One or more members of our team have earned the following credentials:
Texas Real Estate Commission Professional Inspector License #7657, #20824
Level-III Infraspection Institute Certified Infrared Thermographer® #8402
FLIR ITC Certified Thermographer #8692
Certified Master Inspector (CMI)
Certified TPREIA Inspector
Certified Roofing Technology Quality Master
Associate Member of Houston Association of Realtors
NAWT Certified Septic System Inspector #111984 IC
Texas Real Estate Commission Qualified Sponsoring Professional Inspector

Because your home shouldn’t keep secrets from you™
Frame (pre-cover) Inspection Report:

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<th>Prepared For:</th>
<th>Client Confidential</th>
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<th>By:</th>
<th>Chuck Evans (#7657)</th>
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<td>(Name and License Number of Inspector)</td>
<td>August XX, 20XX</td>
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PURPOSE, LIMITATIONS AND INSPECTOR / CLIENT RESPONSIBILITIES

This property inspection report may include an inspection agreement (contract), addenda, and other information related to property conditions. If any item or comment is unclear, you should ask the inspector to clarify the findings. It is important that you carefully read ALL of this information.

This inspection is subject to the rules ("Rules") of the Texas Real Estate Commission ("TREC"), which can be found at [www.trec.texas.gov](http://www.trec.texas.gov).

The TREC Standards of Practice (Sections 535.227-535.233 of the Rules) are the minimum standards for inspections by TREC-licensed inspectors. An inspection addresses only those components and conditions that are present, visible, and accessible at the time of the inspection. While there may be other parts, components or systems present, only those items specifically noted as being inspected were inspected. The inspector is NOT required to turn on decommissioned equipment, systems, utility services or apply an open flame or light a pilot to operate any appliance. The inspector is NOT required to climb over obstacles, move furnishings or stored items. The inspection report may address issues that are code-based or may refer to a particular code; however, this is NOT a code compliance inspection and does NOT verify compliance with manufacturer’s installation instructions. The inspection does NOT imply insurability or warrantability of the structure or its components. Although some safety issues may be addressed in this report, this inspection is NOT a safety/code inspection, and the inspector is NOT required to identify all potential hazards.

In this report, the inspector shall indicate, by checking the appropriate boxes on the form, whether each item was inspected, not inspected, present or deficient and explain the findings in the corresponding section in the body of the report form. The inspector must check the Deficient (D) box if a condition exists that adversely and materially affects the performance of a system or component or constitutes a hazard to life, limb or property as specified by the TREC Standards of Practice. General deficiencies include inoperability, material distress, water penetration, damage, deterioration, missing components, and unsuitable installation. Comments may be provided by the inspector whether or not an item is deemed deficient. The inspector is not required to prioritize or emphasize the importance of one deficiency over another.

Some items reported may be considered life-safety upgrades to the property. For more information, refer to Texas Real Estate Consumer Notice Concerning Recognized Hazards or Deficiencies below.

THIS PROPERTY INSPECTION IS NOT A TECHNICALLY EXHAUSTIVE INSPECTION OF THE STRUCTURE, SYSTEMS OR COMPONENTS. The inspection may not reveal all deficiencies. A real estate inspection helps to reduce some of the risk involved in purchasing a home, but it cannot eliminate these risks, nor can the inspection anticipate future events or changes in performance due to changes in use or occupancy. It is recommended that you obtain as much information as is available about this property, including any seller’s disclosures, previous inspection reports, engineering reports, building/remodeling permits, and reports performed for or by relocation companies, municipal inspection departments, lenders, insurers, and appraisers. You should also attempt to determine whether repairs, renovation, remodeling, additions, or other such activities have taken place at this property. It is not the inspector’s responsibility to confirm that information obtained from these sources is complete or accurate or that this inspection is consistent with the opinions expressed in previous or future reports.

