

**STRUCTURAL STRENGTHENING & CONCRETE REPAIR** 



# STRUCTURAL STRENGTHENING & CONCRETE REPAIR



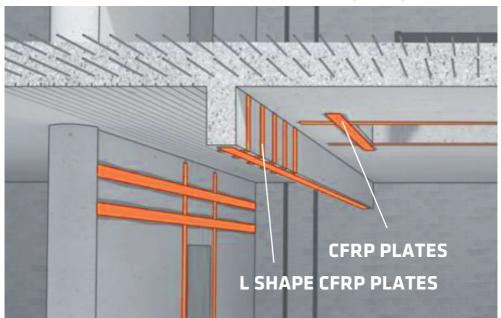
Water Seal provides fully comprehensive solutions with complete systems for all kinds of structural strengthening and improvement, whether it involves increasing bending, shear, or impact resistance. These solutions have been tested and proven through numerous projects in the UAE.

Structural Strengthening systems are available for use on reinforced concrete, steel, wood and masonry load-bearing structures.

We have skilled team & qualified engineers in our division of Structural Strengthening & Concrete Repair. We undertake jobs for rehabilitation and restoration using convenient and economic method of improving structural performance. Water Seal uses the latest technologies to develop innovative strategies to restore or add load-carrying capacity to bridges, buildings, parking facilities, silos and other structures.

# **OUR SERVICES**

# CARBON FIBER REINFORCED POLYMER (CFRP) PLATES



#### Prefabricated Carbon Fiber Reinforced Polymer (CFRP) Plates

For strengthening of concrete substrates, prefabricated CFRP plates can be externally bonded or near surface-mounted. Water Seal offers a wide range of carbon FRP plates in different dimensions and varying E-moduli.

## L-shape Carbon Fiber Reinforced Polymer (CFRP) Plates

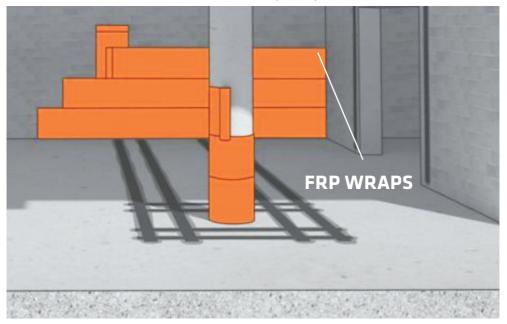
Shear capacity of concrete beams can be increased by externally applying CFRP strengthening systems. Water Seal provides unique L-shape CFRP plates for effective anchorage of stirrup forces in concrete compressive zones.

#### Carbon Fiber Reinforced Polymer (CFRP) Post-tensioning Systems

Post-tensioned systems are effective for control of structural cracks and deflections and to increase fatigue resistance and seismic resistance. Water Seal provides a unique system based on post-tensioned CFRP plates.

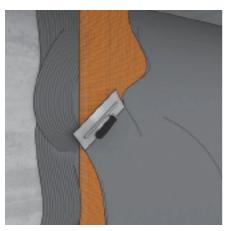
# **OUR SERVICES**

# FIBER REINFORCED POLYMER (FRP) FABRICS



#### Fiber Reinforced Polymer (FRP) Fabrics

Externally applied fabrics can be used to increase flexural, shear, axial or seismic resistance of structures. Water Seal offers various fabric systems, based on different types of materials for specific needs and cost-optimized strengthening



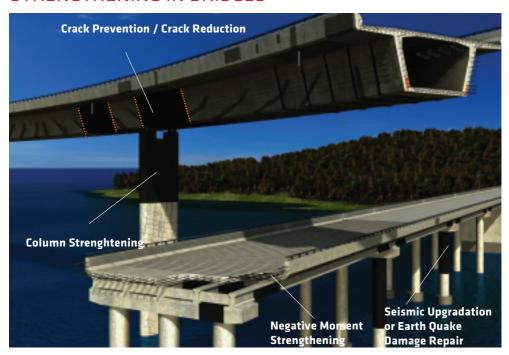
# Fiber-Reinforced Cementitious Matrix (FRCM)

A carbon fiber grid embedded in a specially designed repair mortar for reinforcement of concrete or masonry structures.

## STRENGTHENING OF BUILDINGS USING CARBON FIBER



## STRENGTHENING IN BRIDGES



#### STRENGTH YOU CAN TRUST

With a depth of knowledge from our 'state-of-the art' technical expertise and global practical experience to produce virtually tailor-made solutions for the repair, refurbishment and improvement by strengthening of your existing buildings and civil engineering structures. This includes fully compatible products and integrated systems to suit almost every project and site requirement.



