



building inspection service, inc.

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Condition Inspection Report



Property Inspected

129 Main Street
Cranford, New Jersey

Requested By:	John Doe 123 Main Street Roselle Park, New Jersey 07024
Style of Building:	Single Family
Age of Building:	Approximately 65+ Years
Date/Time of Inspection:	February 15, 2016 / 10:00 AM
Duration of Inspection:	1 Hour & 30 Minutes
Weather:	Cloudy - 35°F
Client Present:	Yes
Inspector:	Anthony J. Chimko

QUALIFICATIONS

State of New Jersey Home Inspector License # 24GI00029200
State of New Jersey Licensed Building Inspector RCS #007587
State of New Jersey Licensed Commercial 7A, 7B Exterminator #61627
State of New Jersey Radon Measurement Technician License #MET10514
American Society of Home Inspectors (ASHI) Member #098946

THIS REPORT RELATES TO CONDITIONS EXISTING AT THE TIME OF THE INSPECTION

A specific condition inspection of the above mentioned subject property was conducted on February 15, 2016. It reflects our professional opinion of the Roof, Gutters, Leaders, Property Drainage, Exterior Foundation and Basement Foundation and Framing.

This report as requested is a special Modified New Jersey Administrative Code N.J.A.C & 13:40-15:15 Standards report. Copies of these standards are available on our website at www.dicoinspect.com. The inspection has been limited in time and scope as requested by our client. The inspection areas/systems were selected by our client. No other related areas / systems were inspected and, therefore, should not be considered as part of this inspection report.

1. ROOF

All roof areas are visually inspected from either the ground, the ground with binoculars, from a ladder at the roof eaves or from the roof when walked on, providing the inspector or the roofing material is not put at risk. Steep roofs, roofs that are heat cupped, heat blistered or that have some other deteriorated condition, as well as roof covering materials that are slate, cement asbestos or tile are not walked on. Roofs cannot be walked on when weather conditions are not permitting such as rain, snow or icy conditions. Snow and icy conditions may also limit and/or prevent the roof covering from being inspected. Roofs that are beyond the view of the inspector and therefore cannot be inspected are listed as such and should be inspected by a roofing contractor with the proper equipment prior to contractual limitations. These factors, which limit an inspection, are excluded from an inspection by the NJAC 13:40-15.16 Standards of Practice. Solar heating equipment, lightening arresters, satellite dishes and other antennae are not inspected and should not be considered as part of this report.

The roof was of gable style of construction. The inspection of the roof was limited because it was partially covered with snow. See photo #'s 1 – 5. Only the roof covering material that was visible was inspected. If an inspection of the snow covered area is desired, contacting our office, or a reputable roofing contractor, to schedule an inspection to evaluate its condition when the snow has melted is recommended. A re-inspection fee may apply. Inaccessible areas are excluded from a Building Inspection by the New Jersey Administrative code NJAC 13:40-15.16 Standards of Practice.

As viewed from the ground with binoculars and a ladder at the lower roof eaves the composition asphalt shingle roof covering material was in overall serviceable condition for its age, however, defects were observed that will require correction.

The roof covering material was approximately 20 years old with approximately 3 to 5 years of useful life remaining provided all of the defects outlined in each of the Roof sections of this report are immediately corrected and the roofing material is properly maintained. The estimated useful life expectancy for this type of roofing material is 25 years provided it is properly maintained.

Defects

See the Ventilation section of the Roof section of this report for defects with the ventilation of the roof, which will affect its life expectancy, help to prevent ice dam leakage and mold from occurring. See the articles regarding attic ventilation on our website at www.dicoinspection.com. Click on the Information tab and read Article #'s 6, 7, 9, 12 & 14.

See the Flashing section on the Roof section of this report for defects with the roof's flashing which will affect its life expectancy and help to prevent leakage from occurring.

Advisory Recommendations and Observations

Repairs to all of the defects listed under the Roof/Defects sections will be required.

The roofing material was nearing the end of its useful service life expectancy. Budgeting for its replacement in the near future, approximately three to five years, will be required.

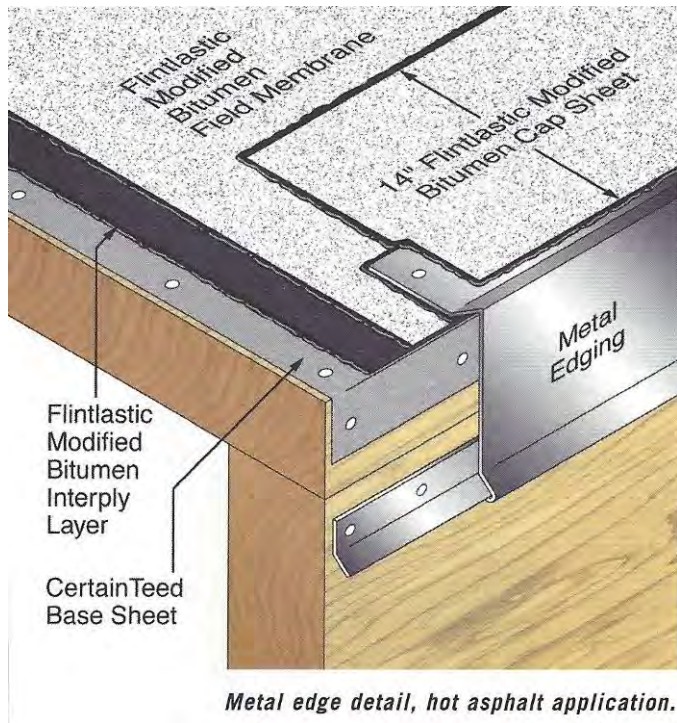
Tree branches were either touching or too close to the roof material. Trimming of these branches will be required to prevent damage from storms, ice and snow.