ITEMS IDENTIFIED IN THE REPORT DO NOT OBBLIGATE ANY PARTY TO MAKE REPAIRS OR TAKE OTHER ACTIONS, NOR IS THE PURCHASER REQUIRED TO REQUEST THAT THE SELLER TAKE ANY ACTION. When a deficiency is reported, it is the client’s responsibility to obtain further evaluations and/or cost estimates from qualified service professionals. Any such follow-up should take place prior to the expiration of any time limitations such as option periods.

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P.O. Box 12188, Austin, TX 78711-2188  
(512) 936-3000  
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Evaluations by qualified tradesmen may lead to the discovery of additional deficiencies which may involve additional repair costs. Failure to address deficiencies or comments noted in this report may lead to further damage of the structure or systems and add to the original repair costs. The inspector is not required to provide follow-up services to verify that proper repairs have been made.

Property conditions change with time and use. For example, mechanical devices can fail at any time, plumbing gaskets and seals may crack if the appliance or plumbing fixture is not used often, roof leaks can occur at any time regardless of the apparent condition of the roof, and the performance of the structure and the systems may change due to changes in use or occupancy, effects of weather, etc. These changes or repairs made to the structure after the inspection may render information contained herein obsolete or invalid. This report is provided for the specific benefit of the client named above and is based on observations at the time of the inspection. If you did not hire the inspector yourself, reliance on this report may provide incomplete or outdated information. Repairs, professional opinions or additional inspection reports may affect the meaning of the information in this report. It is recommended that you hire a licensed inspector to perform an inspection to meet your specific needs and to provide you with current information concerning this property.

TEXAS REAL ESTATE CONSUMER NOTICE CONCERNING HAZARDS OR DEFICIENCIES

Each year, Texans sustain property damage and are injured by accidents in the home. While some accidents may not be avoidable, many other accidents, injuries, and deaths may be avoided through the identification and repair of certain hazardous conditions. Examples of such hazards include:

- malfunctioning, improperly installed, or missing ground fault circuit protection (GFCI) devices for electrical receptacles in garages, bathrooms, kitchens, and exterior areas;
- malfunctioning arc fault protection (AFCI) devices;
- ordinary glass in locations where modern construction techniques call for safety glass;
- malfunctioning or lack of fire safety features such as smoke alarms, fire-rated doors in certain locations, and functional emergency escape and rescue openings in bedrooms;
- malfunctioning carbon monoxide alarms;
- excessive spacing between balusters on stairways and porches;
- improperly installed appliances;
- improperly installed or defective safety devices; and
- lack of electrical bonding and grounding.

To ensure that consumers are informed of hazards such as these, the Texas Real Estate Commission (TREC) has adopted Standards of Practice requiring licensed inspectors to report these conditions as “Deficient” when performing an inspection or a buyer or seller, if they can be reasonably determined.

These conditions may not have violated building codes or common practices at the time of the construction of the home, or they may have been “grandfathered” because they were present prior to the adoption of codes prohibiting such conditions. While the TREC Standards of Practice do not require inspectors to perform a code compliance inspection, TREC considers the potential for injury or property loss from the hazards addressed in the Standards of Practice to be significant enough to warrant this notice.

Contract forms developed by TREC for use by its real estate licensees also inform the buyer of the right to have the home inspected and can provide an option clause permitting the buyer to terminate the contract within a specified time. Neither the Standards of Practice nor the TREC contract forms require a seller to remedy conditions revealed by an inspection. The decision to correct a hazard or any deficiency identified in an inspection report is left to the parties to the contract for the sale or purchase of the home.

INFORMATION INCLUDED UNDER "ADDITIONAL INFORMATION PROVIDED BY INSPECTOR", OR PROVIDED AS AN ATTACHMENT WITH THE STANDARD FORM, IS NOT REQUIRED BY THE COMMISSION AND MAY CONTAIN CONTRACTUAL TERMS BETWEEN THE INSPECTOR AND YOU, AS THE CLIENT. THE COMMISSION DOES NOT REGULATE CONTRACTUAL TERMS BETWEEN PARTIES. IF YOU DO NOT UNDERSTAND THE EFFECT OF ANY CONTRACTUAL TERM CONTAINED IN THIS SECTION OR ANY ATTACHMENTS, CONSULT AN ATTORNEY.

