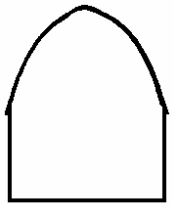
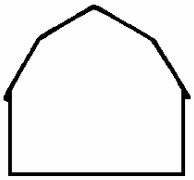


Roof Pitch

Roof slope is expressed as a ratio of total rise to total run (i.e. 6 on 12, 12 on 12). Pitch indicates the incline of the roof in units of vertical rise per units of horizontal run or distance.

How To	If the entire building has one type of roof pitch, enter 100%. If the building has a combination of different types of roof pitches, enter the percentage for each type. Entries must total 100%.

Flat		A roof with no pitch.

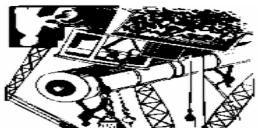
Gable		A roof whose slope on each side forms equal pitches, usually a 4:12 pitch.
Gothic		A roof which is typically high, with a narrow arch and pointed top.
Gambrel		A ridged roof with sides having two pitches or slopes. The slope on each side is interrupted by an obtuse angle, causing the lower slope to be steeper than the upper slope.

Roofing Materials

There are 11 different choices (including none) for roof materials.

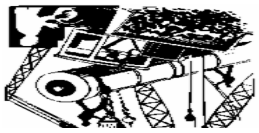
How To	If you want to have the system calculate the percentages for you, leave these fields blank, otherwise enter a percentage, up to 999, for all types of roof materials found on the building or section.

Built-Up, Smooth	A built-up roof is composed of three different and distinct elements: felt, bitumen, and surfacing. Felt paper is used to resist the expansion and contraction forces and does not waterproof the roof, but rather allows more bitumen to be applied. The felt is applied in layers over insulation with bitumen mopped over the top of each layer, holding the layers together. After the layers of felt are applied, a layer of rubber membrane is applied to the exposed area of the roof providing an excellent surface to protect the layers of felt. **Included in Cost:** 3-ply asphalt, built-up smooth, insulation, and drainage.



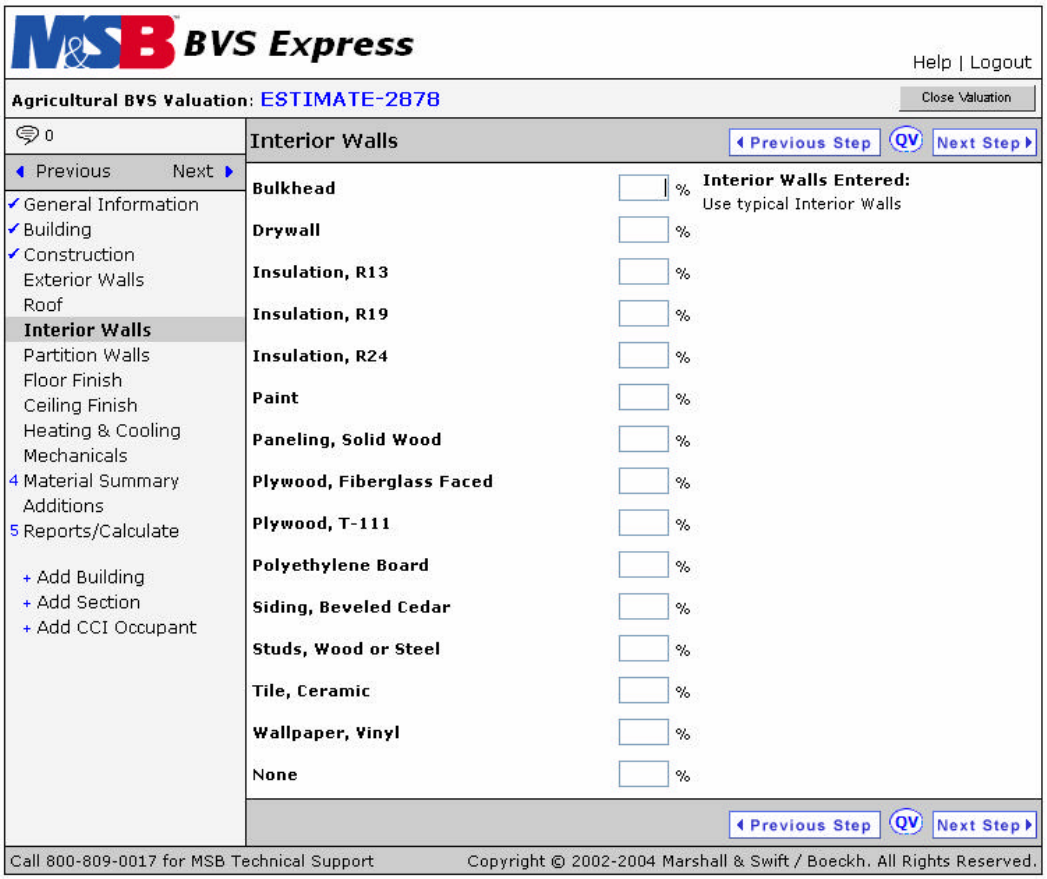
Built-Up / Tar and Gravel	A built-up roof is composed of three different and distinct elements: felt, bitumen, and surfacing. Felt paper is used to resist the expansion and contraction forces and does not waterproof the roof, but rather allows more bitumen to be applied. The felt is applied in layers over insulation with bitumen mopped over the top of each layer, holding the layers together. After the layers of felt are applied, a layer of gravel or slag, mineral granules, or a mineral-coated cap sheet is applied to the exposed area of the roof providing an excellent surface to protect the layers of felt. **Included in Cost:** 3-ply asphalt, built up with roofing stone on top, insulation, and drainage.
Mineral Fiber	A roofing material made up of fiberglass mesh and asphalt topped with mineral stones. **Included in Cost:** Mineral fiber shake, felt, insulation, and drainage.
Roof Sheathing with Felt	Roofing material consisting of plywood sheets and asphalt covering paper. **Included in Cost:** 4' x 8' plywood sheets and felt paper.
Shakes, Wood	Shakes split from a bolt of wood, generally in random dimensions. Wood shakes are normally installed over a pitched roof on spaced sheathing covered with building paper. **Included in Cost:** Cedar shingles or shakes, felt, insulation, and drainage.
Shingles, Architectural	Factory installed designer asphalt/fiberglass shingles featuring multi-layered construction, where random tabs or pads are applied to a base shingle to achieve added dimension and replicate the look of wood shakes. These shingles are sometimes referred to as laminated or three-dimensional shingles. **Included in Cost:** Three-tab shingles, felt, insulation, and drainage.
Shingles, Asphalt	A composition shingle made of asphalt-impregnated felt and surfaced with mineral granules. **Included in Cost:** Shingle, felt, insulation, and drainage.
Slate	A dense, fine grained, metamorphic rock produced by the compression of various sediments, cut into thin shingles. Slate comes in any number of sizes, thicknesses and finishes. **Included in Cost:** Slate shingles, felt, insulation, and drainage.
Steel	Corrugated steel sheets applied over a pitched roof. **Included in Cost:** Colored steel roofing, insulation, and drainage.

Tile, Concrete	A thin piece of concrete made from Portland cement, fine aggregate, and pigments. These tiles can be manufactured to resemble clay tile or wood shakes. **Included in Cost:** Concrete tile, insulation, and drainage.



INTERIOR FEATURES

Interior features include perimeter wall interior finish, partition wall length, partition wall structure, partition wall finish, floor finish, and ceiling finishes.



INTERIOR WALLS (Perimeter Wall Interior Finish)

There are 15 different choices (including none) for perimeter wall interior finish materials.