FLASHINGS

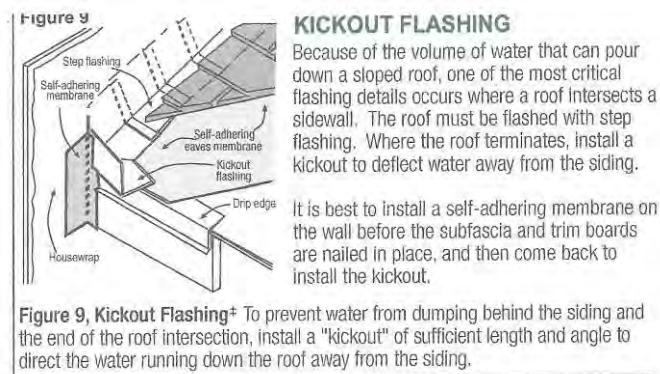
The flashing around the sewer vent pipes was serviceable but will require caulking with urethane or silicone sealant to prevent leaks from occurring.

Defects

Drip edge flashing was not installed. See photo # 5. The installation of drip edge flashing is recommended to help prevent water entry into the building and rotting of the edge of the roof sheathing from occurring. See illustration below.



There were no kickout / diverters installed at the bottom of the roof / wall intersection areas which are commonly referred to as side or 'cheek or side walls'. See photo # 6. Accumulating roof water runoff should be directed out and away from the building and into the gutters. Roof-to-wall flashing areas should have a kickout / diverter installed at the bottom termination of the side or cheek wall to insure that water is directed away from siding and other wall surfaces. The installation of kickout / diverters will be required to prevent leaks and water damage from occurring. Obtaining cost estimates for their installation is recommended prior to contractual limitations. See illustration below.

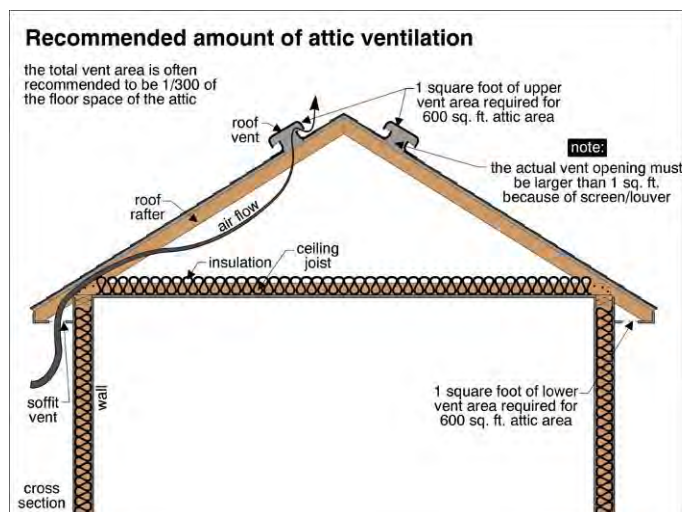


The flashing around the chimney was heavily patched with tar / caulk. See photo #5. This is a very common practice but is not the best way to flash a chimney. A wood framed roof is dynamic and moves with wind and snow loads while the chimney is rigid and does not move. A flashing, which is flexible rather than one that is covered with tar / caulk, creates a better seal. Maintenance of the tar / caulk seal or replacement of this flashing with metal step and counter flashing will be required to prevent leaks from occurring. The installation of metal step and counter flashing that has a

waterproof membrane installed under it is recommended as a more permanent repair. This will help to prevent leaks from occurring.

VENTILATION

Inadequate roof/attic ventilation was noted. The installation of soffit vents and ridge vents will be required. The improved ventilation will release moisture and lower the temperature in the attic which will prolong the life of the roofing material, help to prevent ice damming from occurring, help to prevent the roof sheathing and rafters from molding or rotting, and help to prevent thermal stress cracking of fiberglass roofing material from occurring. See the articles regarding attic ventilation on our website at www.dicoinspection.com. Click on the Information tab and read Article #'s 6, 7, 9, 12 & 14. See illustration below.



Advisory Recommendations and Observations

See the Gutters & Leaders section of this report for additional information on venting this style of roof.

It is recommended that a thermostatically controlled vent fan be installed in the attic to improve the ventilation in the attic area. The improved ventilation will release moisture and lower the temperature in the attic which will prolong the life of the roofing material, help to prevent ice damming from occurring, help to prevent the roof sheathing and rafters from molding or rotting, help to reduce the temperature of the ceilings in the rooms below this area by helping to conserve energy, and help to prevent thermal stress cracking of fiberglass roofing material from occurring. See the articles regarding attic ventilation on our website at www.dicoinspection.com. Click on the Information tab and read Articles #'s 6, 7, 9, 12 & 14.

2. GUTTERS & LEADERS

The purpose of the gutters and leaders/downspouts is to collect water draining from the roof and to direct it away from the foundation of the building. The guttering system helps to prevent: water entry into the interior of the building; water and freeze thaw cycle damage to the foundation; damage to siding materials; damage to shrubbery; and damage to soil around the perimeter of the building. For a gutter and leader system to function properly it must be maintained. Debris from trees can clog gutters both in the Spring and Fall seasons. Buds and pollen sacs must be cleaned in the Spring after the leaves have fully developed on surrounding trees. The gutters must again be cleaned in the fall after most of the leaves have fallen from the trees. Snow and ice tend to build up inside gutters, which can pull them away from a building and cause them to lose their pitch. Flushing the gutters with a garden hose is helpful in removing small debris as well as allowing you to observe how the water is draining. Gutters should not retain any water.

