## WELCOME TO 25 CEDAR LANE THE TESLA OF HOMES

"When somebody has a breakthrough innovation, it is rarely one little thing. Very rarely, is it one little thing. It's usually a whole bunch of things that collectively amount to a huge innovation." – **Elon Musk** 

We believe that there is no house just like it

Over the past 5 years we've expanded the house in size and amenities that include the best of the best with a goal to increase the size of the house without increasing our environmental impact and try to keep expenses as low as possible to offset rising costs which we can't control. We have more than achieved our goals. Please take take the time to read why this house is very different from other homes.

A rooftop solar electric system produces over 12,000 KWH per year offsetting an impressive carbon footprint but more importantly saves the owner approximately \$1800 per year in electric expense. For our needs the system paid for our entire energy needs. If you have a larger family you will still save \$1800 a year over what your needs are. Put that \$1800 toward your property taxes or take a nice cruise. The system will be producing for another 25-30 years.

There are very few homes in Chatham with solar panels due to the number of trees blocking the sun. You can count the number on two hands. And, our panels are virtually hidden from the street as they are on the specially built back roof. The back roof was specially designed and built with standing seam metal roofing which will last 100 years. The under belly of the roof was built with 2 x 12 rafters to support any amount of snow load. There are no penetrations in the roof to mount the solar like most homes which have lots of holes drilled for mounting the rails. The system is clamped on to the seams. We chose to double up on the hold down clips holding the roof down for added wind resistance to well over hurricane forces. The only penetration in the roof is for the two vent pipes. You will never hear rain hitting the roof as the panels absorb the sound. Another benefit is that the panels also absorb all of the heat from the sun keeping your attic cooler in the summer thus saving on air conditioning on the upper floor.

The entire house has been retrofitted with 100% LED ceiling lights and dimmers. This saves a huge amount of electric and added heat in rooms.

The heating system is a hybrid, while maintaining the baseboard heat in the original section of the house as well as a newly installed hydronic radiant heat system on all three floors of the expansion which more than doubled the square footage of the house. We doubled the square footage without increasing the annual natural gas expense. This house will use roughly half the natural gas of a typical 2500 square foot home in this area. This was achieved by replacing all existing windows and addding new double pane low E windows filled with argon gas as well as a high end sliding door also with high energy ratings. You will feel the quality when you open and close the slider. For maximum energy savings a high efficiency condensing boiler and indirect water heater with an efficiency rating of over 96% was chosen. This boiler modulates the amount of gas needed at all times only using what is needed, thus saving energy. The indirect water heater is heated to 150 degrees, not 120 as in most homes eliminating the possibility of legionnaires disease. The hotter water is then mixed back down with cold on demand to achieve the 120 degree supply as required by code. This mixing down technology uses less hot water from the 60 gallon tank and between the decreased demand on the water storage tank and the ability for the boiler to heat unlimited water on demand, this house will never run out of hot water no matter how many showers are taken. Radiant heat is built into the floors and conducts heat to all furniture, cabinets, floors and there are no cold spots in the rooms. The sections of the house with radiant heat include the new kitchen/dining area, the new basement, both master walk in closets, master bathroom and the master bath as well as the apartment bedroom, kitchenette and bath. There are 10 thermostats for individual settings. Each thermostat can be controlled via smartphone apps as well. You can keep the master bath toasty at 74 degrees while sleeping at 70. What a delight to wake up in the middle of the night or come out of the shower to warm floors with no chills. If you have an elderly person in the apartment they can set temps to 78 degrees for their own comfort without affecting the other areas of the house. In the original section of the second floor there is an Ecobee thermostat with sensors in each room maintaining even heat when the rooms are occupied.

Because of the original design of the house, central forced air using ducts was not feasible or desired. Instead we chose to install a Mitsubishi split system with a total capacity of 48,000 BTUs or 4 tons. We upgraded the system to also include the heat pump feature to provide supplemental heat if needed or to heat the whole house just in case a component of the boiler system fails and can't be repaired for days or even a week or so waiting for a part. One of the best features of the split system is that you only use cooling or heating as needed. This saves a lot on electrical usage during the summer as you don't need to cool the entire house or an entire floor with a dual zone option like you'll find in most other homes in Chatham. This system has 8 separate zones. Another great feature is that everyone in the house sets their own temperatures eliminating fights over the thermostat. The compressor is inverter based so like the boiler, it modulates from a whisper to full power as needed thus achieving the highest energy savings. Plus, the outside condenser unit is specially outfitted with a premium heater option to allow it to make heat down to -17 F when most other units will only provide the heat function down to +20F.

You can save even more money in the pre and post summer months when the nighttime air is in the high sixties and instead of using the AC you can turn on the remote controlled 2 speed whole house fan and crack open a couple of windows for cross ventilation with a comforting cool breeze. You can even remove kitchen smoke from burnt popcorn or someone burning the dinner on the stove with the touch of a button and opening the kitchen window. The fan is located in the attic for whisper quiet operation and has a special DC motor for extremely low energy usage.

