NEAT/MHEA AUDIT MANUAL

Version 8.9

Iowa Weatherization Program

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NAVIGATION

Record Navigation

On a given form, there are several different ways to navigate to the record you are interested in. In the navigation block located in the bottom left corner of the form, you can select a record by audit name, client name, client ID, or alternate client ID. Click on the arrow in the combo box and choose the record you want to view.

Others way to navigate:

Arrow Keys - Moves forward or backward one record at a time
Arrow/Vertical Line - Moves you to the first or last record
Arrow /Asterisk Key - Creates a new record
Copy and Delete Buttons - Copies or deletes current records

Entering Data

There are three controls in the way the audit will accept input:

- **The Field** - It can either be numeric or alphabetic, typed in by using the keyboard.
- **The Combo Box** - Generally has pre-selected items to choose from. They are boxes that look like fields, but have a square box with an arrow pointing down at the far right of the field.
- **The Check Box** - Check box is a small white box in which a check mark may or may not be visible. If a check is visible, it implies a yes response to the question associated with the box.

Overwrite/Insert

If characters in a field or combo-box are highlighted (said to be displayed in reverse video), the control is said to be in 'overwrite' mode, and information can be replaced by the keystrokes you enter. To switch to 'insert' mode, position the mouse pointer to a location within the field and left click. This will allow you to insert characters between existing ones.

Navigation between Controls

The Mouse - Point and click the left mouse button on the field or combo box you want to edit or the check box you want to select.

The Keyboard - You can use the [Tab] and [Shift-Tab] keys to cycle through the controls in forward or reverse order. The [Up Arrow] and [Down Arrow] keys will work the same as the [Shift-Tab] and [Tab] keys.

The Escape Key

The [Esc] key is a useful way to back out of your changes. It is similar to an "Undo" command. If you have made changes to a field but have not yet left the field, pressing the [Esc] key restores the value that was in the field prior to your change. Two consecutive [Esc] keys (or only one [Esc] if you are not in a field) will back out of all changes you have made to all the controls on a form since entering it. Once leaving a form and navigating to another, the changes in the former are saved and cannot be reversed.

Required versus Optional Fields

Fields with Solid Line Borders - Required fields have a single solid border. If you try to exit a form with a required field blank, you will be reminded to complete all fields.

Fields without Solid Line Borders - Fields without the solid line border are not necessary for the program to execute or to allow saving the information on the form. **Only exception to this is if you are adding additional costs, infiltration costs, and the post blower door reading. You must add values in these fields.**

Fields Defaults

Most numeric fields have a user-adjustable default value which can be set in Preferences. If you leave a required field by using the [Enter] or [Tab] keys without having supplied a value, the default value will be automatically applied.

Field Range Checks

Numeric fields have two range checks applied as soon as you exit the field.

- **Acceptable Range** - Determines which number values will be acceptable to the analysis engine. Entries must fall within the acceptable range, if not you will get an error message. Using the [Esc] key, you can back out of the field.
- **Reasonable Range** - It can be overridden or changed by the user. The minimum and maximum values are displayed in the status bar in the lower left corner of the screen when you enter the field. A warning message will appear when you enter a value outside of the reasonable range.

Data Sheets & Form Views of Records

There are three basic views supported. You can edit the data in two of the three views.

- **Stand Form** - The Form View is the most common view. It allows you to see and edit all of the information for a particular record.
- **Navigation Data Sheet** - This view displays a listing of all records of a particular type in a spreadsheet format. Data in these displays cannot be altered.
- **Editable Data Sheet** - All of the records of a given type are displayed in a spreadsheet format.

Copy & Pasting Data

This allows you to copy and paste data from one record to another, eliminating duplicate entries. Particularly useful when entering data in wall, window, and door sections of the audit.

Deleting Data

There are three ways you can select data to be deleted:

- [Delete] key on the keyboard
- Select Edit/Cut menu items from the menu bar
- Select Cut (pair of scissors) from the tool bar

Any deletion of data from a combo-box must be replaced by another selection available from the combo-box list.

Caution: if you delete a record in the Record Navigation Block, you automatically delete all of the records which fall under it (audits, work orders, etc).

Entry Errors

Even though the entire error message may not be completely understood, it will contain a reference to a "table" followed by the program's name for the entry in question. This name will lie in single quotes and begin with "tbl" followed by a name which can be recognized as a specific entry.

Example: ”tblAgency” refers to the Agency input field on the General Information form. In such instances, locate the entry and examine it for correct information.

Getting Help

Click on Help button on Main Menu.

You can also get help by pressing the [F1] key anywhere in the program. If you press [F1] having selected a specific data item (field, combo-box, or, check box), you will see help material specific to that item. You can leave the help form and return to the main program at any time by pressing the [Esc] key, clicking on the close button [X] in the upper right corner, or choosing File, Exit on the help menu bar.

The Report Block

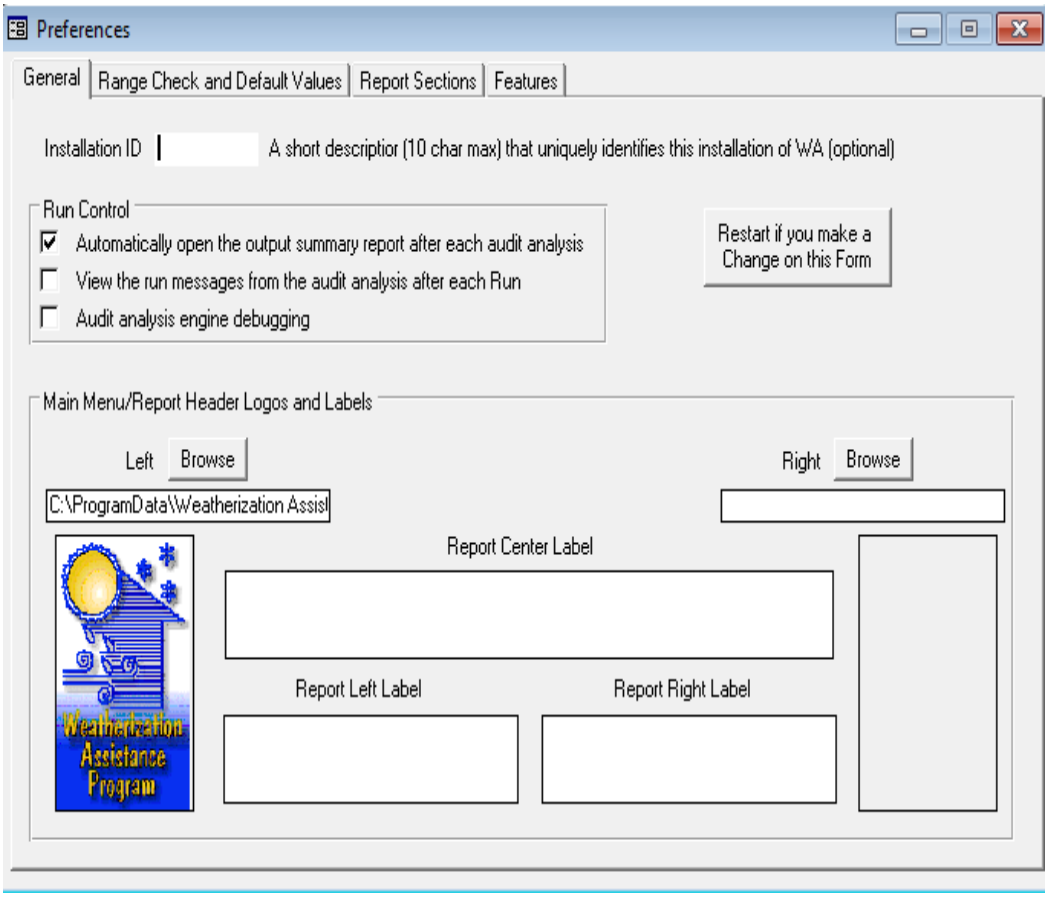
Here is where you can preview, print, or snapshot file any report associated with the record.

PREFERENCE BUTTON

Under the Preferences Main Menu item, you may choose various options available in the Weatherization Assistant. Most of these options affect only the appearance and operation of the interface to the program, not the audits themselves. Thus, recommendations from the audits will not change because of differing choices in the Preferences.

General Tab

Fields and controls on the General tab under the Preferences Main Menu item include the following.



Installation ID
Here is where you would enter the user name (evaluator or other name that would distinguish the user of the software) of the software if you didn't do it during the initial installation of the WA 8.9.

Run Control

- **Automatically open the output summary report after each audit analysis** – By checking this box the recommend measure report will automatically open after the audit has run.

- **View the messages from the audit analysis after each Run** - If the second check box is selected, the program will display run messages produced during the execution of an audit. This box is to be left unchecked.

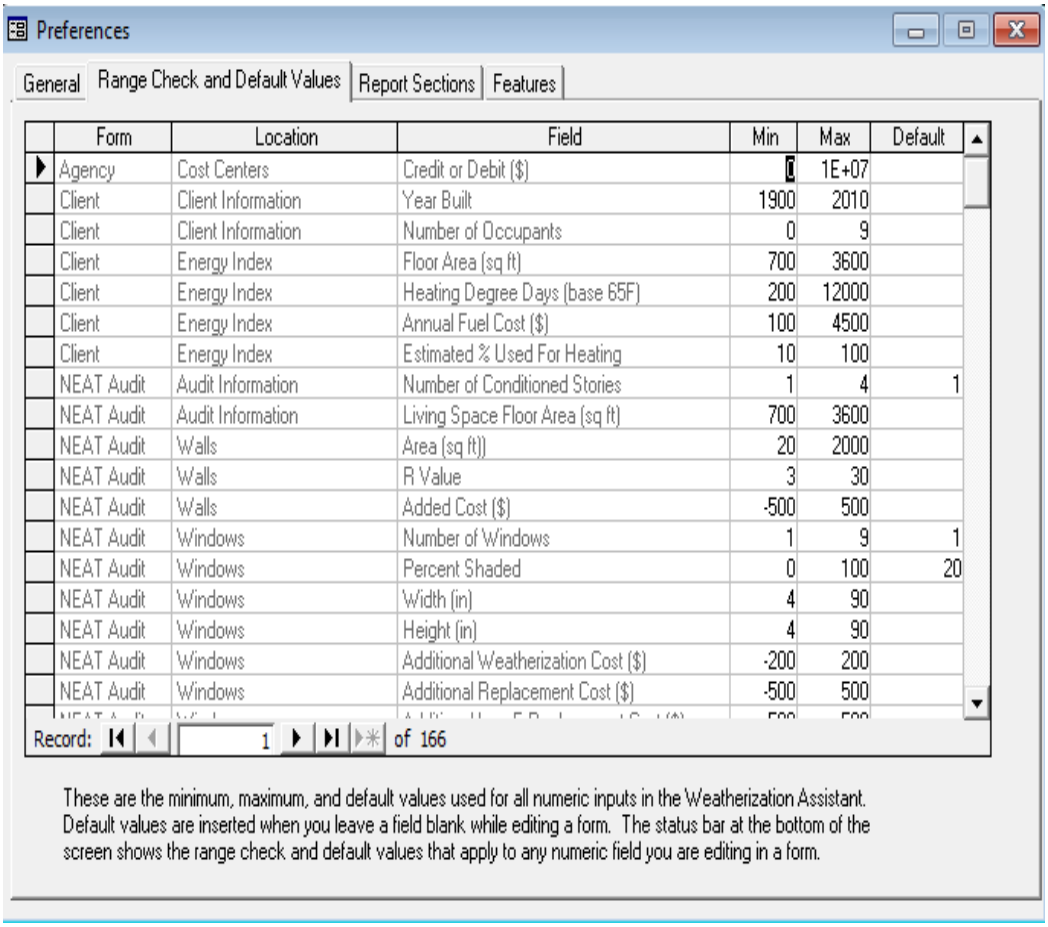
- **Audit analysis engine debugging** - If selected, the third check box will add to the above diagnostic messages output detailing the calculations performed by the audits. The display requires access to Microsoft WordPad. The output can be lengthy and is not designed to be of significant use to normal users. This box is to be left unchecked.

Main/Menu Report Header Logos and Labels

Fields in this block allow you to customize report headers and add your own logo to the Main Menu display.

Remember to click the restart button after you make any changes to the screen.

Range Check and Default Values Tab

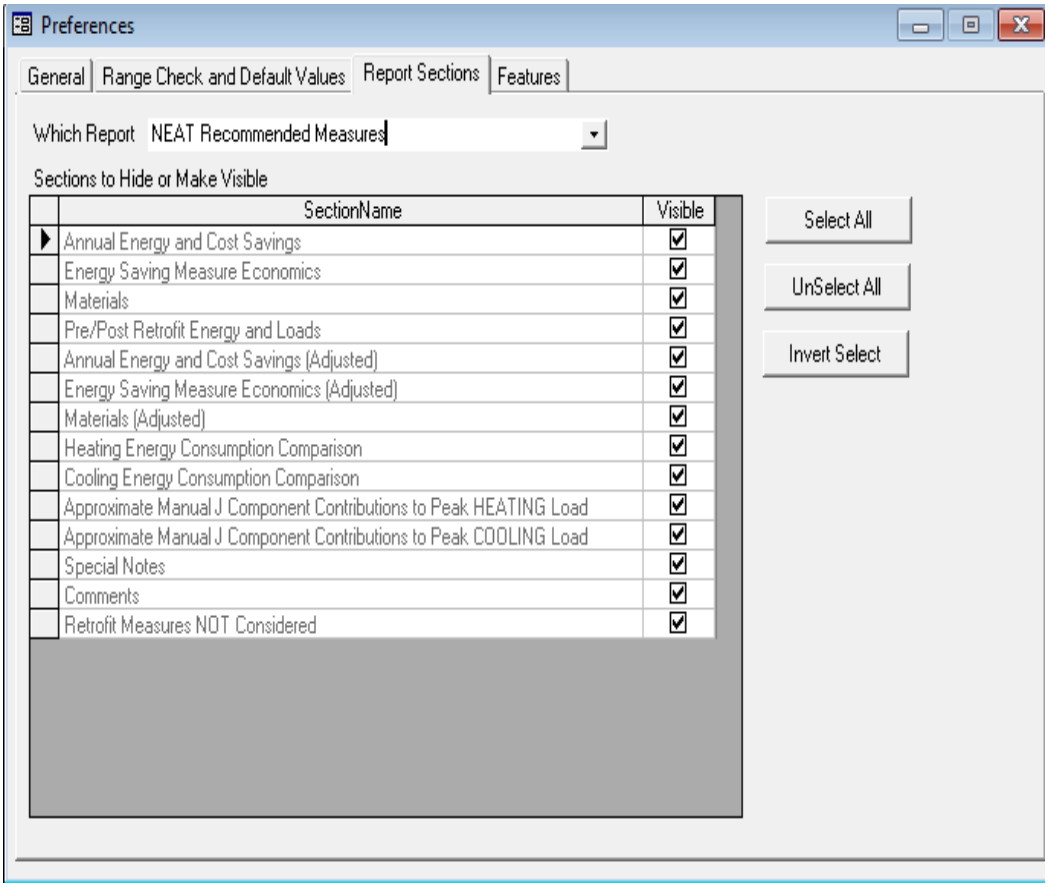


Range Check and Default Values

Here each parameter is listed by Main Menu Item and form on which it lies and its field name. Designated columns allow you to adjust the "Min," "Max," and "Default" values to meet your needs. No other fields are editable and no records can be added or deleted.

The ranges check and default values come pre-loaded with the audit and are not to be altered unless instructed by the State.

Report Sections Tab



One of the reports available from either the NEAT or MHEA audits is the Recommended Measure Report. This report has multiple titled sections. Select which sections of the report you want displayed by clicking on the check boxes to the right of each listing. If the check box is checked, that report section will be displayed. The State will determine which boxes are to be checked.

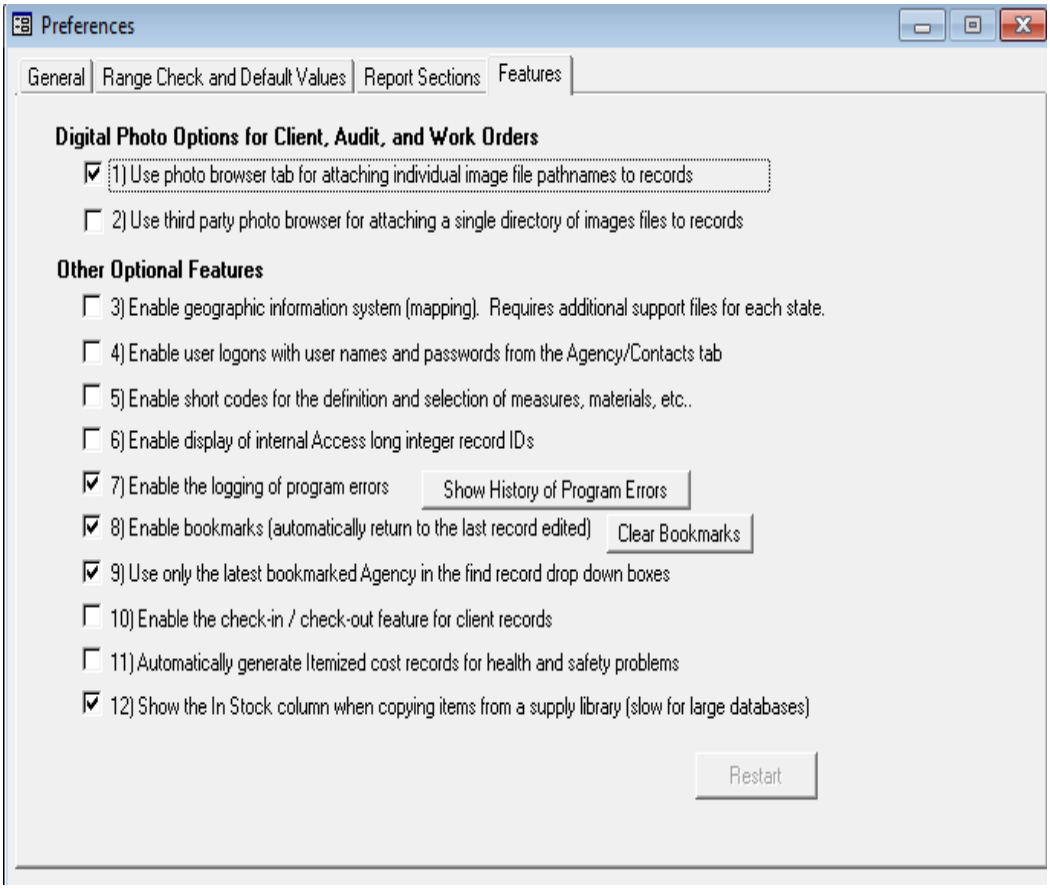
Combo Box
Choose from NEAT Recommended Measures or MHEA Recommended Measures.

Select All Button – Will place a check mark in each box.

Unselect All Button – Will remove all check marks.

Invert Select Button – If some boxes are checked and some boxes are not checked, clicking on this button will place a check mark in a box that doesn't have a check mark in it, and will remove check marks from a check box that has a check mark in it.

Features Tab



The Features tab under the Preferences Main Menu item allows you to indicate preferences regarding many of the expanded features in Version 8 of the Weatherization Assistant. Indicate the features you wish activated by selecting the check boxes adjacent to the feature description. The feature selections are independent of one another, except for the two related to Digital Photo Options. A brief description of each feature is included below. Following any changes in the selections, click on the "Restart" button to implement them. You will be taken back to the Main Menu.

1) Photo browser tab for attaching individual image file pathnames to records - Version 8 allows storage of digital photos associated with your weatherization work. The Weatherization Assistant offers you two methods of storing, viewing, and editing these photos in your computer. The method selected by this first check box allows you to store the location on your computer of each individual photo image file. Thus, photos accessible from any location in the Weatherization Assistant need not be in any particular location. Choice of this method will add a tab to any Main Menu item's form to which photos can be attached. This is the photo feature initially selected. See the above reference for more information on the photo browsers.

2) Third party photo browser for attaching a single directory of image files to records - This second method of storing, viewing, and editing photos requires you to assign a location on your computer where all photo files associated with a given record for each Main Menu item of the program (e.g., Audits, Work Orders, etc.) will be stored. Thus, all photos associated with a given work order must be stored together and all those for the audit of a client in another (or the same if so chosen). If selected, the browser will display a Photo Folder field on the Information tab of the Main Menu item asking for this location. Use the Browse button to find and select the location, then the View button to view the photos stored in that location.

3) Geographic information system (mapping) - This check box turns on the Geographic Information System (GIS) which allows you to map the locations of clients' dwellings (see Geographic Information System). Using this feature requires downloading additional files and an installation. If the feature is selected without having performed this installation, you will receive a message upon restarting the program that the installation has not been performed and that the feature is subsequently turned off until installation is complete. If the required installation for the feature has been performed, selecting this feature will place a "Map" button on the form and under the Select Clients button of the Agency Information form.

4) User logons with user names and passwords from the Agency/Contacts (and Passwords) tab - This feature allows regulation of the users for a specific installation of the program. If implemented, users must logon with a User Name and Password before being allowed to enter the program. See "Change LogOn Group and Password" in, Contacts (Agency) for additional details on this feature.

5) Short codes for the definition and selection of measures, materials, etc. - This feature allows an additional short code to be assigned to Supply Library materials and user defined measures for easier identification in combo box lists and reports. However, as of the first release of Version 8, this feature has not been fully implemented. The feature is used for Health and Safety Measures in assigning an un-alterable code to each of these program-defined measures. Your selection of this feature in the earliest release of Version 8 will not make a difference in the operation of the program.

6) Display the internal Access long integer record IDs (for testing and debugging) - Whenever a record (such as a Client, Audit, or Work Order) is created, Access assigns the record a random integer ID number unique to the record. This ID number will not change, even if you change the other information related to the record or export the record to another computer. Under normal operation of the program, this Access ID number is of little use. Thus, the default mode is to not have them displayed. Program analysts who may use other Microsoft products to debug or otherwise analyze the execution of the program with relation to a particular record may require the ID, however.

7) Logging of program errors - Although many possible conditions that would cause the Weatherization Assistant to not function properly have been anticipated and provided with warnings or messages to the user, some likely remain unaddressed. Under such circumstances the user will receive an Access or System error message which the user is not expected to understand. If this feature is turned on, these "un-handled" errors will be logged giving more detailed information regarding the condition of the program at the time the error occurred. This information, together with the user's description of what operation was being performed when the error occurred and possibly the database which was being used at the time of the error, are normally sufficient to allow developers of the program to determine the cause of the problem.

Clicking on the "Show History of Program Errors" button to the right of this feature's check box will display a Form View showing the first error (if any) which has occurred with all of the information the software can provide related to it. The abbreviated navigation block at the bottom left of the form can be used to access additional error entries, if they exist. The "Do a VBA Reference Check" button on this form initiates an installation test which might be of use to program developers in diagnosing irregular operation of a specific installation. You may use the customary procedure to display the error records in Data Sheet View, from which you may delete any records no longer desired. It is likely good policy to keep the error messages recorded to a minimum so that if an error occurs which causes considerable disruption in your operations, it can be easily recognized in the error history. If an error occurs with which you need assistance to resolve and this feature is not activated, turn it on then try to reproduce the error. If you have setup the Email feature of the Weatherization Assistant, you may click on the "Email this Error Message" button to quickly e-mail the error message to program support personnel.

The Log all Program Errors feature is initially selected for a new installation and will remain selected unless de-selected on this form.

8) Bookmarks (automatically return to the last record edited) - This feature automatically keeps track of which record of each specific type (Agency, Client, Audit, Work Order, etc.) you last visited so that when that particular Main Menu item is again selected, you will be presented with that record. Otherwise, the

program will present the first record in its list of records of that type. This order may not be obvious and more likely will require you to access the desired record via the Record Navigation Block. Upon installation of the Weatherization Assistant, this feature is initially activated.

9) Use latest bookmarked Agency in the find record drop down boxes - Activation of this feature will restrict the records displayed in the Record Navigation Blocks of the other main record types (Client, Audit, Work Order, etc.) to those belonging to the agency last visited via the Agency Main Menu item. As distributed, the Weatherization Assistant Version 8 has two Agencies already entered, the "Sample Agency" and the "Your Agency Name" agency. It is anticipated that this latter agency will be renamed to identify your specific agency. If this feature has not been selected, all of your record navigation combo box lists will include not only records of your agency, but also those installed with the program under the Sample Agency. This may not be desirable. In addition, you may be a state director with clients from all of the state's agencies imported into a common database. In this situation, lists of clients, audits, work orders, etc. would likely be long making locating a specific record difficult. With this feature activated, you may look at only records from a specific agency at any given time. The feature is initially activated with the "Your Agency Name" agency bookmarked. You will have to de-activate this feature or select the Sample Agency from the Agency Main Menu item in order to view the Sample records included with the installation.

10) Check-in/Check-out feature for client records - This feature is used by the Client Export routines of the Weatherization Assistant. Whenever activated, the program tracks which clients have been exported and who was logged on when each was exported. It is used in conjunction with the User Logons feature, item 4 above. The feature may be of use if you routinely pass client information between computers. A client record which is "checked out" will show what user checked the record out on the Client Information tab for that specific.

11) Automatically generate itemized cost records for health and safety problems - When activated this feature will automatically generate Itemized Cost Records in the recommended measures lists of the audits that correspond to Health and Safety problems that are indicated by the user during data input. See "Handling of Health and Safety issues".

12) Show the In Stock column when copying items from a supply library (slow for large databases)

SETUP LIBRARY

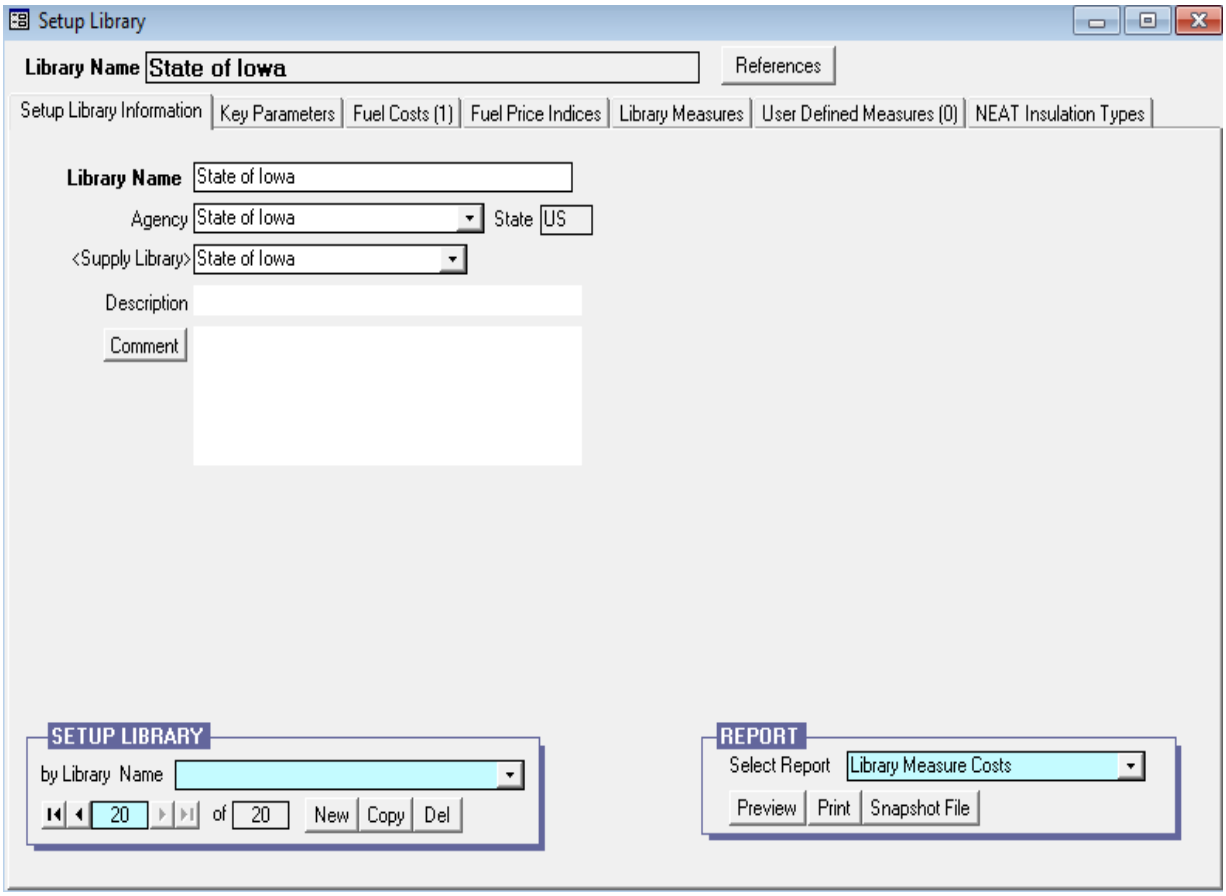
Using the Setup Library, you can customize the programs to your area by supplying fuel costs, material costs, and additional key parameters. These are values which are not expected to change house-by-house. The Setup Library is also where you have the opportunity to tell the programs which measures to consider. These measures are decided by the State.

If you know energy savings associated with any of these tasks, you may define actual User Defined Measures which the programs will treat exactly as they do the pre-defined "Library" Measures. The Setup Library is also where you may designate the characteristics of User Defined Insulation Types used in NEAT.

Only one Setup Library can be associated with each audit.

Agencies should have only one Setup Library. Although you can enter more than one Setup Library in the audit, you only should have one Setup Library for your Agency.

Information Tab



This tab under the Setup Library Main Menu button identifies the Setup Library being displayed and the Agency to which the Setup Library is assigned.

Library Name - Enter in this field a name by which the specific Setup Library can be identified. Most common is your agency name.

Agency - This field identifies the agency to which the Setup Library is associated.

State - This un-editable field displays the state associated with the Agency entered in the previous field.

Supply Library - This entry indicates what Supply Library is associated with the Setup Library.

Description - You may use this field to briefly describe the intended use of the Setup Library.

Comment - Comments related to the Setup Library may be entered directly in the comment field on the form.

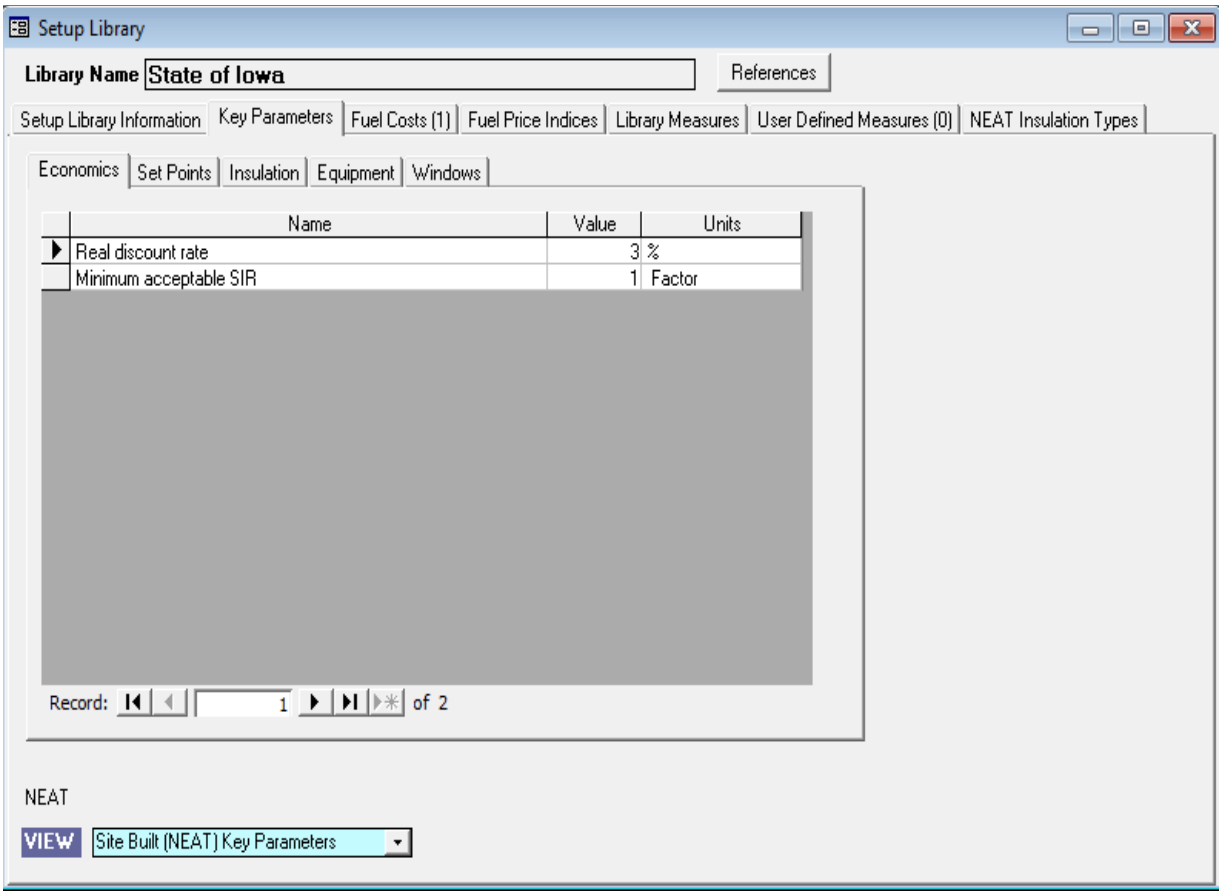
Setup Library Record Navigation Block - The Setup Library Record Navigation Block may be used to find and access setup libraries, delete existing libraries, or create a new library by copying an existing one.

Key Parameters Tab

The Key Parameters tab in Version 8 of the Weatherization Assistant is unchanged from this tab in Version 7 with the exception that key parameters for both NEAT and MHEA are now accessible under the same Main Menu item.

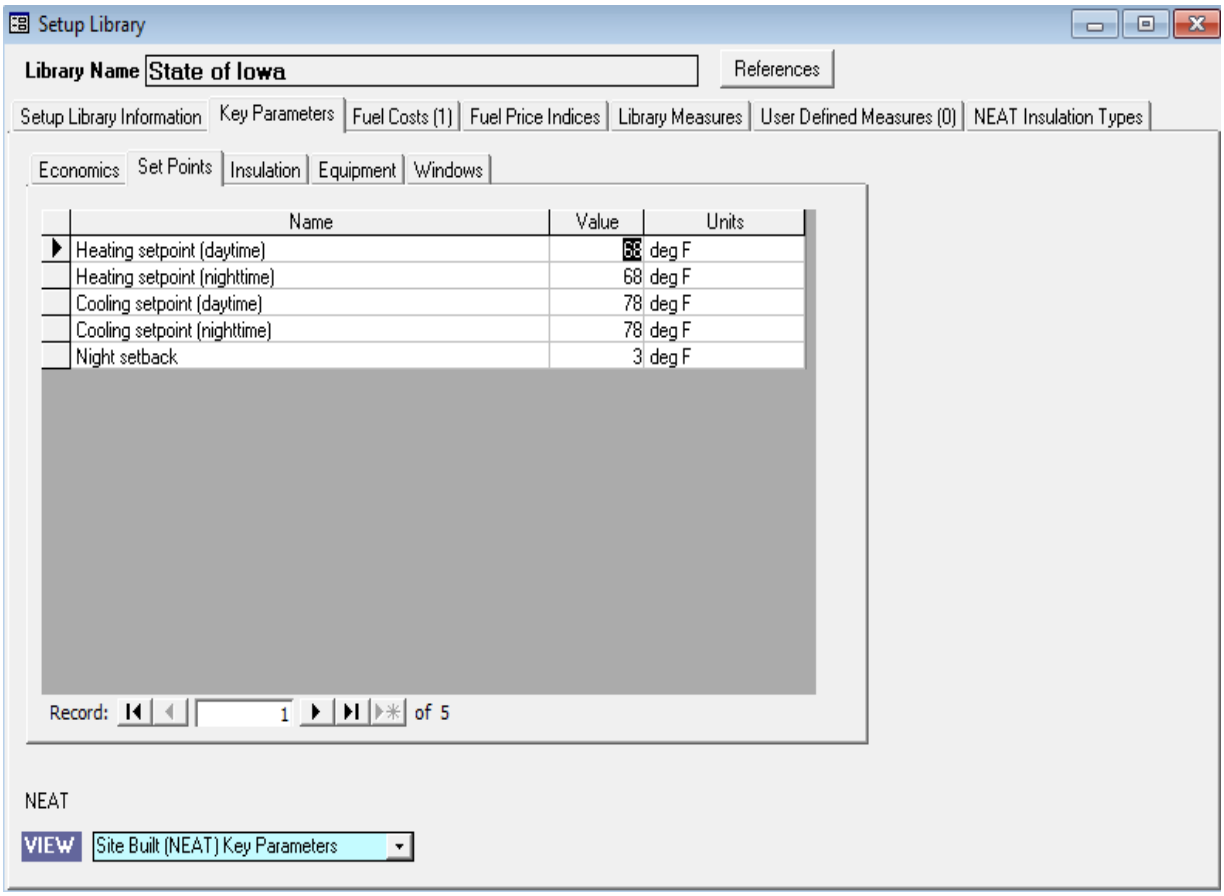
View Box – Select from the drop down box the key parameter that is associated with the audit you are running (Site Built [NEAT] Key Parameters or Mobile Home [MHEA] Key Parameters).

Economics Sub-tab



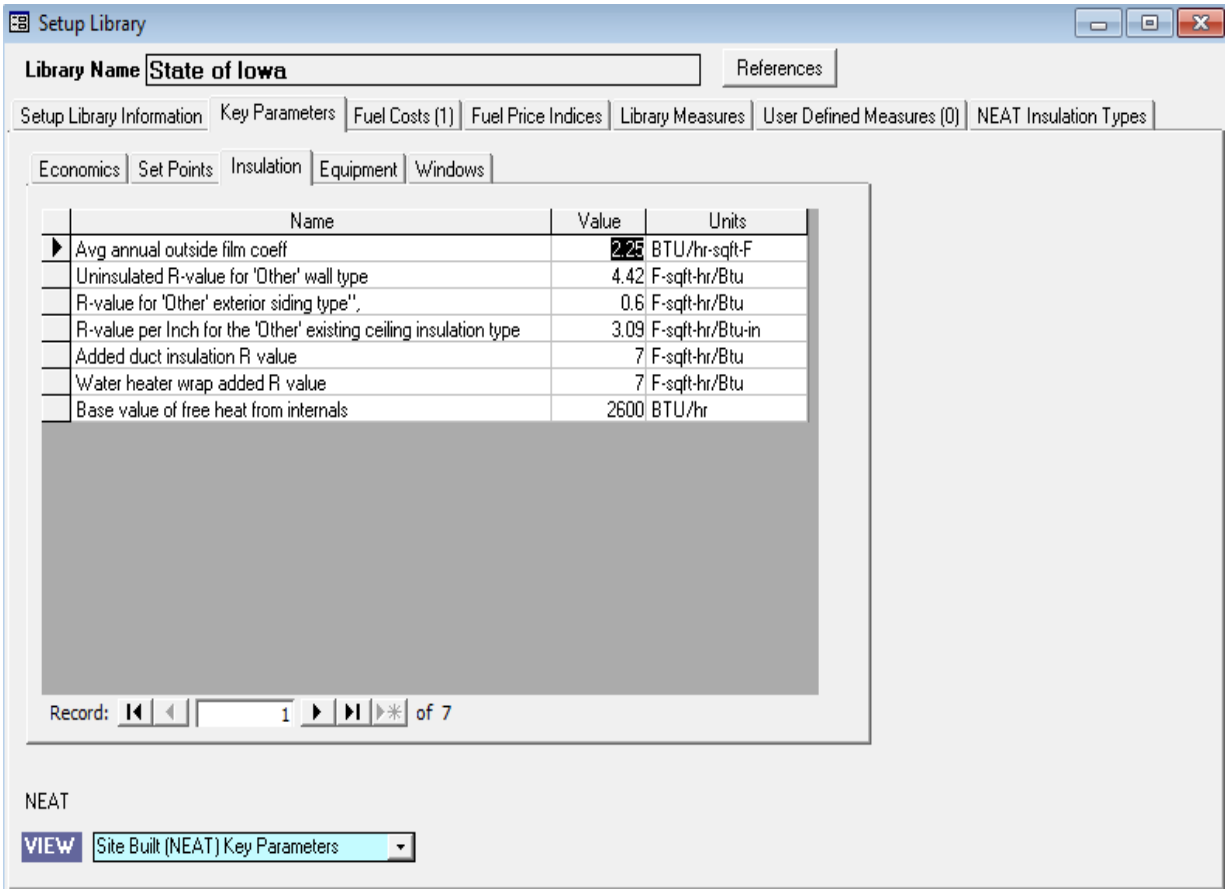
This information will not be changed without specific instructions from the State.

Set Points Sub-tab



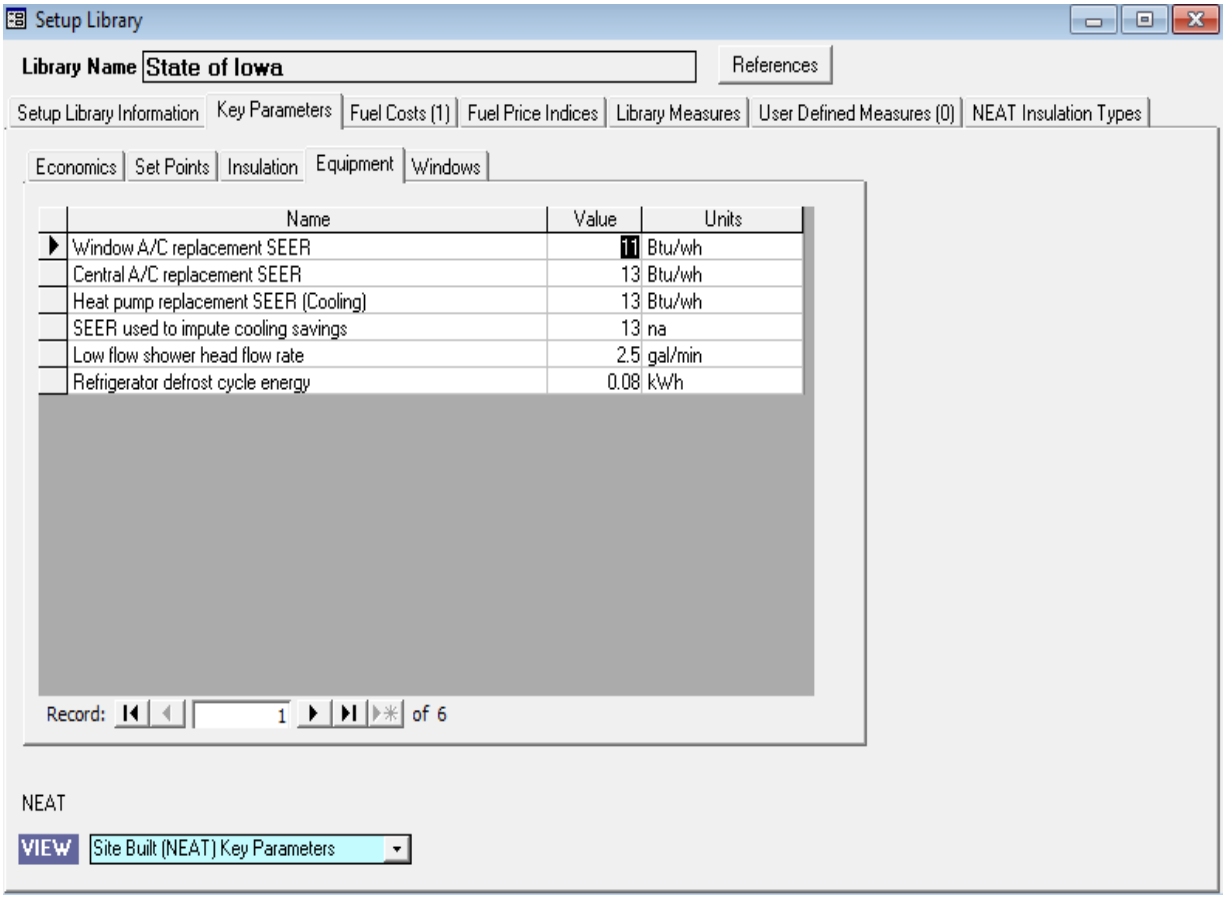
The information on this screen is considered the “normal”. With the State’s approval, if the client keeps the house extremely warm in the winter or cool in the summer, these numbers may be adjusted accordingly, but must be restored to the default after running the audit for that house.

Insulation Sub-tab



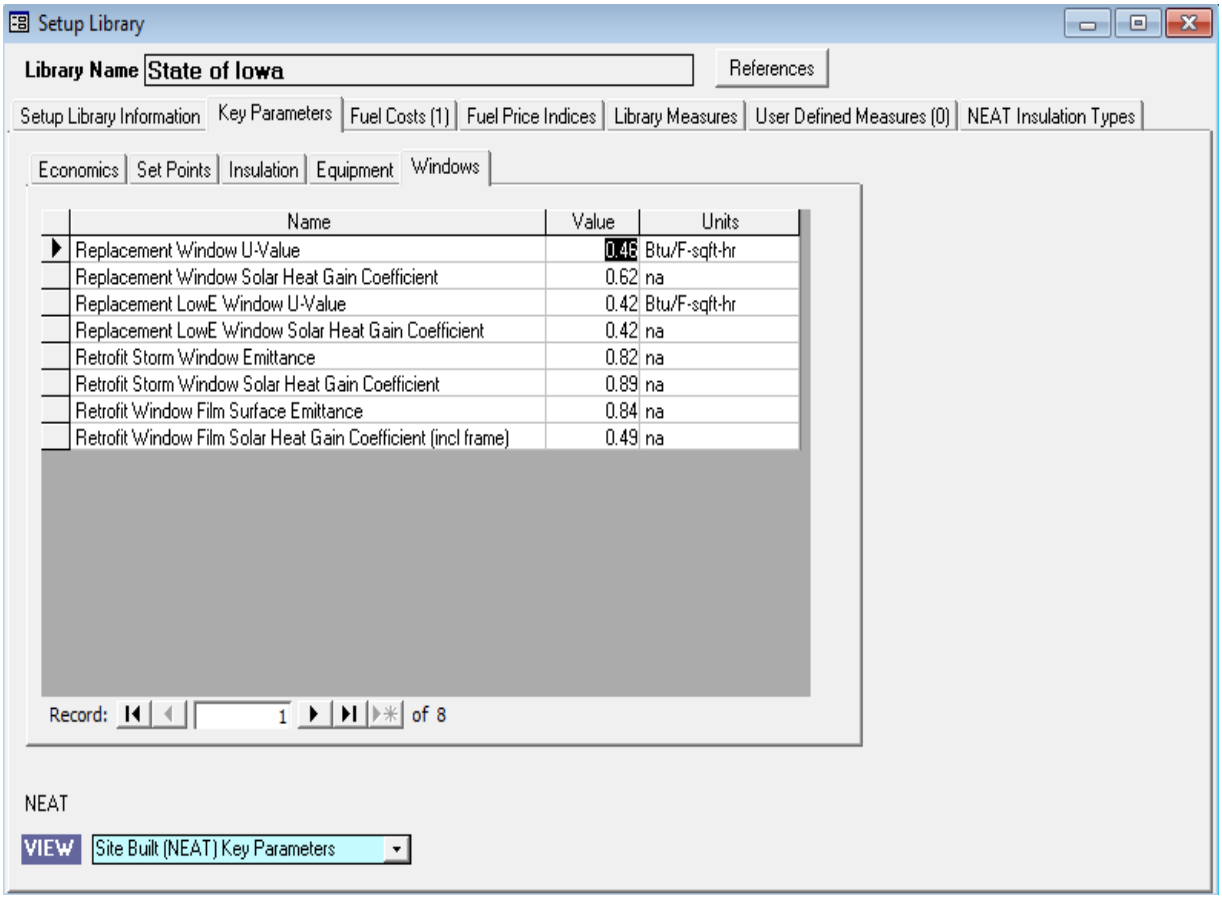
This information will not be changed without specific instructions from the State.

Equipment Sub-tab



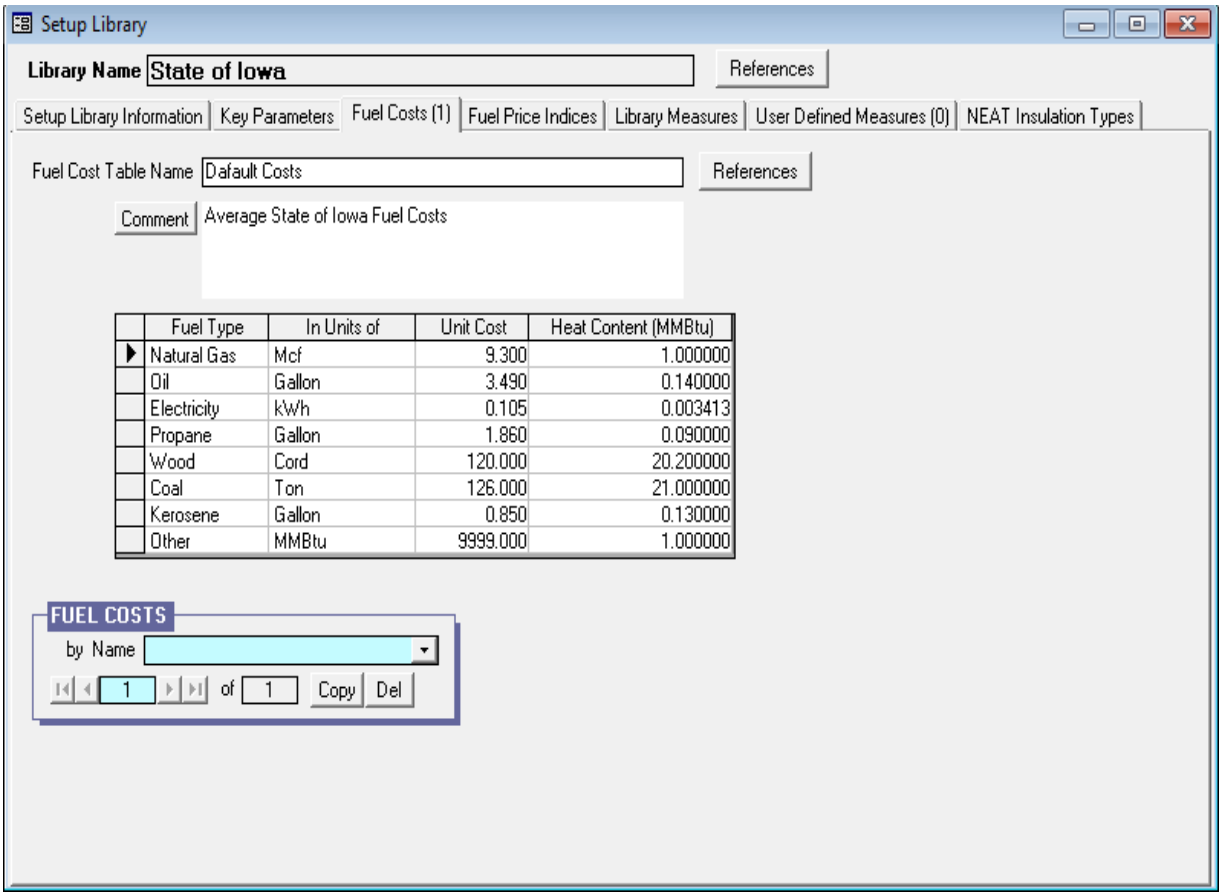
The values on this screen should be followed and will be changed only with specific instructions from the state.

Windows Sub-tab



The values on this screen should be followed and will be changed only with specific instructions from the state.

Fuel Costs Tab

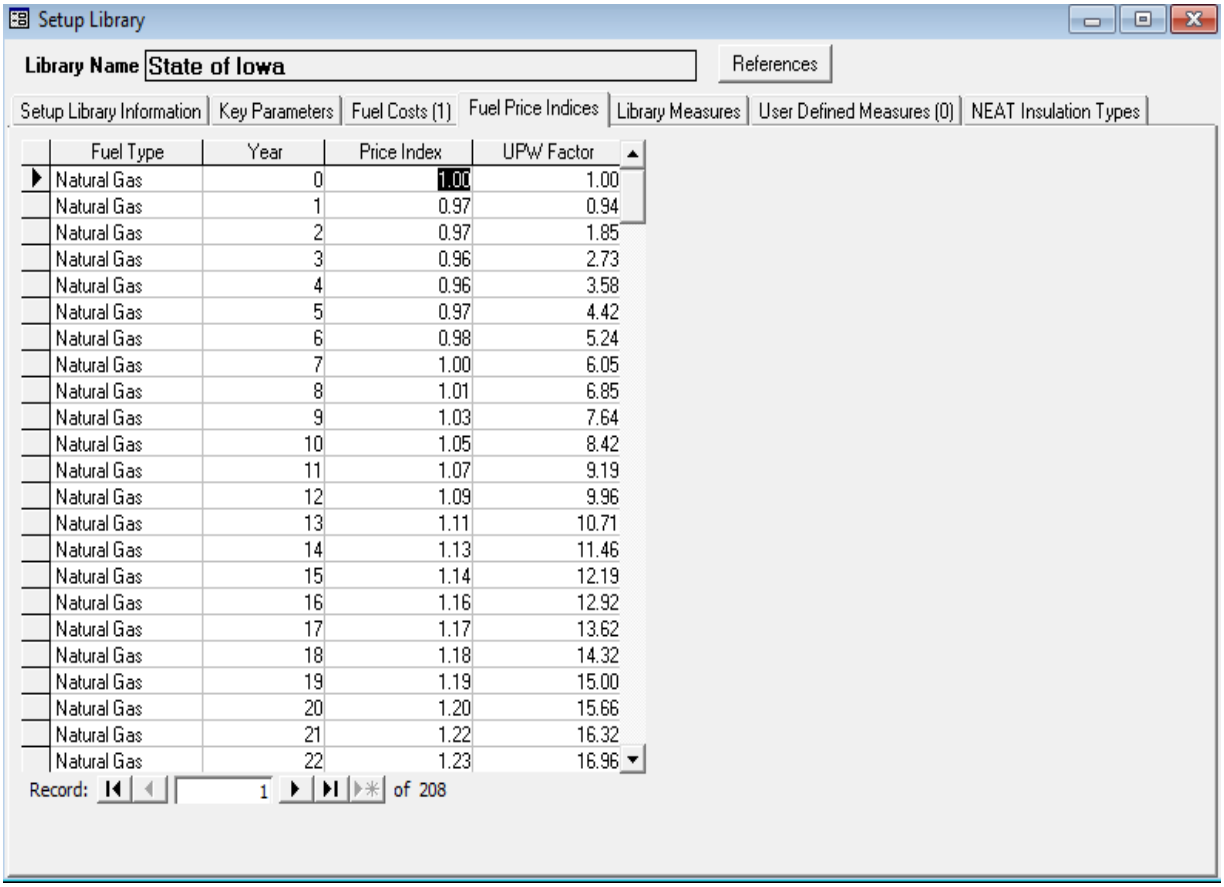


The Fuel Costs tab is where you record the average fuel prices for your agency. This section lists state-wide average costs for the various types of fuel. These costs, obtained from the U.S. Energy Information Administration, are distributed by the State on an annual basis. Occasionally costs are updated more often if they vary a great deal within the year.

