HOUSING AUTHORITY OF SAVANNAH (HAS); SAVANNAH, GEORGIA

SCOPE OF WORK – PTAC SLEEVE ASSESSMENT, REPAIR OR REPLACEMENT AT THE STILLWELL TOWERS BUILDING; 5100 WATERS, SAVANNAH, GEORGIA 31401

1.0 EXECUTIVE SUMMARY

1.1 Project Location:

Project Title: Stillwell Towers – Package Terminal Air Conditioner (PTAC) Wall Sleeve Assessment, Repair or Replacement

Project Location: Stillwell Towers
5100 Waters Ave
Savannah GA 31404

The Housing Authority of Savannah, Stillwell Towers is a retirement home with one-bedroom units for persons aged 62 years and older and/or with disabilities. Stillwell opened in 1972 in Savannah, GA as a retirement apartment homes.

1.2 *Project Description*

The new Packaged Terminal Air Conditioner (PTAC) unit's sleeves are leaking condensation into the building. Sleeve repair/replacement will remedy the situation. The contractor shall provide all materials, utilities, required permits, fees, costs, etc., and labor to repair/replace the designated PTAC sleeves and properly dispose of any/all construction debris and excess materials not used.

2.0 SPECIFIC SCOPE OF WORK:

2.1 PTAC Assessment:

- Contractor will be tasked with the inspection and submission of a recommendation on the condition of the PTAC sleeves in 211 apartment units at the Stillwell Towers Building.

- As part of this assessment the contractor will provide photos along with the submitted recommendation for repair or replacement of PTAC wall sleeves.

2.2 PTAC Wall Sleeve Repairs:

- Check the caulking around the PTAC wall sleeve to make sure all air and water openings are properly sealed. If the caulking has deteriorated remove and apply a new layer of caulking per manufacture specifications.

- Check the wall sleeve's level. It should be tilted to the outside (as close to 1/4 bubble tilt as possible); however, do not over- or under tilt. If the unit has an internal drain system, the sleeve should be leveled (left to right and front to back) so that condensate water drains into the connected drain line/kit location. Water should not overflow the sleeve to the room side or outside and should drain into the internal drain hole. (To test, pour a cup of water into the wall sleeve.)

- Remove any dirt and/or debris from the sleeve pan and clean inside area. If rust is present Contractor will treat with a rust inhibitor and paint with color matching no-toxic paint. A combination paint/rust inhibitor can be using a single phase application.

2.3 PTAC Sleeve Replacement:

If the determination is made based on the initial assessment by the Contractor and Owner to replace the damaged sleeve. The project scope is to remove the PTAC unit from the damaged sleeve and retain it for reinstallation. Remove the existing sleeve and discard. Install a new sleeve. Seal all penetrations and reinstall existing PTAC with air seals. Where box stands are installed repair in kind and repaint prior to reinstallation of PTAC and accessories. The PTAC sleeve will match the unit's type and size.

Typical Sleeve

2.4 Box Stands:

In public spaces the PTAC units sit on a elevated wood base at floor level. Each box is to be inspected after repair or removal of existing PTAC sleeve and damaged finishes are to be repaired in kind. Paint all painted surfaces to match existing.

3.0 GENERAL:

Work shall be in conformance with the following:

1) Comply with scope of work; specifications; drawings and the requirements of all authorities having jurisdiction. Comply with all Applicable Codes.

2) All colors and styles to be pursuant to the owner's instructions.

3) Clean and dispose of debris on a daily basis.

4) The contract amount shall include all labor, material, (except for those materials furnished by others), insurance, disposal, sales tax, permits, fees, utility costs, abatement, other taxes, etc.

6) Provide a one (1) year warranty from the completion date on all workmanship unless otherwise specified.

7) Provide all necessary insurance certificates and list Owner as added-insured. (The Owner is the Housing Authority).

8) Abate all hazardous materials and provide any required testing pursuant to all authorities having jurisdiction; as applicable.

9) Occupant safety and convenience shall be a primary consideration and responsibility of the contractor. Work shall be accomplished between 8:00 a.m. and 4:30 p.m., Monday through Friday, excluding national and local holidays. The building will be occupied during the work.