GUTTERS

As viewed from the ground with binoculars and a ladder at the lower roof eaves the aluminum gutters were defective.

Defects

The gutters were clogged on all sides. See photo #'s 9, 10 & 14. Cleaning of the gutters will be required to prevent water entry into the building from occurring.

The gutter on the upper front was hanging and coming loose with reattachment and repairs to the gutter required. See photo # 2.

The gutter spike nails were coming loose and/or have pulled out of the gutters. Re-nailing of the gutter spike nails or using another method of attaching the gutters to the building will be required to prevent further damage to the gutters and building.

The end cap of the gutter extends into the siding material on the rear right side of the building. See photo # 6. Gutter end caps always leak water and therefore should be installed so that when the end caps leak they drip on the outside of the siding material. Repairs will be required to prevent water entry into the building and rotting or mold growth from occurring.

Advisory Recommendations and Observations

The gutters were clogged with debris. Cleaning of the gutters is required to prevent water back up into the building.

This building was designed and constructed without soffits. See photo # 13. Therefore, gutters must be maintained in a clean condition at all times to help prevent water entry into the building. The absence of soffits also means that there is minimal air entry into the attic area. Keeping the attic cool helps to prevent the formation of ice dams, prolongs the life of the roofing material, and helps to prevent moisture problems. There are many new methods and materials designed to correct this problem. The installation of soffit vents such as the 'Core Vent System' is therefore strongly advised to improve this outdated design.

LEADERS

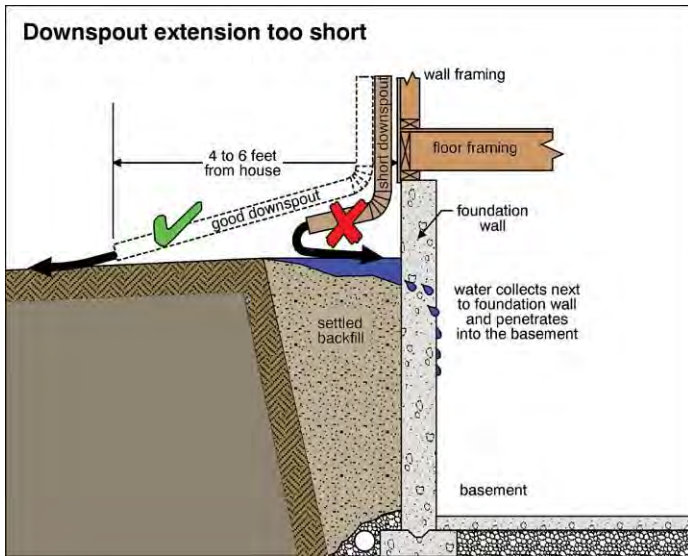
The aluminum leaders were defective.

Defects

The underground drain line was clogged on the rear left. See photo # 11. Cleaning or replacement of this underground drain line, or the use of an alternative draining method will be required to help prevent water entry into the interior of the building from occurring. Clogged underground roof / gutter drain pipes cannot be inspected for breaks or to determine how extensive the clog may be. Sometimes the clogs cannot be cleaned and the underground drains must be replaced. It is therefore recommended that a sewer cleaning company be contacted to determine if they can be cleared or that a video camera inspection of these underground drains lines is conducted prior to contractual limitations. Free flowing underground drain pipes may help to prevent water entry through the foundation. Many plumbers and septic system inspection companies conduct these inspections. Contact our office for a list of these companies.

The leader on the left side was disconnected from the underground drain line with repairs required. See photo # 12.

Some of the roof leaders incorrectly terminated at the foundation of the building. See photo # 7. They should discharge 4 to 6 feet away from the foundation. This will help to prevent water entry and excessive moisture in the foundation walls. The installation of 4 inch diameter PVC pipe extensions will be required. See illustration below.

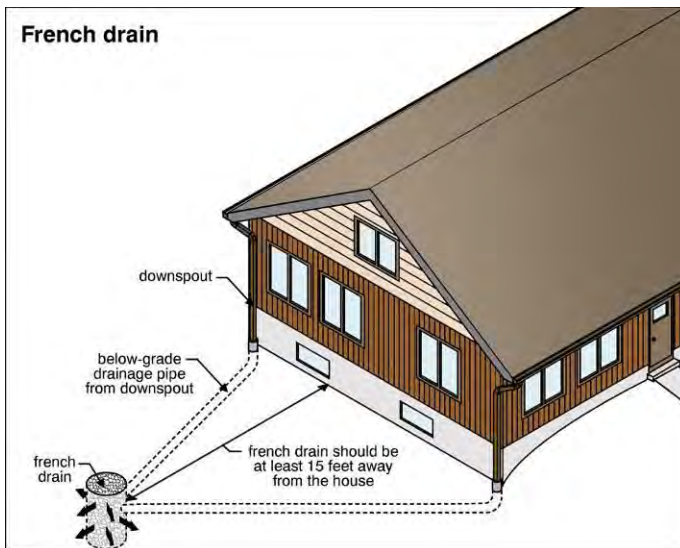


Advisory Recommendations and Observations

It is recommended that the leaders and drain lines be flushed to insure that they are free flowing.