Use the Fuel Cost Table Name to enter your Agency name and Comment fields to identify your agency to this particular set of fuel prices (State of Iowa Average Fuel Costs).

Use the Fuel Costs Record Navigation Block at the lower left of the form to locate, copy, or delete sets of fuel prices in your database. Note: Even though the audit allows for more than one fuel cost record, each agency should only have one fuel cost record associated with their agency.

Fuel Price Indices Tab



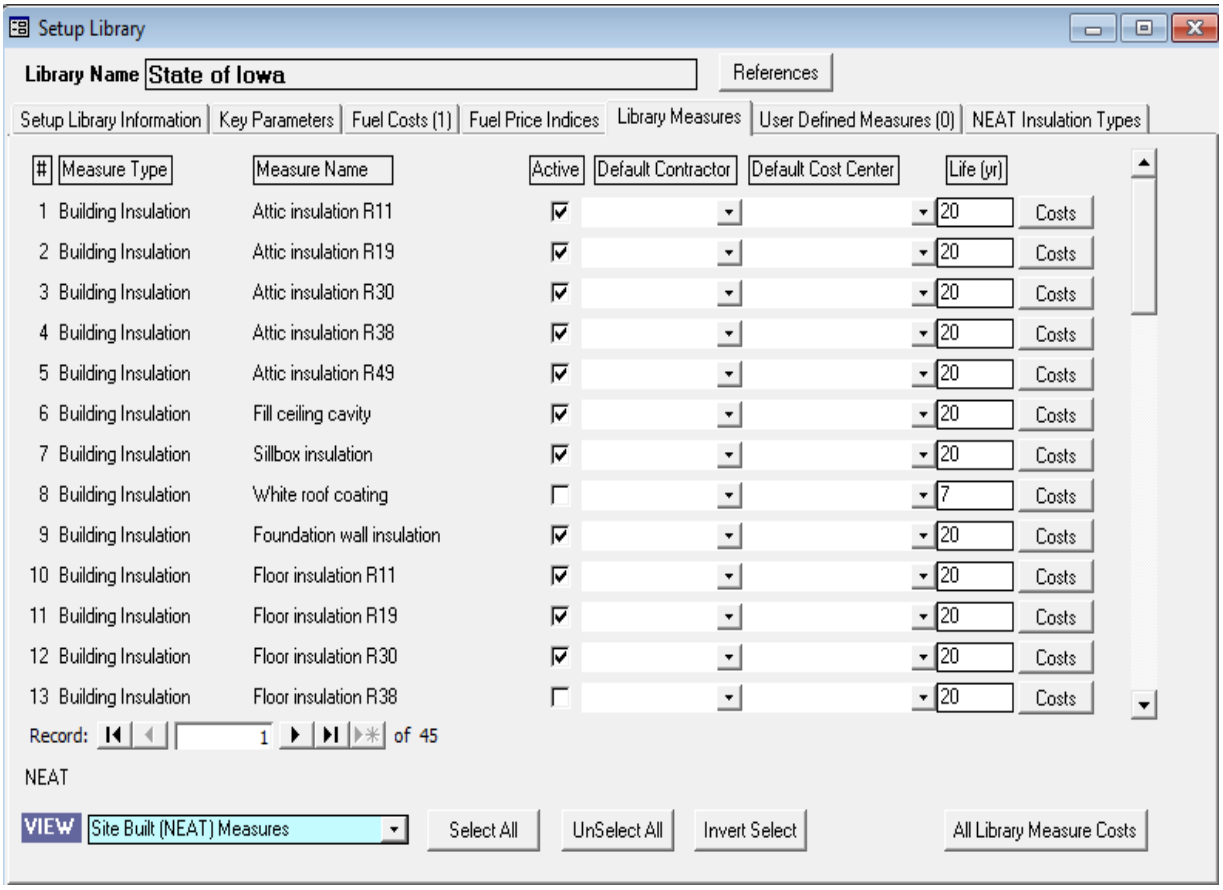
Fuel Type	Year	Price Index	UPW Factor
Natural Gas	0	1.00	1.00
Natural Gas	1	0.97	0.94
Natural Gas	2	0.97	1.85
Natural Gas	3	0.96	2.73
Natural Gas	4	0.96	3.58
Natural Gas	5	0.97	4.42
Natural Gas	6	0.98	5.24
Natural Gas	7	1.00	6.05
Natural Gas	8	1.01	6.85
Natural Gas	9	1.03	7.64
Natural Gas	10	1.05	8.42
Natural Gas	11	1.07	9.19
Natural Gas	12	1.09	9.96
Natural Gas	13	1.11	10.71
Natural Gas	14	1.13	11.46
Natural Gas	15	1.14	12.19
Natural Gas	16	1.16	12.92
Natural Gas	17	1.17	13.62
Natural Gas	18	1.18	14.32
Natural Gas	19	1.19	15.00
Natural Gas	20	1.20	15.66
Natural Gas	21	1.22	16.32
Natural Gas	22	1.23	16.96

This information will not be changed unless the State receives updates to the fuel price indices. At that time, the State will issue the updates to the agencies.

Library Measures Tab

Both NEAT and MHEA measures are accessed under the same Library Measures tab of the Setup Library. Use the View drop down box at the lower left of the form to choose which program measures you want to display (Site Built [NEAT] Key Parameters or Mobile Home [MHEA] Key Parameters).

The "Select All," "UnSelect All," and "Invert Select" buttons at the bottom of the form allow you to make all of the measures active, de-activate (unselect) all measures, or invert the selection currently seen from the check boxes.



The Library Measures tab is where you enter information regarding the measures NEAT and MHEA considers installing in homes.

Measure Type (Un-Editable) - Each NEAT and MHEA Library Measure is assigned a Measure Type. The Measure Type is not used in any standard reports, but can be used to sort the measure list displayed under Work Orders.

Measure Name (Un-Editable) - This is the name the library measure will be identified by in all locations throughout the program, including Audits, Work Orders, and all reports that might be printed.

Active - Selection of this check box indicates your desire that the program consider this measure when forming its recommendations. Even if selected here, however, a measure will not be recommended unless it is cost-effective or is a measure that may be declared mandatory and is so designated within a specific audit.

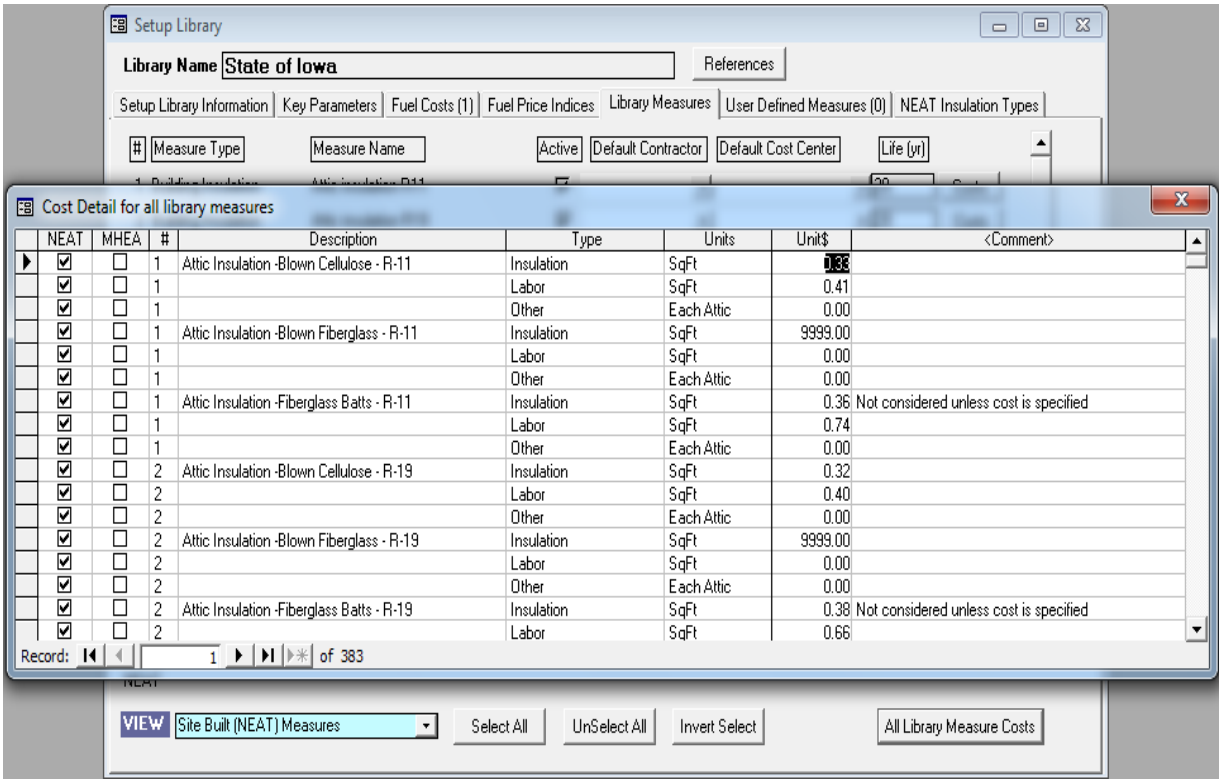
Default Contractor - The Weatherization Assistant gives you the optional feature of designating the contractor who will install each measure. The Default Contractor drop down box allows you to assign a default contractor for each measure.

Default Cost Center - The Weatherization Assistant gives you the option to attribute costs incurred in installing measures to different Cost Centers or funding sources. The Default Cost Center drop down box allows you to assign a default cost center for each measure.

Life (yr) - NEAT and MHEA allow you to change the "Life" of each measure. These numbers are set and should not be changed unless instructed by the State.

Costs - Each measure listed on the Library Measures tab of the Setup Library Main Menu item has its own "Costs" button. Selecting this button for a specific measure will take you to a Datasheet View where cost for implementing the measure can be entered.

All Library Measure Costs - Selecting the All Library Measure Costs button at the lower right of the form presents you with a Form View of all costs of measures in a single window. Measure costs for each Agency are set by the State, and will not change unless instructed by State. See picture below.



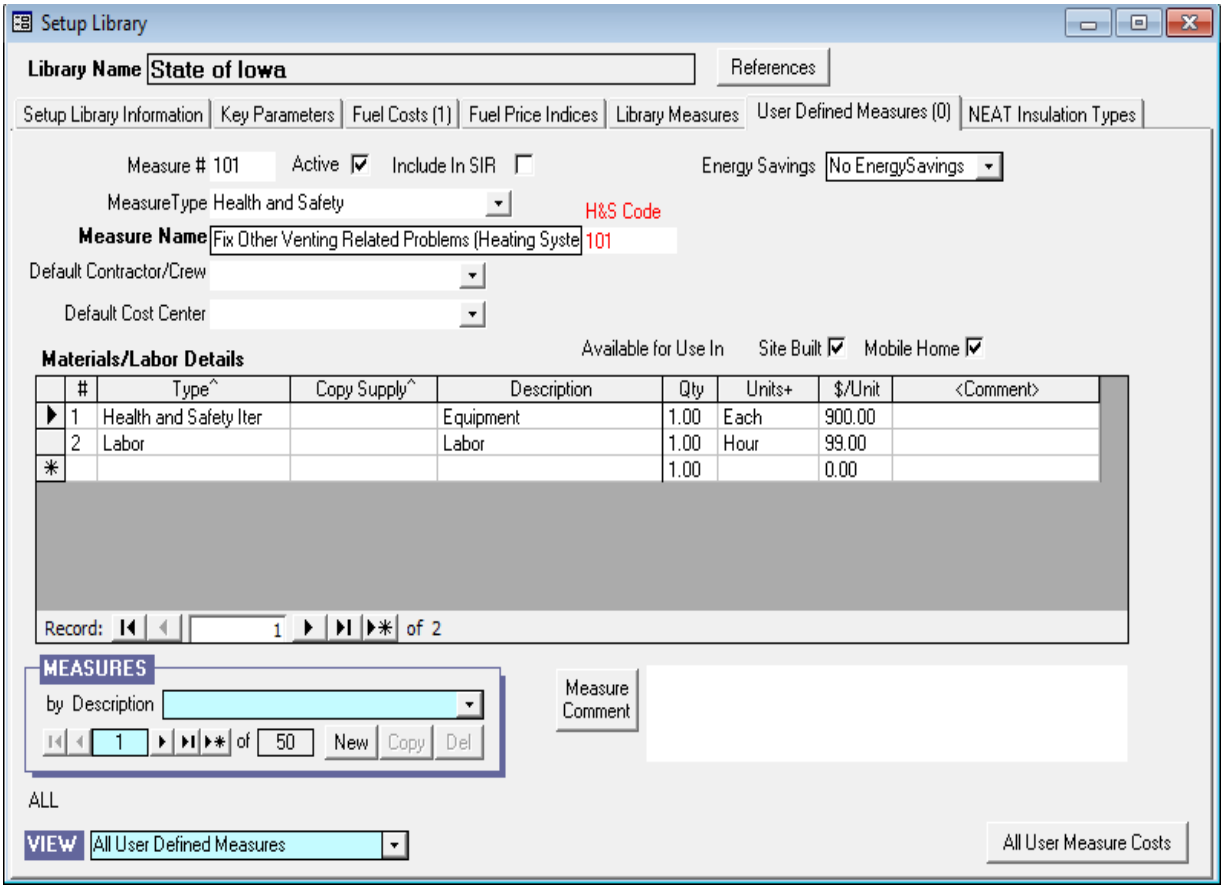
User Defined Measures Tab

Under the User Defined Measures tab, you may pre-define weatherization activities that you commonly encounter but which are not addressed within the standard measures of the NEAT and MHEA audit programs. Defining these activities within Setup allows you to copy them to other parts of the audit (itemized costs and work orders).

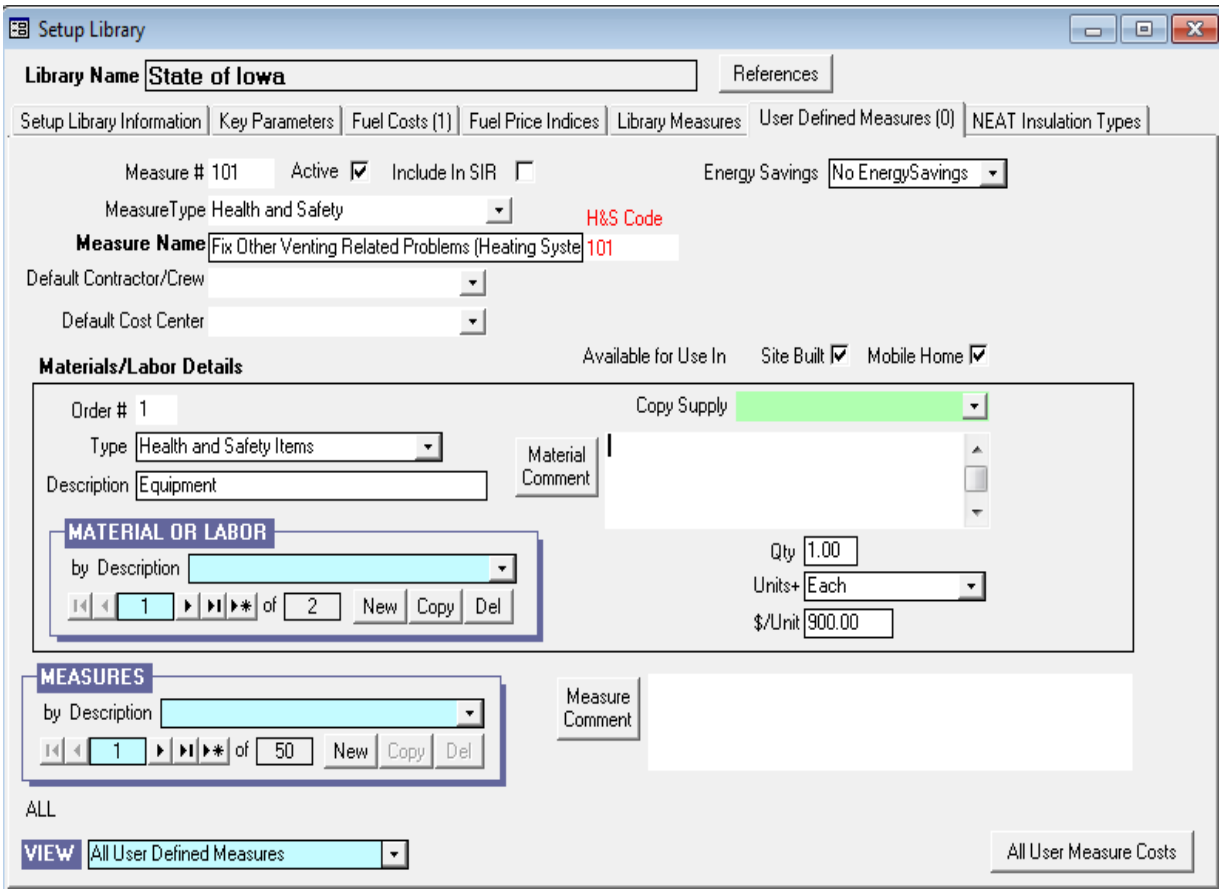
The User Defined Measures tab may be divided into two major categories: those which are truly "User-Defined" and the "Health and Safety" measures. Health and Safety names can be altered by the user; they cannot be deleted since these are the measures associated with specific health and safety hazards, which may be observed during an audit.

The form is made up of three different sections. The upper section is the general task description, the middle section is the Material/Labor Details, and the lower section is the measure navigation block, the View drop down box, and All User Measure Costs button.

Below are pictures of different views of the User Defined Measures tab. Although each view will appear different, the information entered will be the same.

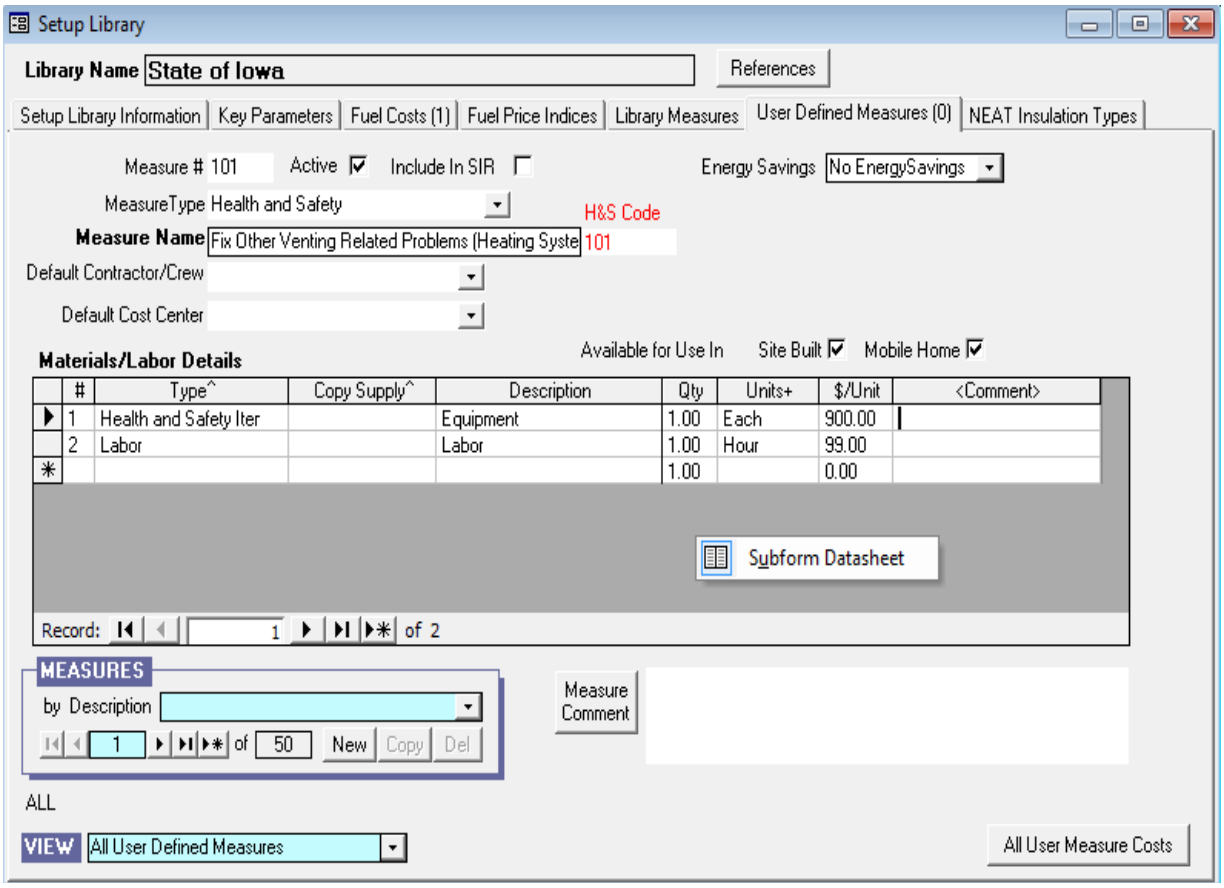


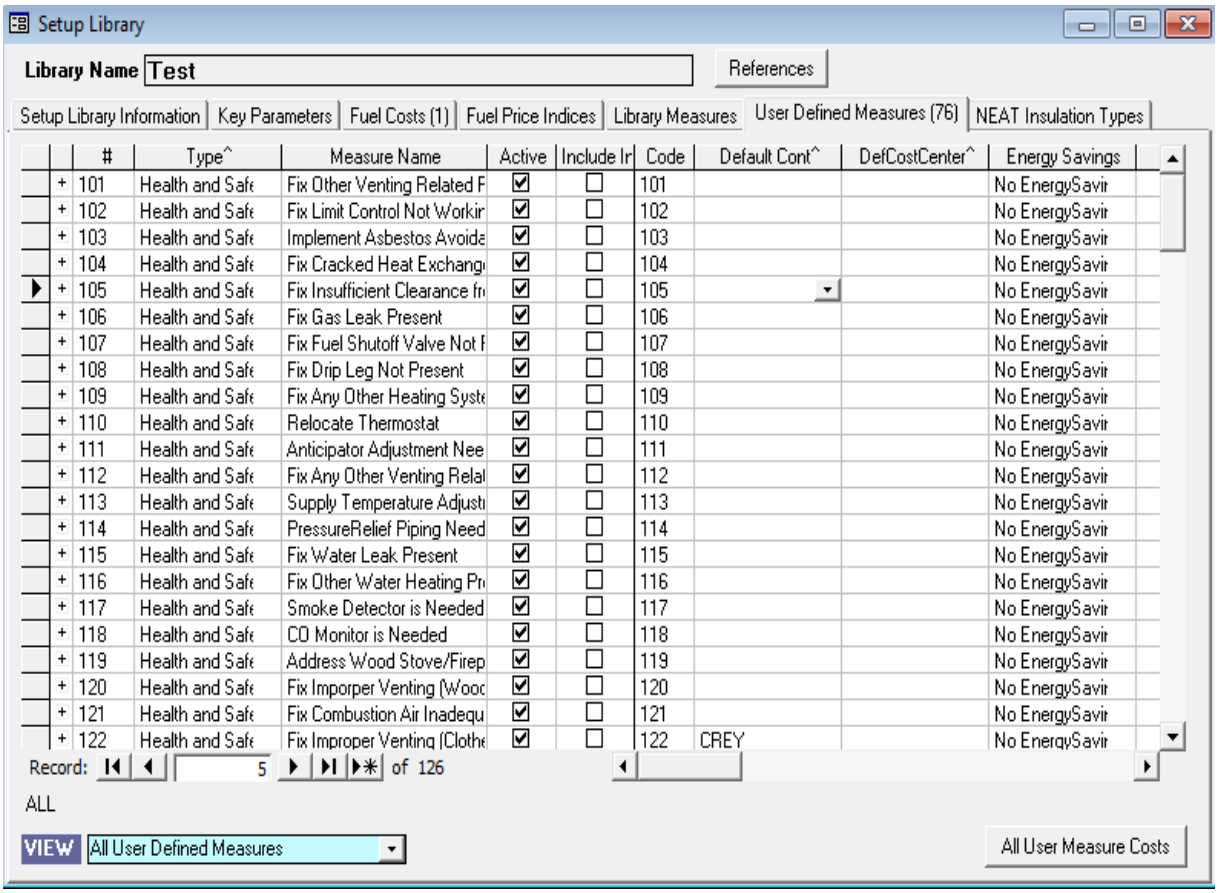
Health and Safety User Defined Measures tab where the general task description is in Form View and the Materials/Labor Details is in Datasheet View.



Health and Safety User Defined Measures tab where the general task description is in Form View and the Materials/Labor Details is in Form View.

To achieve this you need to place your cursor in the middle section of the form and right click on your mouse. A rectangular box with the words “Subform Datasheet” will appear. Click on the box and the form will change. To change the form back, repeat the above steps. See illustration below.

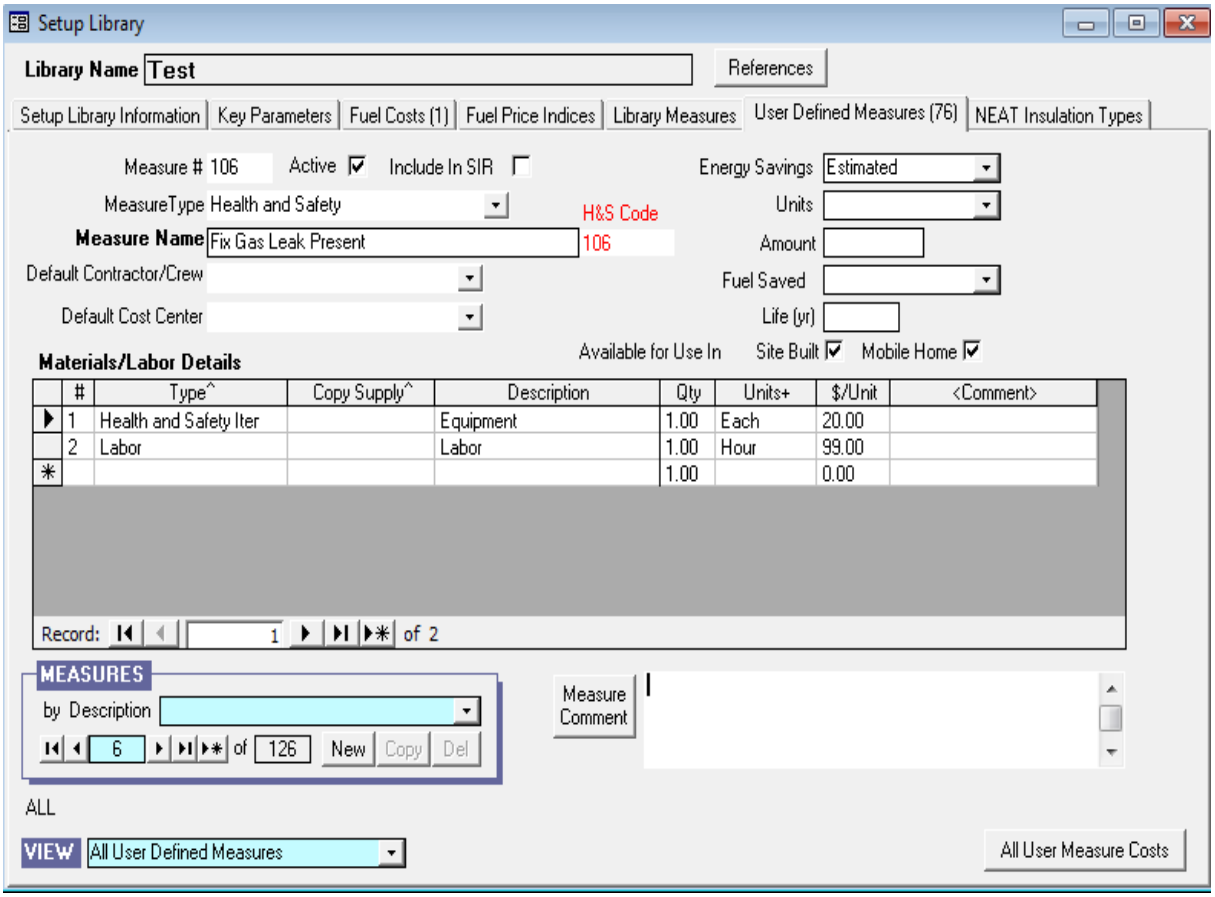

Setup Library
Library Name State of Iowa
References
Setup Library Information
Key Parameters
Fuel Costs (1)
Fuel Price Indices
Library Measures
User Defined Measures (0)
NEAT Insulation Types
Measure # 101
Active
Include In SIR
Energy Savings No EnergySavings
MeasureType Health and Safety
H&S Code
Measure Name Fix Other Venting Related Problems (Heating Syste
101
Default Contractor/Crew
Default Cost Center
Materials/Labor Details
Available for Use In
Site Built
Mobile Home
Type^ Copy Supply^ Description Qty Units+ $/Unit <Comment>
1 Health and Safety Iter Equipment 1.00 Each 900.00
2 Labor Labor 1.00 Hour 99.00
1.00 0.00
Subform Datasheet
Record: 1 of 2
MEASURES
by Description
1 of 50
New
Copy
Del
Measure Comment
ALL
VIEW
All User Defined Measures
All User Measure Costs



Health and Safety User Defined Measures tab with the general task description in Datasheet View.

To achieve this you need to place your cursor in any field in the upper section of the form and right click on your mouse. A rectangular box with the words “Subform Datasheet” will appear. Click on the box and the form will change. To change the form back, repeat the above steps.

User Defined Measures Tab (Entering Information)



The General Task Description

Measure # – Is a number entry which prescribes the order in which the measures are displayed in Setting up the user defined measure. Look at “help” screen to help with how to enter information

Active – This check box allows a measure to be de-activated (un-checked), which prevents it from being accessible from either the Audit or Work Order Main Menu items.

Include In SIR – If this check box is selected, the itemized cost measure will appear at the top of this reports list of measures and will be included in the cumulative cost and SIR for the entire home.

Measure Type – The Measure Type field allows you to assign a type to each measure. Your choices are: (1) Baseloads, (2) Building Insulation, (3) Client Education, (4) Doors and Windows, (5) General Heat Waste and Air Infiltration, (6) General Repairs, (7) Health and Safety, (8) HVAC Systems, and (9) Other.

Measure Name – If you are defining your own measure, enter a unique name for the measure in this field. The audit comes pre- loaded with 50 Health and Safety codes, they are indicated in red and can not be altered. However the costs (material/labor) can be changed to reflex state averages.

Default Contractor/Crew – If you wish to pre-assign a measure to a specific contractor or crew, enter this indication here.

Default Cost Center – Use this field if you are tracking costs that are incurred by different funding sources or programs.

Energy Savings – Indicate in this field whether you have an estimate of annual energy savings to associate with the User-Defined Measure being described. Otherwise, the record is viewed as an Itemized Cost without energy savings.

The following entries are displayed only if "Estimated" has been chosen in the Energy Savings entry above. All entries are then required.

Units – Enter the units of the annual energy savings to be assigned to the measure.

Amount – Enter the numeric value of the amount of annual energy to be saved.

Fuel Saved – Enter the type of fuel to be saved.

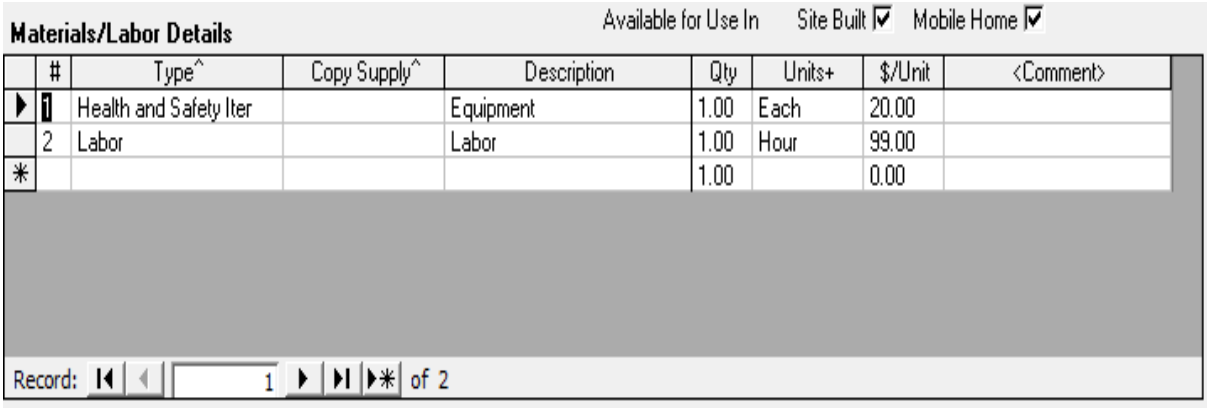
Life (yr) – Enter the expected life of the measure being installed.

Available for Use In - Select the check boxes that indicate which building type(s) the measure should be made available (Site Built and/or Mobile Home).

Measure Comment - Comments related to the measure on the User Defined Measures form may be entered directly in the comment field here.

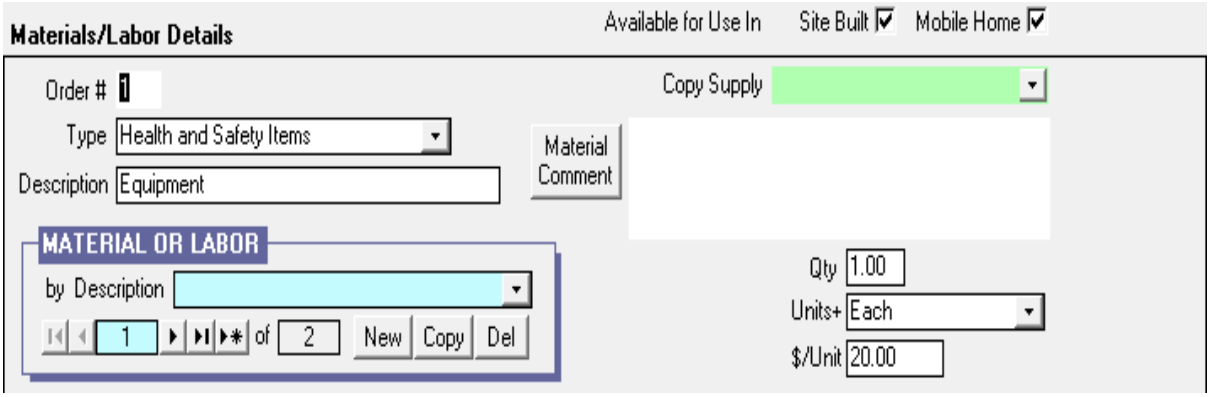
Materials/Labor Details (Subform) – Again, the view may appear different (Datasheet or Form View), but the data you enter is the same.

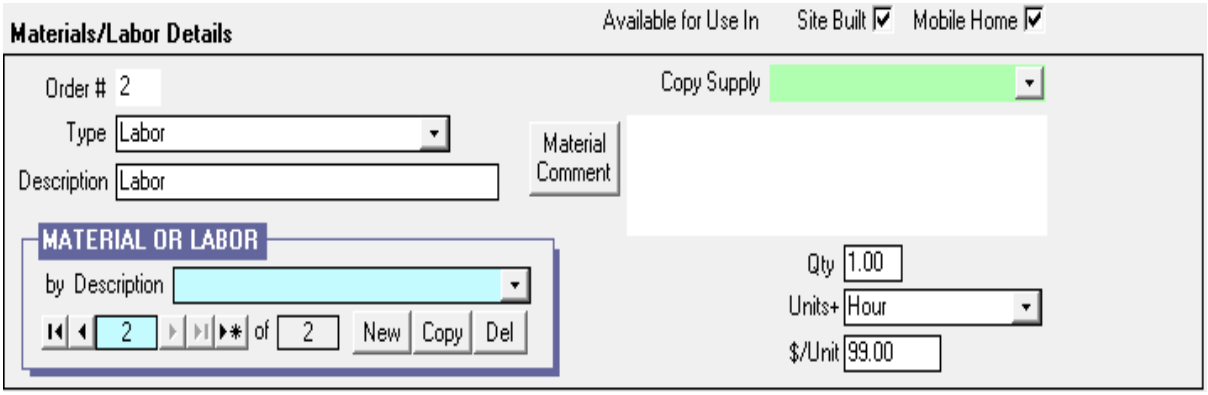
Datasheet View



User Defined Measures Tab (Materials/Labor Details Subform in Form View)

Form View Order #1





Order # - A number entry which prescribes the order in which the costing components of the measure will be listed on a work order when the measure is implemented. In the Form View change the order # in the Material or Labor Navigation Block by selecting the next record (black arrow) or create a new order # by selecting the black arrow with astric, or clicking the new button. You can also copy an existing record or delete an old record.

Type - With the exception of "Unspecified," these selections correspond to the material categories in the Supply Library. From the combo box choose: Cooling Equipment, Construction Material/Hardware, Doors, Health and Safety Items, Heating Equipment, Hot Water Equipment, Insulation, Labor, Lighting, Miscellaneous Supplies, Refrigerators, Windows, Other, and Unspecified.

The entry is used to narrow your search for the material when using the Copy Supply combo box list at the upper right corner of the sub-form. If you do not plan to locate this material detail component in your Supply Library, this entry may be left blank or designated as "Unspecified." This is an optional field.

Note: In the Datasheet View place cursor in the right corner of the type field and left click your mouse. The combo box will appear. Select or type the desired category.

Copy Supply – This entry is used in conjunction with the Type entry on the subform to locate a specific material from your Supply Library (see Chapter 10, Supplies) in the WA 8 manual found in WAPTAC. Selecting the material using this combo box will automatically fill in most of the remaining fields on the subform, provided you have specified the analogous entries in the Supply Library.

Description – Enter a brief description of the component detail of the measure. If the Copy Supply field was used to select the material, this field will be automatically entered.

Material Comment – Enter any comments here.

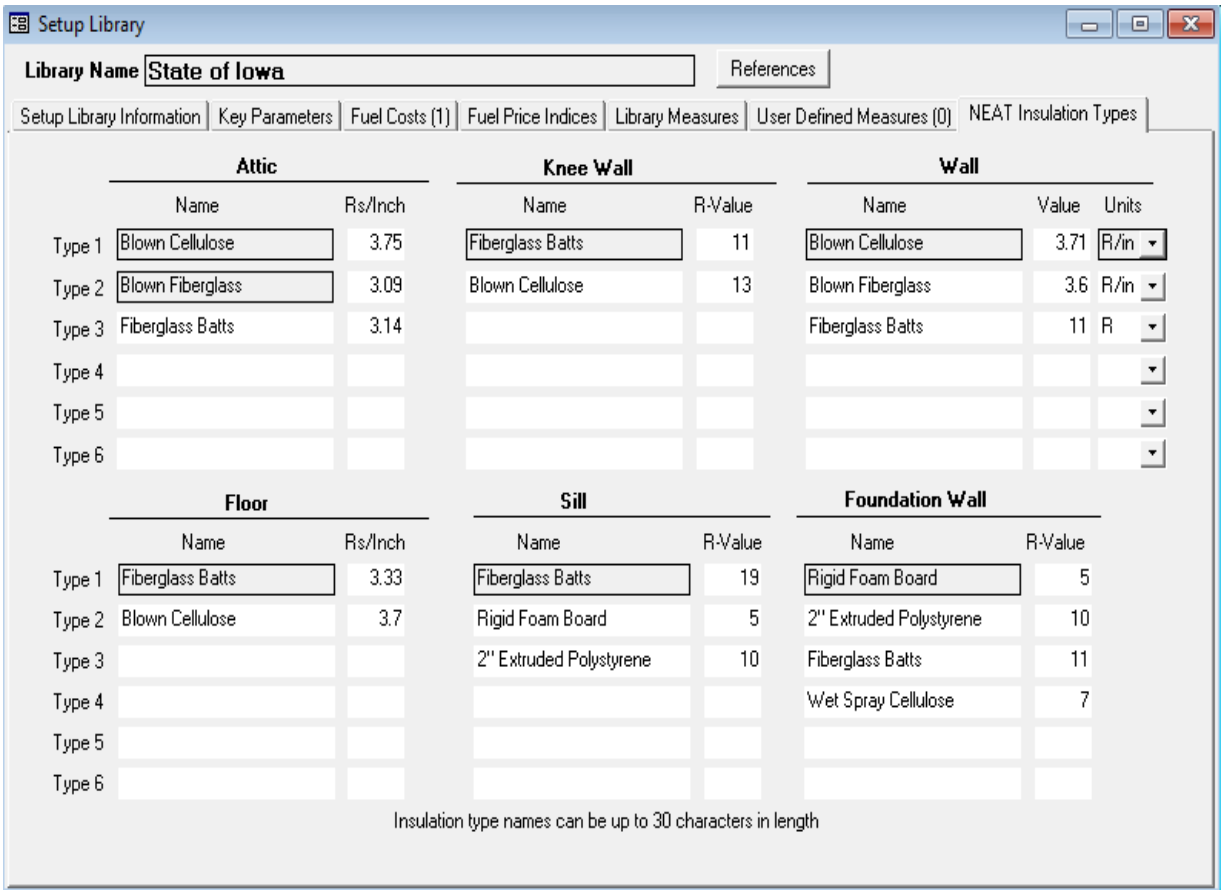
Qty (Quantity) – This is an estimate of the quantity of the material entered in the Description field needed to install the measure currently being considered.

Units+ – Enter the units to be associated with the Quantity field on the subform.

$/Unit – This is an estimate of the cost per unit.

Measures Record Navigation Block – The Measures Record Navigation Block in the lower left corner of the form allows you to find, copy, delete, or navigate to measures in the Setup Library being accessed.

NEAT Insulation Types Tab



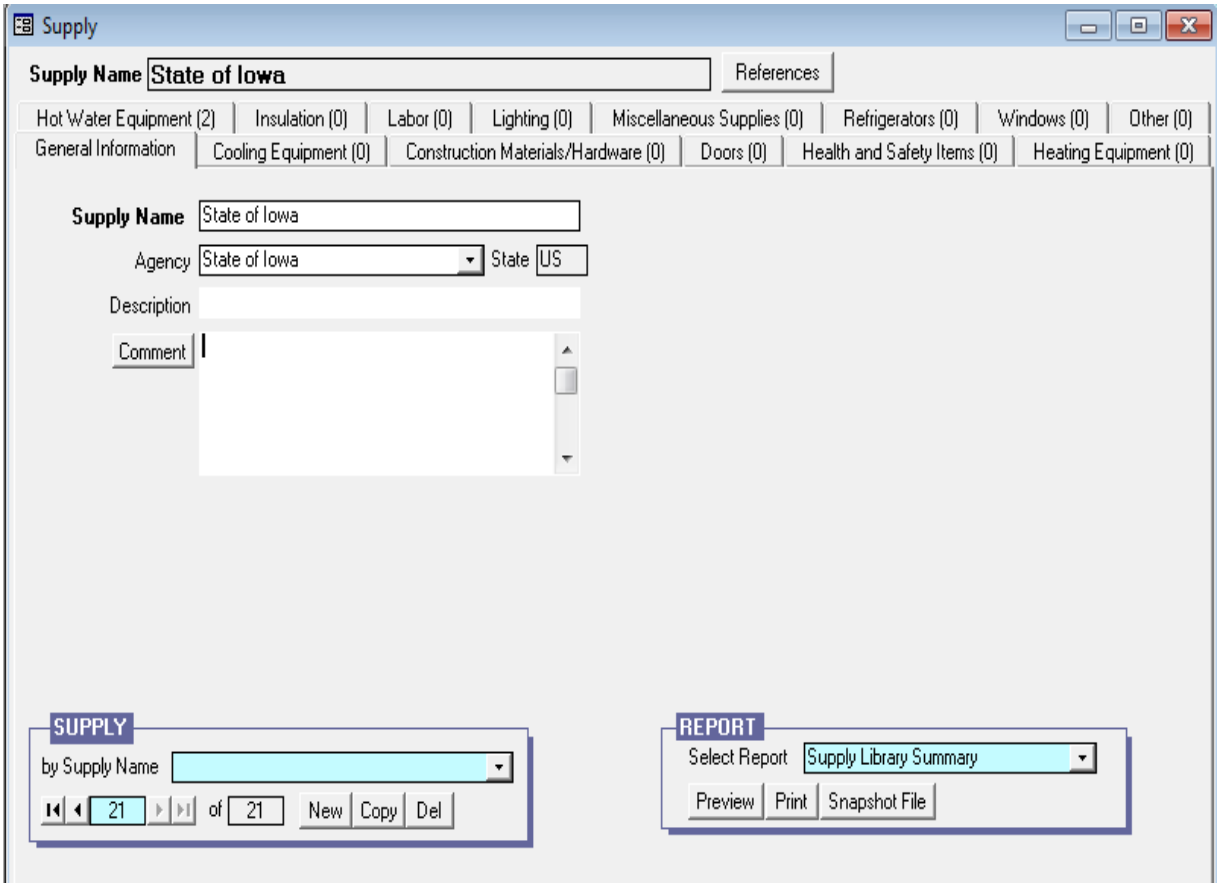
This information will not be changed without specific instructions from the State.

SUPPLY LIBRARY

The Supply Library offers you the optional feature of listing materials or labor components related to your weatherization work. If you use the inventory feature of the Weatherization Assistant, the Supply Library becomes your mechanism for tracking your inventory.

Agencies should have only one Supply Library for their agency.

General Information Tab



Supply Name – Enter in this field a name by which the specific Supply Library can be identified. Example Your agency name.

Agency – This field identifies the agency to which the Supply Library is associated. Because you should only have one agency associated with your agency, your agency name or the name you named your agency should appear here.

State – This un-editable field displays the state associated with the Agency entered in the previous field.

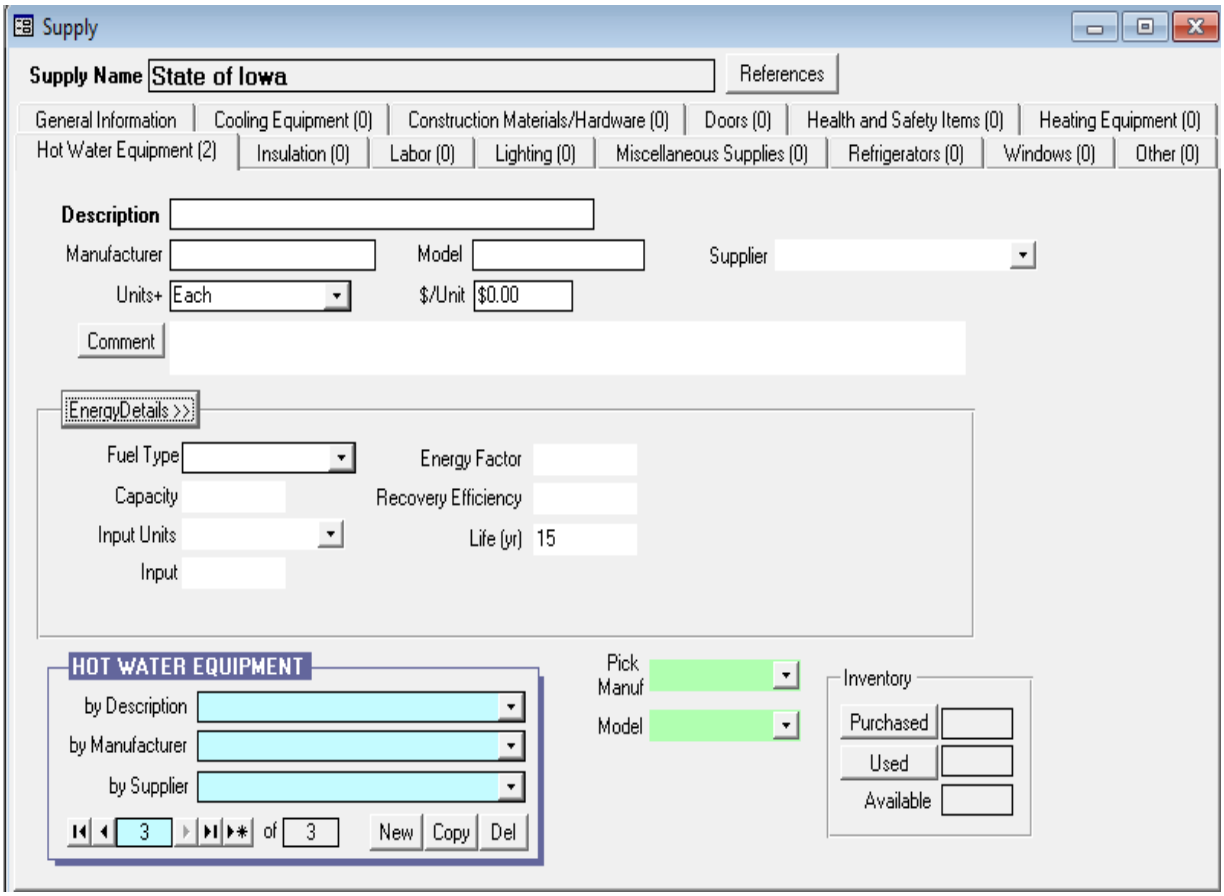
Description - You may use this field to briefly describe the intended use of the Supply Library.

Comment - Comments related to the Supply Library may be entered directly in the Comment field on the form.

Supply Library Record Navigation Block - The Supply Library Record Navigation Block may be used to find and access Setup Libraries, delete existing libraries, or create a new library by copying an existing one.

Report Navigation Block – There are no reports available for this block.

Hot Water Equipment Tab



Enteries are the water heaters you are going to be replacing existing water heaters with.

Pick Manufacturer – You can select from the combo box the manufacture of the water heater you are going be entering in the library

Model – You can select from the combo box the model of the water heater you are going to entering in the library.

Description – Give a brief description of the water heater (fuel type, gallons, etc.).

Manufacturer – Enter the name of the manufacturer or select the manufacturer from the combo box this will automatically enter the manufacturer into the field.

Model – Enter the model of the water heater you are describing or select the model from the combo box this will automatically enter the model into the field.

Supplier – If you enter any suppliers in the Contacts tab of the Agency button, choose the supplier of the water heater you are describing, from the combo box.

Units+ – Choose from Each, Hour, Bag, Roll, Sq/Ft, Linear Foot, Inch, Pound, Case, Box, or United Inch.

$/Unit – Enter the cost to install the water heater (material and labor).

Energy Details

Note: if you choose a water heater from the pre- loaded library this information will automatically be filled in. If you manually enter your water heaters, then you will need to fill in this section separately.

Fuel Type – Choose from Natural Gas, Propane or Electric.

Capacity –Is the size of the water heater (in gallons).

Input Units – Choose from KBTU or KW.

Input – Enter a numeric number.

Energy Factor – Optional field that is required to be filled in. Enter the energy factor of the water heater.

Recovery Efficiency – Optional field that is required to be filled in. Enter the recovery efficiency of the water heater.

Life (yr) – Enter the life expectancy of the water heater.

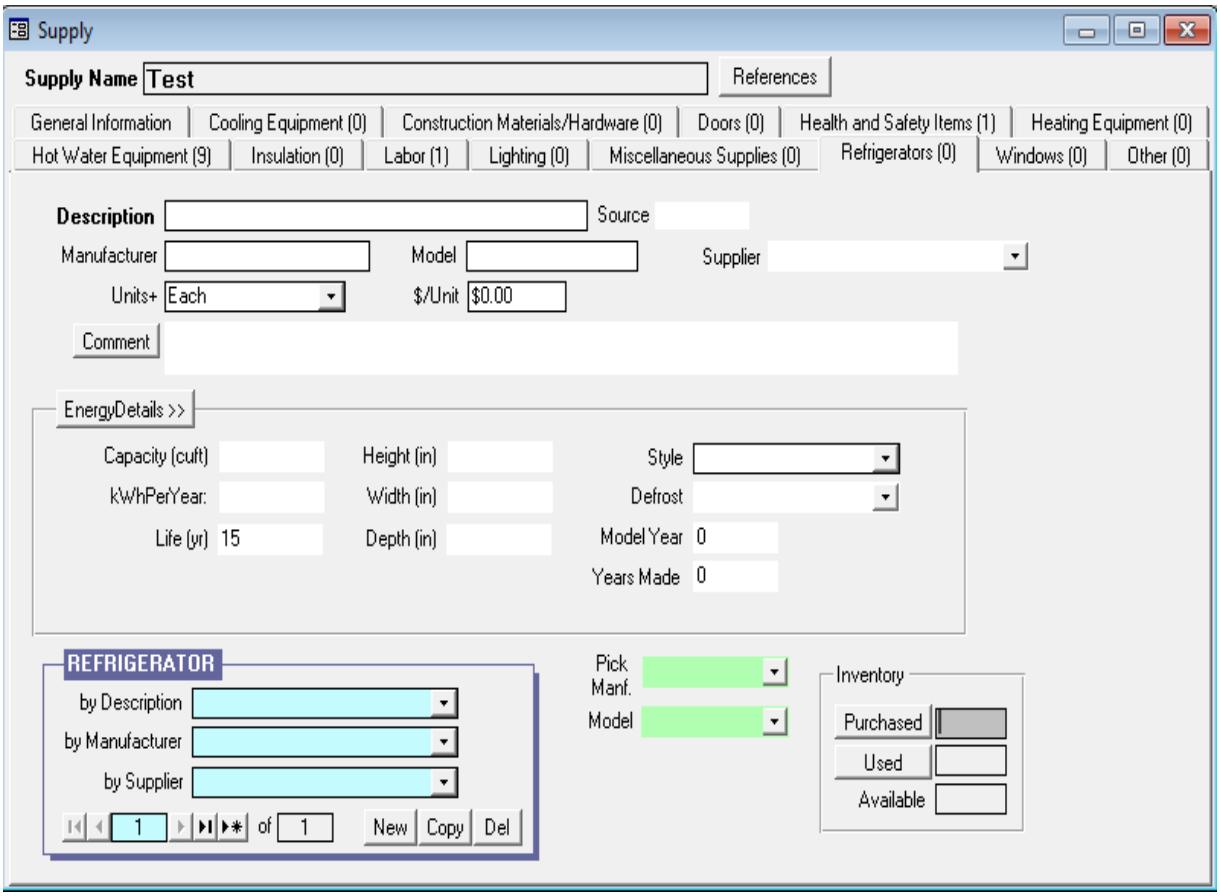
Note: If you choose a water heater from the database of Libraries installed, the information under the energy details will fill in automatically.

