

HOUSTON INSPECTIONS

Houston Home Inspections, PLLC d/b/a Houston Inspections
5535 Memorial Drive, F-502
Houston, TX 77007
713.408.1129 Office
www.houstoninspect.com

Stucco Inspection



INSPECTED FOR

Jane Doe
123 Main
Houston, TX 77001

August 14, 2018

1. INTRODUCTION

1.1 PURPOSE: The purpose of this moisture inspection is to help assess the condition of the stucco system by looking for visible installation flaws, inadequate water diversion, and sealant failures. In addition, we will conduct random moisture readings using electronic moisture scan devices. Please note that the provision of a scope of work for remedial repairs is not the purpose of this inspection. Further investigation may be needed to determine the extent of water damage, if any, and how best to modify your home to address any moisture problems that may be indicated by this inspection.

1.2 SCOPE OF INSPECTION: This is a basic, stucco inspection limited to the following:

- A visual examination of the condition of the stucco, exterior sealants, flashing, windows, doors, roof-to-stucco transitions, parapets, gutters, deck-to-building connections, stucco terminations and any penetrations through the stucco.
- Conducting of *random* electronic moisture scanning of the building envelope.
- Preparing a report of our observations of potential problem areas and recording any high readings found.
- Providing detailed information on typical moisture-related problems in stucco structures to assist you in maintaining the value of your home.

1.3 LIMITATIONS OF LIABILITY: Because this is a limited inspection, we can make no guarantee, express or implied, that our observations and random moisture readings offer conclusive evidence that no installation or moisture problems exist, or that problems found are all-inclusive. This inspection company, its employees and any divisions shall not be liable for non-visual defects, unseen defects, unspecified defects or hidden damage and conditions existing on the subject property and hereby disclaims any liability or responsibility thereof. All parties concerned agree to hold harmless and indemnify this inspection company involving any liabilities that may result.

1.4 FURTHER TESTING / INVESTIGATION: Our policy is to rely on moisture meter readings as an indicator of relative moisture values between different test spots, not as an absolute value of water content in the substrate. It is difficult to determine if the structural wood of the structure has been damaged in areas of high readings without 'probing' and/or removing a core sample of the stucco to allow for visual inspection. Should we feel that further investigation is needed this will be indicated in the summary section of the report.

1.5 REPAIR FOLLOW-UP AND ANNUAL INSPECTIONS: A repair follow-up inspection should be conducted within three months after completion of the repairs to assess the effectiveness of the moisture modifications. This is extremely important. Annual inspections should also be scheduled to ensure that your stucco system remains dry. This way any sealant failures, stucco cracks, etc. can be caught and repaired promptly. Testing and maintaining the structure on a regular basis is the best way to prevent costly repairs associated with moisture damage. Also, should you decide to sell the property, annual inspections and maintenance documentation will be a valuable selling tool, providing evidence to show that your property has been inspected and maintained on a regular basis by a reputable and qualified firm.

HOUSTON INSPECTIONS

Inspection Information

Owner's Information		Buyer's Information	
Owner's Name	Jane Doe	Buyer's Name	n/a
Street address	123 Main	Buyer's Phone	n/a
City, State, Zipcode	Houston, TX 77001	Buyer's Email	n/a
Owner's Phone	Refer to Work Order	Buyer's Realtor	N/A
Owner's Realtor	N/A	Realtor Phone	N/A
Realtor Phone	N/A	Realtor Email	N/A
Realtor Email	N/A	Realty Company	N/A
Realty Company	N/A		
Property Information		Inspection Information	
Type of Exterior	Hard Coat Stucco - 4 Sides, Faux Stone	Date of Inspection	08/14/2018
Substrate (if known)	Assumed to be OSB	Inspector	Shawn Emerick EDI #TX-148, Alden Speer EDI #TX-171
Age of System	0 - 5 Years	Present at inspection	Owner, Additional Inspectors
Square Footage	Refer to Work Order	Weather Conditions	Clear, Dry
Stories	2	Temperature/Humidity	90+
Type of Windows	Vinyl	Last Rainfall	2 - 5 Days

Inspection Test Equipment

	Test Equipment	Test Range			Setting
		Low	Medium	High	
A	Delmhorst Moisture Probe Meter BD 2000	10-14	15 - 19	20 - 99	n/a
B	Extech M0260 Pinless Moisture Meter	10 - 20	21 - 50	51 - 99	n/a