The underground roof / gutter drain pipes cannot be inspected for clogs, breaks, for their performance during normal rains or heavy storms and in many cases where their termination / discharge point is located. It is therefore recommended that a discussion with the seller as to their past performance as well as where they discharge, be conducted. Video camera inspection of these underground drain pipes prior to contractual limitations may also be conducted which, would help to prevent water entry through the foundation. Many plumbers and septic system inspection companies conduct these inspections. Contact our office for a list of these companies.

It is recommended that the underground drain pipes be checked to determine where they discharge. If they terminate into a drywell, it is recommended that the drywell be opened and checked to be sure that it is still functioning. If it has clogged, the drain pipes should be removed from the drywell and allowed to discharge onto the property or be connected into a new drywell. See illustration below.



3. BASEMENT

The basement is a below soil grade area, therefore it is subject to moisture, insect infestations, as well as soil and hydrostatic pressures. Care should be taken to insure that the soil around the exterior perimeter of the building is graded away from the foundation and that surface water and water runoff from the roof is directed to discharge away from the foundation. Hydrostatic pressure (water pressure) from improper grading and/or from ground water can easily

damage a foundation and flood the basement and/or below grade areas. Parts of the foundation may not be visible for inspection due to storage, because the basement may be finished, and/or there may be plant growth around or on the exterior foundation walls. We cannot inspect what we cannot see. Inaccessible areas are excluded from an Inspection by NJAC 13:40-15.16 Standards of Practice. This includes subterranean water conditions which can occur at any time without past history of this event being visible to an inspector. If an inspection of foundation walls or framing systems that have permanent coverings over them is desired, removal of the covering materials would be required. Inspections through the use of a tool called a Bora-scope that uses fiber optics may be conducted. This tool requires that 1/4-inch diameter holes be drilled through the permanent covering materials but does not require their removal. If these in-depth inspections are desired, than contacting our company prior to contractual limitations will be required. Written permission from the owner of the building to drill these inspection holes into the walls of the building would be required. This type of inspection is beyond the scope of a normal building inspection, therefore, additional inspection fees will apply.

The visible sill plates, floor joists, girders and lally columns were in overall serviceable condition.

The visible masonry block foundation was in overall serviceable condition.

The 2 inch by 8 inch floor joists were spaced 16 inches on center.

Approximately 45 percent of the basement walls/ceiling were covered with drywall, therefore, a thorough inspection of the framing system, foundation walls, electrical and plumbing systems was limited. See photo #'s 15, 16, 18 & 19. The following is advised prior to contractual limitations:

If a more thorough inspection of these systems is desired so that their condition can be verified, removal of the walls/ceiling will be required. Inaccessible areas are excluded from a Building Inspection by the New Jersey Administrative code NJAC 13:40-15.16 Standards of Practice. A re-inspection fee will apply.

The basement was partially finished.

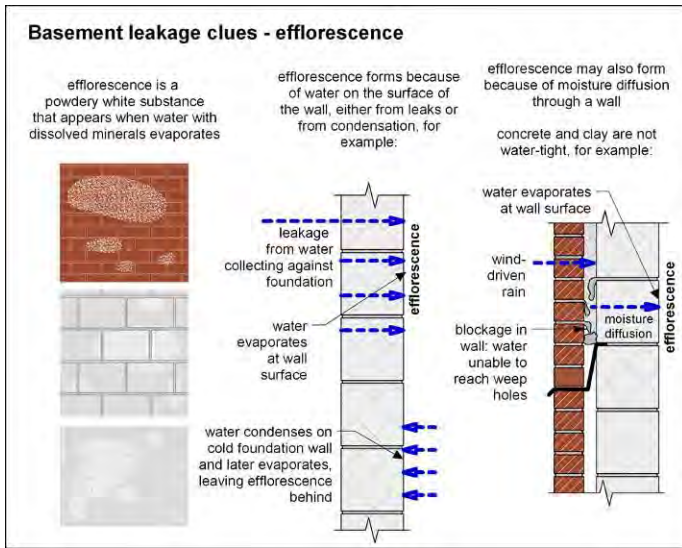
This building is a partial concrete slab style of construction for the rear left first floor unheated room. Because this building is constructed on a concrete slab foundation, the interior wood framing of the building is not visible for inspection. The slab style of construction is conducive to termite infestations because of openings in the slab from cracks, plumbing and wiring and because of its direct contact with soil. Even when a thorough visual inspection has been conducted, an active termite infestation or hidden damage within the wood framing of the building could exist. Termites rarely break the surface of the wood or material that they are feeding on. If finished walls, ceilings, flooring materials, appliances, furniture, cabinets, insulation, etc. are covering termite activity or damage, it cannot be seen using normal visual inspection methods. We therefore cannot guarantee or warrantee either expressed or implied that this building is free from an active termite infestation or that the building is free from any structural damage caused by termite activity. Inaccessible areas are excluded from a Building Inspection by the New Jersey Administrative code NJAC 13:40-15.16 Standards of Practice. It is therefore strongly recommended that prior to purchasing this building the buyers conduct an additional in-depth termite inspection for termite activity as well as damage. These in-depth inspections can include the use of dogs that have been trained to sniff out the methane gas termites produce, ultra-sensitive listening devices that are used to hear termites eating the building, microwave devises used to locate the movement of active termites and/or the use of a Bora-scope which uses fiber optics to look into the walls of a building through quarter inch diameter holes that are drilled into the wall and ceiling cavities of the building. It should be understood that only the Bora-scope or the actual removal of drywall, plaster, paneling or other covering materials can reveal damage that is contained within the wood framing of the building.

Defects

The basement stairs were in poor condition and are a safety trip hazard. See photo # 17. Their repair or replacement will be required for safety reasons.