If you are having a difficult time finding the energy factor or the recovery efficiency of a water heater, use the website www.ahridirectory.org for help.

Hot Water Equipment Navigation Block – Use this section to find water heaters that have already been entered in to your Supply Library. You can search by Description, Manufacturer, or Supplier.

Inventory – This section is used only if you have a supply of water heaters in stock. This section will help keep track of your inventory.

Refrigerators Tab



The Iowa Weatherization Program does not use NEAT to determine the replacement eligibility of refrigerators. The BART program is used for that purpose. This screen may be useful for determining electric usage of existing appliances. In cases where the existing refrigerator or freezer cannot be moved to complete the electric usage monitoring, the database in NEAT may be used to estimate energy usage based on manufacturer and model number.

Description – Give a brief description of the existing refrigerator or freezer to be used for the estimate usage for replacement consideration.

Manufacturer – Enter the name of the manufacturer or select the manufacturer from the combo box.

Model – Enter the model of the refrigerator you are describing or select the model from the combo box.

Supplier – If you enter any suppliers in the Contacts tab in the Agency button, choose the supplier of the refrigerator you are describing, from the combo box.

Units+ – Choose from Each, Hour, Bag, Roll, Sq/Ft, Linear Foot, Inch, Pound, Case, Box, or United Inch.

$/Unit – Enter the cost to install the refrigerator or freezer (material and labor).

Energy Details – If you choose a refrigerator or freezer from the database of Libraries installed the information under the energy details will fill in automatically.

All other tabs in the Supply Library section are not being used at this time.

SITE BUILT (NEAT) ENERGY AUDIT FORM

You get to the NEAT energy audit form by pressing the Site Built (NEAT) energy audit button on the main menu. The main form contains record navigation aids, command buttons, and multiple tabs for all the different audit information that you will need to enter. The main form is where you can copy or define new audit records, enter audit information, make analysis runs, view recommended measures, and optionally generate work orders.

Here is a brief summary of each of the tabs available on the audit form.

1) Audit Information: On this tab you enter the general information about the audit. This tab also has the navigation block used to view different audit records as well as the reporting controls to view or print specific reports.

2) Status: Use of the status tracking is optional, but some reports may look at status information to determine which audits to include in completion reports. So, use of the status tracking is recommended. The status of the audit can be changed here or on the status tab of the client form.

3) Shell: This tab contains the various sub tabs and forms that you will use to describe the thermal envelope (or Shell) of the home.

4) Heating: This tab contains a form that can be used to enter information about the heating system(s) in the home. Separate buttons near the bottom of the form open other forms for various optional testing and diagnostic information not used directly in the audit analysis.

5) Cooling: This tab is used to describe the cooling system(s) in the home.

6) Ducts and Infiltration: This tab contains 4 sub forms. The first sub form contains data required by the analysis engine for whole house leakage and duct sealing. The remaining tabs are for optional detailed blower-door, zonal pressure readings, pressure balance, and pressure pan readings not used directly by the analysis engine.

7) Baseloads: This tab is used to describe the Water Heater, Lighting and Refrigerator(s)/Freezer(s) in the home.

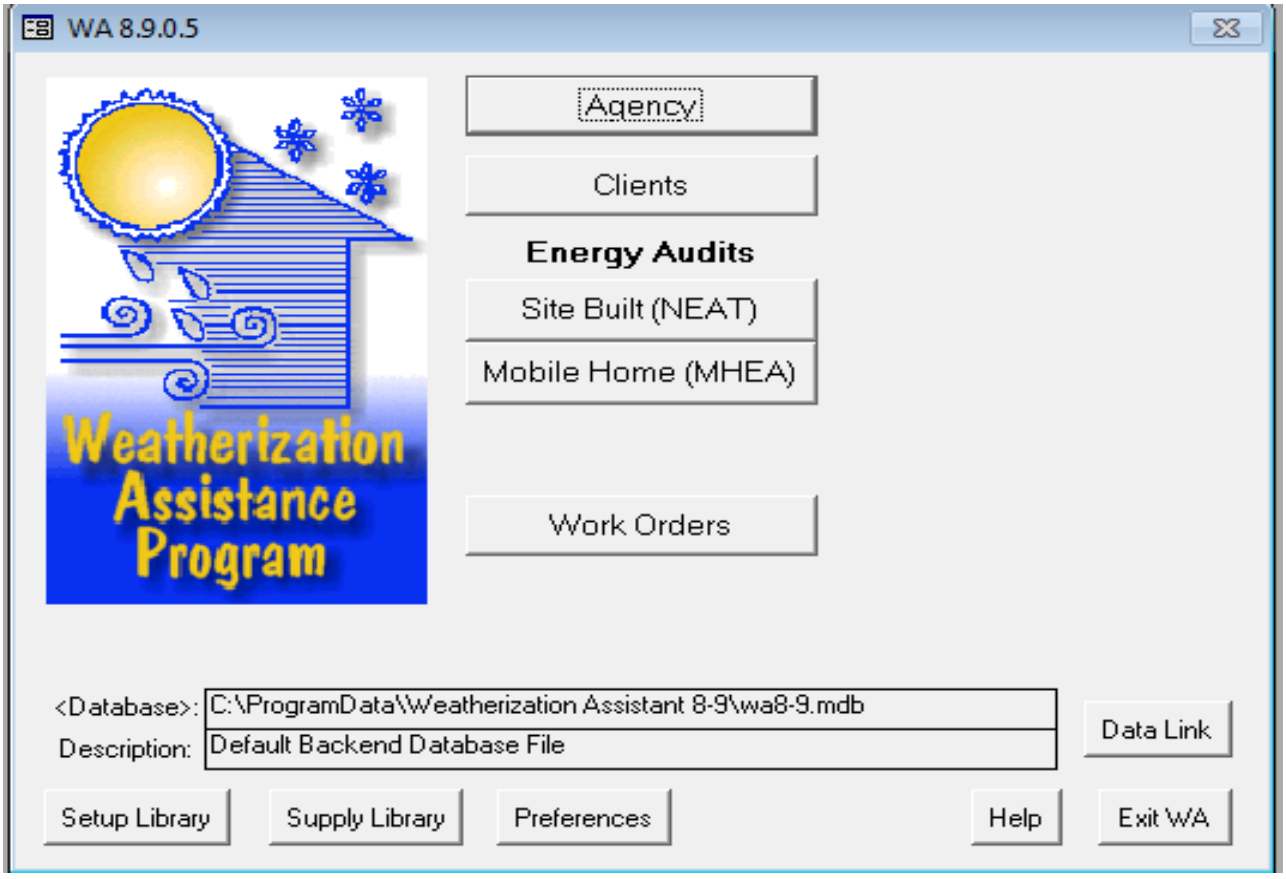
8) Health and Safety: This tab contains optional data identifying potential Health and Safety issues which may be discovered during an audit of a client's home. They are divided into three categories: "Whole House," "Equipment," and "Building Shell." Check boxes on these forms indicate Health and Safety problems, and, if selected, will be bordered with a bright red box. If you have the "Automatically generate Itemized Cost Records for Health and Safety Problems" turned on in Preferences, these check boxes will create itemized cost records in the measures list identifying the potential problem. The NEAT or MHEA Health and Safety Summary, will also identify these situations.

9) Itemized Costs: Entries on the Itemized Cost form allow recording (1) Itemized Costs - costs for items or tasks not associated with specific energy conservation measures yet incurred during weatherization, such as costs for repair, health and safety, on-site supervision, etc; and (2) User Defined Measures - measures which save energy yet are not part of the standard list of NEAT or MHEA defined measures.
10) Utility Bills: This form allows entry of optional heating and cooling, pre- and post-retrofit billing data. Both NEAT and MHEA allow you to compare consumption predictions with pre-retrofit billing data, then, if you desire, the programs will adjust the measure recommendations and savings to reflect this actual consumption. The Audit Information tab of either program contains a check box that enables or disables the adjustment of measure recommendations. Post-weatherization billing data may also be input and stored with the other data for a house, but the programs do not use the data.

11) Photos: If you have turned on the Photo Browser Tab option (#1) in the preferences/features tabIDH_W3000 a Photos tab will appear on the work order form. Refer to the help topic on digital photographs for more information.

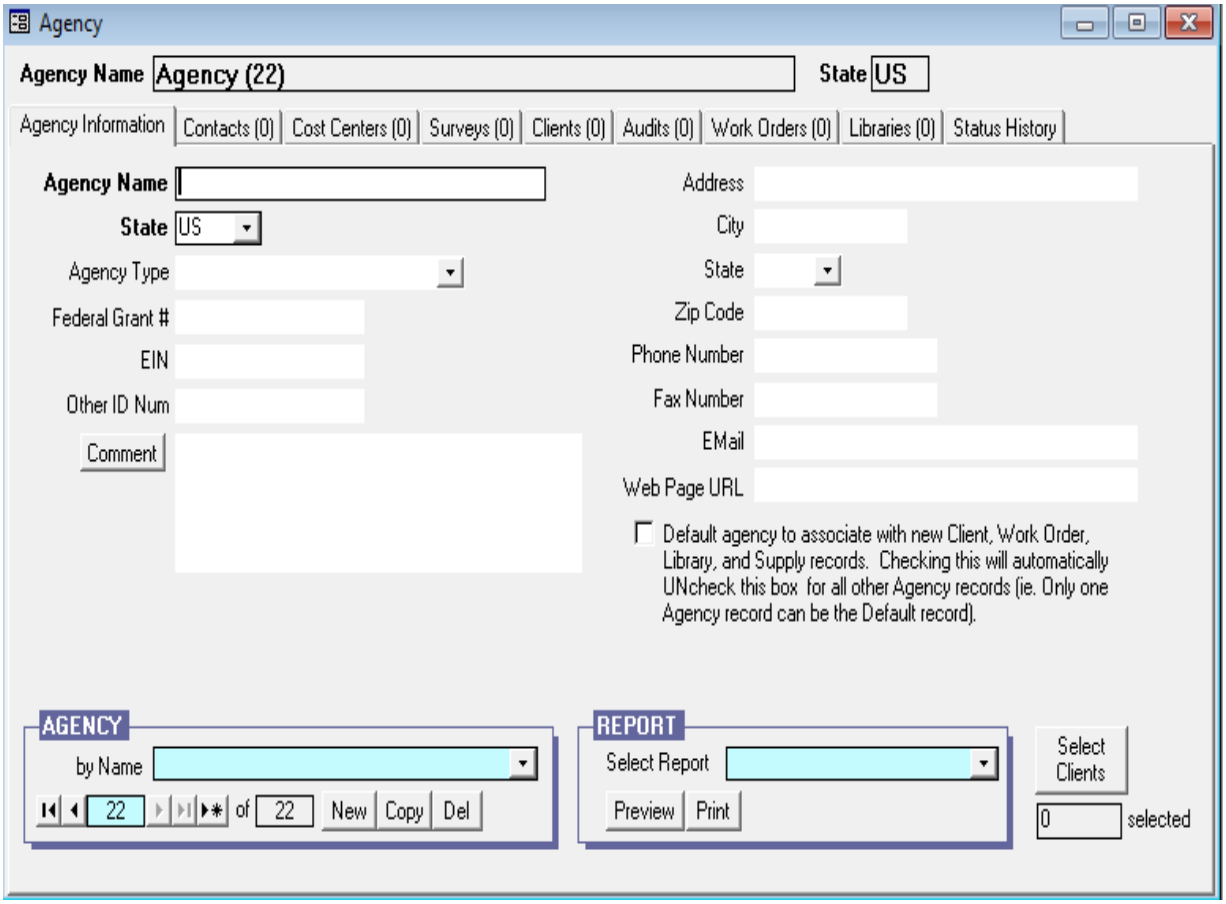
12) Measures: After running the program for your client, this tab will be populated with a list of recommended measures and activities. The form allows you to accept or reject each item, assign them to different contractors (defined under the Contacts tab under Agency Main Menu Item), or allocate funds to perform each measure from different funding sources (defined under Cost Centers and also under the Agency Main Menu Item). This information is optional, but will be reflected in the Work Orders generated from the audit, if created.

MAIN MENU WA 8.9.0.5



The Main Menu is the starting point of the Weatherization Assistance Program, where various sections of the NEAT/MHEA Audit can be accessed.

Agency Button



The information on the Agency form is associated with each of the client, supply library, and setup library records you create. You can think of the Agency record as being the parent record for all the data in your backend database. When you first install the WA software, you will find a sample agency record with some sample clients and audits. A second blank agency record is provided for you to rename with your agency name and state. If you have multiple auditors you should read the help topic on multi-user installations to read about your options for sharing data.

1) **Agency Information Tab:** On this tab you enter the general information about your agency. This tab also has the navigation block used to view different agency records, as well as the reporting controls, and a button in the lower right corner for accessing the client selector form.

2) **Contacts Tab:** This tab allows you to store information on all of the people associated with your agency, including auditors, contractors, crew members, and suppliers. If you have enabled the user logon feature, then any contact in this list with a user name and a password can log on the Weatherization Assistant. If your database is shared over a network, this contact list serves as the central list of all users. If you wish to track work orders by contractor or add suppliers to your supply libraries, you must enter these contacts as well. Be sure to use short User Names (initials perhaps) to make forms and reports more readable. As many contacts as are required may be entered. Use the Agency Contact Navigation Block at the lower left of the form to initiate new contacts or locate and access previously entered contacts. The form may be viewed and edited in Datasheet View, providing a summary of all contacts already entered or allowing quick changes to multiple entries.

To get to the Data Sheet View screen put your cursor on the form and right click. A rectangular box with “Subform Data sheet” will appear; left click on that box and the form will change to a data sheet view. Repeat the steps to change back.

3) **Cost Centers Tab:** Use this tab to create cost centers for categorizing your costs. Individual work order measures can be assigned to cost centers that you create here. You can optionally add funds to the cost centers with the button in the lower right corner of this tab. If used this way, the cost center tab can show the balance of available funds and costs of associated work orders. The use of cost centers is an optional feature not required for audits or work orders.

4) **Surveys Tab:** This tab is used to define any custom surveys that you may want to apply to individual client records. You can setup any number of surveys, give each a name and then define groupings of questions. Responses to questions are all strings of text. In the client form you can copy blank copies of these defined surveys to be filled out for that client.

5) **Clients Tab:** This tab is a datasheet that shows all client records associated with this agency record. The tab is used primarily for navigation to the individual client records and for creation of new blank client records. The light blue border of the datasheet on this tab is the visual indicator that this datasheet is used for navigation rather than data entry. Field names with <angle brackets> can be double-clicked with the mouse to navigate to that record. Like any datasheet, the sorting can be changed by highlighting a column and pressing one of the sort buttons in the tool bar.

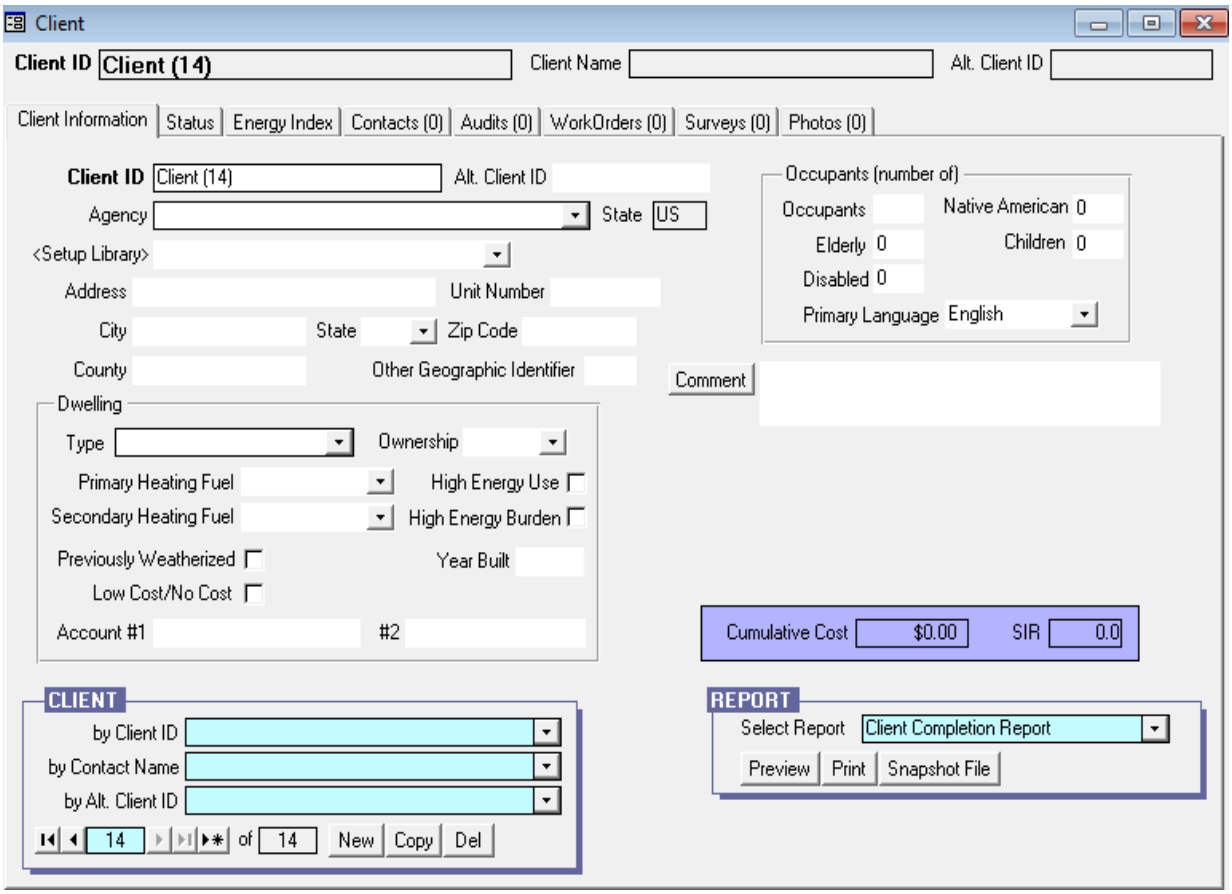
6) **Audits Tab:** This tab is a datasheet that shows all audit records associated with the clients for this agency record. The tab is used primarily for navigation to the individual client and audit records. The light blue border of the datasheet on this tab is the visual indicator that this datasheet is used for navigation rather than data entry. Field names with <angle brackets> can be double-clicked with the mouse to navigate to that record. Like any datasheet, the sorting can be changed by highlighting a column and pressing one of the sort buttons in the tool bar.

7) **Work Orders Tab:** This tab is a datasheet that shows all work orders with this agency record. The tab is used primarily for navigation to the individual client or work order records. The light blue border of the datasheet on this tab is the visual indicator that this datasheet is used for navigation rather than data entry. Field names with <angle brackets> can be double-clicked with the mouse to navigate to that record. Like any datasheet, the sorting can be changed by highlighting a column and pressing one of the sort buttons in the tool bar.

8) **Libraries Tab:** This tab has two datasheets that show all Setup and Supply Libraries associated with this agency record. The tab is used primarily for navigation to the library records. The light blue borders of the datasheets on this tab are the visual indicators that the datasheets are used for navigation rather than data entry. The library names with <angle brackets> can be double-clicked with the mouse to navigate to that record. Like any datasheet, the sorting can be changed by highlighting a column and pressing one of the sort buttons in the tool bar.

9) **Status History Tab:** This tab is used to review all status history (changes to various status tabs) for clients belonging to this agency record. Note that this form is normally used to just review the history of status changes, but it can also be used to edit or remove records from the status change history.

Clients Button



Audits and work orders are organized under a client record. New client records can be added in either the Client s tab of the Agency form, or the Client Information tab of the Clients form, which is accessed from the Main Menu.

This is where client contacts, overall work status, surveys (not to be confused with audits), and overall dwelling and occupant data are stored.

Below, is a brief summary of the various tabs on this form.

1) **Client Information Tab:** On this tab you enter the general information about the client dwelling. This tab also has the navigation block used to view different client records as well as the reporting controls to view or print client specific reports.

2) **Status Tab:** This tab shows the status of the client record (overall client and application status are tracked separately) as well as the status of all audits and work orders for this client. Each work order has separate status tracking for overall work, inspections, and payment so you may need to scroll the form on this tab to see all the status history. The Edit button can be used to change any status record and the button with the "H" character can be used to review the history of a particular status. Use the Refresh List button in the lower left corner of this form if you navigate to other forms and the status list is no longer current.

3) **Energy Index Tab:** The energy index tab can be used to compute an overall BTU per heating degree day per square foot as a figure of merit for determining if the client dwelling has a high energy use. If the energy index exceeds your state's definition for high energy burden, use the checkbox on the Client Information tab. The Energy Index calculation on this tab is independent of the detailed energy audit.

4) **Contacts Tab:** Enter the names of the people associated with the client. Here is where you can identify all persons for which contact information should be maintained for a client record. Mark one of the records as the primary contact to select that person to be displayed in the various places where client records are selected from lists.

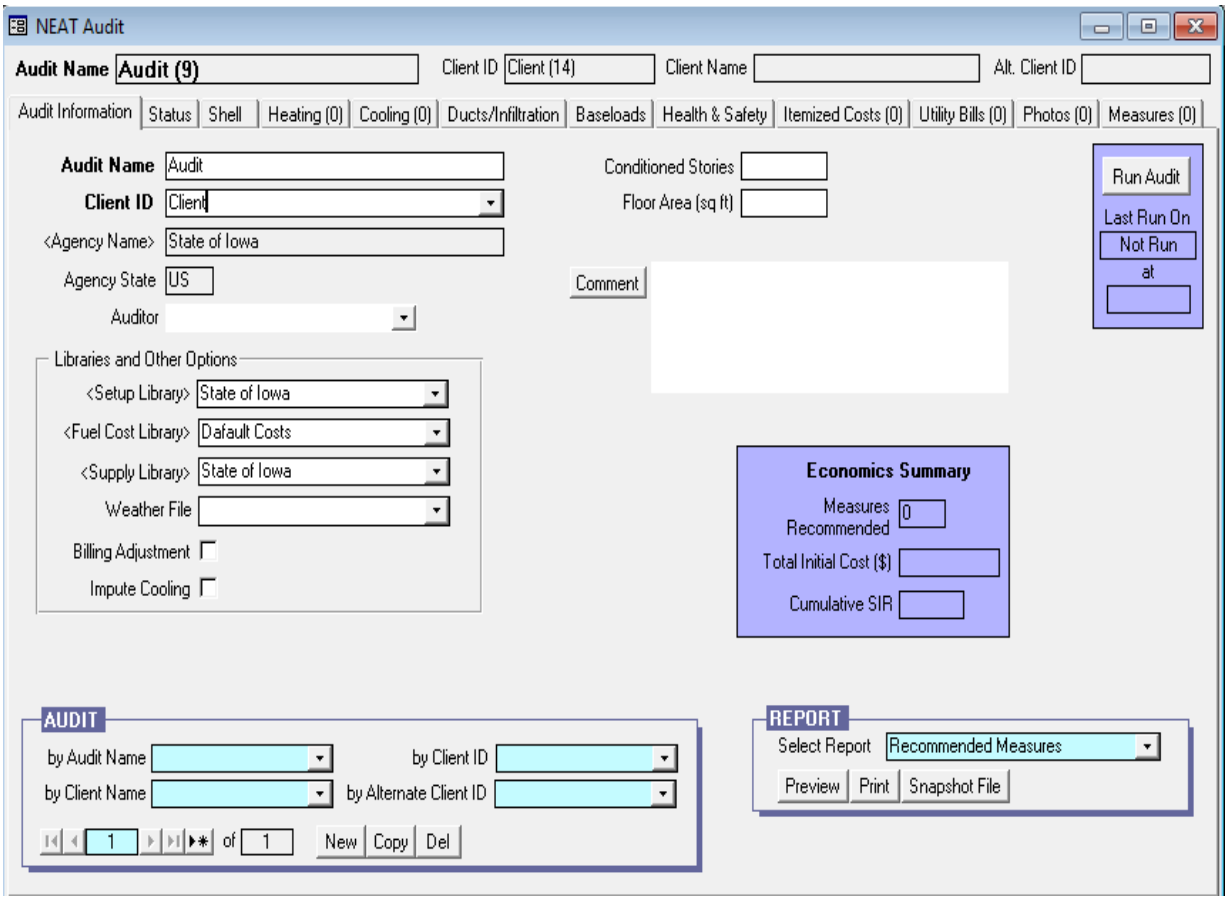
5) **Audits Tab:** This tab is used to list the audits associated with a client record. Typically there will be only one audit associated with each client, but it is possible to have several. Buttons in the bottom right corner of the form can be used to generate new blank NEAT or MHEA audits associated with this client.

6) **Work Orders Tab:** This tab is used to list the work orders associated with a client record. Work orders generated from the Measures tab on the Audit form are listed here along with any work orders that you may have generated manually. The button in the lower right corner is used to manually add work orders to the client.

7) **Surveys Tab:** This tab is used to create blank copies of survey questions which are defined with the survey tab on the Agency form. Use the combo box and button in the lower right corner of the form to select the predefined survey and create the blank copy. The rest of the form is used to select and edit the blank surveys you copy.

8) **Photos Tab:** If you have turned on the Photo Browser Tab option (#1) in the Main Menu Preferences button, a Photos tab will appear on the Client form. Refer to the help topic on digital photographs for more information.

Site Built (NEAT) Button



Access the NEAT Energy Audit form by pressing the Site Built (NEAT) energy audit button on the Main Menu. The main form contains record navigation aids, command buttons, and multiple tabs for all the different audit information that you will need to enter. The main form is where you can copy or define new audit records, enter audit information, make analysis runs, view recommended measures, and optionally generate work orders.

Here is a brief summary of each of the tabs available on the audit form.

1) **Audit Information Tab:** On this tab you enter the general information about the audit. This tab also has the navigation block used to view different audit records as well as the reporting controls to view or print specific reports.

2) **Status Tab:** Use of the status tracking is optional, but some reports may look at status information to determine which audits to include in completion reports. The status of the audit can be changed here or on the status tab of the client form.

3) **Shell Tab:** This tab contains the various Sub-tabs and forms that you will use to describe the thermal envelope (or Shell) of the home.

4) **Heating Tab:** This tab contains a form that can be used to enter information about the heating system(s) in the home. Separate buttons near the bottom of the form open other forms for various optional testing and diagnostic information not used directly in the audit analysis.

5) **Cooling Tab:** This tab is used to describe the cooling system(s) in the home.

6) **Ducts/Infiltration Tab:** This tab contains four subforms. The first subform contains data required by the analysis engine for whole house leakage and duct sealing. The remaining tabs are for optional detailed blower door, zonal pressure readings, pressure balance, and pressure pan readings not used directly by the analysis engine.

7) **Baseloads Tab:** This tab is used to describe the water heating system(s), refrigerator(s) and lighting systems in the home.

9) **Health & Safety Tab:** This tab contains optional data identifying potential Health and Safety issues which may be discovered during an audit of a client's home. The tab is divided into three categories: "Whole House," "Equipment," and "Building Shell." Checkboxes on these forms indicate Health and Safety problems, and, if selected, will be bordered with a bright red box. If you have the "Automatically Generate Itemized Cost Records for Health & Safety Problems" turned on in the Main Menu Preferences button, these check boxes will create itemized cost records in the measures list identifying the potential problem. The NEAT or MHEA Health & Safety Summary will also identify these situations.

10) **Itemized Costs Tab**: Entries on the Itemized Costs tab allow recording (1) Itemized Costs - Costs for items or tasks not associated with specific energy conservation measures yet incurred during weatherization, such as costs for repair, health and safety, on-site supervision, etc. and (2) User Defined Measures - Measures which save energy yet are not part of the standard list of NEAT or MHEA defined measures.

11) **Utility Bills Tab**: This tab allows entry of optional heating and cooling and pre- and post-retrofit billing data. Both NEAT and MHEA allow you to compare consumption predictions with pre-retrofit billing data, then, if you desire, the programs will adjust the measure recommendations and savings to reflect this actual consumption. The Audit Information tab of either program contains a check box that enables or disables the adjustment of measure recommendations. Post-weatherization billing data may also be input and stored with the other data for a house, but the programs do not use the data.

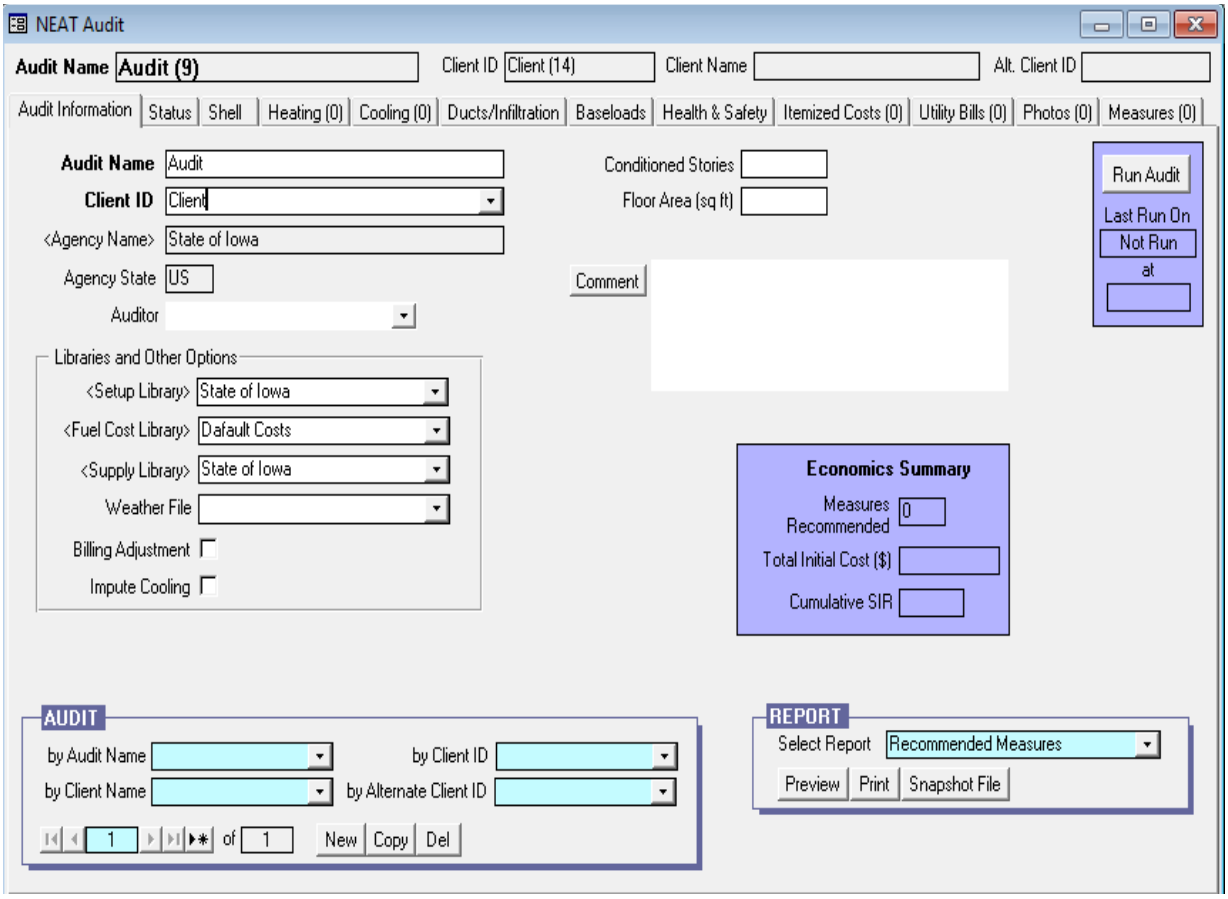
12) **Photos Tab:** If you have turned on the Photo Browser Tab option (#1) in the Main Menu Preferences button, a Photos tab will appear on the Work Order form. Refer to the help topic on digital photographs for more information.

13) **Measures Tab**: After running the program for your client, this tab will be populated with a list of recommended measures and activities. The form allows you to accept or reject each item, assign them to different contractors (defined under the Contacts tab under the Main Menu Agency button), or allocate funds to perform each measure from different funding sources (defined under the Cost Centers tab under the Main Menu Agency button). This information is optional, but will be reflected in the Work Orders generated from the audit, if created.

ENERGY AUDITS

Site Built (NEAT) Button

Audit Information Tab



This tab on the main NEAT and MHEA forms is used to enter overall audit information about the house and what libraries to reference for additional data. In addition to the fields for data input (see individual help topics), the tab has the following features and controls:

Audit Name - The Audit Name must be unique for all audits entered into the Weatherization Assistant. The Audit Name is any string of up to 50 characters long that is used to identify the specific audit. It can be any mix of numbers or letters useful to your organization to track jobs. This field is one of several used in the combo boxes at the bottom of the Audit Information tab to quickly locate audits.

Client ID - The Client ID identifies the Client whose home is being audited. The field is used to associate this audit with a specific client. The client must already have been described under the Clients button from the Weatherization Assistant Main Menu.

If you have initiated a new audit from the Audits tab under the Main Menu Clients button, the Client ID field will automatically be entered as that client from whom the audit was initiated. Or, if a Client record is opened when you ask to create a new audit in the Audit Information tab, the audit will again automatically be assigned the opened client. **Caution:** The Client ID of the last client referenced from the Clients button on

the WA Main Menu, even if not currently opened, will be used when creating a new audit; thus, resulting in two audits having the same Client ID.
Conditioned Stories - Enter the number of conditioned stories. Include a finished attic if it is heated or cooled. Include a basement if it is heated or cooled and the majority of its wall area is above-grade. Decimal entries such as 1.5 may be used for split level or half-story upstairs. The value is used to compute the stack effect of infiltration.

Floor Area (sq/ft) - Enter the number of square feet of floor area that is conditioned. If more area is heated than effectively cooled, enter the heated floor area. The value is total floor area, not footprint area, (e.g. enter 2400 for a two story house with 1200 square feet in each story).

Agency Name - This un-editable field displays the Agency to which the Client whose house is being audited is assigned. Any number of agencies can be defined within a Weatherization Assistant database, but in a typical weatherization agency, there should be only one with your agency name. If there are multiple auditors each with a copy of the Weatherization Assistant software and you are interested in having a single shared database, read the help topic for multi-user installations.

Agency State - This un-editable field gives the two character abbreviation for the state where the agency handling this particular client is located.

Auditor - Select the lead auditor who will have primary responsibility to perform the audit, from the drop-down box. After selection, only the shortened abbreviation of the name will appear in the field. Those available to choose from are assigned by the user under the Contacts tab in the Main Menu Agency button. Only entries made there who are indicated as being Auditors will be displayed in the drop down-box.

Comment – Enter pertinent information here.

Run Audit Button - After completely describing the house in the audit with data entered under the tabs visible on the main audit forms, use the "Run Audit" button to have the audit perform its calculations and produce energy efficiency measure recommendations for the home. Within the same data block as the Run Audit button are un-editable fields showing the date and time the currently accessed audit was "Last Run On." If the audit has not yet been run for this specific house description, the date field will display "Not Run." An audit on a house may be run any number of times, but the recommendations from any previous runs will be overwritten. If you wish to run an audit on a house again, and would like to save the recommendations from a previous audit on the same house, use the "Copy" button in the Record Navigation block in the lower left corner of the form to copy the house description. Then, give the new house description a new Audit Name (possibly a variant of the original name); make any modifications to the house description desired, then use the Run Audit button to produce another set of recommendations.
Note that the Run Audit button is available from all Audit tabs and may be activated from any of these tabs once it has been decided that changes to the building description are complete.

Libraries and Other Options Section

Setup Library – Choose the Setup Library associated with the audit you are entering, from the drop-down box. **Note:** Each agency should only have one Setup Library associated with their agency; therefore, defaulting to your agency Setup Library each time you start a new audit.

Fuel Cost Library – Choose the fuel cost associated with the audit you are entering, from the drop-down box. **Note:** Each agency should only have one Fuel Cost Library associated with their agency; therefore, defaulting to your agency Fuel Cost Library each time you start a new audit.

Supply Library – Choose the Supply Library associated with the audit you are entering. **Note:** Each agency should only have one Supply Library associated with their agency; therefore, defaulting to your agency Supply Library each time you start a new audit.

Weather File – Choose from the drop-down box the weather file your agency is in, or type in the field the name of the weather file your agency is in.

Billing Adjustment – Do not check this box.

Input Cooling – Do not check this box.

Economics Summary - For audits which have already had NEAT or MHEA produce recommendations, the Economics Summary block of data will display a summary of these recommendations: the number of Measures Recommended, the Total Initial Cost ($) of these recommendations (using the audit's estimated measure costs prior to any modifications made in work orders to reflect actual costs), and the Cumulative SIR (Life Cycle Savings to Investment Ratio) for all recommended work on the house. If the audit has not yet been run on the house, the number of Measures Recommended will be "0" and the other fields will be blank. All of the fields within the Economics Summary block are un-editable.

Audit Record Navigation Block - The Audit Record Navigation block in the lower left corner of the form allows you to find, copy, delete, and navigate to audits in your database. See the separate help topic indicated.

Report Block - The Report Block located in the lower right corner of the main NEAT and MHEA forms allows access to the various reports available in the audit. The reports may be Previewed (displayed on your monitor), Printed (to your default printer), or sent to a Snapshot File (a file that may be sent as an attachment to an e-mail, copied to a floppy, or shared by some other means). Use the drop-down list to view and choose from the various reports available.

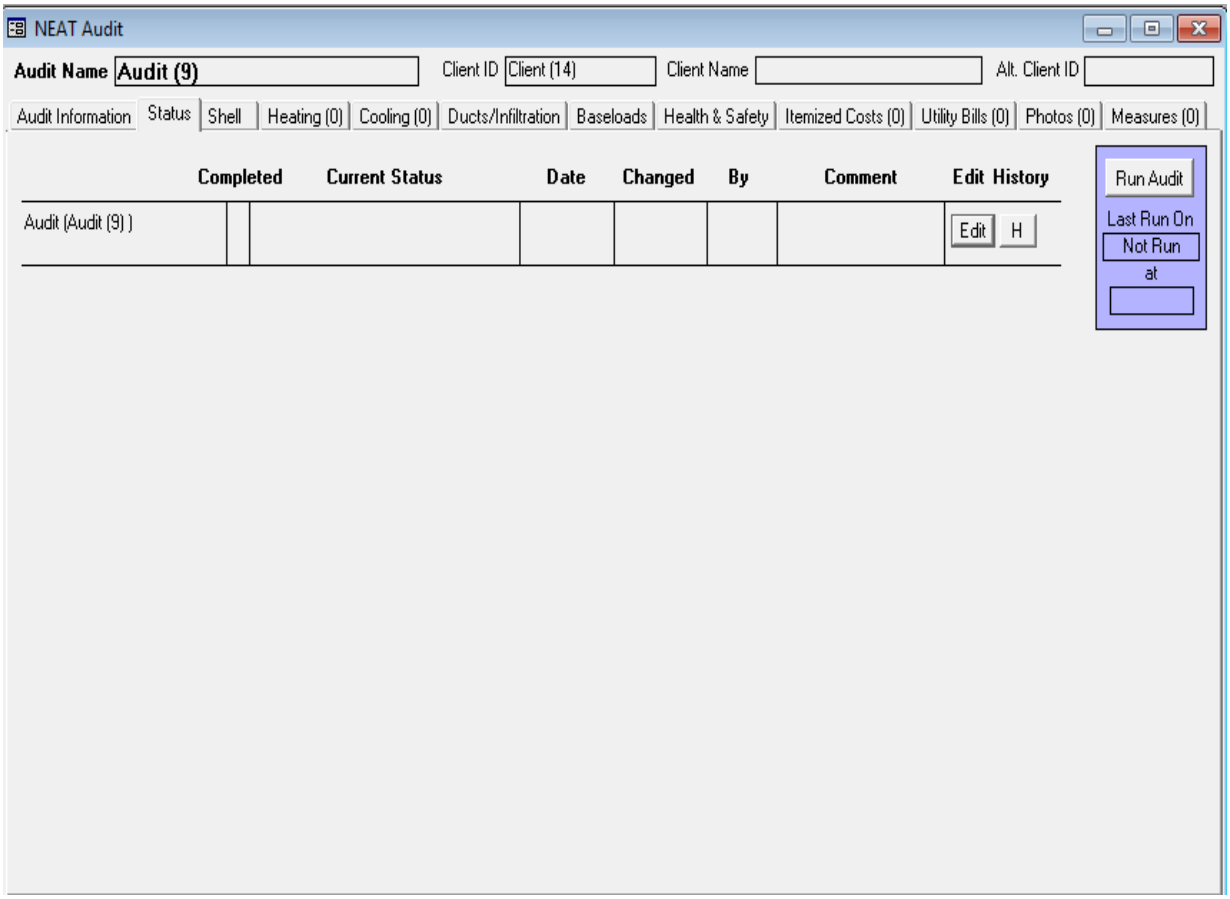
Economics Summary

Measures Recommended – This is the number of Energy Measure recommended on the Recommended Measure Report after running the audit.

Total Initial Cost – This is the initial cost of the job after running the audit.

Cumulative SIR – This is the cumulative SIR of the job after running the audit. Should be one or greater to proceed with any of the work.

Status Tab



The Status tab under the Main Menu Site Built (NEAT) Energy Audit button allows you to view the status of the audit currently being accessed.

The setting and tracking of statuses is an optional feature in the Weatherization Assistant.

The Audit level status settings available are:

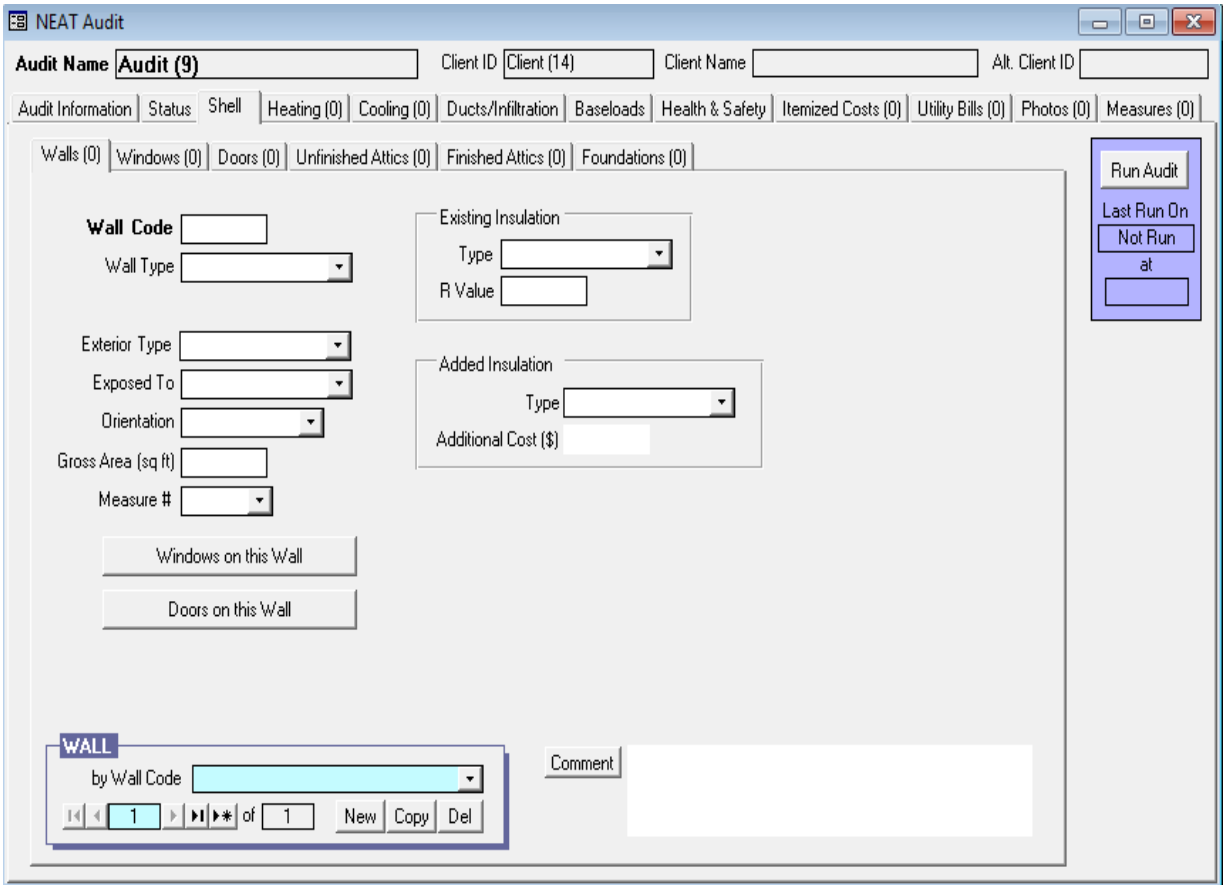
- Site Visit Scheduled For
- Site Visit Completed On
- Billing Data Collected On
- Recommendations Generated On
- Audit Complete and Locked On*
- Walk Away by Auditor On*
- Delayed On
- Denied On
- Other

The Status tab displays not only the current status of the audit, but the date the status became effective, the date it was last changed, and who changed it. You are also shown any comment which has been appended to this current status setting. A Completed column on the form will display an asterisk (*) when

a status setting indicates completion or closure of the activity associated with the status category. For the audit category, this corresponds to those settings followed by the asterisk in the table above.
Status settings are changed by selecting the Edit button at the right of the row indicating the current status for the audit. You will be presented with the Status Editor form. Choose the "H" button to see a history of all settings for the current audit.

Shell Tab

Walls Sub-tab



In order for NEAT to execute properly, you must enter data for at least one wall. This could represent an apartment with only one outside wall, with no heat transfer assumed through the other walls.

There would normally be at least one wall described for exposed surfaces facing in each cardinal direction, because solar heat gain through windows on a wall varies according to its direction. To simplify your input, combine multi-storied walls that have the same orientation and construction.

Other than cardinal direction, the most important difference is whether the wall is already insulated or can be insulated.

NOTE: At the end of this manual is a section which illustrates different wall insulation scenarios to help you determine how to enter walls in the NEAT Audit.

Walls Code – Enter a unique wall identifier or hit enter to use the default code, such as NW1 for the wall that faces north.

Wall Type – Describe the construction of the wall using the following: Balloon Frame, Platform Frame, Masonry or Stone, Concrete Block, Adobe, or Other.

Exterior Type – Describe the exterior of the wall using the following: Wood, Metal or Vinyl, Stucco, Brick or Stone, None, or Other.

Exposed To – Describe the exposure of each wall using the following: Outside (Ambient), Buffered Space, or Attic Space.

- Buffered walls are located in an enclosed garage or porch. If garage or porch walls are balloon framed to an exposed upstairs wall, list as exposed.
- Enter vented attic walls as exposed walls.

Orientation – Enter direction the wall faces. Walls with the same orientation but with different exterior types must be listed separately.

Gross Area (sq ft) – Enter the gross wall area in square feet.

Measure # – Enter a measure number starting with 1. Assign the same measure number to all walls with similar characteristics (exposure, existing insulation, etc.).

Existing Insulation Type – Enter the existing type of insulation using the following: None, Blown Cellulose, Blown Fiberglass, Rockwool, Fiberglass Batts, Polystyrene Board, or Other.

R-Value – Enter the R-value of the existing insulation or press enter to accept the default. If none, this field will not be visible.

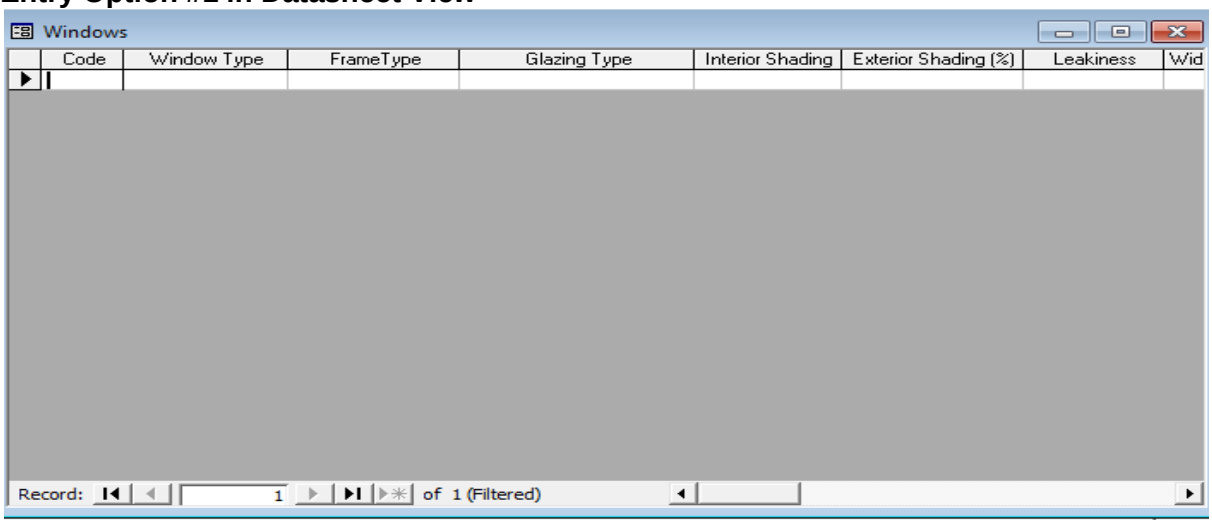
Added Insulation Type – Indicate the type of insulation to be added to the walls using the following: None, Blown Cellulose, Blown Fiberglass, or Fiberglass Batts. If **only** pressure points are to be insulated, the cost must be included in the Infiltration Costs on the Ducts/Infiltration tab.

Added Insulation Additional Cost ($) – Do not use this field.

Shell Tab

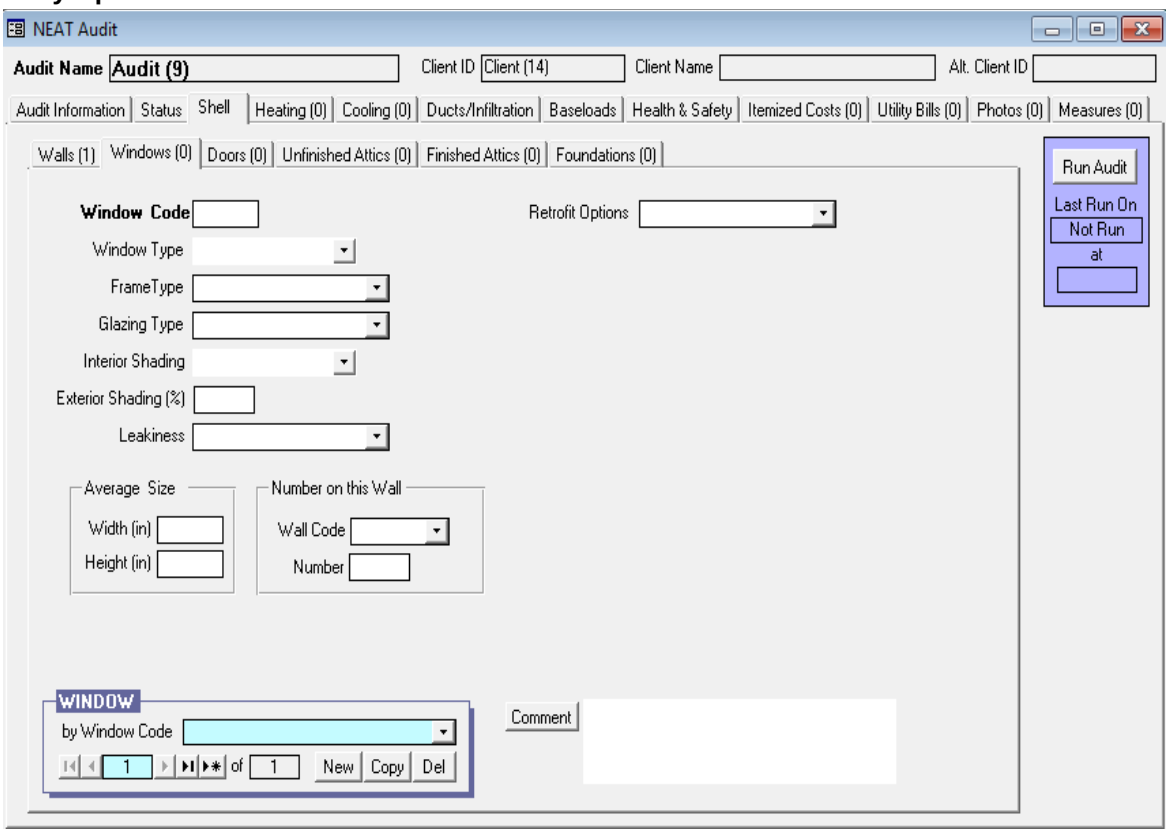
Walls Sub-tab – Windows on this Wall Button

Entry Option #1 in Datasheet View

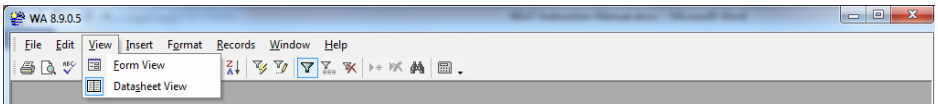


Walls Sub-tab – Windows on this Wall Button

Entry Option #2 in Form View



To change the “Datasheet View” to “Form View” click View from the toolbar in the upper left corner of the form and select “Form View”.



Window Code - Enter a unique window identifier or hit enter to use the default code.

Window Type - Indicates what types of windows are in the home. Choose one of the following:

- **Jalousie** windows are constructed of several horizontal panes.
- **Awning** windows are hinged at the top or side of the window so that when opened (usually by turning a crank), the glass angles out from the home exterior.
- **Slider** windows usually have two panes of glass and either one or both panes slide past the other when the window is opened.
- **Fixed** windows are sealed in the window frame and cannot be opened.
- **Door Windows** are sealed in the window frame of a door and cannot be opened.
- **Sliding Glass Doors** are large windows that extend to the floor of the addition and can be opened to enter or exit the addition.
- **Skylights** are glass or plastic windows in the ceiling of the addition.

Framing Type - Describe the type of window frame using the following: Wood or Vinyl, Metal, or Improved Metal.

Glazing Type - Describe the type of window using the following: Single Pane, Single with Wood Storm, Single with Metal Storm, Single with Bad Storm, Double Pane, or Double Pane Low E.

Interior Shading - Interior shading devices are interior window coverings that prevent sunlight from entering the manufactured home. Choose from: Drapes, Blinds or Shades, Drapes with Blinds or Shades, or select None if there is no interior window shading.

Exterior Shading (%) - Enter the percent of the window which is shaded by overhangs or porches or hit enter to accept the default of 20%. Unless obviously shaded, use the default.

