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**INSPECTION PROPERTY ADDRESS:**                   **XXXX Street**  
Houston, Texas

**INSPECTION PERFORMED FOR:**                   Mr. Buyer

**INSPECTION DATE:** 12/16/10

**INSPECTIONS ORDERED:**

- [X] Structural
- [X] Mechanical
- [X] Electrical
- [X] Plumbing
- [X] Appliance

**LIMITATIONS AND DISCLAIMERS**

This Inspection Report reflects only the items listed and only the condition of those items at the time and date of inspection. This Report reflects only if the items inspected are observed to be "functional" or "nonfunctional" at the time of the inspection, that is, whether such items at this time are observed to serve the purpose for which they are ordinarily intended. THIS REPORT REFLECTS ONLY THOSE ITEMS THAT ARE REASONABLY OBSERVABLE AT THE TIME OF THE INSPECTION. NO REPRESENTATION IS MADE CONCERNING ANY LATENT DEFECTS OR DEFECTS NOT REASONABLY OBSERVABLE AT THE TIME OF THE INSPECTION OR OF ITEMS WHICH REQUIRE THE REMOVAL OF FURNITURE OR COVERINGS. For example, but without limitation, recent repairs, painting or coverings may conceal prior or present damage which is not reasonably observable by the inspector, and no representation or comment can be made. NO REPRESENTATION IS MADE CONCERNING ANY OTHER CONDITION OR THE FUTURE PERFORMANCE OF ANY ITEM. NO REPRESENTATION IS MADE AS TO ITEMS NOT SPECIFICALLY COMMENTED UPON. ALL WARRANTIES, EXPRESSED OR IMPLIED, ARE EXCLUDED AND DISCLAIMED. Any environmental hazards or toxic materials were not included as a part of this inspection. We have performed no inspections or tests for mold. This report is provided for the use of our client only, based on their specific needs. No representation is made to the use of this report by any other party. Opinions related to the compliance with specifications, legal and current code requirements, or restrictions of any kind are specifically excluded as being covered by this inspection. Repair costs vary from one contractor to the next. You should contact several qualified contractors to obtain firm quotes and defined scope of work on each repair item.

On December 16, 2010, Harris Engineering Real Estate Inspections, Inc. performed a limited visual inspection on the house at XXXX Street, Houston, Texas. The inspection was performed exclusively for Mr. Buyer. We make no representation to the use of this report by any other party. By state law, inspections to determine the presence of, or damage by, wood destroying insects are to be conducted by individuals licensed for that purpose, therefore Harris Engineering Real Estate Inspections, Inc. advises that a licensed pest control inspector be contacted. No representation is made to any environmental aspects/hazards of this property. The purpose of this report is to render an opinion as to whether the items listed on this report were performing the function for which intended or were in need of repair at the time of the inspection.



The limited structural inspection consisted of interior and exterior visual observations as well as floor levelness measurements with a four foot spirit level. Since no formal engineering analysis or testing was performed, the conclusions of this report are based solely on this engineer's visual impressions as to the performance on this date. Should you desire a foundation level survey or other engineering evaluations such as geotechnical analysis, concrete testing, concrete moisture testing, plumbing testing, or post tension testing (if applicable), please contact this office. No geotechnical study has been made to determine the soil characteristics of this property. However, much of the greater Houston area is known to have an active type soil that can adversely affect the performance of the foundation. No representation is made to the location of any geological faults. For the purpose of this report, the terms front, rear, right, left are used when viewing the house from the front. No representation is made to any previous or future flooding.

## **FOUNDATION COMMENTS**

This is a three story residential structure with a concrete foundation. Exterior siding is stucco and cultured stone veneer.

Observations revealed relatively few signs of any foundation movement. There were few signs of any wall cracks. There were a few typical hairline stucco cracks. The doors fit well. There were relatively minor floor slopes. Much of the perimeter of the foundation was not observed due to obstructions.