10) Materials to be stored for payment by the owner shall be stored on site.

12) Time for completion shall be 30 calendar days from the date of the Notice to Proceed.

13) Provide all required miscellaneous accessories, trim, scribe molding, adjustments, etc. for a complete installation.

14) Work shall be limited to within the property lines and/or limit of work.

15) As applicable, provide compliance with the Section 504 handicap requirements and the latest edition of the "Uniform Federal Accessibility Standards" (UFAS).

16) Contractor to provide sample installation of all required work at one location designated by the Owner for approval by the Owner. All new work at the remainder of the specified locations shall match or exceed the work completed in the sample installation.

17) Prepare existing conditions as required by this exhibit, applicable codes and manufacturer's written recommendations.

18) Contractor shall maintain telephone on site for his use. Under no circumstances are the resident's or Owner's telephones to be used by contractor's employees or subcontractors. (cell phone permitted)

19) The buildings shall be occupied during the tenure of the contract. The Contractor shall consult with the Owner and agree on a schedule of work to be performed in the units and buildings so the contract work can be organized in such a manner and method which will cause the minimum of interference with the conduct of the occupant's activities.

20) For occupied units, the work shall be planned and staged in close cooperation with the residents and Owner.

21) The Contractor shall provide all labor, materials, (except for those materials furnished by others), tools, scaffolding, drop cloths, appropriate barricades, dustproof enclosure or partitions for protection where dusty or dirty work is performed, etc., to protect the resident's, furniture, fixtures, equipment, other furnishings, etc., in the units and remove same upon completion of the work. Any item or items requiring removal for proper execution of the contract work shall be replaced by the Contractor satisfactory to the Owner whether damage to the unit during construction.

22) No occupied space shall be without electricity, telephone services if they exist and hot and cold water for more than six (6) consecutive hours.

23) If at any time the unit heating system is interrupted, the Contractor shall provide continuous adequate temporary heat in the unit during cold and/or inclement weather.

24) No materials shall be stored overnight in the structure. All construction debris shall be removed, and the unit area cleaned up prior to 4:30 p.m. each day. All debris shall be so dampened when removed as to keep dust down.

25) Workmen shall be restricted from all areas other than those in which work is being done.

26) The Contractor shall begin the work in accordance with the schedule established in the Notice to Proceed and shall consistently place sufficient workers, equipment and materials on the project site to be able to pursue the construction with diligence and determination to assure completion within the time allocated for construction. He/she shall place orders for all materials immediately upon execution of the construction contract and approval of submittals to assure timely delivery and no delay in construction. All work shall be coordinated with all local officials and utility companies (as applicable). The general contractor shall be responsible for a well-organized smooth running efficient team of general and subcontractor personnel providing constant support and coordination for all workers. The General contractor shall accommodate and assist the owner in their observation of the work and request their assistance when needed.

27) All material and workmanship shall be subject to inspection, examination or test by the Architect and the Owner at any and all times during construction and at any and all places where such construction is carried on. Neither inspection, testing, approval nor acceptance of work in whole or in part by the Owner shall relieve the Contractor of full responsibility for materials furnished or work performed not in strict accordance with the contract.

28) Certificates – Contractor shall obtain certificates of approval, acceptance and compliance from all authorities having jurisdiction over the work (as applicable) and shall deliver these certificates to the Owner. Work shall not be deemed complete, nor will final payment be made until such certificates have been received (as applicable). Prior to completion of the work the contractor shall prepare Maintenance and Operating instructions & manuals of manufacturer's literature including of all equipment and materials, incorporated in the job with full details of care and maintenance.

29) The work shall commence at the time stipulated in the Notice to Proceed from the Owner to contractor and shall be fully completed within the consecutive days indicated. Work at residence shall begin within 10 days of notice-to-proceed.

30) Energy Star Equipment shall be minimum standard.

31) Contractor shall determine existing conditions and complete all demolition and preparation necessary to complete the work required. At all areas affected by the work the Contractor shall repair and replace affected areas with new material to match existing conditions found before the work commenced.