Leakiness - Select from the drop down–box, the leakiness category that best describes the fit of this window description: Very Tight, Tight, Medium, Loose, or Very Loose.

Average Size Section

Width (in) - Enter in inches, the average width of the windows described.

Height (in) - Enter in inches, the average height of the windows described.

Number on this Wall Section

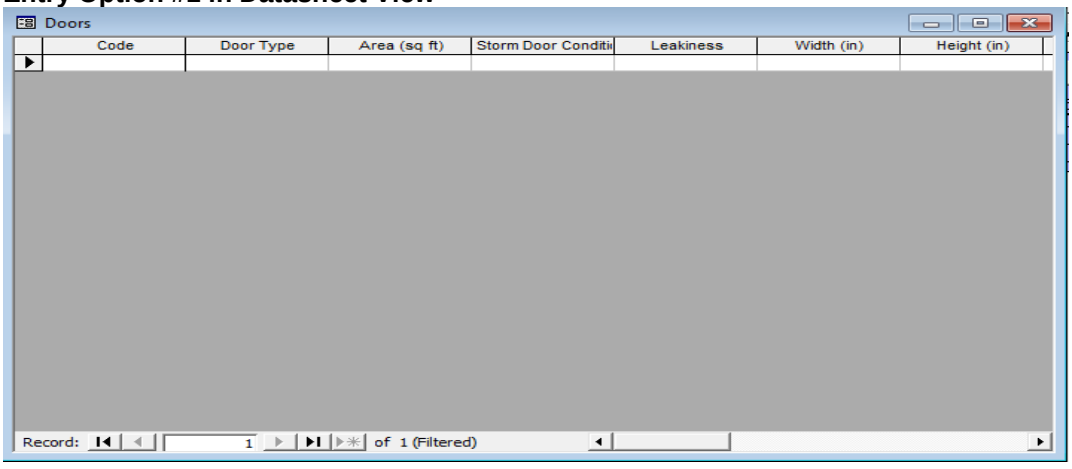
Wall Code - Each window must be associated with a wall that you have defined in the Walls Sub-tab. The Wall Code combo box brings up a list of available walls that have been defined. This Wall Code entry is how NEAT subtracts the window areas from the appropriate gross wall area.

Number - Enter the number of identical windows that match the description given on the remainder of the form.

Retrofit Options - Select “Evaluate All”. The retrofit of this window is optional.

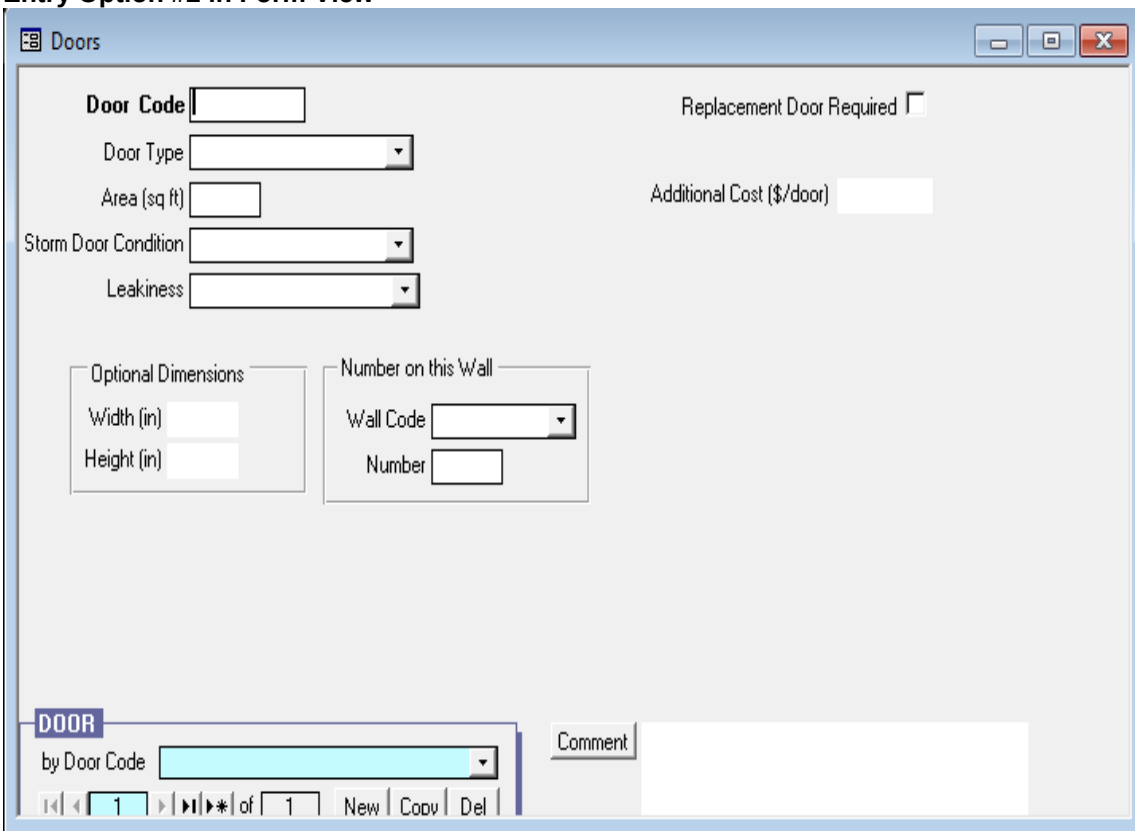
Walls Sub-tab – Doors on this Wall Button

Entry Option #1 in Datasheet View

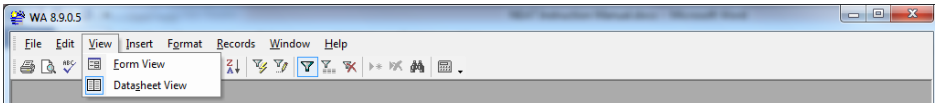


Walls Sub-tab – Doors on this Wall Button

Entry Option #2 in Form View



To change the “Datasheet View” to “Form View”, click View from the toolbar in the upper left corner of the form and select “Form View”.



Each door must be associated with a previously defined wall.

Door Code - Enter a unique door identifier.

Door Type - Select the type of existing door: Hollow Core Wood or Panel Door, Solid Core Wood, Insulated Steel, Single Pane Sliding Glass, or Double Pane Sliding Glass.

Area (sq ft) - Enter the average size of the doors in square feet.

- 36 x 80 = 20 sq. ft.
- 32 x 80 = 18 sq. ft.
- 30 x 80 = 17 sq. ft.

Storm Door Condition - Select the condition of the existing storm door: Adequate, Deteriorated, or None.

Leakiness - Select the leakiness category that best describes the fit of this door:

- **Tight** - Tight fitting doors will be structurally sound, having fully functional weather stripping, including a tight-fitting door sweep.
- **Medium**
- **Loose** - Loose doors will be ill fitted, have noticeable leakage sites surrounding them with no or non-functioning weather stripping and possible structural problems.

Optional Dimensions

Width (in) - Use these entries to record the width, in inches, of door openings.

Height (in) - Use these entries to record the height, in inches, of door openings.

Number on this Wall

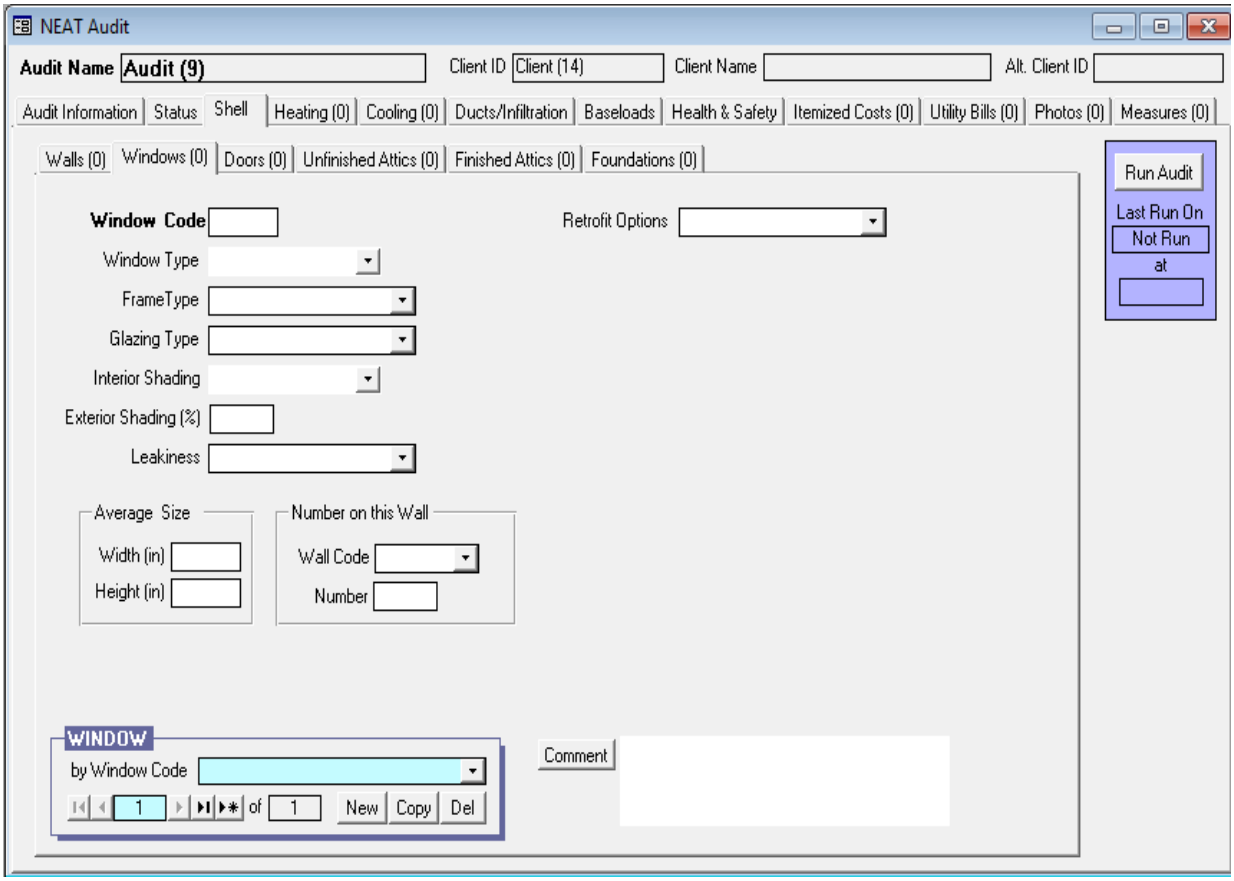
Wall Code - Each door must be associated with a wall that you have defined in the Walls Sub-tab. Pressing the button brings up a list of available walls that have been defined. This Wall Code entry is how NEAT subtracts the door area from the appropriate gross wall area.

Number - Enter the number of identical doors that match the description given on the remainder of the form.

Replacement Door Required - Do not check this box. Let the audit call for door replacement as an energy conservation measure (ECM).

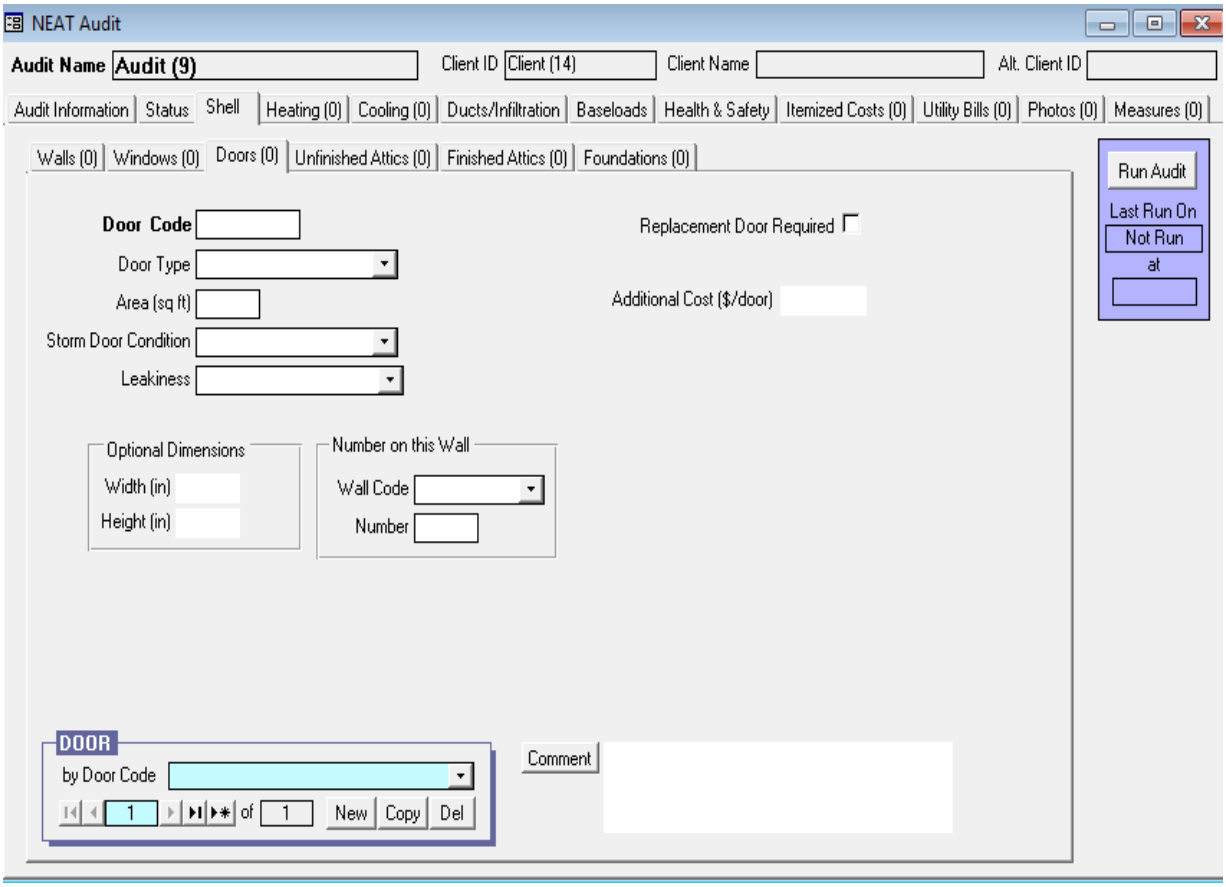
Additional Cost ($/door) – Do not use this field.

Windows Sub-tab



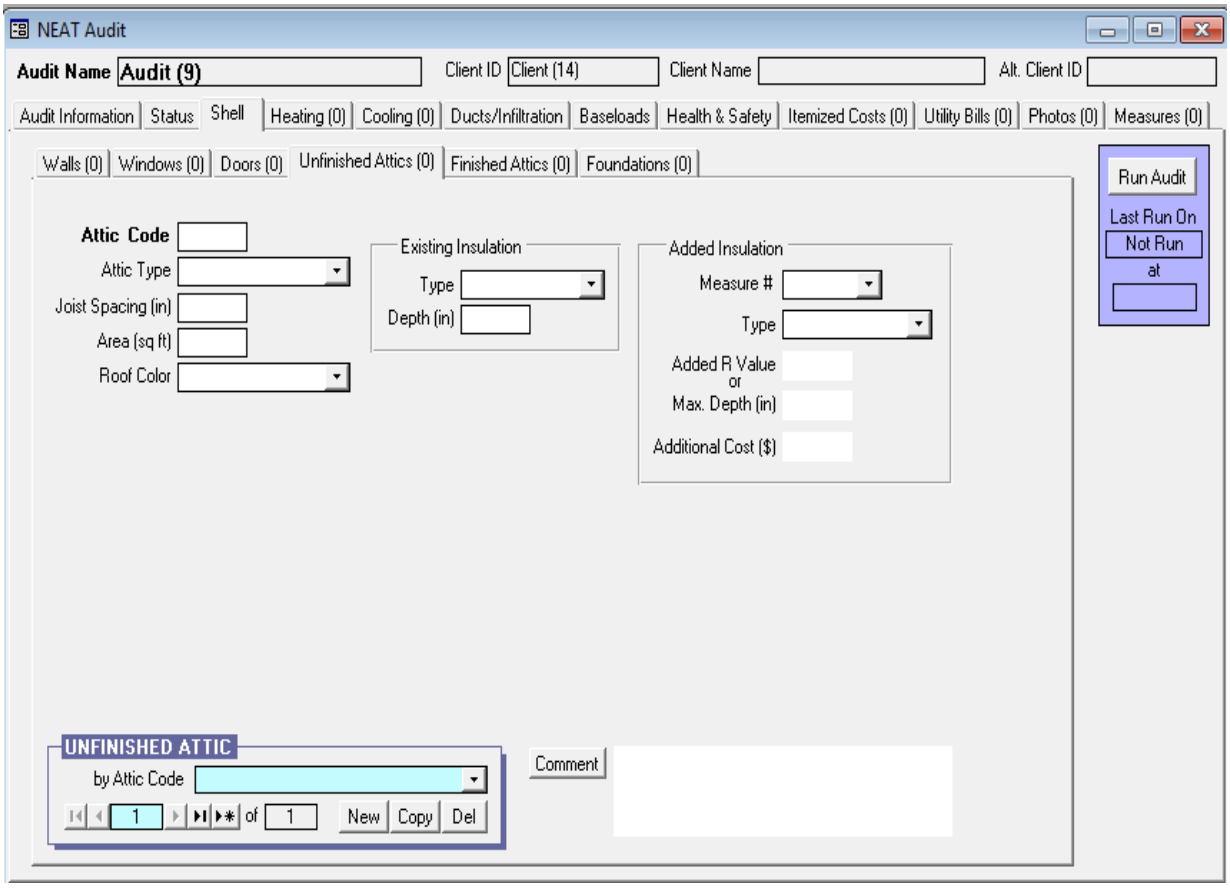
If the window information was entered in the Walls Sub-tab, this tab will not be used. If the window information was not entered in the Walls Sub-tab, enter it here. Remember window replacement is consider a repair cost and should be entered in the Itemized Costs Tab.

Doors Sub-tab



If the door information was entered in the Walls Sub-tab, this tab will not be used. If the door information was not entered in the Walls Sub-tab, enter it here.

Unfinished Attics Sub-tab



Attic Code – Enter a unique attic identifier or hit enter to accept the default.

Attic Type – Describe the attic using the following: Unfloored, Floored, or Cathedral or Flat.

Joist Spacing (in) – Enter inches between ceiling joists (usually 16” or 24”).

Area (sq ft) – Enter the area of the attic in square feet.

Roof Color – Select from: White, Reflective, or Shaded or Normal or Weathered.

Existing Insulation

Type – Describe the existing type of insulation using the following: None, Blown Cellulose, Blown Fiberglass, Rockwool, Fiberglass Batts, or Other. If unknown, use None.

Depth (in) – Enter, in inches the depth of the existing insulation. If none, this field will not be visible.

Added Insulation

Measure # - Enter a measure number starting with 1. Assign the same measure number to all attics with similar characteristics.

Type – Enter the type of insulation to be added using the following: None, Blown Cellulose, Blown Fiberglass, or Fiberglass Batts. Floored, cathedral and flat roofs must be dense-packed whenever possible.

Added R Value – Do not use this field.

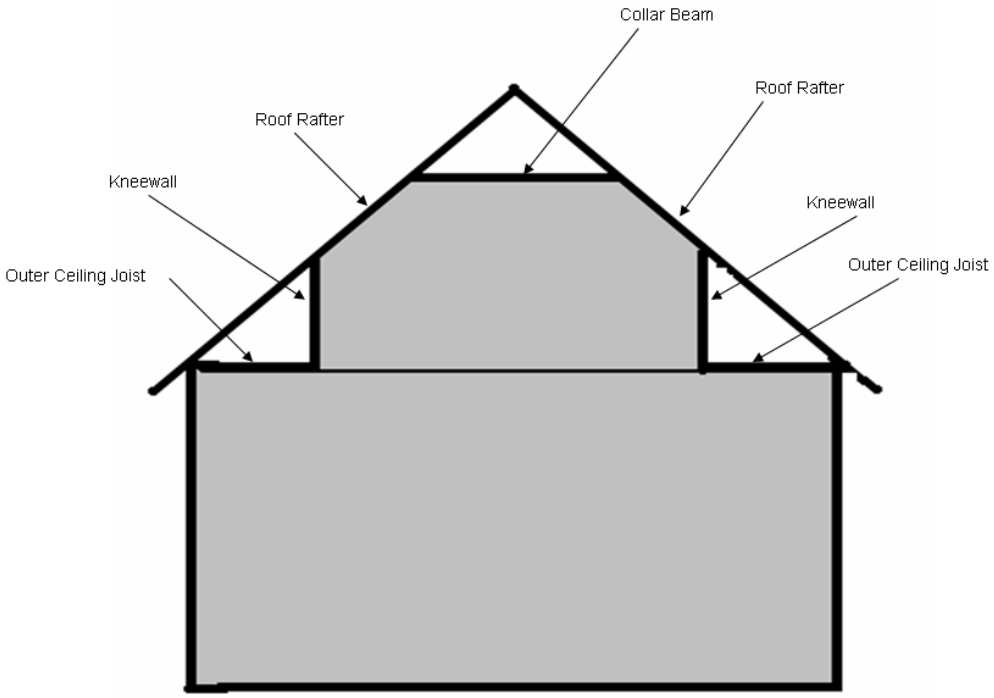
Max. Depth (in) – If this is a floored attic or an attic of restricted height (less than 15”); enter the total maximum depth of the attic. If this is an open blow attic, leave this field blank.

Additional Cost ($) – Do not use this field.

Finished Attics Sub-tab

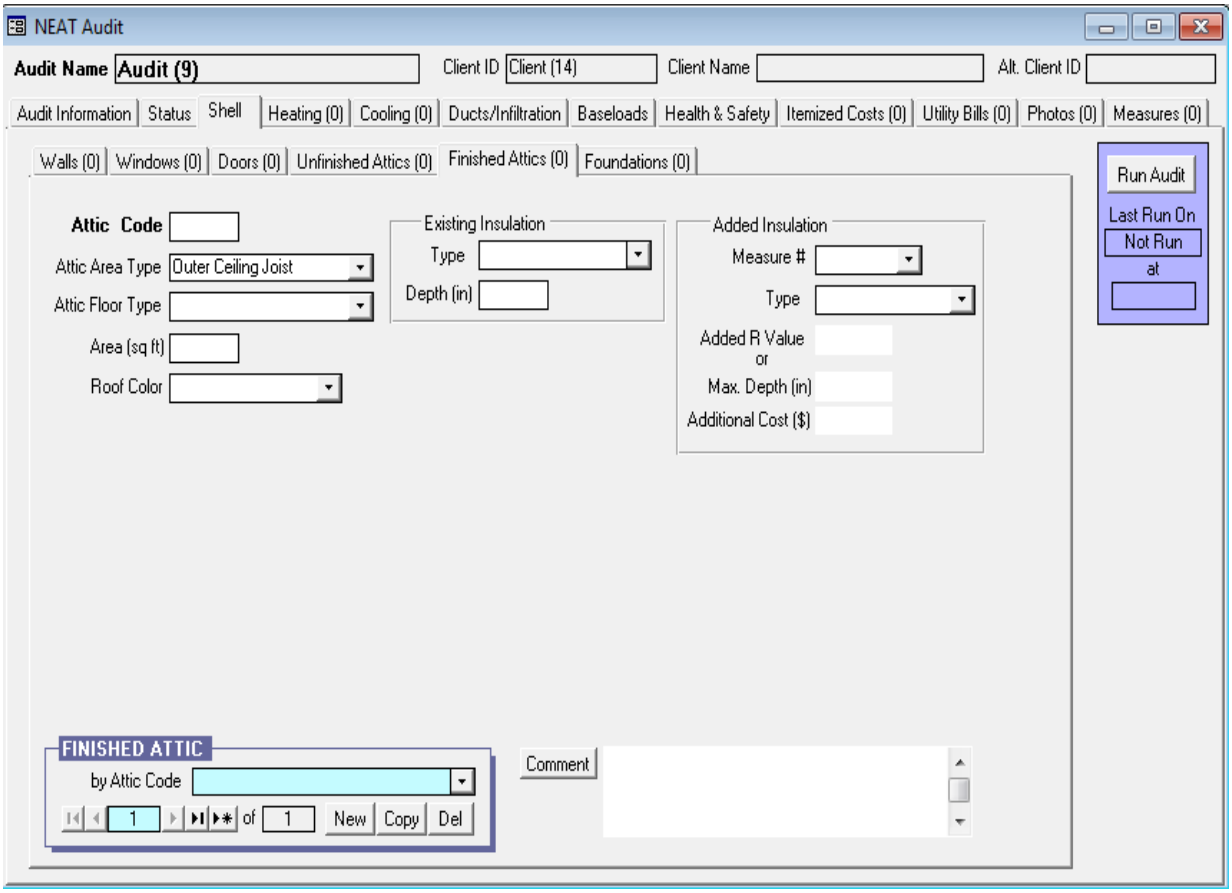
There are four screens shown here. Depending on the Attic Code selected (Outer Ceiling Joist, Collar Beam, Kneewall, or Roof Rafter), different fields are available. Each type of finished attic will have a different measure number.

FINISHED ATTIC EXAMPLE: Select one of the four Finished Attic component types shown in the illustration.



Finished Attic Sub-Tab

Outer Ceiling Joist



Attic Code – Enter a unique attic identifier or hit enter to accept the default.

Attic Area Type – Select Outer Ceiling Joist.

Attic Floor Type - Enter a description of the attic using: Unfloored or Floored. If some of both types of attic are present in the house, two different Finished Attic records would be used.

Area (sq ft) – Enter the area of the attic described in square feet.

Roof Color – Select from: W**hite, Reflective, or Shaded**, or **Normal or Weathered**. The reflectance of the roof affects how solar energy impacts the heating and cooling loads of the home.

Existing Insulation

Type – Describe the existing insulation using the following: None, Blown Cellulose, Blown Fiberglass, Rockwool, Fiberglass Batts, or Other.

Depth (in) – Enter, in inches the depth of the existing insulation. If none, this field will not be visible.

Added Insulation

Measure # – Enter a measure number starting with 1. Assign a different measure number to each type of finished attic.

Type – Enter the type of insulation to be added using the following: None, Blown Cellulose, Blown Fiberglass, or Fiberglass Batts.

Added R Value – Do not use this field.

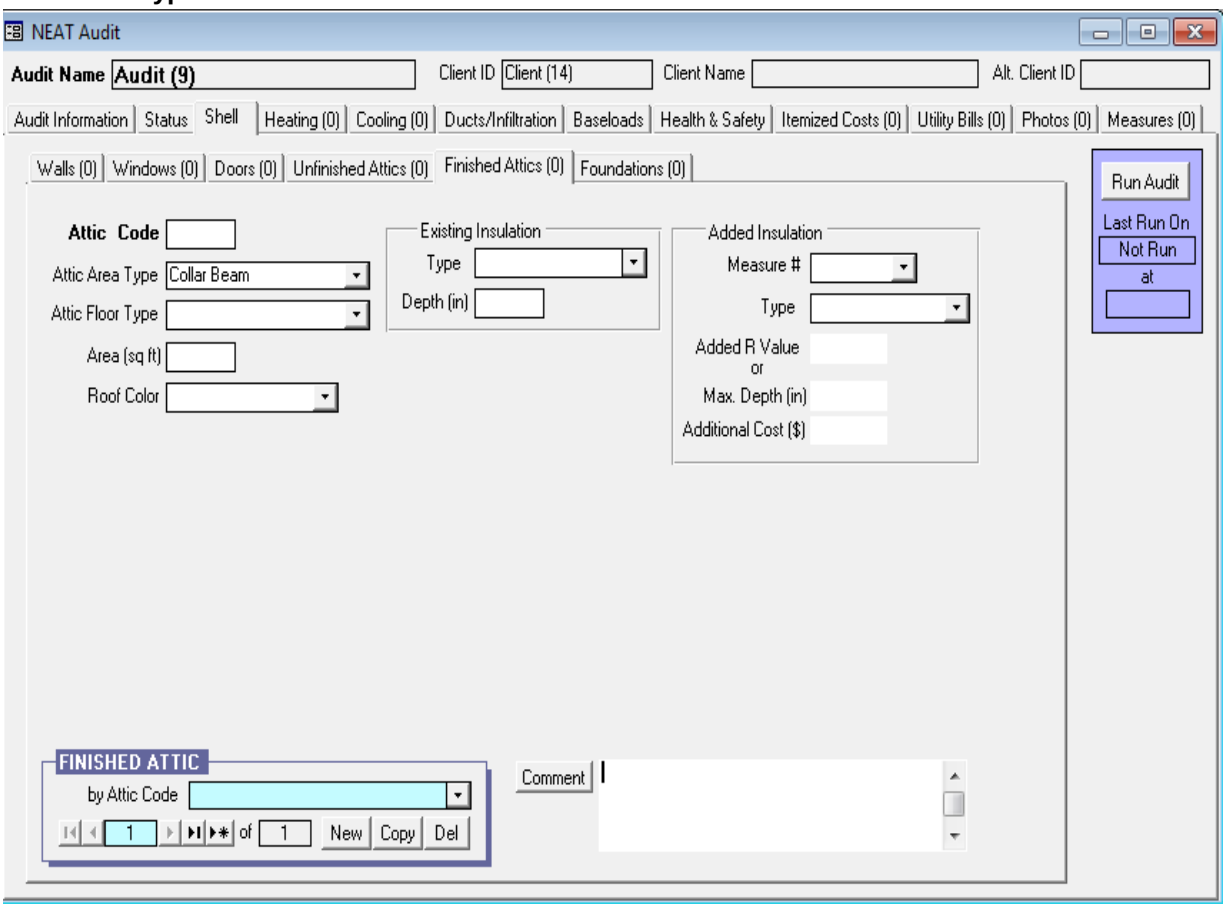
Max. Depth (in) – If this is a floored attic or an attic of restricted height (less than 15”), enter the total maximum depth of the attic. If this is an open blow attic, leave this field blank.

Additional Cost ($) – Do not use this field.

Comment – Enter any additional information about the outer ceiling joist here.

Finished Attics Sub-tab

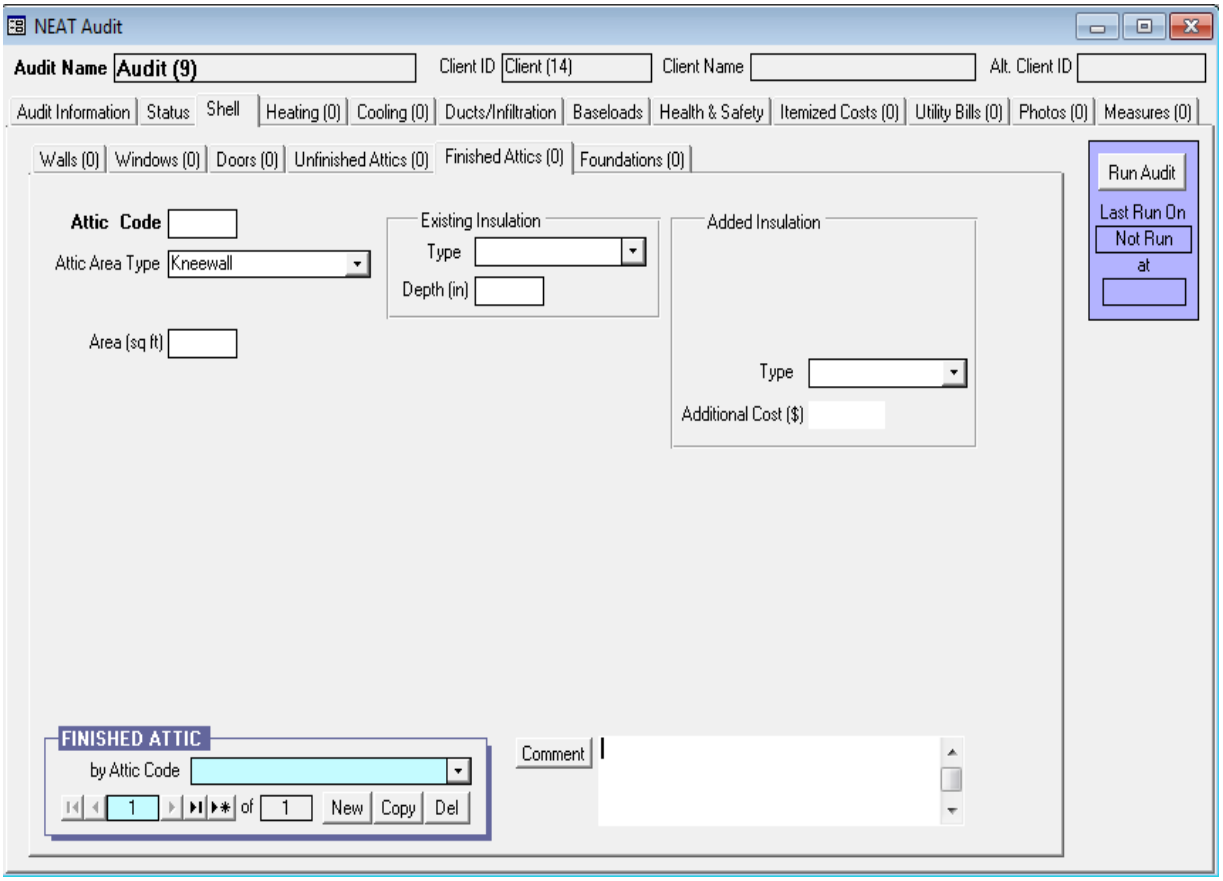
Attic Area Type - Collar Beam



Entry is the same as Outer Ceiling Joist.

Shell Tab - Finished Attics Sub-tab

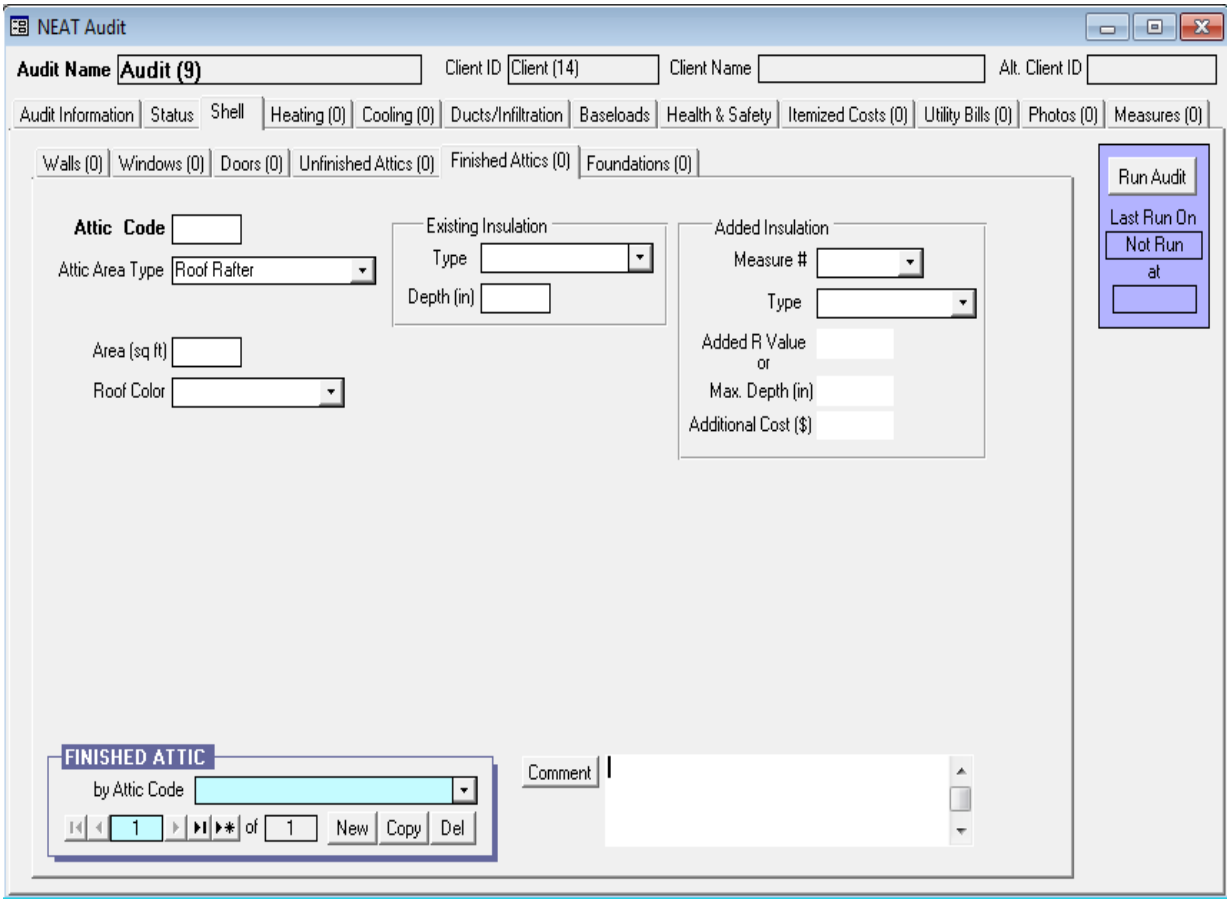
Attic Area Type - Kneewall



DO NOT use this screen for kneewall areas.

Finished Attics Sub-tab

Attic Area Type - Roof Rafter



This screen is for roof rafter (or sloped) areas.

Attic Code – Enter a unique identifier or hit enter to accept the default.

Attic Area Type – Select Roof Rafter.

Area (sq ft) – Enter the area of the roof rafter in square feet.

Roof Color – Select from: **White, Reflective, or Shaded** or **Normal, or Weathered.** The reflectance of the roof affects how solar energy impacts the heating and cooling loads of the home.

Existing Insulation

Type – Describe the existing type of insulation using the following: None, Blown Cellulose, Blown Fiberglass, Rockwool, Fiberglass Batts, or Other.

Depth (in) – Enter, in inches the depth of the existing insulation. If none, this field will not be visible.

Added Insulation

Measure # – Enter a measure number starting with 1. Assign a different measure number to each type of finished attic. Roof rafters must be dense-packed and sealed at one or both ends, whichever is possible.

Type – Enter type of insulation to be added using the following: None, Blown Cellulose, Blown

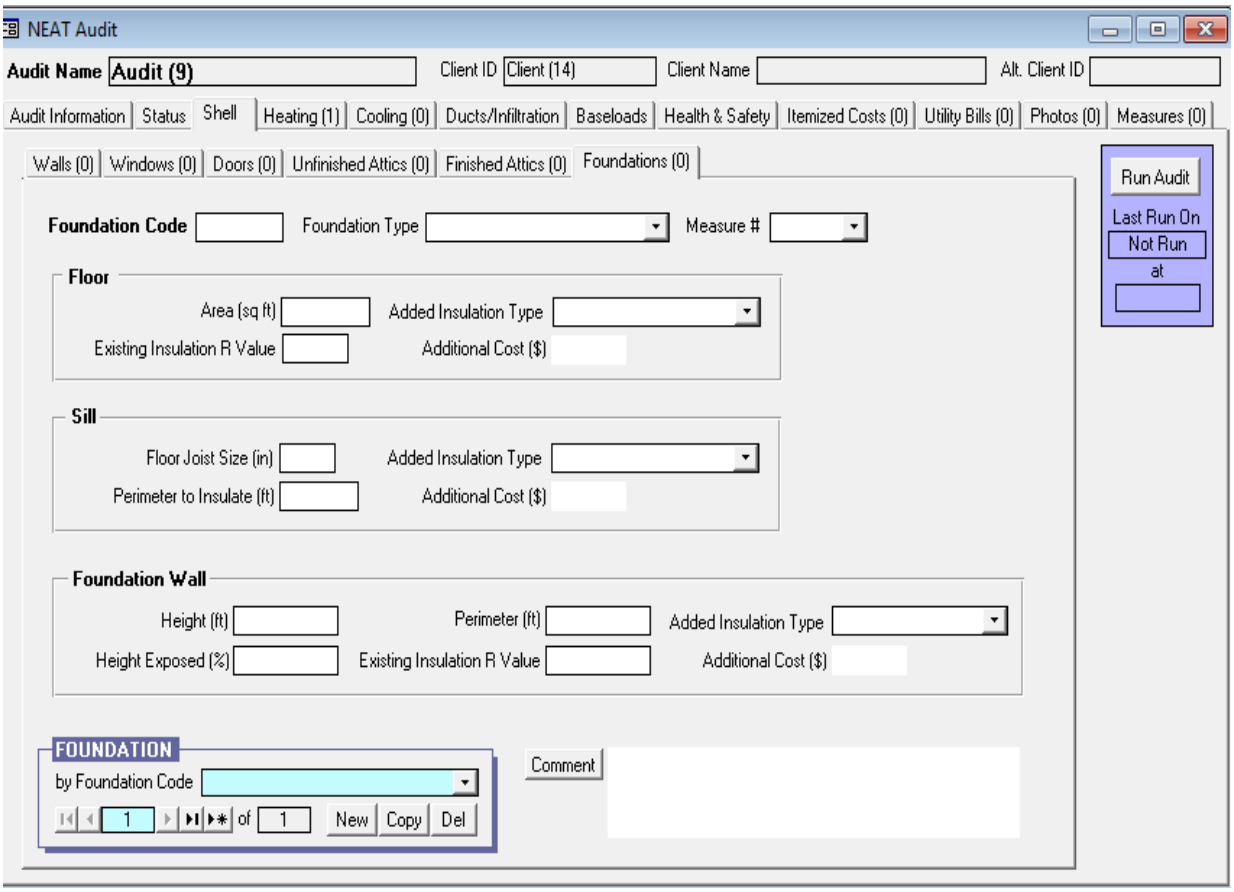
Fiberglass.

Added R Value – Do not use this field.

Max. Depth (in) – Enter the total maximum depth of the roof rafter (sloped area), in inches.

Additional Cost ($) – Do not use this field.

Foundations Sub-tab



Foundation Code – Enter a unique identifier for each foundation type or hit enter to accept the default code.

Foundation Type – Describe the type of foundation using the following:

- Conditioned – Intentionally heated living space or space that has an open register(s).
- Non-Conditioned – No heat source other than condition through uninsulated walls and floors. Vented Non-Conditioned – Vents are directly vented to the outside, even if a furnace or uninsulated ductwork is present.
- Unintentionally Conditioned – A space that has no open register and is heated by the by-waste from heating equipment, such as ductwork from the furnace.
  This can include a basement or crawlspace with an open register where the foundation is considered the thermal boundary.
- Uninsulated Slab – No opening below the house floor, just a slab (usually concrete).
- Insulated Slab – Occasionally a slab perimeter is insulated – very rare.
- Exposed Floor – Cantilevered floors.

Measure # – Enter a measure number starting with 1. Assign a different measure number to each foundation description.

Floor

Area (sq ft) – Enter the total area, in square feet, of the floor directly above the foundation you are describing.

Existing Insulation R Value – Enter the R-value of the existing insulation in the ceiling over the basement or crawlspace you are describing. No insulation = 0

Added Insulation Type – Enter the type of insulation to be added using the following: None, Fiberglass Batts, or Blown Cellulose.

Additional Cost ($) – Do not use this field.

Sill

Floor Joist Size (in) – Enter the height of the floor joist, in inches.

Perimeter to Insulate – Enter the total accessible sill area to insulate, in linear feet.

Added Insulation Type – Enter the type of insulation to be added using the following: None, Fiberglass Batts, Rigid Foam Board, or 2" Extruded Polystyrene.

Additional Cost ($) – Do not use this field.

Foundation Wall

Height (ft) –Enter the height of the wall you are describing, in feet.

Height Exposed (%) – Enter the percentage of the wall that is exposed above grade (height of wall above the ground).

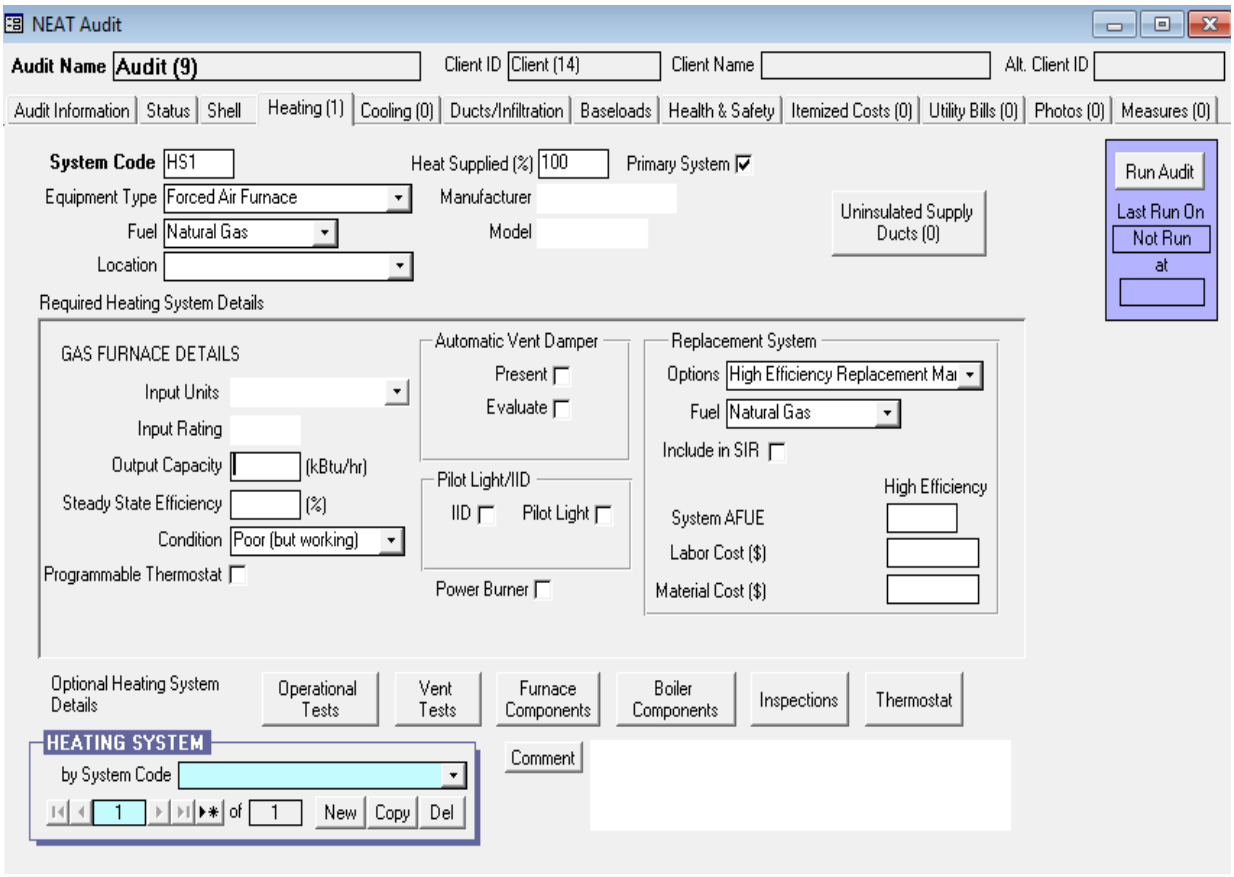
Perimeter (ft) – Enter the total area, in feet, that is exposed to the outside. If a section of wall is buffered from the outside, do not include it in the total area.

Existing Insulation R Value – Enter the R Value of the existing insulation on the wall in the basement or crawlspace you are describing. No insulation = 0

Added Insulation Type – Enter the type of insulation to be added using the following: None, Rigid Foam Board, 2" Extruded Polystyrene, Fiberglass Batts, Wet Spray Cellulose.

Additional Cost ($) – Do not use this field.

Heating Tab



System Description

System Code – Enter a unique identifier or hit enter to accept the default.

Equipment Type – Describe the existing type of heating system using the following: Gravity Furnace, Forced Air Furnace, Steam Boiler, Hot Water Boiler, Fixed Electric Resistance, Portable Electric Resistance, Heat Pump, Vented Space Heater, Unvented Space Heater, or Other.

Fuel – Select the type of fuel used for heating: Natural Gas, Oil, Electricity, Propane, Wood, Coal, Kerosene, or Other.

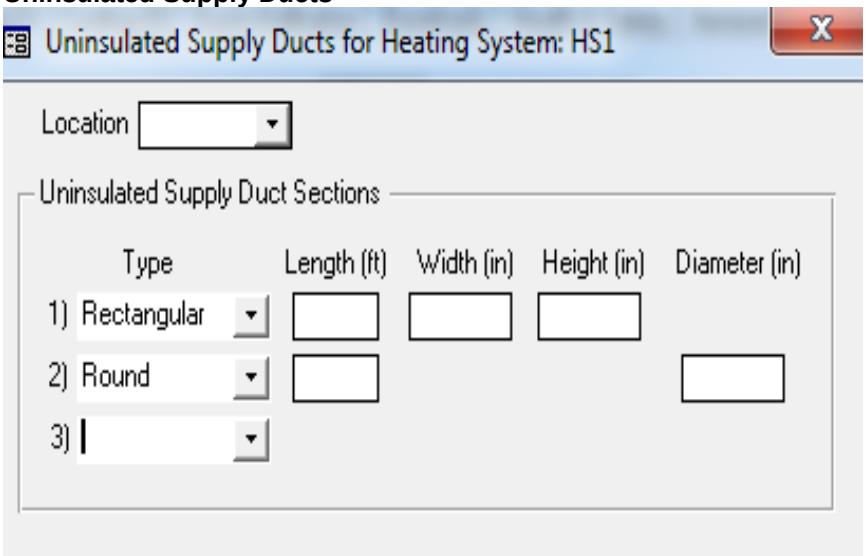
Location – Describe where the heating system sits using the following: Heated Space, Unconditioned Space, or Unintentionally Heated Space. Most basements are Unintentionally Heated.

Heat Supplied – Enter the percent of heat supplied by this unit. If there is only one heating system, it would be 100%.

Manufacturer – Enter the manufacturer name. This field is optional.

Model – Enter the unit model number. This field is optional.

Uninsulated Supply Ducts



Location – Attic, or Subspace

Type – Rectangular, or Round

Length (ft) – Enter the linear feet of uninsulated supply duct outside the thermal barrier.

Width (in) – Enter the width, in inches, of uninsulated supply duct outside the thermal barrier.

Height (in) – Enter the height, in inches, of uninsulated supply duct outside the thermal barrier.

Diameter (in) – Enter the diameter, in inches, of uninsulated supply duct outside the thermal barrier.

Required Heating System Details

Input Units - Enter the input units based on fuel type. Select from: No Input (if unknown), kBtu per Hour, Gallons per Hour, Lbs per Hour, or Cubic Centimeters per Hour.

- Natural Gas – kBtu per Hour
- Oil – Gallons per Hour
- Electric – This field will not be available
- Propane – kBtu per Hour
- Wood – Lbs (pounds) per Hour
- Coal – Lbs (pounds) per Hour
- Kerosene – Gallons per Hour

Input Rating – Enter the input rating of the existing heating system in units per hour. This information is usually found on a plate attached to the unit.

Output Capacity – Enter the output rating of the existing heating system in units per hour. This information is usually found on a plate attached to the unit, or can be calculated by taking the output steady state efficiency (SSE) number from the combustion gas analyzer and dividing it by the input rating of the unit. Example: Output SSE of 84 (obtained from the combustion gas analyzer) / input rating of 125,000 Btu = 0.672%.

Steady State Efficiency – Unless you actually test the steady state efficiency of the heating unit, just hit enter to accept the calculated rating. We recommend testing for steady state efficiency, which helps with replacing a furnace as an efficiency measure.

Condition – Enter the condition of the existing unit using the following: Good, Fair, or Poor (but working).

Programmable Thermostat – If a programmable thermostat has been installed, mark this checkbox if the client uses it to set the temperature back at night. If the box is marked and the client doesn't set it back, the NEAT audit will assume a set back and calculate a 6° set back every night.

Automatic Vent Damper

Present – If there is an existing mechanical vent damper, mark this checkbox. Induced power draft or, 90+ furnace is considered to have a vent damper.

Evaluate – Do not mark this checkbox.

Pilot Light/IID

IID – Mark this checkbox if the existing system has an intermittent ignition device (electronic igniter, such as a spark or glow igniter).

Pilot Light – Mark this checkbox if the system has a standing pilot light.

On in Summer – Mark this checkbox if the standing pilot light is left on during the summer months.

Power Burner - Mark this checkbox if there is an existing power burner. This option is only available for natural gas or propane heating systems.

Replacement System

Options - This entry tells NEAT about the current status of the primary heating system and what you wish the program to evaluate relating to replacement or tuning up the system.

Select one of the six following choices:

1. **Evaluate All** - Evaluate both heating system replacement (standard and high efficiency) and system tune- up and recommend the most cost-effective option, if any. Replacement system efficiencies and costs for both standard and high-efficiency replacements will be requested in subsequent fields.

2. **Tuneup Performed** – Evaluate Replacements Only - A tune-up of the system has already been performed. The Steady State Efficiency given on the form is the efficiency of the tuned-up system. NEAT will not evaluate the system tune-up measure. Replacement system efficiencies and costs for both standard and high-efficiency replacements will be requested in subsequent fields.

3. **Tuneup Mandatory** - Inspection of the heating system has indicated that a system tune-up is all that is necessary. NEAT will evaluate and recommend the system tune-up, regardless of its cost-effectiveness. The tuned-up system will then be used in evaluating other measures not considered mandatory. No system replacement will be considered.

4. **Standard Efficiency Replacement Mandatory** - NEAT will consider replacement of the existing heating system with a standard efficiency system as mandatory. This may be the result of an unsafe yet un-repairable existing system. NEAT will recommend the replacement regardless of its cost-effectiveness. The replacement system efficiency and cost for the standard unit will be requested in subsequent fields. The efficiency of the replacement system will be used in evaluating other

measures not considered mandatory. No system tune-up or high-efficiency replacement will be considered.

5. **High Efficiency Replacement Mandatory** - NEAT will consider replacement of the existing heating system with a high-efficiency system as mandatory. This may be the result of an unsafe yet un-repairable existing system. NEAT will recommend the replacement regardless of its cost-effectiveness. The replacement system efficiency and cost for the high-efficiency unit will be requested in subsequent fields. The efficiency of the replacement system will be used in evaluating other measures not considered mandatory. No system tune-up or standard efficiency replacement will be considered.

6. **Don't Replace – Evaluate Tuneup Only -** No system replacement (either standard or high-efficiency) will be considered. The tune-up measure, however, will still be considered and recommended if cost-effective.