ADDITIONAL INFORMATION PROVIDED BY INSPECTOR

Promulgated by the Texas Real Estate Commission (TREC) P.O. Box 12188, Austin, TX 78711-2188 (512) 936-3000 (http://www.trec.texas.gov).
This report has been prepared for the exclusive use of the client named on the first page. This inspection report is the sole property of HomeCert, LLC. HomeCert, LLC grants the client permission to use this report, including permission to forward the report to others, for the purpose of conducting their real estate transaction, obtaining estimates, etc. This report will be distributed to other persons, only at the request of the client. This inspection is not transferable to any other party and HomeCert, LLC assumes no liability for any secondary use. HomeCert, LLC retains all rights to the content of this report.
Dear Client Confidential,

The following report contains the details of the inspection that we performed on the above property on your behalf. We have strived to be detailed in our inspection and document our findings in a manner which is readily understandable to you. The report will identify many defects, both large and small. We advise focusing on those items which have the greatest significance to you. We have provided some advice for how to approach prioritizing findings in the article "What Really Matters in Your Houston Home Inspection", which is available on our website. We have also attempted to emphasize those items which we believe may be of the greatest importance to you. However, because every homebuyer’s situation and needs are unique to them, we strongly advise that you read the report in its entirety to determine which items are most important to you. You may always contact us to discuss the potential implications of any given defect.

Your inspector conducts a visual, non-destructive inspection of the property. This report reflects the inspector’s observations and opinion of the accessible features of the property at the time of inspection. Not all conditions may be apparent at the time of the inspection due to weather conditions, inoperable systems, and inaccessibility. Neither HomeCert, LLC or the Inspector is responsible or liable for the non-discovery of any patent or latent defects or other conditions of the property, or any conditions which may occur or become evident after the time of the inspection. The inspector is not an insurer and makes no warranty against defects in the building improvements, systems or components of the property.

The inspection and report do not include code compliance certification, mold investigations, environmental hazards, Chinese drywall detection, indoor air quality analysis, municipal regulatory compliance, subsurface investigation, or record research related to this property. This inspection excludes all underground piping including but not limited to water, sewer and gas piping. Detached structures, other than the primary garage are not inspected except by special prior arrangement.

Texas law allows only persons who possess a valid “Structural Pest Control Business License” to inspect or make reports with respect to pest infestations including wood destroying insects and other organisms such as fungus (causing wood rot). This report is not a termite inspection and no responsibility is assumed for any damage caused by wood-destroying organisms.

We strongly recommend visually rechecking the property for previously hidden defects or deficiencies immediately prior to closing, after the previous resident’s belongings, builder’s materials, etc. have been removed. We have included a pre-closing checklist to assist you in conducting your final pre-closing walkthrough.

Assessment and prioritization of repair items is subjective. Only you, the client, can determine what observed conditions are acceptable to you.

We appreciate having this opportunity to serve you and hope that you find this report both informative and useful.

Thank you for trusting us with your inspection needs.

Sincerely,

Chuck Evans (TREC #7657)
Owner, HomeCert, LLC
Property Description:
Two story, wood framed, single family home with a post-tensioned, slab on grade foundation, brick ledge, Hardie-Plank siding and attached garage. The structure employed traditional framing methods. The roof is covered with asphalt shingles.

For reference purposes in the report the home is considered to face South

The house was actively under construction at the time of inspection with the framing substantially completed. Plumbing, electrical and mechanical systems had been roughed in. The windows and roof covering were installed. Exterior wall veneer, Insulation, interior wall coverings, etc. had not been installed.