32) Work to be accomplished in occupied structures. Contractor will relocate occupants and their possessions to complete the work and pay all expenses.

33) Contractor to place all removed materials in one location as determined by the Resident, the Owner and the Architect. They will be allowed one week to salvage material. After one week the Contractor shall dispose of the remaining discarded material.

34) All equipment, make, model, serial numbers are to be recorded by the Contractor and delivered to Owner prior to acceptance of each residence. All equipment to be reused shall be cleaned, labeled and reinstalled in the same residence.

35) Modify existing conditions as required to accommodate work. Provide all clearances pursuant to manufacturer's requirements and applicable code requirements. Locate equipment, piping, ducts, vents, wiring and etc. for easy removal of equipment without removal of other equipment piping, ducts, vents, wiring, etc. Upgrade electrical and other systems as required to conform to new and existing work with the requirements of all authorities having jurisdiction. Paint new work and paint existing affected work (floor to ceiling/corner to corner). All interior and exterior lines, pipes, tubes and wiring shall be concealed in furring, walls or mechanical closets.

36) Remediate all conditions which cause mold and provide a test report from certified testing laboratory, company, or individual as approved by the Owner or Architect to certify all conditions which cause mold to have been eliminated. All water piping, condensate lines and other drainage piping to be protected from freezing.

37) Contractor shall abate lead-based paint (LBP) and asbestos, as applicable, pursuant to all authorities having jurisdiction. Contractor shall utilize its forces or subcontractors, specialized in completing abatement work, with minimum of 5 years' experience performing LBP/asbestos abatement and disposal. The Contractor shall provide monitoring, abatement, post abatement testing performed by an independent testing company or individual, as approved by the Owner and the Architect. Contractor shall provide disposal manifests and other required documentation to verify proper removal and disposal of LBP and asbestos containing materials.

38) All wiring, piping and ductwork to be concealed in walls, chases, furred spaces, attics, or crawl spaces.

39) Reuse existing materials as applicable. Obtain prior approval from Architect or Owner.

40) At all project sites, Contractor shall coordinate with electrical service provider to determine if the current power transformer will accommodate additional power usage required by electrical upgrades. If electrical service provider determines transformers are to be upgraded, contractor to pay all associated fees and costs.

41) Use Low or No VOC (Volital Organic Material) paints, adhesives, materials, equipment, etc.

4.0 APPENDICES:

- PTAC Sleeve Installation Manual **(Appendix A**)

END OF SECTION

APPENDIX A

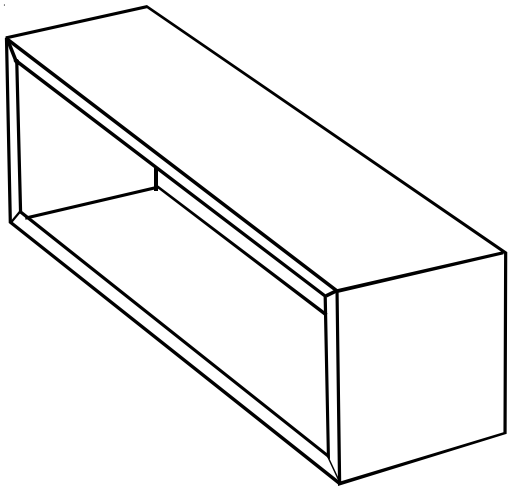
PTAC Wall Sleeve
Installation Instructions

The wall sleeve must be installed before the air conditioner or heat pump chassis can be set in place. Read the instructions thoroughly before proceeding.

When 230/208 volt units are to be installed, the power supply may be either cord connected or permanent wiring. Permanent wiring may be done through the hard wire junction box, or the accessory subbase.

When 265 volt units are to be installed, the power supply must be permanent wiring. Permanent wiring may be done through the accessory hard wire junction box, or the accessory subbase. **An exposed cord connection on 265 volt units is not permitted.**

The subbase accessory includes leveling legs. If added wall sleeve support is required and the subbase is not to be used an accessory leveling leg kit may be installed.