If the system will be replaced for health and safety reasons (cracked heat exchanger, etc.), select “High Efficiency Replacement Mandatory” and mark the “Include in SIR” checkbox. The NEAT audit will call for a furnace replacement. If the individual SIR is 1.0 or greater, the furnace may be replaced for efficiency reasons. If the SIR is less than 1.0, go back to the heating tab and unmark the “Include in SIR” checkbox, and re-run the audit. The furnace will be replaced as a health and safety measure. If you’re checking to see if replacement would be cost-effective, enter it as “Evaluate All”.

Note: Mandatory system replacement or tune-up will be placed at the top of the recommended measures list, regardless of the computed SIR, thus affecting savings of all measures following it. In some cases, if the individual SIR is 1.0 or greater, rerun the audit, selecting Evaluate All. This change may cause the furnace replacement to drop down in the order of the recommended measures list and allow for other measures to be completed, which would have otherwise not been considered because of the lower individual SIR of the mandatory selection.

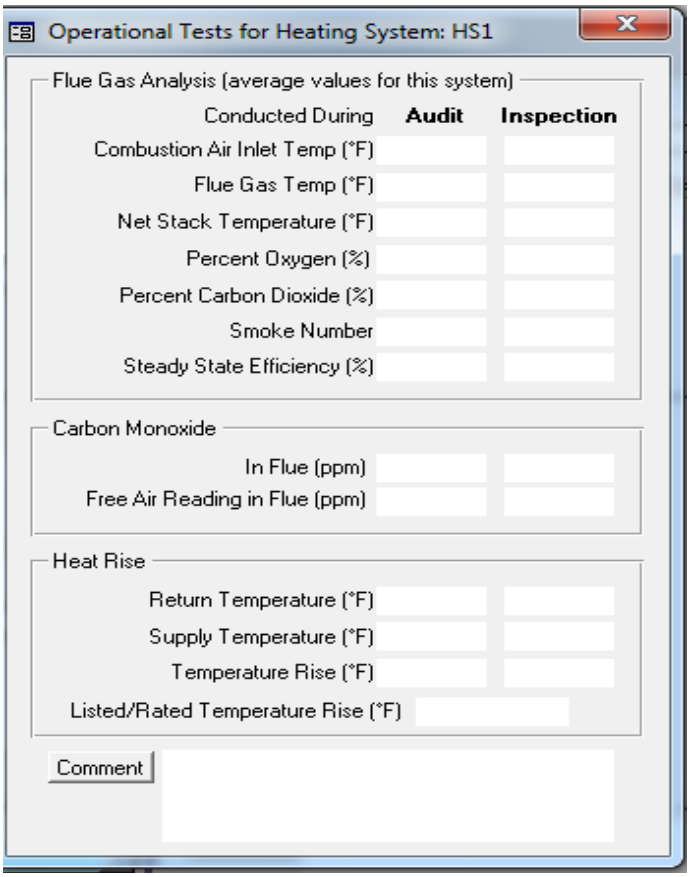
Fuel – Enter the type of fuel the replacement furnace will use: Natural Gas, Oil, Electricity, and Propane are the most common fuel types. Others are Wood, Coal, Kerosene, and Other.

System AFUE - Enter the AFUE (Annual Fuel Utilization Efficiency) for the replacement unit.

Labor Cost ($) – Enter the agency’s average labor cost for furnace replacements.

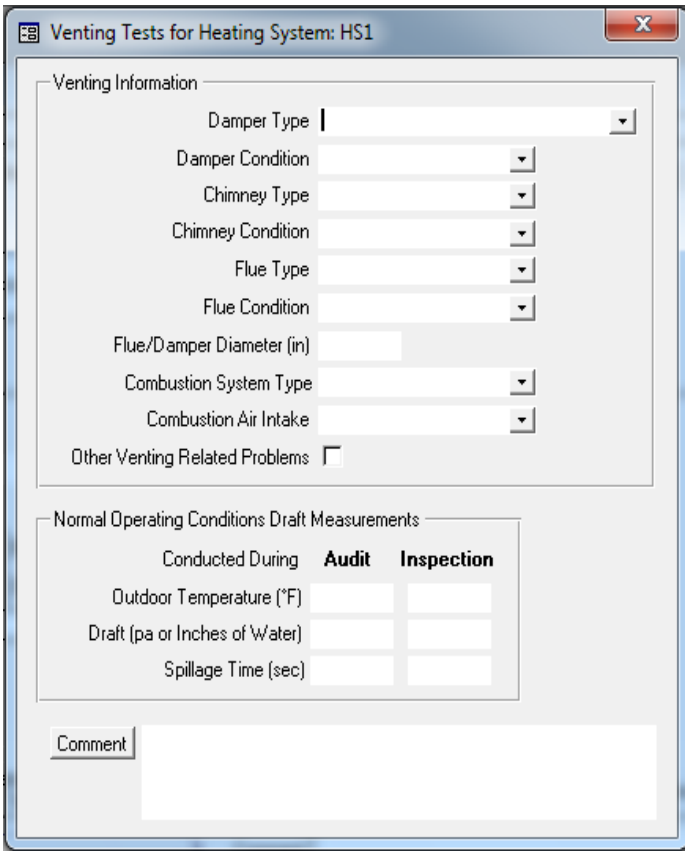
Material Cost ($) – Enter the agency’s average material costs for furnace replacements.

Heating Tab - Operational Tests for Heating System Button



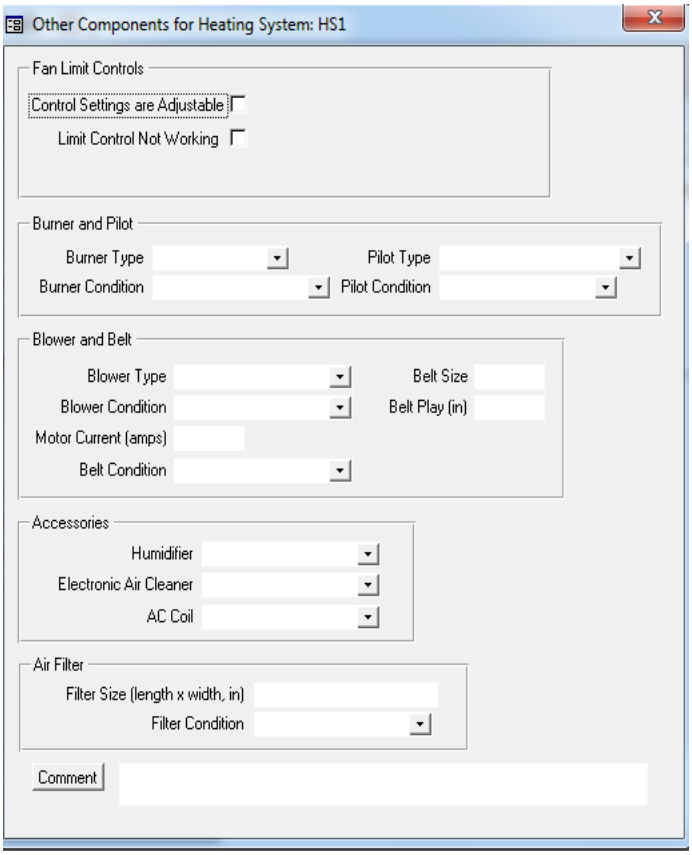
You can enter applicable test information in these sections. Entry is optional.

Heating Tab -Venting Test for Heating System Button



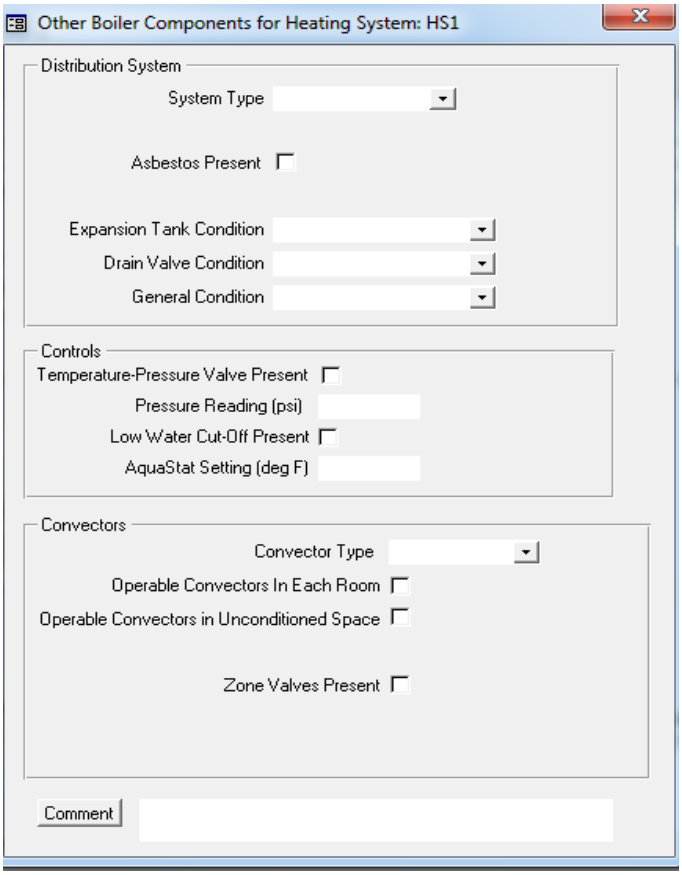
You can enter applicable test information in these sections. Entry is optional.

Heating Tab - Other Components for Heating System Button



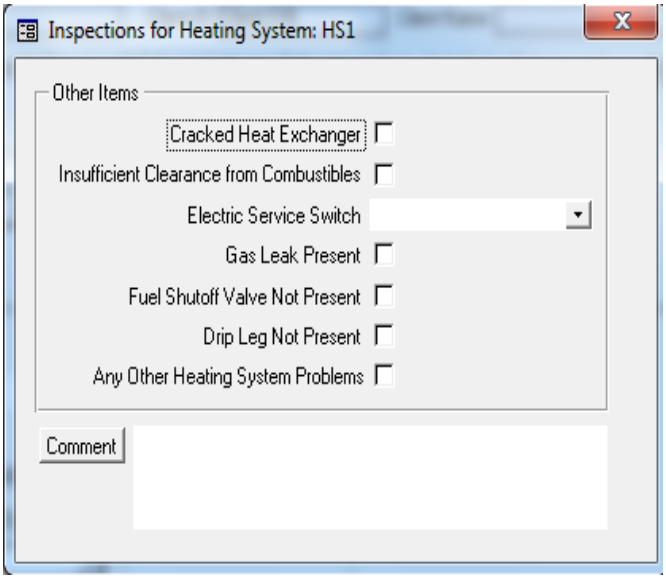
All information in this screen is optional information that can be filled in.

Heating Tab - Other Boiler Components for Heating System Button



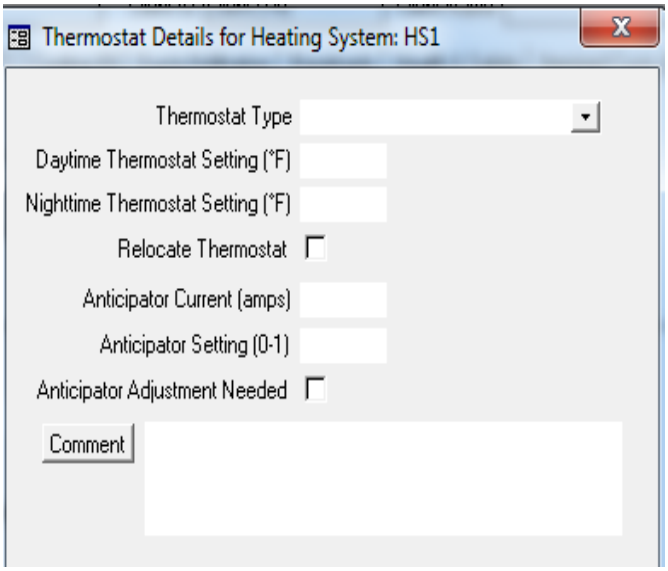
All information in this screen is optional information that can be filled in.

Heating Tab - Inspections for Heating System Button



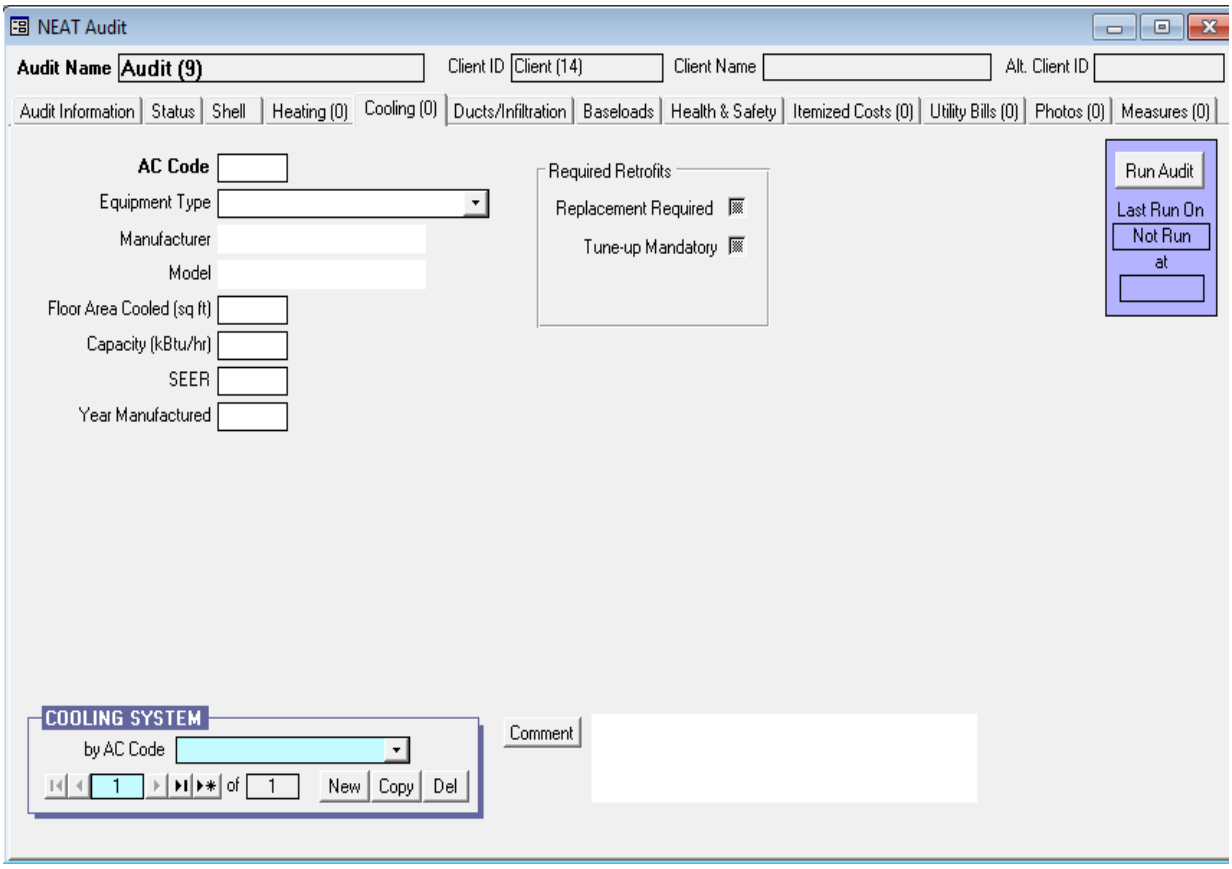
All information in this screen is optional information that can be filled in.

Heating Tab -Thermostat Details for Heating System Button



All information in this screen is optional information that can be filled in.

Cooling Tab



AC Code – Enter a unique identifier for each air conditioner or hit enter to accept the default.

Equipment Type – Describe the existing air conditioner using the following: Central Air Conditioner, Window or Room Air Conditioner, Heat pump, or Evaporative Cooler.

Manufacturer – Enter the manufacturer's name. This field is optional.

Model – Enter the model number of the unit. This field is optional.

Floor Area Cooled (sq ft) – Enter, in square feet, the total area cooled by the unit.

Capacity (kBtu/hr) – Enter the size of the unit, in kBTU per hour. 1 ton = 12,000 BTU (12 kBtu)

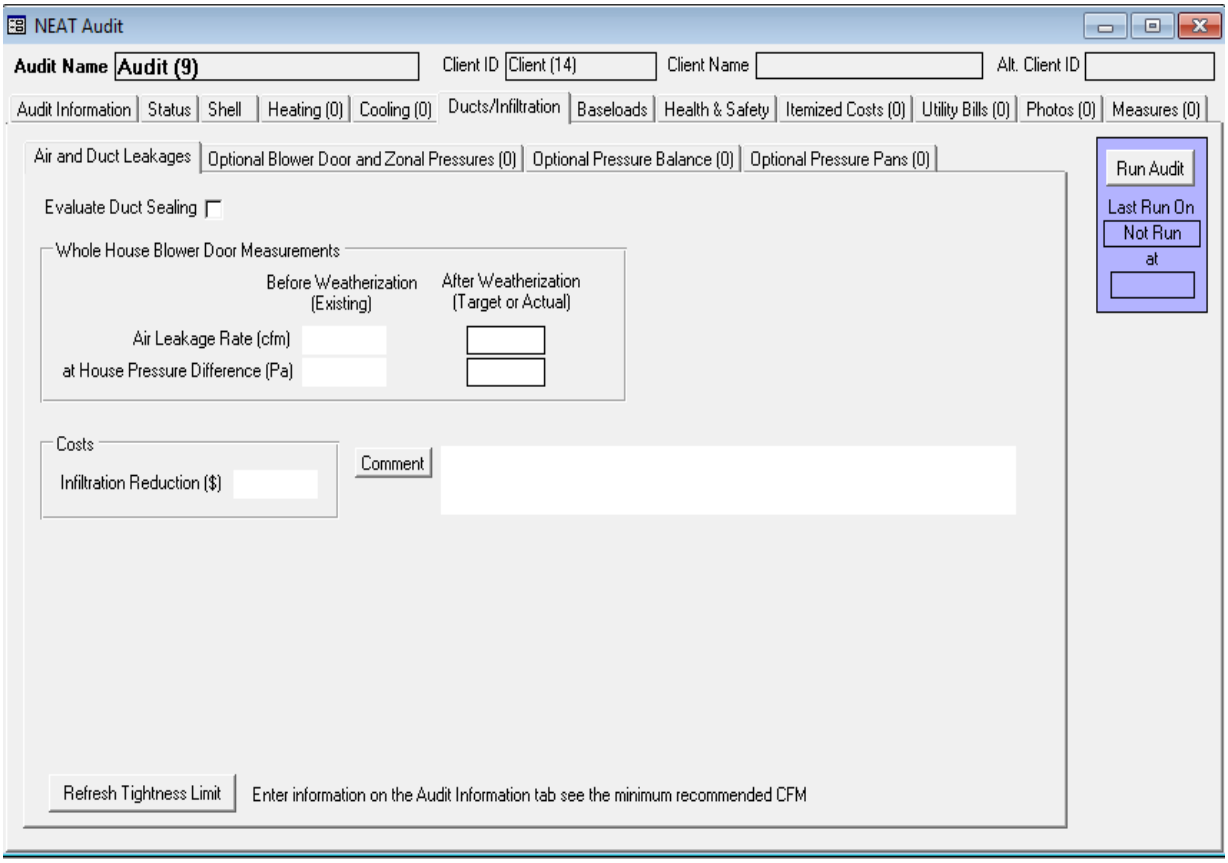
SEER – If known, enter the SEER. To convert the EER noted on a window air conditioner to SEER, use the following formula: SEER = (1.2 x EER) - 0.7 if fan is running during cooling only, and SEER = (0.9 x EER) + 0.1 if fan is running continuously.

Year Manufactured – If the SEER (or EER) is not known, enter the year manufactured.

Note: If you enter information in the SEER field, you do not need to enter information into the Year Manufactured field. If you enter information into the Year Manufactured field, you do not need to enter information into the SEER field.

Ducts/Infiltration Tab

Air and Duct Leakages Sub-tab



Evaluate Duct Sealing - Do not mark this checkbox because we consider it a health and safety measure.

Whole House Blower Door Measurements

Air Leakage Rate (cfm) – Enter the beginning blower door reading in the Before Weatherization (Existing) column. Enter the estimated ending blower door reading in the After Weatherization (Target or Actual) column. The Iowa Weatherization Program requires the input of pre- and post-weatherization blower door readings for the NEAT Audit. The initial reading must be actual data obtained at the time of evaluation. The post- reading for NEAT data may be based on an estimation or come from the table below.

At House Pressure Difference (Pa) – Hit enter to accept the default value of 50 Pascal's.

Costs

Infiltration Reduction ($) – Enter the estimated costs for all infiltration measures. Costs must be entered to get SIR credit for infiltration work.

Comment – Enter any additional information about air and duct leakages here.

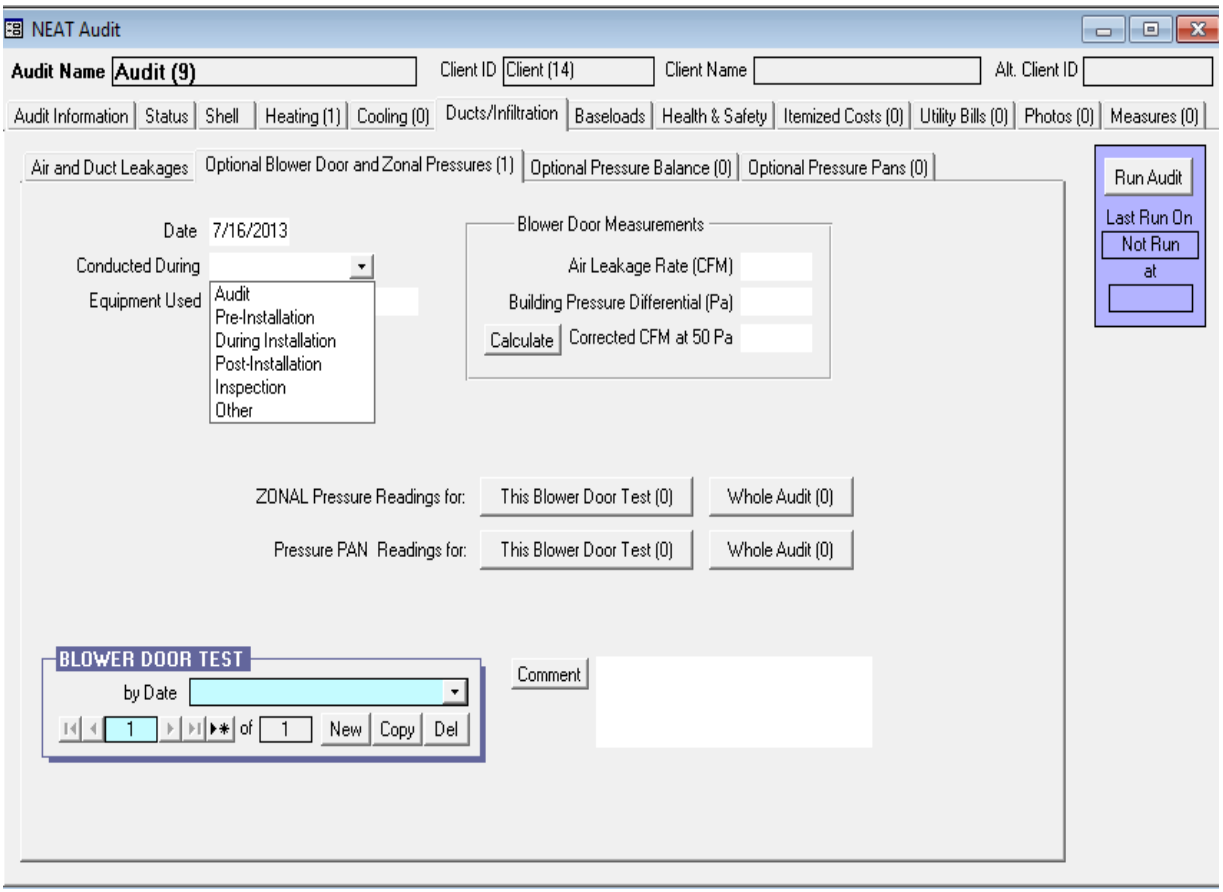
The chart below is an average CFM reduction recorded for several years based on the volume of the house.

Across the top of the chart is the house volume. Down the left side is the pre-WX blower door reading. Follow the pre-blower door reading across to the closest volume number of the house. This is the average post-CFM reduction.

ESTIMATED POST-WX BLOWER DOOR READINGS
based on volume of house

House Volume	6000	8000	10000	12000	14000	16000	18000	20000	22000	24000	26000
Pre-wx blower door											
1000	700	800	850	950	1000	1000	1000	1000	1000	1000	1000
1200	800	900	950	1050	1100	1150	1200	1200	1200	1200	1200
1400	900	1000	1050	1150	1200	1250	1350	1400	1400	1400	1400
1600	1000	1100	1150	1200	1300	1350	1450	1500	1600	1600	1600
1800	1100	1200	1250	1300	1400	1450	1550	1600	1700	1750	1800
2000	1200	1250	1350	1400	1500	1550	1650	1700	1800	1850	1950
2200	1300	1350	1450	1500	1600	1650	1750	1800	1900	1950	2050
2400	1400	1450	1550	1600	1700	1750	1850	1900	2000	2050	2150
2600	1500	1550	1650	1700	1800	1850	1950	2000	2100	2150	2250
2800	1600	1650	1750	1800	1900	1950	2050	2100	2200	2250	2350
3000	1700	1750	1850	1900	2000	2050	2150	2200	2300	2350	2400
3200	1800	1850	1850	2000	2100	2150	2250	2300	2350	2450	2500
3400	1900	1950	2050	2100	2200	2250	2350	2400	2450	2550	2600
3600	2000	2050	2150	2200	2300	2350	2400	2500	2550	2650	2700
3800	2100	2150	2250	2300	2400	2450	2500	2600	2650	2750	2800
4000	2200	2250	2350	2400	2450	2550	2600	2700	2750	2850	2900
4200	2300	2350	2400	2500	2550	2650	2700	2800	2850	2950	3000
4400	2400	2450	2500	2600	2650	2750	2800	2900	2950	3050	3100
4600	2450	2550	2600	2700	2750	2850	2900	3000	3050	3150	3200
4800	2550	2650	2700	2800	2850	2950	3000	3100	3150	3250	3300
5000	2650	2750	2800	2900	2950	3050	3100	3200	3250	3350	3400

Blower Door and Zonal Pressures Sub-tab



Additional blower door related readings may be taken for diagnostic purposes. These optional readings may be recorded under three additional Sub-tabs under the "Ducts/Infiltration" tab: "Optional Blower-Door and Zonal Pressures," "Optional Pressure Balance," and "Optional Pressure Pans."

The zonal pressure test done during the evaluation can be recorded in the appropriate fields and all other applicable forms associated with zonal pressure testing.

Date – Enter the date of evaluation.

Conducted During - Select “Audit” from the drop-down box.

Equipment Used – This is an optional field.

Blower Door Measurements

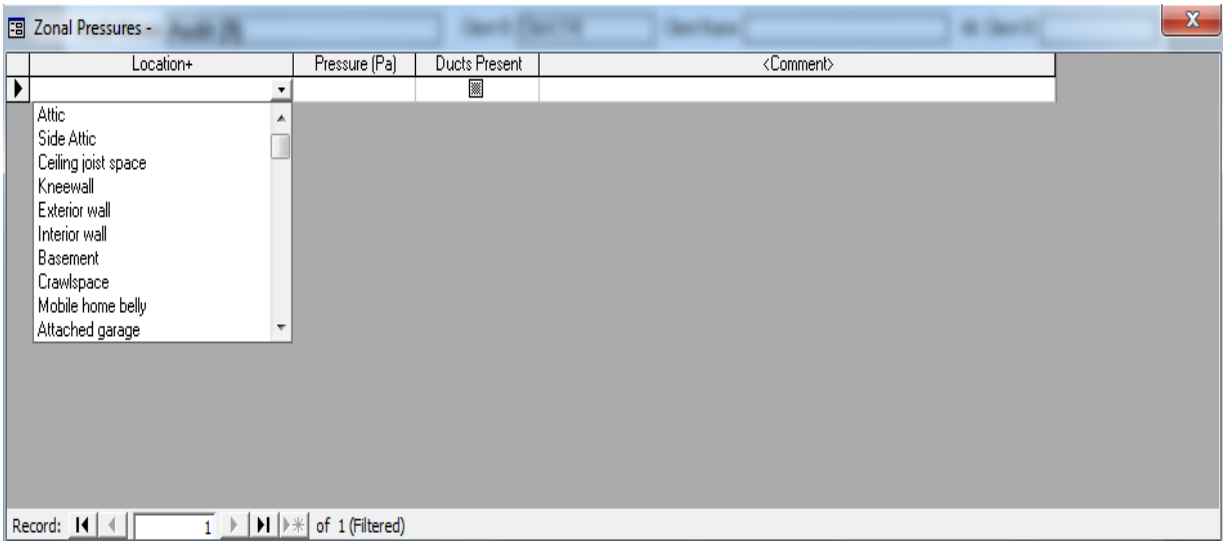
This section is an optional section that would be used if you couldn’t get the blower door to reach 50pa when conducting the blower door test.

Air leakage Rate (CFM) – Enter the rate, in CFMs, from the blower door test.
Building Pressure Differential (Pa) – Enter the building [to outside] pressure differential (Pa) if other than 50.

Corrected CFM at 50 Pa – Clicking the “Calculate” button will automatically apply the "Can't Reach 50" factor to provide you with a CFM at 50 Pascal’s in the adjoining field.

Zonal Pressure Readings for

This Blower Door Test - Zonal pressures are pressure differences between the main part of the house where the blower door has been installed and various zones of the house, such as attics, basements, attached garages, etc. These measurements may be made in conjunction with a blower door measurement for a variety of reasons, such as to help identify the possible location of leakage sites, to locate where the functioning air barrier is, or to identify potential health and safety problems associated with a combustion appliance. Zonal pressure readings associated with a specific blower door setup can be recorded by selecting the "Zonal Pressure Readings for “This Blower Door Test" button. This will take you to the Zonal Pressures screen in which the readings may be entered.



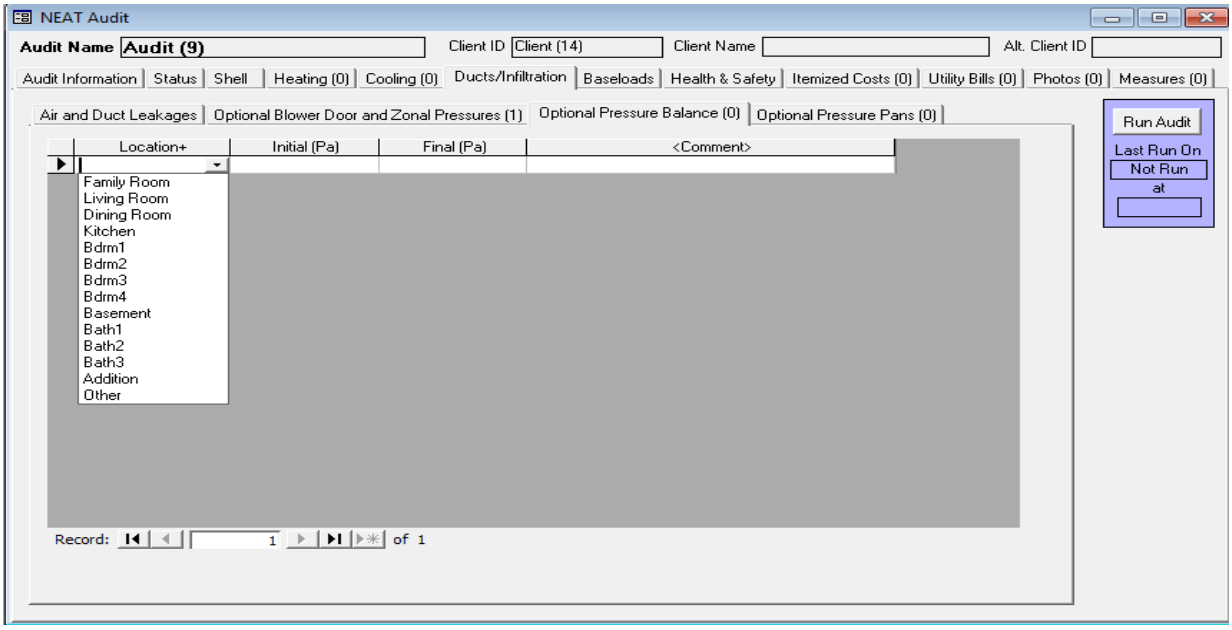
Location – Select the location of the zone using the choices in the drop-down box list or by entering a location of your own, if none of the choices meet your needs.

Pressure (Pa) - Enter the pressure found in the zone (building to zone with reference to outside) with blower door at -50pa.

Ducts Present – This is an optional field.

Comment - Comments may be entered for each entry.

Optional Pressure Balance (Room Pressures) Sub-tab



The Optional Pressure Balance Sub-tab allows you to record pressure differentials between various rooms of the house and the main body of the house (where the return registers exist). The measurements are taken with the air handler operating. The measurements do not involve use of a blower door.

Location - Enter each location or room using the choices in the drop-down box or by entering a location of your own, if none of the choices meet your needs.

Initial (Pa) - Enter the pressure found between the rooms being tested, wrt (with reference to) the main body of the house.

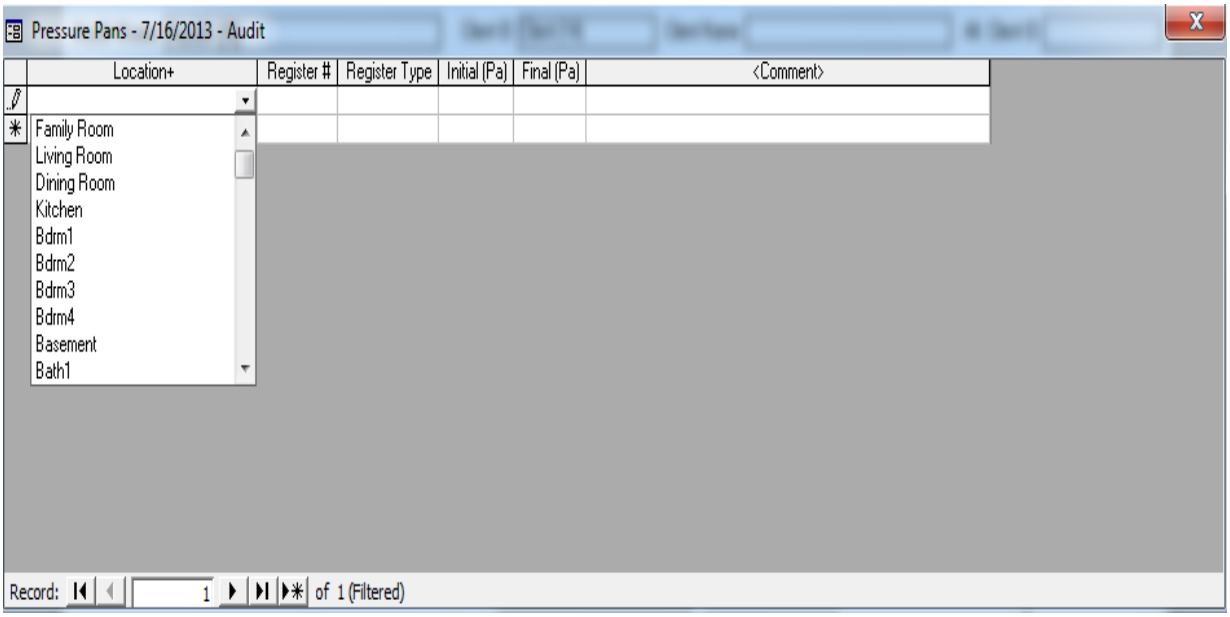
Final (Pa) – This is an optional field.

Comment - Comments may be entered for each entry.

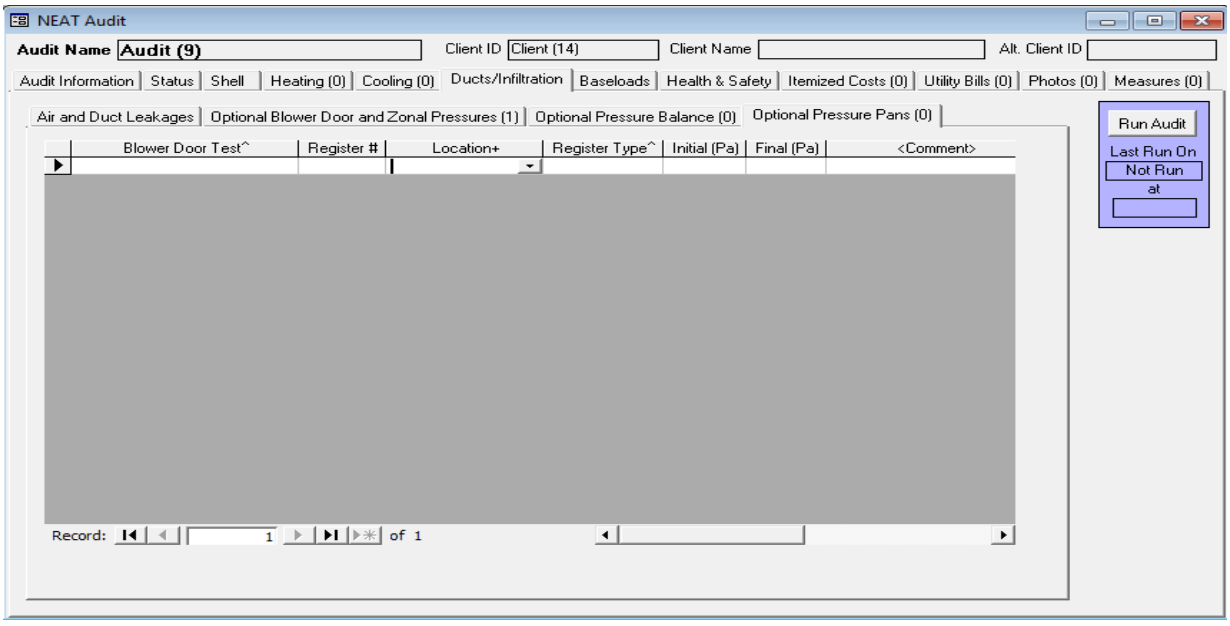
Optional Pressure Pans

There are two different ways that you can enter pressure pan readings. (1) In the Optional Blower Door and Zonal Pressures Sub-tab, select the Pressure Pan Reading for “This Blower Door” button, which will open the pressure pan screen. (2) Select the “Optional Pressure Balance” Sub-tab to open the screen. Both screens will allow for the same information to be entered, but the appearance of the two screens is different.

Option #1 Using “Pressure Pan Reading for this Blower Door” Button (Duct Pressures)



Option #2 Using “Optional Pressure Pans” Sub-tab



Pressure pan measurements are taken with a home depressurized to 50 Pascal’s using a blower door. A pressure pan which fits snugly over a register and attached to a digital manometer is used to measure the pressure differential at each supply or return registers wrt (with reference to) the home. Pressure pan tests are done one register at a time. No pressure difference indicates that the duct leading to the register is at the same pressure as the house and that little or no leaks to the outside exist in that branch of the ducts.

Blower Door Test – This is an optional field.

Register # – Enter a number or letter to uniquely identify the register.

Location – Enter each location or room using the choices in the drop-down box or by entering a location of your own, if none of the choices meet your needs.

Register Type – Select from the drop-down box: Supply or Return.

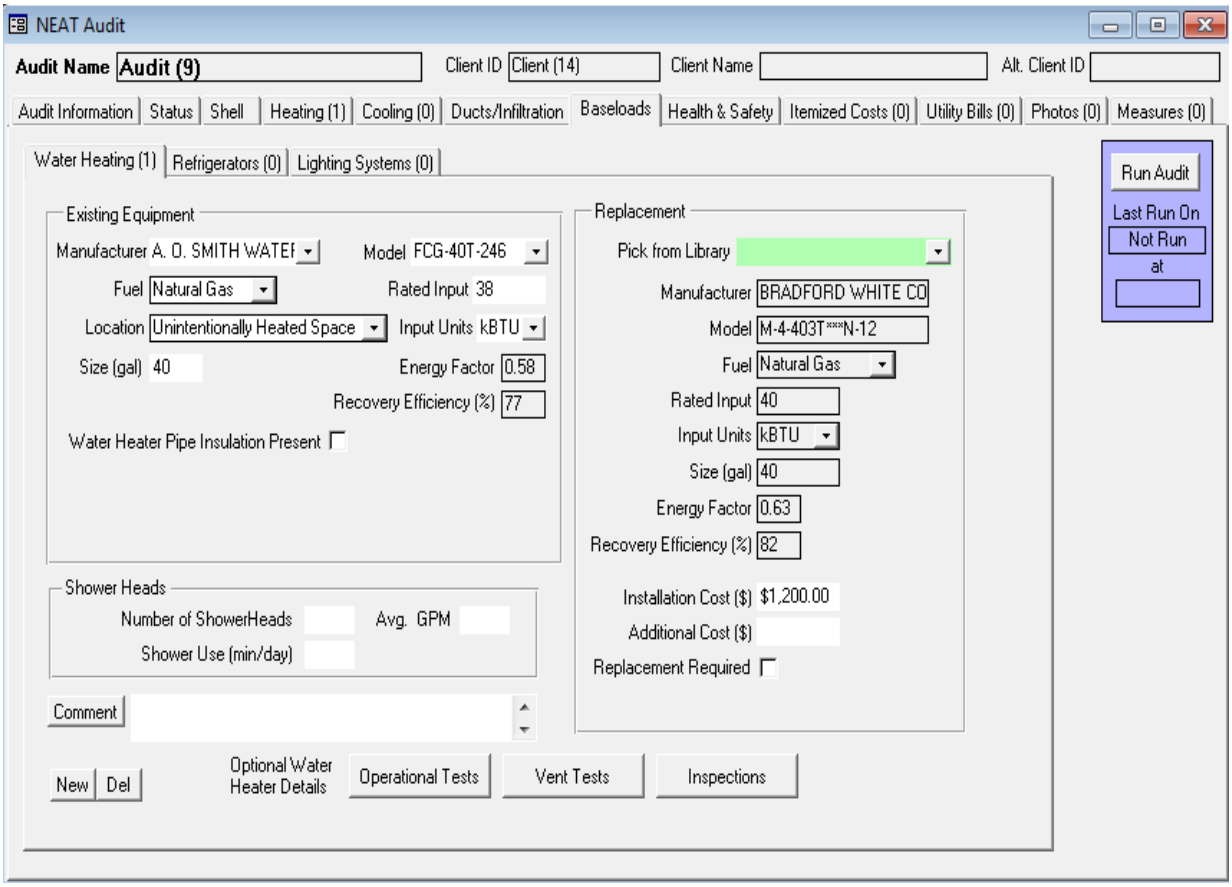
Initial (Pa) – Enter the duct pressure.

Final (Pa) – This is an optional field.

Comment - Comments may be entered for each entry.

Baseloads Tab

Water Heating Sub-tab



Water heater replacement for efficiency reasons will require some additional entries. Agencies will need to build a library of water heaters used in their area; in the Supply Library section under the Hot Water Equipment tab. Agencies may gather the information for this library through historical data or by gathering data from their contractors on manufacturers and model numbers. The cost to install the new water heater (materials and labor) must also be included. Costs are the average costs to install the water heater.

Note: The only way for the audit to call for a water heater to be replaced for efficiency reason is to have values in the "Energy Factor", and "Recovery Efficiency (%)" fields, in both the existing equipment and the replacement section. These values cannot be entered manually, so you need to choose a water heater from the existing equipment library that matches the existing water heater, or if the exact water heater is not listed in existing equipment library, choose a water heater with like characteristics. Select from the "Pick from Library" drop-down box, the water heater you want to be installed.

(1) Replacing for Efficiency:
If you are trying to replace the water heater as an energy efficiency measure, make sure you fill in all the fields in both the existing equipment and replacement sections, and **do not** mark the "Replacement Required" checkbox. Run the NEAT Audit. If the Recommended Measures Report shows the water heater having an individual SIR of 1.0 or greater and the cumulative SIR is 1.0 or greater, then the water heater can be replaced as an energy saving measure.

(2) Replacing for Health and Safety:

If the water heater is going to be replaced for health and safety reason(s), run the NEAT Audit to see if the water heater may be replaced for efficiency reasons first, making sure you fill in all the fields in both the existing equipment, and replacement sections, and **do not** mark the "Replacement Required" checkbox. Run the NEAT Audit. If the Recommended Measures Report shows the water heater having an individual SIR of 1.0 or greater and the cumulative SIR is 1.0 or greater, then the water heater can be replaced as an energy saving measure. If the individual SIR is less than 1.0, the measure will not show up on the Recommended Measures Report. Go back to the water heater section and mark the "Replacement Required" checkbox, but **do not** mark the "Include in SIR" checkbox that will appear after you mark the Replacement Required checkbox. Re-run the audit. The water heater will appear at the bottom of the Recommended Measures Report with an individual SIR below 1.0 and cumulative SIR of 0. This will indicate that the water heater is being replaced as a health and safety measure.

(3) Entering Data on Existing Water Heater When No Action is Needed:

Existing Equipment Section

Manufacturer – Select the manufacturer of the existing water heater from the drop-down box. This is an optional entry.

Model – Select the model of the existing water heater from the drop-down box. Although this is a large library, not all existing water heaters can be found in here. This is an optional entry.

Fuel – Select the existing type of fuel from the drop-down box.

Rated Input – Enter a numeric value. This is an optional entry.

Location – Select the location of the existing water heater from the drop-down box.

Input Units –Select the input units of the existing water heater from the drop-down box. This is an optional entry.

Size (gal) – Enter a numeric value of the size (gals) of the existing water heater. This is an optional entry.

Energy Factor – This is an optional entry field if no action is needed otherwise, select a manufacturer and model number from the drop-down box. A value will be entered into the Energy Factor field.

Recovery Efficiency (%) – This is an optional entry field if no action is needed. Otherwise, select a manufacturer and model number from the drop-down box. A value will be entered into the Recovery Efficiency field.

Water Heater Pipe Insulation Present – If pipe wrap is present on the existing water heater, mark the checkbox. If pipe wrap is missing and you want the audit to consider installing it as an energy efficiency measure, leave box unmarked.

Replacement Section

Pick from Library – If no action is needed, leave this section blank. If action is needed, select from the library list.

Shower Heads Section

Number of Shower Heads – Enter the number of showerheads used in the house for which replacement with low-flow models needs to be evaluated (maximum number is 2).

Avg. GPM - Enter the average water flow rate in GPM (gallons per minute) of all showerheads being considered for replacement.

Shower Use (min/day) - Enter the total minutes per day that the showerheads are in use. Combine the times for each showerhead being considered for replacement.

Comment - Comments may be entered for each entry.

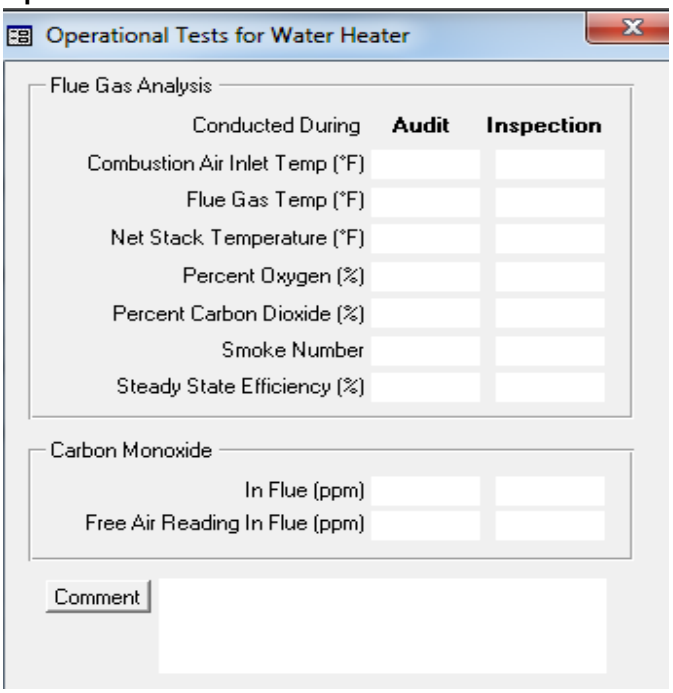
New Button – Select to create a new record.

Del Button – Select to delete an existing record.

Water Heating Sub-tab

Optional Water Heater Details Section

Operational Tests Button

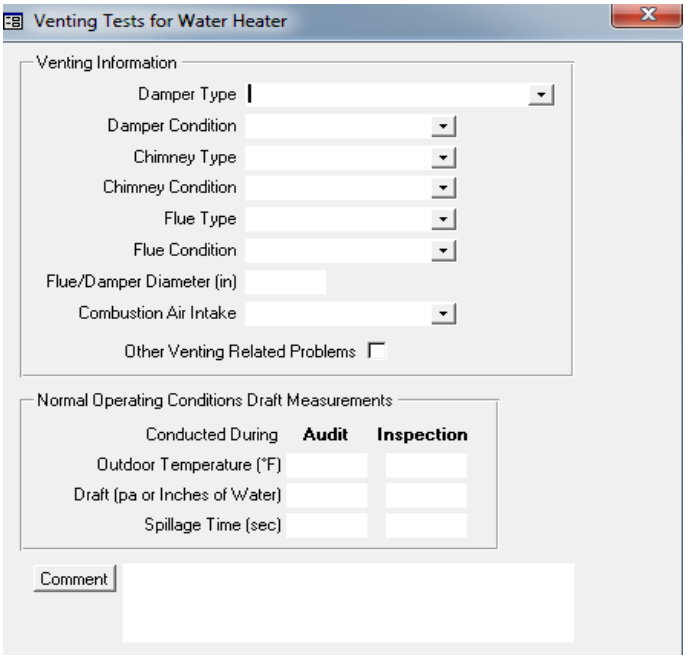


The entry of these tests is optional.

Water Heating Sub-tab

Optional Water Heater Details Section

Vent Tests Button

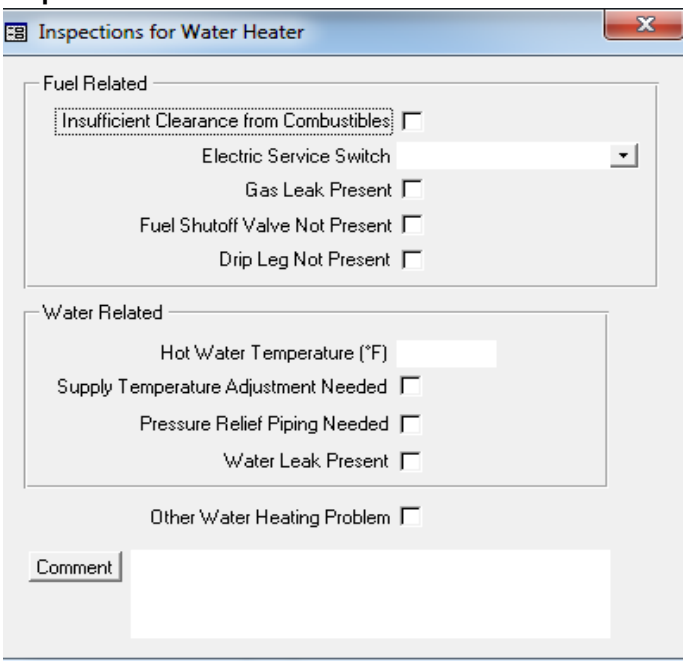


The entry of these tests is optional.

Water Heating Sub-tab

Optional Water Heater Details Section

Inspections Button

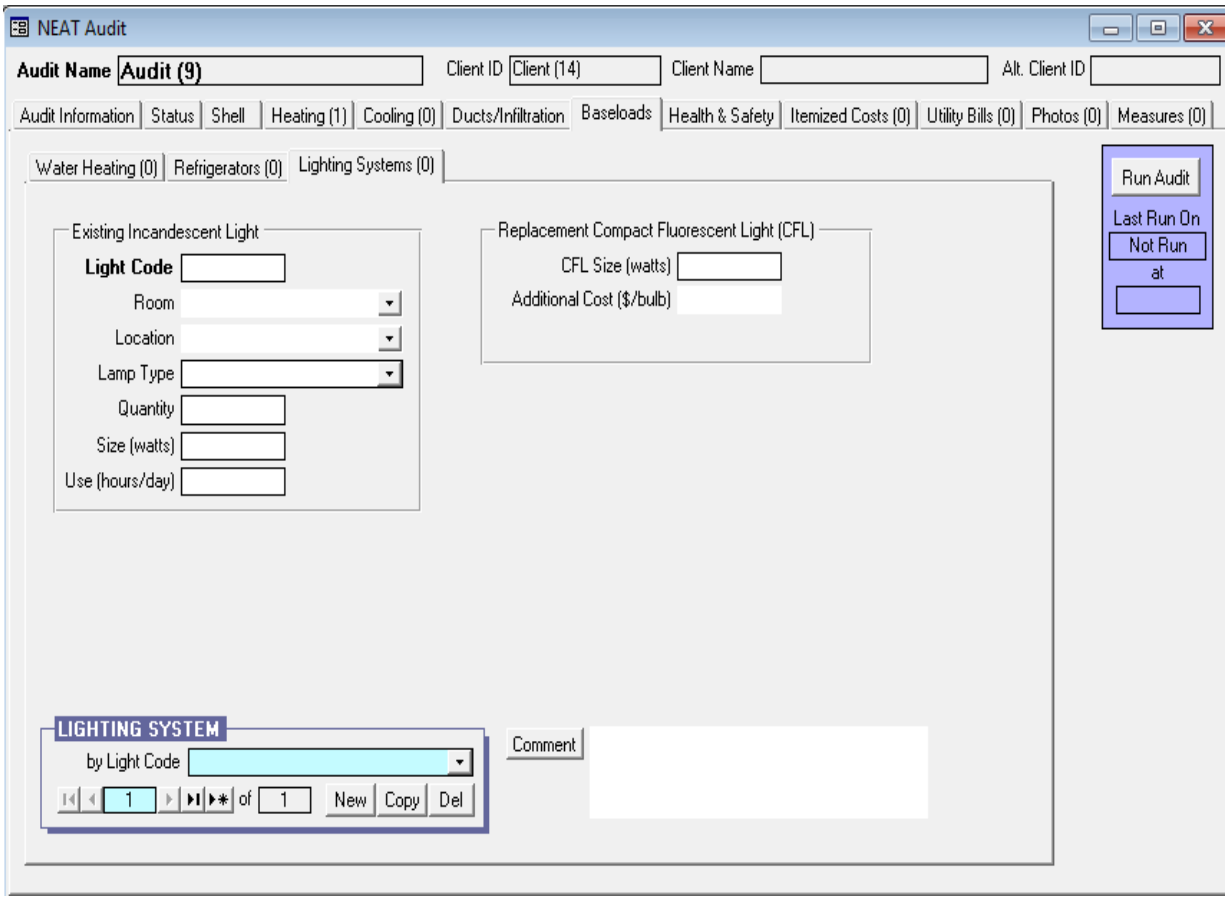


All information in this screen is optional information that can be filled in.