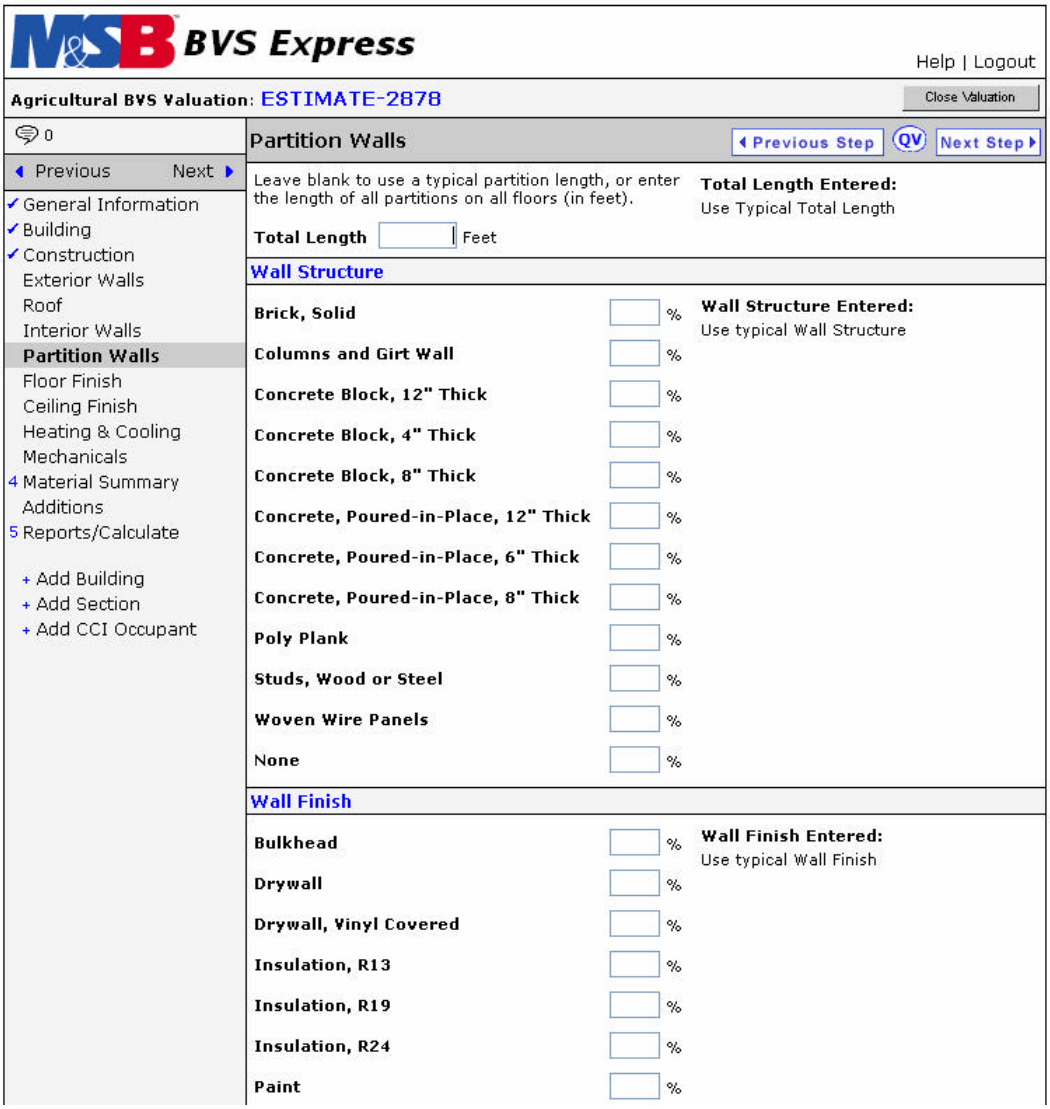
How To	If you want to have the system calculate the percentages for you, leave these fields blank, otherwise enter a percentage, up to 999, for all types of perimeter wall interior finish for the valuation.

Bulkhead	A wood framed retaining wall with a sloped base. Used to provide additional structural support to the wall. This is common in buildings that store bulk goods such as potatoes, grain, or fertilizer.

Drywall	Drywall, also called plasterboard, sheetrock, gypsumboard or wallboard, comes in sheets typically 4' x 8' or 4' x12'. It is a hard, chalk like material covered with paper on both sides. It forms a smooth surface on a wall that can be painted or finished in any number of ways.
Insulation, R13	A flexible insulation made of loosely matted glass fibers, faced with kraft paper or aluminum foil. The insulation is about 3½" to 4" thick and used for 2" x 4" stud walls.
Insulation, R19	A flexible insulation made of loosely matted glass fibers, faced with kraft paper or aluminum foil. The insulation is about 5½" to 6½" thick and used for 2" x 6" stud walls.
Insulation, R24	A flexible insulation made of loosely matted glass fibers, faced with kraft paper or aluminum foil. The insulation is about 7½" thick and used for ceilings.
Paint	A liquid wall covering made of pigment and oil, latex, solvent or water, that is used to color or decorate a surface. **Included in Cost:** One coat of primer and two finish coats.
Paneling, Solid Wood	Solid wood paneling with a protective finish, usually in sheets of 4' x 8' or boards of 4" - 12" in width.
Plywood, Fiberglass Faced	A sheet of plywood with a fiberglass coating used to help prevent the absorption of water.
Plywood, T-111	A registered trade name for siding panels with a special surface treatment such as saw texture and with grooves spaced regularly across the face.
Polyethy-lene Board	A sheet of polyethylene attached to a wall surface. The material is plastic and white in color and is easy to clean.
Siding, Beveled Cedar	Narrow wood boards, thicker at one edge, that are typically used for the exterior covering of frame buildings. The boards are applied horizontally and overlapped.
Studs, Wood or Steel	A framing member usually cut to a precise length at the mill, designed to be used in framing building walls with little or no trimming before it is set in place. Studs are most often 2" x 4" and 2" x 6".
Tile, Ceramic	A thin, flat piece of fired clay that is attached to the wall surface with cement or other adhesive. Normally used for its durability, easiness to clean, and relatively waterproof finish. The most common sizes are 4½" x 4½" and 4" x 6", Ceramic mosaic tiles are 1" unglazed tiles.

Wallpaper, Vinyl	Sheets of decorative paper or vinyl wallpaper backed with an adhesive and pasted to the wall surface.

PARTITION WALLS



Partition Wall Length

How To	Enter the total lineal feet of partition walls, up to 999,999. You do not need to enter the commas; the system will automatically put them in once you tab off the field.

Partition Wall Structures

Partition walls consist of the framing materials and the finishes that cover them. There are 12 different choices (including none) available for partition wall structure materials.

How To	If you want to have the system calculate the percentages for you, leave these fields blank, otherwise enter the percentage, up to 999, for each partition wall structure material found in the building or section. **NOTE:** Although the program does not prohibit you from entering greater than or less than 100%, it is recommended that if you enter data into these fields, your totals equal 100%. **NOTE:** If an entry is made in any Partition Wall Structure field, an entry must also be made in Partition Wall Finish.

Brick, Solid	A solid brick interior wall that is either load bearing or non-load bearing and is used to separate rooms. **Included in Cost:** Face brick, brick backup, and mortar.
Columns and Girt Wall	This type of partition is used in forestalls or other larger buildings which require center support and free air movements. **Included in Cost:** Columns and girts.
Concrete Block, 4" Thick	Concrete formed into an 8" high x 16" long x 4" deep or thick block and allowed to set until it hardens. The inside of the block is usually hollow but can be solid in some areas of a wall. **Included in Cost:** Concrete block and mortar.
Concrete Block, 8" Thick	Concrete formed into an 8" high x 16" long x 8" deep or thick block and allowed to set until it hardens. The inside of the block is usually hollow but can be solid in some areas of a wall. **Included in Cost:** Concrete block and mortar.
Concrete Block, 12" Thick	Concrete formed into an 8" high x 16" long x 12" deep or thick block and allowed to set until it hardens. The inside of the block is usually hollow but can be solid in some areas of a wall. **Included in Cost:** Concrete block and mortar.
Concrete, Poured-in-Place, 6" Thick	A solid, 6" thick, concrete wall. The wall is created by laying forms where the wall will be, then trucking in or making on site, a concrete mix that is then poured into those forms. Once poured, the wall will not be moved to a different location. The finished product may be made to look like stone, brick, or wood. **Included in Cost:** Building and removal of the forms, reinforcing, and concrete.

