



CNA e-Tool v 3.2

Components & Alternatives

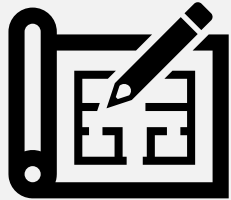
Office of Multifamily Housing Programs
November 2023



What do I need to know?

CNA e-Tool Release 3.2 (v3.2) will improve how Components, Alternatives and Recommendations are entered in the e-Tool.

The Components & Alternatives will also be displayed categorically – Future Needs; Critical & Non-Critical Repairs – in the new Comp & Alt Tab.



Existing (v3.1) Components, Alts & Recs

Existing Display

Currently, all Components are listed as one long table in the "Components, Alt & Recs" Tab.

You cannot readily tell which Components are replaced as Future Needs or listed as Repair Items.

COMPONENTS, ALTERNATIVES & RECOMMENDATIONS

Component Type	Component Name	Standard EUL	Age	RUL	Standard or Assessed RUL
3.2.4.1 - Asphalt Pavement	Repair Damaged Areas - Asphalt Paving (Non-Critical Repair)	25	0	25	Standard
3.2.4.1 - Asphalt Pavement	Parking, Re-Surface or Replace Asphalt Paving	25	20	5	Standard
3.2.4.2 - Asphalt Seal Coat	Parking, Asphalt Sealing	5	1	6	Assessed
3.2.4.8 - Striping and Marking	Parking Stripes (Per Car)	15	12	3	Standard

Filter List By..

Select a Component above to view or edit details or click *Add New Component* to add a Component.

- Only after selecting a Component, you can see what Alternatives are entered and which one is "Recommended" in the subsequent expandable sections.

▼ Alternatives (Component Replacement Options)

Select Alternatives

Repair Damaged Areas - Asphalt Paving (Non-Critical Repair) - (3.2.4.1) Asphalt Pavement

Alternative Name: 728971 - Repair Damaged Areas - Asphalt Paving (Non-Critic)

Alternative's Component Type: (3.2.4.1) Asphalt Pavement

EUL Standard: 25

Unit of Measure: Each

Quantity: 1

Recommended Alternative (See form below)

Associated with this Component

Existing Pain-points

- "Repair Replace Recommendation" entries (e.g., "Action" & "When") are entered specific to the recommended Alternative. When a different Alternative is selected, all Recommendation entries are deleted.

Repair Replace Recommendation

Action: One-time Repair

When: Now

Months to Complete: 12

Duration: [input]

Critical Repairs

Life Safety Item?: NO

Accessibility Remedy?: NO

Relevant Accessibility Statute: Select...

New (v3.2) Components & Alternatives

New Display

e-Tool v3.2 displays the Components in three categories: Future Needs; Critical Repairs; and Non-Critical Repairs.

- The e-Tool will automatically categorize the Components based on "Action" + "When" entries and Critical Repair indicator markers.

COMPONENTS AND ALTERNATIVES

Future Replacement Components
 Critical Repair Components
 Non-Critical Repair Components

Filter List By.. Add New Component

Component Type	Component Name	Age/EUL	Assessed/Std RUL	Cost \$	Annual Utility \$
+ 3.2.4.1 - Asphalt Pavement	Parking, Re-Surface or Replace Asphalt Paving	20 / 25	- / 5	\$29,485.5	-
+ 3.2.4.2 - Asphalt Seal Coat	Parking, Asphalt Sealing	1 / 5	6 / 4	\$3,484.65	-
+ 3.2.4.8 - Striping and Marking	Parking Stripes (Per Car)	12 / 15	- / 3	\$1,359.04	-
+ 3.2.5.2 - Concrete	Pedestrian Paving - Concrete Sidewalks and Patios	43 / 50	12 / 7	\$12,755.85	-

Select a Component above to view or edit details or click *Add New Component* to add a Component.

- When you click on [+] next to the Component, all the associated Alternatives entered for the Component are displayed right below the Component in the table.
- In addition, you can freely change the "Recommended" Alternative between multiple Alternatives without losing the Recommendation Definitions entered – e.g., Action, When, Life Safety, etc.