Inspection Conditions:
Weather Conditions:  ✔ Fair  ☐ Cloudy  ☐ Rain  Temperature ~83-92° F
Present at inspection:  ✔ Client  ☐ Buyer Agent  ☐ Seller/Builder

Builder: Plantation

Note: Where possible and appropriate, items of note have been marked using fluorescent ORANGE marking paint

Note: Photographs accompanying comments in this report should be considered to be examples of the item or condition being described. Not every instance of an item or condition are necessarily represented with individual photographs.
For purposes of this report, all directions (left, right, rear, etc.) are taken from the viewpoint of an observer standing in front of the building or object and facing it. Where appropriate for clarity, directions will be described by cardinal direction (e.g., north, east, southeast, etc.).

Key to Comment Symbols

- 🗿 Informational. Requires no action.
- 🖍 Observation. May indicate a defect which should be monitored or repaired.
- 🛠 Defect. Often indicates an item that typically warrants repair. Note: we recommend using properly licensed and qualified tradespersons for repairs.
- 🛑 Safety related item. Used to indicate what the inspector believes to be a significant safety related issue. Note: most items in an inspection report are in some way safety related. The absence of this symbol does NOT indicate that the item has no safety implications or that it is safe to ignore. Final assessment is up to the client.
- 🚫 Item that should be addressed at some time in the future or as a part of a regular maintenance/service schedule.

INSPECTION FINDINGS

- 🚫 Foundations

  Observed Conditions:

  🛠 Ensure that brick ledge flashing fully covers the brick ledge to prevent veneer from bonding to foundation and reduce potential for corner pops due to thermal expansion.
Grading and Drainage

Observed Conditions:

✘ Soil grade and drainage patterns around some areas of house do not appear to properly direct water away from foundation to aid in controlling runoff water. (Ref: IRC Section R401.3 Drainage). Surface drainage shall be diverted to a storm sewer conveyance or other approved point of collection that does not create a hazard. Lots shall be graded to drain surface water away from foundation walls. The grade shall fall a minimum of 6 inches (152 mm) within the first 10 feet (3048 mm).

Exception: Where lot lines, walls, slopes or other physical barriers prohibit 6 inches (152 mm) of fall within 10 feet (3048 mm), drains or swales shall be constructed to ensure drainage away from the structure. Impervious surfaces within 10 feet (3048 mm) of the building foundation shall be sloped a minimum of 2 percent away from the building.

Roof Coverings

Observed Conditions:

✘ Observed damaged areas of roof that need attention, including but not limited to: torn or damaged shingles; nail holes from removed toe boards, etc.
▲ Observed one or more areas of nail pops through shingles or fishmouthing due to fasteners not secured down fully or backing out of roof decking.

▲ Drip edge flashing is deformed at northwest corner, preventing shingles from laying flat.

▲ Observed white caulk applied to roof surface, does not appear to be roofing caulk. Caulking used on the roof surface must contain UV inhibitors for durability.
Walls, Framing & Windows

**Observed Conditions:**

⚠️ Missing sill plate tie downs or anchor bolts at several sole plate splices. Hold downs are required within 12 inches of each sill plate section end and a minimum of two hold downs required for each segment. Cut nails and scab lumber are not listed as appropriate substitutes for bolts or engineered anchors. (Ref: IRC Section R403.1.6 Foundation Anchorage) Wood sole plates at all exterior walls on monolithic slabs, wood sole plates of braced wall panels at building interiors on monolithic slabs and all wood sill plates shall be anchored to the foundation with anchor bolts spaced a maximum of 6 feet (1829 mm) on center. Bolts shall be at least ½ inch (12.7 mm) in diameter and shall extend a minimum of 7 inches (178 mm) into concrete or grouted cells of concrete masonry units. A nut and washer shall be tightened on each anchor bolt. There shall be a minimum of two bolts per plate section with one bolt located not more than 12 inches (305mm) or less than seven bolt diameters from each end of the plate section.

⚠️ Observed sill strap missing required fasteners
- Joist hangers missing (3) near entry.