Concrete, Poured-in-Place, 8" Thick	A solid, 8" thick, concrete wall. The wall is created by laying forms where the wall will be, then trucking in or making on site, a concrete mix that is then poured into those forms. Once poured, the wall will not be moved to a different location. The finished product may be made to look like stone, brick, or wood. **Included in Cost:** Building and removal of the forms, reinforcing, and concrete.
Concrete, Poured-in-Place, 12" Thick	A solid, 12" thick, concrete wall. The wall is created by laying forms where the wall will be, then trucking in or making on site, a concrete mix that is then poured into those forms. Once poured, the wall will not be moved to a different location. The finished product may be made to look like stone, brick, or wood. **Included in Cost:** Building and removal of the forms, reinforcing, and concrete.
Poly Plank	A plastic plank, hollow in the center and about the size of a 2'x 8', which is used as a finished wall and/or ceiling material in buildings. **Included in Cost:** Heavy duty planking and the hardware to install it.
Studs, Wood or Steel	Wood or steel framing that can either be load bearing or non-load bearing walls. Common spacing of the studs is 12", 16", or 24" on center. **Included in Cost:** Wood or steel framing studs.
Woven Wire Panels	Heavy gauge wire panels shaped in a grid pattern. **Included in Cost:** Woven wire panels and the hardware to install them.

Partition Wall Finishes

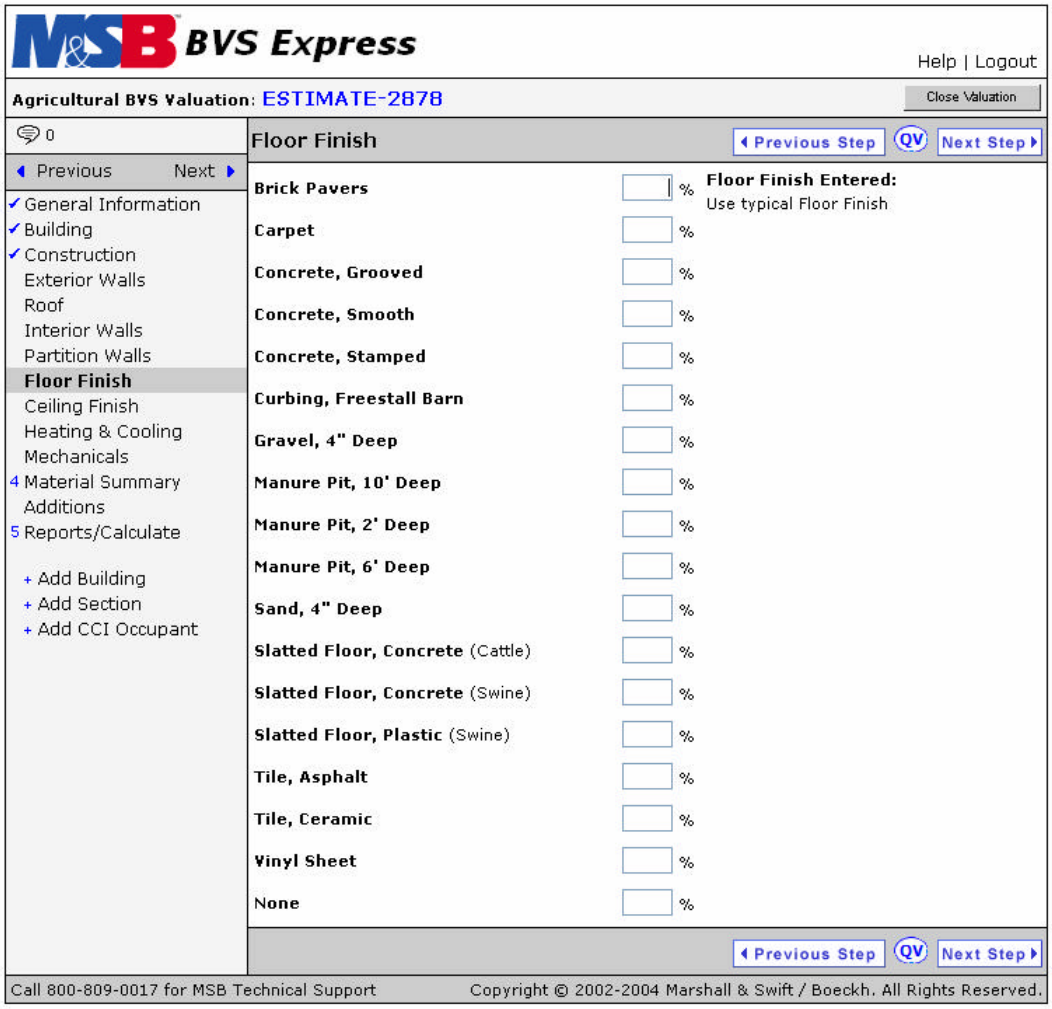
There are 15 different choices (including none) for partition wall finish materials.

How To	If you want to have the system calculate the percentages for you, leave these fields blank, otherwise enter the percentage, up to 999, for each partition wall finish material found in the building or section. **NOTE:** It is important to remember that a partition wall has finishes on both sides of the wall. If your partition wall has drywall on both sides, your total percentage for drywall would be 200%. **NOTE:** If an entry is made in any Partition Wall Finish field, an entry must also be made in Partition Wall Structure.

Bulkhead	A wood framed retaining wall with a sloped base. Used to provide additional structural support to the wall. This is common in buildings that store bulk goods such as potatoes, grain, or fertilizer.
Drywall	Drywall, also called plasterboard, sheetrock, gypsumboard or wallboard, comes in sheets typically 4' x 8' or 4' x 12'. It is a hard, chalk-like material covered with paper on both sides. It forms a smooth surface on a wall that can be painted or finished in any number of ways.
Drywall, Vinyl Covered	Drywall, also called plasterboard, sheetrock, gypsumboard or wallboard, comes in sheets typically 4' x 8' or 4' x 12'. It is a hard, chalk-like material covered with paper on the back side and a decorative vinyl wallpaper on the front side. It forms a smooth surface on a wall that can be painted or finished in any number of ways.
Insulation, R13	A flexible insulation made of loosely matted glass fibers, faced with kraft paper or aluminum foil. The insulation is about 3½" to 4" thick and used for 2" x 4" stud walls.
Insulation, R19	A flexible insulation made of loosely matted glass fibers, faced with kraft paper or aluminum foil. The insulation is about 5½" to 6½" thick and used for 2" x 6" stud walls.
Insulation, R24	A flexible insulation made of loosely matted glass fibers, faced with kraft paper or aluminum foil. The insulation is about 7½" thick and used for ceilings.
Paint	A liquid wall covering made of pigment and oil, latex, solvent or water, that is used to color or decorate a surface. **Included in Cost:** One coat of primer and two finish coats.
Paneling, Solid Wood	Solid wood paneling with a protective finish, usually in sheets of 4' x 8' or boards of 4" - 12" in width.
Plywood, T-111	T-111 is a registered trade name for sheet siding, typically 4' x 8', with vertical cut grooves to simulate standard wood board siding.
Polyethylene Board	A sheet of polyethylene attached to a wall surface. The material is plastic and white in color and is easy to clean.
Sheetmetal	A corrugated metal sheet attached to an interior partition surface.
Tile, Ceramic	A thin, flat piece of fired clay that is attached to the wall surface with cement or other adhesive. Normally used for its durability, easiness to clean, and relatively waterproof finish. The most common sizes are 4½" x 4½" and 4" x 6". Ceramic mosaic tiles are unglazed 1" tiles.

Tile, Quarry	A thin piece of stone mined from a open excavation. Normally used for its durability, easiness to clean, and relatively waterproof finish. A shale, clay type of unglazed tile, most commonly 6" x 6" x ½" in size.
Wallpaper, Vinyl	Sheets of decorative paper or vinyl wallpaper backed with an adhesive and pasted to the wall surface.

