Merry Christmas from Inspector Brad

It is the Christmas season and the Christmas lights are out in force. The contest is on for the neighborhood fathers to see who can install the brightest and most intricate Christmas lights, complete with motorized ornaments and speaking Santa Clauses. Is that a word? There is usually a network of intricate wiring that rivals a NASA space ship preparing for take off. The multiple circuits require outlet splitters, and then splitters on the splitters, and in the case of one homeowner, a third splitter so that the necessary power is supplied; one guy even tapped directly into his electric panel in order to be sure his lights are the brightest.

In the daylight the light cords remind one of the barbed wire in a WWI battle field but when darkness falls the yard turns into a wonderment that draws visitors from miles around. At the exact moment as the daylight turns to dusk you can almost hear the generators at Don Pedro bog down with the extra load and the main utility lines buzz just a little louder, trying to keep up with the extra demand. The community dims, just for a second as the power is adjusted for the extra load. Computers flicker as the voltage drops and backup files are created. Astronauts can see the outline of Turlock from space and can imagine a hearty "Merry Christmas" from its citizens. The little white wheels in the electric meter begins spinning around their axles counting the kilowatt hours of power being used; on some houses these wheels are almost flying. As the power hits the first splitter (The thing that goes from one outlet to 3 or 4 outlets) everything is fine. The lights go on and the motors are whirling. As the power hits the second splitter the lights go on and the motors whirl but there is some heat in the connection and the heat creates some resistance in the cords but the lights go on, even if they are not quite as bright as they should be: the breaker only popped or once or twice…

The third splitter is smokin. There is only so much power that can be sucked out of any one circuit and this home is at the outer edge of the envelope. During the initial tests the homeowner discovered the circuit breaker could not take the load. "No problem, just install a larger breaker." We'll just use the oversize one we installed last year. That way we can use more lights! And the good thing is that this breaker did not pop one time…

Now we have the Chevy Chase of Turlock. He is going to have the brightest and best Christmas lights of anyone in the city. He doesn't even bother with breakers. Direct wiring from the panel is the best. But he doesn't want the power drain from the buss bar; he is tapping the lugs at the outlet side of the meter. Power straight from the power plant is the best. "We're going to have the best Christmas ever!" The switch is thrown and the lights come on. But the lights are not the only thing glowing. The wiring is overheating and the splitters and melting. But everything is fine, the lights are on and all is good with the world. Lets all hope that it does not rain.

The electrical systems in your home are designed with dual backup safety systems. One system can usually be disabled and you can still have a relatively safe system. When the second system is disabled then there is a real chance of something going wrong. When the home is constructed, even the older homes, these safety systems are in place and

working. It is only when the electrical system is changed by an unknowledgeable person, like Mr. Christmas Lights, can the safety systems be disabled. This is usually done with the best intentions but the results may not show up for quite some time and be disastrous. Almost everyone has heard of installing a penny under a screw in fuse in the older panels to keep them from blowing out without ever discovering the underlying reason the overloaded the circuit. Sometimes breakers have been oversized for the same reasons. Properly sized breakers are probably the most important safety system in your home. The rating in the breaker must match the rating in the wiring in order to be safe. When the current exceeds the safe operating range of the wiring the breaker will open or "trip" before the wiring overheats and a fire is started. Be sure to have properly sized breakers in your home to insure your family's safety.

A Home Inspector can help you identify safety and operational issues in your home. If you do happen to need a Home Inspection be sure to use a qualified inspector. The California Real Estate Inspection Association is the premiere inspection association in the State of California. Certified Inspector Members must pass a written exam, attend regular chapter meetings and obtain at least 30 hours of continuing education each year. Each inspection report is written to the standards of practice to insure the client of have all the required systems evaluated by the inspector. Look for the CREIA badge for a good home inspection. If you have any questions about your home I can be reached at 613-1430 or emailed at HomeInspect2020@aol.com.