

HEATING, VENTILATION and AIR CONDITIONING



SCOPE OF WORK

Standards and Description of Acceptable Work Performance

Objective:

- To ensure that the Heating, Ventilation and Air Conditioning systems are installed in a manner consistent with all applicable building codes, manufacturer's instructions and warranty requirements, and acceptable construction practices.

Related Documents:

- Company's Terms and Conditions
- Heating, Ventilation and Air Conditioning Inspection Reports
- Heating, Ventilation and Air Conditioning Purchase Order

Terms Used in This Document:

- "Site Superintendant" shall refer to any Company representative with authority to perform the specified task.
- "Construction Team Member" shall refer to the Construction Team Member's organization, its employees, or any representative of the Construction Team Member assigned the authority to perform the specified task.

General Standards:

- **IF THE CONSTRUCTION TEAM MEMBER DOES NOT FULLY UNDERSTAND THIS SCOPE OF WORK, COMPANY'S TERMS AND CONDITIONS, OR THE PURCHASE ORDER PERTAINING TO THE JOB, DO NOT BEGIN WORK FOR COMPANY.**
- Purchase orders must be confirmed prior to beginning any work on the site. The commencement of any work on the site by the Construction Team Member shall indicate the acceptance of the Subcontractor Purchase Order.
- The work of Construction Team Member shall conform to those standards stipulated in the building code, mechanical code, plumbing code, and electrical code applicable in the local jurisdiction.
- All construction on Company jobsites shall meet or exceed National Association of Homebuilders (NAHB) Performance and Building Standards.
- Construction Team Member shall use materials and installation methods identified in the construction plans and this Scope of Work.
- Every job must be completed correctly the first time. Where this is not the case, corrective action must be immediate and comprehensive.
- The Construction Team Member and the Site Superintendent shall walk the job together and complete each section of the Inspection Report(s).
 - The Construction Team Member must correct any deficiency found during the inspection
 - The job must be 100-percent complete before payment will be made.
- The Construction Team Member and the Site Superintendent must sign-off on all sections of the Inspection Report(s) attesting that the job is 100-percent complete and is correct per the job requirements found in this Scope of Work.
- Construction Team Members shall warrant the quality of their work for a period of at least one (1) year from date of first occupancy of the structure. Any machinery warranty extending beyond the first year shall be passed through to the owner.
 - The Construction Team Member shall have seven (7) days from the date of notice to correct any Warranty problem.
 - If the problem is not corrected within seven (7) days, Company shall correct the problem.
 - Company will charge the Construction Team Member at the labor rate of \$80.00 per hour, with a minimum charge of \$80.00, plus the cost of any materials or equipment which must be used to effect the correction, plus 20% of any such labor, materials and equipment costs to cover transactional expenses.
 - Construction Team Member accepts such charges in advance by signing below.

Description of Acceptable Work:

General:

1. The equipment and system shall be installed in accordance with all approved building, plumbing, electrical, and health codes, and function as specified. Installations should pass the initial code inspection at each phase.
2. The Construction Team Member must be licensed in the code enforcement jurisdiction in which the project is located prior to beginning work.
3. All work is to be done by trained, experienced individuals. Workmanship shall be so as to require a minimum of repairs and patching after installation.
4. All systems must be energy efficient per current code.
5. Company will furnish the Construction Team Member a full set of plans in a timely manner to allow the Construction Team Member time to complete the necessary heat-load calculations and HVAC layouts. It is the responsibility of the Construction Team Member to determine the tonnage and number of units required for each house.
6. Systems shall be installed using new materials of the grade and quality required to meet or exceed local or state and ASHRAE standards. The type and manufacturer of the heating and cooling system shall be approved by Company and cannot be changed without the written approval of Company's purchasing agent. Approval must be received in writing.
7. Should the requirements for HVAC systems change because of any change in the applicable codes, the Construction Team Member must notify Company immediately and all plans must be re-bid.
8. **No roof or floor truss may be cut, notched, moved, or otherwise damaged in any manner.** If any truss interferes with the installation of the HVAC system, the Site Superintendent should be notified so that the truss manufacturer may solve the problem. Should any truss be damaged accidentally the Site Superintendent must be notified immediately. The truss manufacturer's engineer must approve any repairs before they are made.
9. The heating system shall be a complete and functioning system tested and ready for operation.
10. The heating and cooling systems should operate correctly for the first two (2) years of Warranty coverage with the exception of those items caused by owner negligence.
11. The heating system should be capable of producing an inside temperature of 74 degrees Fahrenheit (F), as measured in the center of each room at a height of 5 feet above the floor, under local outdoor winter design conditions as specified in the ASHRAE handbook. Federal, state or local energy codes shall supersede this standard where such codes have been adopted locally.
12. The cooling system shall be a complete and functioning system tested and ready for operation.
13. The cooling system shall be capable of maintaining a temperature of 70 degrees F, as measured in the center of each room at a height of 5 feet above the floor, under local outdoor summer design conditions as specified in the ASHRAE handbook. In the case of outside temperatures exceeding 95 degrees F, a differential of 15 degrees F from the outside temperature shall be maintained. Federal, state or local energy codes shall supersede this standard where such codes have been adopted locally.
14. Refrigerant lines should not develop leaks and there should be no condensation on refrigerant lines during the first year of the Warranty period.
15. The Construction Team Member will furnish to the homeowner, via a tag on the HVAC unit, a regular office hour phone number and an emergency phone number. The Construction Team Member is required to furnish emergency service.