Refrigerators Sub-tab

The Iowa Weatherization Program does not use the refrigerator section to determine replacements. This section may be used to determine appliance usage (based on manufacturers' data), if it is not possible to meter the appliance. The BART program is used to determine cost-effectiveness of refrigerator/freezer replacements.

Lighting Systems Sub-tab

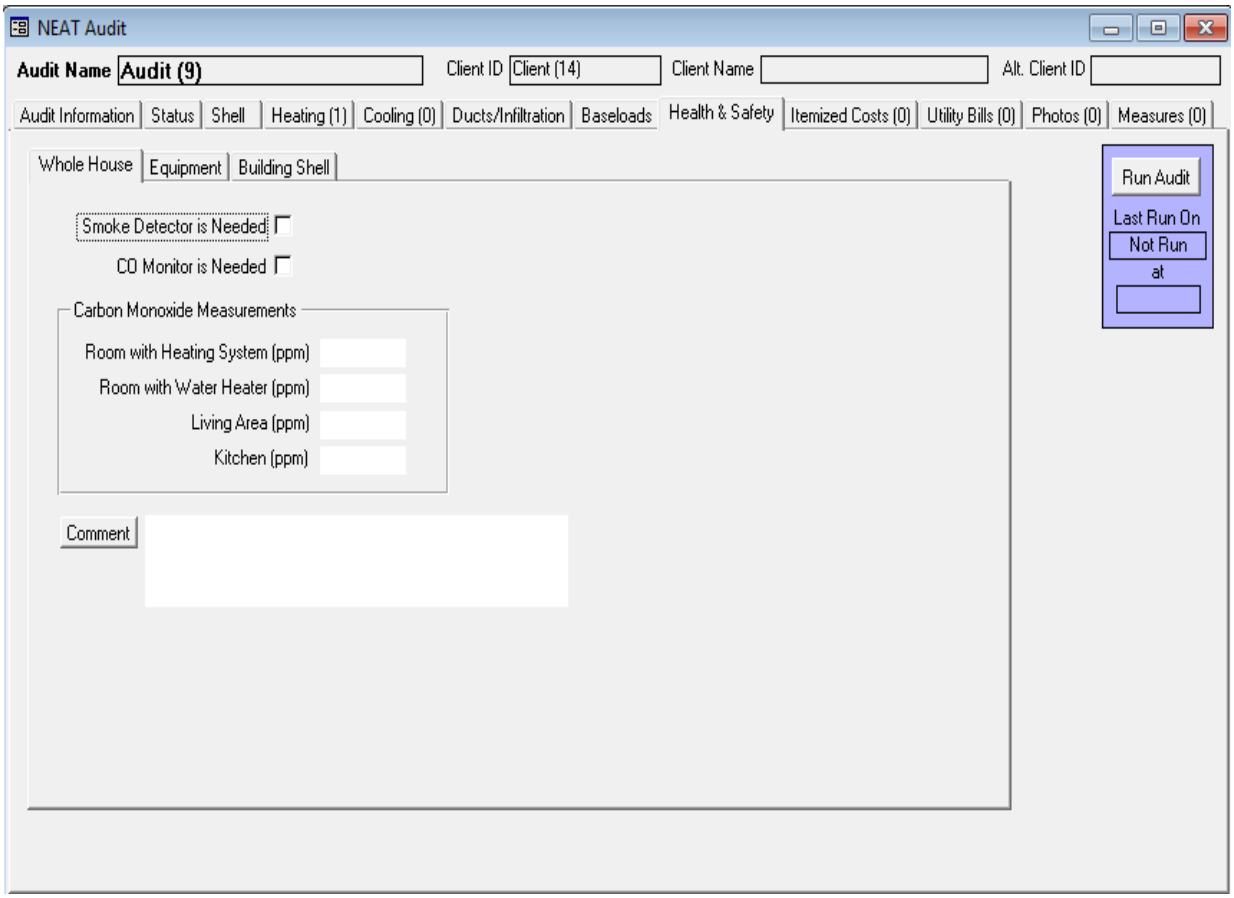


We no longer use the lighting tab to replace light bulbs. Light bulbs are entered into the Itemized Cost tab.

Health & Safety Tab

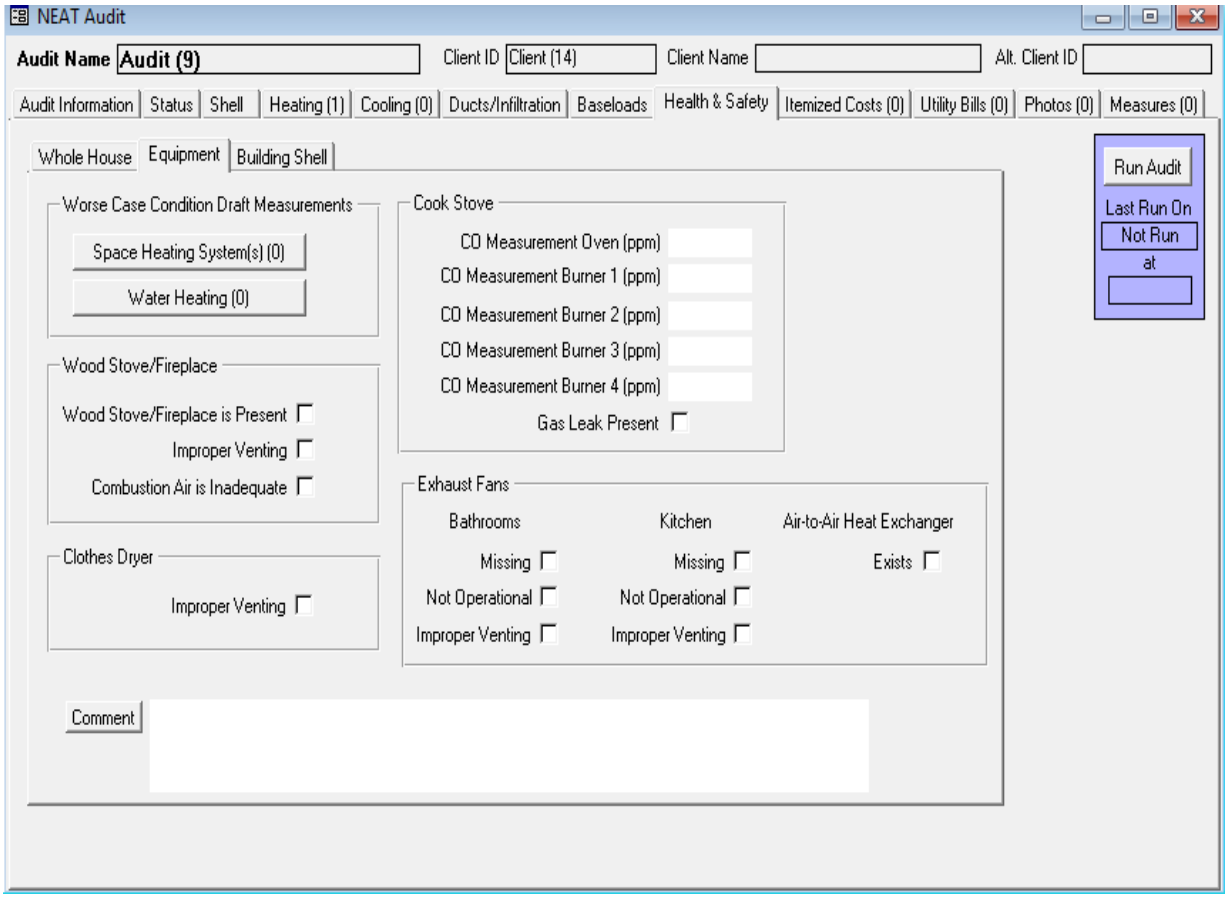
In addition to the potential health and safety hazards which can be identified under the Heating and Baseloads tabs, the Health & Safety tab permits identification and description of additional safety concerns. These additional safety-related tests are divided into three categories: Whole House, Equipment, and Building Shell.

Whole House Sub-tab



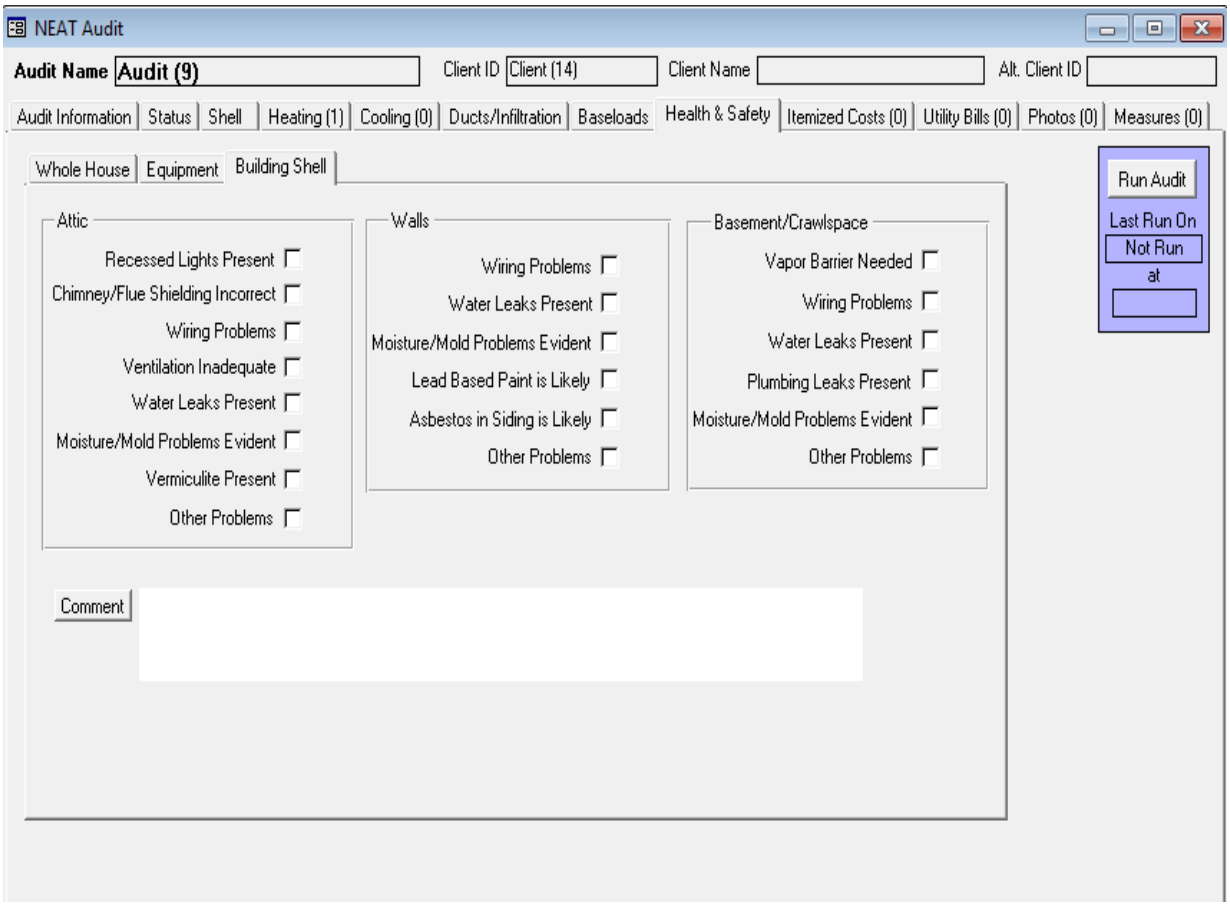
This Sub-tab allows the need for smoke or CO detectors to be identified as well as carbon monoxide concentrations in various rooms of the home to be recorded.

Equipment Sub-tab



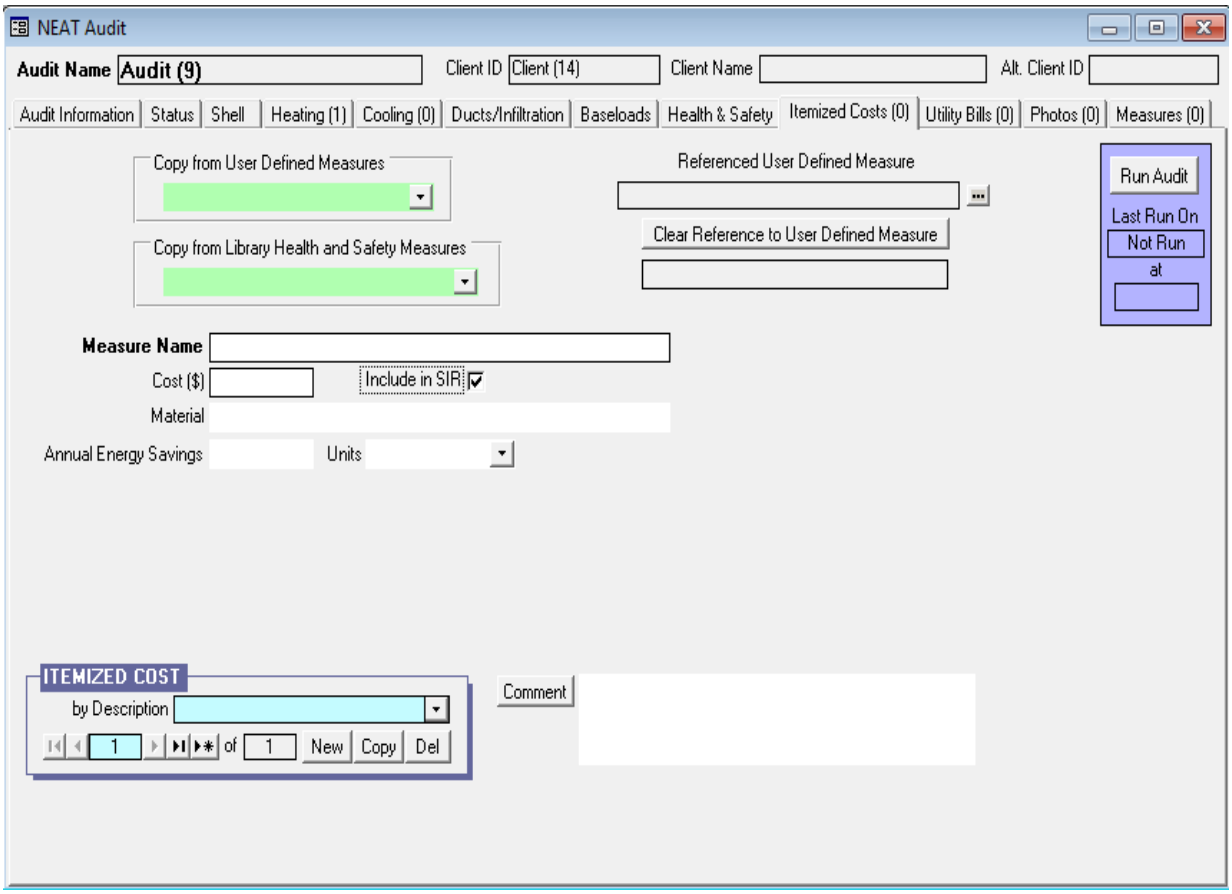
This Sub-tab is divided into data blocks addressing (1) Worse Case Condition Draft Measurements (for heating systems and water heater), (2) Wood Stove/Fireplace, (3) Clothes Dryer, (4) Cook Stove, and (5) Exhaust Fans and Heat Exchangers. The worst-case draft tests allow multiple measurements to be recorded in a spreadsheet format. NEAT and MHEA allow these measurements to be taken for each of the heating systems described on the Heating tab. Improper venting is a concern for wood stoves, fireplaces, clothes dryers, and exhaust fans. In addition, wood stoves or fireplaces may have inadequate combustion air, and bathroom or kitchen exhaust fans may be missing or not operational. Individual burner and oven CO measurements can be recorded for a gas cook stove. A gas leak associated with the gas stove can also be identified.

Building Shell Sub-tab



The Building Shell Sub-tab is divided into data blocks for Attic, Walls, and Basement/Crawlspace. All three of these areas have the potential for wiring problems, water leaks, or moisture related problems. In the attic, additional concerns may be related to recessed lighting, the chimney/flue, or the presence of vermiculite. Walls may use lead-based paint or have asbestos siding. The basement may be in need of a vapor barrier or exhibit plumbing problems. All areas can also be described as having Other Problems, which could be explained in the comments.

Itemized Costs Tab



All incidental repair costs must be recorded on the itemized costs screen and be included in the SIR. Other costs, such as health & safety and general health & safety repair, may be recorded here, but should not be included in the SIR.

Repair costs may be totaled and entered as one item, listed individually, or all repair costs may be totaled and entered, but will need to be broken out in the comment section as to what each repair cost is.

Measure Name – Enter either a general category, such as Repair Items, or individual materials, such as Glass replacement, or faucet aerators.

Cost ($) – Enter the cost associated with the measure. Be sure to enter the total cost for the measure. If you are installing six of something with a unit cost of $10, enter $60 in the cost field.

Material – List materials to be included. If entering the total repair, please use this section.

Annual Energy Savings – Here is where you will enter the annual energy savings for the faucet aerators considered for installation.–Costs savings can be found in the SLICE Report.

Units – Choose from kWh, MBTu, or Therms.

Include in SIR – Mark this checkbox to include the measure in the SIR calculation. All incidental repairs must be included in the SIR calculation. Health and safety measures should not be included in the SIR calculation.

Comment - Comments may be entered for each entry.

Copy from User Defined Measures Drop-Down Box
Use this field if you wish to copy a pre-defined Itemized Cost or User Defined Measure from your Setup Library to this specific job. You must have pre-loaded the user defined measures in the Setup Library before using this feature. More on setting up the User Defined Measure tab in the Setup Library section.

Copy from Library Health and Safety Measures Drop-Down Box
The audit came pre-loaded with pre-defined health and safety measures which are also found in the User Defined Measure tab in the Setup Library. Using this field you can copy the Health and Safety measure from the Setup Library, but in order to use this feature you must have entered costs (material and labor) associated with the measure in the User Defined Measure tab in the Setup Library section. More on setting up the User Defined Measure tab in the Setup Library section.

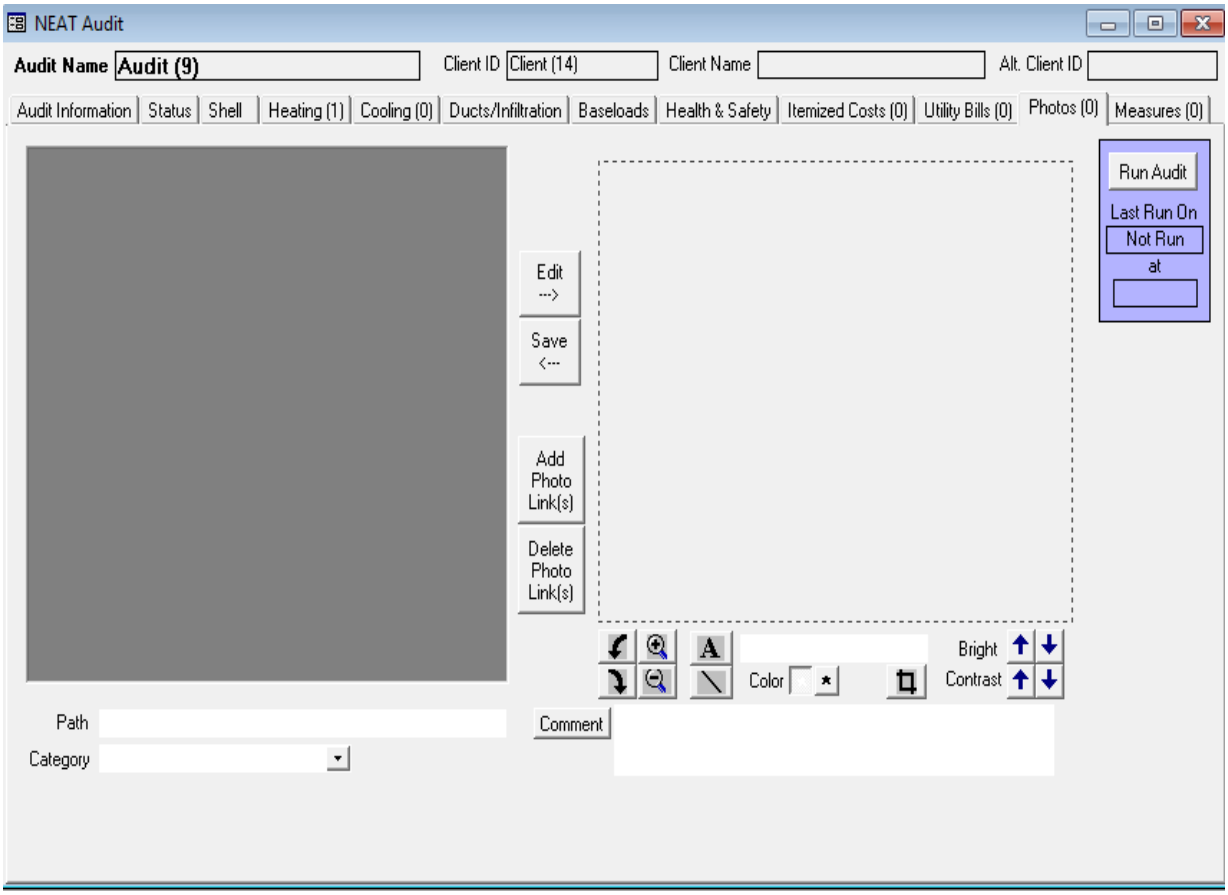
Referenced User Defined Measure Field
By clicking on the three-dotted box, you can reference the item selected from the User Defined Measure tab found in the Setup Library.

Clear Reference to User Defined Measure Field
Use the "Clear Reference to User Defined Measure" button to eliminate the reference of the existing item definition on the Itemized Costs form to the pre-defined item in your Setup Library. You can tell if the information on an existing Itemized Costs form is referencing a pre-defined item by examining the box directly below the "Referenced User Defined Measure" heading in the upper right corner of the form. If this box is empty, no pre-defined item is being referenced. Otherwise it will list the Measure Name of the referenced pre-defined item.

Utility Bills Tab

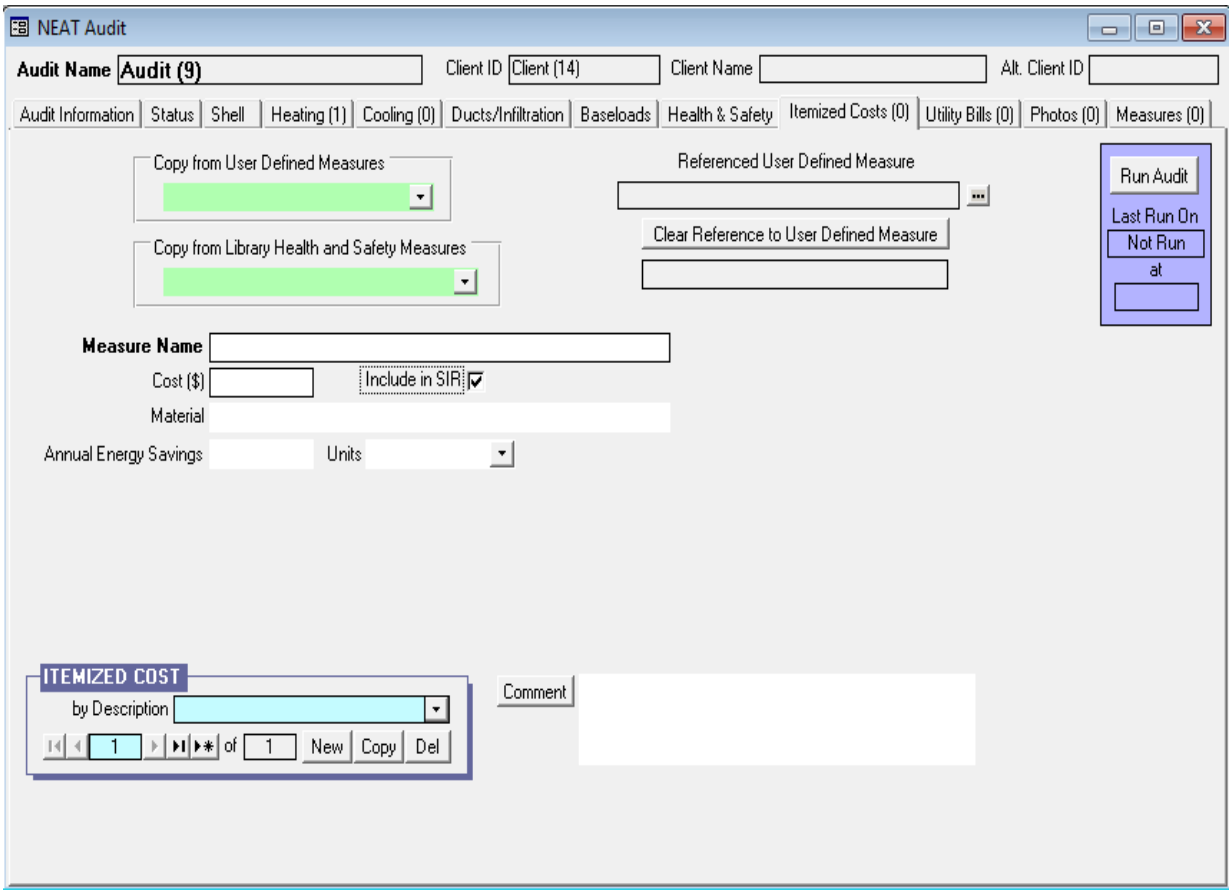
This tab will not be used.

Photos Tab



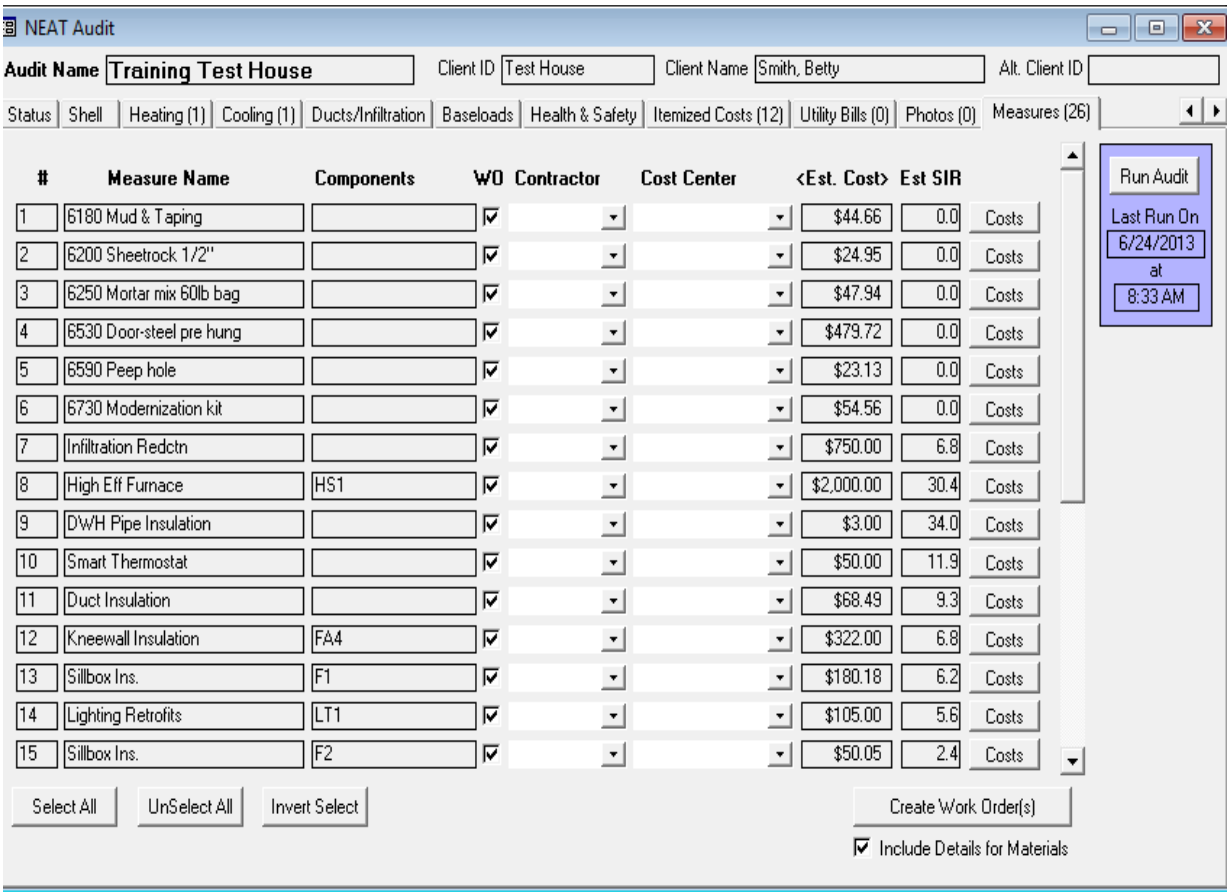
Starting with Version 8 of the Weatherization Assistant, it is now possible to organize digital photographs related to your weatherization work. Photos may be saved at several levels, as associated with the Client, an Audit, or a specific Work Order. Read the Photos section in each of the chapters from the version 8 manual for additional information.

Run Audit Section



After describing a home in the Energy Audit portion of the Weatherization Assistant, the audit can be analyzed (run) to produce recommendations by selecting the "Run Audit" button visible in the upper right corner on any of the tabs under the Site Built (NEAT button, from the Main Menu. Following completion of the analysis, the program will automatically display the NEAT or MHEA Recommended Measures Report, listing the recommendations from the audit. This report may be printed directly from the display or simply viewed. Once closed (or if never opened), this report can be recalled at any time from the report block on the Site Built (NEAT) button, from the Main Menu.

Measures Tab



New to Version 8 of the Weatherization Assistant is the optional feature of creating work orders. If you want these work orders to be created based on the results from running either the NEAT or MHEA audits, the Measures tab of the NEAT Audit is the starting point for this process by clicking the “Create Work Order(s)” button on the lower right of the page.

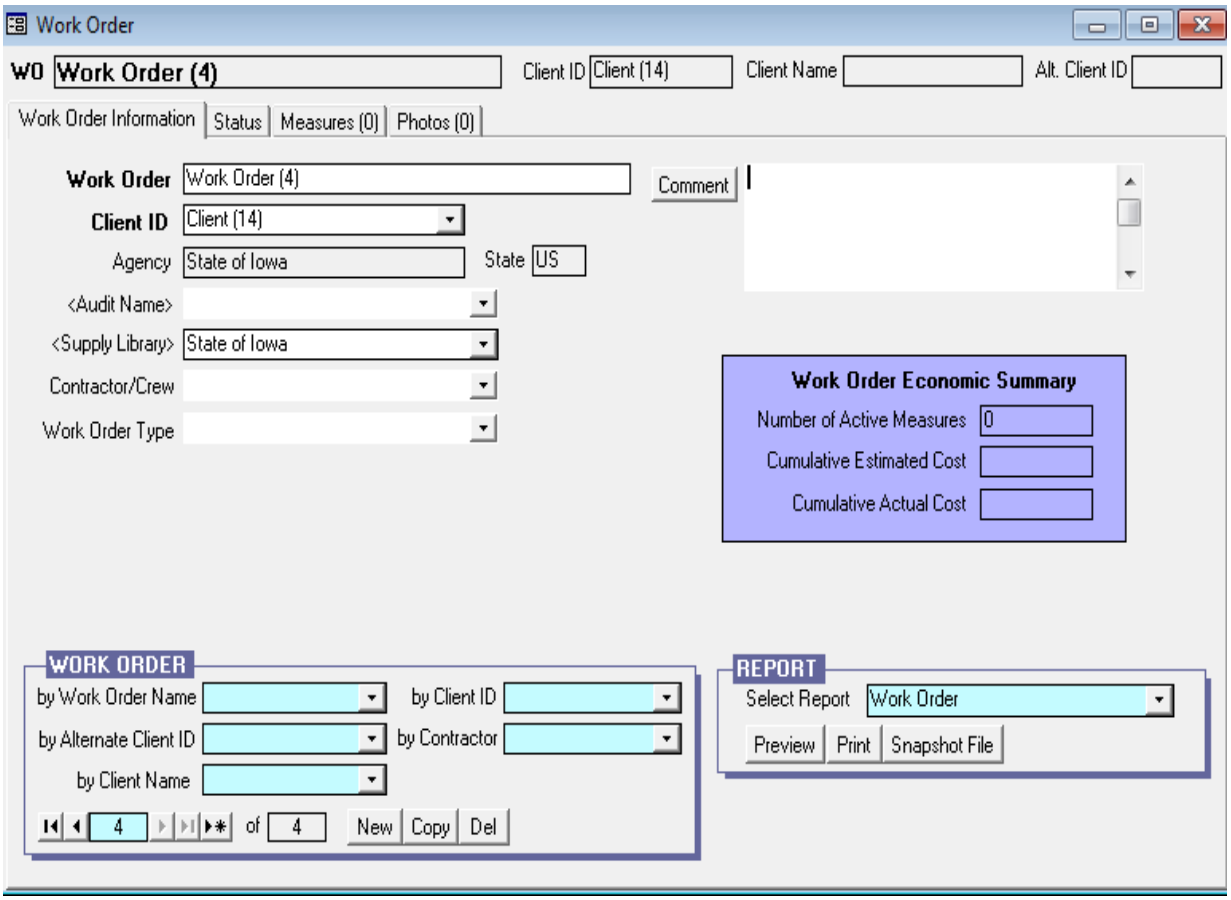
Create Work Order(s) Button

Work orders can be generated manually or from the audit recommended measures. You must first have a client record before work orders can be created because work orders must be associated with an existing client record. The work order includes status tracking using the Status tab on the form. It also includes any number of measures (or tasks) on the Measures tab, with each measure containing any number of material and labor detail records.

Any number of work order records can be created for each client.

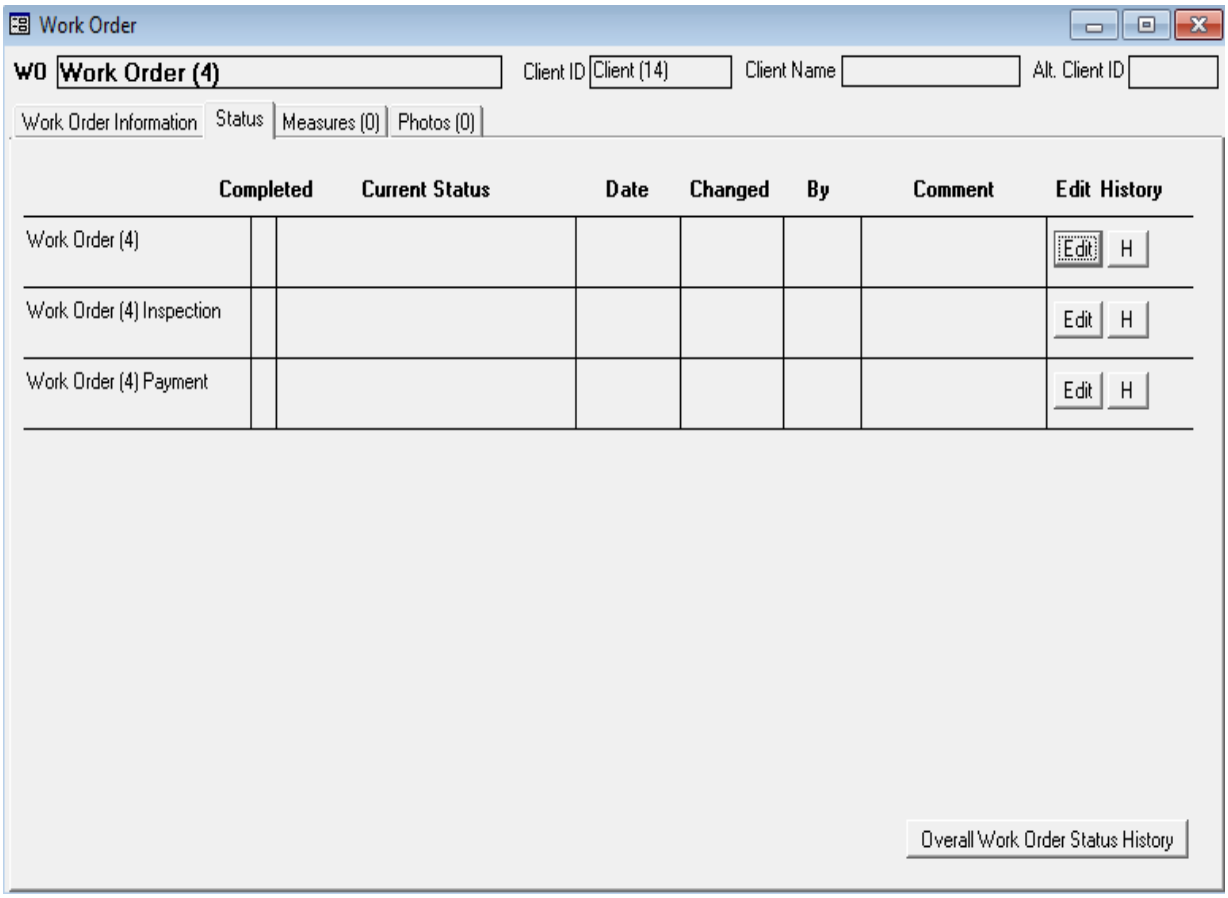
Work orders can be automatically generated from the audit recommended measures using the Measures tab on the audit form. When the work order is generated from the audit, all of the selected measures along with their material and labor details, are copied from the associated setup library records.

Work Order Information Tab



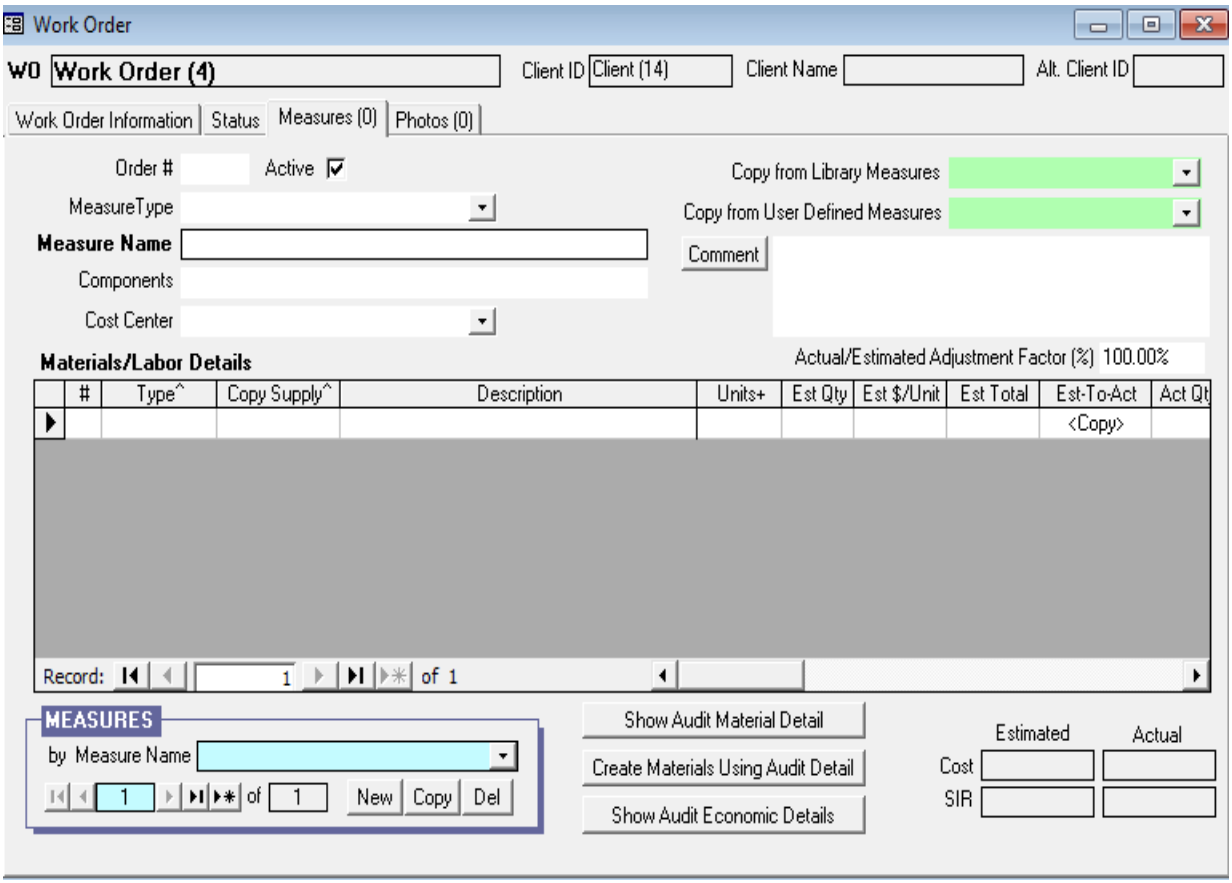
On this tab you enter general information about the work order. This tab also has the navigation block used to view different work order records as well as the reporting controls to view or print work order specific reports.

Status Tab



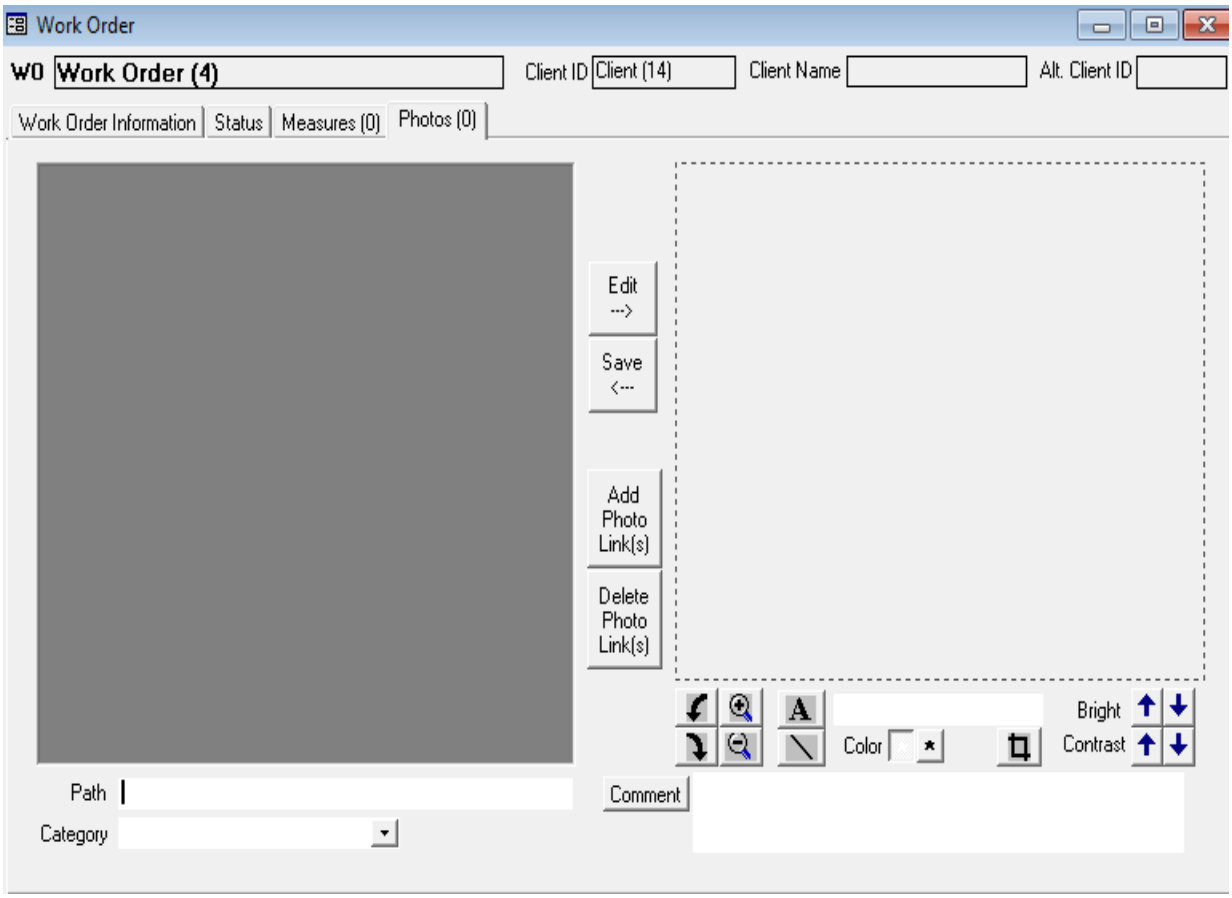
Work orders have separate status tracking for the overall work order, inspections, and payments. Use of the status tracking is optional, but some reports may look at status information to determine which work orders to include in reports. So, use of the status tracking is recommended. The status of the work order can be changed here or on the status tab of the client form.

Measures Tab



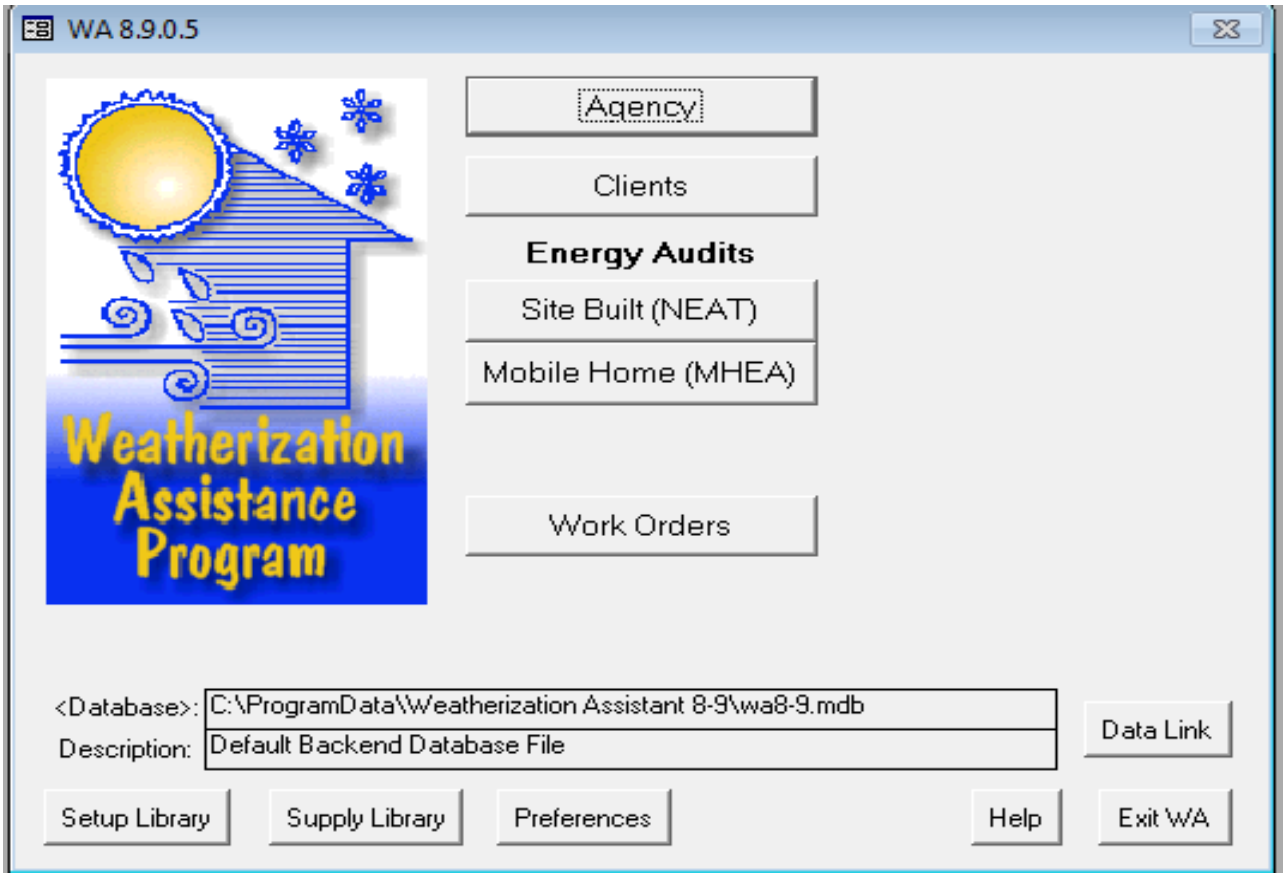
The Measures tab is where the individual energy saving measures or tasks are described in detail. Each measure has its own economic summary as well as cost center assignment. Any amount of material and labor detail can be added to each measure.

Photos Tab



Read the Photos section in each of the chapters from the version 8 manual for additional information.

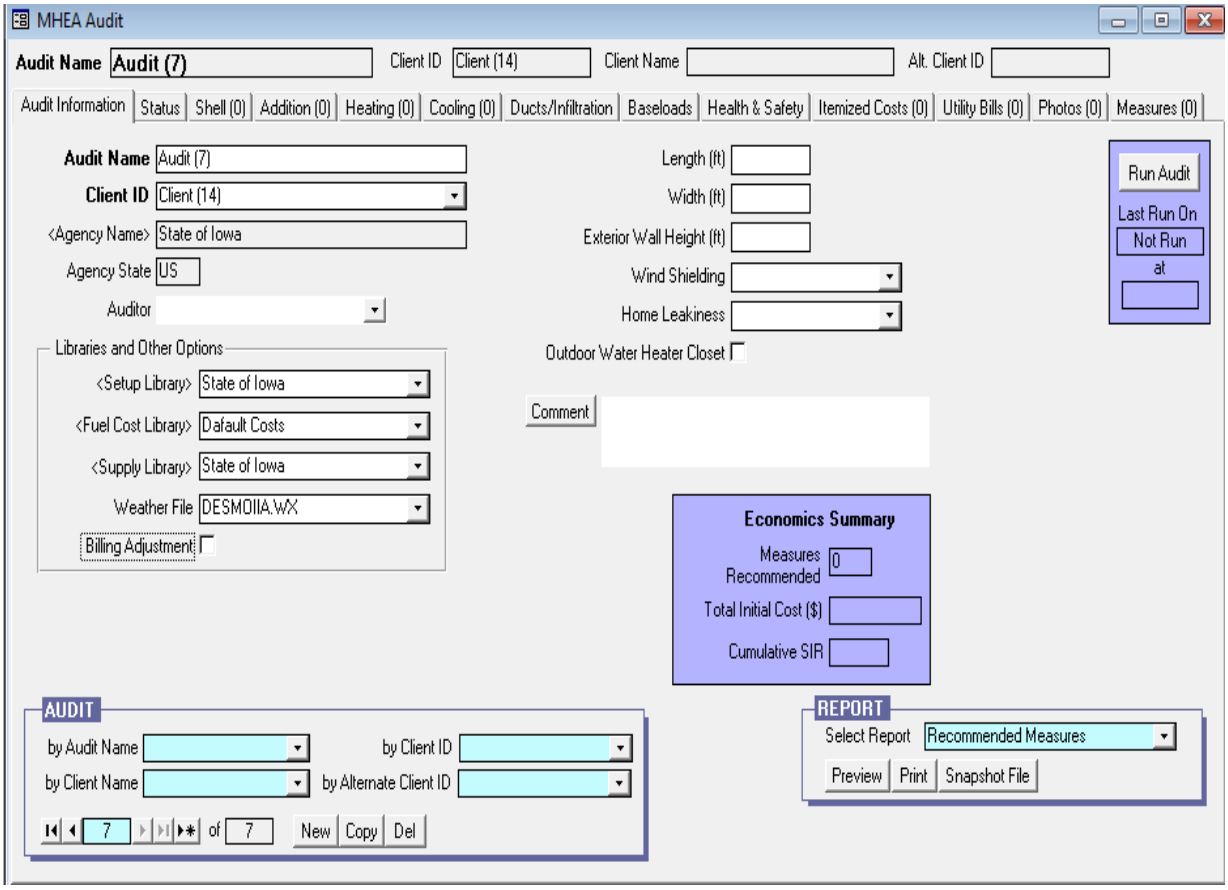
MAIN MENU WA 8.9.0.5 (MHEA)



The Main Menu is the starting point of the Weatherization Assistance Program, where various sections of the NEAT/MHEA Audit can be accessed.

Energy Audits

Mobile Home (MHEA) Button - Audit Information Tab



This tab on the main NEAT and MHEA forms is used to enter overall audit information about the house and what libraries to reference for additional data. In addition to the fields for data input (see individual help topics), the form has the following features and controls:

Audit Name – The Audit Name must be unique for all audits entered into the Weatherization Assistant. The Audit Name is any string up to 50 characters long that is used to identify the specific audit. It can be any mix of numbers or letters useful to your organization to track jobs. This field is one of several used in the combo boxes at the bottom of the Audit Information form to quickly locate audits.

Client ID - The Client ID identifies the Client whose home is being audited. The field is used to associate this audit with a specific client. The client must already have been described under the Clients button from the Weatherization Assistant Main Menu.

If you have initiated a new audit from the Audits tab under the Main Menu Clients button, the Client ID field will automatically be entered as that client from whom the audit was initiated. Or, if a Client record is opened when you ask to create a new audit in the Audit Information tab, the audit will again automatically be assigned the opened client. **Caution:** The Client ID of the last client referenced from the Client button on the WA Main Menu, even if not currently opened, will be used when creating a new audit; thus, resulting in two audits having the same Client ID.

Agency Name - This un-editable field displays the Agency to which the Client whose house is being audited is assigned. Any number of agencies can be defined within a Weatherization Assistant database, but in a typical weatherization agency, there should be only one with your agency name. If there are multiple auditors each with a copy of the Weatherization Assistant software and you are interested in having a single shared database, read the help topic for multi-user installations.

Agency State - This un-editable field gives the two character abbreviation for the state where the agency handling this particular client is located.

Auditor - Select the lead auditor who will have primary responsibility to perform the audit, from the drop-down box. After selection, only the shortened abbreviation of the name will appear in the field. Those available to choose from are assigned by the user under the Contacts tab in the Main Menu Agency button. Only entries made there who are indicated as being Auditors will be displayed in the drop-down box.

Length (ft) - Enter the length of the home in feet. The home length is the length of the living space.

Width (ft) - Enter the width of the home in feet.

Exterior Wall Height (ft) - Enter in feet, the height of the home as measured from the floor to the ceiling in the interior of the home. Measurements should be taken along an exterior wall of the home.

Wind Shielding – From the drop-down box, choose the best selection that describes the mobile home: Well Shielded, Normal Shielding, or Exposed.

Home Leakiness - From the drop-down box, choose the best selection that describes the mobile home: Tight, Medium, or Loose.

Outdoor Water Heater Closet – Mark this checkbox if the mobile home has an exterior water heater door.

