

THE BUILDING ENVELOPE.

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What makes waterproofing so important? 🤔

Well, what doesn't! ☁️🏠

Your building is an asset that requires significant investment.

To make your asset truly stand the test of time, (and climate!), creating a strong building envelope is a MUST.

Here's what it does for you:

- Enhanced energy efficiency 💡
- Protection against weathering and deterioration
- Increased structural integrity 🏢

Leading to an extended lifespan of your building! BUT... 😊

How is this achieved?

1. By preventing water infiltration
2. Proper thermal insulation and air barriers 🌡️

Whether it's heavy rains in monsoon 🌧️ or groundwater 🌊

Our advanced waterproofing solutions ensure your building remains dry and durable

Along with our well-designed thermal insulation plans,

That enhance energy efficiency, reduce utility costs, and provide a comfortable indoor environment.



Reach out, and let's discuss how we can optimize your building envelope! 😊

BLOG – “BUILDING ENVELOPE”

A building envelope, as the name suggests, is an envelope that separates the interiors of a building from the exterior environment. It forms a physical barrier that creates and contains the internal conditions. 5 main elements facilitating the separation are; the foundations, exterior walls, roof, windows, and doors. These elements protect the building like a layer of skin, and cover it from top to bottom, to control and prevent infiltration of climatic elements such as air, water, heat, cold, wind, and light. A building envelope is developed to protect your structure from weathering and deterioration. Envelopes complete numerous functions in a building's life cycle, including:

- Preventing water infiltration
- Controlling heat and airflow, into and out of interior spaces
- Providing a shield against ultraviolet rays and excessive sunlight
- Limiting noise invasion
- Providing structural integrity for the façade components
- Providing necessary aesthetics
- Preventing Mold formation and growth

Some of the most prominent risks faced by buildings are easily avoidable by undertaking simple measures such as waterproofing, thermal insulation, and strengthening of the building envelope. These are the most common ways of ensuring the longevity of a project's life. A comprehensive look at these methods follows:

1. WATERPROOFING.

At GWC, we believe that waterproofing is essential for every construction project. Waterproofing, by definition, is the combination of materials that prevents water invasion into the structural elements of a building. Basic waterproofing and envelope design incorporates three steps to ensure a watertight and environmentally sound interior:

1. Understanding water sources likely to be encountered.
 2. Designing systems to prevent leakage from these sources.
 3. Finalizing the design by properly detailing each envelope component into adjacent components.
- Waterproofing plays a crucial role in protecting the building envelope by providing various key benefits. It acts as a barrier against water penetration which is essential in protecting the integrity of the building. It increases the durability of materials used in construction and boosts energy efficiency. It also reduces heating and cooling costs. Moisture, when prevented from entering, improves indoor air quality and ensures the stability of the structure. Water infiltration, if not avoided, leads to a multitude of issues like Mold growth, wood rot, and metal corrosion among others.

2. THERMAL INSULATION.

Heat insulation services offered by GWC, are crucial for the upkeep of building envelopes, prevent heat from passing through, keep indoor spaces cooler in summer, and lead up to 20% energy savings. Conversely, in winter, it helps maintain warmer temperatures indoors. The primary contribution of thermal insulation of a building envelope is to provide thermal comfort to its occupants. This supports healthy living environments and better productivity at workplaces. It reduces unwanted heat loss or heat gain and also acts as a mitigation measure to reduce GHG emissions and carbon footprint. Thermal insulation also provides soundproofing benefits, reducing the transmission of noise from outside to inside the building and vice versa. Maintenance costs for thermal insulation are low and, in some cases, may not be required at all.

3. EXPANSION JOINTS.

An expansion joint system is simply a transition across an expansion joint opening. In other words, it is a cover, a bridge, or an insert. It may be a simple cover plate, engineered system, insert, or even a compression seal. When sealing the building envelope, using a quality façade sealant is essential. Sealing around windows and between concrete or façade panels is the most common application of expansion joints. At GWC, we believe proper treatment is essential to seal these joints, to prevent water from penetrating and damaging the structure.

Apart from these, we offer a range of repair and strengthening services for both commercial and residential structures. Be it repair issues or improper waterproofing for renovating buildings that need correction, we have got you covered!