No floor coverings were removed to determine locations of any cracks in the concrete foundation. Most, if not all, concrete foundations experience some cracks. Cracks are not necessarily an indication of a need for foundation repair. Some cracks occur at the time of curing and some are a result of deflection. Cracks can be a source for moisture and insect penetration. Should you desire inspection of the concrete surface, floor coverings would need to be removed.

Based on the limited visual observations, it appeared that this foundation had experienced a minor amount of movement. It is our opinion that the foundation was performing well at the time of the inspection. **No representation is made to future performance.**

Although future performance is not predicted, a soil moisture maintenance program is recommended. Signs of distress should be monitored to determine if the maintenance program will be effective. The soil should be kept at a constant moisture content to avoid any inherent shrink/swell characteristics of the soil which can cause differential movement and damage to foundations. This can be achieved by diligent lawn watering. Without specific soil characteristics of this property, the moisture maintenance program will be somewhat by trial and error. Any signs of foundation distress should be closely monitored as inadequate or excessive soil moisture can cause problems under certain conditions. Trees and large shrubs can remove a large amount of soil moisture which can adversely affect the foundation. Areas of large vegetation should be given sufficient water so that they do not deplete the moisture content of the soil. Top soil should be at least four inches below the brick or siding and sloped away from the structure for drainage.

There are some underground area drains in the yard. Gutter downspouts terminated at underground drains. It is recommended that the drainage conditions be monitored during rains. Water should readily flow away from the house and not pond on the lot.

## **ROOF COMMENTS**

The roof covering is composition shingles. The shingles had experienced minor to moderate weathering. There were discolorations on the shingles that were considered normal for a roof of this age. It is recommended that the roof be monitored during rains for any signs of leakage.



There were various stains at the attic framing. These were dry at the time of the inspection. This appears to be a result of original construction.



It is recommended that the exposed nails at the wall flashings be caulked.



## **OTHER STRUCTURAL COMMENTS**

We make no representation to whether the stucco was installed in accordance with any particular standards. There were a few typical small hairline cracks at the stucco. No weep screed flashings were installed at the lower stucco and stone details. Modern stucco and stone lower details use a weep screed flashing to help control moisture. There was soil in contact with the lower stucco at the outdoor kitchen. Slab exposure is recommended to help prevent moisture and wood destroying insects. Be advised that this was a limited visual inspection of the stucco and stone details. Should you desire additional evaluations, interior wall probe testing and/or infrared camera survey could be performed.



We make no representation to whether the cultured stone veneer was installed in accordance with any particular standards. However, there are concerns about a few of the stone details. There were a few small areas of exposed metal lath. These areas should be properly covered to prevent deterioration and water penetration.



The lower details of the stone columns at the front and rear exterior are in contact with horizontal surfaces. This is a concern for moisture.



The stones were installed so that moisture can collect at a few areas. This was most evident at the angled stones at the chimney shoulders. Water should readily drain away and not be allowed to collect. The house should be monitored for any water penetration.



The roof sheds water onto the chimney at the left rear. This is a concern for moisture. This condition should be monitored for any water penetration.



There were some penetrations through exterior walls that were not adequately sealed to prevent water penetration. All exterior wall penetrations should be properly sealed.



There was limited caulking at some windows. Thorough caulking is recommended.



For your information, there were small dents at gutters at the front left and left rear.



A gutter at the right side was sagging. There were signs of overflow at this gutter. Adjustment is needed.



For your information, there were a few cracks at the front sidewalk. There was some displacement at driveway pavers.



There was minor wood floor warpage at the kitchen area. Warpage is generally a result of moisture. It is our understanding that there was a previous leak at the icemaker. This condition should be monitored.



There are deadbolt locks at exterior doors. Current standards require keyless locks for egress reasons.

There were signs of water penetration that were observed under the outdoor kitchen grill. Repair is needed.



There was some wood deterioration at the pergola in the backyard.



There were some ceiling cracks at the back porch ceiling. This was constructed of stucco. The cracks may have been a result of some sagging.

The garage overhead door top panels were not reinforced. These should be reinforced for the garage door electric operators.