FLOOR FINISH



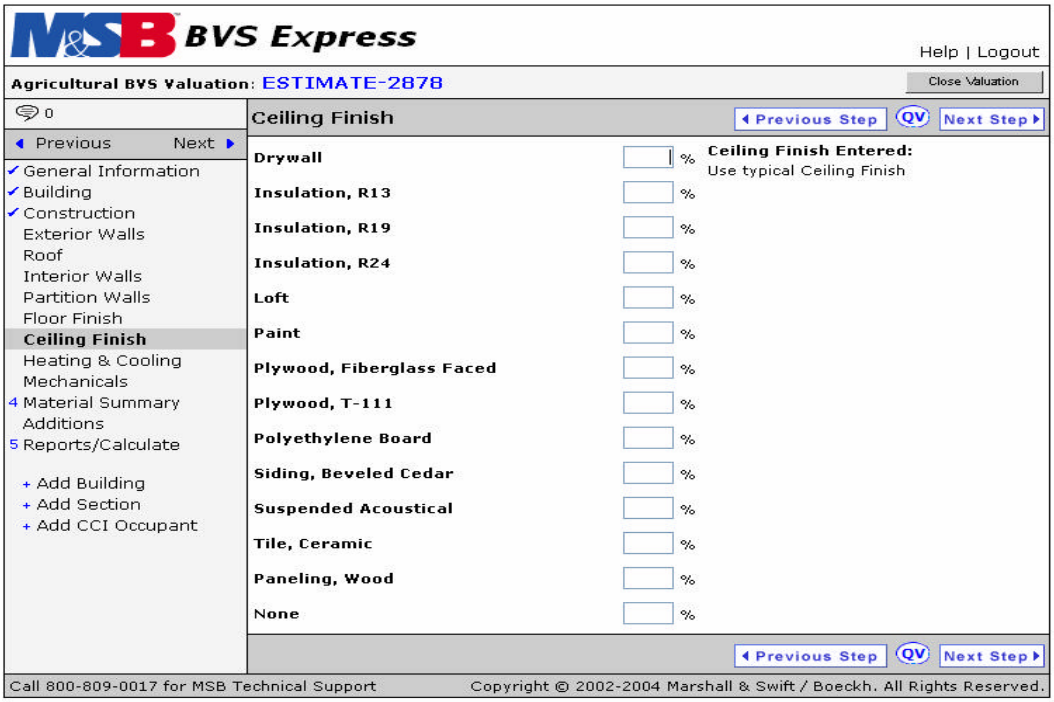
There are 18 different choices (including none) for floor finishes.

How To	If you want to have the system calculate the percentages for you, leave these fields blank, otherwise enter a percentage, up to 999, for all types of floor finishes found in the building or section.

Brick Pavers	Floor finish made from a hard, burned brick with a smooth or rough texture face, and made of selected colors and sizes. Typically the pavers are installed over a compacted bed of crushed stones and sand.
Carpet	A heavy woven fabric attached to a rubber or burlap like backing. It is attached to the floor either by an adhesive, or by nailing strips located along the perimeter of the room.
Concrete, Grooved	A hard stone like material made by mixing sand, an aggregate such as crushed stone or gravel, cement, and water. It is poured into place in the structure, then allowed to harden. Before the surface hardens though, grooves are trowelled in. This type of surface is used in freestall type buildings to allow more traction for the animals.
Concrete, Smooth	A hard stone like material made by mixing sand, an aggregate such as crushed stone or gravel, cement, and water. It is poured into place then the surface is trowelled smooth.
Concrete, Stamped	A hard stone like material made by mixing sand, an aggregate such as crushed stone or gravel, cement, and water. It is poured into place, a stamped pattern is applied to the surface, and then it is allowed to harden.
Curbing, Freestall Barn	A raised line of concrete to help retain the sand used in the stanchion area.
Gravel, 4" Deep	A surface composed of loose pieces of rock which are typically ½" – 1½" in diameter.
Manure Pit, 2' Deep	A 2' deep area, below a freestall or other livestock building, where manure collects. The walls are poured concrete with a concrete floor. **NOTE:** Unless intended as an open pit like those found in a milking parlor, additional floor finishes (i.e.: slatted floors) should be added.
Manure Pit, 6' Deep	A 6' deep area, below a freestall or other livestock building, where manure collects. The walls are poured concrete with a concrete floor. **NOTE:** Unless intended as an open pit like those found in a milking parlor, additional floor finishes (i.e.: slatted floors) should be added.
Manure Pit, 10' Deep	A 10' deep area, below a freestall or other livestock building, where manure collects. The walls are poured concrete with a concrete floor. **NOTE:** Unless intended as an open pit like those found in a milking parlor, additional floor finishes (i.e.: slatted floors) should also be added.
Sand, 4" Deep	A floor surface of loose granular material resulting from the disintegration of rock that is finer then gravel and courser then silt.

Slatted Floor, Concrete (Cattle)	A precast concrete slab positioned over a manure pit. The slab has 2" slatted openings so the manure can fall through into the pit. The slates are not large enough for an animal's foot to go through.
Slatted Floor, Concrete (Swine)	A precast concrete slab positioned over a manure pit. The slab has 1" slatted openings so the manure can fall through into the pit. The slates are not large enough for an animal's foot to go through.
Slatted Floor, Plastic (Swine)	A plastic slatted floor is made up of a metal framework positioned over a manure pit then a plastic panel is placed within that framework to be used as a floor. The plastic floor has openings large enough for manure to fall through, but not large enough for an animal's foot to go through.
Tile, Asphalt	A resilient flooring comprised of resins, typically 12" x 12" in size and applied over a subfloor with a bonding coat.
Tile, Ceramic	A thin, flat piece of fired clay that is attached to the floor surface with cement or other adhesive. Normally used for its durability, easiness to clean and relatively waterproof finish. The most common sizes are 4½" x 4½" and 4" x 6". Ceramic mosaic tiles are unglazed 1" tiles.
Vinyl Sheet	A sheet made of any version of thermoplastic resins, pigment and clay-based fillers. Found in sheet form, it has asbestos or felt backing.

CEILING FINISH



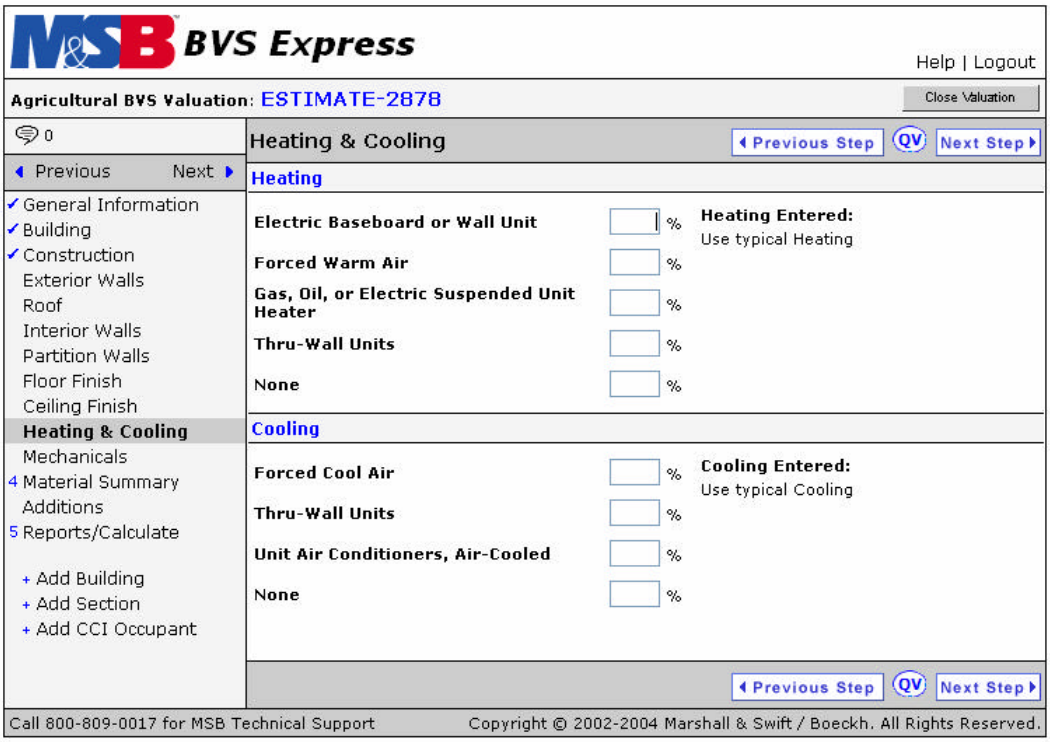
There are 14 different choices (including none) for ceiling finishes.

