HEDDERMAN ENGINEERING, INC.
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December 6, 2018

TO: Santiago Suarez Vallejo

REF: CONDITION OF PROPERTY SURVEY

Dear Santiago Suarez Vallejo:

At your request, a visual survey of the townhouse/condo located at 3010 Holly Hall Street Unit 3010, Houston, Texas, was made by Mr. Ruben Martinez and Mr. Tim Hedderman.

Transmitted herewith are the structural and mechanical inspection reports stating our professional opinions on whether the items of construction included in the survey are performing their intended function on the day of the inspection or are in need of repair. The scope of our inspection and other important information, particularly in the area of dispute resolution should a question arise, is contained in our Service Agreement, which has been included at the end of this report.

Thank you for asking HEDDERMAN ENGINEERING, INC. to perform this important inspection work for you. If you have any questions after reviewing this report, please feel free to call me at my office.

At your service,

HEDDERMAN ENGINEERING, INC.
Tim Hedderman, President

3010 Holly Hall Street Unit 3010

INTRODUCTION

The purpose and scope of the inspection are detailed below, as well as in the executed Service Agreement at the end of this report. Also included are the limitations of the inspection.

PURPOSE

The purpose of the inspection was to view the components of the house included in the inspection and to give our opinions on whether or not these specific items were functioning at the time of the inspection or were in need of repair. Although this report may include observations of some building code violations, total compliance with structural, mechanical, plumbing, electrical codes, specifications, and/or legal requirements is specifically excluded. This also applies to all non-code making bodies, including but not limited to, the Brick Institute of America and the Texas Lathing and Plastering Contractors Association and their respective recommendations of building construction details. **We do not perform "code" inspections**, and since building codes change every few years, our inspections are **not** done with the intention of

bringing every item in the house into compliance with current code requirements. Rather, the standard of our inspections is a performance standard to determine if the items inspected are functioning at the time of the inspection, or if they are in need of repair. This is particularly applicable to Home Warranty policies, where the standards of the Home Warranty service company may differ than the scope of our stated performance standard for judging whether a piece of equipment is functional or in need of repair. If you intend to rely on a Home Warranty policy, then it is recommended that you **contact the Home Warranty company of your choice for a more in-depth analysis of what may be required to meet their standards should a claim be made against their policy**. It has been our experience that Home Warranty companies may require the equipment to be in total compliance with current code (even if it was installed before the current code was adopted) to be covered under their policy, and if so, it is recommended that you contact the appropriate service companies for a code compliance certification inspection.

This report is provided solely for the use of the person to whom this report is addressed and is in no way intended or authorized to be used by a third party, who may have different requirements, and to whom we have not contracted to perform the inspection. If a third party chooses to use this inspection report, they do so without HEDDERMAN ENGINEERING, INC. permission or authorization, and they do so at their own risk.

It is our purpose to provide information on the condition of the house on the day of the inspection. It is not our purpose to provide discussions or recommendations concerning the future maintenance of any part of the house, or to verify the adequacy and/or design of any component of the house. It is pointed out that other engineers/inspectors may have contrasting opinions to those given in this report.

Items that we find that in our opinion are in need of repair will typically include the recommendation to **Obtain a Cost Estimate** from qualified contractors. The scope and cost of the actual repairs can vary significantly from company to company, and it is your responsibility to see that the scope of work needed and actual cost of repairs is confirmed by contacting one or more qualified service companies **before your option period ends or before closing on the property**. This report may also contain informational items which are included as a courtesy to help you become more aware of the condition of the house.

In the performance of this inspection, HEDDERMAN ENGINEERING, INC. has acted as an engineering consultant subject to the standards of the State Board for Professional Engineers.

SCOPE

The scope of the inspection included limited, visual observations at the interior and exterior of the structure. Only those items readily visible and accessible at the time of the inspection were viewed and are included in this report. Any items causing visual obstruction, including, but not limited to furniture, furnishings, floor or wall coverings,

pictures, foliage, registers and grills on HVAC ductwork, soil, appliances, insulation, etc., were not moved.

The basis of our opinions will be the apparent performance of that portion of the house readily visible at the time of the inspection. Disassembly or removal of any portion of the structure, mechanical equipment, plumbing equipment, or electrical equipment is beyond the scope of this inspection.

There is no warranty or guarantee, either expressed or implied, regarding the habitability, future performance, life, insurability, merchantability, workmanship, and/or need for repair of any item inspected.

The components of the house included in scope of the inspection, if present and applicable, include:

Structural: Foundation, primary load-carrying framing members, roof surface, water penetration, and miscellaneous items related to the house.

Mechanical: Air conditioning and heating systems, water heaters, built-in kitchen appliances, and garage door openers.

Plumbing: Water and gas supply lines, sinks, toilets, tubs, showers, visible drain lines inside the house, and vents.

Electrical: Service entrance conductors, electric meter, distribution panel, visible wiring, light fixtures, switches, and receptacle outlets.

Items specifically excluded from our inspection include:

- Tainted and Corrosive sheetrock (Chinese Sheetrock),
- All pests, wood destroying insects, conducive conditions, ants, or rodents.
- All equipment related to mosquito control.
- All items related to major geological conditions such as faults or subsidence.
- All underground piping, including water, sewer, and gas piping.
- Water softening and water treatment systems.
- Identifying products that have been recalled.
- Pressure testing of gas system.
- All low voltage lighting systems and/or photocells.
- All low voltage data systems such as telephone, cable TV or data lines.
- All fire detection, carbon monoxide, smoke alarms and/or security alarm systems.
- All environmental hazards, or any toxic/hazardous materials including, but not limited to: radon gas, lead, formaldehyde, electromagnetic, any and all items related to asbestos.
- A backup generator and transfer switch panel.
- Any electrical load analysis on the electrical system to determine adequacy of the service or any branch circuit.

If you desire information or inspections concerning the items listed above, or any other items, then it is recommended that you contact the appropriate service companies.

Also excluded from the scope of the inspection are any and all items related to mold and/or all microbial substances. Due to the current limitations of coverage on most homes by the insurance industry in Texas, where damages due to mold and/or other microbial substances may not be covered, we routinely recommend that you have a mold inspection by a qualified professional before you close on the house.

Built-in appliances and mechanical equipment were operated in at least one, but not all, of their operating modes, where possible. If you desire for every operating mode of each piece of equipment to be operationally checked, then it is recommended that you contact a service company. Equipment and materials that are not visible, including structural components, underground plumbing and gas lines, and all other items not normally available for ready viewing, are excluded from the scope of this inspection. If you desire an inspection on the underground plumbing pipes or a hydrostatic test to determine if the plumbing pipes are leaking under the house, then it is recommended that you contact a plumber. No electrical circuit or load analysis will be performed on the electrical system.