There was limited caulking at security sensors at the windows. Additional caulking would generally be expected to help prevent water penetration.



There were minor to moderate upstairs floor slopes. This was most evident at the master bedroom and master bathroom. This appeared to be a result of some original construction and some minor framing distortion in this two story house. There was a fine hairline floor crack at the master bathroom interior door location. This condition should be monitored. Be advised that concealed framing was not observed.

There were stains at a window at the second floor right bedroom rear window. This water penetration condition is in need of being repaired.



There were a lack of door pulls at the inside of the master woman's closet doors. Door pulls are needed so that these doors can be opened from the inside of the closet.

There was no balcony rail at the small balcony at the access to the mechanical equipment at the third floor stair area. There should be a balcony rail.



There was some discoloration at wall insulation at the far left attic. The reason for this was not determined. This area should be monitored for any water penetration.



## **MECHANICAL COMMENTS**

The elevator was not included as a part of the inspection. It is recommended that you contact a qualified elevator company. Marchall Stevenson Company, 713-961-1940 installed the elevator.

The outside temperature was approximately 70°F at the time of the inspection. The five air conditioners, four gas furnaces, and one electric furnace were functional. It is recommended that these units be monitored during different temperature conditions to determine whether they will cool and heat adequately.

For your information, most of the mechanical equipment appeared to be original installation.

The air conditioner return airs were not sealed. There was exposed electrical wiring in the return airs. It is recommended that these be completely sealed.



There were signs of some previous air conditioner condensate leakage. This should be monitored during warmer weather.



The rear furnace vent was improperly in contact with shingles at the perimeter of the roof. It appeared that this had been recently modified. There should be a minimum 1" clearance to combustibles.



The bathroom exhaust vent ducts did not terminate at the exterior. It is recommended that these be extended to terminate at the exterior.

The condensate drain line for the wine storage room cooler appears to terminate at a bucket. This would generally be expected to terminate at a drain line of the house.

## **ELECTRICAL COMMENTS**

Note: Concealed wiring is not inspected. For your information, we have performed no electrical design analysis.

For your information, we performed no inspections of any security system equipment.

For your information, photo cell and motion detector controlled lights were not included as a part of this inspection. It appeared that yard and tree lights were controlled by photocells. These were not included as a part of the inspection. These should be monitored at night to determine whether any repairs are needed.

For your information, built-in speakers and media equipment were not included as a part of the inspection.

The smoke alarms may be connected to the security system. Therefore, the smoke alarms were not tested as a part of the inspection. It is recommended that these be tested regularly. Carbon monoxide detectors are recommended.

For your information, a house of this age generally does not meet current electrical code requirements. Among these items include: arc fault circuit interrupters, inadequate ground fault circuit interrupters, lack of tamper-resistant receptacles, and lack of concrete encased grounding electrode. Please consult with a licensed electrical contractor about modifying some or all of these items for safety reasons.

One 20 Amp breaker had been turned off. The reason for this was not determined. Please consult with the seller.

There were bundled wires at the penetrations through the electric panels. This is not allowed by current standards.



There was a missing common tie at a multi-wire circuit in the panel (red and black wires). A common tie is needed at these breakers.

There was a 60 Amp breaker protecting what appeared to be #8 AWG wire for an air conditioner. This breaker is larger than is generally expected for this size wire. The electrical repair contractor should evaluate this condition.

One of the ground wires was improperly connected at the neutral bar at the subpanel. This should be connected at the ground bar.



There was no disconnect switch adjacent to the right rear air conditioner. There should be a disconnect switch adjacent to this unit.

The driveway gate electric operator was not operated during the inspection. Please consult with the seller to determine how this is controlled.

There was no power at a ground fault circuit interrupter receptacle at the outdoor kitchen area. The reason was not determined.

There was a loose escutcheon at the back porch ceiling fan. Repair is needed.



There was disconnected conduit at the left exterior near the front left corner. Repair is needed.