The presence of efflorescence, a condition relating to water seepage through masonry, was seen on the rear foundation walls. See photo # 21 – 25. As water that is inside the foundation walls evaporates, mineral salts are deposited on them leaving behind these crystalline structures. This is a condition conducive to water damage and mold. Corrections to the water entry will be required in order to correct this condition. Efflorescence is rarely a structural concern, however it is a definite sign that water is entering and moving through the foundation walls. It is also an indication that the exterior drainage is inadequate. This can be an easy fix such as directing gutters and leaders to discharge four to six feet away from the foundation. In can also be related to negatively pitched soil on the exterior of the foundation and/or other exterior foundation conditions. The exterior soil should slope / pitch, one inch per foot, eight to twelve feet away from the foundation. The exterior foundation should be well parged / plastered, without

cracks, and it should be well sealed with an approved damp / water proofing material below the exterior soil grade / level. Most of these conditions cannot be observed because they are below the exterior soil grade. Corrections to these conditions and a further evaluation by a structural engineer or a basement waterproofing company are recommended prior to contractual limitations. See illustration below.



Evidence of recurring water entry into the basement was noted by water / water stains on the front foundation wall and by water stains on the wall framing and wall coverings on the front basement. See photo #'s 21 – 25.

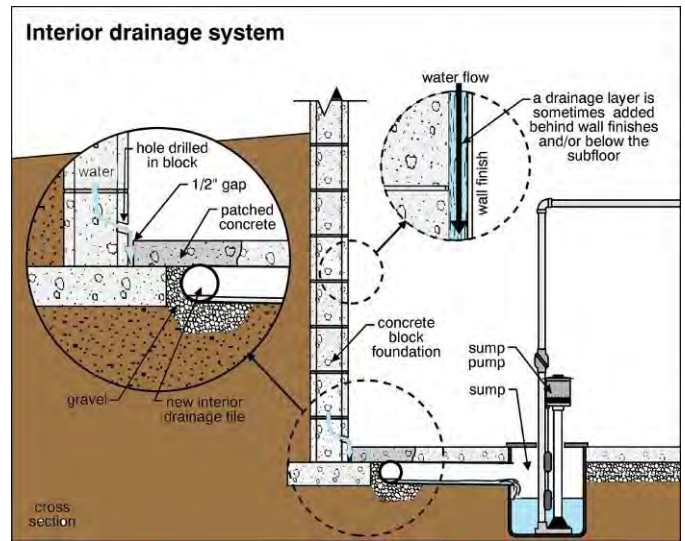
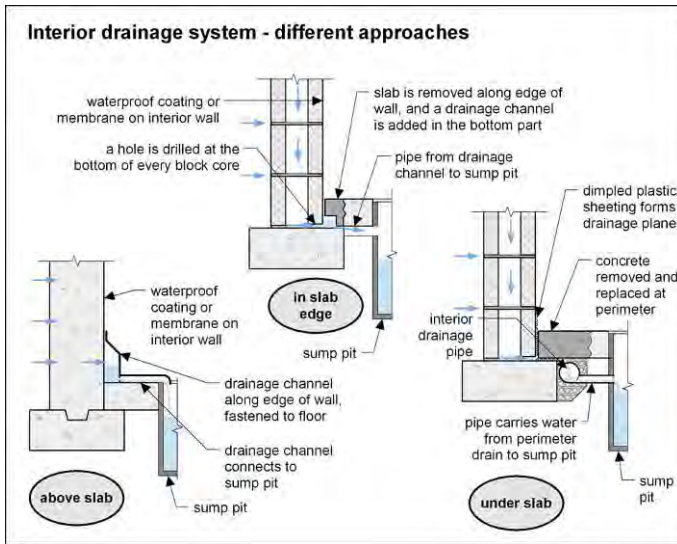
The sump pump pit sleeve was a solid sleeve or pit. See photo # 20. This is not a properly installed sump pump pit since the only way that water can enter the sump pump pit is through the bottom of the pit's sleeve or through several small holes. The installation of an 18-inch by 24-inch A.B.S. plastic perforated sump pump pit sleeve with approximately 12-inches of crushed stone below the sump pump pit sleeve and approximately 12-inches of crushed stone around the exterior perimeter of the sump pump sleeve will be required for drainage of ground water and proper operation of the sump pump to occur. Obtaining cost estimates for any repairs will be required prior to contractual limitations.

Advisory Recommendations and Observations

Water seepage conditions can sometimes be hidden by shrubbery, painting and other cover up methods. Changes in ground water, exterior drainage or extreme weather conditions may generate water in a basement where the inspector could find no visible or limited evidence of moisture. This type of foundation is porous and will permit water entry if it is allowed to pool near the building. For this reason, exterior drainage must be kept under control at all times.

It is recommended that the suggestions given in the Gutters and Leaders, Property Drainage, and Exterior Foundation sections of this report be followed to help prevent water entry into the building from occurring.

If the suggestions given in the Gutters and Leaders and the Property Drainage sections of this report do not eliminate the water seepage problem, the installation of a perimeter drain connected into the sump pump pit and sump pump will be required to prevent water seepage into the basement. See illustrations below.