We make no representation regarding the condition of this house other than as contained in this written report. Any verbal discussions concerning this house that were made at the time of the inspection, and not contained in this written report, are not to be relied upon.

Although the structural portion of this inspection was made by an engineer, it cannot be considered to be a formal engineering study since no calculations, structural analysis, or physical material testing were performed. If engineering drawings/specifications have been made available during this inspection and, if they have been viewed, it is pointed out that all such viewing is strictly cursory, and in no way should our cursory examination be construed as providing engineering judgments concerning the adequacy or acceptability of the drawings/specifications.

It is pointed out that it is possible for latent defects to exist in the structure and its related equipment, underground piping, and systems that are not visible at the time of the inspection, and may not be able to be viewed during a limited visual inspection. This is particularly applicable in items relating to water, such as roof leak, water penetration conditions, etc., where the condition may exist, but not be visible at the time of the inspection (e.g. where it has not rained for a period of time, allowing materials time to dry out). HEDDERMAN ENGINEERING, INC. does not claim or warrant that the observations listed in this report represent every condition that may exist. In using the information supplied by this inspection, one must recognize the limitations of a limited, visual inspection, and accept the inherent risk involved.

It is recommended that you obtain as much history as is available concerning this house. This historical information may include copies of any seller's disclosures, previous inspection or engineering reports, building drawings and/or specifications, bids to perform repair work on the house, knowledge of any drainage problems, receipts from repair work that has been performed, reports performed for or by relocation companies, municipal inspection departments, lenders, insurers, and appraisers. You should attempt to determine whether repairs, renovation, remodeling, additions or other such activities have taken place at this house.

DESCRIPTION OF HOUSE

The house was a two story wood frame dwelling with brick veneer, a composition shingle roof, and was supported on a monolithic slab on grade concrete foundation. The house had a two car attached garage. The house was vacant at the time of the inspection, and the house, according to HAR, was built in 1984.

FOR THE PURPOSE OF THIS INSPECTION, NORTH WILL BE ASSUMED TO BE FROM THE RIGHT SIDE OF THE HOUSE TOWARDS THE LEFT, WHEN FACING THE HOUSE FROM THE FRONT.

STRUCTURAL

FOUNDATION

Description

The foundation was a concrete slab on grade and appeared to be reinforced with steel reinforcing rods (rebar).

EVIDENCES OF DIFFERENTIAL MOVEMENT

Note that it is not HEI's purpose to exhaustively document each and every evidence that may be related to foundation movement, but rather to document a representative sample and/or the most significant evidences of movement upon which we base our opinion on the condition of the foundation.

Levelness

The floors were checked with an electronic level and were observed to be acceptably level throughout the house. The difference in elevation between the high point and low point was 0.5 inch at the 1st floor and 1.3 inches at the 2nd floor. The high point at the 1st floor was located at the reference point, and the low point was located at the family room. The unlevelness takes place over a horizontal distance of approximately 20 feet.

Note also that elevation readings taken at the garage area are relatively large numbers relative to the reference point due to the step down into the garage area.

See our field sketch showing the elevation readings at the end of this report. Note that the “R” on the sketch is our randomly chosen starting reference point, where the elevation is 0, and all other elevation readings are taken relative to the reference point and are measured in inches to the nearest 1/10 inch.

We typically point out that foundations are rarely constructed perfectly level, so most properties have some unlevelness (typically ¾ to 1-1/2 inches) built into the foundation as part of original construction. We have no knowledge as to how much unlevelness was built into this house foundation during original construction.

Veneer Cracks

Cracks in the exterior veneer that appeared to be related to foundation movement were minimal in number and degree.

Sheetrock Cracks

Sheetrock cracks that appeared to be related to foundation movement were minimal in number and degree.

Concrete Cracks

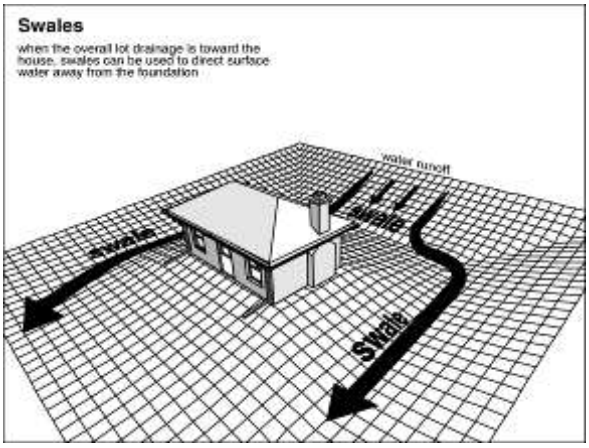
Cracking of the foundation concrete exists in virtually all foundations. It is pointed out that cracking is a normal property of concrete and other brittle materials, and Hedderman Engineering, Inc. assumes no responsibility should cracks be found that are not mentioned in this report. Some cracking was observed in this concrete foundation, including at the garage floor.

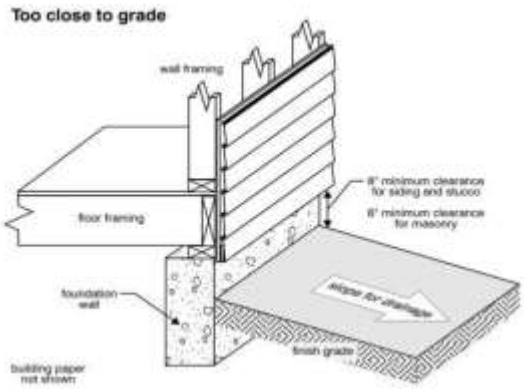
FOUNDATION CONCLUSIONS

Most of the structures previously inspected by this firm have experienced some degree of differential foundation movement, and this structure was no exception. After careful examination, it is our opinion that the evidences of movement observed do not indicate excessive or unusual foundation settlement. The overall degree of the foundation movement for this structure is within an acceptable amount for a house of this age and type construction. The foundation is, at this time, performing its function, and is not in need of releveling. It is pointed out for your information that, due to the nature of the soils in this area, it is reasonable to expect that some movement of the foundation will happen in the future.

Perimeter Grading/Drainage

This inspection does not include determining if the property is in the 100 year flood plain. For further information regarding the elevation of this lot check with your survey and/or a land surveyor.





The perimeter drainage at the front and the rear of the property appeared to generally be adequate. It was not raining at the time of the inspection and, therefore, it could not be determined with certainty if water would pool at any localized low areas around the property. Further investigation with the homeowner is recommended to determine if there are any drainage problems or standing water after a rain.
R401.3

OTHER OBSERVATIONS

The foundation of this unit is monolithic with the foundation of adjoining units and can be affected by foundation movement occurring at those units.