- Observed engineered beam and/or joist hangers not adequately nailed at attic access. Not all required fastener points have nails.

**Nail Hole Shapes**

- Round Holes: All holes must be filled except for the THAI adjustable height hanger. See current Connectors for Wood Construction catalog for THAI nail quantities.
- Triangle Holes: Provided on some products in addition to round holes. Round and triangle holes must be filled to achieve the published maximum load value.
- Diamond Holes: Optional holes to temporarily secure connectors to the member during installation.
- O Round Holes: Used to provide easier nailing access in tight locations. All holes must be filled except for the LSSU hanger when skewed. See current Connectors for Wood Construction catalog for LSSU nail quantities.
dehyde / improper type of nail protection plates installed at one or more locations. In concealed locations where piping, other than cast-iron or galvanized steel or vents are installed through holes or notches in studs, joists, rafters or similar members less than 1½ inches OR and electrical cable or raceway is installed less than 1¼ inches from the nearest edge of the member (inside or outside) shall be protected by shield plates. Shield plates for piping must extend a minimum of 2 inches above sole plates and below top plates, while shield plates for vents must extend a minimum of 4 inches past the plate.

(Ref: IRC Section M1308.2; G2426.7; P2603.2.1 Protection against physical damage) OR
(Ref: NEC Article: 300.4 Protection Against Physical Damage (A) Cables and Raceways Through Wood Members (1) Bored Holes AND (2) Notches in Wood.)
Over-bored, over-notched studs need stud shoes installed for reinforcement (2nd floor bathroom). (Ref: IRC Section R602.6)

Drilling and notching—studs. Drilling and notching of studs shall be in accordance with the following:

1. Notching. Any stud in an exterior wall or bearing partition may be cut or notched to a depth not exceeding 25 percent of its width. Studs in nonbearing partitions may be notched to a depth not to exceed 40 percent of a single stud width.

2. Drilling. Any stud may be bored or drilled, provided that the diameter of the resulting hole is no more than 60 percent of the stud width, the edge of the hole is no more than 5/8 inch (16 mm) to the edge of the stud, and the hole is not located in the same section as a cut or notch. Studs located in exterior walls or bearing partitions drilled over 40 percent and up to 60 percent shall also be doubled with no more than two successive doubled studs bored.

Exception: Use of approved stud shoes is permitted when they are installed in accordance with the manufacturer’s recommendations.
Steel plates should be installed where existing top plates are not tied in at corners to prevent separation (breakfast room)
This house construction incorporates the use of engineered I-joist style joists and/or other structural members. This is a specially engineered product designed to be installed in compliance with very specific standards from the manufacturer to ensure that they perform as designed. The installation requirements for I-Joists differ greatly from those used for dimensional lumber. Product design and installation requirements are well documented by the manufacturer (e.g., http://www.woodbywy.com/trus-joist/tji-joists/).

We noted inconsistencies with the installation / application of engineered I-Joist products, which are listed below and enumerated in the following paragraphs. We recommend careful review of all joist installations for compliance with the manufacturer's specification, including hangers, squash blocks, bearing, stabilization, cantilevers etc. http://www.woodbywy.com/document/tj-9001.

Exhaustive evaluation of every installed member exceeds the scope of a home inspection. We also do not verify loading, spans, etc. Consult with a qualified engineer regarding any deviation from the published standard.

Observed installation deficiencies including but not limited to:

- Lateral bracing.
- Fastening / Hanger Installation
- Holes/ Penetrations
- Damage to flanges
- Cantilevers
- Squash blocks / rim boards / blocking
- Improper bevel cuts
- Nailing, fasteners
- Bearing
Observed improper bevel cuts at TJI ceiling joists (west wall above garage). The upper flange has been cut inside of the inner wall surface (approximately six inches inside wall). The installation does not conform to the manufacturer's standard. (Ref: ILevel Structural Framer's Pocket Guide, which states "Do not bevel cut joist beyond inside face of wall."