Important Note: The test equipment is used to help locate problem areas. It must be understood that the test equipment is not an **exact** science but rather good tools used as indicators of possible problems. At times, because of hidden construction within the wall cavity, the meters get false readings or no readings at all. Some meters will pick up on metals, wiring, unique wall finishes, etc. Positive readings do not always mean there is a problem, nor do negative readings necessarily mean there is not a problem. We do not use the equipment to obtain **exact** moisture content, but rather to obtain relative readings between suspected problem areas and non problem areas. This information is then used to help determine potential problem areas which may warrant more investigation.

General Observations

U/D =Unable to determine N/A = Not applicable

	YES	NO	U/D	N/A
Are there any areas of cracking?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are there any areas of impact damage?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are sealant joints present at windows and doors?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have sealants been applied at all penetrations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are sealant joints present at intersections of the stucco and dissimilar materials?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the stucco system terminate 4 inches above grade?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the stucco system terminate 2" above hard surface / flatwork?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does the stucco system terminate 2" above roof surface?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are kickout / diverter flashing's installed at required locations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are the window and door flashing's properly installed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are the chimney flashing's properly installed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Has a chimney cricket been installed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Are the exterior fixtures installed properly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are the decks installed properly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Are all deck flashing details installed properly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Are flat surfaces present at Stucco Walls?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are gutter downspouts installed properly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

TREC NOTICE: This report was prepared for our client named on page two of this report in accordance with the client's requirements. This report addresses the stucco cladding system only and is not intended as a substitute for a complete standard inspection of the property. Standard inspections performed by a Texas Real Estate Commission licensee and reported on Texas Real Estate Commission "TREC" promulgated report forms may contain additional information a buyer should consider in making a decision to purchase.

Front Elevation



Grid Site	Moisture Reading	Substrate Condition	Observations / Comments
1	23.3%	Firm	
2	36.9%	Soft	See details of problems below.
3	33.1%	Soft	See Below

Front Elevation



Grid Site	Moisture Reading	Substrate Condition	Observations / Comments
1	14.7%	Firm	Seal Kickout Flashing

Right Elevation



Grid Site	Moisture Reading	Substrate Condition	Observations / Comments
1	17.1%	Firm	
2	11.4%	Firm	
3	18.5%	Firm	
4	16.8%	Firm	
5	15.5%	Firm	
6	11.3%	Firm	

Left Elevation



Grid Site	Moisture Reading	Substrate Condition	Observations / Comments
1	13%	Firm	
2	11.3%	Firm	
3	12.1%	Firm	
4	17.5%	Firm	Improve vegetation
5	13.4%	Firm	
6	20.9%	Firm	Repair HVAC primary drain line

Rear Elevation



Grid Site	Moisture Reading	Substrate Condition	Observations / Comments
1	19.7	Firm	Improve vegetation

Observations & Photos

Items Damaged, Improperly Installed, or Areas of Concern

Evidence of significant damage was found at the exterior stucco walls located below the roof and wall termination located at the front middle of the home. Staining was found on the surface of the stucco. During the invasive probing of the wall cavities at two locations below the roof termination the substrate was found to be soft and elevated moisture readings were found. In addition, signs of prolonged water penetrations were found in this area as evidenced by the interior damage, bacteriological growth, staining, and other problems outlined below.

Visible Staining Below Window



Staining in Corner Below Roof



During the inspection of the wall and roof termination using a drone it was determined that kickout / diverter flashing had not been installed. It is suspected that this is one of the main causes of these extensive moisture problems.



Elevated moisture readings were found below the window in the front game room on the second floor. Visible growth was observed in this same area. The readings measured in this area were between 14 - 15% all other areas in the home measured less than 9%. The elevated moisture readings are confirming the problems found at the stucco outside this area.



Damage and stained drywall was found at the ceiling located below the moisture problems found on the second floor at the stucco and interior walls. This is further evidence that active water penetrations exists.



Slightly elevated moisture readings were found at the front right window on the interior. This area was inaccessible for invasive stucco probing. During repairs of the other areas this location should be evaluated and improved as needed.



