



Work Order Bid (ID)

4104 Warbonnet St Memphis TN 38109-4234

WORK ORDER INFORMATION

Work Order Name: WO/1001664/1

Work Order Type: Weatherization

Audit Name: 1000557

CLIENT INFORMATION

Client ID: 1001664

Alt. Client ID: C1001683SA101

AGENCY INFORMATION

Agency: City of Memphis Division of
Housing and Community
Development

Address: 701 N Main St
Memphis TN 38107

Agency Phone: 1-901-576-7300

Agency Fax:

Email Address: paul.young@memphistn.gov

Company Name & License Number: _____

Contractor's Signature: _____

COMMENT

This is a one story house site built in 1951. The house is built on a crawlspace and is 975 sqft. The exterior is brick on the lower 3/4 with wood on the upper 1/4 plus gables and soffits. The attic access is a hatch located in the hallway. The home is occupied by 2 adults and has 3 bedrooms and 1 bathroom.

**Measure Vapor Barrier Needed
(Basement/Crawlspace)**

Components

Inspected

Comment 975 SqFt of Ground area to be covered with a 6-mil or greater plastic vapor barrier. Crawlspace/Basement is accessed through utility room from the outside.
All work to be performed in accordance with Tennessee Housing Development Agency Standard Work Specifications (SWS).

#	Material/Labour	Description/Comment	Unit	Qty	Estimated		Actual			
					Unit Cost	Total	Qty	Unit Cost	Total	
1	Health and Safety Items	Basement / crawlspace vapor barrier	SqFt	975	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
2	Labor	Labor	SqFt	975	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Other Detail										
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Measure Sub Total						<input type="text"/>	Sub Total			<input type="text"/>

Field Notes:

Measure Seal Ducts

Components

Inspected

Comment Contractor to seal ductwork, meet or exceed target CFM25 listed below.
 During post-work inspection no more than 3 registers should have pressure pan readings greater than 1.0 Pascals. No single reading shall be greater than 3.0 Pascals. Best practice, all registers should read less than 1.0 Pascals.
 Total Duct Leakage test pre-weatherization:313 CFM25
 Target Duct Sealing: 117 CFM25 (Total Leakage) or 78 CFM25 (Leakage to Outside)
 General Specifications:
 Liquid Mastic to be applied to seal all seams, joints, and connections in areas where duct sealing is performed to meet target. Areas where duct insulation must be removed must be re-insulated with R-8 insulation. Location(s) where boots meet drywall or subfloor to be caulked or taped with UL 181 Mastic tape. Sealing of the Return plenum shall be done using liquid Mastic. All return seams are to be sealed with mastic, and solid material (foam board, etc.) shall be used around edges to fill in any voids. To repair holes in duct, place flat sheet metal over opening and secure with sheet metal screws; seams to be sealed with Mastic paste.
 All work to be performed in accordance with Tennessee Housing Development Agency Standard Work Specifications (SWS).

#	Material/Labour	Description/Comment	Unit	Estimated			Actual		
				Qty	Unit Cost	Total	Qty	Unit Cost	Total
1	Miscellaneous Supplies	Duct Sealing	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Other Detail									
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Measure Sub Total						<input type="text"/>	Sub Total		<input type="text"/>

Field Notes:

Measure Infiltration Redctn

Components

Inspected

Comment Reduce air infiltration by 1026 cfm. It is the responsibility of the contractor to locate areas of leakage in addition to areas detailed below. A blower door is recommended to find and seal air leaks. Contractor must meet or exceed the targeted reduction. No CHANGE ORDER will be issued for air sealing achieved below the targeted reduction #.
 "open" Ring,side Door, Pre-Weatherization CFM50:2001;
 Target CFM50:975.
 All work to be performed in accordance with Tennessee Housing Development Agency Standard Work Specifications (SWS).