Repair of engineered joists must be designed and approved by an engineer or the manufacturer. We advise obtaining documentation of the repair method and post repair inspection by a qualified, licensed engineer, bearing the engineer's seal and signature.

Exterior doors lack required shimming / pressure blocking at the jamb (front and rear). All hinges should be blocked.
Damaged, defective framing members, blocking, etc. should be repaired or replaced, including but not limited to: bowed studs and posts (post near attic access needs a stiffener), missing studs, Studs cut short (below stairs), etc. (not all marked).
Damaged, missing or inadequate fireblocking at one or more locations, including but not limited to: fireplace / chimney and stairs. (Ref: IRC Section R302.11 Fireblocking). In combustible construction, fireblocking shall be provided to cut off all concealed draft openings (both vertical and horizontal) and to form an effective fire barrier between stories, and between a top story and the roof space....
**Excessive notching and/or boring of rafter at northeast corner of master bedroom.** (Ref: IRC Section R502.8 Drilling and notching). *Structural floor members shall not be cut, bored or notched in excess of the limitations specified in this section. See Figure R502.8.*

R502.8.1 Sawn lumber. Notches in solid lumber joists, rafters and beams shall not exceed one-sixth of the depth of the member, shall not be longer than one-third of the depth of the member and shall not be located in the middle one-third of the span. Notches at the ends of the member shall not exceed one-fourth the depth of the member. The tension side of members 4 inches (102 mm) or greater in nominal thickness shall not be notched except at the ends of the members. The diameter of holes bored or cut into members shall not exceed one-third the depth of the member. Holes shall not be closer than 2 inches (51 mm) to the top or bottom of the member, or to any other hole located in the member. Where the member is also notched, the hole shall not be closer than 2 inches (51 mm) to the notch.
Noted improper, inadequate or missing air barrier (e.g., draft stopping, membrane, foam sealant) at one or more locations, including but not limited to: multiple locations. Air barriers are needed to prevent unconditioned air infiltration through the building thermal envelope, does not comply with current building standards. One or more of the areas below were observed to be deficient. (Ref: IRC Section NII02.4.1 Building thermal envelope). The building thermal envelope shall be durably sealed to limit infiltration. The sealing methods between dissimilar materials shall allow for differential expansion and contraction. The following shall be caulked, gasketed, weatherstripped or otherwise sealed with an air barrier material, suitable film or solid material.

1. All joints, seams and penetrations.
2. Site-built windows, doors and skylights.
3. Openings between window and door assemblies and their respective jambs and framing.
5. Dropped ceilings or chases adjacent to the thermal envelope.
7. Walls and ceilings separating the garage from conditioned spaces.
8. Behind tubs and showers on exterior walls.
9. Common walls between dwelling units.
10. Attic access openings.
11. Rim joists junction.
12. Other sources of infiltration.
❖ Damaged building paper / air barrier should be repaired at top of walls.

❖ Observed some sheathing material improperly installed (e.g., small pieces, gaps, vertical edges not supported over framing, etc.). Pactiv Greenguard sheathing not installed in accordance with manufacturer’s installation instructions which state that the material is to be installed vertically with seams located on studs. (Ref: GreenGuard® PLYGOOD® Sheathing Installation Guidelines) “Install GreenGuard® PLYGOOD Sheathing vertically with seams located on studs.”
All penetrations, tears, abrasions in sheathing / house wrap / WRB (weather resistant barrier) should be sealed with approved materials. All penetrations should be flashed with approved adhesive flashing tape (note that seam tape is not flashing). Flashings should be layered in shiplap fashion to direct moisture outward as it moves down the surface.

Improper material used to flash penetrations in exterior sheathing and / weather resistant barrier. Sheathing seam tape, housewrap tape, duct tape, duct mastic, spray foam should not be used to seal wall penetrations in lieu of flashing. These materials are not a substitute for flashing. Recommend use of adhesive backed flashing in these areas.