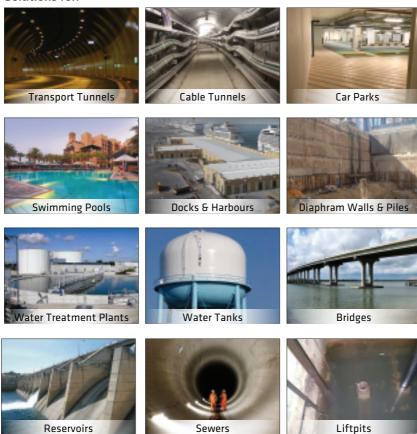
Structural Strengthening Systems have been tested extensively internally and externally, under many different conditions to ensure their long-term performance in different environments.



#### TYPICAL AREAS OF STRUCTURAL STRENGTHENING & CONCRETE REPAIR

Projects undertaken range from controlling major incursions to weeping cracks. Sites from the largest civil engineering projects to small individual lift pits.

#### Solutions for:



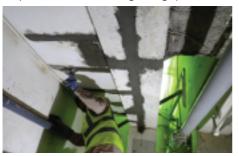




Project: Burj Al Arab 24th floor Structural Strengthening by I BEAM

Year: 2021 Location: Dubai

Our Client: Alec Engineering & Contracting
Scope of Work: Strengthening by I beam





Project: Sharjah International Airport ATC Tower Structural Rectification

Year : 2021 Location : Sharjah

Our Client: Sharjah Airport Authority

Scope of Work: Demolison Works, Concrete Repair, Casting, Cathiodic Protection,

Strengthening by CFRP system





Project: Gardens 3 District Cooling Plant Structural Strengthening & Modification Works

Year: 2020

Value: AED 1.2 Million

Location: Duba

Our Client: Empower (Emirates Central Cooling System Corporation)

Scope of Work: Structural Strengthening & Soil Stabilization





Project: Dubai Airport Priority 2A Project Related Civil & MEP Works - Dubai

Year: 2019

Value: AED 332,940 Location: Dubai

Our Client: Alec Engineering & Contracting
Scope of Work: Structural Strengthening by CFRP





Project: Mai Dubai Factory - Stabilization Works and Rectification works

Year: 2020 Location: Dubai Our Client: Mai Dubai

Scope of Work: Soil stabilization, Slab Lifting, Concrete Repair





Project: Refurbishment of Hala Building (B+G+Roof) Al Muaileh - Sharjah

Year: 2019

Value: AED 218,000 Location: Sharjah

Our Client: East Coast Contracting
Scope of Work: Structural Strengthening





Project: Dubai Hospital - Complete Structrual Repair of Old Cooling Towers

Year: 2019

Value: AED 658,000 Location: Dubai

Our Client: Dubai Health Authority
Scope of Work: Structural Strengthening



Project: Dubai Airport Al Majlis Facility Strengthening

 Year:
 2020

 Value:
 AED 46,000

 Location:
 Dubai

Our Client: Alec Engineering & Contracting
Scope of Work: Structural Strengthening by CFRP





Project: Construction of 500 Villas in Oud Muteena Dubai

Year: 2016

Value: AED 11.2 Million

Location: Dubai

Our Client: Arabtec Construction LLC

Scope of Work: Slab Lifting





Projects: Reef Mall Proposed Repair & Rectification Works to External Façade - Dubai

Year: 2019

Value: AED 538,000 Location: Dubai

Our Client: Reef Mall - Al Ghurair Real Estate Group

Consultant: Bureau of Engineering Studies Consulting Engineers







BEFORE IN PROCESS AFTER

Projects: Sharjah Safari Park - Al Dhaid Sharjah, UAE - Suspension Bridge, Pool & Reed Bed

Year: 2019

Value: AED 280,000

Our Client: Hardco Building Contracting

Consultant: Jacob Consultant

Project Client: Sharjah Investment & Development Authority (Shurooq)

Scope of Work: Structural Strengthening





Projects: Proposed G+2 Building on Plot # 112-458 Renovation Works Deira Dubai

Year: 2011

Value: AED 635.000

Location: Dubai

Our Client: Asia Prime Contracting

Scope of Work: Structural Strengthening & EIFS

STRUCTURAL STRENGTHENING & CONCRETE REPAIR
WATER SEAL - A STEP AHEAD IN CONSTUCTION TECHNOLOGIES



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