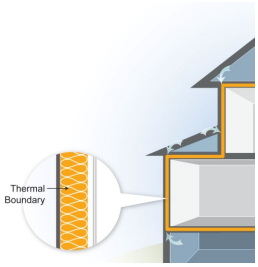
Key Points
Domain 1 PPT-2

5/1/20

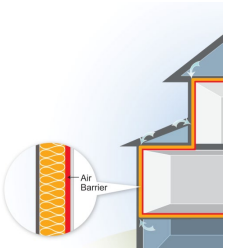


Thermal Boundary:

- Limits heat flow between the inside and outside of the structure

Pressure Boundary:

- Limits air flow between the inside and outside of the structure



A comfortable, safe, and energy-efficient home requires:

- A fully insulated thermal envelope
- A well-sealed air boundary
- The thermal and air boundaries to be continuous and in contact with one another
- Efficient, properly sized equipment to condition the living space and heat water
- A well-designed and balanced air distribution system.
- Healthy indoor air quality

Basic Inspection Considerations:

Exterior

- Measurements – drawing/footprint/orientation
- Thermal/Pressure boundary alignment
- H&S issues – lead, workers…etc
- Moisture control – grading, gutters…etc
- Building durability issues/Structural integrity – paint/siding deterioration, rot, mold…etc
- Identification of building materials/framing
- Hidden rooms or spaces
- Penetrations/Terminations – vents, chimneys, exhaust, accesses…etc
- Areas of Infiltration/Exfiltration
- Roof – exposure/orientation, materials, conditions, flashing
- Foundation type, materials and exposure
- Additions, garages, cantilevers, anomalies
- Lighting

Interior

- IAQ – CO exterior and exterior – combustible gases, living environment, client interview
- Drawing details
- Thermal/Pressure boundary alignment
- H&S issues – lead, workers, occupants…etc
- Moisture control – plumbing, roof leaks, high relative humidity…etc
- Building durability issues – deterioration of building materials, rot, mold…etc
- Hidden rooms or spaces
- Anything you need to remember before entering crawls or attics – locations…etc
- Areas of infiltration/Exfiltration
- Additions, garages, cantilevers, anomalies
- Lighting

Windows and Doors

- Measurements
- Types, materials and features
- Performance
- Orientation - shading
- Repairs needed
- Replacement options
- Energy retrofit options

Walls

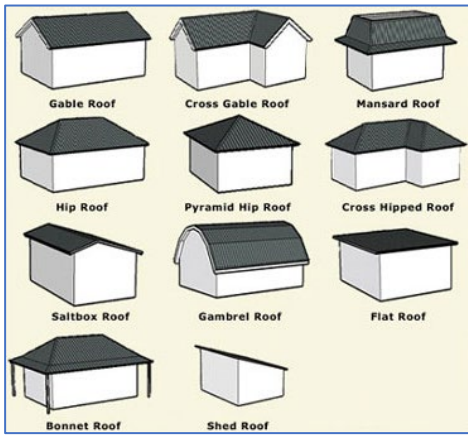
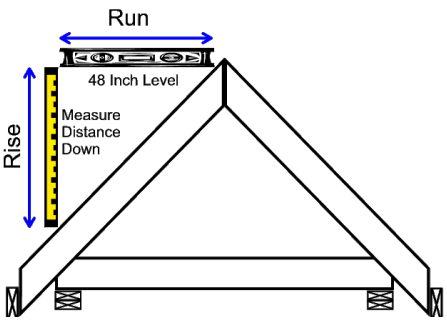
- Type/framing
- Interior and exterior finish
- Cavity depth
- Insulation type and R-value
- Structural integrity
- Moisture/pests
- Infiltration issues
- Orientation - exposure
- Calculate amount of needed insulation

Foundation (Below the floor)

- Type and materials
- H&S concerns and moisture
- Thermal and pressure boundary
- Structural integrity
- Insulation type and R-value
- Infiltration issues
- Identify special equipment
- Calculations for insulation

Attic

- Thermal and pressure boundary alignment
- Air sealing sites, materials & techniques
- Vents and ventilation requirements
- Insulation type and R-value
- H&S concerns and moisture
- Calculate amount of needed insulation

Roof

- Type
- Color
- Condition
- Moisture
- Orientation
- Slope
- Roof debris
- Gutters – condition
- Access
- Insulation
- Penetrations
- Attic venting
- Safety considerations for working on a roof