How To	If you want to have the system calculate the percentages for you, leave these fields blank, otherwise enter a percentage, up to 999, for all types of ceiling finishes for the building or section.

Drywall	Drywall, also called plasterboard, sheetrock, gypsumboard or wallboard, comes in sheets typically 4' x 8' or 4' x 12'. It is a hard, chalk-like material covered with paper on both sides. It forms a smooth surface on a wall that can be painted or finished in any number of ways.
Insulation, R13	A flexible insulation made of loosely matted glass fibers, faced with kraft paper or aluminum foil. The insulation is about 3½" to 4" thick and used for 2" x 4" stud walls.
Insulation, R19	A flexible insulation made of loosely matted glass fibers, faced with kraft paper or aluminum foil. The insulation is about 5½" to 6½" thick and used for 2" x 6" stud walls.
Insulation, R24	A flexible insulation made of loosely matted glass fibers, faced on both sides with kraft paper or aluminum foil. The insulation is about 7½" thick and used for ceilings.
Loft	This option adds a structural floor into an attic space so it can be used for the storage of goods.
Paint	A liquid wall covering made of pigment and oil, latex, solvent or water, that is used to color or decorate a surface.
Paneling, Wood	A veneer or solid wood ceiling finish, usually in 4’ x 8’ sheets or 4" - 12" boards, nailed directly to the joists.
Plywood, Fiberglass Faced	A sheet of plywood with a fiberglass coating to help prevent the absorption of water.
Plywood, T-111	T-111 is a registered trade name for sheet siding, typically 4' x 8', with vertical cut grooves to simulate standard wood board siding.
Polyethy-lene Board	A sheet of polyethylene attached to a wall surface. The material is plastic and white in color and is easy to clean.
Siding, Beveled Cedar	Narrow wood boards, thicker at one edge, that are applied in an overlapping fashion. This ceiling finish option can also be used for other wood board finishes such as those that butt up to each other or that are interlocked in a tongue and groove fashion.

Suspended Acoustical	Acoustic tiles that are suspended from the ceiling with the help of wire hangers and a light weight metal grid system. Acoustic tiles are typically 2' x 2' or 2' x 4' squares that have an inherent property to absorb sound. The tiles are generally made of mineral fiber or some other similar insulated material.
Tile, Ceramic	A thin, flat piece of fired clay that is attached to the ceiling surface with cement or other adhesive. Normally used for its durability, easiness to clean, and relatively waterproof finish. The most common sizes are 4½" x 4½" and 4" x 6". Ceramic mosaic tiles are unglazed 1" tiles.

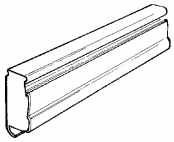
HEATING AND COOLING

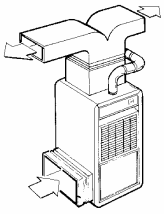
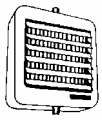
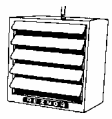
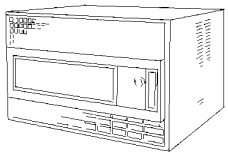


Heating

There are 5 different choices (including none) for heating systems.

How To	If you want to have the system calculate the percentages for you, leave these fields blank, otherwise enter a percentage, up to 999, for all types of heating systems for the building or section.

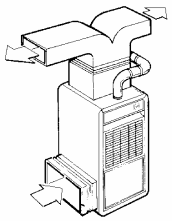
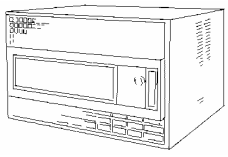
Electric Baseboard or Wall Unit		This system utilizes an electric resistance element that is protected by an enclosure. A thermostat regulates the room temperature by acting as a switching device.

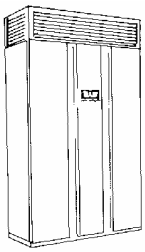
Forced Warm Air	 A forced warm air system consists of a fan or blower, a fuel burner, ductwork, and registers. The fuel source may be electricity, gas, oil, coal, or wood. By adding a cooling coil to the supply ducting, either warm or cool air can be supplied on demand.
Gas, Oil, or Electric Suspended Unit Heater	  A unit heater consists of a heating element and a motor driven fan within a factory-assembled housing. The units using steam, hot water, electricity, gas, or oil as a fuel source provide a relatively low-cost means of heating. Another type of suspended unit heater is an infrared heater. Fuel sources for this type of heater can be either electric or gas.
Thru-Wall Units (heating)	 These are factory-selected wall sleeves with a separate uncased combination of heating and cooling components, assemblies, or sections intended for mounting through the wall to serve a single room or zone. It includes heating capacity by hot water or electricity.

Cooling

There are 4 different choices (including none) for cooling systems.

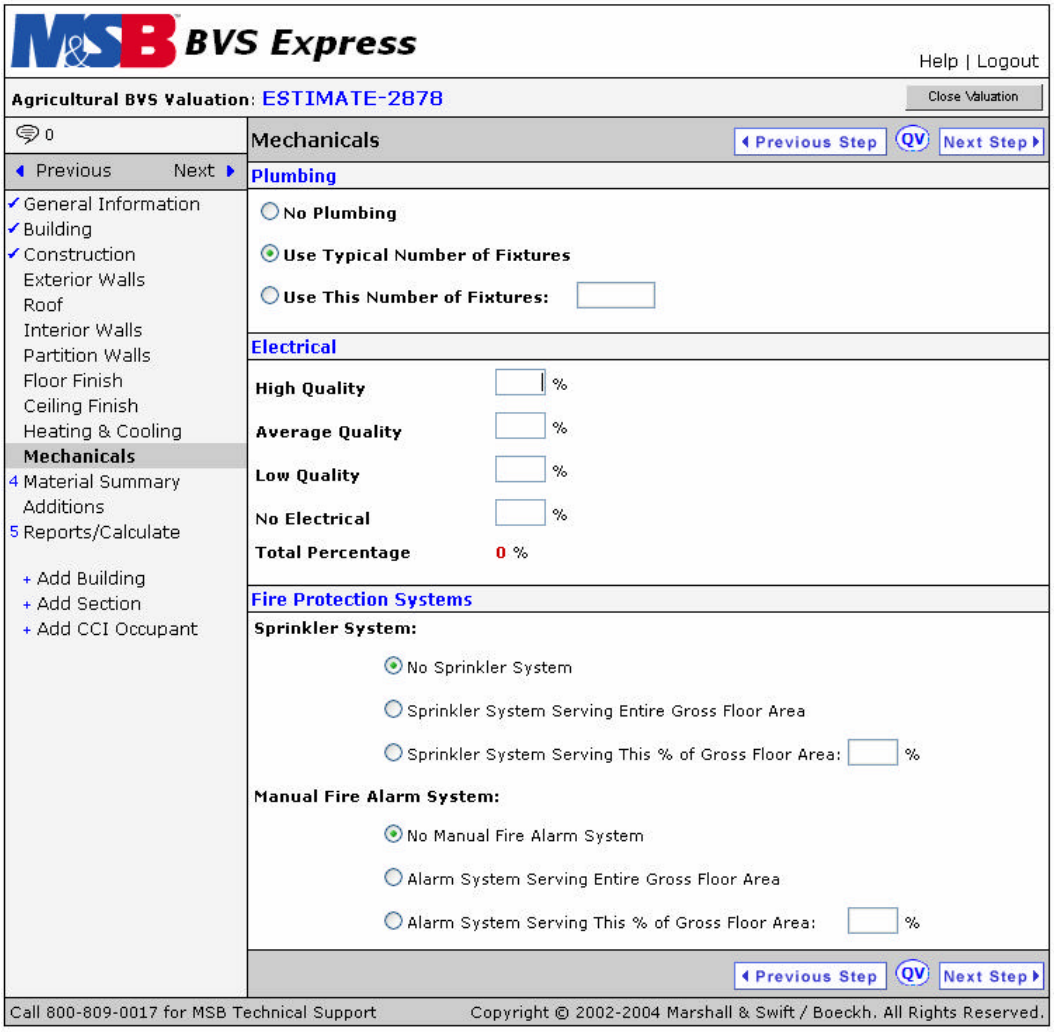
How To	If you want to have the system calculate the percentages for you, leave these fields blank, otherwise enter a percentage, up to 999, for all types of cooling systems for the building or section.