Made in USA

Contents

⚠ RECOGNIZE THIS SYMBOL AS A SAFETY PRECAUTION

ATTENTION INSTALLING PERSONNEL

As a professional installer you have an obligation to know the product better than the customer. This includes all safety precautions and related items.

Prior to actual installation, thoroughly familiarize yourself with this Instruction Manual. Pay special attention to all safety warnings. Often during installation or repair it is possible to place yourself in a position which is more hazardous than when the unit is in operation.

Remember, it is **your** responsibility to install the product safely and to know it well enough to be able to instruct a customer in its safe use.

Safety is a matter of common sense...a matter of thinking before acting. Most dealers have a list of specific good safety practices...follow them.

The precautions listed in this Installation Manual are intended as supplemental to existing practices. However, if there is a direct conflict between existing practices and the content of this manual, the precautions listed here take precedence.

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DRAIN KIT

An indoor/outdoor drain kit is available as an accessory item. When a drain kit is to be installed, do so before installing the wall sleeve in the wall. See the drain kit for actual installation instructions.

SUBBASE, LEVELING LEGS, MAIN DUCT, AND HYDRONIC HEAT KITS

Installation of these kits requires drilling of mounting holes on both sides of the wall sleeve. The minimum required clearance distance between the wall sleeve and wall is shown in Table 1. If the distance between wall sleeve and wall will be at or near the minimum clearance distance, mount these kits on the sleeve before installing the sleeve in the wall. The kit installation instructions are included with the accessory kits.