Comment – Enter any comments related to the mobile home.

Run Audit Button - After completely describing the mobile home in the audit with data entered under the tabs visible on the main audit forms, use the "Run Audit" button to have the audit perform its calculations and produce energy efficiency measure recommendations for the home. Within the same data block as the Run Audit button are un-editable fields showing the date and time the currently accessed audit was "Last Run On." If the audit has not yet been run for this specific house description, the date field will display "Not Run." An audit on a house may be run any number of times, but the recommendations from any previous runs will be overwritten. If you wish to run an audit on a house again, and would like to save the recommendations from a previous audit on the same house, use the "Copy" button in the Record Navigation block in the lower left corner of the form to copy the house description. Then, give the new house description a new Audit Name (possibly a variant of the original name); make any modifications to the house description desired, then use the Run Audit button to produce another set of recommendations. Note that the Run Button is available from all Audit tabs and may be activated from any of these tabs once it has been decided that changes to the building description are complete.

Libraries and Other Options Section

Setup Library – Choose the Setup Library associated with the audit you are entering, from the drop-down box. **Note:** Each agency should only have one Setup Library associated with their agency; therefore, defaulting to your agency Setup Library each time you start a new audit.

Fuel Cost Library – Set by the state.

Supply Library – Choose the Supply Library associated with the audit you are entering. **Note:** Each agency should only have one Supply Library associated with their agency; therefore, defaulting to your agency Supply Library each time you start a new audit.

Weather File – Choose from the drop-down box the weather file your agency is in, or type in the field the name of the weather file your agency is in.

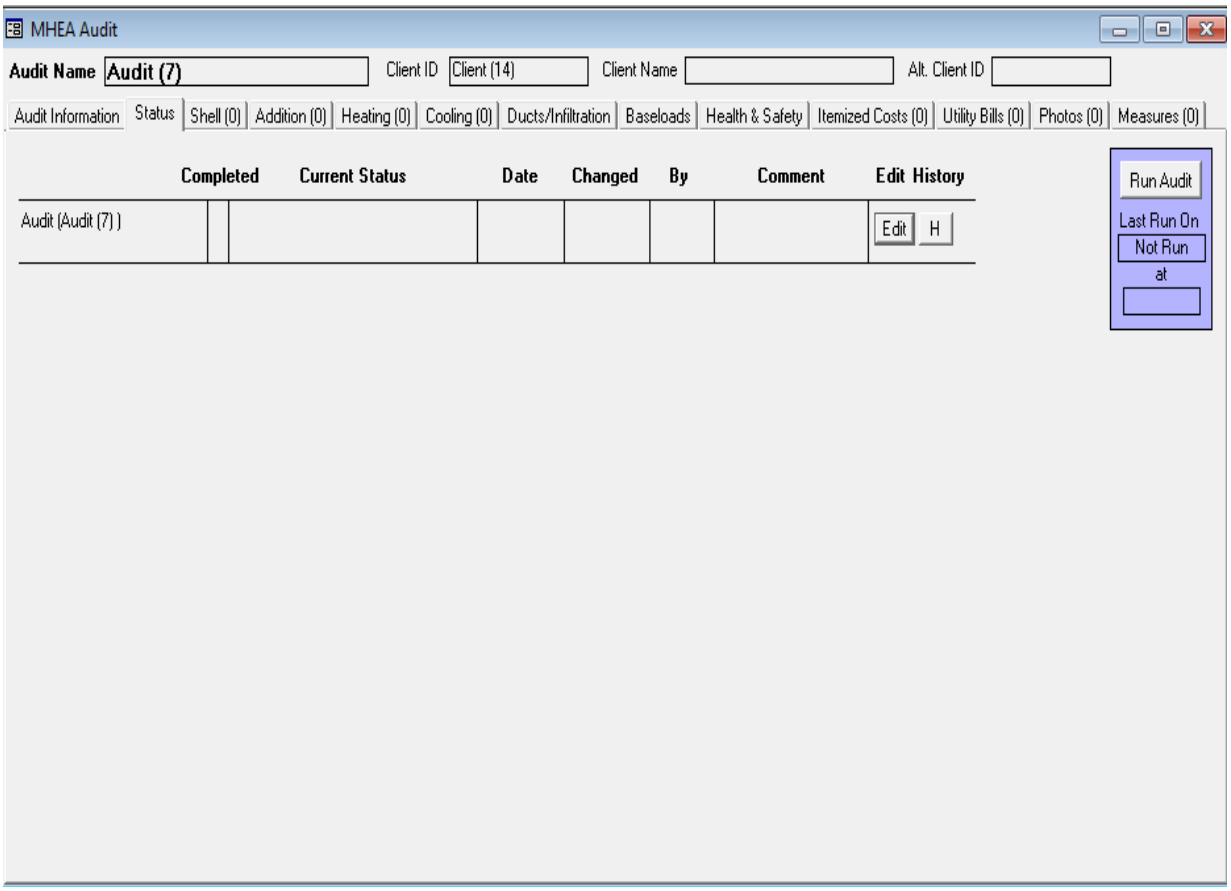
Billing Adjustment – Do not check this box.

Economics Summary - For audits which have already had NEAT or MHEA produce recommendations, the Economics Summary block of data will display a summary of these recommendations: the number of Measures Recommended, the Total Initial Cost ($) of these recommendations (using the audit's estimated measure costs prior to any modifications made in work orders to reflect actual costs), and the Cumulative SIR (Life Cycle Savings to Investment Ratio) for all recommended work on the house. If the audit has not yet been run on the house, the number of Measures Recommended will be "0" and the other fields will be blank. All of the fields within the Economics Summary block are un-editable.

Audit Record Navigation Block - The Audit Record Navigation block in the lower left corner of the form allows you to find, copy, delete, and navigate to audits in your database. See the separate help topic indicated.

Report Block - The Report Block located in the lower right corner of the main NEAT and MHEA forms allows access to the various reports available in the audit. The reports may be Previewed (displayed on your monitor), Printed (to your default printer), or sent to a Snapshot File (a file that may be sent as an attachment to an e-mail, copied to a floppy, or shared by some other means). Use the drop-down list to view and choose from the various reports available.

Status Tab



The Status tab under the Main Menu Mobile Home (MHEA) Energy Audit button allows you to view the status of the audit currently being accessed.

The setting and tracking of statuses is an optional feature in the Weatherization Assistant.

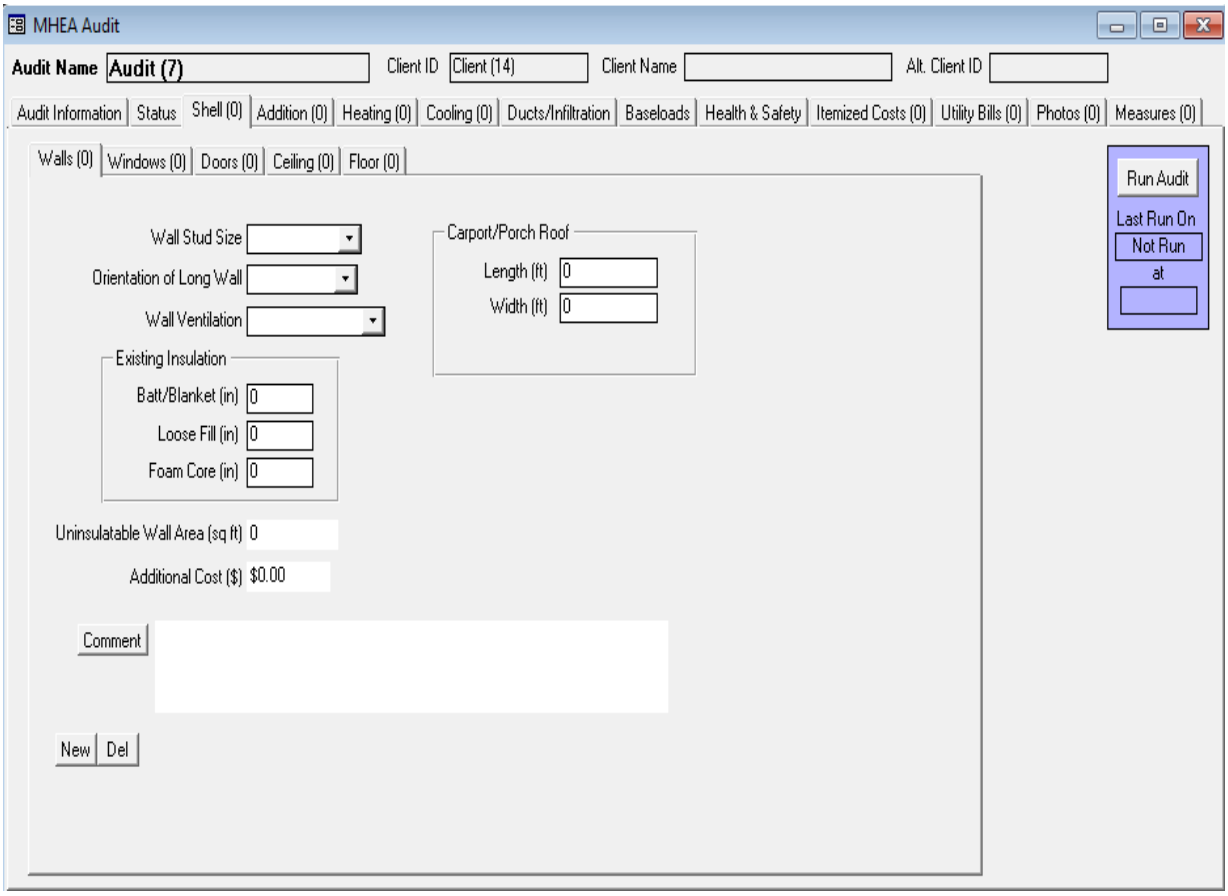
The Audit level status settings available are:

- Site Visit Scheduled For
- Site Visit Completed On
- Billing Data Collected On
- Recommendations Generated On
- Audit Complete and Locked On*
- Walk Away by Auditor On*
- Delayed On
- Denied On
- Other

The Status tab displays not only the current status of the audit, but the date the status became effective, the date it was last changed, and who changed it. You are also shown any comment which has been appended to this current status setting. A Completed column on the form will display an asterisk (*) when a status setting indicates completion or closure of the activity associated with the status category. For the audit category, this corresponds to those settings followed by the asterisk in the table above.
Status settings are changed by selecting the Edit button at the right of the row indicating the current status for the audit. You will be presented with the Status Editor form. Choose the "H" button to see a history of all settings for the current audit.

Shell Tab

Walls Sub-tab



Wall Stud Size - Using the drop-down box, select the size of the framing stud size between the interior and exterior wall of the manufacture home: 2x2, 2x3, 2x4, or 2x6.

Orientation of Long Wall - Select the direction the long wall faces: North, South, East or West. The long wall is considered the “front” of the manufactured home with a door and is used as the main entrance to the manufactured home.

Wall Ventilation - A manufactured home wall may be intentionally or unintentionally ventilated. A ventilated wall has a space for air to flow between the exterior and interior wall materials. From the drop-down box, identify whether the wall is Vented or Not Vented.

Existing Insulation Section

Batt/Blanket (in) - Enter the amount of existing insulation. By entering a value greater than 0 inches, you are implying that the insulation exists. If you enter a thickness of 0 inches, MHEA assumes that insulation of that type does not exist.

Loose Fill (in) - Same as Batt/Blanket.

Foam Core (in) - Same as Batt/Blanket.

Uninsulatable Wall Area (sq ft) - This is an optional field. Enter the wall area not accessible for insulating.
Additional Cost ($) – Do not use this field.

Comment – Enter any comments associated with the walls here.

Carport/Porch Roof Section

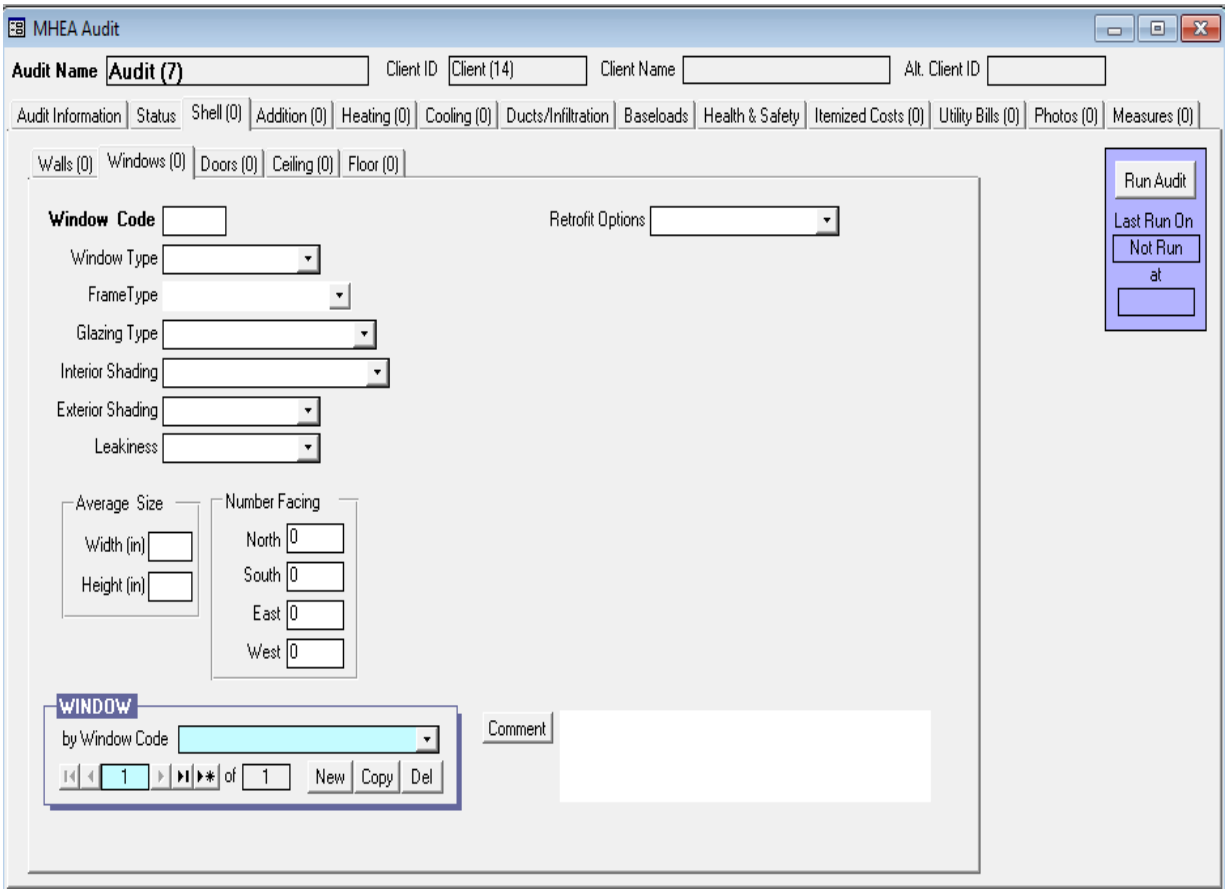
Length (ft) - Enter length in feet. The length is the part of the structure that is parallel to the home. If none exists, enter zero.

Width (ft) - Enter width in feet. The width is the part of the structure that is perpendicular to the home. If none exists, enter zero.

New Button – Creates a new record.

Del Button – Deletes an existing record.

Windows Sub-tab



Window Code - The Window Code allows you to identify the specific window type in the MHEA reports. Enter a unique window identifier or hit enter for the default code.

Window Type - Indicates what types of windows are in the home. Choose one of the following:

- **Jalousie** windows are constructed of several horizontal panes.
- **Awning** windows are hinged at the top or side of the window so that when opened (usually by turning a crank), the glass angles out from the home exterior.
- **Slider** windows usually have two panes of glass and either one or both panes slide past the other when the window is opened.
- **Fixed** windows are sealed in the window frame and cannot be opened.
- **Door Windows** are sealed in the window frame of a door and cannot be opened.
- **Sliding Glass Doors** are large windows that extend to the floor of the addition and can be opened to enter or exit the addition.
- **Skylights** are glass or plastic windows in the ceiling of the addition.

Frame Type – Describe the type of window frame using the following: Wood or Vinyl, Metal, or Improved Metal.

Glazing Type - Window glazing is the type and number of glass or plastic panes that make up a window. Select Glazing Type from the drop-down box: Single Pane, Single with Glass Storm, Single with Plastic Storm, Double Pane, Double with Glass Storm, or Double with Plastic Storm.

Interior Shading - Interior shading devices are interior window coverings that prevent sunlight from entering the manufactured home. Choose from: Drapes, Blinds or Shades, Drapes with Blinds or Shades, or select None if there is no interior window shading.

Exterior Shading – Select the exterior window coverings from: Awning, Carport or Porch, Low E Film, Sun Screen, or None.

Leakiness – Select from the drop-down box, the best selection that describes the window: Very Tight, Tight, Medium, Loose, or Very Loose.

Average Size Section

Width (in) - Enter the average width of the windows described, in inches. For each like window, add the widths together and divide by the number of windows. Example: Widths are 32", 33", and 34" = 99" total width / 3 windows = 33".

Height (in) - Enter the average height of the windows described, in inches. For each like window, add the heights together and divide by the number of windows. Example: Heights are 60", 61", and 62" = 183" total height / 3 windows = 61".

If windows are going to be evaluated to be replaced as an ECM, each window must be entered separately.

Number Facing Section

Enter in the number of like-kind windows located on each exterior wall. Choose from: North, South, East or West.

Retrofit Options – Select "Evaluate All" from the drop-down box.

Comment - Enter any comments associated with the windows here.

Window Navigation Block

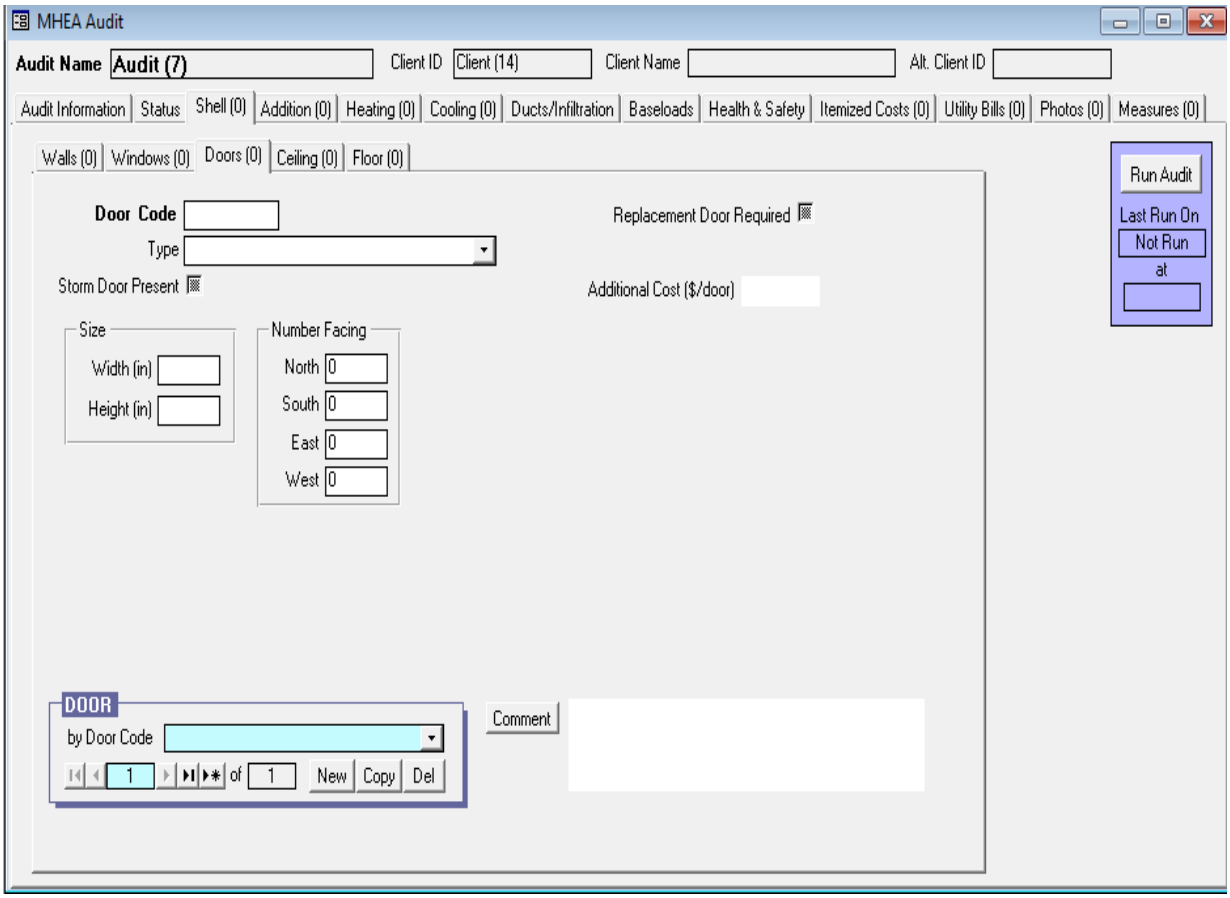
Drop-Down Box – You can choose and view other records associated with the Windows Sub-tab.

New Button – Use this button to create a new record.

Copy Button – Use this button to copy an existing record to a new record.

Del Button – Use this button to delete an existing recorded.

Doors Sub-tab



Door Code - The Door Code allows you to identify the specific door in the MHEA reports. Enter a unique door identifier.

Door Type - Select the type of existing door: Hollow Core Wood, Solid Core Wood, Standard Manufactured Home Door, or Insulated Steel.

Storm Door Present – Mark the checkbox if there is a storm door present

Replacement Door Required – Do not mark this checkbox. Let the audit call for door replacement as an energy conservation measure (ECM).

Additional Cost ($/door) – Do not use this field.

<u>Average Sizes Section</u>

Width (in) – Enter the average width of the doors described, in inches.

Height (in) - Enter the average height of the doors described, in inches.

Number Facing Section
Enter the number of doors located on each exterior wall. Choose from: North, South, East, or West.

Door Navigation Block

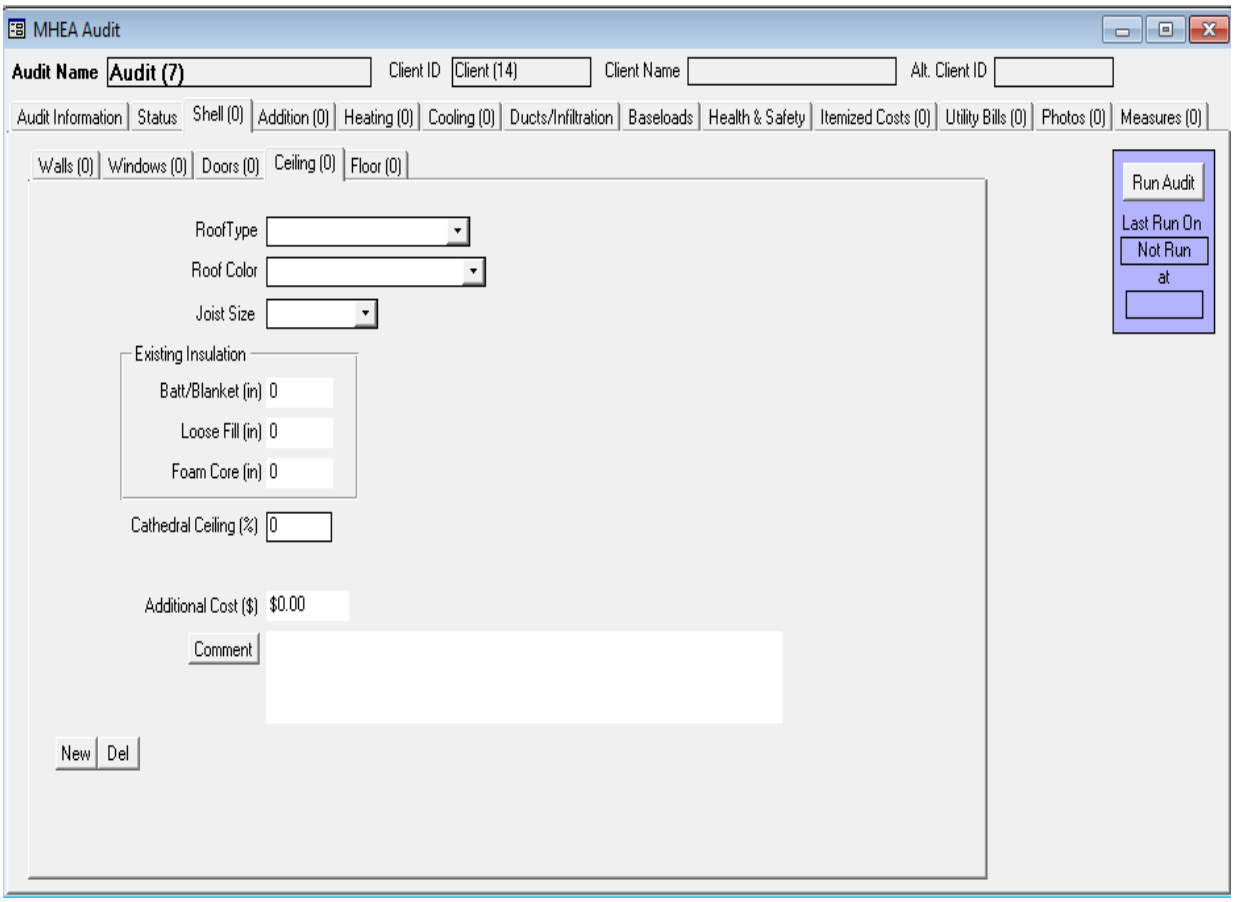
Drop-Down Box – You can choose and view other records associated with the Doors Sub-tab.

New Button – Use this button to create a new record.

Copy Button – Use this button to copy an existing record to a new record.

Del Button – Use this button to delete an existing recorded.

Ceiling Sub-tab



Roof Type - Select the type of roof on the manufactured home: Flat, Bowstring, or Pitched.

Note: The ceiling screen will change depending on the roof type you enter.

Flat

Joist Size - Choose the appropriate joist size: 2x4, 2x6, or 2x8.

Bowstring

Height of Roof at Center (in) - For bowstring roofs, enter the maximum height of the roof above the ceiling, in inches, disregarding any existing insulation.

Pitched

Insulation to Add at Center (in) - Enter the number of inches of insulation you wish to consider adding to the existing insulation (if any). See the "Help" screen for more instructions. MHEA will not consider adding more than 12 inches of insulation. Entering a 0 will prevent roof insulation from being considered.

Roof Color - Using the drop-down box, enter the color of the roof: **White, Reflective or Shaded**, or **Normal or Weathered.** This field is important to complete because the color of the roof affects how solar energy impacts the heating and cooling loads of the addition.

Existing Insulation Section

Batt/Blanket (in) – This field is optional. Enter the amount of existing insulation.

Loose Fill (in) – This field is optional. Enter the amount of existing insulation.

Foam Core (in) – This field is optional. Enter the amount of existing insulation.

Cathedral Ceiling (%) - Enter the percentage of floor area that is below an elevated portion of the ceiling.

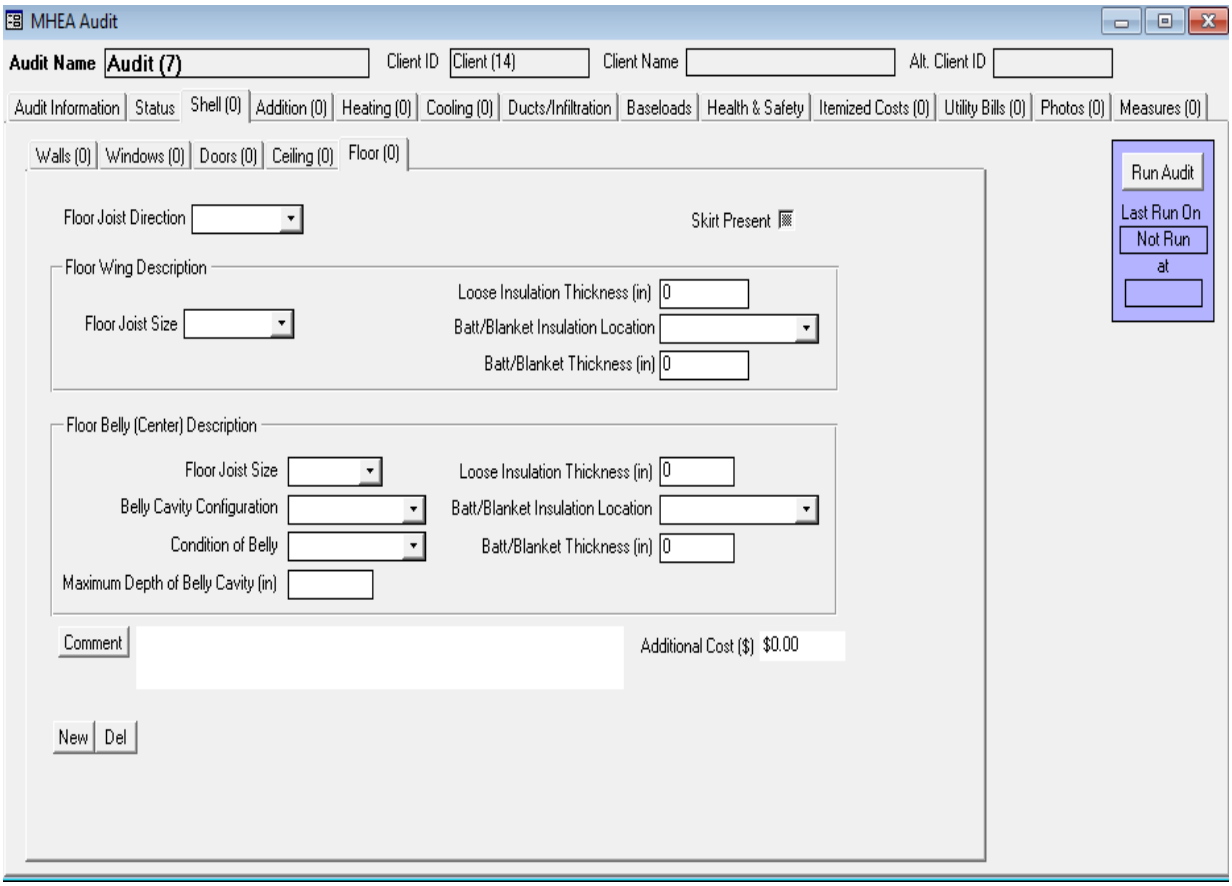
Additional Cost ($) - Do not use this field.

Comment - Enter any comments associated with the ceiling here.

New Button – Creates a new record.

Del Button – Deletes an existing record.

Floor Sub-tab



Floor Joist Direction - Enter the direction the floor joists are running. Use the drop-down box to make your selection: Lengthwise or Widthwise.

Skirt Present - Mark this checkbox if a skirt is present.

<u>Floor Wing Description Section</u>

F**loor Joist Size -** Using the drop-down box, enter the size of the floor joist. Sizes to select from are: 2X4, 2X6, or 2X8.

Loose Insulation Thickness (in) - Enter the amount of existing batt\blanket and loose-fill insulation. By entering a value greater than 0 inches, you are implying that the insulation exists. If you enter a thickness of 0 inches, MHEA assumes insulation of that type does not exist.

Batt/Blanket Insulation Location - Indicate where the batt/blanket insulation is located in the wing sections. Refer to the "Help" screen for an illustration. Select from the drop-down box: Attached to Flooring, Between Joists, Attached Under Joists, or None.

Batt/Blanket Insulation Thickness (in) - Enter the amount of existing batt\blanket and loose-fill insulation. By entering a value greater than 0 inches, you are implying that the insulation exists. If you enter a thickness of 0 inches, MHEA assumes insulation of that type does not exist.

Floor Belly (Center) Description Section

Floor Joist Size - Using the drop-down box, enter the size of the floor joist. Sizes to select from are: 2x4, 2x6, or 2x8.

Belly Cavity Configuration - Enter the configuration of the belly center cavity. The belly cavity is the deep section that runs the length of the home and usually houses the main supply air duct. Make your selection from the drop-down box: Square, Rounded, or Flat.

Condition of Belly - Enter the condition of the existing belly wrap. Choose from: Good, Average, or Poor.

Maximum Depth of Belly Cavity (in) - Enter the maximum depth of the belly (in inches) as measured from the underside of the flooring to the lowest part of the belly.

Loose Insulation Thickness (in) - Enter the amount of existing batt\blanket and loose-fill insulation. By entering a value greater than 0 inches, you are implying that the insulation exists. If you enter a thickness of 0 inches, MHEA assumes insulation of that type does not exist.

Batt/Blanket Insulation Location - Indicate where the batt/blanket insulation is located in the belly sections. Select from the drop-down box: Attached to Flooring, Between Joists, Attached Under Joists, Draped Below Joists, or None.

Batt/Blanket Insulation Thickness (in) - Enter the amount of existing batt/blanket and loose-fill insulation. By entering a value greater than 0 inches, you are implying that the insulation exists. If you enter a thickness of 0 inches, MHEA assumes insulation of that type does not exist.

Comment - Enter any comments associated with the floors here.

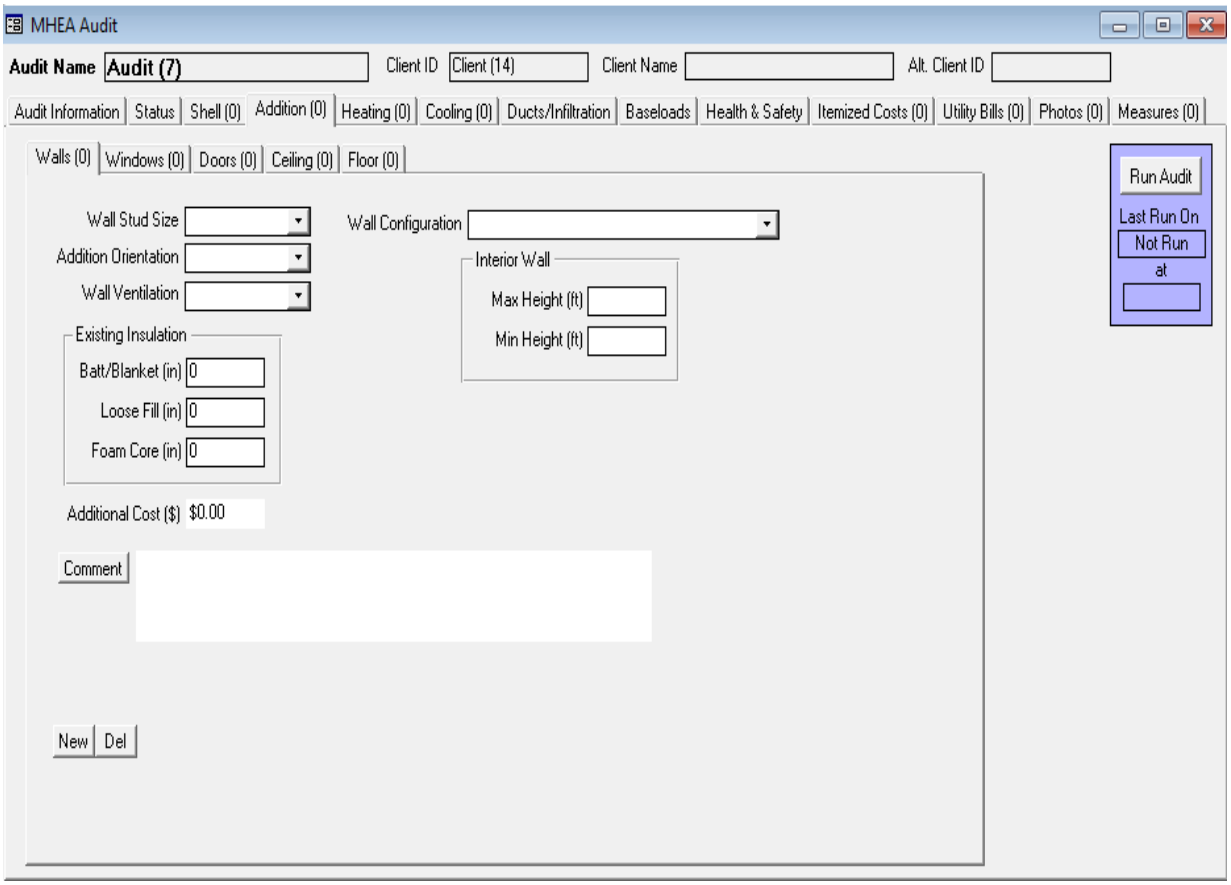
Additional Cost ($) – Do not use this field.

New Button – Creates a new record.

Del Button – Deletes an existing record.

Addition Tab

Walls Sub-tab



Wall Stud Size - Using the drop-down box, select the size of the framing stud between the interior and exterior wall of the manufactured home. Choose from: 2x2, 2x3, 2x4, or 2x6.

Addition Orientation - The addition orientation is the same orientation (direction the wall faces) as the manufactured home wall to which the addition is attached. Indicate this orientation by selecting: North, South, East, or West from the drop-down box.

Wall Ventilation - An addition wall may be intentionally or unintentionally ventilated. A ventilated wall has a space for air to flow between the exterior and interior wall materials. Select from the drop-down box to identify the wall as: Vented or Not Vented.

Wall Configuration - Enter the approximate wall configuration by selecting the appropriate description: Maximum Wall Height at Interior Wall, Maximum Wall Height in Center of Addition or All Addition Walls the Same Height.

Existing Insulation Section

Batt/Blanket (in) - Enter the amount of existing insulation.

Loose Fill (in) - Enter the amount of existing insulation.

Foam Core (in) - Enter the amount of existing insulation.

Interior Wall Section

Max Height (ft) - Enter the maximum height, in feet, of the addition walls. If the walls are of varying height, enter the maximum and minimum wall heights. If the walls are all the same height, enter the same value in both the maximum and minimum height fields.

Min Height (ft) - Enter the minimum height, in feet, of the addition walls. If the walls are of varying height, enter the maximum and minimum wall heights. If the walls are all the same height, enter the same value in both the maximum and minimum height fields.

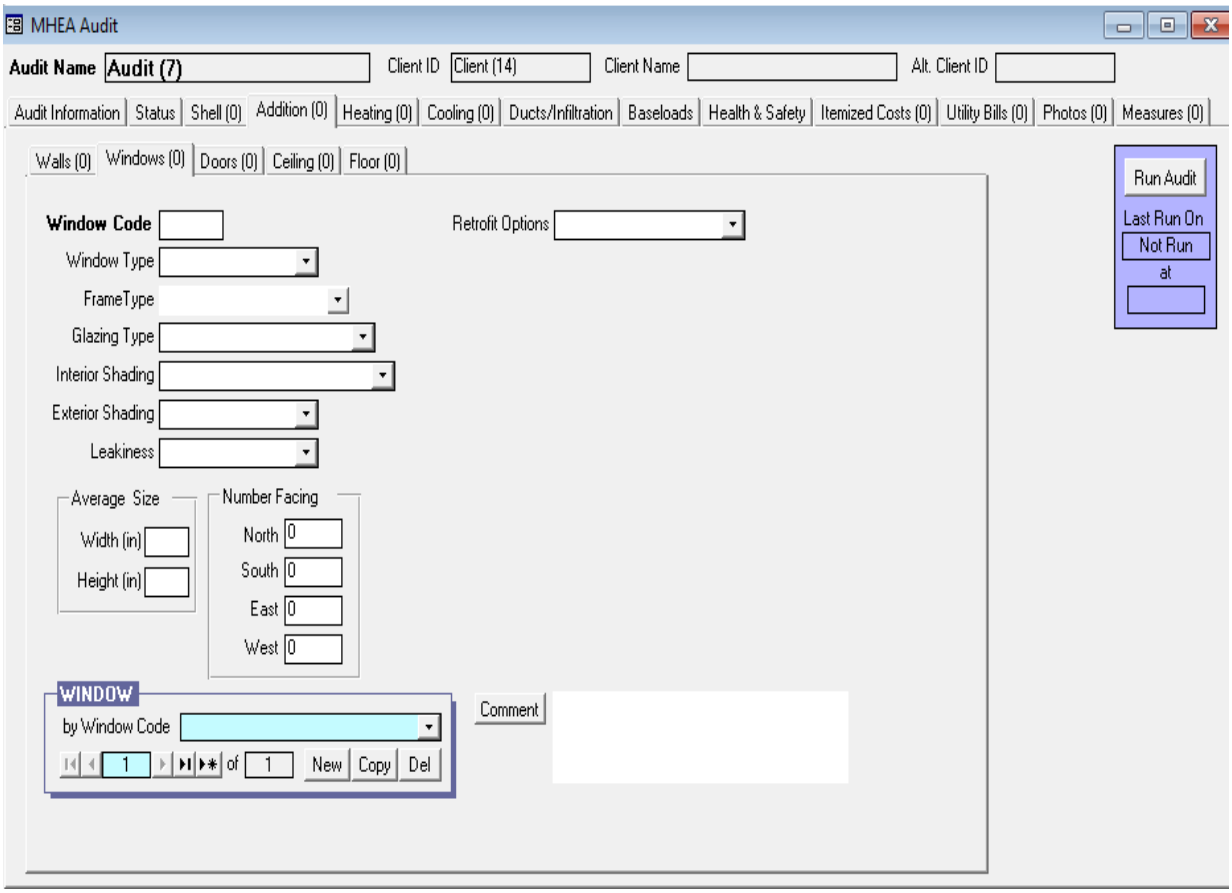
Additional Cost ($) - Do not use this field.

Comment - Enter any comments associated with the floors here.

New Button – Creates a new record.

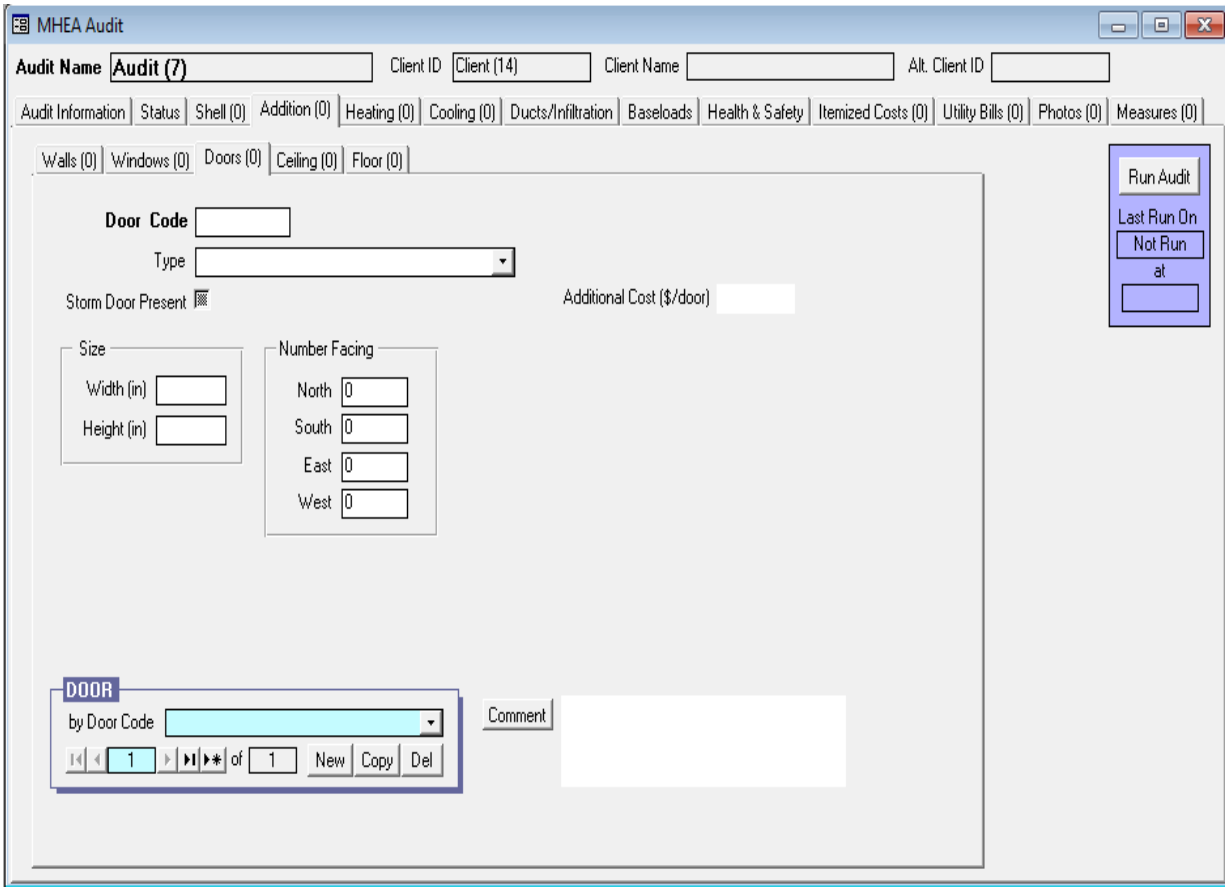
Del Button – Deletes an existing record.

Windows Sub-tab



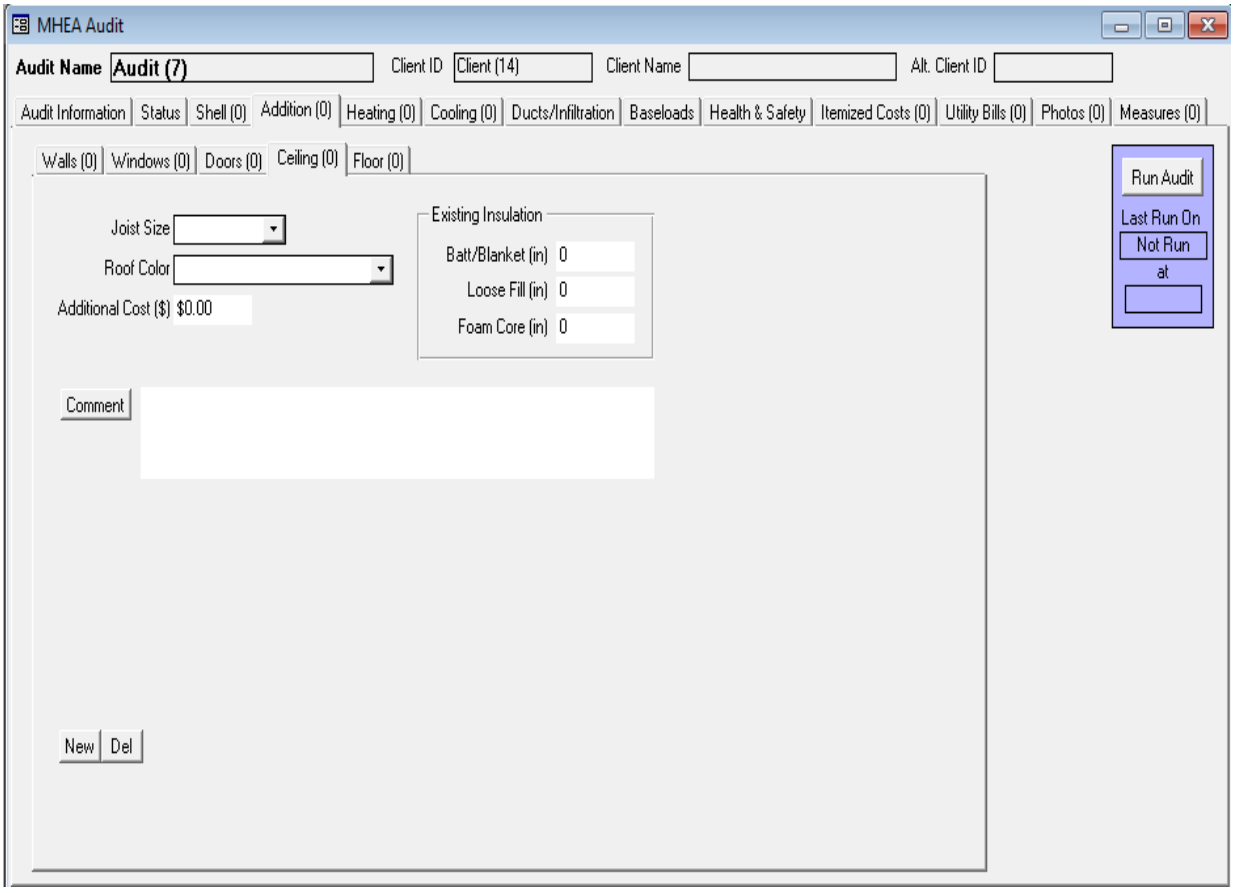
Refer to the Windows Sub-tab under the Shell tab, for instructions.

Doors Sub-tab



Refer to the Doors Sub-tab, under the Shell tab, for instructions.

Ceiling Sub-tab



Joist Size - Using the drop-down box, enter the size of the floor joist. Sizes to select from are: 2x4, 2x6, or 2x8.

Roof Color - Using the drop-down box, enter the color of the roof: **White, Reflective or Shaded**, or **Normal or Weathered**. This field is important to complete because the color of the roof affects how solar energy impacts the heating and cooling loads of the addition.

Existing Insulation

Batt/Blanket (in) - Enter the amount of existing insulation.

Loose Fill (in) - Enter the amount of existing insulation.

Foam Core (in) - Enter the amount of existing insulation.

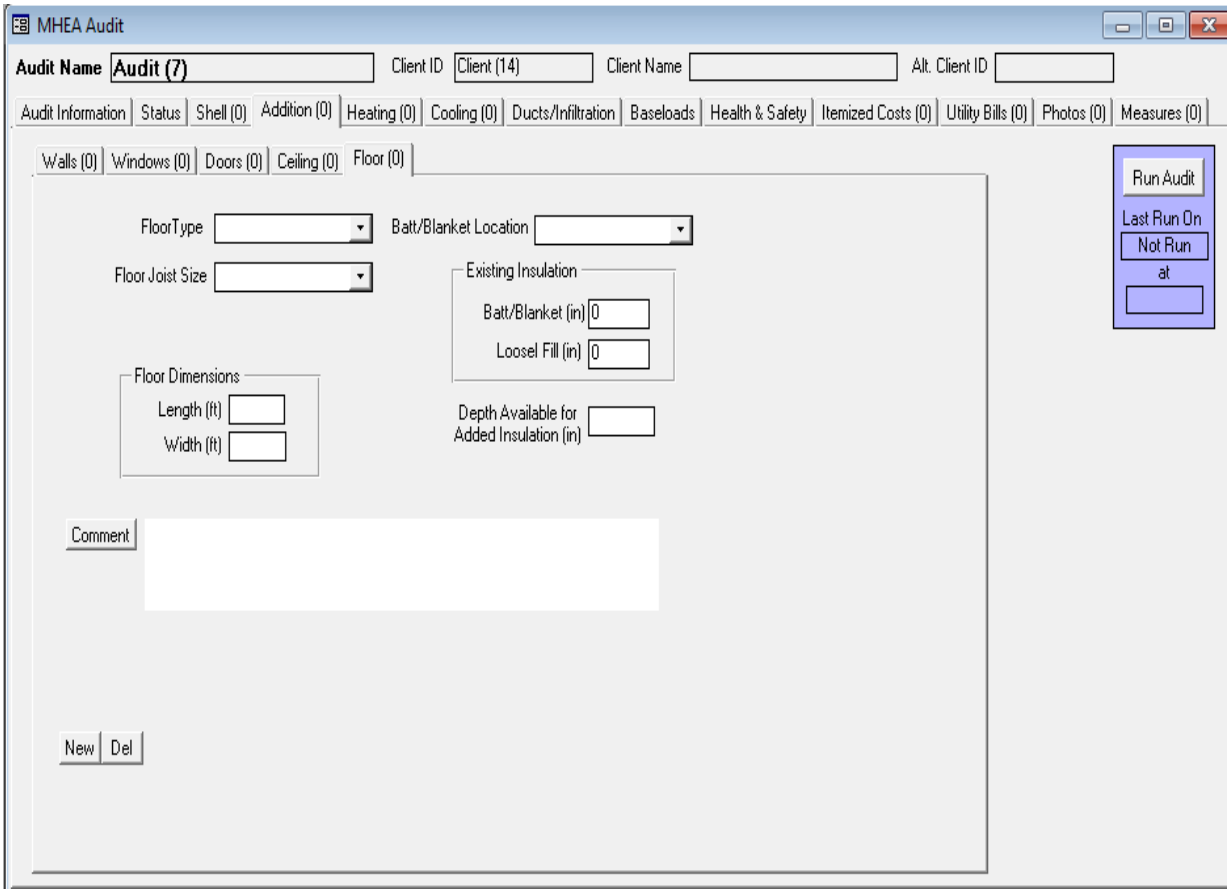
Additional Cost ($) - Do not use this field.

Comment - Enter any comments associated with the ceiling here.

New Button – Creates a new record.

Del Button – Deletes an existing record.

Floor Sub-tab



Floor Type - Enter the type of floor. Use the drop-down box to make your selection from: Crawl Space, Slab on Grade, or Exposed Floor.

Floor Joist Size - Using the drop-down box, enter the size of the floor joist. Sizes to select from are: 2x4, 2x6, or 2x8.

Batt/Blanket Location - Indicate where the batt/blanket insulation is located in the addition. Using the drop-down box, select from: Attached to Flooring, Between Joists, Attached Under Joists, or None.

Existing Insulation Section

Batt/Blanket (in) - Enter the amount of existing batt/blanket and loose-fill insulation.

Loose Fill (in) - Enter the amount of existing batt/blanket and loose-fill insulation.

Depth Available for Adding Insulation (in) - Enter the depth of space available for added insulation, in inches, in this section.

Floor Dimensions Section

Length (ft) - Enter the dimensions of the addition floor. The floor length is the dimension parallel to the wall shared with the manufactured home.

Width (ft) - Enter the dimensions of the addition floor. The floor width is the dimension perpendicular to the wall shared with the manufactured home.