The master bath was designed with an oversized shower running 3/4" pex vs 1/2" as well as a high flow shower faucet for increased water volume if wanted. The overhead rain shower head as well as the handheld shower head are high pressure, high flow units for an invigorating shower. There is a bench made from quartz and the shower floor and bench are also kept warm from the radiant heat underneath. The vanities contain extra electrical outlets and two LED lit mirrors are on separate switches. Quartz countertops cover the cabinets with ample drawers and even the sink fronts tilt out on soft close hinges for extra storage of small items. There is an outlet by the toilet for a plug in bidet seat, an outlet with built in USB charger beside the toilet for smartphones and tablets. switches for the overhead toilet light, fan and main lights right at the toilet in addition to the other locations. There is a two person, heart shaped whirlpool bath with high flow Roman faucets for faster filling of the tub. There are multiple ways to relax. You can choose from multiple levels of air bubbles, plus numerous whirlpool jets and a built in heater keeps the water temperature from cooling down during a 30 minute massage bath. Most whirlpool tubs don't have air bubbles and many don't have a built in heater.

Master bedroom has more than ample room for any combination of furniture. A ceiling fan sits atop the bed area. Two large walk-in closets have radiant in floor heat so you stay nice and toasty while getting dressed in the morning.

For security we installed a smart Android based alarm system from Qolsys which is connected to Alarm.com using dual path over WiFi with cellular backup. All entry points are protected and Alarm.com's app is easy to use. There is a 4 camera remote view DVR and 16 outlet gigabit switch in one closet with space for NAS storage for the home. Various rooms have Cat 6 cable already run to key areas and other areas have cables tucked away for future needs. There are 4 cameras mounted around the perimeter of the house for peace of mind no matter where you may be. A ring doorbell is installed at the front door and can also be accessed through the the ring app. Remote ringers are placed around the house to announce when someone rings the bell. All 4 perimeter doors are locked with digital deadbolt locks which automatically lock when the alarm is set. Any lock can be opened and locked remotely via cellphone app.

There is an eight zone app controlled lawn, tree and flower sprinkler system covering the entire lawn as well as the front walk and should you want to add automatic watering to flower pots on the deck it can be set up easily. The system utilizes micro sprinkler head technology to save on water usage. The entire system is programmable and controlled by an app. You will have the greenest lawn on the block and will not have to move hoses and sprinklers around like others on the block who work tirelessly on their lawn trying to keep

them green.

The entire house is protected by a whole house natural gas 17KW backup generator. If you think that a generator is not really necessary consider this. All the high tech stuff in the world does you no good without power and in the 5 years since the unit has been installed it's backed up over 175 hours of power outages from just about every wind storm to hurricane we've been hit with. It has saved us thousands in spoiled food, hotel rooms, burst frozen pipes due to no heat for days (just ask our neighbors who lost most of their food, had to move into a hotel and pay for water damage due to burst pipes). You will never be without power. When an outage occurs just count to 20 and your power is restored. All systems in the house can be used even with the AC system running all units. Nothing changes. Peace of mind. You will never miss a meeting at work because you couldn't take a shower either if the power is lost.

The apartment on the first floor has a paved walkway direct from the street with an accessible ramp to a separate entrance. The spacious apartment is ADA compliant with a kitchenette, full size refrigerator with freezer, pantry closets, bedroom, spacious walk-in closet, accessible (easily convertible) roll-in shower with flip up bench and handheld shower head. Plus a washer and dryer. A door from the bedroom leads to the deck. This apartment can be set up as an In-Law suite, mother/daughter, Au Pair or rented out or listed on Air BNB. Rental rates for comparable apartments in Chatham go for \$1500 to \$1800 a month. Ca-Ching!

The newly renovated and expanded kitchen/dining room has radiant heat in the entire floor with oak stained stairs to the new basement. Three full height pantry closets plus extra cabinets assure that you will not be lacking for storage. Spacious island has electrical outlets on each side for smart device charging and appliances. Automatic sensor faucet is touchless and has a spray head with hose. Half horsepower Food disposal unit reduces food being thrown out in the garbage. Beautiful granite countertops cover all the floor cabinets and island.