All exterior wall penetrations (electrical panels, electrical disconnects, light fixtures, etc.) and openings (expansion joints, windows, door thresholds, etc.) should be sealed with an approved material to prevent water penetrations into the wall cavities. Properly sealed exterior veneers help provide a barrier against the weather, insects, and enable environmental control of the interior spaces.



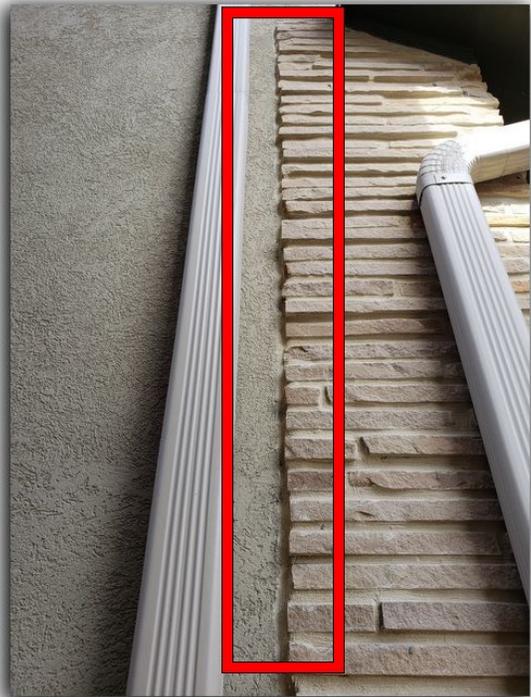
Tree limbs were noted in contact with the exterior walls. The tree limbs should be trimmed away from the walls to prevent future damage.



Missing head / "z" flashing was found at the garage door opening.



The transitions between differing materials have not been made properly. The transitions have been made with mortar which will eventually fail.



The overgrown vegetation around the sides and rear of the property should be improved to prevent moisture and insect problems at the walls.



The primary drain line appears to be not functioning properly as evident by water dripping from the secondary drain line on the left exterior of the home. This has caused visible damage to the stucco. In addition, elevated moisture readings were found in this area.



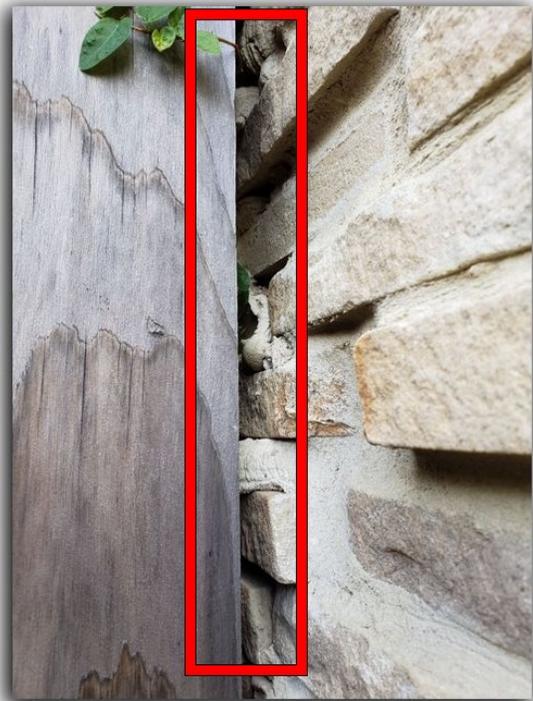
Mortar cracks were found on the exterior of the structure as evidence of settlement of the structure.



Cracks were found at the stucco walls. Recommend repairing / sealing these cracks.



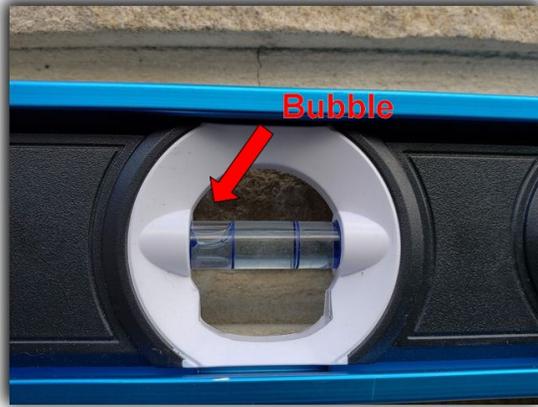
Missing mortar was found at the stone along the fence post on the right side of the home. This appears to have been not completed during construction.