Forced Cool Air	 A forced air system consists of a fan or blower, a fuel burner, ductwork, and registers. The fuel source may be electricity, gas, oil, coal, or wood. By adding a cooling coil to the supply ducting, either warm or cool air can be supplied on demand.
Thru-Wall Units (cooling)	 These are factory-selected wall sleeves with a separate unencased combination of heating and cooling components, assemblies, or sections intended for mounting through the wall to serve a single room or zone. It includes heating capacity by hot water or electricity.

Unit Air Conditioner, Air-Cooled	 Most unit air conditioners, which resemble freestanding cabinets, are used for cooling only. When used in conjunction with a heat source, these units can be used for year-round air conditioning. An air-cooled conditioner relies on a remote air-cooled condensing unit. The heat source is steam, hot water, or electric resistive elements.

MECHANICALS

Mechanicals include plumbing, electrical quality, and fire protection systems.



Plumbing

This field allows you to enter the actual number of plumbing fixtures for the building/section you are valuing. **NOTE:** An entry made here will override any system defaults.

How To	Click the appropriate radio button (No Plumbing, Use Typical Number of Fixtures, or Use This Number of Fixtures). If you choose to enter the number, enter the total number of plumbing fixtures, up to 999,999, for the building or section. When figuring out the total number, do not include plumbing in an office space. Listed below is a guideline of which plumbing fixtures to include in your total count.
	Count 100' of ¾" copper pipe and value (1 fixture) 10 gallon water heater Wall sink Floor drain **Do Not Count** Water Coolers Water Closets

Electrical Quality

There are three different electrical quality types, as well as none.

How To	Enter a percentage between 0 and 999, for each electrical quality for the section.

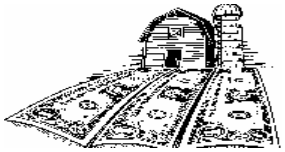
	Low Based on the national building codes, low-electrical quality is below the standards set for each occupancy. **Average** Based on the national building codes, average-electrical quality meets the requirements set for each occupancy. **High** Based on the national building codes, high-electrical quality goes above the requirements set for each occupancy.

Fire Protection Systems

Fire Protection Systems area divided into two separate systems: Sprinkler System, and Manual Fire Alarm System.

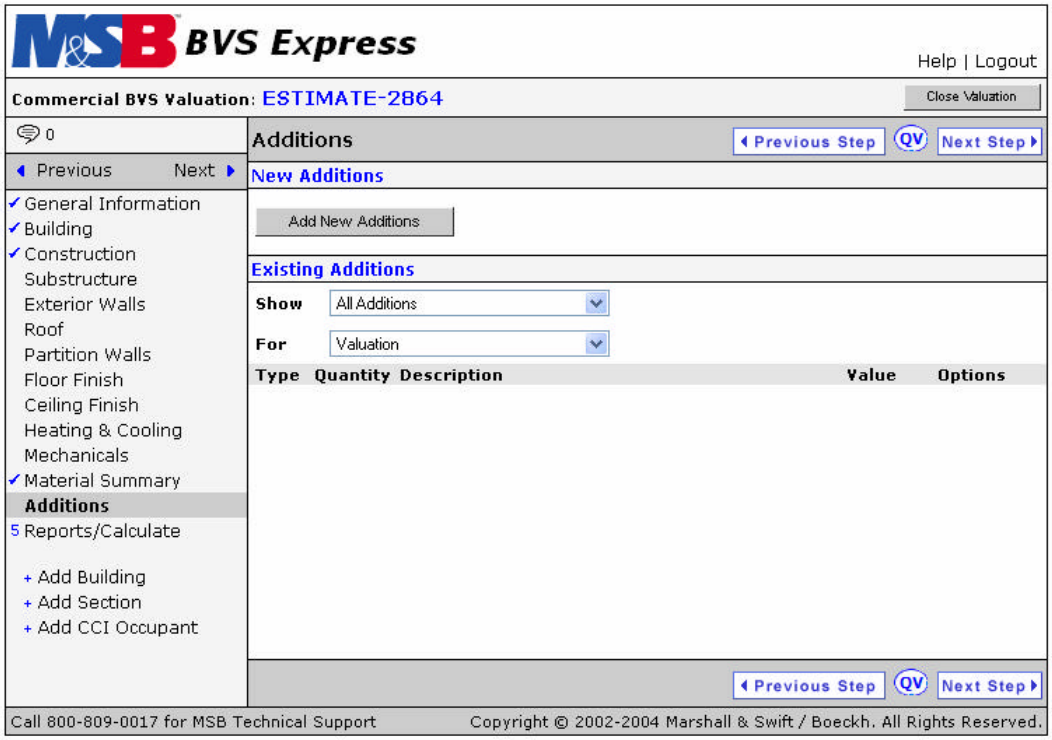
How To	Click the appropriate radio button (No System, System Serving Entire Gross Floor Area, or System Serving This % of Gross Floor Area). If the system doesn't cover the entire gross floor area, enter a percentage, up to 999, of the gross floor area served by the fire protection system. **Sprinkler System** An automatic fire sprinkler system, consisting of piping and sprinkler heads that discharge water upon activation by a

	flame. Lower quality systems employ PVC piping and higher quality systems employ either copper or iron pipe. Cost includes installation. **Fire Alarm System** A manual fire alarm system includes pull stations with either a horn or bell, or a light. This system is not connected to any other systems or the fire department.



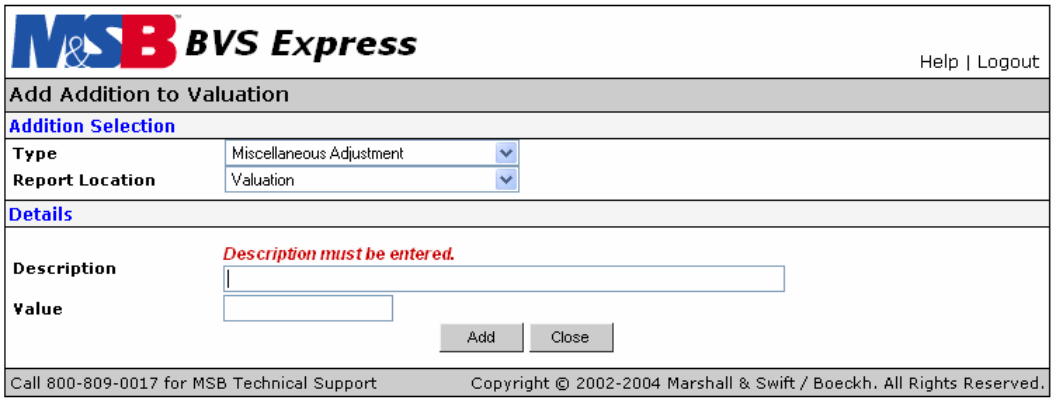
ADDITIONS

This section allows you to add new equipment, external structures, site improvements, and miscellaneous items to the current valuation file, as well as make changes to existing additions. Additions can be made to the valuation overall or to a specific section within the valuation.



Miscellaneous Additional Features

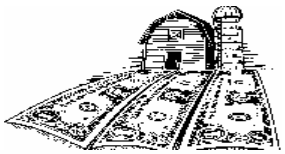
Use this window to record any additional items you want included in the valuation amount, but are not found in the system.