ROOF

Life expectancy

The roof surface was constructed of composition shingles. The life expectancy of a composition shingle roof has been observed to vary from 15 to 20 years, with most requiring replacement at about 17-20 years. We estimate that the age of the roof is approximately five years.

Due to the height of the roof, the roof was not viewed from its surface due to safety concerns but was viewed with a drone.









Observations

After observing the interior of the structure, evidences of current roof leaks were not visible. The absence of evidences of roof leaks does not guarantee that roof leaks were not present; rather, that no evidences of leaking were visible at the time of the inspection. Some stains were visible in the attic, but the stains appeared to be related to previous roof leaks. It is recommended that you check with the owner and/or a service company concerning the stains.
Locations included: attic at the south above the master bedroom

The roof decking was observed to be plywood.

It was observed that spacer clips were installed at the joints between the roof decking to allow for expansion of the roof deck.

Roof Conclusions

The roof is in serviceable condition at this time and is performing its intended function with no repairs indicated to the roof surface.

STRUCTURAL FRAMING

The roof framing members in the attic were constructed of prefabricated trusses connected with metal gusset plates pressed into the wood at the joints.

We did not observe metal hurricane clips/straps installed at the attic framing members. These clips/straps provide a stronger structure that will be more resistant to wind uplift from hurricane and tornadoes. These clips/straps were not commonly used on this age home at construction.

Deflected Framing

The header over the garage door was deflected slightly (less than one inch deflection in a 30-foot horizontal distance ($L/\Delta = 360$ per the building code)). The degree of the deflection was not such that the header was not performing its intended function and, therefore, no repairs are recommended at this time.

Observations

No deficiencies were observed in the primary load carrying members of the structural framing that were accessible and viewed at the time of the inspection, including the roof framing, load bearing walls, ceilings, and floors. No significant deflections were observed in the roof framing as we were able to look up the plane of the roof from the different sides of the house.

Framing Conclusions

The primary load carrying members of the structural framing that were accessible and viewed at the time of the inspection were performing their intended function at the time of the inspection, and were not in need of repair.

WATER PENETRATION

No visual evidences of water penetration to the interior of the structure were observed at the time of the inspection. It is pointed out that this statement is based upon the limitations of a visual inspection, without the moving or removal of items causing visual obstruction, including, but not limited to, furniture, furnishings, floor or wall coverings, foliage, soil, etc.

We checked around all window and door openings with a moisture meter, and found no evidence of elevated moisture at the time of the inspection.

A substantial vulnerability to water penetration was observed at penetrations/openings through the exterior building envelope, and it is recommended that all penetrations/openings be sealed against water penetration. Typical examples on a structure may include light fixtures, air conditioning refrigerant lines, water piping, gas piping, vent caps, windows, doors, expansion joints, etc. Below is a representative sample of locations and/or photographs showing some, but not necessarily all, locations where there is a vulnerability to water penetration. Have a contractor provide a cost estimate to seal all vulnerable areas on the exterior building envelope against water penetration.

Obtain Cost Estimate

- The exterior light fixtures have not been caulked.

- Windows where the caulking was cracked or missing, and/or had gaps in the caulking.

FIREPLACE/CHIMNEY

Description

The fireplace was a prefabricated metal fireplace with a metal flue pipe that extends up through the roof. The firebox was not equipped with a gas supply line.



ATTIC

The attic was entered and was viewed from the access decking provided in the attic.

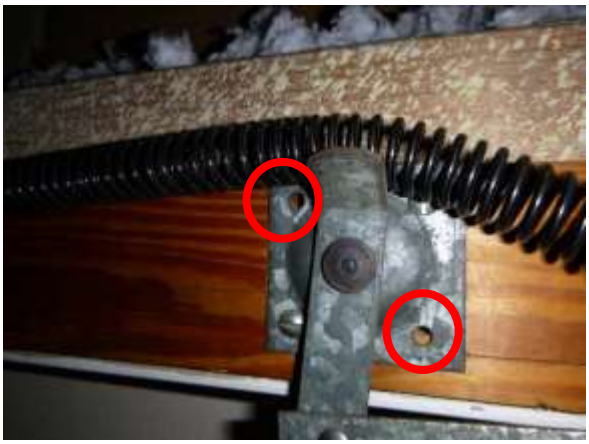
The attic had adequate service decking to the equipment, with a walkway that was a minimum of 24 inches wide.

The access ladder was not labeled to indicate the rated capacity of the ladder.

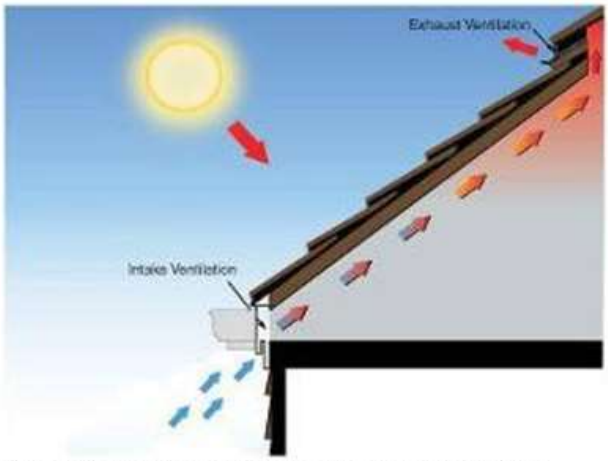
The stair assembly was not properly installed or secured to the framing members, and repair is needed for safety purposes. The condition(s) can be a safety hazard, and repair is needed, as an improperly installed stair assembly can possibly collapse.
Obtain Cost Estimate
Defective conditions we observed included the following:

- The nails used to secure the ladder assembly to the attic framing were not installed through the holes in the corner brackets at the top of the stairs.

- The nails used to secure the ladder assembly to the attic framing were not installed through the holes in the spring arm pivot plates on the sides of the access ladder.



The ventilation for the attic included continuous ridge vents and continuous soffit vents.



Clip art showing eaves and fascia ventilation

The insulation in the attic was approximately average by today's standards. The normal amount of insulation for attics in this area is R30 energy rating. This attic appeared to have approximately 12 inches of insulation in the ceiling, which is typically an R30.

INTERIOR ITEMS

Doors

Doors had missing hardware that needs to be replaced.
Obtain Cost Estimate
Locations included: garage pedestrian door


We observed a “ghost” door that opens/closes by itself, and the door needs to be adjusted.
Obtain Cost Estimate
Locations included: master bedroom

Windows

No items requiring repair were observed concerning the operation of the windows. The windows that were accessible were opening and closing properly.