The operation of the sump pump was checked at the time of the inspection. The sump pump did turn on and discharged any water that was inside the sump pump pit. This is not a guarantee or warranty that the sump pump can remove all of the water entering the basement during a storm or heavy rain. A further inspection of this system by a basement waterproofing company therefore may be desired. It is also recommended that homeowner's insurance be obtained for ground water intrusion should the sump pump fail and the basement flood. Normal homeowner's insurance policies do not cover losses caused by ground water. The installation of a 'battery back-up sump pump system' is also recommended should a power failure, pump motor failure, or discharge pipe failure occur. A 'battery back-up sump pump system' uses a 12-volt deep cycle Marine battery, a 12-volt operated second pump, and a separate discharge pipe that terminates at the exterior of the foundation wall. We have also heard good results from plumbers who have installed the 'Liberty Water Sump Jet Pump' model #SJ10 and SJ12. This is a water actuated pump that is much better than older models of water actuated pumps. Because you usually do not lose city water pressure they should have power during a storm. Note: These are emergency systems which help prevent flooding. Be sure to install a second discharge pipe for the back-up system. Do NOT connect the emergency back-up pumps discharging piping into the 120-volt pump's discharge pipe. If the main discharge pipe fails for any reason or if it gets crushed, clogged, or frozen, both systems will fail. Most battery back-up systems can remove approximately 10,000 gallons of water on a single battery charge.

The use of a dehumidifier during summer months will help to prevent excessive moisture in the basement.

See the Environmental section of this report for visible signs of what appears to be mold that were found in the basement area.

There was little or no insulation installed in the exterior perimeter rim joist/box beam area. This is a high energy loss area. Air sealing this area with a closed cell polyurethane foam insulating material and then the installation of 10.5 inch to 12.5 inch of unfaced fiberglass insulation will help to reduce energy loss and make the building more comfortable as well as being compliant with current energy codes.

4. EXTERIOR FOUNDATION

The foundation of the building is designed to support the load of the building including its contents. The foundation is usually constructed of masonry although other material such as wood can also be used. The foundation transmits the load of the building downward to the footing. The footing must be below the frost line. It transmits and spreads the load of the building to the soil under the footing. Since the foundation is rigid, normal stress settling cracks usually develop. Because most of the foundation is located under the ground, only the portion above the ground on the exterior and only the visible portion inside the basement can be inspected and reported on. Inaccessible areas are excluded from a Building Inspection by the New Jersey Administrative code NJAC 13:40-15.16 Standards of Practice. Soil conditions and the stability of the soil to support the building are beyond the scope of this inspection and can only be performed by a licensed professional engineer. Structural components are probed where deterioration is suspected unless such probing would damage any finished structure. Hydrostatic loading (water pressure) against the foundation walls of a building can have detrimental effects. Attention to the recommendations given in the Property Drainage and Gutters and Leaders sections of this report will help to prevent and/or correct the negative effect of hydrostatic loading.

The masonry block exterior foundation is in overall serviceable condition.

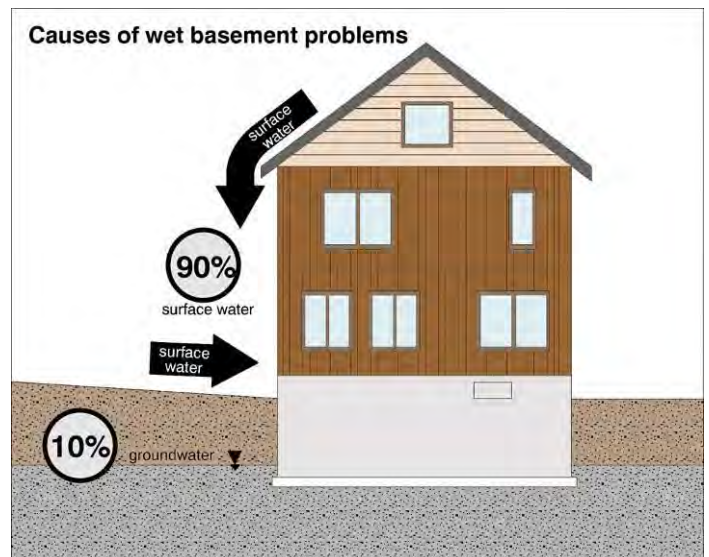
5. PROPERTY DRAINAGE

The lawn and landscaping of this property were not inspected and should therefore not be considered as part of this inspection report. If an inspection of the lawn and landscaping is desired, hiring a trained horticultural specialist or landscaper will be required. Vegetation, grading, drainage and retaining walls with respect to their immediate detrimental effect on the condition of the building are inspected and reported on. Fences, geological and/or soil conditions, sea walls, break-walls, bulkheads and docks, and/or erosion control and earth stabilization are not inspected and should not be considered as part of this report and are excluded from a Building Inspection by the New Jersey Administrative code NJAC 13:40-15.16 Standards of Practice. If an inspection of these items is desired, hiring a professional in their field will be required. The property should slope away from all sides of the building and be allowed to drain naturally off the property. Water leakage through the building foundation is caused in large part by poor property drainage or from the failure of maintaining drainage systems such as gutters, leaders and proper grading of soil around the exterior perimeter of the building. Current building practice is to pitch the soil 1-inch per foot 8-feet to 12-feet away from the building. In other words, the soil should be 8-inches higher at the foundation, completely around the perimeter of the building, then it is 8-feet to 12-feet away from the building. Water is an extremely destructive force. It can find its way through the smallest of cracks in a foundation, therefore, proper grading as well as maintenance of gutters and leaders is very important. If defects in the property drainage are mentioned, they should immediately be corrected to help prevent water entry into the building from occurring. The lawn sprinkler system, if installed, was not inspected and should not be considered as part of the inspection report and is excluded from a Building Inspection by the New Jersey Administrative code NJAC 13:40-15.16 Standards of Practice. If an inspection of the lawn sprinkler system is required, contacting a lawn sprinkler company, gardener, or having the building owner explain the use of the sprinkler system and testing of the sprinkler system is recommended.

