Code Upgrades

The California Building Code (CBC) has expanded significantly over the last 60+ years. The CBC is revised and updated regularly. The CBC was even further expanded by inclusion of the California Residential Code (CRC) in 2010. The California Energy Code has required substantial energy efficiency increases over the last 4 code cycles (12 years). The California Green Building Code was adopted in 2010 which added more requirements.

Every 3 years an upgraded code cycle is adopted by the State of California for all of the construction codes including, Building (3 volumes), Plumbing, Electrical, Mechanical, Green building, Energy, Fire, and Administration Codes. Most of these codes are reference codes that require numerous other publications in order to obtain the requirements.

The following is a partial list of "code upgrades" a replacement home will require. Note that the year the home was originally built and the year of any remodel and/or addition can impact the amount of "code upgrades".

Any home being constructed today shall meet the requirements of the current 2016 code adoptions.

1. Soils Report by a geotechnical engineer. Approx. $6K to $10k.
2. Foundation upgrades based on the findings in the soils report and by increased seismic and wind loading found in the CBC & CRC. This could range from $5k to $30k and more
3. The California Energy Code mandates several methods of improving the energy efficiency of homes including: higher R-value insulation for exterior wall which requires 2X6 walls instead of 2X4 or the addition of rigid insulation in addition to wall cavity insulation, air circulation fans for the whole house for air quality, windows are required to meet specific U-factors and solar heat gain coefficients, HVAC units are required to meet efficiency standards, ductwork and whole houses are tested for air tightness, cool roofs… the list is too long to print. The costs of compliance is dependent on the size of the house, typ. cost $30K
4. The California Green Building Code requires more ecologically friendly construction. Types of paint, glues, concrete additives, debris removal and recycle, low flow plumbing fixtures, alternate construction materials and more are specified in a "Green Building Checklist". The completed checklist is required for all permit submittals for structures. The checklist is completed by a consultant and verified in the field by a consultant. Cost, $8k to $25K.
5. The California Electrical Code requires GFCI's, AFCI's, tamper proof receptacles, closer spacing of receptacles, fewer receptacles per circuit in kitchens and bathrooms, dedicated circuits for specific appliances... Cost $10K.
6. The California Residential Code requires life safety features too numerous to list, from stair designs, fire sprinklers, hardwired w/battery back-up smoke detectors, light and ventilation standards, minimum room dimensions, egress requirements, seismic bracing requirements, wind bracing requirements, increase psi design for concrete… If a property is in a State Responsibility Area (SRA) where CalFire is the first responder, Wildland Urban Interface requirements for building materials and design are imposed (Chp.7A of the CBC). Cost min $30k+
7. Grading upgrades if any grading work is needed must comply with current grading codes. Driveway changes may require additional width, turn outs, and fire truck turn arounds (hammerheads).

The Sonoma County Building Department first came into existence in 1962. To create a list of 3 year cycle code upgrades since 1962 would take hundreds and hundreds of hours and, each home.; depending on the year built, would require an individual list along with the original approved plans.

The dollar amounts shown are estimates.

Potential list of Code Upgrade Requirements
Based on 2016 California Building Standards Code

Title 24 Energy (2016 Title 24, Part 6 CEC)

1. High efficiency water heating
2. Higher efficiency heating and cooling system equipment
3. Higher R value insulation
4. More efficient windows
5. Possible increase in wall thickness
6. Tighter construction to prevent air leakage
7. Radiant Barrier in attic
8. Cool Roof

Cal Green (2016 Title 24, Part 11 CGBSC))

1. Low flow water fixtures
2. Higher efficiency cooking and washing appliances
3. Requirements for storm water drainage and retention
4. Pre-wiring for future electric vehicle charging
5. Pre-wiring for future rooftop solar energy system
6. Construction and waste management
7. Low VOC paints and stains
8. Private inspector to verify requirements
9. Moisture control features
10. Indoor air quality and exhaust requirements

Wildland Urban Interface Code (2016 Title 24, Part 2, Chapter 7A California Building Code) aka: WUI Code

1. Tempered windows
2. Limited vents in foundation, eves and soffit
3. Fire resistant exterior siding
4. Limitations on deck materials and construction
5. Fire resistive roofing materials

Residential Building Code (2016 Title 24, Part 2.5, CRC)

1. Soils Report
2. Residential Fire Sprinklers
3. Electrical code requirements for ground fault interrupters and arc fault circuit breakers
4. Seismic design changes
5. Water efficient fixtures
6. Separate circuits for bathrooms and laundry
7. Smoke alarm and carbon monoxide detector
8. Additional hardware required for seismic compliance

Water Efficient Landscape Requirements aka: WELO

1. Landscape architect designed plan
2. Irrigation controls and timers

Note: This is not a complete list. This is just and overview of probable requirements based on current codes.