Excessive gaps in foam sheathing at corners.
Observed improper layering of some flashings. Flashing should always be layered in a ship lap fashion with the upper piece lapping outside of the lower piece. Improper lapping creates pockets which can trap water and direct it into the structure.
Windows are improperly installed. The window installation does not comply with the manufacturer's (Krestmark) installation instructions (download a copy here or from the manufacturer's website); AAMA 2400 “Standard Practice for Installation of Windows with Mounting Flanges in Wood Stud Construction”; ASTM E2112 “Standard Practice for Installation of Exterior Windows, Doors and Skylights”

Observed numerous installation deficiencies including but not limited to:

- Window mounting flanges not embedded in continuous bead of caulking.
- Missing or improper rough sill flashing
- Window flanges not supported and secured and / or window opening is oversized
- Window flanges are damaged
- Inadequate nailing at corners
- Inadequate / improper nailing of flanges
- Window not plumb, level or centered in opening
- Flashing missing or improper materials used
- Flashing installed improperly and / or improper integration with drainage plane (e.g., housewrap)
- Flashing is not continuous, gaps, etc.

Additional details included in subsequent comments

Where alternative methods from the above are claimed, then those alternative methods should be equal to or be greater than the minimum industry standard noted above that will serve the same function of air and water tight sealing and the alternative method(s) agreed to by the AAMA or ASTM standard committee. [ref: IRC RI02.4] The inspector knows of no documented alternative methods published by AAMA or ASTM that differs from the above minimum standards.

There are a number of videos available depicting proper flanged window installation in new construction. A couple of excellent examples may be seen here https://www.youtube.com/watch?v=v4O7y4CLRzs and here https://www.youtube.com/watch?v=ywJRcwOFbM
Window mounting flanges are not embedded in a continuous bead of caulk. The window installation does not comply with the manufacturer's installation instructions; AAMA 2400 “Standard Practice for Installation of Windows with Mounting Flanges in Wood Stud Construction”; ASTM E2112 “Standard Practice for Installation of Exterior Windows, Doors and Skylights”. **Note:** Foam insulation applied from the interior is not an approved substitute for caulk embedment of the nailing flange.
One or more arched windows lack proper support, fastening, caulk embedment and proper flashing at the arches. The window installation does not comply with the manufacturer's installation instructions; AAMA 2400 “Standard Practice for Installation of Windows with Mounting Flanges in Wood Stud Construction”; ASTM E2112 “Standard Practice for Installation of Exterior Windows, Doors and Skylights”.

One or more windows are improperly installed in the openings (attic). The opening is oversized and / or the window is not centered or plumb. One or more mounting flanges have inadequate support. The window lacks fasteners at the exposed flange. The window installation does not comply with the manufacturer's installation instructions; AAMA 2400 “Standard Practice for Installation of Windows with Mounting Flanges in Wood Stud Construction”; ASTM E2112 “Standard Practice for Installation of Exterior Windows, Doors and Skylights”.

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Attic service passageway and/or platform to mechanical equipment does not meet building standards (to water heaters). IRC §M1305.1.3 specifies that attics containing appliances shall have an opening not less than 22in x 30in, a clear unobstructed passageway with solid flooring at least 24in wide and not more than 20ft long; a work area not less than 30in wide by 30in deep in front of all sides of appliances where access is required. IRC §M1305.1.3.1 stipulates that a light fixture with a switch at the required passageway opening and a receptacle outlet will be provided near the appliance.

Access to appliances in attics

Client note: some home warranty companies have denied warranty claims due to non-compliance with service access requirements.

☒ ☐ ☐ ☐ Stairways

Observed Conditions:

☒ No significant deficiencies or anomalies noted at the time of inspection.