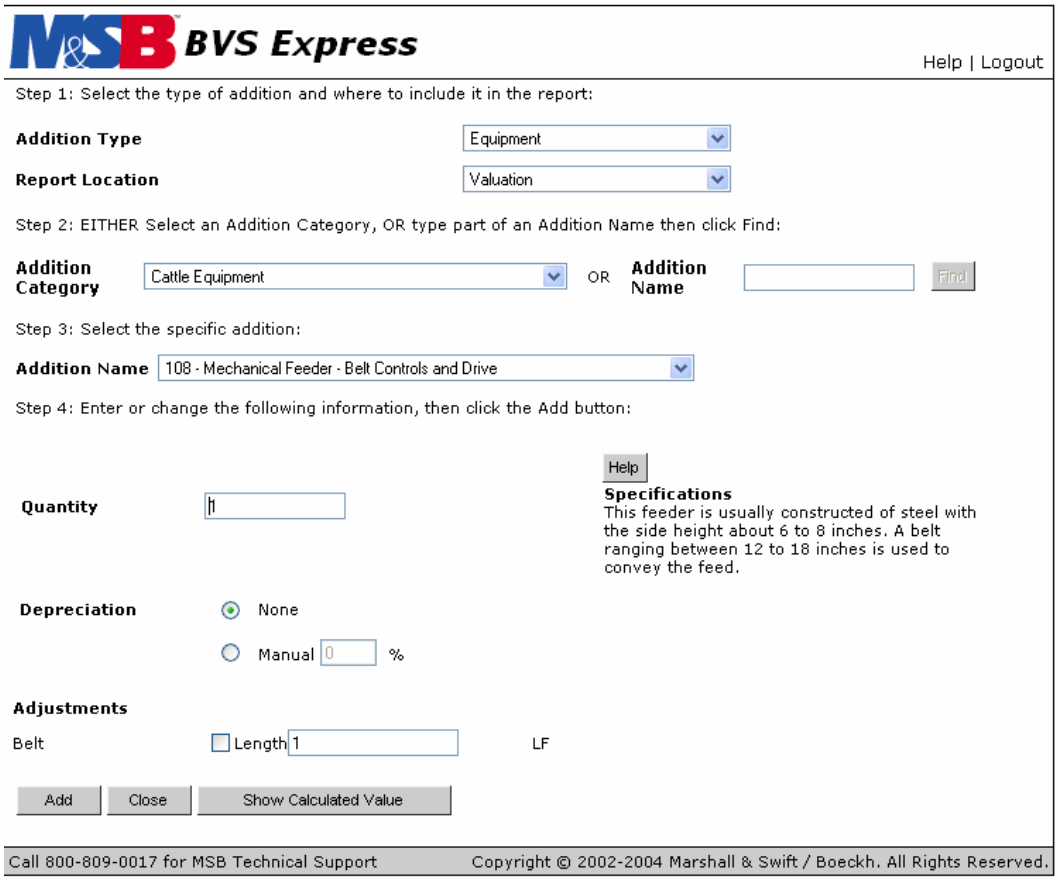


How To	1. Make sure the **Additions** navigation link is selected on the left-hand side of the screen. 2. Using the **Show** drop-down list, select the Miscellaneous Adjustments then use the **For** drop-down list to select where the addition should be placed (valuation or section). 3. Click the **Add** button. 4. **Type** will already be filled in with Miscellaneous Adjustment. 5. **Report Location** will also be filled in based upon your choice in the For drop-down list mentioned above. 6. Type in a **Description**, up to 32 characters. 7. Enter a whole dollar amount, up to $9,999,999, in **Value**. The cost can be expressed as a positive or negative dollar amount. Do not enter the dollar signs or commas. 8. Click the **Add** button. 9. To add additional adjustments, repeat steps 2-8. 10. When all adjustments have been added, click the **Close** button. 11. To make a change to an existing adjustment, simply find the desired addition in the list and click the **Edit** link under Option. 12. To remove an existing adjustment, simply find the desired addition in the list and click the **Delete** link under Option.

Equipment, External Structures, and Site Improvements

Use this window to add equipment, additional external structures, and site improvements to the valuation.

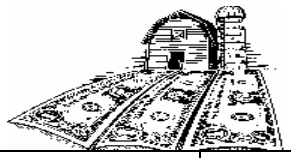




How To	1. To add a new addition, make sure the **Additions** navigation link is selected on the left-hand side of the screen. 2. Using the drop-down lists, select the **Type** and **Location** for the addition. 3. **Type** will already be filled in with your addition selection. 4. Using the **Category** and **Name** fields, select the specific addition you wish to enter. 5. If you would rather search by equipment name, type in the partial name then click the **Find** button. 6. Enter the specific information (quantity, criteria, etc..) for your addition. 7. Specify the depreciation by clicking the **None** or **Manual** radio buttons. If manual is selected, type in the desired percentage. If same as section is selected, the percentage will automatically be filed in based upon the depreciation entered for the section. 8. Finally, in the **Adjustments** section, click the checkboxes on or off and change the input value to represent the

	specific equipment or structure you have. 9. Once all the information has been entered, click the **Add** button to continue. The Additions screen will appear again and you can repeat the steps above to add additional items. 10. If the item you want to add is not in the list, you can manually enter the item. Select the ID code **ND** for non-descript, enter a description for the item you are entering, then enter the quantity and the base value for the item. 11. If you would like to see what the calculated value is for the selected equipment, click the **Show Calculated Value** button.

Entry Information	**Addition Type** Use the drop-down list to select what you are adding (equipment, external structures, or site improvements). **Addition Category** Use the drop-down list to select the equipment, building items, or site improvements category. **Addition Name** Use the drop-down list to select the equipment or structure **ID**. **NOTE:** If you know the ID number, you can type in the ID in this field. The description will automatically be filled in. **Entry Type** When applicable, use the drop-down to select between the entry types (i.e., chromed, aluminum and stainless steel) for determining which criteria to enter for the equipment or structure. **Quantity** Enter the number of the items up to 999,999. **Criteria** The criteria specifications for each piece of equipment, building items, or site improvements may be different. There are two types of criteria that are used in conjunction with quantity: drop-down or data entry. All pieces of criteria must be filled out for each piece of equipment, building item, or site improvement. The possible criteria may include one or more of the following: HP — Tank KW — Sq.ft. of Building Width — Bushels per Hour



Length	Height
Capacity	Spout Diameter
Square Feet	Number of Spouts
Diameter	Height to Eaves
Number of Alleys	Bushel (level)
Number of Gallons	Arch
Type	Tank Height
Lineal Feet	Sweep Arm Loader
Number of Stalls	Chain Unloader
Type of System	L x W
Per Stall or Unit	Depth
Each	Gallons
Item	Sidewall Height
Size	

Depreciation
Here you can specify whether the equipment, building item, or site improvements have depreciation or not.

Basic Specifications
This section lists information on the equipment, building item, or site improvement selected and is automatically filled in by the program and cannot be modified.

Adjustment
Where available, a listing of adjustments for the equipment, building item, or site improvement selected will appear. Choose which adjustments to make by clicking on the box to the left of each appropriate adjustment then changing the input value.

Input Value
This is a numerical field, related to the input caption (i.e., quantity, linear feet, etc.). Based upon the caption, enter the appropriate numeric value of 1-999999999. **NOTE:** if entering a value with a decimal, you can enter between 1 – 9999999.99.

Base Value
This is the cost of the equipment, building item, and/or site improvement without adjustments and is automatically filled in by the program and cannot be modified. **NOTE:** This is available when you click the **Show Calculated Values** button.

Total Value / Total Depreciated Value
This is the cost of the equipment, building item, or site improvement plus adjustments multiplied by the total quantity and is automatically filled in by the program and cannot be modified.