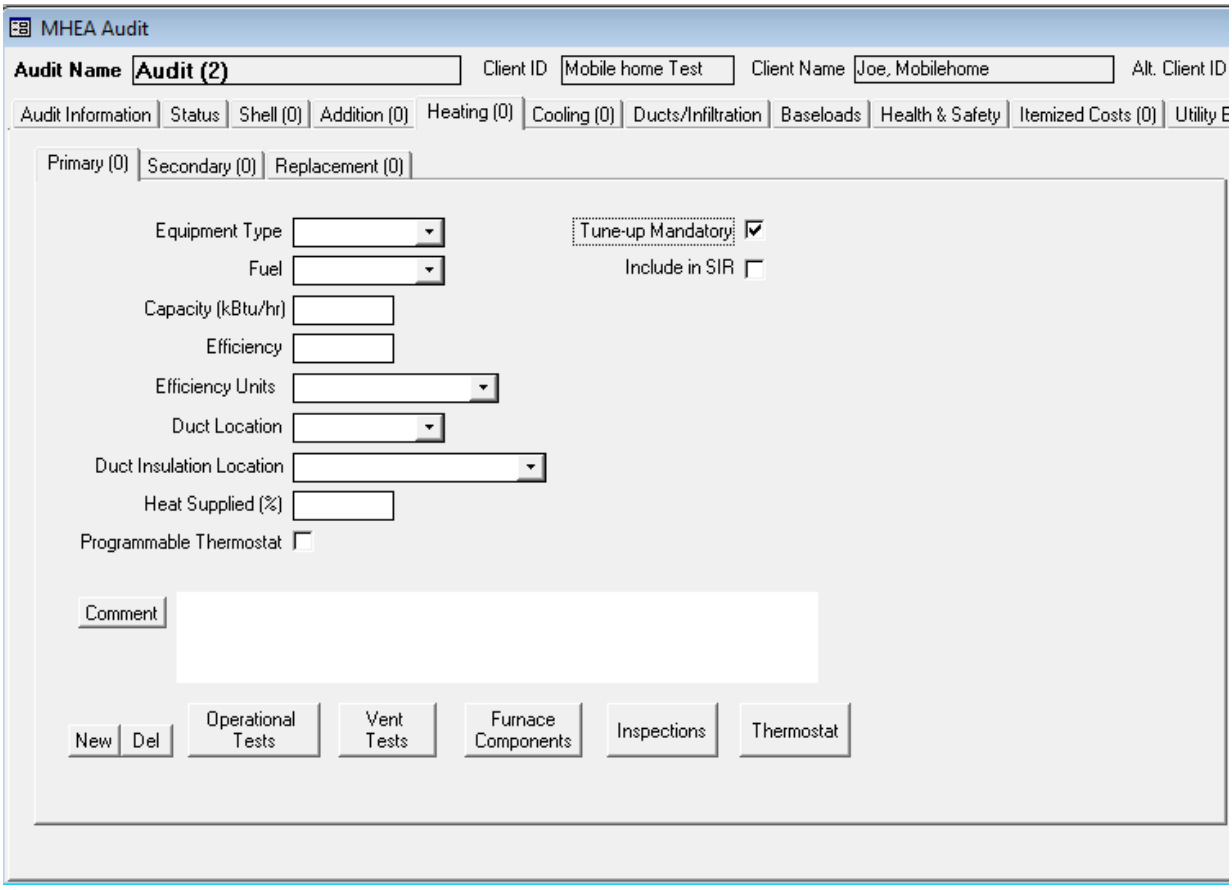
Comment - Enter any comments associated with the floor here.

New Button – Creates a new record.

Del Button – Deletes an existing record.

Heating Tab

Primary Sub-tab



This information is in regard to the home's primary heating system. **Equipment Type -** Indicate the home heating equipment type. Using the drop-down box, choose from: Furnace, Heat Pump, Space Heater, or None.

Fuel - Select the fuel type associated with the primary heating system, whether it is a furnace or space heater. Heat pumps are automatically considered electric. Using the drop-down box, choose from: Natural Gas, Oil, Electricity, Propane, Wood, Coal, Kerosene, or Other.

Capacity (kBtu/hr) - Enter the rated input capacity (found on the equipment nameplate) for natural gas, electric, propane, oil, and kerosene furnaces. Enter the rated output capacity for heat pumps. Capacity input for coal and wood systems is not required.

Efficiency - Enter the heating efficiency of the primary heating system in the efficiency units selected.

Efficiency Units - Using the drop-down box, select the unit efficiency from the following selection: Steady State, AFUE, HSPF, or COP.

Duct Location - Select the location of the main supply air duct for the cooling system. Using the drop down box, choose from: Floor, Ceiling, or None.

Duct Insulation Location - Enter the location of the insulation on the main supply air duct. Using the drop-down box, choose from: Above Duct, Below Duct, Around Duct or Ductboard, or No Insulation.

Total Heat Supplied (%) - Enter the amount of heat supplied by the primary heating system.

Programmable Thermostat – Mark the checkbox if a programmable thermostat exists.

Tune-up Mandatory – There are a few different ways the MHEA audit will consider whether a tune-up can be done.

1. Tune-up Mandatory Checkbox – **Do not mark this checkbox** if you want the audit to recommend that a tune-up be done on the heating system. Enter all of the information in the required fields and run the audit. If a tune-up is cost–effective, the tune-up will appear in the Recommended Measures Report.
2. Tune-up Mandatory Checkbox – **Mark this checkbox** if you want MHEA to make the tune-up. You will also need to mark the "Include in SIR" checkbox. Note: By marking the SIR checkbox, the tune-up will appear on the Recommended Measures Report regardless of the SIR. If the individual SIR is 1.0 or greater and the cumulative SIR is 1.0 or greater, the tune-up can be done.
3. Tune-up Mandatory Checkbox – Marking this checkbox and NOT marking the "Include in SIR" checkbox will put the tune-up in the health and safety section of the Recommended Measures Report. **You must first run the audit following the first and second steps above, before running the tune-up as a health and safety measure.**

Include in SIR – Mark this checkbox to include the tune-up as an energy efficiency measure. Leave this checkbox unmarked if you want the tune-up to be considered a health and safety measure.

Comment - Enter any comments associated with the heating system here.

New Button – Creates a new record.

Del Button – Deletes an existing record.

These tests are optional tests.

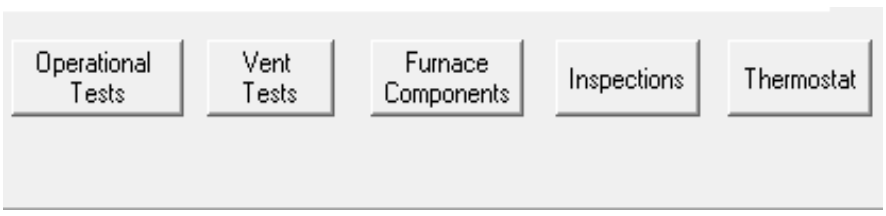
Operation Tests Button – Refer to the Heating tab in the NEAT Audit section for instructions.

Vent Tests Button – Refer to the Heating tab in the NEAT Audit section for instructions.

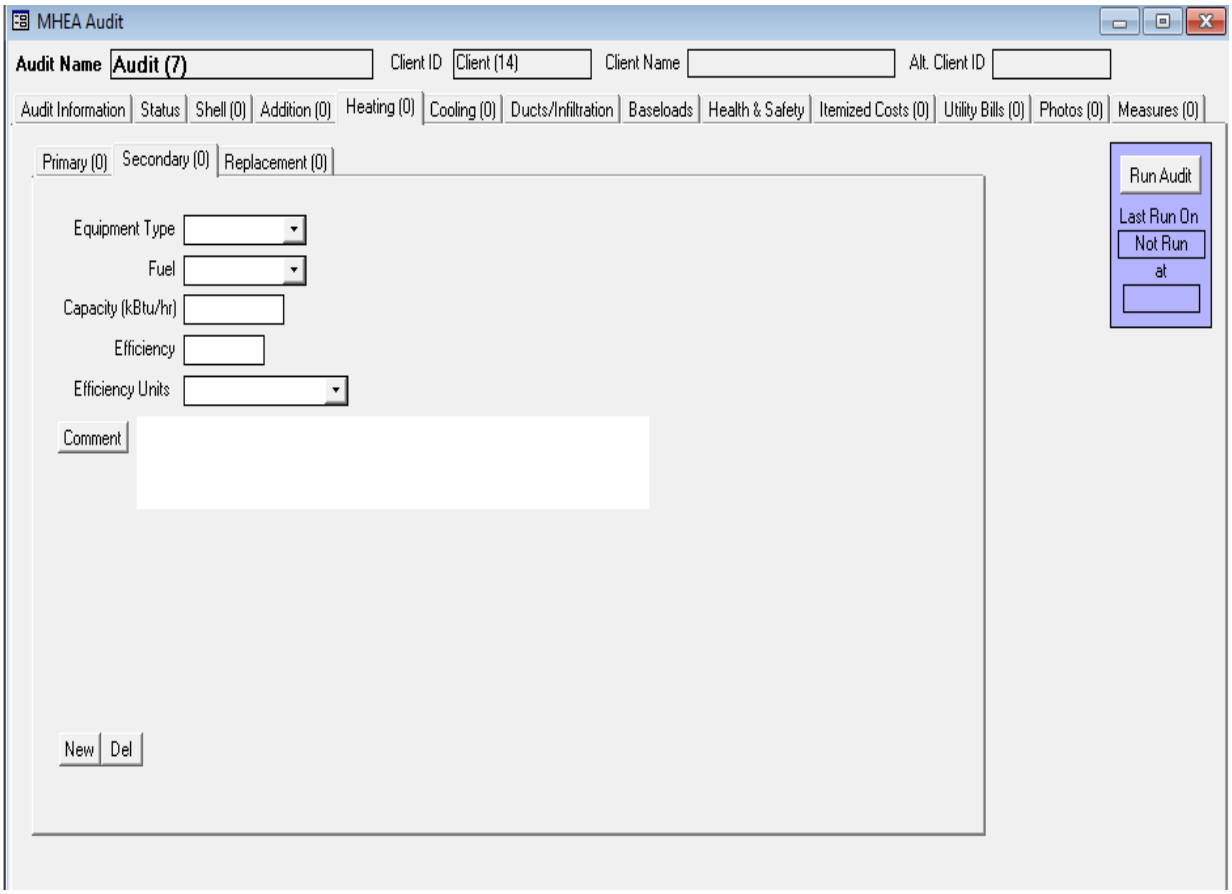
Furnace Components Button – Refer to the Heating tab in the NEAT Audit section for instructions.

Inspections Button – Refer to the Heating tab in the NEAT Audit section for instructions.

Thermostat Button – Refer to the Heating tab in the NEAT Audit section for instructions.

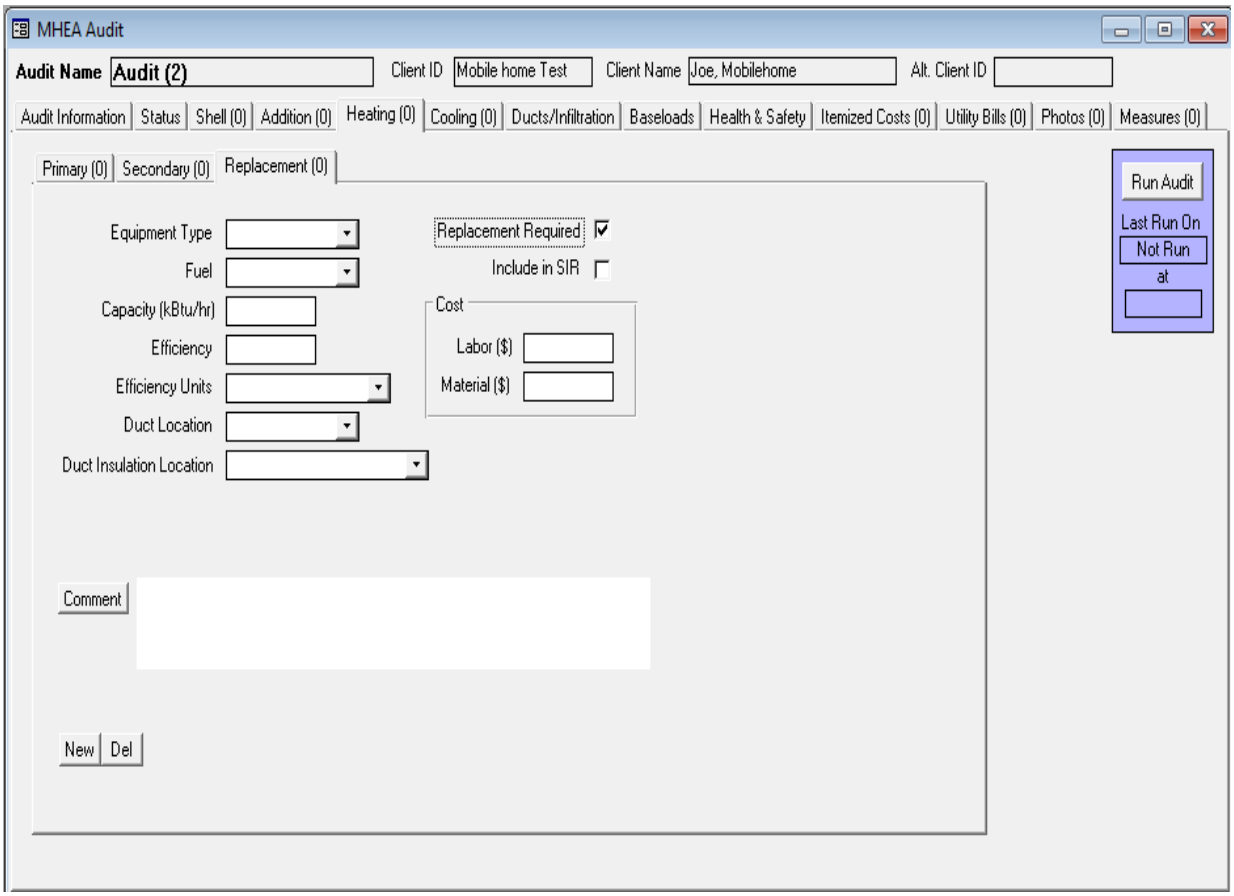


Secondary Sub-tab



This information is in regard to the home's secondary heating system. Some of the same information as the primary heating system will be entered here. Refer to the primary system on the Primary Sub-tab to fill in fields.

Replacement Sub-tab



This information is in regard to replacing the heating system. A record similar to the primary heating system record will appear. Use this record to specify the equipment you plan to install if replacing the heating system is part of the retrofit package.

There are a few ways the MHEA audit will call for replacing the heating system.

1. **Replacement Required - Do not mark this checkbox** if you want the audit to recommend the heating system to be replaced as an efficiency measure. Enter all of the information in the required fields and run the audit. If the replacement is cost–effective, it will appear in the Recommended Measures Report.
2. **Replacement Required -** If replacing the heating equipment is required, mark the checkbox. You will also need to mark the "Include in SIR" checkbox. By marking the SIR checkbox, the heating system replacement will appear on the Recommended Measures Report, regardless of the SIR. If the individual SIR is 1.0 or greater and the cumulative SIR is 1.0 or greater, the heating system can be replaced.
3. **Replacement Required –** Marking this checkbox and not marking the "Include in SIR" checkbox will put the heating system replacement in the health and safety section of the Recommended Measures Report. **First run the audit using the first and second methods listed above, before replacing the heating system as a health and safety measure.**

Include in SIR - Mark this checkbox if the costs associated with replacing the heating system equipment should be included with the home retrofit costs. Leave this checkbox unmarked if you want the heating system replacement to be considered a health and safety measure.

Cost Section

Labor ($) – Enter the labor cost to install the heating system.

Material ($) – Enter the cost of the materials used to install the heating system.

Comment - Enter any comments associated with the heating system here.

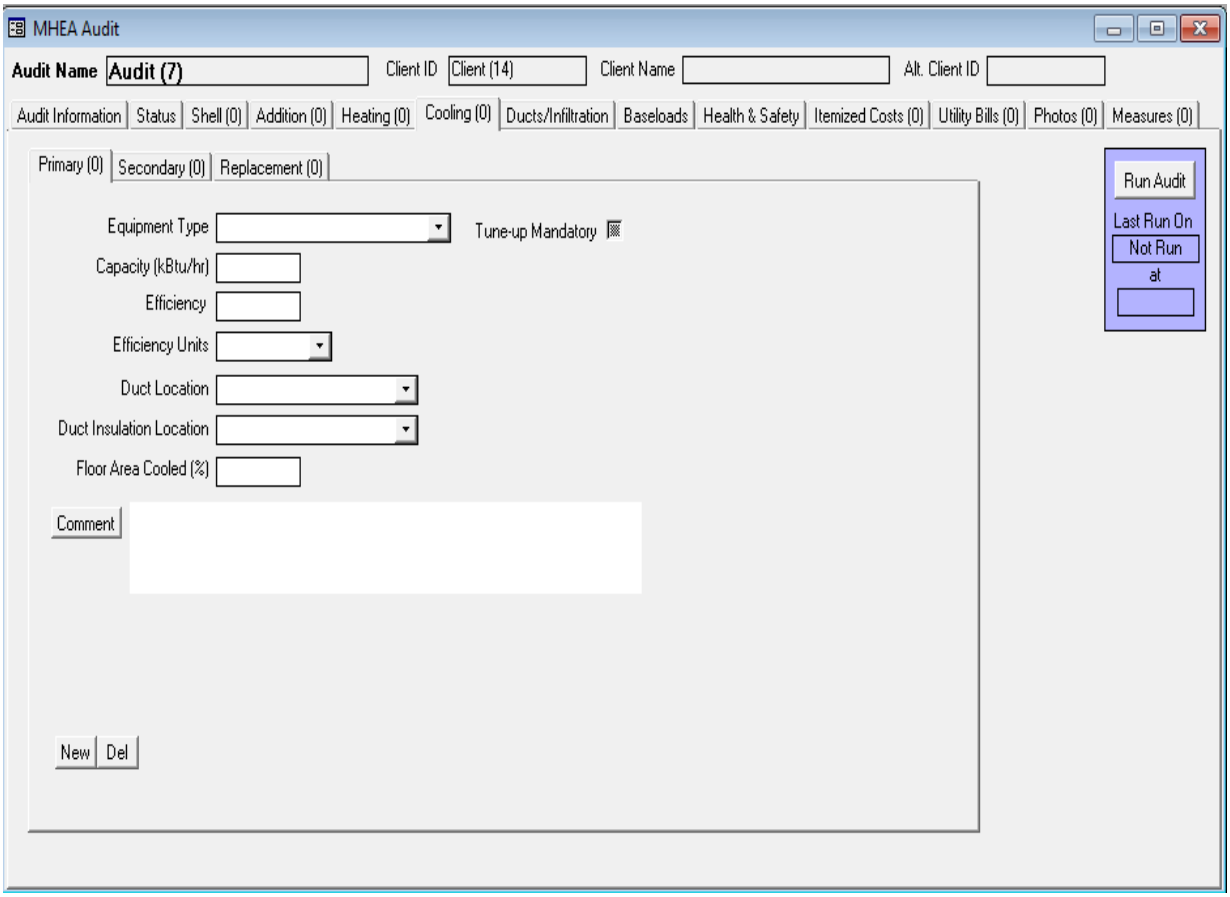
New Button – Creates a new record.

Del Button – Deletes an existing record.

For clarification of other inputs see heating tab in the NEAT site built section.

Cooling Tab

Primary Sub-tab



This information is in regard to the primary cooling unit in the home.

EquipmentType - Enter the type of cooling unitin the home. Use the drop-down box to select from: Central Air Conditioner, Window or Room Air Conditioner, Heat Pump, Evaporative Cooler, or None.

Capacity (kBtu/hr) - Read the energy input from the nameplate attached to the cooling unit. No capacity input is allowed if the cooling unit is an evaporative cooler or if no cooling unit exists. If the capacity is given in Tons of cooling, multiply that value by 12 kBtu/hr per Ton.

Efficiency - Enter the unit's rated efficiency, which can be found on the nameplate, which is attached to the cooling unit.

Efficiency Units - Select the unit of efficiency entered in the Efficiency field: EER, SEER, or COP. EER ratings are commonly found on window/room air-conditioners while the SEER ratings are more common on central systems.

Duct Location - Select the location of the main supply air duct for the cooling system. Using the drop-down box, choose from: Floor, Ceiling or None.

Duct Insulation Location – Enter the location of the insulation on the main supply air duct. Using the drop-down box, choose from: Above Duct, Below Duct, Around Duct or Ductboard, or No Insulation

Floor Area Cooled (%) - Enter the approximate percent of the home floor area that is cooled by the air conditioner.

Same as Primary Unit (the only thing different in this tab from the primary tab, there will not be a duct location to enter information in).

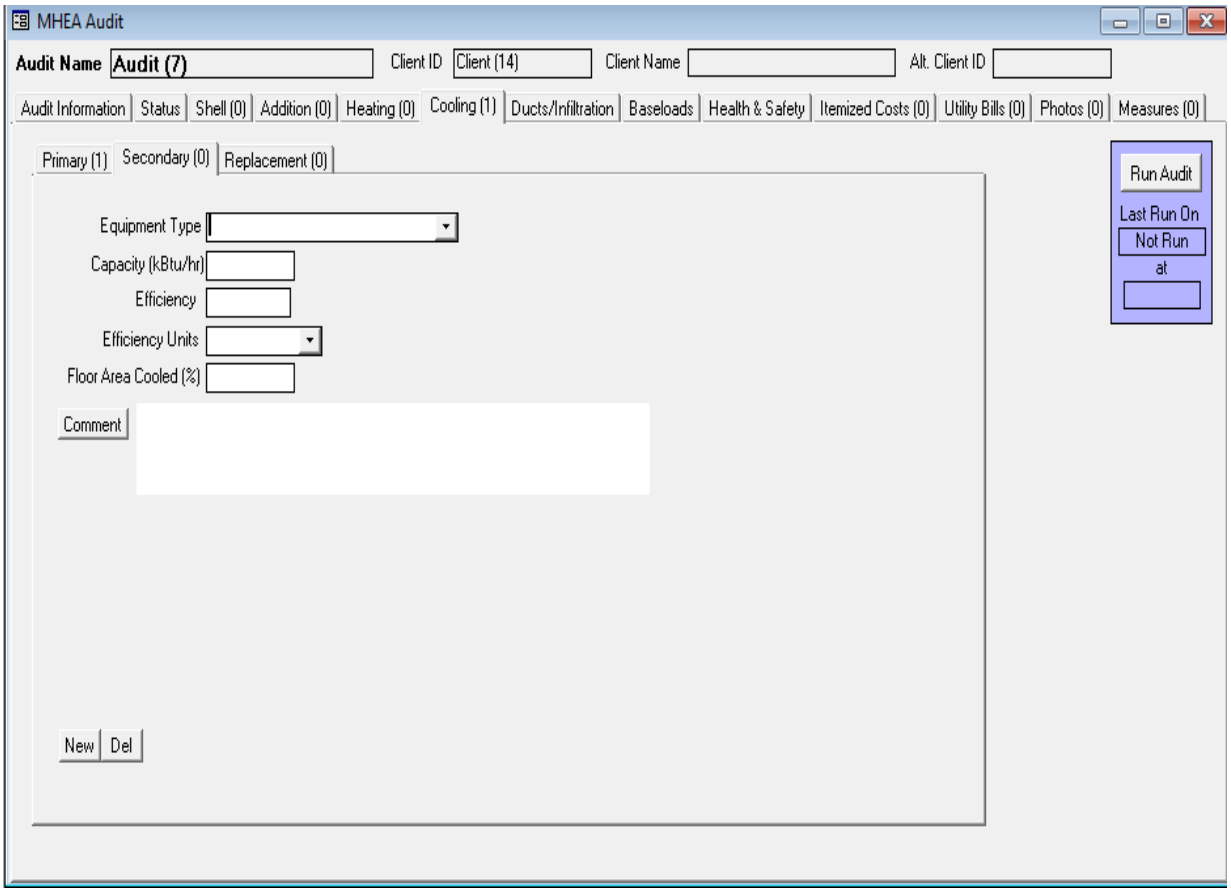
Tune-up Mandatory - Do **NOT** mark this checkbox. Our program doesn't clean cooling systems.

Comment - Enter any comments associated with the cooling system here.

New Button – Creates a new record.

Del Button – Deletes an existing record.

Secondary Sub-tab



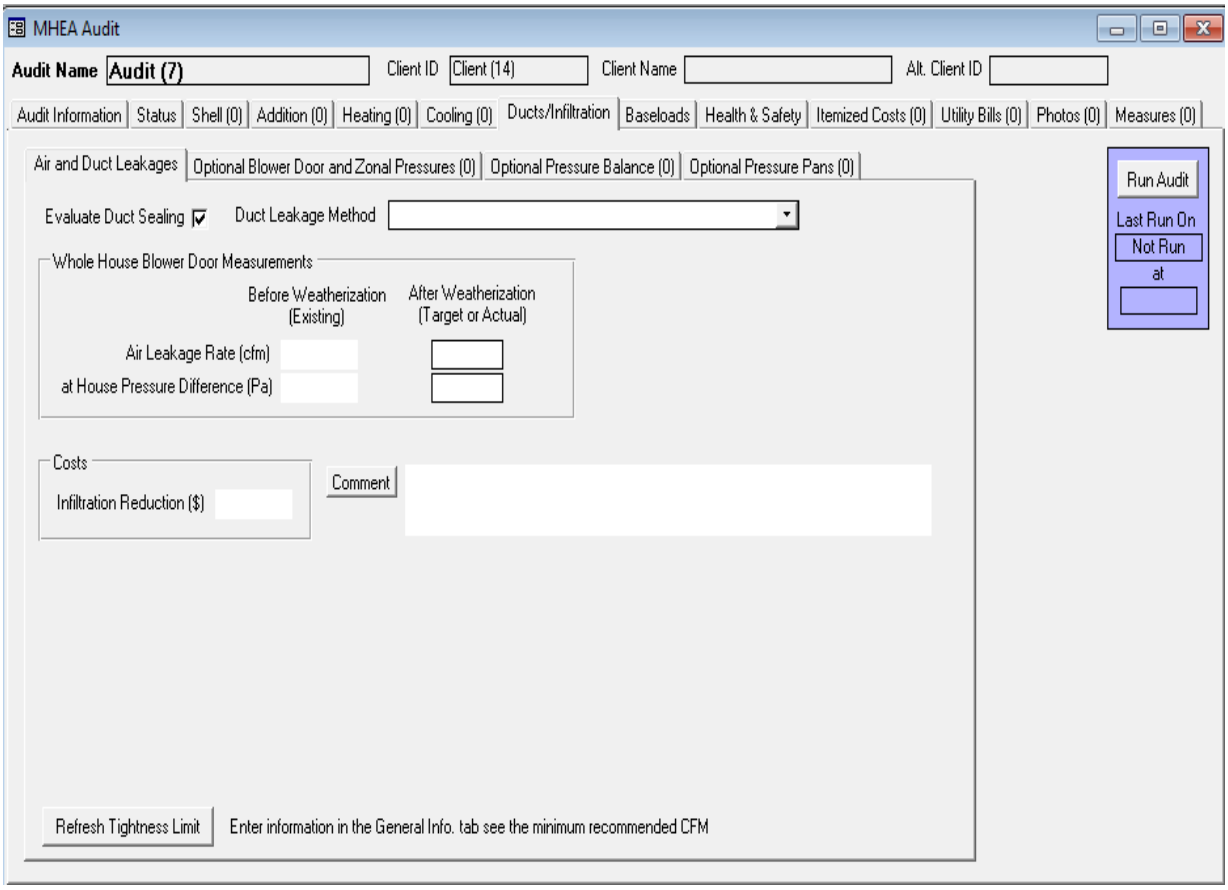
This information is in regard to the home's secondary cooling system. The same information will be entered as in the Primary Sub-tab, except the Duct Location field. Refer to the primary system on the Primary Sub-tab to fill in fields.

Replacement Sub-tab

Our program doesn't replace cooling systems, so we do not need to add information to this record.

Ducts/Infiltration

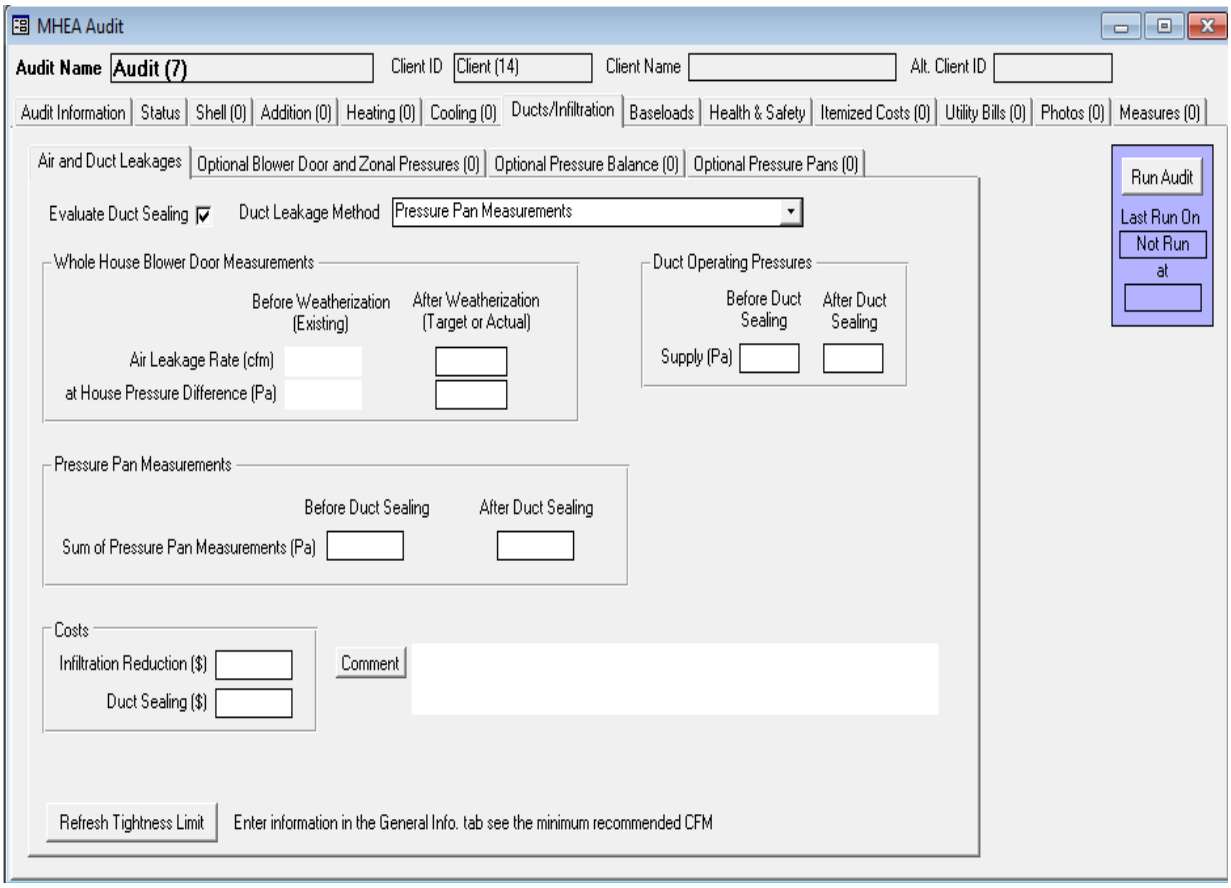
Air and Duct Leakage Sub-tab



Evaluate Duct Sealing - ALWAYS mark this checkbox.

Duct Leakage Method - Use the drop-down box to indicate what method you want to use to check the duct leakage. ALWAYS select Pressure Pan Measurements.

Note: By selecting "Pressure Pan Measurements", the infiltration screen will change. You will then need to fill in the required fields for this particular screen.



Whole House Blower Door Measurement

Air Leakage Rate (cfm) – Enter the beginning blower door reading in the Before Weatherization (Existing) column. Enter the estimated ending blower door reading in the After Weatherization (Target or Actual) column. The Iowa Weatherization Program requires the input of pre- and post-weatherization blower door readings for the MHEA Audit. The initial reading must be actual data obtained at the time of evaluation. The post- reading for MHEA data may be based on estimation

At House Pressure Difference – Hit enter to accept the default value of 50 Pascals.

At House Pressure Difference (Pa) - Hit enter to accept the default value of 50 Pascals.

Duct Operating Pressures Section

Before Duct Sealing Supply (Pa) - Enter the supply duct static pressure under normal conditions with the HVAC fan operating **before** implementing any duct-sealing measures.

After Duct Sealing Supply (Pa) - Enter the supply duct static pressure under normal conditions with the HVAC fan operating **after** implementing any duct-sealing measures. Because duct sealing is done after the audit is run, note the Before Duct Sealing reading, add 5Pa to that number and enter it into this field.

Pressure Pan Measurements Section

Sum of Pressure Pan Measurements (Pa) Before Duct Sealing – Enter the sum of the pressure pan readings before duct sealing is done.

Sum of Pressure Pan Measurements (Pa) After Duct Sealing – Enter the sum of the pressure pan readings after the duct sealing is done. Because duct sealing is done after the audit is run, you will need to determine in advance what you think the number will be.

Costs Section

Infiltration Reduction ($) – Enter the estimated costs for all infiltration measures. Costs must be entered to get SIR credit for infiltration work.

Duct Sealing ($): Enter the total (labor and material) cost to seal the ducts. Run the audit first to see if the audit will allow duct sealing to be considered as a retrofit measure, by giving duct sealing an individual SIR of 1.0 or greater on the Recommended Measures Report. If duct sealing does not appear on the Recommended Measures Report, return to the Air and Duct Leakage Sub-tab and remove the duct sealing cost. Enter the cost in the Itemized Costs tab as a health and safety measure and enter 0 in the duct sealing field.

Comment - Enter any comments associated with ducts/infiltration here.

Note: The tabs listed below and the information that needs to be entered follows the same process as that which is described in the NEAT Audit section of the instruction manual.

Ducts/Infiltration Tab – The Optional Blower Door and Zonal Pressure, Optional Pressure Balance, and Optional Pressure Pans Sub-tabs are similar to the NEAT Audit. Refer to the NEAT Audit instructions to enter information into these tabs.

Baseloads Tab –Refer to the NEAT Audit instructions for information on how to fill in tab.

Health & Safety Tab – Refer to the NEAT Audit instructions for information on how to fill in tab.

Itemized Costs Tab – Refer to the NEAT Audit instructions for information on how to fill in tab.

Utility Bills Tab – Refer to the NEAT Audit instructions for information on how to fill in tab.

Photos Tab – Refer to the NEAT Audit instructions for information on how to fill in tab.

Measures Tab – Refer to the NEAT Audit instructions for information on how to fill in tab.

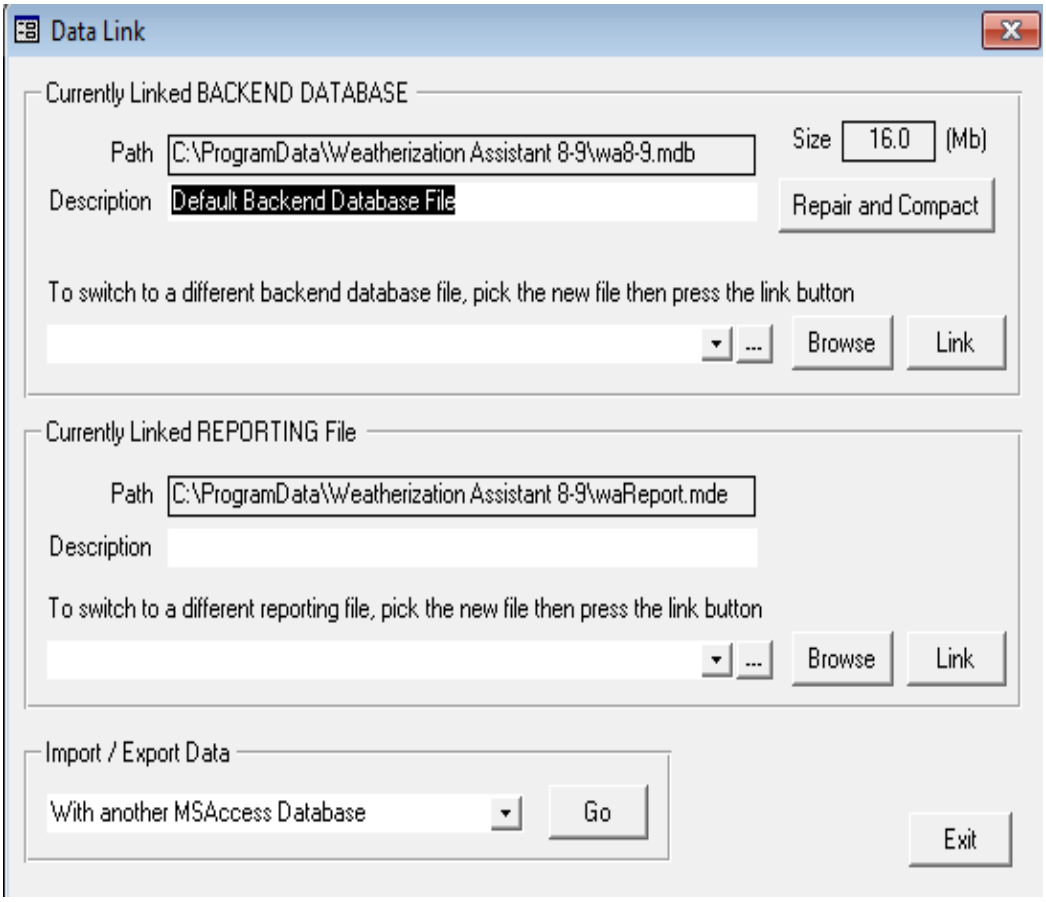
DATA LINK BUTTON

This will be a brief description on how to transfer data from one database to another. A more thorough approach can be found in the WA 8 Manual found on WAPTAC, or on the Members Only Website.

Data Link Main Menu item allow you to group client information (such as for different program years), quickly link to various database files, and share information on individual or groups of clients with others.

All user-supplied data and audit results in the Weatherization Assistant are stored in a file on the computer. The file is a Microsoft Access database file, termed the "backend" file in Access terminology.

From the main menu, click on the “Data Link” button, a screen will appear that looks like the one below.



The data link screen is broken out into three different sections; each section will link you to a different data base.

Currently linked BACKEND DATABASE:

Path – Un-editable field displays the path (location in your computer) and name of the database file you are currently linked to.

Description – This field provides you with a means of identifying the characteristics or contents of the database file designated in the Path field.

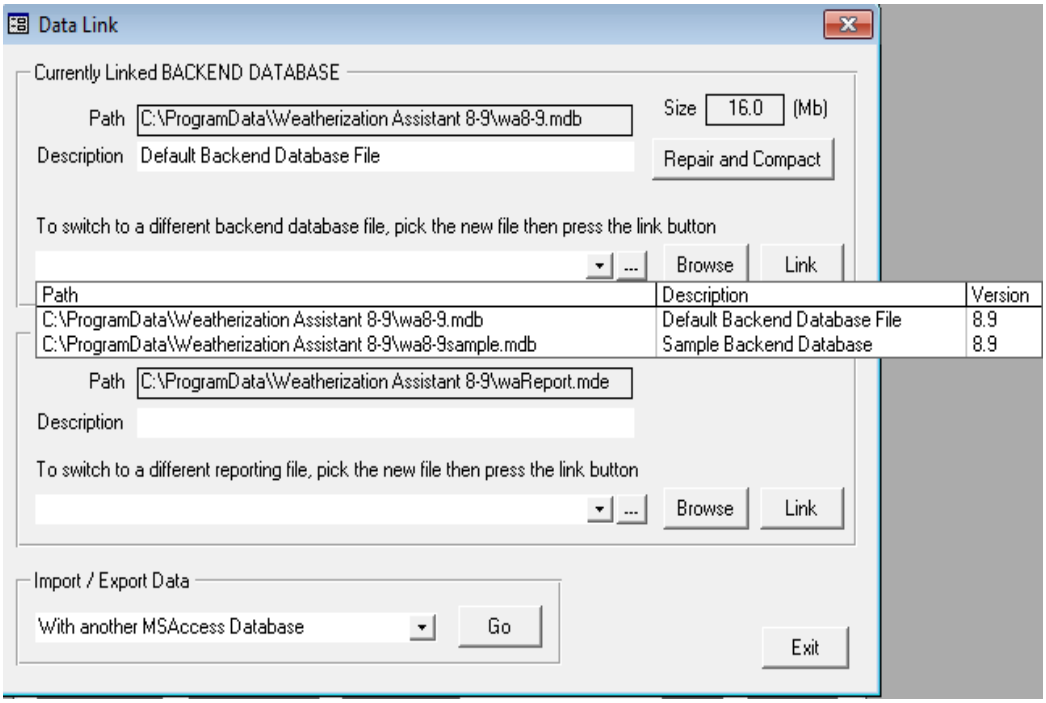
Size – Un-editable field, reports the size of the database file displayed in the Path field, in Megabytes (MB). Helpful if you want to email, or move file.

Repair and Compact Button – If a database file becomes disjoint or even damaged, the Repair and Compact button examines the database file identified in the Path field and attempts to repair any damaged segments, then compacts the file into its most efficient form.

Note: If selected, the operation will notify you that it "requires exclusive use of the backend database." Thus, if the currently linked backend [database] is shared on a network, be sure everyone is logged off... or not linked to the database.

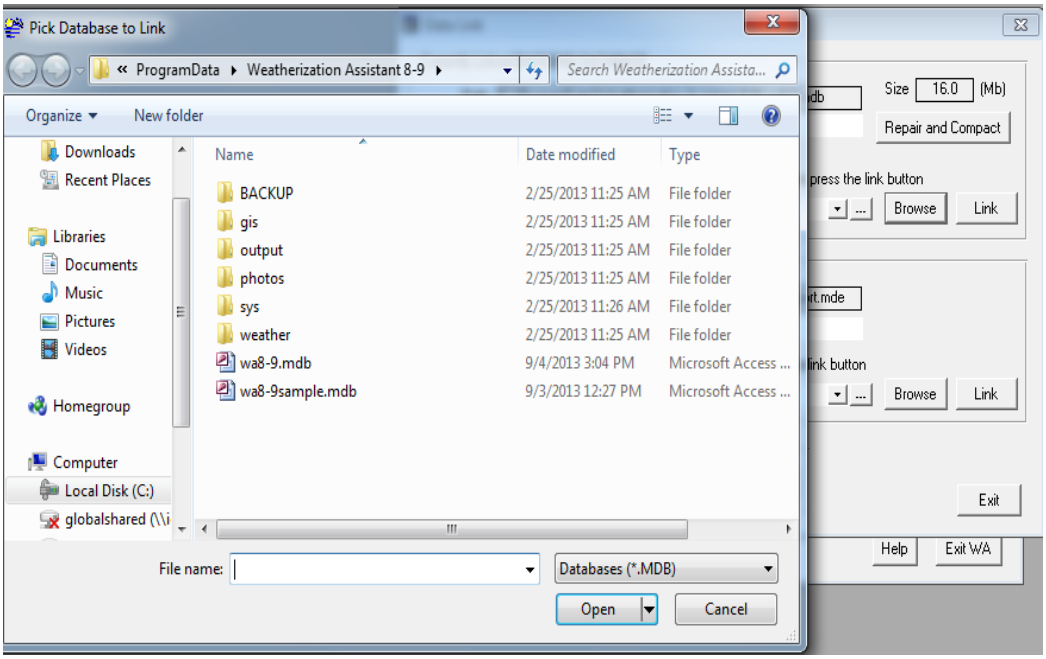
To switch to a different backend file, pick the new file then press the link button. There are a couple of different ways you can locate a file:

Combo box – Choose form the combo box the database file you want to link to and press the link button,



or,

Browse Button – Press the browse button and locate the database file you want to link to and press the link button.

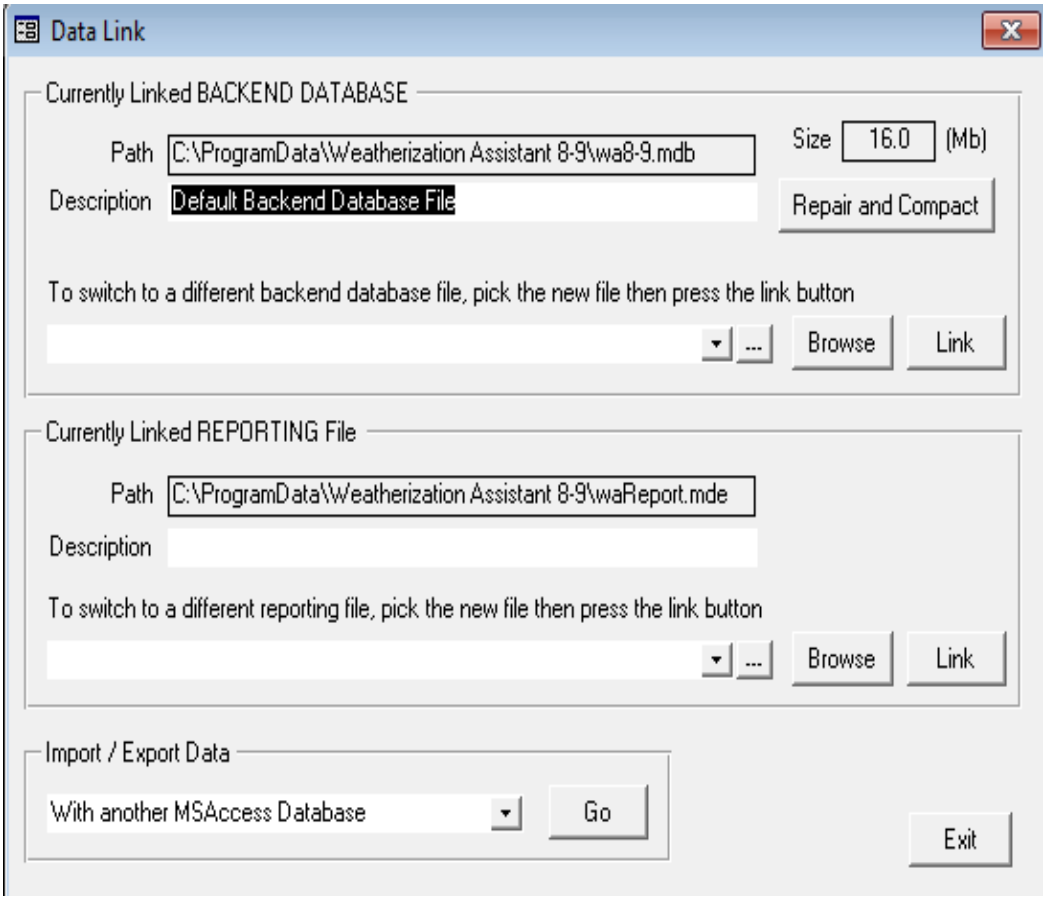


Link Button – Select the Link button to link to the database file.

Note: Whenever the Link button is selected, you will be shown a progress bar in a small sub-window which monitors the progress of the linking operation. When completed, the message "Data Link was successful" should appear. Select the "OK" button in this window. A similar linking process will then be performed for the Reporting module associated with the database, which will indicate that "Reporting Data Link was successful" when completed. Again, select "OK."

Currently Linked REPORTING File – This data block acts the same as the "Currently Linked Backend Data File" block discussed above except that it links only to a Reporting file.

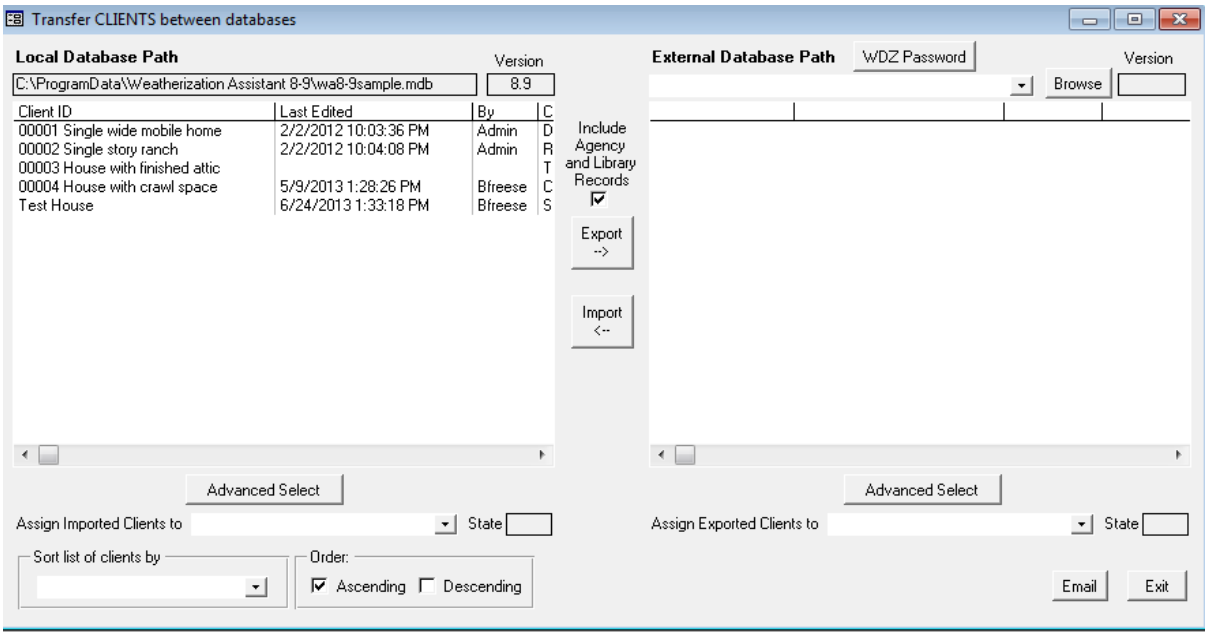
Import/Export Data



Import/Export Data:
Combo box – Select “With another MS Access Database”.

Go Button – Opens up the database with the file you want to import or export.

Exit – Return you to the main menu screen.



Local Database Path – Is the current database file you are linked to.

External Database Path – Is the database file you want to move file(s) to or from. To select the external database path, click on the combo box, or the browse button in the upper right corner of the form.

You can either import or export files from either location by selecting the file(s) you want to move then click on the “Import” or “Export” button. File(s) will then be transferred between databases. To transfer more than one file at a time, select the files you want to transfer and at the same time holding the “shift” key down this should highlight all the file that you want it transfer (all files need to be in row for this to work). If files are not in a row hold the “Ctrl” key down, this will allow you to choose different files in different locations in the database.

Note: Importing and exporting file(s) actually copies the file(s) form one database to the other.

Email Button – Allows you to email a file(s)

Exit Button – Returns you to previous menu.

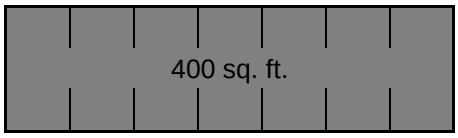
WALL INSULATION SCENARIOS

Wall cavity is completely filled with insulation
Wall cavity is completely empty, no insulation in it.

Please keep in mind that in order to complete any measure, it must have an individual SIR of 1.0 or greater after the audit is run.

SCENARIO #1

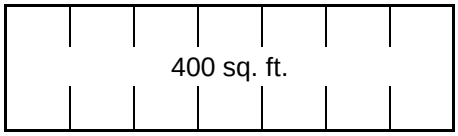
Wall – 400 sq. ft., 2x4 walls. Applies to one or two story house



Model wall as completely full in wall section of the audit

SCENARIO #2

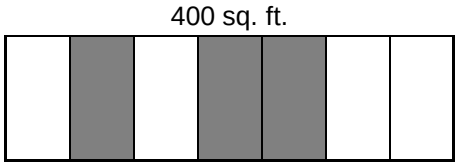
Wall – 400 sq. ft., 2x4 walls. Applies to one or two story house



Model wall as completely empty in wall section of the audit

SCENARIO #3

Wall – 400 sq. ft., 2x4 walls. Applies to one or two story house



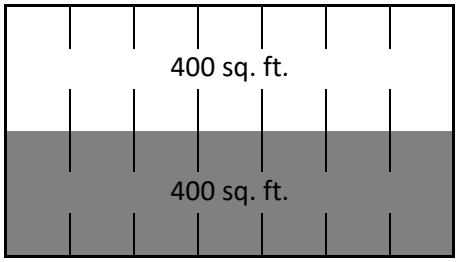
Model: First calculate the square footage of insulated area and of empty area. Enter into audit as two different walls with the same orientation. Give each a different measure number.

Example:
Wall 1
Orientation: North
Gross Area: 230 sq. ft.
Measure: 1
Existing insulation: None
Added insulation: Blown cellulose

Wall 2
Orientation: North
Gross Area: 170 sq. ft.
Measure: 2
Existing insulation: Fiberglass batt
R-Value: 11
Added insulation: Blown cellulose

SCENARIO #4

Wall – 800 sq. ft., 2x4 walls – two story house



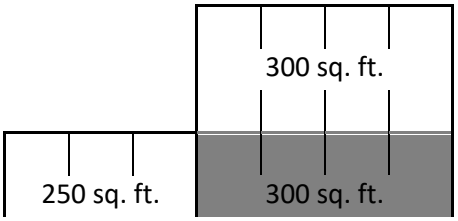
Model: Enter into audit as two separate walls with same orientation. Give each a different measure number.

Example:
Wall 1
Orientation: North
Gross Area: 400 sq. ft.
Measure: 1
Existing insulation: None
Added insulation: Blown cellulose

Wall 2
Orientation: North
Gross Area: 400 sq. ft.
Measure: 2
Existing insulation: Fiberglass batt
R-Value: 11
Added insulation: Blown cellulose

SCENARIO #5

Two story with an addition. Main dwelling 600 sq. ft., 2x4 walls. Addition 250 sq. ft., 2x4 walls.



Two ways to model
#1 Add sq. ft. of empty cavities together and model together

Example:
Wall 1
Orientation: North
Gross Area: 550 sq. ft.
Measure: 1
Existing insulation: None
Added insulation: Blown cellulose

Wall 2
Orientation: North
Gross Area: 300 sq. ft.
Measure: 2
Existing insulation: Fiberglass batt
R-Value: 11
Added insulation: Blown cellulose

OR

#2 Model existing dwelling and addition separately.

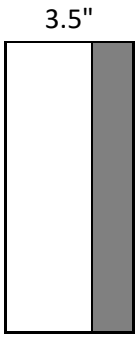
Example:
Wall 1
Orientation: North
Gross Area: 300 sq. ft.
Measure: 1
Existing insulation: None
Added insulation: Blown cellulose

Wall 2
Orientation: North
Gross Area: 300 sq. ft.
Measure: 2
Existing insulation: Fiberglass batt
R-Value: 11
Added insulation: Blown cellulose

Wall 3
Orientation: North
Gross Area: 250 sq. ft.
Measure: 1
Existing insulation: None
Added insulation: Blown cellulose

SCENARIO #6

Wall is insulated top to bottom, but not entire depth of wall cavity. 400 sq. ft., 2x4 walls. 1” fiberglass batt.



Side view of the wall cavity

Determine if the wall can be re-insulated. If it can:
Orientation: North
Gross Area: 400 sq. ft.
Measure: 1
Existing insulation: Fiberglass batt
R-Value: 3
Added insulation: Blown cellulose

After the audit is run, check to see if audit calls for wall to be insulated with a SIR of 1.0 or greater. If so, re-insulate.

If not, determine amount of labor and material costs it would take to re-insulate and add that cost to the infiltration costs and re-run audit. If the infiltration cost SIR is 1.0 or greater, re-insulate the wall. If not, wall cannot be re-insulated.