Smoke Alarms

The house does not meet the current code concerning smoke alarms. This house is an older home and if bringing the house up to current standards is desired, the section below from the 2012 International Residential Code is the current requirements for smoke alarms in a home.
R314.3 Location.
Smoke alarms shall be installed in the following locations:
1 .In each sleeping room.
2. Outside each separate sleeping area in the immediate vicinity of the bedrooms.
3. On each additional story of the dwelling, including basements and habitable attics but not including crawl spaces and uninhabitable attics. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.

Where more than one smoke alarm is required to be installed within an individual dwelling unit in accordance with Section R314.3, the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual unit. Physical interconnection of smoke alarms shall not be required where listed wireless alarms are installed and all alarms sound upon activation of one alarm.

EXTERIOR ITEMS

Gutters and Downspouts

The gutters and downspouts were in generally good condition at the time of the inspection with no repairs needed.

Gates/Fences

The fences and gates were in generally good condition at the time of the inspection with no repairs needed.

MECHANICAL

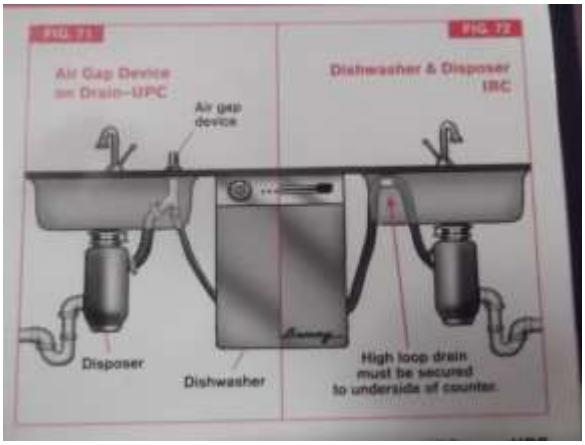
APPLIANCES

A continuity check was made of the exterior metal casings of the appliances, and it showed that the casings were bonded for the built-in countertop appliances in the kitchen, with the exception of the disposal, which was not equipped with a proper wire and plug. Have a service company make the necessary repairs.
Obtain Cost Estimate

Dishwasher

No items requiring repair were visible at the time of the inspection for the operation of the dishwasher. The unit was run through a cycle at the time of the inspection, and appeared to be operating properly.

The drain line under the sink was looped up so that the top of the loop was higher than the point where the drain line connected to the disposal. This will help to prevent garbage from running down the drain line into the dishwasher.



Disposal

No items requiring repair were visible at the time of the inspection for the operation of the disposal.

Vent Fan

No items requiring repair were visible at the time of the inspection for the operation of the vent.

Electric Range

No items requiring repair were visible for the operation of the electric cooktop. All of the elements and controls were operating properly at the time of the inspection.

Electric Oven

The range was not equipped an anti-tip device.
Obtain Cost Estimate

No repair was needed to the calibration of the oven thermostat. The thermostat was set at 350 degrees, and the oven heated to within the allowable ±25 degrees. The oven was checked with an oven thermometer, and found to heat to 350 degrees.

Microwave Oven

No items requiring repair were visible at the time of the inspection for the heating operation of the microwave. A cup of water was placed in the unit, and the microwave heated the water adequately. It is pointed out that the unit was not checked for microwave leakage.

Refrigerator/Freezer

It is pointed out that our inspection of the refrigerator is only cursory to see if the refrigerator compartment is cooling, and the freezer compartment is freezing. The freezer was cooling to -14 degrees and the refrigerator to 35 degrees at the time of the inspection, according to our infrared thermometer.

Garage Door Opener

No items requiring repair were visible at the time of the inspection for the opener. The auto-reverse mechanism was operational, and the sensitivity setting on the mechanism was adequate. Also, the infrared auto reverse mechanism was functional.

Utility Room

The utility room contained a washing machine and dryer. The washer and dryer are excluded from the scope of the inspection, but as a courtesy, were operationally checked in a cursory manner. The dryer was observed to be heating, and the washing machine was observed to be letting water into the tub, draining the water out, and going into a spin cycle that locked the cover. You may want to have the equipment thoroughly checked by a service company.

The 240-volt outlet for an electric dryer was the old style 3-prong outlet, rather than the new style 4-prong outlet.

PLUMBING

A plumbing system typically consists of three major components, including the potable water supply piping; the waste or drain piping; and the plumbing fixtures. The supply piping brings the water from the public water main or a private well through the water meter to the main shut off valve at the house. The water distribution piping brings the water from the main shut off valve at the house to the individual fixtures throughout the house. The water distribution system is under pressure, usually from 40 psi to 70 psi. The waste or drain piping carries the waste water and products underground to the sewer system or septic tank, and the waste piping is not under pressure, but operates by gravity flow. We typically run water down the drains from the sinks, tubs, showers, and toilets, but this cannot simulate the waste flow characteristics of full occupancy. There may be partial blockage of the underground waste lines from debris, broken pipes, or tree roots that cannot be detected by a visual inspection. If you desire a more in-depth inspection of the water supply, water distribution, and waste/drain systems, it is recommended that you contact a qualified plumber.

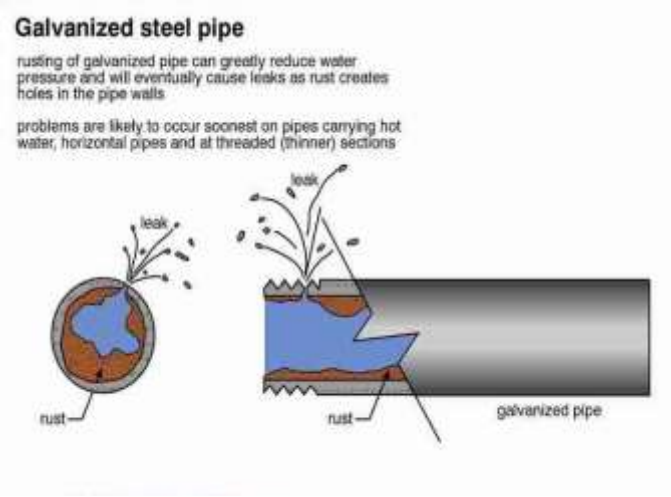
Water Service / Supply Piping

The shut-off valve for the main inlet water line was located at the exterior of the unit at the end of the building.

The water pressure to the house at the time of the inspection was checked with a pressure gauge at a hose bibb, and the pressure was observed to be 42 psi.

WATER DISTRIBUTION PIPING

The water supply piping inside the house was observed to be galvanized steel.