There was a broken conduit connection at an east tree. Repair is needed.



There were less electrical receptacles than are expected in some areas.

There was a nonfunctional light at the kitchen. This may be due to a burned bulb.

There was a missing receptacle cover at the utility room. A cover plate is needed.

## **PLUMBING COMMENTS**

For your information, no representation is made to concealed and underground piping. Should you desire, additional evaluations could be performed.

For your information, the water meter is located in the front yard. The main water shut-off valve is located at the front right exterior. The static water pressure was measured to be 60 psi.

For your information, the mosquito spray system was not included as a part of the inspection.

There was a slight gas odor at the front porch area. This was apparently from the gas lamps.

Corrosion protection is needed for the gas piping adjacent to the meter.



There was leakage at an exterior faucet near the outdoor kitchen. This leakage occurred from the top of the faucet when the faucet was turned on. Repair is needed.

The lawn sprinkler system was operated manually from the control panel during the inspection. Various heads improperly sprayed on the house. These are in need of being adjusted so that they do not spray on the house. Zone nine was bypassed when the controller was manually operated. Appropriate repairs are needed.



For your information, the water softener was not included as a part of the inspection. We have performed no laboratory analysis to determine if this is functional.

There was a lack of insulation at some water supply piping. This was observed in the garage and in the attic. Insulation is needed.

There were a lack of sediment traps at the gas piping connections to the appliances. Sediment traps are recommended.

There were no keys found for the fireplace gas valves. These were not operated during the inspection.

Caps are recommended at the water heater drain valves to prevent accidental water flow.



For your information, there was no inspection access found under the master bathroom hydromassage bathtub. It is recommended that an access opening be provided. Due to the lack of access opening, the tub overflow drain was not included as a part of the inspection.

The master bathroom hydromassage bathtub could not be operated. Please consult with the seller to determine how this is controlled.

For your information, the showers were operated briefly during the inspection. No signs of shower leakage were observed. Should you desire a more thorough evaluation, a 24 hour shower pan test could be performed to determine whether there is any leakage.

For your information, water heater T&P valves are not tested during the inspection due to the potential for these valves not resetting and due to the potential for leakage. The drain lines were partially concealed. It is recommended that a licensed plumbing contractor test these valves on a yearly basis and monitor for any concealed plumbing leakage.

The swimming pool and spa, as well as the associated equipment were visually inspected. Be advised that we have performed no leak testing. The filter was not backwashed or drained as a part of this limited visual inspection. There was an inadequate safety barrier around the pool and spa. A proper safety barrier would include self-closing/self-latching gates, etc. The swimming pool appeared to be constructed of gunite and plaster. The equipment consisted of lights with ground fault circuit interrupter protection, remote controls, three motors/pumps, filter, spa air blower, gas heater, and electrically actuated valves. Initially, the gas heater came on. This later went off for an unknown reason. Appropriate repair is needed. The controls at the edge of the spa could not be operated. Please consult with the seller to determine how these are operated. Repair may be needed. There is a pump for a pool sweeper. However, there was no sweeper in the pool. Please consult with the seller. There are spray nozzles at the perimeter of the pool. One of these nozzles had a different spray pattern than the other three. The stone walkway around the pool had a "hollow" sound when tapping on the stones. There were some signs of stone repairs at the walkway around the pool. Some of these stones appeared loose. Periodic repairs may be needed.

## **APPLIANCE COMMENTS**

There was a nonfunctional light at the outdoor kitchen refrigerator. This may be due to a burned bulb.

It was not determined where the cook top vent terminates. Please consult with the seller. This should properly terminate at the exterior.

There was a light on the icemaker that noted that cleaning is needed.

Harris Engineering Real Estate Inspections, Inc. does not perform repairs. Should you desire, a reinspection can be performed to determine whether repairs have been properly made.

This report contains the opinions of Harris Engineering Real Estate Inspections, Inc. It is possible that differing conclusions could be obtained from other companies. It is a pleasure to have been of service. Please call should you have any questions or need future inspections.

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