The water in this area is not the best quality for multiple reasons. Twice yearly they upset the pipes doing routine maintenance which releases scale and sediment into the water which makes its way into all the homes. The sediment destroys toilet fill valves, washing machine fill valves, dishwasher fill valves, sink, tub and shower faucets. The chemicals used to disinfect the water contain high levels of chlorine and still contain bacteria. The mineral content makes the water hard, staining appliances and fixtures. We have installed a multi faceted whole house water filtration and softening system which addresses all of the above. The main supply is filtered with a 20" woven sediment pre filter then thru a 20" 5 micron high flow filter to all fixtures throughout the house. No clogged valves or appliance repair bills due to sediment ever. Next a whole house 55" non sodium based water softening system softens the water without salt. No increased sodium in your diet. Softer hair and your soap will lather nicely without that overly soft water in hotels that just won't rinse off no matter how long you rinse. Next, we have a 6 stage reverse osmosis 100 gallon per day system with an ultra violet sanitizer and an oversized 14 gallon storage tank feeding the two kitchen sinks and the main kitchen refrigerator. Oversized 3/8ths inch tubing and faucets are used and the water flow is incredibly fast when filling glasses and bottles. And the water quality? Most people have never experienced water this good. Way better than bottled and you never have to lug cases of water home from Costco. No plastic filling our landfills too. Your guests will comment about how good the water is and your pets will live longer. How about you?

Open hearth fireplaces are huge energy wasters. Even with doors. They literally suck the heated air out of your house up the chimney and provide some warmth but are mostly for ambiance. We chose to remove the drafty fireplace doors and install a natural gas sealed fireplace. This is a system which is totally sealed from the living room with clear tempered glass. The air that's burned is brought down the chimney thru a tube and the burned fumes are exhausted thru a second tube up to the chimney cap. No air is drawn from the house and the fireplace insert produces five levels of flames for up to 35,000 btu of heat back into the living room. A remote control allows you to adjust flame height, built in fan to increase air flow into the room and turn unit on and off. Authentic looking logs with glowing embers mimic a real fireplace for that fireplace charm. The only thing missing is the crackling of the fireplace and the smell of burnt logs. For that we ask Alexa to play fireplace sounds and burn some hickory incense and you can't tell the difference. Oh, and another thing missing is the constant cleaning and dumping of ashes from the fireplace and buying cords of wood and storing logs on the property which attracts termites. Oh, the joys of a gas insert.

We added a large deck that is 32 feet wide by 12 feet deep. We chose Azek composite decking with hidden screw installation along with composite rail system for maintenance free benefits. Each post has a deluxe LED lighted cap for nice ambiance. A separate extension of the deck will fit the largest Weber six burner grille you can buy. Natural gas has been run to the grill, two tall heaters with 12 foot stainless steel covered hoses for relocating around the deck and for a fire table. A remote control gas valve shutoff allows you to shut the entire deck off from natural gas when you come inside. A six person hot tub is built in to the center of the deck and has a built in speaker and sub woofer system for music. An ozone generator automatically works in conjunction with mineral stones for amazingly easy once a week addition of oxidizer to keep hot tub sanitized without chlorine. 80 jets and dual circulating pumps will ease your tired muscles. The hot tub was recently converted to use a heat exchanger which replaced the energy hogging electric heating element that hot tubs come with. It's now connected to the boiler and uses inexpensive natural gas to heat the water, saving money. And if that's not enough we just installed a 20 foot sunsetter awning with a massive 12 foot extension which covers the entire right side of the deck with the lounge furniture, fire table and the entire hot tub. A remote control opens and closes the awning to your liking and a wind sensor automatically closes the awning if the winds kick up. LED rope lighting adds a nice touch.

The new basement was set up with a billiard table surrounded by seating around the walls a lamp and an air hockey table on hinges that can fold up to the wall to increase space as well as a large screen TV with sound bar surround system. Plenty of space for a large couch with recliners too. And since the basement has radiant heat you're never cold because the floors and couch remain warm. No cold spots or drafts. So nice. Your kids will love sitting on the floor. You may too!

The garage will fit one car or a lot of tools or a combination of both. We installed a heavy duty smart door opener that can be controlled via an app as well. The opener is tucked in between joists to increase headroom. The entire ceiling is insulated and a layer of sheet aluminum was installed to further increase the insulating value. The garage door frames and trim were recently redone and are like new. There is partial heat in the garage to keep it from getting extremely cold.

You will never want for lighting around the outside of the house. 9 motion sensor spotlights automatically light your way at night no matter where you walk.

The house has multiple areas inside where motion sensors turn lights on and off as you walk up stairs or thru hallways. You can ask Alexa to turn lights on and off in various rooms and turn everything off including TVs when retiring by saying "Alexa good night"

We installed an 8 X 12 foot all wood constructed shed with asphalt shingle roof in the yard to store snow blower, mower and all your garden tools. It is a premium shed and was built to last for many years to come.

Have a big family? A home based business? Grandparents living with you? Want to collect rent to offset the mortgage? Think of all the possibilities in this house.

The bottom line is that this house was designed and upgraded to put your hard earned money into your bank instead of the utility companies. The added amenities will make your life easier. You will not run out of propane for the grill, fire table or heaters. You will not need to pay for, stack and drag in wood for a fireplace. You will never need to buy bottled water. You should never run out of hot water for showering.

Think of all the money you can put in the bank or into a 529 plan for your children's college by purchasing this house versus any other house in Chatham. There's only one like it.

Only one family will get a chance to own this amazing house. Shouldn't it be you?