Plumbing Fixtures

The drain line was leaking under the sink when the sink was filled with water and allowed to drain. Also, the drain line was heavily puttied, indicating previous leaks.
Locations included: the kitchen sink
Obtain Cost Estimate

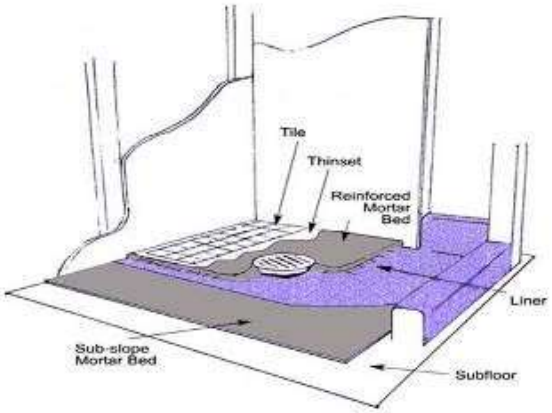
TOILETS

The toilet fill valve(s) was leaking inside the toilet tank and is in need of replacement
Locations included: upstairs secondary toilet
Obtain Cost Estimate each

TUBS/SHOWERS

No items requiring repair were visible at the time of the inspection to the plumbing on the tubs and/or showers. The tubs were filled with approximately 3-4 inches of water and water was run in the showers, and they were observed to be draining properly with no leaks visible in the plumbing.

No evidences of a current shower pan leak were visible at the time of the inspection for the shower located at the master bathroom. It is pointed out that the duration of our shower pan leak check is only for a portion of the time spent during the inspection. If you desire a comprehensive shower pan leak check, then it is recommended that a plumber be contacted to perform a shower pan leak check.



No items requiring repair were observed in the operation of the whirlpool tub. The recirculation pump and aerators, were functioning properly. However, the GFCI was missing and needs to be installed for safety purposes.
Locations included: the master bathroom
Obtain Cost Estimate

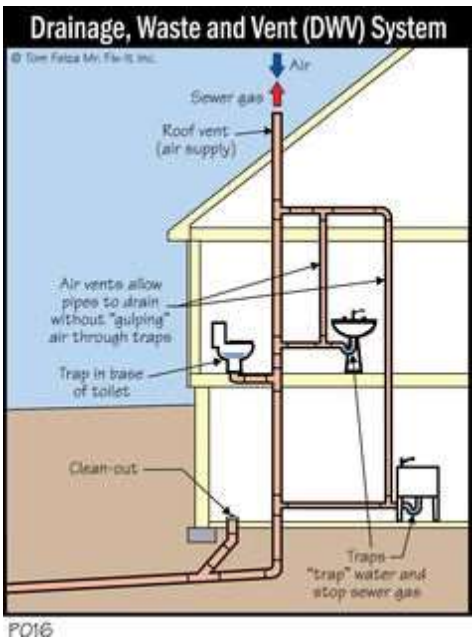
Miscellaneous Interior Plumbing

No items requiring repair were visible for the operation of the drain system at the time of the inspection. No evidences of slow drains or a system wide problem were observed when the system was operationally checked by running water through each of the plumbing fixtures during the duration of the inspection. It is noted that most of the drain waste system is in the walls, under the house, and in the ceilings, and is not visible. If a more in depth survey is desired, it is recommended that a plumber be contacted to perform an a camera or hydrostatic test.

Miscellaneous Exterior Plumbing

The atmospheric vacuum breaker devices were missing at one or more of the hose bibbs, and it is recommended that they be installed to prevent cross connections, which can allow contaminated water to enter the potable water supply.
Obtain Cost Estimate

Drains/Wastes/Vents



CLEAN OUT

The main sewer clean out was located at the end of the building. The clean out is needed in the event of a stoppage in the main sewer drain line, and the clean out is where a sewer snake would be installed to remove the clog in the drain line.

WATER HEATER

The hot water for the unit was provided from a centrally supplied source which was not viewed at the time of the inspection, and will be maintained by the Homeowners Association. Further investigation with the Homeowners Association is recommended.

The temperature of the hot water at the kitchen sink was measured to be 96 degrees at the time of the inspection. Normally, we see 120 degrees, so further investigation with the Homeowners Association is recommended.

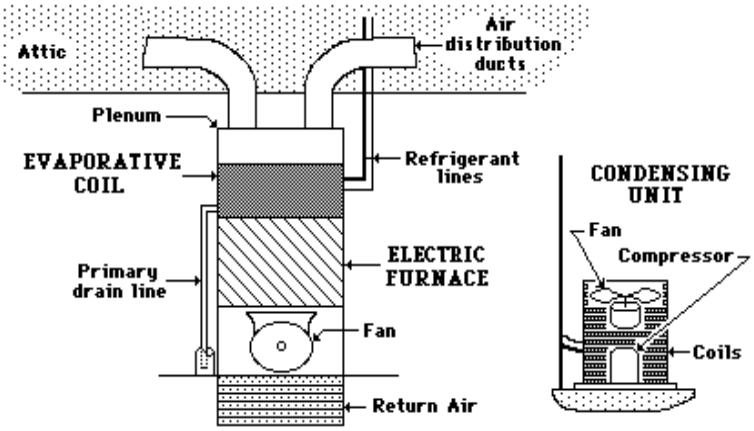
TIME AND TEMPERATURE RELATIONSHIP TO SERIOUS BURNS

WATER TEMPERATURE		Adults (skin thickness of 2.5 mm)	Children (skin thickness of .56 mm)
		Time required for a third-degree burn to occur	
155°F	68°C	1 second	0.5 second
148°F	64°C	2 seconds	1 second
140°F	60°C	5 seconds	1 second
133°F	56°C	15 seconds	4 second
127°F	52°C	1 minute	10 seconds
124°F	51°C	3 minutes	1.5 minute
120°F	48°C	5 minutes	2.5 minutes
100°F	37°C	Safe temperature for bathing	Safe temperature for bathing

For SI: $°C = [(°F) - 32]/1.8$ or $\left(\frac{°F + 40}{18}\right) - 40 = °C$

Figure P2708.3
TEMPERATURE BURN CHART

AIR CONDITIONING and HEATING



The air conditioning for the house was provided by one forced air split system. The equipment included the following:

Zone	Condensing Unit	Date	Evap. Coil	Date	ΔT(degrees)
House	3-ton York/Unitary	2012	3-1/2 ton	2011	16-17

It is pointed out that our inspection of the air conditioning and heating system(s) is a limited, visual inspection where we check the equipment as it has been installed to determine whether or not the system(s) is cooling and/or heating at the time of the inspection. Our inspection is necessarily a cursory inspection, as we do not determine the sizing, adequacy, or design of any component in the system, or the compatibility of the individual components, nor the installation of the system(s) to be in conformity to the latest building code requirements. If you desire an in-depth analysis of the HVAC system(s), then it is recommended that a service company be contacted to analyze the system(s). This is particularly important if the system(s) is an older system and has only a limited amount of remaining life due to its age and/or condition.