#	Material/Labour	Description/Comment	Unit	Qty	Estimated		Actual			
					Unit Cost	Total	Qty	Unit Cost	Total	
1	Miscellaneous Supplies	Infiltration Reduction	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Other Detail										
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Measure Sub Total						<input type="text"/>	Sub Total			<input type="text"/>

Field Notes:

Measure Attic Ins. R-30

Components A2

Inspected

Comment

#	Material/Labour	Description/Comment	Unit	Qty	Estimated		Actual			
					Unit Cost	Total	Qty	Unit Cost	Total	
1	Insulation	Attic Insulation - Blown Fiberglass - R-30	SqFt	78	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
2	Labor	Attic Insulation - Blown Fiberglass - R-30	SqFt	78	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Other Detail										
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Measure Sub Total						<input type="text"/>	Sub Total			<input type="text"/>

Field Notes:

Measure Attic Ins. R-30

Components A1

Inspected

Comment

Estimated

Actual

#	Material/Labour	Description/Comment	Unit	Qty	Estimated		Actual		
					Unit Cost	Total	Qty	Unit Cost	Total
1	Insulation	Attic Insulation - Blown Fiberglass - R-30	SqFt	897	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2	Labor	Attic Insulation - Blown Fiberglass - R-30	SqFt	897	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
3	Miscellaneous Supplies	Added Misc Cost - Blown Fiberglass - R-30	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Other Detail

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Measure Sub Total

Sub Total

Field Notes:

Measure Kneewall Insulation

Components A3

Inspected

Comment Contractor to insulate 68 Sqft of attic knee wall areas missing insulation with R-13 batt Fiberglass insulation. The stud spacing on knee walls is 16" OC, contractor to verify in field. Installed fiberglass insulation is to be covered with a rigid barrier on the attic side.
All work to be performed in accordance with Tennessee Housing Development Agency Standard Work Specifications (SWS).

#	Material/Labour	Description/Comment	Unit	Qty	Estimated		Actual			
					Unit Cost	Total	Qty	Unit Cost	Total	
1	Insulation	Kneewall Insulation - Fiberglass Batts - R-13	SqFt	68	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
2	Labor	Kneewall Insulation - Fiberglass Batts - R-13	SqFt	68	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
3	Miscellaneous Supplies	Added Misc Cost	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Other Detail										
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Measure Sub Total						<input type="text"/>	Sub Total			<input type="text"/>

Field Notes:

Measure DWH Pipe Insulation

Components

Inspected

Comment Insulate the first 6 feet of hot and cold water pipe from water heater with R-3 (minimum) pipe insulation. Cover elbows, unions, and other fittings to the same thickness as pipe. All corners must be cut properly. Keep pipe insulation 6 inches away from single wall vent pipe, 1 inch away from Type B vent, and 1 inch away from draft hood on gas water heater. Interior diameter of pipe sleeve must match exterior diameter of pipe. Fasten with zip ties and tape without compression. All work to be performed in accordance with Tennessee Housing Development Agency Standard Work Specifications (SWS).Water Tank Insulation

#	Material/Labour	Description/Comment	Unit	Qty	Estimated		Actual			
					Unit Cost	Total	Qty	Unit Cost	Total	
1	Insulation	DHW Pipe Insulation	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
2	Labor	DHW Pipe Insulation	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Other Detail										
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Measure Sub Total							<input type="text"/>	Sub Total		<input type="text"/>

Field Notes:

Measure Floor Ins. R-19

Components F1

Inspected

Comment 975 SqFt of Floor area to be insulated with an additional R-19. Crawlspace/Basement is accessed through utility room from the outside. Per SWS, crawlspace/basement shall have: complete insulation information card permanently affixed at entry point. All work to be performed in accordance with Tennessee Housing Development Agency Standard Work Specifications (SWS).

#	Material/Labour	Description/Comment	Unit	Qty	Estimated		Actual			
					Unit Cost	Total	Qty	Unit Cost	Total	
1	Insulation	Floor Insulation - Fiberglass Batts - R-19	SqFt	975	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
2	Labor	Floor Insulation - Fiberglass Batts - R-19	SqFt	975	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
3	Miscellaneous Supplies	Added Misc Cost	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Other Detail										
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Measure Sub Total						<input type="text"/>	Sub Total			<input type="text"/>

Field Notes:

Measure DWH Tank Insulation

Components

Inspected

Comment Insulate the exterior of the water heater tank using a tank wrap with a minimum value of R-10 Fasten with zip ties and tape without compression.
All work to be performed in accordance with Tennessee Housing Development Agency Standard Work Specifications (SWS).Water Tank Insulation