☒ ☐ ☐ ☐ Fireplaces and Chimneys

Observed Conditions:

☒ No significant deficiencies or anomalies noted at the time of inspection.
Electrical Rough-In

Observed Conditions:

❌ Ground rod assembly is driven too shallow. 8 foot ground rod should be driven full depth. (Ref: NEC Article 250.53 Grounding Electrode System Installation (G) Rod and Pipe Electrodes). The electrode shall be installed such that at least 2.44 m (8 ft) of length is in contact with the soil. It shall be driven to a depth of not less than 2.44 m (8 ft) except that, where rock bottom is encountered, the electrode shall be driven at an oblique angle not to exceed 45 degrees from the vertical or, where rock bottom is encountered at an angle up to 45 degrees, the electrode shall be permitted to be buried in a trench that is at least 750 mm (30 in.) deep. The upper end of the electrode shall be flush with or below ground level unless the aboveground end and the grounding electrode conductor attachment are protected against physical damage as specified in 250.10.

❌ Bonding clamp attachment to steel gas pipe is improper. The clamp should be in direct contact with steel pipe, not over Polyvinyl chloride (PVC) pipe wrap.

HVAC, Duct & Vent Rough-In

Observed Conditions:

❌ Gaps / openings in duct chases should be sealed.
“B” vent termination / cap is missing from one of the furnaces.

Plumbing Rough-In

**Observed Conditions:**

- **X** Chlorinated polyvinyl chloride (CPVC) water piping is inadequately secured / supported at the water heaters

- **X** Water pan drain is obstructed by or has inadequate clearance to the heater jacket. Water cannot drain properly from the pan.
Improper tape used for pipe wrap. "Duck" tape is not listed for use as a pipe wrap and is not durable when exposed to sunlight. Recommend the use of a proper 10 mil, Polyvinyl chloride (PVC), UPC listed tape which is designed for pipe wrap to secure insulation to exterior water lines and hose bibs.

HomeCert file photo

"Duck" tape after only 1 year of exposure

UPC listed tape after 5 years of exposure
Resources and Guides:

We have compiled the following list of online resources and guides for your reference and convenience. We hope that you find them useful.

**AAMA 2400-10** - American Architectural Manufacturer’s Association Standard Practice for Installation of Windows and Doors with a Mounting Flange in Stud Frame Construction.

**ASTM E2112** - Standard Practice for Installation of Exterior Windows, Doors and Skylights. There is a fee payable to ASTM to obtain this standard in printed or electronic form.

**PACTIV Building Products** - Access to product literature and installation standards for many of their building materials, which are commonly used in new construction in the Houston area. Makers of the GreenGuard family or products: Sheathings, insulation board, house wraps, flashings, etc.

**Thermo-Ply** - Product information and installation standards. Thermo-Ply is a popular sheathing product for new home construction in the Houston market area

**TYVEK Installation** - Installation standards for DuPont’s popular house-wrap

**Plygem Window Installation** - Plygem Window installation instructions (Window sticker)


**The Safe Home Book** - This publication is a compilation of well-researched articles especially for homeowners. They include valuable information and tips for helping keep families safe and their homes in top condition.

**International Residential Code (IRC)** - Public links to the ICC International Residential Code model building codes.


**APA Advanced Framing Construction Guide** - This guide details several advanced framing techniques, including 2x6 wood framing spaced 24 inches on center, insulated three-stud corners, two-stud corners with ladder blocking, wall intersection options, single headers, single top plates, and eliminating unnecessary materials.

**ARMA Nail Application of Asphalt Shingles** - The Asphalt Roofing Manufacturer’s Association recommends that properly driven roofing nails be utilized as the fastening system for asphalt shingles. Nails are required in the International Building Code. Proper nailing is essential to good performance.

**What Homeowners Should Know About attic Ventilation** - Consumer oriented publication from Air Vent Inc. Addressing several key concepts concerning attic ventilation.

**CSST Safety** - Website published by the National Association of State Fire Marshals dedicated to the potential fire safety issues associated with Corrugated Stainless Steel Tubing for fuel gas and mitigation.

City of Houston Residential Homeowners Guide - A homeowner’s guide to the residential permitting process in the City of Houston.