Cooling Performance

We measure the temperature drop (ΔT) across the coil(s) at each unit at the time of the inspection and our observations have been recorded above in the description of each zone. It is pointed out that our measurements of the cooling performance of the equipment is only at a "point in time", and cannot reflect whether the equipment has been recently serviced, or what the future performance of the equipment will be after the day of the inspection. Further investigation with the homeowner is recommended to determine when the equipment was last serviced.

No items requiring repair were visible at the time of the inspection for the cooling performance of the equipment.

Overflow Pans – Float Switch

The main condensate drain for the evaporator coil was not equipped with an in-line float switch which should shut off the air conditioning unit if the drain line backs up, and it is recommended that you consider having one installed.
Obtain Cost Estimate

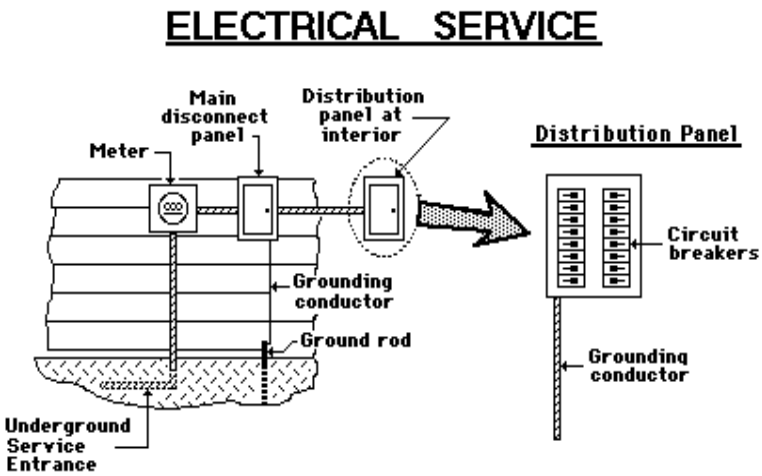
HEATING

The heating for the house was provided by an electric vertical furnace located in the upstairs hallway. The equipment was as follows:

Zone	Manufacturer	Size	Date	Location
House	York/Unitary	Electric	2011	Upstairs hallway

Observations

The furnace was operationally checked at the time of the inspection, and no repairs were indicated to the operation of the furnace. The electric furnace was heating the air 27 degrees, which is adequate.



ELECTRICAL SERVICE
Type: Underground **Voltage**: 120/240 **Phase**: Single **Amps**: 200-Amps
Meter: End of the Building

MAIN DISCONNECT PANEL
Manufacturer: Eaton Cutler Hammer Square-D General Electric Federal Pacific Zinsco - Main panel and subpanel
Rated Capacity: 200 Amps 225 150 125 100 Amps Not Visible Each
Main Breaker: 200 Amps 400 Amps 100 Amps 125 Amps 150 Amps
Location: End of the Building

BREAKER PANEL
Manufacturer: Bryant
Rated Capacity: 125 Amps
Main Breaker: 125 Amps
Location: Inside garage

WIRING
Service Entrance Conductors Aluminum
Branch Circuit Wiring: Copper
Type of Wiring: Non-Metallic Sheathed (Romex)
Type of System: 3-wire grounded system

Breaker Panel Box(es) (Panelboard)

It is a general recommendation that all circuit breakers be tripped off and on at least once a year to ensure that they are still physically able to trip off. Occasionally, the points on a breaker will fuse to the main bus in the panel, preventing the breaker from tripping off, even if there is an overload on the circuit. If this condition occurs, it can be

a fire hazard.

Breaker Panel

Foreign matter was observed in the panel box, which can be a safety hazard, and it is recommended that the panel be cleaned
Obtain Cost Estimate

Legend

The legend in the breaker panel was labeled to identify the circuits in the panel. We did not verify the accuracy of the labeling.

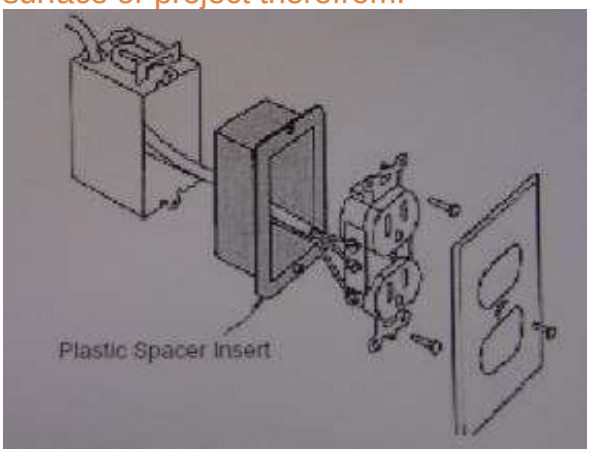
Wall Outlets

Most of the outlets that were supposed to be protected by a ground fault circuit interrupt (GFCI) device were protected. This included the outlets at all the bathrooms, the exterior of the house, and at the kitchen countertop area. The GFCI devices were checked by pushing the “test button, and also with an exterior testing device, and were functioning properly.

Outlet(s) were not protected by a ground fault circuit interrupt (GFCI) device.
Locations included: garage
Obtain Cost Estimate each

A three prong outlet(s) that was not grounded properly and needs to be repaired. It is recommended that an electrician be contacted, and the necessary repairs made to the outlet(s).
Locations included: two outlets at the dining room
Obtain Cost Estimate

The outlet for the washing machine in the garage was missing an extender box.
Obtain Cost Estimate
314.20 In Wall or Ceiling. In walls or ceilings with a surface of concrete, tile, gypsum, plaster, or other noncombustible material, boxes employing a flush-type cover or faceplate shall be installed so that the front edge of the box, plaster ring, extension ring, or listed extender will not be set back of the finished surface more than 6 mm (1⁄4 in.). In walls and ceilings constructed of wood or other combustible surface material, boxes, plaster rings, extension rings, or listed extenders shall be flush with the finished surface or project therefrom.



Additional Comments

The doorbell was non-functional or loose and needs to be repaired.
Obtain Cost Estimate

CLOSE

Opinions and comments stated in this report are based on the apparent performance of the items included within the scope of the inspection, at the time of the inspection. Performance standards are based on the knowledge gained through the experience and professional studies of the inspector. There is no warranty or guarantee, either expressed or implied, regarding the habitability, future performance, life, merchantability, and/or need for repair of any item inspected. It is suggested that it would be a prudent thing to purchase a Home Warranty Policy to protect the appliances and equipment against unforeseen breakdowns during the first year and for preexisting conditions. It is recommended that you research the various options available and protect yourself with a policy. Check with your agent for details and please read our comments concerning Home Warranty policies on page 2 of this report.