#	Material/Labour	Description/Comment	Unit	Estimated			Actual			
				Qty	Unit Cost	Total	Qty	Unit Cost	Total	
1	Hot Water Equipment	DHW Tank Insulation	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
2	Labor	DHW Tank Insulation	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Other Detail										
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Measure Sub Total						<input type="text"/>	Sub Total			<input type="text"/>

Field Notes:

Measure Storm Windows

Components NW1,EW2,WW1

Inspected

Comment

#	Material/Labour	Description/Comment	Unit	Estimated			Actual			
				Qty	Unit Cost	Total	Qty	Unit Cost	Total	
1	Labor	Storm Window	SqFt	90	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
2	Other	Storm Window	Each Window	5	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
3	Windows	Storm Window	SqFt	90	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Other Detail										
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Measure Sub Total						<input type="text"/>	Sub Total			<input type="text"/>

Field Notes:

Measure *Install Bathroom Exhaust Fan*

Components

Inspected

Comment Contractor to install Bath Exhaust fan moving 50 CFM; fan must be ENERGY STAR compliant. Must have weatherproof termination fitting, a Backdraft damper installed at the fan housing or termination fitting have a low noise rating in accordance with SWS and local codes. Pricing to include all electrical for fan & switch. Exhaust ducting to be insulated to R-8. If removing existing fan with light or existing light to install new fan, install fan with light. BATH FAN installed shall include Smart Exhaust Bath Fan/Light Switch/Delay Timer/Ventilation Controller; fan shall meet continuous ventilation requirements per ASHRAE 62.2-2016. All work to be performed in accordance with Tennessee Housing Development Agency Standard Work Specifications (SWS).

#	Material/Labour	Description/Comment	Unit	Qty	Estimated		Actual			
					Unit Cost	Total	Qty	Unit Cost	Total	
1	Health and Safety Items	Bathroom exhaust fan	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
2	Labor	Labor	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Other Detail										
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Measure Sub Total						<input type="text"/>	Sub Total			<input type="text"/>

Field Notes:

Measure *Install Kitchen Exhaust Fan*

Components

Inspected

Comment Kitchen Exhaust hood moving 100 CFM; fan must be ENERGY STAR compliant. Must have weatherproof termination fitting, a Backdraft damper installed at the fan housing or termination fitting have a low noise rating in accordance with SWS and local codes. Pricing to include all electrical for fan & switch. Exhaust ducting to be insulated to R-8. If removing existing fan with light or existing light to install new fan, install fan with light. All work to be performed in accordance with Tennessee Housing Development Agency Standard Work Specifications (SWS).

#	Material/Labour	Description/Comment	Unit	Qty	Estimated		Actual			
					Unit Cost	Total	Qty	Unit Cost	Total	
1	Health and Safety Items	Kitchen exhaust fan	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
2	Labor	Labor	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Other Detail										
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Measure Sub Total							<input type="text"/>	Sub Total		<input type="text"/>

Field Notes:

Measure *REPAIR PRESSURE BOUNDRY*

Components

Inspected

Comment Small area of dry wall in kitchen ceiling has pulled away and cracked. Contractor to repair as needed to dry wall finish level 4.

#	Material/Labour	Description/Comment	Unit	Qty	Estimated		Actual			
					Unit Cost	Total	Qty	Unit Cost	Total	
1	Unspecified	Misc Material	Each	1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Other Detail										
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Measure Sub Total							<input type="text"/>	Sub Total		<input type="text"/>

Field Notes:

Measure Smoke Detector is Needed (3)

Components

Inspected

Comment Battery operated alarms will be installed in accordance with the 2012 IRC and manufacturer Specifications. Ensure proper installation. All homes should have UL-217 rated smoke Alarms installed in each bedroom and common area of home.
 All work to be performed in accordance with Tennessee Housing Development Agency Standard Work Specifications (SWS). Water Tank Insulation.

#	Material/Labour	Description/Comment	Unit	Qty	Estimated		Actual			
					Unit Cost	Total	Qty	Unit Cost	Total	
1	Health and Safety Items	Smoke detector	Each	3	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
2	Labor	Labor	Each	3	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Other Detail										
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Measure Sub Total						<input type="text"/>	Sub Total			<input type="text"/>

Field Notes:

Work Ordere Grand Total: <input type="text"/>	Grand Total: <input type="text"/>
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