



**Scope of Inspection**  
**Lake Travis Engineering and Inspection, LLC**  
**TREC Lic. # 9915**

**I. STRUCTURAL SYSTEMS**

**A. Foundations**

1. Type of foundation:
2. Method used to access crawl space (if access less than 24" x 18" not required):
3. Foundation performance opinion:
4. Visible indication of movement:
5. Visible evidence of unprotected post tension cable ends:
6. Crawl space ventilation appears adequate (1 Ft<sup>2</sup>/1500 Ft<sup>2</sup> with vapor barrier and 1 Ft<sup>2</sup>/500 Ft<sup>2</sup> without vapor barrier):
7. Visible conditions for or signs of water penetration:
8. Conditions visible that may affect foundation performance:
9. Visible evidence of mid notches on joists and beams >1/6 D and on inside 1/3 of span:
10. Visible evidence of end notches on joists and beams >1/4D:
11. Visible evidence of holes in top or bottom 2" of joists and beams or >1/3D:

**B. Grading and Drainage**

1. Visible evidence of negative grade conditions (< 6" in 10' or 5% slope):
2. Visible evidence of erosion close to slab or equipment:

**C. Roof Covering**

1. Type of roof covering:
2. Visible condition of ridge line:
3. Estimated roof slope:
4. Location roof viewed from:
5. Roofing system appears to be correct system for roof slope:
  - a. Asphalt >2/12 and <4/12 needs low slope system with double felt and 1/3 shingle exposure verses 1/2 for mid slope roof:
  - b. Roll roofing, membrane or built up 1/12 to 3/12 slope:
  - c. Asphalt shingle, clay tiles, wood shingle or shake >4/12 slope. Shake require interlayment between courses:
6. Visible condition of shingles:
7. Visible evidence of fastener Issues:
8. Visible presence of drip ledge:
9. Visible evidence of flashing and counter flashings missing or needing repair:
10. Visible evidence of skylights or other roof penetration issues, leaking or conditions that may promote leaking:
11. Visible gutters and downspouts needing repair:
12. Top of chimney or exhaust flue appears to be at correct elevation from visible inspection. (3' above roof at penetration and 2' higher than anything within 10'):
13. Chimney over 30" wide inspect for presence of cricket if visually accessible:
14. Visible evidence of chimney cap and spark arrestor missing or needing repair:
15. 4" separation of multiple flues appears to be correct if visually accessible:



#### **D. Roof Structure and Attic**

1. Visible signs of poor attic ventilation (1.)  $<1 \text{ ft}^2$  per  $300 \text{ ft}^2$  attic space when 50% - 80% of space ventilated with power vent (3' above eave or cornice vents) or vapor barrier installed on warm side of ceiling or 2.)  $<1 \text{ ft}^2$  per  $150 \text{ ft}^2$  without power vents):
2. Roof structure and sheathing appear to be free of defects or water stains from visual inspection:
3. Visible indications of moisture penetration:
4. Visible evidence of structural issues with joists, rafters, collar ties, knee braces, etc:
5. Visible evidence of excessive deflection or depression of roof structure:
6. Type and depth of insulation based upon visual inspection:
7. Approximate average depth of Vertical Insulation:
8. Visible issues with chimney or exhaust flue clearance from combustibles (18" w/o draft hood for single wall, with draft hood 9" for oil / 6" for gas, doublewall 2" and Type B or L 1"):
9. Visual deficiencies with attic power vents to include installation, operation, unusual sounds or vibration:

#### **E. Walls (Interior and Exterior)**

1. Visible evidence of water penetration:
2. Visual deficiencies that could indicate structural performance issues:

#### **F. Ceilings and Floors**

1. Visible evidence of water stains:
2. Visual deficiencies that could indicate structural performance issues:
3. Garage floor minimum of 4" lower than living space floor:
4. No more than 4" between balusters:
5. Risers less than  $7 \frac{3}{4}$ " in height and consistent from step to step:
6. Treads greater than 10" in depth and consistent from step to step:
7. Nose overhand between  $\frac{3}{4}$ " and  $1 \frac{1}{4}$ " unless tread over 11".
8. Hand rails minimum of  $1 \frac{1}{2}$ " wide and 34" – 38" above treads:
9. Stair ways minimum of 36" wide above handrails and with minimum of 6' 8" headroom.
10. Windows adjacent to stairs or landings minimum of 36" above floor finish.