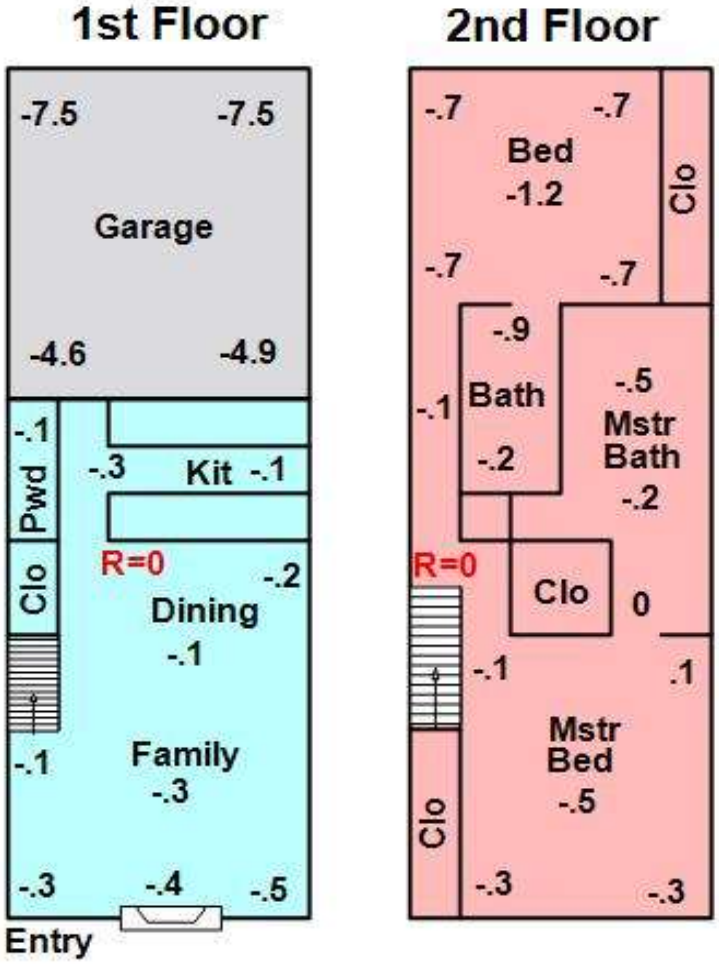
As an additional service, we strongly recommend using a new tool we have on our website that can quickly turn your inspection report into an easy-to-read estimate of repairs for a nominal fee. These pricing reports from a third party company called **RepairPricer** not only make the inspection report easy to understand in terms of dollars and cents, but they are also useful negotiation tools. Just visit the page below on our website and upload your report into **RepairPricer**. If you have any questions when you receive your report, you can contact them at info@repairpricer.com
http://www.heddermanengineering.com/repair-cost-estimates

Thank you again for asking HEDDERMAN ENGINEERING, INC. to perform this inspection for you. If you have any questions after reviewing this report, please feel free to call the office. It is emphasized that the executed Service Agreement contract, which has been included at the end of this report, contains a provision under “Dispute Resolution” for you to contact HEI to resolve any disputes.

At your service,

Tim Hedderman
Registered Professional Engineer #51501
Texas Firm Number: 7942

12.6.2018 **HEI** **Suarez-Vallejo**



3010 Holly Hall Street Unit 3010
Elevation Readings

HEDDERMAN ENGINEERING, INC.
www.heddermanengineering.com Office 281-355-9911 Fax 281-355-9903 office@heddermanengineering.com

RECEIPT

December 6, 2018

TO: Santiago Suarez Vallejo

REF: Inspection of the townhouse/condominium at 3010 Holly Hall Street
Unit 3010, Houston, Texas.

Total cost of inspection:	$600.00
Total Paid:	$600.00
Total Due:	- 0 -

For your records, following is the Service Agreement that you executed for this inspection.

HEDDERMAN ENGINEERING, INC.

Office: 281-355-9911 Fax: 281-355-9903

office@heddermanengineering.com www.heddermanengineering.com

Real Estate Inspection Service Agreement

NOTICE: THIS AGREEMENT IS INTENDED TO BE A LEGALLY BINDING CONTRACT - PLEASE READ IT CAREFULLY

DATE OF INSPECTION: 12/6/2018

CLIENT NAME: Santiago Suarez Vallejo

PROPERTY ADDRESS: 3010 Holly Hall Street Unit 3010

COST OF INSPECTION: $600.00

Purpose of inspection

The purpose of the inspection is to view selected accessible components and/or systems, and to inform you, our client, of our observations and professional opinions from a NON-INVASIVE VISUAL SURVEY on whether or not those selected components and/or systems appear to be functioning on the day of the inspection, or appear to be in need of repair. Although this report may include observations of some building code violations, total compliance with structural, mechanical, plumbing, electrical codes, specifications, and/or legal requirements is specifically excluded. HEI does not perform Code inspections. Since building codes change every few years, our inspections are not done with the intention of bringing every item in the house into compliance with current code requirements. Rather, the standard of our inspections is a **PERFORMANCE STANDARD** to determine if the items inspected in the opinion of HEI appear to be functioning at the time of the inspection, or appear to be in need of repair. It is pointed out that other engineers/inspectors may have different opinions to those given in this report. It is also not our purpose to verify the adequacy and/or design of any component of the house.

It is also not within the purpose and/or scope of this report to determine the insurability, habitability, merchantability, future performance, suitability of use, economic life span, or deferred maintenance issues, and/or issues unnamed in this report. This report is not an insurance policy, neither is it an express or implied warranty or guarantee as to future life and/or continued performance of the items inspected. Our inspection and report are intended to express HEI's perceived impression of the apparent performance of the inspected components and systems viewed on the date of the inspection. HEI's intent is to reduce your risk associated with this transaction, however we cannot eliminate all risk, nor assume your risk. Any items pointed out as in need of repair or further investigation should be evaluated by a qualified repair specialist or service company who should provide estimated repair costs PRIOR TO CLOSING ON THE PROPERTY. By accepting this agreement, the Client understands that the services provided by HEI are the types of services described in the Professional Services Exemption of the Texas Deceptive Trade Practices-Consumer Protection Act ("DTPA) and agrees that no cause of action exists under the DTPA related to the services provided.

It is recommended that you obtain as much history as is available concerning this property. This historical information may include copies of any seller's disclosures, previous inspection or engineering reports, building drawings and/or specifications, bids to perform repair work on the property, receipts from repair work that has been performed, reports performed for or by relocation companies, municipal inspection departments, lenders, insurers, and appraisers. You should attempt to determine whether repairs, renovations, remodeling, additions or other such activities have taken place at this property.