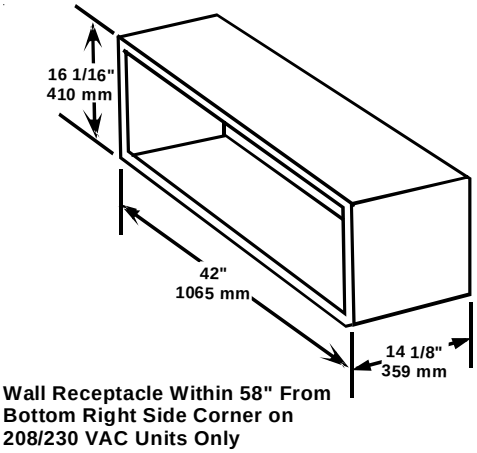

Figure 1 - Wall Sleeve Dimensions

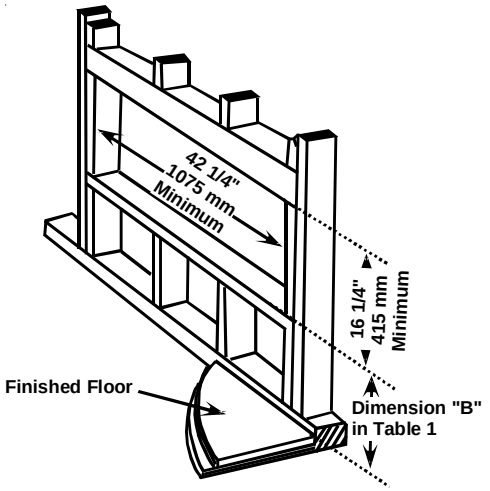

Figure 2 - Minimum Wall Opening Dimensions

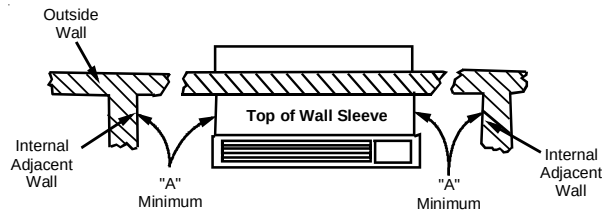

Figure 3 - Minimum Unit Clearances

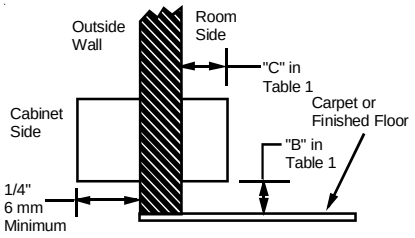

Figure 4 - Minimum Interior and Exterior

MINIMUM CLEARANCES AND PROJECTIONS						
OPTION	MINIMUM CLEARANCES				MINIMUM PROJECTION	
	A (Figure 2)		B (Figure 3)		C (Figure 4)	
	Inches	mm	Inches	mm	Inches	mm
Wall Sleeve Only	3	75	0	0	0	0
Subbase Kit	3	75	3 1/4	85	2 3/4	70
Leveling Legs Kit	3	75	3	75	2	50
Duct Kit	3	75	0	0	2 3/8	35
Hydronic Heat Kit "A Series"	9	230	0 to 3 1/4[3]	0 to 85[3]	3[2]	75[2]
Hydronic Heat Kit "J Series"	6	150	0	0	2 1/2	65
Drain Kit	3	75	'0[1]	'0[1]	0	0
Hardwire Kit	3	75	1 1/4	30	0	0

[1] If inside mounted then B = 1 1/2 inches (40 mm)

[2] To achieve a flush fit between the hydronic front and the finished wall, Dimension “C” must be between 3” and 3 1/8”. If this dimension is more than 3 1/8” there will be a gap between the front and the wall. This gap could permit occupant access to hydronic lines or other dangerous parts.

[3] This dimension can be from 0” to 3-1/4”, but cannot exceed 3-1/4”. If this dimension exceeds 3-1/4”, the skirt around the front will not reach the floor.

Table 1

PRE-INSTALLATION CONSIDERATIONS

Before proceeding with the sleeve installation, ensure the following guidelines for locating the wall opening and sleeve are met:

- The wall opening must be the correct size. See Figure 1 for wall sleeve dimensions and Figure 2 for minimum wall opening size.
- The wall sleeve will need to be installed with minimum clearances to the floor and adjacent walls. Minimum projections of the sleeve into and out of the room will also have to be met. See Figures 3 and 4 as well as Table 1 for details.
- If installed in a concrete or masonry wall, a lintel must be provided in the wall opening for support. **Do not use the wall sleeve as a lintel.** See Figure 5 for a typical lintel construction.
- When installed in the opening, the wall sleeve must be horizontally level from side to side and pitched (one quarter bubble in the sight glass) to the outside. DO NOT SLOPE THE WALL SLEEVE TOWARD THE ROOM. (Figure 5)
- The installer must determine and supply the mounting bolts and/or screws to attach the wall sleeve to the sides of the wall opening. Make sure the wall opening is adequate for strong support.
- The installer must provide adequate sealing and insulation around the sleeve after it is installed. See Figure 6 for one of many types of constructions.
- If used, a 208/230-volt wall receptacle must be located within 58 inches of the lower right sleeve corner. Extension cords must not be used with the unit. See the note on Figure 1.
- For installations in walls deeper than 13-7/8 inches, special care is necessary to prevent problems with rain water, condensate drainage and intake/discharge air. Under these circumstances, careful job site analysis and precautions are required. You must consult with your Sales Representative and receive approval before attempting such installations.

Outdoor Enclosure Panel Removal

The sleeve stiffener must be taken out before the enclosure panel can be removed from the sleeve.

1. Remove the zig-zag folded cardboard sleeve stiffener (Figure 7).
2. Remove the rear closure panel by folding the four flaps as indicated in Figure 8.
3. Grasping the top and bottom flanges of the rear closure panel as shown in Figure 9, the entire panel is pulled out diagonally from one side.

Install the wall sleeve condenser air grille by using the screws and holes provided. (See the Installation Instructions provided for the grille kits.)