Displaying Alternatives

Component Type	Component Name	Age/EUL	Assessed/Std RUL	Cost \$	Annual Utility \$
- 3.4.2.1.2 - Boilers, Gas Fired, Sectional - Centralized	kind: 24-Boiler- Gas 1,530 mbtu/hr (Heating)	5 / 25	- / 20	\$54,200	\$1,690
Alt(1): 3.4.2.1.2 - Boilers, Gas Fired, Sectional - Centralized	Energy Efficient Boiler	- / 30	-	\$60,000	\$1,521
Alt(2): 3.4.2.1.2 - Boilers, Gas Fired, Sectional - Centralized	Boiler- Gas 1,530 mbtu/hr (Heating)	- / 25	-	\$54,200	\$1,690
+ 3.4.2.2.10 - Radiation-	Hydronic Heater	43 / 50	11 / 7	\$40,500	-

Component Definition +

Alternatives Definition(s) -

Alternative 1 Definition

Alternative 2 Definition

Alternative 3 Definition

Changes in Adding Components & Alternatives

v3.1 Procedure

In the existing e-Tool v3.1, users follow these steps to add Components, Alternatives, and Recommend an Alternative for replacement or repair:

1. Add Component
2. Add Alternative(s)
3. "Associate" Alternatives to that Component
4. Select one of the Associated Alternatives to 'Recommend.'
5. "Repair Replace Recommendation" displays. Enter "Action", "When", and other indicators specific to the "Recommended Alternative."
6. When you select a different Alternative as 'Recommended,' all existing Recommendation entries are deleted, and you must re-enter them.

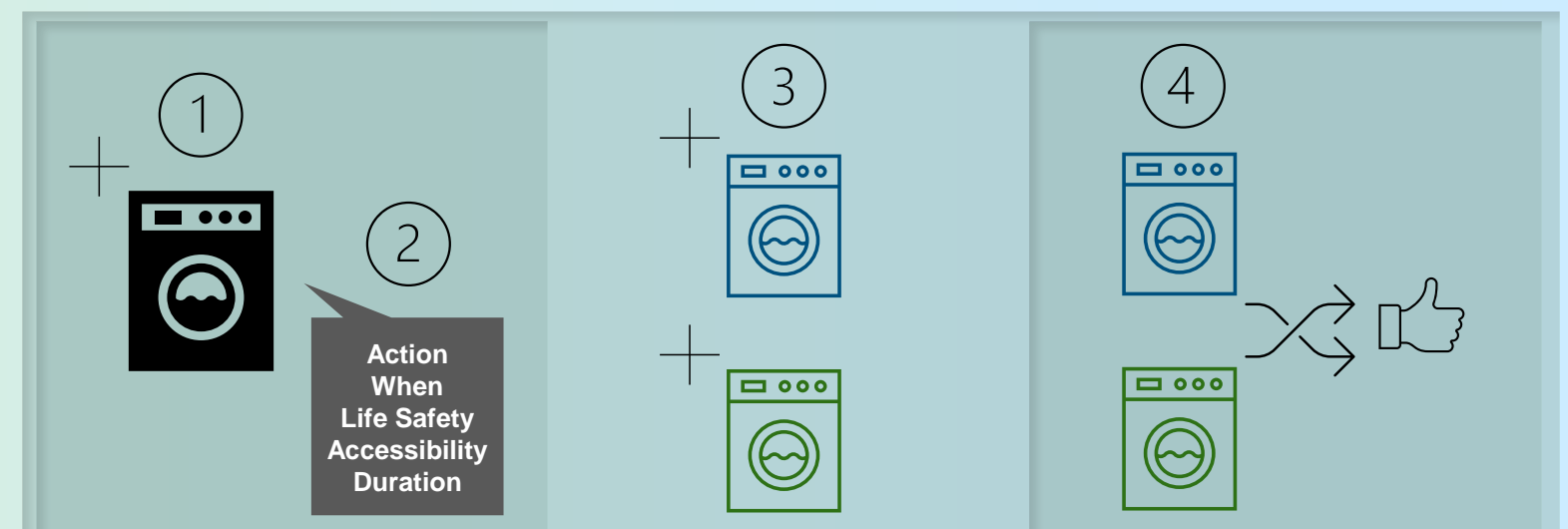


v3.2 Enhanced Procedure

Enhanced e-Tool v3.2 lets users enter "Repair Replace Recommendation" info as part of the Component's Definition and not tied to an Alternative.