Valuation Totals Summary

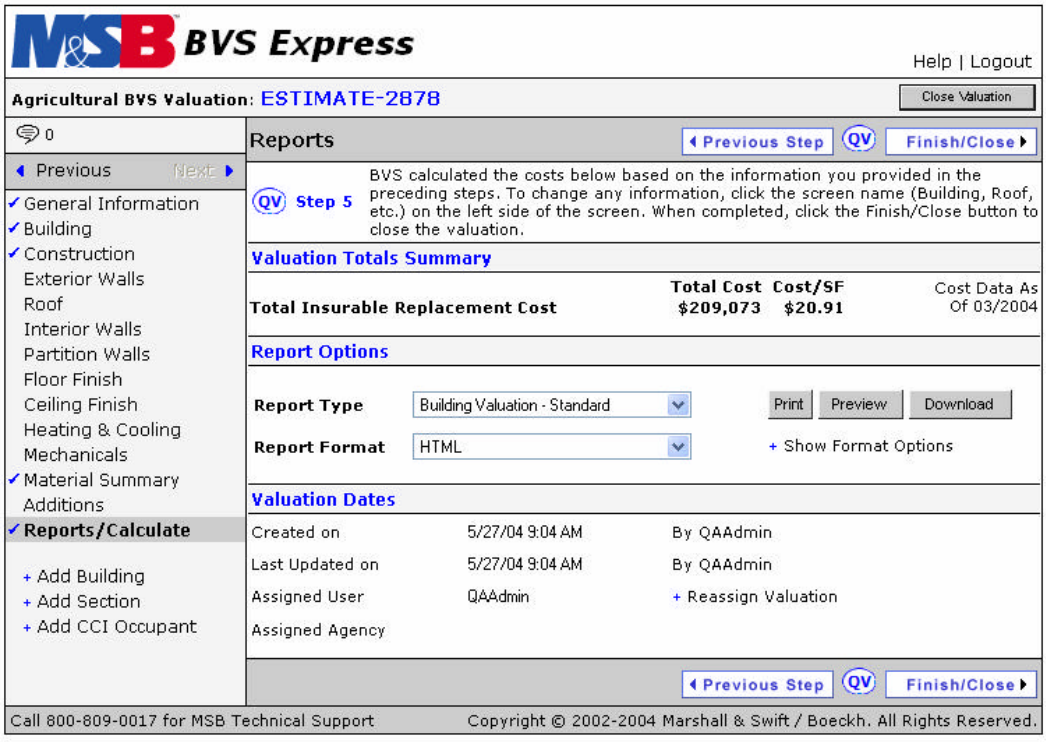
This section shows you the total replacement, depreciation, actual cash value, and $/sq.ft. costs for the valuation, as well as the cost as of date for the valuation report.

NOTE: These are display only fields.

How To	1. Make sure the **Reports/Calculate** navigation link is selected on the left-hand side of the screen. 2. View the summary information for the valuation under the **Valuation Totals Summary**.

Printing

There are four different reports available: Detailed, Standard, Summary, and Equipment. You can specify which options you want to see printed on the report, as well as define the header and footer for the reports.



How To	Click the **Report** navigation link on the left-hand side of the screen. Once you choose to print the report, there are several options to take note of:

Report Type	Here you can choose the **Report Type**. **Standard Report** The Standard report contains the same information as the detailed report, but instead of individual component details, this report only includes the total component costs. **Detailed Report** The Detailed report includes the owner, structure information, location adjustments, individual component details and costs, and the total depreciated cost. **Summary Report** The Summary report includes the owner, the replacement cost (new) total, the depreciated cost, and the total cost per square foot for each section. It also includes the total replacement costs for equipment and structures for each section. **Equipment Report** The Equipment and Building Items report includes the owner, individual equipment and building item details, their associated costs, and the total replacement cost for all equipment, building items, and site improvements.

Report Format

Selecting this option will print the selected valuation report to an HTML File Format, a PDF File Format, a RTF File Format, or a Delimited Text Format.

How To	Select the desired Format using the drop-down box. The default format is HTML. **NOTE:** Internet Explorer version 5.5 or greater is required to run the reports.

Report Options

Here you can choose which options you want to see printed on the report. The information displayed will either be the information used when the valuation file was last printed, or if the valuation was not printed, all defaults will be used.

Header and Footer	Here you can enter two separate Report Title lines (up to 50 characters each) as you want them to appear on the report. You can also enter the Footer information as you want it to appear on the report. NOTE: Once you enter information for either the Header or Footer, that information will appear each time you print a report until you change these fields again.
Report Options	**Print Adjustments** Check this option on if you want climate, seismic zone and high wind adjustments, and hillside construction adjustments on the report.

	Print Architect Fees, and O&P Percentages Check this option on if you want architect fees, and overhead and profit percentages printed on the report. **Print Summary Report** When printing a Standard or Detailed report, a Summary report will also print. **Print Equipment Report** When checked on, an equipment report will automatically print if equipment has been added to the valuation.

Printing Reports

How To	1. Make sure the **Reports** navigation link is selected on the left-hand side of the screen. 2. Choose the **Report Type** using the drop-down list. See Report Types for additional information. 3. Choose the **Report Format** (HTML, PDF, RTF, or, TXT). 4. Click the **Show Options>>** button to specify what options you want to print on the report and to enter the report titles and footer. See Report Options for additional information. 5. Click the **Preview** button to preview the report on screen, or print it.

State Abbreviations

For United States addresses, the program uses a two-character state abbreviation. These are the official state abbreviations of the U.S. Postal Service:

Alabama	AL	Montana	MT
Alaska	AK	Nebraska	NE
Arizona	AZ	Nevada	NV
Arkansas	AR	New Hampshire	NH
California	CA	New Jersey	NJ
Colorado	CO	New Mexico	NM
Connecticut	CT	New York	NY
Delaware	DE	North Carolina	NC
District of Columbia	DC	North Dakota	ND
Florida	FL	Ohio	OH
Georgia	GA	Oklahoma	OK
Hawaii	HI	Oregon	OR
Idaho	ID	Pennsylvania	PA
Illinois	IL	Rhode Island	RI
Indiana	IN	South Carolina	SC
Iowa	IA	South Dakota	SD
Kansas	KS	Tennessee	TN
Kentucky	KY	Texas	TX
Louisiana	LA	Utah	UT
Maine	ME	Vermont	VT
Maryland	MD	Virginia	VA
Massachusetts	MA	Washington	WA
Michigan	MI	West Virginia	WV
Minnesota	MN	Wisconsin	WI
Mississippi	MS	Wyoming	WY
Missouri	MO		

Province Codes

For Canadian addresses, the program uses a two-character province code. These are the official province code abbreviations:

Alberta	AB
British Columbia	BC
Manitoba	MB
New Brunswick	NB
Newfoundland	NF
Northwest Territories / Nunavut	NT
Nova Scotia	NS
Ontario	ON
Prince Edward Island	PE
Quebec	PQ
Saskatchewan	SK
Yukon	YT

Occupancy Code Listing

The program uses the following occupancy codes:

100	One Story Dairy, Old Style	407	Poultry House, Cage Operation, Multi-story
101	Special Purpose Barn	409	Poultry House, Cage Operation, 1 Story Elevated
102	One Story Dairy with Loft, Old Style	411	Poultry House, Cage Operation, Multi-Story Elevated
104	Two Story Dairy, Old Style	418	Turkey Barn
105	Bank Barn, Special Purpose	500	Cold Storage - Fruit and Vegetable
106	Free Stall Barn	501	Fruit Packing Barn
108	Loafing Shed, Open One Side	502	Commodity Building
110	Livestock Feed Barn	503	Commodity Warehouse
112	Calving Building	504	Grain Storage, Flat
114	Three-Wall Addition	506	Granary
115	Lean To	508	Potato Storage, Above Ground
116	Milking House	510	Potato Storage, Below Ground
117	Milkhouse Shed, Open One Side	512	Air Curing Tobacco Building
118	Milking Parlor	514	Flue Curing Tobacco Building
120	Hay Storage, Open One Side	516	Feed-Handling and Mixing
122	Hay Storage, Open Four Sides	518	Controlled Atmosphere Storage
200	Gestation Barn	519	Vegetable Storage
201	Nursery	520	Dehydrator Building
202	Farrowing To Finish Barn	522	Cotton Gin
204	Finishing Barn	600	Machinery Storage
205	Hog Shed, Modified	601	Farm Implement Shed
206	Hog Shed	602	Small Storage Building/Garage
300	Arena - Riding and Show	604	Small Office
301	Stable, High End	606	Bulk Fertilizer Storage
302	Stable	608	Tool Shed
304	Hobby Barn	610	Bag Fertilizer Storage
400	Brooder/Grower	612	Bulk Oil Storage
402	One-Story Layer	700	Sheep Barn, Lambing
404	Multi-Story Layer	702	Sheep Shed, Open One Side
405	Poultry House, Cage Operation, 1 story		

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