



Give us a call if you have questions and need assistance in your real estate purchase. It's a good idea to spend a little extra money to conduct an inspection prior to the purchase rather than to find out afterwards you have a huge expensive problem to deal with. Trust us when we say, "We've seen it happen."

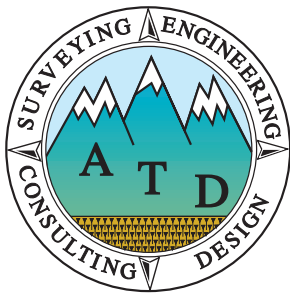
WHAT YOU NEED TO KNOW BEFORE BUYING REAL ESTATE (DUE DILIGENCE)

Whether you want to purchase developed or undeveloped real estate, we highly recommend you consider and inspect some of or all of the following site conditions, depending upon your situation.

- (1) Do you know where the property boundaries are?
- (2) What is the condition of the Water Well and other related components?
- (3a) Developed Septic System (aka "OWTS") What is the condition?
- (3b) Undeveloped Septic System (aka "OWTS")... Soil tests are required, and what is the level of the ground water-table?
- (4) Is the parcel of land in a Flood Plain?
- (5) ATD recommends an inspection of the general site conditions to possibly discover something you may not have readily thought about before you spend a large sum of money,... only to learn later that you have an expensive problem.
- (6) Soil Testing for any new or renovation construction is needed to determine the composition of the soil and if it can properly support the foundation.



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(1) DO YOU KNOW WHERE THE PROPERTY BOUNDARIES ARE?

Knowing the property boundary locations is a very important part of being a homeowner. Not knowing where the boundaries are between you and the neighbors can lead to legal disputes. Any encroachments could result in the title company refusing insurance. Being a professional survey company, ATD can locate the property boundaries for you.

(2) DOES THE PROPERTY HAVE A WATER WELL?

If the answer is “YES”, you need to know the answers to the following questions:

- (a) What is the condition of the well?
- (b) How deep is the well?
- (c) What is the rate of the water flow?
- (d) What is the capacity of the well?
- (e) What is the ground water like in your area?
- (f) How old are the pump and pressure tank?
- (g) When was the last time the pressure tank was tested?
- (h) Is there any visible corrosion on the pressure tank or at the pump fittings?
- (I) Is the well-cap on level ground or uphill?
- (j) Does the well casing depth meet state and local codes?
- (k) How is the water? When was the last time it was tested? What is in the water?
- (l) Does the water need a filtration system?

(3A) DEVELOPED SEPTIC SYSTEM

Does the parcel of land have a Septic System? (A Septic System is currently known as an “Onsite Waste-water Treatment System” and abbreviated as “OWTS”) Did you know the homeowner is responsible for maintaining the OWTS? If properly designed, constructed and maintained, your OWTS can provide long-term, effective treatment of household waste-

water. If a home is sold having an OWTS, it must be in good working order. Before spending a large sum of money to purchase a home with an OWTS, ATD recommends you have the OWTS inspected by a professional. The following are components and elements that should be inspected: (a) Pipe from the home, (b) Drainage Field, (c) and Tank. Maintenance of an OWTS is important because a failing system is very costly to repair! Another reason it is wise to have the OWTS inspected is for health and safety reasons. Protect your freshwater resources and prevent the spread of disease. It is of extreme importance to understand this: when a foul odor is emitted, gurgling sounds are heard, and/or the sewage is beginning to backup, damage is more than likely already occurred. OWTS should be regularly inspected for leaks and clogs.

(3b) UNDEVELOPED SEPTIC SYSTEM (OWTS)

You *must* have a professional test the soil before installing and OWTS. The determines of the type of OWTS you have designed and installed are; the type of soil and the size of the drainage field. Suitable soil is necessary for successful wastewater treatment. The drainage field needs to be large enough for the volume the family or business generates.

Soil testing for an OWTS and the design of an OWTS are part of the professional engineering services ATD offers. At ATD, we can help you in every step: repairing, construction and maintaining your OWTS.

The Ground Water-Table plays a key role in OWTS design, home construction, foundation stability, and home comfort. OWTS leach lines and the sewage pit may be compromised by a

highwater table. If the foundation of a home is not cracked or shifted by hydrostatic pressure, a highwater table can also cause rust, bacteria and mold. Wood structure homes may be compromised by a high level of humidity. At ATD, our civil engineers specialize in dealing with various water table levels and water issues. We can help you plan for and design accommodations that work with or around your water table levels, protecting you from possible natural occurring damages.

(4) IS THE REAL ESTATE IN A FLOOD PLAIN?

Detailed Flood Plain studies are usually required and are used to determine the Base Flood Elevation (BFE) at a building site. Sometimes buildings are located in the Floodway because they were built before the Flood Plain Map (FIRM) went into effect and meet Grandfather Causes. Only Ag exempt buildings may be constructed in the floodway. Future development in Floodways is very restricted and the floodways are not generally shown on the Floodplain maps. If you have any questions about a property located in a floodplain, talk to the county planning department or a civil engineer who has some knowledge about floodplains and the regulations governing floodplains.

(5) GENERAL SITE CONDITIONS

There are general site conditions that sometimes are overlooked before a purchase is made, but discovered thereafter. Drainage is one such condition to consider. For example, if you purchase a home in the summer, you may not find-out about a drainage problem until the autumn or winter arrives. Other site conditions worth taking a look at are these: (a) the condition of the foundations of structures [especially if the structure is old],

(b) considering your plans, will the size of the parcel of land be large enough? There are variance rights-of-way width regulations. A general inspection by a licensed or trained professional is a good idea before you purchase real estate. The professional may see something worth knowing that you may not readily see or know about. At ATD, we are a turn-key surveying and civil engineering company who can assist you in all the ground level inspections, issues and projects.

(6) SOIL TESTING

Soil testing for any new or renovation construction is needed to determine the composition of the soil and if it can properly support the foundation. It is usually also a necessary part of obtaining a building permit. If the soil is found to be loose, easily compressed, or full of absorptive clay, you may need to replace the soil. Soil engineers perform soil testing in various areas of the site because the soil type may vary in different parts of your construction site. Soil engineers can be hired privately or through the architect or contractor. These specialized professional individuals are also known as geotechnical engineers. It is important to communicate with the geotechnical engineer where the footings and the foundation will be constructed. A professional surveyor can assist in marking those areas. Once the geotechnical engineers have performed the testing, inspection and noted all the compounds in the soil, they look for any problems that could be caused by the composition. You may request soil testing before buying land and have it put in writing that your offer is contingent on the property passing the soil test. However, soil testing can also be ongoing during the construction process.