The topography of the land pitched from the rear of the property toward the front of the property.

Defects

The soil grading on all sides was incorrectly sloped into the foundation rather than away from the foundation. This condition will cause surface water to drain into the building rather than away from the building. Grading of the soil away from the building will be required to help prevent water from draining against the foundation and from entering the interior of the building. The ground adjacent to the foundation wall must be graded to slope away from the building at a ratio of 1:12, meaning that for every 12-foot out horizontally the ground level is to descend 1-foot. This grading requirement is to be applied for a distance of 8-feet or more, measured perpendicular to the foundation wall. See illustrations below.



Advisory Recommendations and Observations

It is recommended that the suggestions given in the Gutters and Leaders section of this report be followed to help prevent water entry into the building from occurring.

Maintaining the proper grade or slope of soil away from the foundation walls of the building will be required to help prevent water from entering into the interior of the building as well as to help prevent freeze thaw damage to the foundation. See illustration below.



The shrubs should be kept trimmed 18-inches to 24-inches away from the building to allow for adequate air circulation, to prevent damage to the siding material and to help prevent mold growth. The tree branches overhanging the building should be trimmed approximately 6-feet to 8-feet away from the building to prevent animals and insects from gaining access onto the roof or into the attic and to prevent storm damage to the roofing material from occurring.

6. CRAWL SPACE

The crawl space is subject to moisture, insect infestations, water pressures, and soil pressures. Care should be taken to insure that soil is graded away from the foundation and the roof runoff is directed to discharge away from the foundation. Hydrostatic pressure/water pressure from improper grading or from ground water can easily damage a foundation. Parts of the foundation may not be visible for inspection due to storage inside the crawl space, insulation installed in between the floor framing, and/or plant growth on or around the exterior of the foundation. We cannot inspect what we cannot see. Inaccessible areas are excluded from a Building Inspection by the New Jersey Administrative code NJAC 13:40-15.16 Standards of Practice. Humidity control in crawl spaces is very important to prevent rot and mold from occurring. DICO Building Inspection Service, Inc. does not inspect for mold. If a mold inspection is desired, contacting a company that specializes in environmental testing will be required prior to contractual limitations.

See photo # 26.

The visible sill plates and floor joists were in overall serviceable condition.

The visible masonry block foundation was in overall serviceable condition.

The crawl space was not entered because the crawl space was filled with stored items or had a cluttered condition. See photo #'s 27 & 28. This condition prevents a thorough inspection of the crawl space's foundation walls, floor, floor framing, plumbing system, electrical system, water entry as well as insect entry into the crawl space, etc. A further inspection of the crawl space, when the stored items/cluttered conditions are removed, will be required prior to contractual limitations. We cannot report on what we cannot see. Inaccessible areas are excluded from a Building Inspection by the New Jersey Administrative code NJAC 13:40-15.16 Standards of Practice. A re-inspection fee will apply.

The crawl space could not be entered but it was viewed from the basement.

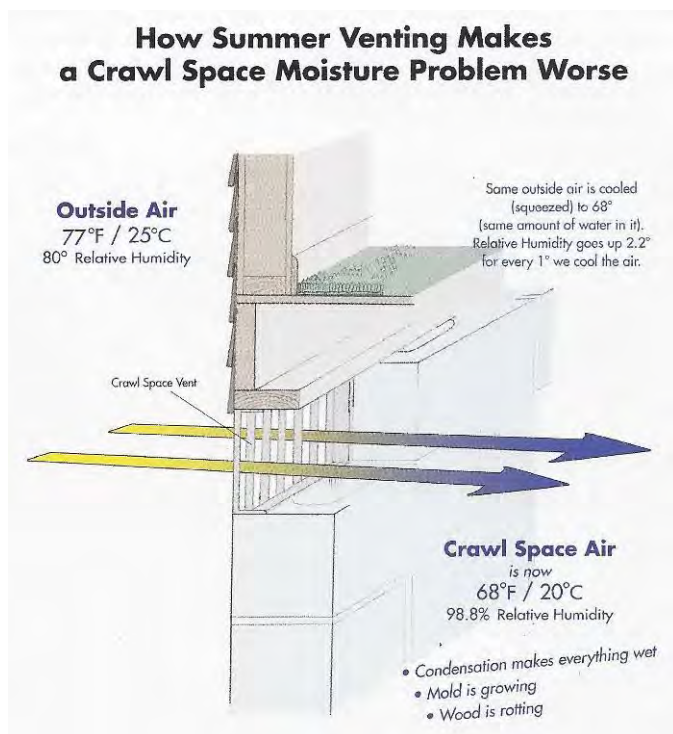
The 2 inch by 8 inch floor joists were spaced 16 inches on center.

Defects

The presence of efflorescence, a condition relating to water seepage through the foundation walls, was seen on the front foundation wall. See photo #'s 28 & 29. As water that is inside the foundation walls evaporates, mineral salts are deposited on them leaving behind these crystalline structures. This is a condition conducive to water damage and mold. Corrections to the water entry will be required in order to correct this condition. Efflorescence is rarely a structural concern, however it is a definite sign that water is entering and moving through the foundation walls. It is also an indication that the exterior drainage is inadequate. This can be an easy fix such as directing gutters and leaders to discharge four to six feet away from the foundation. It can also be related to negatively pitched soil on the exterior of the foundation and/or other exterior foundation conditions. The exterior soil should slope / pitch, one inch per foot, eight to twelve feet away from the foundation. The exterior foundation should be well parged / plastered, without cracks, and it should be well sealed with an approved damp / water proofing material below the exterior soil grade / level. Most of these conditions cannot be observed because they are below the exterior soil grade. Corrections to these conditions and a further evaluation by a structural engineer or a basement waterproofing company are recommended prior to contractual limitations.