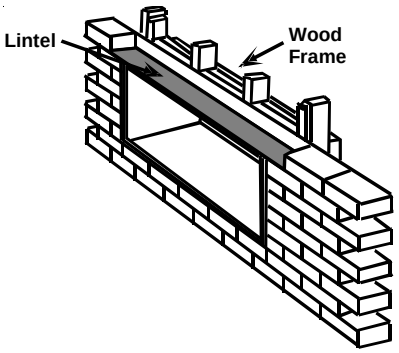

Figure 5 - Framing with Lintel

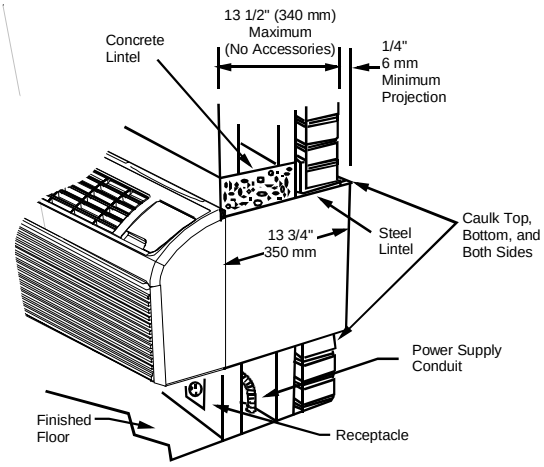

Figure 6 - Block and Brick Veneer Installation

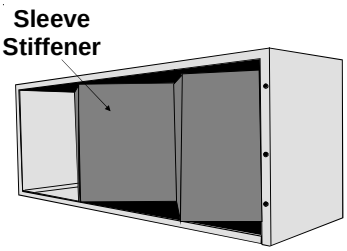

Figure 7- Sleeve Stiffener Remova

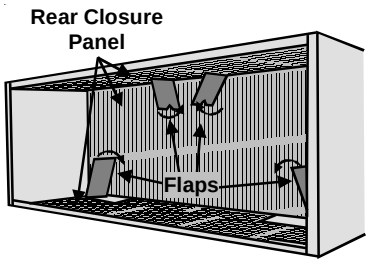

Figure 8 - Rear Enclosure Panel

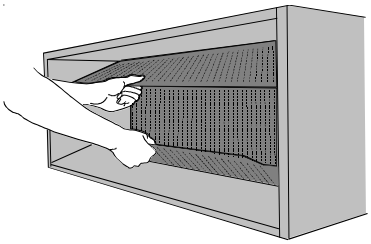

Figure 9 - Panel Removal

WALL SLEEVE INSTALLATION

After the wall opening is checked and approved for location, size, and clearances, complete the following to install the wall sleeve.

1. Remove the outside enclosure panel from the wall sleeve.
2. Slide the wall sleeve into the wall opening. Do not distort the cabinet shape to fit the wall opening; the unit chassis must fit snugly and uniformly into the wall sleeve.
3. Locate the sleeve within the range of minimum projections, as shown in Figures 3 and 4, so both sides are at least the minimum projection from the wall.
4. Check the level of the wall sleeve. For proper drainage, the sleeve should be level from side to side and one-quarter bubble in the sight glass sloping to the outside.
5. Two holes will need to be drilled in both sides of the wall sleeve for mounting into the wall. Drill holes of proper size and in the proper location so the screws will engage into strong supporting members of the wall. DO NOT DRILL THROUGH BOTTOM OF SLEEVE. Figure 10 shows possible fastening methods.

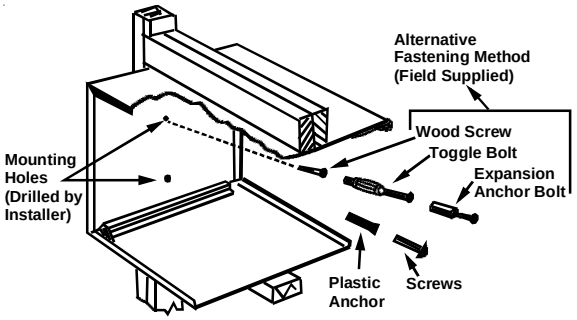

Figure 10 - Wall Sleeve Attachment to Opening

6. Check the level of the wall sleeve and adjust if necessary.
7. Caulk or seal around the outside of the entire sleeve.
8. If the unit chassis will not be installed immediately, replace the enclosure panel on the outside opening of the sleeve. This will prevent weather damage to the building interior.
9. Recycle or dispose of packaging materials per local codes.