



ROYALE ESTATES
PREMIUM AFFORDABLE HOUSING

YOUR GUIDE TO UNDERSTANDING

AIR PRESSURE



IMPORTANCE OF AIR CONTROL IN REDUCING COST

- CONTROL OF AIR FLOW IS IMPORTANT TO ENSURE INDOOR AIR QUALITY, CONTROL ENERGY CONSUMPTION, AVOID CONDENSATION (AND THUS HELP ENSURE DURABILITY), AND TO PROVIDE COMFORT. CONTROL OF AIR MOVEMENT INCLUDES FLOW THROUGH THE ENCLOSURE (THE ASSEMBLY OF MATERIALS THAT PERFORM THIS FUNCTION IS TERMED THE AIR BARRIER SYSTEM) OR THROUGH COMPONENTS OF THE BUILDING ENVELOPE (INTERSTITIAL) ITSELF, AS WELL AS INTO AND OUT OF THE INTERIOR SPACE, (WHICH CAN AFFECT BUILDING INSULATION PERFORMANCE GREATLY). HENCE, AIR CONTROL INCLUDES THE CONTROL OF WIND-WASHING AND CONVECTIVE LOOPS.
- THE PHYSICAL COMPONENTS OF THE ENVELOPE INCLUDE THE FOUNDATION, ROOF, WALLS, DOORS, WINDOWS, CEILING, AND THEIR RELATED BARRIERS AND INSULATION. THE DIMENSIONS, PERFORMANCE AND COMPATIBILITY OF MATERIALS, FABRICATION PROCESS AND DETAILS, CONNECTIONS AND INTERACTIONS ARE THE MAIN FACTORS THAT DETERMINE THE EFFECTIVENESS AND DURABILITY OF THE BUILDING ENCLOSURE SYSTEM.
- COMMON MEASURES OF THE EFFECTIVENESS OF A BUILDING ENVELOPE INCLUDE PHYSICAL PROTECTION FROM WEATHER AND CLIMATE (COMFORT), INDOOR AIR QUALITY (HYGIENE AND PUBLIC HEALTH), DURABILITY AND ENERGY EFFICIENCY. IN ORDER TO ACHIEVE THESE OBJECTIVES, ALL BUILDING ENCLOSURE SYSTEMS MUST INCLUDE A SOLID STRUCTURE, A DRAINAGE PLANE, AN AIR BARRIER, A THERMAL BARRIER, AND MAY INCLUDE A VAPOR BARRIER. MOISTURE CONTROL (E.G. DAMP PROOFING) IS ESSENTIAL IN ALL CLIMATES, BUT COLD CLIMATES AND HOT-HUMID CLIMATES ARE ESPECIALLY DEMANDING.



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