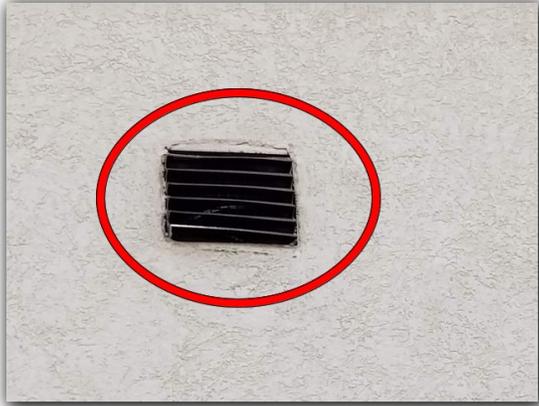
Vegetation was noted growing on the exterior walls of the structure. Vegetation on exterior walls promotes insect activity and moisture problems. The removal of the vegetation should be considered.



Poor workmanship was noted at the stone along the front above the garage door and on the right side of the home. The stone is not level at these areas.



The outside air source cover on the right side of the home is recessed at the stucco wall. This could allow water to enter the cavity. Recommend improvements.



Weepscreeds / drainage openings missing at the stucco walls - This could lead to the build up of moisture / water in the wall cavities and create future problems.



Improper clearance of the stucco was found at the back right porch column. Visible damage was found at this column.



Improper clearance was found at the grade (soil), roof, and patio of flatwork.



Portions of the underlying vapor barrier are hanging from the wall cavities.



Failed sealant was found between the kickout / diverter flashing and the wall / roof termination.



General Comments

During the inspection of the walls on the interior of the structure with a infrared camera no abnormalities were noted. The picture(s) below are a sampling of some image(s) taken during the inspection.



Property Address: 123 Main, Houston, TX 77001
08/14/2018

This inspection was performed as a visual & invasive testing inspection of areas accessible from a 24' ladder or by using the interior openings to gain access to the exterior, i.e. windows, balconies, etc.. Possible areas of high moisture penetration will be detected and tested during this inspection process.

It is suggested to thoroughly read the inspection report to evaluate and determine costs for repairs.

- All windows, doors, and penetrations through the system should be professionally sealed using a high quality, professional sealant, suggested by the manufacturer of your system and properly tooled into joints to prevent moisture intrusion and sealant separation. Sealants are suggested to be replaced every 2-3 years.
- Coatings should be elastomeric and high quality designed for the material being coated. It is recommend to seal all hairline cracks routinely on the exterior of the building. Painting is suggested every 8-10 years, to alleviate all staining and cracks.
- It is recommended for the performance of the building envelope, that sealants be maintained at all times and inspected by a qualified stucco or waterproofing contractor on a regular basis, generally every 2-3 years. Waterproofing stucco systems is recommended every 8-10 years using elastomeric coatings.
- All sprinklers (if present) should be directed away from the structure, especially where penetrations are present, to prevent damages.
- Stucco industry details require a minimum ground clearance of 4" above landscaping, 2" above hard surface grade, and 2" above roof covering. Tress, shrubs, and other plants should be kept clear from the stucco.
- All repairs should be performed by qualified contractors with expertise in stucco. Repairs should conform to current accepted industry standards.

This document only reports on the condition of the structure at the specific locations indicated. Locations were determined by the inspector according to probable areas of possible moisture intrusion, accessibility, and in accordance with accepted industry standards. No judgment is intended or given for any areas not reported on or not accessible. The inspection is limited to the accessible areas. Please know that this system is composed of many details, which can not be exposed without the removal of portions of the system. This inspection and report are not a warranty or guaranty, of any kind whatsoever, that all work and materials on this property are in complete conformity and compliance with installation specifications or that such installation and material will necessarily perform as intended. It is suggested that a follow-up inspection be completed in 12 - 24 months after all repairs are completed to ensure that the moisture levels remain within an acceptable level and proper corrections have been made to prevent moisture intrusion and wood rot.

It has been a pleasure providing this inspection service for you. If you have any questions, please feel free to contact our office at office@houstoninspect.com or 713-408-1129.

With appreciation,

Shawn Emerick EDI #TX-148