Advisory Recommendations and Observations

Current engineering studies related to crawl space ventilation, mold growth and moisture control recommend that in-depth crawl space inspections be conducted. Crawl space moisture management and mold control are new lines of work. Work specifications vary from crawl space to crawl space. The idea of venting crawl spaces to the exterior in most cases is not being conducted. Crawl space floors and foundation walls are now being covered with 30-mil polyethylene. Better materials and methods of installation are being developed to control moisture as well as mold. See illustration below.



Water seepage conditions can sometimes be hidden by shrubbery, painting and other cover up methods. Changes in ground water, exterior drainage or extreme weather conditions may generate water in a crawl space where the inspector could find no visible or limited evidence of moisture. However, this type of foundation is porous and will permit water entry if it is allowed to pool near the dwelling. For this reason, exterior drainage must be kept under control at all times.

It is recommended that the suggestions given in the Gutters and Leaders, Property Drainage, and Exterior Foundation sections of this report be followed to help prevent water entry into the building from occurring.

The use of a dehumidifier during summer months will help to prevent excessive moisture in the crawl space.

There was no insulation installed in the exterior perimeter rim joist/box beam area. This is a high energy loss area. Air sealing this area with a closed cell polyurethane foam insulating material and then the installation of 10.5 inch to 12.5 inch of unfaced fiberglass insulation will help to reduce energy loss and make the building more comfortable as well as being compliant with current energy codes.

7. ENVIRONMENTAL

Environmental tests are specific, in-depth inspections that must be conducted by licensed people in these fields. These tests are not covered under the New Jersey Administrative code NJAC 13:40-15.16 Standards of Practice inspection standards and are NOT conducted by DICO during the course of a Home / Building Inspection. If during the course of our Home / Building Inspection we happen to observe a material, substance or condition that in the inspector's opinion appears to be hazardous, we will list that suspect material, substance or condition in the Environmental section of this report. In no way, should it be assumed that our casual observation of a possible hazardous material, substance or condition, takes the place of specific, in-depth, independent, environmental inspections. Other materials and other locations with-in this building, with different or the same hazardous conditions, could exist. Therefore, further testing maybe advised. DICO assumes no liability for tests conducted by independent contractors or independent testing companies, even if the independent contractor or testing company may have been referred by DICO.

MOLD

An inspection for mold was not conducted and can only be conducted by persons qualified to do so, however, the following conditions were noted which will require further inspection and testing:

A substance that appears to be mold/fungi was found on the drywall in the basement. See photo #'s 21 – 24.

Mold/fungi develops when there is an excessive moisture condition in a building. Not only can mold/fungi cause decay in a building, it can also produce severe allergic conditions in humans. Some reported cases have made buildings uninhabitable. Although we are reporting on a condition that is visible, mold/fungi growth could be hidden within the walls of the building. We do not test for mold/fungi nor do we report on the indoor air quality. It is therefore recommended that a qualified environmental specialist or an industrial hygienist be contacted immediately to further evaluate the building and to determine how this condition can be corrected and if there are any health related implications associated with our finding.

One species of mold, *Stachybotrys chartarum* (also known by its synonym *Stachybotrys atre*), is particularly dangerous. According to the National Center for Environmental Health, '*Stachybotrys chartarum* is a greenish-black mold. It can grow on material with a high cellulose and low nitrogen content, such as fiberboard, gypsum board, paper, dust and even lint. Growth occurs when there is moisture from water damage, excessive humidity, water leaks, condensation, water infiltration or flooding. Constant moisture is required for its growth. It is not necessary, however, to determine what type of mold you may have. All molds should be treated the same with respect to potential health risks and removal.'

Stachybotrys chartarum may cause fever, nasal stuffiness or eye irritation when individuals are exposed. This is one of the 'black molds' that are now feared by homeowners and there are other types of common molds indoors as well.

The EPA suggests that if mold spores encounter water sources, there is a potential for growth, either inside of homes, in crawlspaces or basements. EPA further suggests that mold remediation may be completed using bleach water (one cup of bleach per gallon). While this will kill active mold growth, it will not control mold spores in the air. Air sampling can reveal if there are dangerous mold spores in the air. There is even a home test kit currently available at hardware stores.

Moisture can lead to further reproduction of the dangerous molds. Corrections to any moisture conditions in the building will therefore be required in order to prevent the growth and spread of mold.

The New Jersey Health Department of Health and Senior Services Consumer and Environmental Health Services / Indoor Environments Program manages mold problems in the state of New Jersey. They also have a list of mold inspection and mold remediation companies that work in New Jersey. They can be contacted by phone at 609-631-6749 or by email joe.eldridge@doh.state.nj.us. The website address is www.state.nj.us/health/eoh/tsrp. Additional information on mold can be found using at following links: American Industrial Hygiene Association - www.aiha.org;

8. NOTES

Repairs to all defects listed under the defects sections will be required. Obtaining cost estimates for all repairs is also recommended prior to contractual limitations.

Photos were taken at the time of the inspection. They are on file and were either emailed to our client or included in the report.

INSPECTOR'S CERTIFICATION



ANTHONY CHIMKO
SENIOR INSPECTOR
NJ HOME INSPECTOR LICENSE # 24GI00029200

AJC/mb
02-15-2017