#### **G. Doors (Interior and Exterior)**

1. Operation of interior doors excluding locks and latches:
2. Exterior door condition:
3. Operation of exterior doors to include locks and latches:
4. Door between garage and living space 20 minute fire rated (solid wood or metal clad):
5. Garage door operation to include photoeyes (4"-6" above floor finish), auto reverse against solid object:

#### **H. Windows**

1. Damaged glazing in windows or exterior doors:
2. Fogging or leaking windows:
3. Safety glazing near doors, floor level windows, showers, etc:
4. Missing or damaged window or door screens:
5. Burglar bars have functional keyed exit:
6. Inoperable windows at burglar bar locations:
7. Representative number of windows tested for operation:
8. Minimum of 8% window glazing with 4% opening as a percentage of roof area per room. Must be minimum of  $3 \text{ ft}^2$  glazing and  $1.5 \text{ ft}^2$  opening for bathrooms unless 6 FC lighting and  $50 \text{ ft}^3/\text{min}$  of ventilation.



**I. Stairways (Interior & Exterior)**

1. Visible evidence of structural issues:
2. Decks higher than 30" missing hand rails or banisters:
3. Decks higher than 30" with more than 4" between balusters:
4. Risers less than 7  $\frac{3}{4}$ " in height and consistent from step to step:
5. Treads greater than 10" in depth and consistent from step to step:
6. Nose overhand between  $\frac{3}{4}$ " and 1  $\frac{1}{4}$ " unless tread over 11".
7. Hand rails minimum of 1  $\frac{1}{2}$ " wide and 34" – 38" above treads:
8. Stair ways minimum of 36" wide above handrails and with minimum of 6' 8" headroom.

**J. Fireplace/Chimney**

1. Visible evidence of structural issues with components of chimney and fireplace:
2. Visible evidence of creosote buildup in flue and fireplace:
3. Damper operation appears correct:
4. Hearth appears to be non combustible and have proper dimensions (min. 16" Deep with 8" overlap on sides for less than 6 ft<sup>2</sup> or 20" deep with 12" overlap on side for greater than 6 ft<sup>2</sup>):
5. Mantel and side clearance appear to be adequate (12" above and 6" on sides):
6. Visible/odor evidence of as log lighter leaks or defects:
7. Circulating fan free from unusual noises or vibrations:
8. Presence of combustion air vent:
9. Visible evidence of chimney cap and spark arrestor missing or needing repair:

**K. Porches, Decks, and Carports (Attached)**

1. Visible evidence of structural issues:
2. Decks higher than 30" missing hand rails or banisters:
3. Decks higher than 30" with more than 4" between balusters:
4. Risers less than 7  $\frac{3}{4}$ " in height and consistent from step to step:
5. Treads greater than 10" in depth and consistent from step to step:
6. Nose overhand between  $\frac{3}{4}$ " and 1  $\frac{1}{4}$ " unless tread over 11".
7. Hand rails minimum of 1  $\frac{1}{2}$ " wide and 34" – 38" above treads:
8. Stair ways minimum of 36" wide above handrails and with minimum of 6' 8" headroom.



## II. ELECTRICAL SYSTEMS

### A. Service Entrance and Panels

1. Over head power entrance insulation, drip loop, separation of conductors:
2. Over head power clearances appear correct from visual inspection. (18' above public roadways, 15' above residential property and drives (>300V), 12' above residential property and drives (<300V), 10' above ground and walkways (no vehicle traffic and <150V), 3' from windows/doors/balconys/decks, and 8' clear of roof; 3' if roof pitch greater than 4/12; 18" if within 4' of roof edge, 22.5' above/10' out horizontally of pool and within 14.5' of diving board or platform):
3. Weather head or mast appears securely attached:
4. Ground rod present and appears well connected (#8=125A, #6=175A, #4=200A, #6 for ground rod connection=200A):
5. Panels appear well attached:
6. Dead front in place and secure:
7. AFCIs (Arc Fault Circuit Interrupters) used to protect lighting and receptacles in sleeping areas.
8. All 240 V. breakers have trip ties:
9. Visible evidence of open knock outs:
10. Wires appear to be sized properly from visual inspection:
11. Type of wire (AL or CU) from visual inspection:
12. Panel location acceptable (5'6" to 6'6" above floor, 6'5" head room, 30" wide by 36" deep clear space in front of panel):
13. If AL wire present is anti-oxidant on primary connections or pig-tailed connections or crimped connections in place (COPALUM crimped connectors) based upon visual inspection:
14. Main disconnect presence:
15. No more than 6 hand movement rule for total power cut off:
16. Visual evidence of power taps ahead of main:



**B. Branch Circuits – Connected Devices and Fixtures**

1. All accessible outlets have power, grounds and correct polarity:
2. Type of wiring:
3. Outlets show no visible signs of arcing or excessive heat:
4. Outlets appear to be secured to wall properly:
5. Outlets located every 4' in kitchen and 3' from tub or shower in bathrooms:
6. Minimum of 1 outlet every 12' or within 6' of any point on a wall 24" or wider:
7. Outlets with missing covers:
8. GFCIs properly located and installed (kitchen, bathrooms, unfinished basements, 6' of water, garage and all exterior (waterproof)):
9. All light and fan switches appear to operate correctly:
10. Switches show no visible signs of arcing or excessive heat:
11. Switches appear to be secured to wall properly:
12. Switch location proper (48" above floor finish, 5' from tub/shower, 18" from closet shelves, one switched light or outlet per room):
13. Switches with missing covers:
14. Visible evidence of missing or inoperable fixtures:
15. No bare bulb light bulbs in closet and lights 6" from shelves:
16. Recessed fixtures in attic 3" clear from insulation unless rated for insulated ceiling as observed from visible inspection:
17. Visible evidence of exposed wiring, wiring terminations, open junction boxes:
18. Visible evidence of missing or poorly connected conduit:
19. Electrical gutters and sub panels appear properly bonded and grounded:
20. Missing disconnects:
21. If AL wiring present test random outlets and switches for proper connections (COPALUM crimped connectors or CO/ALR switches and outlets):
22. If AL wiring present recommend inspection by certified electrician:
23. Visible evidence of extension cords used for permanent fixtures:
24. Smoke detectors present and appear operable (No smoke test performed):



### III. HEATING, VENTILATION AND AIR CONDITIONING SYSTEMS

#### A. Heating Equipment

1. Test operation (only below 50° F):
2. Type of system:
3. Energy Source:
4. Return temperature:                      Register temperature:  
(delta T between 10 and 20° F for electric and 60 to 100° F for gas or oil)
5. Gas units – visible examination of burner condition, draft hood operation, vent pipe, leaks:
6. Gas units – flame color (other than blue) flame blowout, scale build up, consistent flame size:
7. Gas line material:
8. Gas shut offs present:
9. Flue clearance (18" w/o draft hood for single wall, with draft hood 9" for oil / 6" for gas, doublewall 2" and Type B and L 1"):
10. Flue piping pitch greater than ¼" per foot:
11. If in garage unit 4" above floor with burner 18" above floor finish:
12. 1" free vent air per 1000 BTU as estimated from visual inspection:
13. Electric units – elements working if readily accessible:
14. Visible inspection of plenum, supply or return air ducting free of piping or wires running through them:
15. Furnace clearances maintained (6" clear on sides and 18" on front for gas and 24" for oil):
16. Service disconnects present (5' off floor/ground and within sight):
17. Gas Meter Adequately sized (1 ft<sup>3</sup> of gas per 1000 BTU of load):
18. Attic Ventilation adequate per visual inspection ventilation. (1.) <1 ft<sup>2</sup> per 300 ft<sup>2</sup> attic space when 50% - 80% of space ventilated with power vent (3' above eave or cornice vents) or vapor barrier installed on warm side of ceiling or 2.) <1 ft<sup>2</sup> per 150 ft<sup>2</sup> without power vents):



## B. Cooling Equipment

1. Test operation (only above 60° F):
2. Type of system:
3. Return temperature:                      Register temperature:                      (delta T between 10 and 20° F)
4. Condensate lines and overflows present (minimum size for overflow pipe = 3/4"):
5. Visible evidence of condensate terminating in sewer vent:
6. Safety pan present and appears to be correctly sized and clean:
7. Visible inspection of plenum, supply or return air ducting free of piping or wires running through them:
8. Refrigeration gas line and condensate line insulated:
9. Visible evidence of condenser coil damaged, level and located properly;
10. Over-current protection sized properly:
11. Disconnect present:
12. Evaporative cooler pump operation free of noise or excessive vibration:
13. Evaporative cooler spider tubes, tub clips and bleeder system appear in good condition through visual inspection:
14. Evaporative cooler water supply and float operation appear in good condition through visual inspection:
15. Visual inspection of evaporative cooler 1" air gap between float discharge and maximum water level:
16. Visible evidence of evaporative cooler fan blower having rust or corrosion:
17. Evaporative cooler fan belts or pull-ups in good condition through visual inspection:
18. Evaporative cooler roof jacks in good condition through visual inspection:

## C. Ducts and Vents

1. Ducting appears in good condition, proper materials used and routing acceptable through visual inspection:
2. Heat or A/C present in all habitable rooms:
3. Fans and filters appear accessible:
4. Record Filter Sizes:
5. Ducts appear free of piping or wires running through them through visual inspection:
6. Visible evidence of flue and vents incorrectly installed or terminated:
7. Visible evidence of flue and vents not utilizing proper materials:

## IV. PLUMBING SYSTEM

### A. Water Supply System and Fixtures

1. Location of water meter:
2. Location of main water supply valve:
3. Static water pressure reading:
4. Estimation of size and material of water main visible at meter:
5. Condition of main shut off valve:
6. Test all accessible fixtures for operation:
7. Visible evidence of inside faucets with out fixture and drain:
8. Visible evidence of missing backflow devices, anti-siphon devices or air gaps:
9. Visible evidence of dissimilar metal issues:
10. Test each area with two fixtures operating simultaneously for adequate flow:
11. Hot on left, cold on right:
12. Visible evidence of cracks, leaks, secure mounting for commode:
13. Visible evidence of leaking pipes, valves or fixtures:
14. Visible evidence of shower enclosure leaking:
15. Hose bib operation (anti-siphon device presence):



**B. Drain, Waste, Vents**

1. Test functional drainage for all fixtures:
2. Drain stops present and operational for sinks, lavatories, and tubs:
3. Visible evidence of leaking drain pipes:
4. Sewer vents piped to exterior of structure and routed properly (>6" above roof, > 12" from wall, >10' from window):

**C. Water Heating Equipment**

1. Energy Source:
2. Capacity of water heater:
3. Visible evidence of leaking or corroded fittings:
4. TPR (Temperature and Pressure Relief) valve piping missing, improperly sized and gravity drain to exterior of structure:
5. Operate TPR valve if piping provides for safe testing:
6. Visible evidence of broken, missing parts, covers or controls:
7. Gas units – visible inspection of burner condition:
8. Gas units – flame color (other than blue), evidence of flame rollout, scale build up, consistent flame size:
9. Gas line material:
10. Gas shut offs present:
11. Visible evidence of gas leaks:
12. Electric units – elements working (top first in series, test top first then bottom):
13. Visible inspection of draft piping, draft diverter, draft hoods (check for negative draft at hood):
14. Visible inspection of vent piping clearance (6" for single wall, 2" for double wall, 1" for Type B or L):
15. Vent 2' above roof and 2' higher than anything within 10' as estimated through visual inspection:
16. Vent slope minimum of  $\frac{1}{4}$ " / 1' of pipe:
17. Visible evidence of wiring issues:
18. Safety pan and drain appear to be installed properly:
19. Water heater location safe and accessible:
20. Any damage noted:
21. In garage unit minimum of 4" above floor finish with burner a minimum of 18" above floor finish:

**D. Hydro-Therapy Equipment**

1. Test operation:
2. Connected to GFCI:
3. Switch location and operation appears correct:
4. Visible evidence of leaks:
5. Visible inspection of ports, valve, grates and cover condition:
6. Access to pumps and valves appears adequate:



## V. APPLIANCES

### A. Dishwasher

1. Visible inspection of door gasket, control knobs and interior parts condition:
2. Visible evidence of interior rust or corrosion:
3. Door spring operation:
4. Visible inspection of discharge hose condition:
5. Presence of back-flow prevention device:
6. Appears to be securely mounted (check for tipping):
7. Visible evidence of leaking:
8. Soap dispenser, spray arms, drying element operation:
9. Test initial cycle for operation:

### B. Food Waste Disposer

1. Splash guard, grinding component and wiring condition:
2. Securely mounted:
3. Visible evidence of leaking:
4. Vibration or unusual noise:

### C. Range Exhaust Vent

1. Visible inspection of filter vent pipe, light and switches:
2. Test blower operation:
3. Vibration or unusual noise:
4. All blower speeds appear operational:
5. For non-circulating unit does vent exit exterior of structure:
6. Vent piping material:
7. Absence of range exhaust fan:

### D. Ranges/Ovens/Cooktops

1. Visual inspection of broken or missing knobs, glass, elements, drip pans:
2. Clearance from combustible materials:
3. Anti-tip device in place and securely mounted:
4. Burner operation appears correct over range of settings:
5. Gas line material:
6. Gas shut offs present:
7. Visible evidence of gas leaks:
8. Clearance to combustibles appears correct:
9. Visual inspection of door gasket condition and tightness of seal:
10. Operation of door latch:
11. Heating elements and temperature sensor appear properly mounted:
12. Operation of heating elements, light and flame condition:
13. Operation of clock, timer, thermostat and door springs:
14. Set oven for 350 degrees and test temperature for 350 +/- 25 degrees:

### E. Microwave Oven

1. Visual inspection of broken or missing knobs, handles, or glass:
2. Visual inspection of door and seal condition and fit:
3. Heat 1 cup water for 1 minute and check temperature:
4. Operation of light and turntable:



**F. Trash Compactor**

1. Test operation:
2. Evidence of vibration or unusual noise:
3. Appears to be securely mounted:

**G. Mechanical Exhaust Vents and Bathroom Heaters**

1. Test operation:
2. Evidence of vibration or unusual sounds:

**H. Garage Door Operators**

1. Test operation:
2. Visible evidence of improper installation:
3. Test automatic reverse on closing cycle:
4. Electronic sensors installed at proper height (4" to 6") and reverse door on closing cycle:
5. Door locks or side ropes still in place:

**I. Doorbell and Chimes**

1. Test operation:
2. Visual condition of installation:

**J. Dryer Vents**

1. Visual condition of ducts:
2. Ducting material:
3. Visual inspection of routing:

**VI. OPTIONAL SYSTEMS – Inspected in a similar fashion to the systems listed above**

**A. Lawn Sprinklers**

1. Backflow prevention device in place.
2. Cycle each zone and observe for several minutes.
3. No evidence of above ground leaking.

**B. Swimming Pools and Equipment**

1. Type of construction:
2. Electrical meets minimum requirements – All outlets within 20' GFCI, No outlets within 10' except for pumps which can be within 5', all junction boxes within 20' 4" above ground and 12" above maximum water level and more than 4' from inside edge of pool unless lighting (15A) filled with potting material which can be flush with grade. One receptacle required 10' – 20' from pool. Switches greater than 5' from inside edge of pool. No light within 5' horizontally or 12' vertically from pool. No overhead wiring within 22.5" vertically out to 10' horizontally of pool or within 14.5' of diving platform.
3. Pumps operation without excessive leaking or unusual noise.
4. Child proof fences or warning systems present.
5. Equipment such as diving boards and slides firmly attached.

**C. Outbuildings – Same requirements for equipment and fixtures found above for dwelling inspection.**

**D. Outdoor Cooking Equipment**

*Energy Source:*



**F. Private Water Wells** (A coliform analysis is recommended.)

1. Type of pump:
2. Type of storage equipment:
3. Proper clearances appear to be maintained (>50' from house, >75' from septic tank, >100' from septic field):
4. Visible condition of electrical panel and controls:
5. Visible condition of pressure tank:
6. Operation of pressure switch appears correct:
7. Evidence of short cycling or water logged pressure tank:
8. Size of water main and material as visually inspected:

**G. Private Sewage Disposal (Septic) Systems**

1. Type of system:
2. Location of drain field:
3. Tank less than 50' from water wells, 5' from buildings or structures, 10' from potable water piping.
4. Soil absorption lines or system 100' from private wells unless grouted to 100' or water level which allows for 50' separation. 75' from streams or ponds and 5' from buildings or structures.
5. Cleanouts every 50' and at 90 degree turns (as estimated from visual inspection).
6. If sprinkler system is used and within 20 feet of yard or property line should be on timer set between midnight and 5:00 A.M.
7. If pump used for irrigation or for lifting of waste effluent does audible and visual alarm present and appears to be functional.
8. Irrigation or lift pump appears to be functional.
9. Recommend that septic tank be serviced.

**H. Whole House Vacuum Systems:**

1. Test operation:
2. Visible evidence of wiring issues:

**L. Other Built-in Appliances**