Detailed Job Procedures:

1. A new set of plans is required for each house. Plans are subject to changes and modifications. It is the responsibility of the Construction Team Member to have the new plans before beginning work. Plans should be picked up from the Site Superintendent.
2. The Construction Team Member will correct any errors that occur from using an incorrect set of plans at no cost to Company.
3. The Construction Team Member is responsible for obtaining all necessary trade permits.
4. Heating and cooling equipment shall be installed per manufacturers' instructions and all applicable codes.
5. Construction Team Member shall be responsible for installing ventilation for hot water tank.
6. The Framing Construction Team Member is responsible for framing and completing the attic

- access and platform area for all HVAC units to be installed in attic. If the attic area is not complete or completed incorrectly, the Site Superintendent should be notified immediately. Do not install unit if framing is not complete.
7. A metal condensation drain pan shall be installed by the Construction Team Member when an attic unit is placed.
 8. All heating and cooling equipment shall be located with sufficient clearances from walls or other equipment to permit cleaning of heating and cooling units, replacement of filters, blowers, motors, controls, vent connections, lubrication of moving parts, and adjustments. Should any area be inadequate to allow necessary clearances, the Site Superintendent should be notified immediately.
 9. The Construction Team Member shall furnish a pre-built pad for the AC unit. It is to be installed level and square.
 10. All ducts should be properly sealed at the heat exchanger per energy code and should not become loose or detached.
 11. All ducts shall be installed per the manufacturer's installation instructions. No duct shall be crimped, bent, or otherwise installed in such a manner as to restrict airflow. Any duct work leaving the heating or cooling unit shall not obstruct the unit in such a manner that the unit cannot be cleaned, filters changed, maintenance performed, etc.
 12. All floor ducts are to be temporarily covered to prevent debris from falling into the ductwork. The appropriate covering is expanded metal stucco lath cut to size for the vent cover, provided and installed by the Construction Team Member.
 13. All floor duct openings shall be level, square, and flush with the floor. When grills are installed they should not tilt more than 1/16 inch when stepped on.
 14. The vent and grill in the kick plate under the cabinets shall be installed high enough to allow shoe molding to be installed below the kick plate.
 15. All ceiling grills shall be square and set flush with the ceiling. They shall have the proper insulation materials installed and shall fit snugly.
 16. Construction Team Member is responsible for cutting neat, clean holes and for completely sealing the holes. Any excess sealing material is to be removed.
 17. All piping joints and connections shall be suitable for the pressure-temperature conditions and compatible with the piping material.
 18. The stiffening of ductwork and the gauge of the metal used shall be such that duct walls do not flex with pressure changes.
 19. Programmable thermostats shall be installed at location(s) discussed with Supervisor. The instruction booklet is to be placed in kitchen cabinet drawer to the left of the range.
 20. Condensation pumps shall be plugged in and operational.
 21. Heating units shall have filters installed.
 22. The Construction Team Member is responsible for cleaning up all residual materials before the job will be accepted as complete.
 23. At completion of job, house shall be broom-swept and all debris removed to the dumpster or a designated trash area.
 24. The Construction Team Member is responsible for passing all required inspections.
 25. Any re-inspection fees assessed Company for items relating to this Scope of Work will be charged to and reimbursed by the Construction Team Member.
 26. Any items found during the final inspection that need correction shall be corrected before payment will be made.

I, _____, agent for _____,
have read and fully understand the above **Scope of Work** and I hereby agree, for myself and for the Construction Team Member, to perform all work in accordance with the above.

Date: _____

Signed: Construction Team Member (or agent)

Date: _____

For Company