Scope of inspection

The scope of the inspection includes limited, visual observations at the interior and exterior of the structure, the attic (if applicable) as viewed only from the areas determined by the inspector to be safely accessible, the underside of the house (if applicable) as viewed only from the crawlspace areas determined by the inspector to be safely accessible, and the roof as viewed from the ground and/or only from the locations on the roof **if the roof is determined by the inspector to be safely accessible**. Only those items readily accessible and visible at the time of the inspection will be viewed and included in this report. Any items causing visual obstruction, including, but not limited to, furniture, furnishings, floor or wall coverings, registers and grills on HVAC ductwork,, foliage, soil, appliances, stored items, insulation, etc., will not be moved or removed. Only those electrical outlets that are readily accessible will be operationally checked. Disassembly or removal of any portion of the structure, mechanical equipment, plumbing equipment, or electrical equipment is beyond the scope of this inspection.

The components of the property included, if applicable, in the scope of the inspection:

Structural:
Foundation, elevation survey including sketch of house and level readings, primary load-carrying framing members, roof surface, water penetration, grading and drainage, fireplace/chimney, and miscellaneous items related to the house.

Mechanical:
Air conditioning and heating systems, water heater, built-in appliances, and garage door opener.

Plumbing:
Water and gas supply lines that are visible, sinks, toilets, tubs, showers, visible drain lines, and vents.

Electrical:
Service entrance conductors, electric meter, distribution panel, visible wiring, light fixtures, switches, and accessible receptacle outlets.

Lawn Sprinkler:
Control panel, solenoid valves, backflow prevention device, visible piping, and sprayer heads.

Pool:
Basin, deck, tile, pumps, filters, piping, heater, timer, and electrical.

The following items, even if present in the subject property, are not inspected and do not constitute any part of the inspection services to be performed hereunder unless a specific notation is made on this report stating its condition.

Tainted and Corrosive drywall (Chinese Drywall), Clock Timers, Landscape Lighting, Sump Pumps, Wood Destroying Insects/Pests, Antennas, Environmental Hazards, Laundry Equipment, Water Filters, Geological faults/subsidence, Automatic Oven Cleaners, Fire Sprinklers System, Mold/Microbial, Water Wells, Mosquito Misting Systems, Buried/Concealed Plumbing, Fire/Smoke Alarm Systems, Septic Systems, Indoor Air Quality, Asbestos, Low Voltage and data Systems, Lights on Photo-cell/timers, Carbon Monoxide Alarms, and Water Softeners/water treatment systems/reverse osmosis systems with all related piping.

Reinspections:

HEI typically does not perform reinspections on the property. However, if we agree to return to the property, it is with the understanding that we are not certifying the adequacy of any repair work that has been done, and there will be an additional fee charged. This is also true for conditions that are beyond the control of the inspector and hinder the inspector during the inspection, such as inclement weather, lack of adequate access to attics, crawlspaces, or other areas, utilities that are off, non-functional equipment, etc. If a return trip to the house is requested to finish items that were not able to completed at the time of the originally scheduled inspection, then an additional fee will be charged.

Limitations of Inspection

A visual inspection method will generally produce a competent first impression assessment of the apparent performance of the structural, mechanical, plumbing, and electrical components, provided repairs have not been performed which would cover distress patterns normally produced by problems. Because the inspection procedure is visual only, and is not intended to be diagnostic and/or technically exhaustive, an inherent residual risk remains that undiscovered problems exist and/or future problems will develop.

This report is provided solely for the use of the person to whom this report is addressed, and is in no way intended or authorized to be used by a third party, who may have different requirements, and to whom we have not contracted with to perform an inspection. If a third party chooses to use this inspection report, they do so without HEI's permission or authorization, and they do so at their own risk.

Dispute Resolution

In the event of a complaint concerning the inspection services provided pursuant to this agreement, Client must notify HEI in writing of such complaint within ten (10) business days of the date of Client's actual discovery and thereafter allow a prompt re-inspection of the item relating to the claimed condition. Client further agrees that client and he/she/it's agents, employees or independent contractors **will make no alterations, repairs or replacements to the item complained about prior to a re-inspection by HEI as agreed above. You agree that failure to comply with this procedure shall result in your express release of all claims Client may have against HEI, known and unknown, related to the item complained about and any related alleged act or omission by HEI**.

LIMITATION OF LIABILITY:

In any event the inspector fails to fulfill the obligations under this agreement, CLIENTS EXCLUSIVE REMEDY AT LAW OR IN EQUITY AGAINST INSPECTOR IS LIMITED TO A MAXIMUM RECOVERY OF DAMAGES EQUAL TO THE INSPECTION FEE PAID HEREIN. CLIENT VOLUNTARILY AGREES TO WAIVE THEIR RIGHTS UNDER THE DECEPTIVE TRADE PRACTICES-CONSUMER PROTECTION ACT, SECTION 17.41 ET SEQ. BUSINESS & COMMERCE CODE. This limitation of liability applies to anyone, including client, who is damaged or has to pay expenses of any kind, including attorney fees and costs. Client assumes the risk of losses greater than the refund of the fee paid herein. Client acknowledges that this limitation of liability is reasonable in view of the relatively small fee that inspector charges for making the inspections when compared with the potential of exposure that inspector might otherwise incur in the absence of such limitation of liability, and that a much higher fee would be charged if the inspector were subject to greater liability.

Statute of Limitations

The parties agree that no claim, demand, or action, whether sounding in contract or in tort, may be brought to recover damages against HEI, or its officers, agents, or employees MORE THAN TWO YEARS AND ONE DAY AFTER THE DATE OF THE INSPECTION OR THE DATE ANY PURPORTED CAUSE OF ACTION ARISING OUT OF THE INSPECTION ACCRUES. TIME IS EXPRESSLY OF THE ESSENCE HEREIN. Client understands that this time period may be shorter that otherwise provided by law.

Acceptance of Report

By signing I confirm that I have read, understood, and agree to the above pre-inspection service agreement, and that I agree to be bound by these terms and conditions. In the absence of Client signing this service agreement prior to or at the time of the inspection, then acceptance of the report and/or payment for the inspection shall constitute agreement with all of the terms of this agreement. The report to be prepared by HEI shall be considered the final and exclusive findings of HEI regarding the inspection of the property which is the subject of this agreement. Client shall not rely on any oral statements made by HEI or its representatives prior to issuance of the printed report.

NOTE: IF THE INSPECTION IS CANCELLED LESS THAN ONE FULL BUSINESS DAY BEFORE THE SCHEDULED TIME, THE CLIENT WILL BE CHARGED ½ OF THE ORIGINAL INSPECTION FEE AND AGREES TO PAY SUCH PENALTY FEE.

☑ **I HAVE READ AND ACCEPT THIS AGREEMENT**