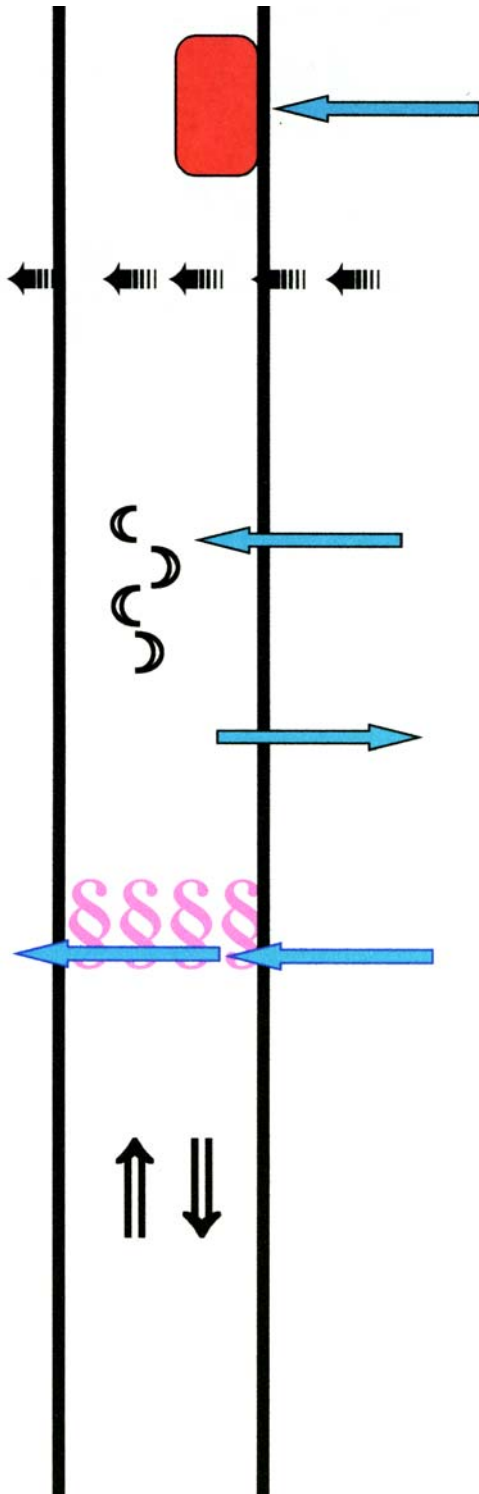


## HEAT TRANSFER



### RADIATION

Radiation is the movement of energy or heat between objects by electro-magnetic waves. A room may be 72 degrees, yet when standing next to a window in the winter, it feels cold. This is due the cold radiating through the glass.

### AIR INFILTRATION

Air infiltration is the movement of air through the building assembly. This happens when the air movement bypasses the insulation and air barriers. The main force causing this is the pressure difference between the interior and exterior.

### AIR INTRUSION

Air intrusion is the movement of air within the building cavity. This is referred to as “wind wash”. Air movement is caused by wind entering the cavity. The movement of air within the insulation reduces the R value and effectiveness of the insulation.

### CONDUCTION

Conduction is the transfer of heat through solid or touching objects such as walls, floors or ceilings. For heat to be conducted, the objects must be in contact.

### CONVECTION LOOPING

Convection looping is the vertical movement of air within a cavity. This occurs when warm air on the interior of a wall is rising and cool air on the exterior wall is falling, creating convection within the cavity. As the temperature differences increase, the air flow within the insulation increases, compounding the problem and reducing the R value.