- The Recommendation info stays with the Component's Definition.
- It does not get deleted when you change the recommended Alternative.

1. Add Component
2. Enter "Action", "When", and other indicators as part of the Component Definition.
3. Add Alternatives. Any Alternative added under the Component is automatically "Associated" with that Component.
4. Select one of the Alternatives as the "Selected Alternative," formerly referred to as "Recommended Alternative." Change selection freely.



Changes in Adding Components & Alternatives

Adding Components Under Each Category

In addition, e-Tool v3.2 provides the following short-cuts in adding Components and Alternatives:

When you 'Add New Component' from the selected Category Tab (i.e., Future Replacement; Critical & Non-Critical Repair), relevant Recommendation parameters are automatically entered.

- e.g., "Non-Critical Repair" Components get ["Action" = "Repair"] & ["When" = "Now"].
- You can edit these, and the Components will automatically appear in the correct Category Tab.

Adding Alternatives, Shortcuts

When adding an Alternative, you can utilize two shortcuts to expedite data entry: "Select from existing..." & "Replicate Component".

1 Select from existing Alternatives

- The dropdown list displays Alternative(s) that you already added for the Component.
- Selecting an existing Alternative from the list prepopulates the new Alternative's data fields identical to the existing one.
- This is useful when the new Alternative is similar to an existing Alternative and only requires minor edits.
- The new Alternative's name must be edited to be different and unique from any existing Alternative.

2 Replicate Component

- Clicking this button prepopulates the new Alternative's data fields identical to the original Component's definitions.
- This is useful when you are replacing a Component with an Alternative that is the same as the original Component.

New Features Components & Alternatives

Two Utilities Data

You can now enter up to **two utilities** for a single Component or Alternative.

- e.g., Some appliances such as Dishwashers consume both electricity and water.

Utility Consumption (Annual)					
Utility	Annual Usage	Energy (kBtu)	Utility Rate	\$ per Unit	\$ per Comp.
Common Electricity - KWH	10000.000	34120.00	\$0.15	\$1500	\$3000
Common Water - Gallons	50000.000	N/A	\$0.0038	\$190	\$380
				\$1690	\$3380

There is a **new table** that compares key metrics between a Component and its associated Alternatives

Component and Alternatives Comparison Table

Component and Alternative(s) Annual Comparison						
Component	Total Cost of Component	Annual Calculations				
		\$ Utility	Total \$ of Operation	Energy Usage (kBtu)	Water Usage (Gal)	Green House Gas (MTCO2e)
Orig. Component	\$31772.40	\$145.00	\$7556.75	341.2	N/A	N/A
Replace stoves/ranges, for Component - Apartment stoves original	\$31772.40 (0.00)	\$145.00 (0.00)	\$7650.90 (+94.15)	341.2 (0)	N/A	N/A
Energy Star stoves/ranges, for Component - Apartment stoves	\$35200.00 (+3427.60)	\$130.50 (-14.50)	\$6915.33 (-641.42)	307.08 (-34.1200000000000005)	N/A	N/A

- Delta (+ or - ###): The value differences between the Component and its associated Alternatives are displayed within the parenthesis (), as + or - delta #.
- Cost \$ per Component: This is the total cost based on the quantity and per unit cost of the Component.
- Energy Usage in kBtu: All energy consuming fuel & utility types (e.g., electricity) are converted into kBtu based on EPA's standard conversion ratios to allow direct comparison.
- Annual TCO ("Total \$ of Operation"): By dividing the (delta) \$ per Component by annual (delta) of TCO, you can readily calculate the payback period between the Component and its Alternative(s).